

Acorn Pub Lib Dist Regular

GASB Statement No. 68 Employer Reporting
Accounting Schedules
December 31, 2018



Table of Contents

Page

Certification Letter

Section A Executive Summary

Executive Summary.....	1
Discussion.....	2 - 4
Other Observations.....	5 - 6

Section B Financial Statements

Pension Expense/(Income) Under GASB Statement No. 68	7
Statement of Outflows and Inflows Arising from Current Period	8
Statement of Outflows and Inflows Arising from Current and Prior Periods	9
Schedule of Changes in Net Pension Liability and Related Ratios Current Period	10
Sensitivity of Net Pension Liability/(Asset) to the Single Discount Rate Assumption	10
Multiyear Schedule of Changes in Net Pension Liability and Related Ratios	11
Multiyear Schedule of Contributions	12
Notes to Schedule of Contributions.....	13
Development of Market Value of Assets	14
Schedule of Contributions	14
Summary of Actuarial Methods and Assumptions Used in the Calculation of the Total Pension Liability	15

Section C Calculation of the Single Discount Rate

Calculation of the Single Discount Rate	16
Projection of Contributions.....	17 - 18
Projection of Plan Fiduciary Net Position	19 - 20
Present Values of Projected Benefits.....	21 - 22
Projection of Plan Net Position and Benefit Payments	23

Section D Glossary of Terms..... 24 - 27

March 27, 2019

Acorn Pub Lib Dist
Illinois Municipal Retirement Fund

Ladies and Gentlemen:

The accounting schedules submitted in this report are required under the Governmental Accounting Standards Board (GASB) Statement No. 68 "Accounting and Financial Reporting for Pensions."

Our calculations for this report were prepared for the purpose of complying with the requirements of GASB Statement No. 68. These calculations have been made on a basis that is consistent with our understanding of these accounting standards. These results are subject to review by the fund's auditor and may be revised.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement No. 68. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the Acorn Pub Lib Dist only in its entirety and only with the permission of Acorn Pub Lib Dist. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by the Illinois Municipal Retirement Fund (IMRF), concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different than ours, please let us know and do not use or distribute this report until those differences have been resolved to your satisfaction. This information was checked for internal consistency, but it was not audited.

This report complements the actuarial valuation report that was provided to the IMRF and should be considered in conjunction with that report. Please see the actuarial valuation report as of December 31, 2018 for additional discussions of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, the information contained in this report is accurate, and fairly represents the GASB 68 information related to Acorn Pub Lib Dist. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Mark Buis and Francois Pieterse are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinions herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,



Mark Buis, FSA, EA, FCA, MAAA



Francois Pieterse, ASA, FCA, MAAA

MB/FP:dj

SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2018

Actuarial Valuation Date	December 31, 2018
Measurement Date of the Net Pension Liability	December 31, 2018
Fiscal Year End	June 30, 2019

Membership

Number of	
- Retirees and Beneficiaries	22
- Inactive, Non-Retired Members	17
- Active Members	13
- Total	52
Covered Valuation Payroll ⁽¹⁾	\$ 487,251

Net Pension Liability

Total Pension Liability/(Asset)	\$ 3,126,189
Plan Fiduciary Net Position	2,778,588
Net Pension Liability/(Asset)	\$ 347,601
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	88.88%
Net Pension Liability as a Percentage of Covered Valuation Payroll	71.34%

Development of the Single Discount Rate as of December 31, 2018

Long-Term Expected Rate of Investment Return	7.25%
Long-Term Municipal Bond Rate ⁽²⁾	3.71%
Last year ending December 31 in the 2019 to 2118 projection period for which projected benefit payments are fully funded	2118
Resulting Single Discount Rate based on the above development	7.25%
Single Discount Rate calculated using December 31, 2017 Measurement Date	7.50%

Total Pension Expense/(Income) \$ 6,816

Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 9,882	\$ 17,772
Changes in assumptions	53,347	33,290
Net difference between projected and actual earnings on pension plan investments	375,655	180,553
Total	\$ 438,884	\$ 231,615

⁽¹⁾ Does not necessarily represent Covered Employee Payroll as defined in GASB Statement Nos. 67-68.

⁽²⁾ Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 31, 2018. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax exempt securities.

Discussion

Accounting Standard

For state and local government employers (as well as certain non-employers) that contribute to a Defined Benefit (DB) pension plan administered through a trust or equivalent arrangement, Governmental Accounting Standards Board (GASB) Statement No. 68 establishes standards for pension accounting and financial reporting. Under GASB Statement No. 68, the employer must account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information is not included in this report if it is not actuarial in nature, such as the notes to the financial statements regarding accounting policies and investments. As a result, the retirement fund and/or plan sponsor is responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state and local government employers that contribute to DB pension plans to recognize the net pension liability and the pension expense on their financial statements, along with the related deferred outflows of resources and deferred inflows of resources. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 says, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to IMRF subsequent to the measurement date of December 31, 2018.

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the certain changes in the liability and investment experience.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows of resources and inflows of resources related to pensions.

In addition, GASB Statement No. 68 requires the notes of the financial statements for the employers to include certain additional information, including (page numbers refer to page numbers from this report unless specified otherwise):

- a description of the types of benefits provided by the plan, as well as automatic or ad hoc COLAs (please see pages B-1 - B-5 of the December 31, 2018 Annual Actuarial Valuation report dated February 28, 2019);
- the number and classes of employees covered by the benefit terms (page 1);
- for the current year, sources of changes in the net pension liability (page 10);
- significant assumptions and methods used to calculate the total pension liability (page 15);
- inputs to the single discount rate (page 16);
- certain information about mortality assumptions and the dates of experience studies (page 13 and page 15);
- the date of the valuation used to determine the total pension liability (page 1);
- information about changes of assumptions or other inputs and benefit terms (pages 13 and 15);
- the basis for determining contributions to the plan, including a description of the plan's funding policy, as well as member and employer contribution requirements (please see page A-3, B-5 and Section D of the December 31, 2018 Annual Actuarial Valuation report dated February 28, 2019, as well as page 13);
- the total pension liability, fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability (page 10);
- the net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes (page 10); and
- a description of the fund that administers the pension plan (to be provided by IMRF).

Required Supplementary Information

The financial statements of employers also include required supplementary information showing the 10-year fiscal history of:

- sources of changes in the net pension liability (page 11);
- information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll (page 11); and
- comparison of actual employer contributions to the actuarially determined contributions based on the plan's funding policy (page 12).

These tables may be built prospectively as the information becomes available.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. For the employer's financial reporting purposes, the net pension liability and pension expense should be measured as of the employer's "measurement date" which may not be earlier than the employer's prior fiscal year-end date. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of December 31, 2018 and a measurement date of December 31, 2018.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a single discount rate that reflects: (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the plan's projected fiduciary net position is not sufficient to pay benefits).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.25%, the municipal bond rate is 3.71% (based on the daily rate closest to but not later than the measurement date of the "20-Year Municipal GO AA Index" described on page 1), and the resulting Single Discount Rate is 7.25%.

Other Observations

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.25% on the actuarial value of assets), it is expected that:

- (1) The employer normal cost as a percentage of pay will decrease to the level of Tier 2 normal cost as time passes as the majority of the active population will consist of Tier 2 members.
- (2) The unfunded liability will increase in dollar amount for several years before it begins to decrease.
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio.

This funding policy results in a crossover date in 2118 and a discount rate of 7.25%. The projections in this report are strictly for the purposes of determining the GASB discount rate and are different from a funding projection for the ongoing plan.

Limitations of Assets as a Percent of Total Pension Liability Measurements

This report includes a measure of the plan fiduciary net position as a percent of total pension liability. Unless otherwise indicated, with regard to any such measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.
- (2) The measurement is inappropriate for assessing the need for or amount of future employer contributions.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded ratio measurement presented in this report is based upon the actuarial accrued liability and the market value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, in other words of transferring the obligations to a unrelated third party in an arm's length market value type transaction.
- (2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amount of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon actuarial assumptions. A funded ratio measurement in this report of 100% is not synonymous with no required future contributions. If the funded ratio were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).

Limitation of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

SECTION B

FINANCIAL STATEMENTS

Pension Expense/(Income) Under GASB Statement No. 68

Calendar Year Ended December 31, 2018

A. Expense/(Income)

1. Service Cost	\$	43,704
2. Interest on the Total Pension Liability		219,418
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(21,926)
5. Projected Earnings on Plan Investments (made negative for addition here)		(224,583)
6. Other Changes in Plan Fiduciary Net Position		(61,447)
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		(18,339)
8. Recognition of Outflow (Inflow) of Resources due to Assets		69,989
9. Total Pension Expense/(Income)	\$	6,816

Recognition of Deferred Outflows and Inflows of Resources

Differences between expected and actual experience and changes in assumptions are recognized in pension expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with a retirement benefit through the pension plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active employees in the plan was approximately 162.47 years. Additionally, the total plan membership (active employees and inactive employees) was 52. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 3.1245 years.

Additionally, differences between projected and actual earnings on pension plan investments should be recognized in pension expense using a systematic and rational method over a closed five-year period. For this purpose, the deferred outflows and inflows of resources are recognized in the pension expense as a level dollar amount over the closed period identified above.

Statement of Outflows and Inflows Arising from Current Reporting Period Calendar Year Ended December 31, 2018

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (26,137)
2. Assumption Changes (gains) or losses	\$ 78,458
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	3.1245
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ (8,365)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ 25,111
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	<u>\$ 16,746</u>
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$ (17,772)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ 53,347
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	<u>\$ 35,575</u>

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ 415,461
2. Recognition period for Assets {in years}	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ 83,092
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ 332,369

* Please note that employer contributions made after the measurement date have not been reported as deferred outflows of resources. These employer contributions must be separately accounted for by the employer.

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Calendar Year Ended December 31, 2018

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 34,682	\$ 53,021	\$ (18,339)
2. Due to Assets	130,174	60,185	69,989
3. Total	\$ 164,856	\$ 113,206	\$ 51,650

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 9,571	\$ 19,847	\$ (10,276)
2. Assumption changes	25,111	33,174	\$ (8,063)
3. Net difference between projected and actual earnings on pension plan investments	130,174	60,185	69,989
4. Total	\$ 164,856	\$ 113,206	\$ 51,650

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ 9,882	\$ 17,772	\$ (7,890)
2. Assumption changes	53,347	33,290	20,057
3. Net difference between projected and actual earnings on pension plan investments	375,655	180,553	195,102
4. Total	\$ 438,884	\$ 231,615	\$ 207,269

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending December 31	Net Deferred Outflows of Resources
2019	\$ 57,051
2020	42,133
2021	24,992
2022	83,093
2023	0
Thereafter	0
Total	\$ 207,269

Schedule of Changes in Net Pension Liability and Related Ratios Current Period Calendar Year Ended December 31, 2018

A. Total pension liability	
1. Service Cost	\$ 43,704
2. Interest on the Total Pension Liability	219,418
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	(26,137)
5. Changes of assumptions	78,458
6. Benefit payments, including refunds of employee contributions	(185,954)
7. Net change in total pension liability	\$ 129,489
8. Total pension liability – beginning	2,996,700
9. Total pension liability – ending	<u><u>\$ 3,126,189</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 52,623
2. Contributions – employee	21,926
3. Net investment income	(190,878)
4. Benefit payments, including refunds of employee contributions	(185,954)
5. Other (Net Transfer)	61,447
6. Net change in plan fiduciary net position	\$ (240,836)
7. Plan fiduciary net position – beginning	3,019,424
8. Plan fiduciary net position – ending	<u><u>\$ 2,778,588</u></u>
C. Net pension liability/(asset)	<u><u>\$ 347,601</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	88.88%
E. Covered Valuation payroll	\$ 487,251
F. Net pension liability as a percentage of covered valuation payroll	71.34%

Sensitivity of Net Pension Liability/(Asset) to the Single Discount Rate Assumption

	1% Decrease	Current Single Discount Rate Assumption	1% Increase
	6.25%	7.25%	8.25%
Total Pension Liability	\$ 3,484,223	\$ 3,126,189	\$ 2,831,933
Plan Fiduciary Net Position	2,778,588	2,778,588	2,778,588
Net Pension Liability/(Asset)	\$ 705,635	\$ 347,601	\$ 53,345

Schedules of Required Supplementary Information

Multiyear Schedule of Changes in Net Pension Liability and Related Ratios

Last 10 Calendar Years
(schedule to be built prospectively from 2014)

Calendar year ending December 31,	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Pension Liability										
Service Cost	\$ 43,704	\$ 37,927	\$ 41,320	\$ 45,113	\$ 45,510					
Interest on the Total Pension Liability	219,418	218,832	216,262	215,370	204,264					
Benefit Changes	0	0	0	0	0					
Difference between Expected and Actual Experience	(26,137)	29,024	(39,542)	(73,747)	(74,938)					
Assumption Changes	78,458	(97,780)	(3,199)	(3,272)	137,945					
Benefit Payments and Refunds	(185,954)	(180,191)	(185,261)	(161,747)	(151,901)					
Net Change in Total Pension Liability	129,489	7,812	29,580	21,717	160,880					
Total Pension Liability - Beginning	2,996,700	2,988,888	2,959,308	2,937,591	2,776,711					
Total Pension Liability - Ending (a)	\$ 3,126,189	\$ 2,996,700	\$ 2,988,888	\$ 2,959,308	\$ 2,937,591					
Plan Fiduciary Net Position										
Employer Contributions	\$ 52,623	\$ 51,037	\$ 54,067	\$ 55,364	\$ 60,939					
Employee Contributions	21,926	20,451	18,279	17,682	18,137					
Pension Plan Net Investment Income	(190,878)	495,858	176,177	13,009	155,067					
Benefit Payments and Refunds	(185,954)	(180,191)	(185,261)	(161,747)	(151,901)					
Other	61,447	(42,444)	(16,718)	57,736	(14,609)					
Net Change in Plan Fiduciary Net Position	(240,836)	344,711	46,544	(17,956)	67,633					
Plan Fiduciary Net Position - Beginning	3,019,424	2,674,713	2,628,169	2,646,125	2,578,492					
Plan Fiduciary Net Position - Ending (b)	\$ 2,778,588	\$ 3,019,424	\$ 2,674,713	\$ 2,628,169	\$ 2,646,125					
Net Pension Liability/(Asset) - Ending (a) - (b)	347,601	(22,724)	314,175	331,139	291,466					
Plan Fiduciary Net Position as a Percentage										
of Total Pension Liability	88.88%	100.76 %	89.49 %	88.81%	90.08 %					
Covered Valuation Payroll	\$ 487,251	\$ 454,471	\$ 406,209	\$ 392,931	\$ 405,722					
Net Pension Liability as a Percentage										
of Covered Valuation Payroll	71.34%	(5.00)%	77.34 %	84.27%	71.84 %					

Multiyear Schedule of Contributions

Last 10 Calendar Years

<u>Calendar Year Ending December 31,</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Valuation Payroll</u>	<u>Actual Contribution as a % of Covered Valuation Payroll</u>
2014	\$ 61,345	\$ 60,939	\$ 406	\$ 405,722	15.02%
2015	55,364	55,364	0	392,931	14.09%
2016	54,066	54,067	(1)	406,209	13.31%
2017	51,037	51,037	0	454,471	11.23%
2018	52,623 *	52,623	0	487,251	10.80%

* Estimated based on contribution rate of 10.80% and covered valuation payroll of \$487,251.
This number should be verified by the auditor.

Notes to Schedule of Contributions

Summary of Actuarial Methods and Assumptions Used in the Calculation of the 2018 Contribution Rate*

Valuation Date:

Notes Actuarially determined contribution rates are calculated as of December 31 each year, which is 12 months prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine 2018 Contribution Rates:

Actuarial Cost Method	Aggregate Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	Non-Taxing bodies: 10-year rolling period. Taxing bodies (Regular, SLEP and ECO groups): 25-year closed period Early Retirement Incentive Plan liabilities: a period up to 10 years selected by the Employer upon adoption of ERI. SLEP supplemental liabilities attributable to Public Act 94-712 were financed over 20 years for most employers (three employers were financed over 29 years).
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage growth	3.50%
Price Inflation	2.75%
Salary Increases	3.75% to 14.50% including inflation
Investment Rate of Return	7.50%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2014 valuation pursuant to an experience study of the period 2011-2013.
Mortality	For non-disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Blue Collar Health Annuitant Mortality Table with adjustments to match current IMRF experience. For disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Disabled Retirees Mortality Table applying the same adjustment that were applied for non-disabled lives. For active members, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Employee Mortality Table with adjustments to match current IMRF experience.

Other Information:

Notes There were no benefit changes during the year.

* Based on Valuation Assumptions used in the December 31, 2016 actuarial valuation.

Development of Market Value of Assets

Market Value of Assets as of December 31, 2018

1. Employee Contribution Reserve (MDF Assets from IMRF)	\$	380,917
2. Employer Contribution Reserve (EAF assets from IMRF)	\$	518,446
3. Annuitant Reserve	\$	1,871,548
4. Miscellaneous Adjustment*	\$	<u>7,677</u>
5. Net Market Value	\$	2,778,588

* Includes an adjustment factor of 0.0027705476 on Items 1 through 3 to ensure that Market Value of Assets for all employers balances to the total Market Value of IMRF. Miscellaneous adjustments are due to various items such as suspended annuity reserve, disability benefit reserve, death benefit reserve, supplemental benefit reserve, employers with no assets, etc.

Schedule of Contributions

Total Contributions

1. Employer

a.) Wage Reporting	\$	52,623
b.) Accelerated payments and Reserve Payments		<u>-</u>
	\$	52,623

2. Member

a.) Wage Reporting	\$	21,926
b.) Member Payments (i.e. ERI, Pension Payments)		<u>-</u>
Sub-total (Amount used for valuation on Schedule of Changes Page 10)	\$	21,926

c.) Voluntary Additional Plan	\$	<u>648</u>
Total Member Contributions (a+b+c)	\$	22,574

Total Employer and Member Contributions (1+2)	\$	75,197
------------------------------------------------------	----	---------------

Summary of Actuarial Methods and Assumptions Used in the Calculation of the Total Pension Liability

Methods and Assumptions Used to Determine Total Pension Liability:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Market Value of Assets
Price Inflation	2.50%
Salary Increases	3.39% to 14.25%
Investment Rate of Return	7.25%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2017 valuation pursuant to an experience study of the period 2014-2016.
Mortality	For non-disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Blue Collar Health Annuitant Mortality Table with adjustments to match current IMRF experience. For disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Disabled Retirees Mortality Table applying the same adjustment that were applied for non-disabled lives. For active members, an IMRF specific mortality table was used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Employee Mortality Table with adjustments to match current IMRF experience.

Other Information:

Notes	There were no benefit changes during the year.
-------	------------------------------------------------

A detailed description of the actuarial assumptions and methods can be found in the December 31, 2018 Illinois Municipal Retirement Fund annual actuarial valuation report.

SECTION C

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 68 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

The *Single Discount Rate* (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.25%; the municipal bond rate is 3.71%; and the resulting single discount rate is 7.25%.

The tables in this section provide background for the development of the single discount rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

Expected Contributions are developed based on the following:

- Member Contributions for current members
- Normal Cost contributions for current members
- Unfunded Liability contributions for current and future members.

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate (SDR). It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Single Discount Rate Development Projection of Contributions

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
2018	\$ 487,251				
2019	464,250	\$ 20,891	\$ 23,010	\$ 13,540	\$ 57,441
2020	438,526	19,734	23,315	16,619	59,667
2021	420,818	18,937	22,078	20,049	61,064
2022	409,499	18,427	21,484	23,874	63,786
2023	400,359	18,016	21,005	28,143	67,164
2024	393,404	17,703	20,640	28,846	67,189
2025	386,364	17,386	20,232	29,567	67,185
2026	378,190	17,019	19,728	30,307	67,054
2027	368,136	16,566	19,167	31,064	66,797
2028	354,827	15,967	18,403	31,841	66,211
2029	342,602	15,417	17,700	32,637	65,755
2030	332,169	14,948	17,095	33,453	65,496
2031	322,800	14,526	16,516	34,289	65,331
2032	315,680	14,206	16,025	35,146	65,377
2033	309,665	13,935	15,596	36,025	65,556
2034	303,123	13,641	15,175	36,926	65,742
2035	296,869	13,359	14,744	37,849	65,952
2036	291,007	13,095	14,307	38,795	66,197
2037	284,279	12,793	13,862	39,765	66,420
2038	274,915	12,371	13,296	40,759	66,426
2039	264,705	11,912	12,643	41,778	66,333
2040	257,558	11,590	12,121	42,822	66,533
2041	249,394	11,223	11,587	43,893	66,703
2042	241,065	10,848	11,055	44,990	66,893
2043	234,896	10,570	10,608	0	21,178
2044	223,608	10,062	9,964	0	20,026
2045	207,362	9,331	9,136	0	18,468
2046	193,973	8,729	8,430	0	17,159
2047	183,438	8,255	7,880	0	16,135
2048	162,301	7,304	6,907	0	14,211
2049	127,135	5,721	5,385	0	11,106
2050	90,223	4,060	3,813	0	7,873
2051	66,702	3,002	2,825	0	5,827
2052	46,157	2,077	1,964	0	4,041
2053	26,120	1,175	1,117	0	2,292
2054	20,684	931	901	0	1,832
2055	12,826	577	556	0	1,133
2056	4,063	183	178	0	361
2057	1,666	75	81	0	156
2058	924	42	51	0	93
2059	383	17	24	0	41
2060	12	1	1	0	1
2061	3	0	0	0	0
2062	1	0	0	0	0
2063	0	0	0	0	0
2064	0	0	0	0	0
2065	0	0	0	0	0
2066	0	0	0	0	0
2067	0	0	0	0	0
2068	0	0	0	0	0

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Single Discount Rate Development Projection of Contributions (Concluded)

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
2069	\$ 0	\$ 0	\$ 0	\$ 0	0
2070	0	0	0	0	0
2071	0	0	0	0	0
2072	0	0	0	0	0
2073	0	0	0	0	0
2074	0	0	0	0	0
2075	0	0	0	0	0
2076	0	0	0	0	0
2077	0	0	0	0	0
2078	0	0	0	0	0
2079	0	0	0	0	0
2080	0	0	0	0	0
2081	0	0	0	0	0
2082	0	0	0	0	0
2083	0	0	0	0	0
2084	0	0	0	0	0
2085	0	0	0	0	0
2086	0	0	0	0	0
2087	0	0	0	0	0
2088	0	0	0	0	0
2089	0	0	0	0	0
2090	0	0	0	0	0
2091	0	0	0	0	0
2092	0	0	0	0	0
2093	0	0	0	0	0
2094	0	0	0	0	0
2095	0	0	0	0	0
2096	0	0	0	0	0
2097	0	0	0	0	0
2098	0	0	0	0	0
2099	0	0	0	0	0
2100	0	0	0	0	0
2101	0	0	0	0	0
2102	0	0	0	0	0
2103	0	0	0	0	0
2104	0	0	0	0	0
2105	0	0	0	0	0
2106	0	0	0	0	0
2107	0	0	0	0	0
2108	0	0	0	0	0
2109	0	0	0	0	0
2110	0	0	0	0	0
2111	0	0	0	0	0
2112	0	0	0	0	0
2113	0	0	0	0	0
2114	0	0	0	0	0
2115	0	0	0	0	0
2116	0	0	0	0	0
2117	0	0	0	0	0
2118	0	0	0	0	0

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Single Discount Rate Development Projection of Plan Fiduciary Net Position

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.25%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
2019	\$ 2,778,588	\$ 57,441	\$ 198,251	\$ 196,433	\$ 2,834,211
2020	2,834,211	59,667	210,520	200,108	2,883,466
2021	2,883,466	61,064	217,855	203,467	2,930,142
2022	2,930,142	63,786	224,901	206,697	2,975,724
2023	2,975,724	67,164	232,696	209,844	3,020,037
2024	3,020,037	67,190	237,692	212,880	3,062,414
2025	3,062,414	67,186	241,395	215,820	3,104,026
2026	3,104,026	67,054	243,861	218,745	3,145,963
2027	3,145,963	66,797	246,847	221,670	3,187,583
2028	3,187,583	66,211	249,791	224,561	3,228,565
2029	3,228,565	65,755	251,984	227,438	3,269,774
2030	3,269,774	65,495	253,672	230,357	3,311,954
2031	3,311,954	65,331	259,364	233,206	3,351,127
2032	3,351,127	65,377	260,046	236,023	3,392,482
2033	3,392,482	65,556	258,389	239,087	3,438,735
2034	3,438,735	65,742	261,072	242,351	3,485,756
2035	3,485,756	65,952	263,341	245,687	3,534,054
2036	3,534,054	66,197	260,213	249,309	3,589,347
2037	3,589,347	66,420	259,509	253,351	3,649,608
2038	3,649,608	66,426	264,524	257,541	3,709,050
2039	3,709,050	66,333	262,039	261,936	3,775,280
2040	3,775,280	66,534	258,242	266,880	3,850,452
2041	3,850,452	66,703	256,689	272,391	3,932,857
2042	3,932,857	66,894	253,783	278,476	4,024,443
2043	4,024,443	21,178	249,356	283,645	4,079,911
2044	4,079,911	20,026	255,059	287,423	4,132,301
2045	4,132,301	18,468	261,781	290,926	4,179,913
2046	4,179,913	17,159	261,447	294,343	4,229,968
2047	4,229,968	16,135	262,614	297,894	4,281,383
2048	4,281,383	14,211	273,799	301,155	4,322,950
2049	4,322,950	11,106	299,072	303,158	4,338,142
2050	4,338,142	7,873	330,892	303,011	4,318,133
2051	4,318,133	5,827	343,057	301,054	4,281,957
2052	4,281,957	4,041	363,347	297,645	4,220,297
2053	4,220,297	2,292	375,727	292,671	4,139,533
2054	4,139,533	1,832	372,290	286,922	4,055,998
2055	4,055,998	1,133	379,270	280,592	3,958,453
2056	3,958,453	361	383,479	273,343	3,848,678
2057	3,848,678	156	379,467	265,520	3,734,886
2058	3,734,886	93	374,775	257,435	3,617,639
2059	3,617,639	41	370,126	249,098	3,496,652
2060	3,496,652	1	364,870	240,512	3,372,296
2061	3,372,296	0	359,175	231,699	3,244,820
2062	3,244,820	0	353,076	222,674	3,114,418
2063	3,114,418	0	346,573	213,452	2,981,297
2064	2,981,297	0	339,631	204,048	2,845,714
2065	2,845,714	0	332,215	194,482	2,707,981
2066	2,707,981	0	324,293	184,779	2,568,467
2067	2,568,467	0	315,832	174,965	2,427,600
2068	2,427,600	0	306,806	165,074	2,285,868

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Single Discount Rate Development

Projection of Plan Fiduciary Net Position (Concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.25%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
2069	\$ 2,285,868	\$ 0	\$ 297,202	\$ 155,140	\$ 2,143,807
2070	2,143,807	0	287,009	145,204	2,002,002
2071	2,002,002	0	276,229	135,307	1,861,080
2072	1,861,080	0	264,874	125,495	1,721,701
2073	1,721,701	0	252,968	115,814	1,584,547
2074	1,584,547	0	240,553	106,312	1,450,306
2075	1,450,306	0	227,672	97,038	1,319,673
2076	1,319,673	0	214,370	88,041	1,193,344
2077	1,193,344	0	200,716	79,369	1,071,997
2078	1,071,997	0	186,793	71,067	956,271
2079	956,271	0	172,706	63,179	846,743
2080	846,743	0	158,588	55,741	743,896
2081	743,896	0	144,571	48,783	648,109
2082	648,109	0	130,790	42,330	559,648
2083	559,648	0	117,377	36,394	478,665
2084	478,665	0	104,435	30,984	405,214
2085	405,214	0	92,056	26,099	339,257
2086	339,257	0	80,324	21,735	280,669
2087	280,669	0	69,309	17,880	229,240
2088	229,240	0	59,085	14,516	184,670
2089	184,670	0	49,710	11,618	146,578
2090	146,578	0	41,224	9,159	114,512
2091	114,512	0	33,657	7,103	87,958
2092	87,958	0	27,019	5,415	66,354
2093	66,354	0	21,299	4,052	49,106
2094	49,106	0	16,468	2,974	35,612
2095	35,612	0	12,475	2,138	25,274
2096	25,274	0	9,244	1,503	17,533
2097	17,533	0	6,692	1,033	11,874
2098	11,874	0	4,727	693	7,840
2099	7,840	0	3,253	453	5,039
2100	5,039	0	2,178	288	3,149
2101	3,149	0	1,416	178	1,911
2102	1,911	0	893	107	1,125
2103	1,125	0	546	62	641
2104	641	0	322	35	354
2105	354	0	184	19	189
2106	189	0	101	10	98
2107	98	0	53	5	51
2108	51	0	27	3	27
2109	27	0	13	1	15
2110	15	0	6	1	10
2111	10	0	3	1	8
2112	8	0	1	1	7
2113	7	0	0	0	7
2114	7	0	0	1	7
2115	7	0	0	1	8
2116	8	0	0	1	9
2117	9	0	0	1	9
2118	9	0	0	1	10

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Single Discount Rate Development

Present Values of Projected Benefits

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{((a)-.5)}	(g)=(e)*vf ^{((a)-.5)}	(h)=(c)/(1+sdr) ^{((a)-.5)}
2019	\$ 2,778,588	\$ 198,251	\$ 198,251	\$ 0	\$ 191,433	\$ 0	\$ 191,433
2020	2,834,211	210,520	210,520	0	189,539	0	189,539
2021	2,883,466	217,855	217,855	0	182,883	0	182,883
2022	2,930,142	224,901	224,901	0	176,036	0	176,036
2023	2,975,724	232,696	232,696	0	169,825	0	169,825
2024	3,020,037	237,692	237,692	0	161,744	0	161,744
2025	3,062,414	241,395	241,395	0	153,160	0	153,160
2026	3,104,026	243,861	243,861	0	144,266	0	144,266
2027	3,145,963	246,847	246,847	0	136,160	0	136,160
2028	3,187,583	249,791	249,791	0	128,470	0	128,470
2029	3,228,565	251,984	251,984	0	120,837	0	120,837
2030	3,269,774	253,672	253,672	0	113,423	0	113,423
2031	3,311,954	259,364	259,364	0	108,129	0	108,129
2032	3,351,127	260,046	260,046	0	101,085	0	101,085
2033	3,392,482	258,389	258,389	0	93,651	0	93,651
2034	3,438,735	261,072	261,072	0	88,227	0	88,227
2035	3,485,756	263,341	263,341	0	82,978	0	82,978
2036	3,534,054	260,213	260,213	0	76,450	0	76,450
2037	3,589,347	259,509	259,509	0	71,089	0	71,089
2038	3,649,608	264,524	264,524	0	67,564	0	67,564
2039	3,709,050	262,039	262,039	0	62,405	0	62,405
2040	3,775,280	258,242	258,242	0	57,344	0	57,344
2041	3,850,452	256,689	256,689	0	53,146	0	53,146
2042	3,932,857	253,783	253,783	0	48,992	0	48,992
2043	4,024,443	249,356	249,356	0	44,883	0	44,883
2044	4,079,911	255,059	255,059	0	42,806	0	42,806
2045	4,132,301	261,781	261,781	0	40,965	0	40,965
2046	4,179,913	261,447	261,447	0	38,147	0	38,147
2047	4,229,968	262,614	262,614	0	35,727	0	35,727
2048	4,281,383	273,799	273,799	0	34,731	0	34,731
2049	4,322,950	299,072	299,072	0	35,372	0	35,372
2050	4,338,142	330,892	330,892	0	36,490	0	36,490
2051	4,318,133	343,057	343,057	0	35,274	0	35,274
2052	4,281,957	363,347	363,347	0	34,835	0	34,835
2053	4,220,297	375,727	375,727	0	33,587	0	33,587
2054	4,139,533	372,290	372,290	0	31,030	0	31,030
2055	4,055,998	379,270	379,270	0	29,475	0	29,475
2056	3,958,453	383,479	383,479	0	27,787	0	27,787
2057	3,848,678	379,467	379,467	0	25,638	0	25,638
2058	3,734,886	374,775	374,775	0	23,609	0	23,609
2059	3,617,639	370,126	370,126	0	21,740	0	21,740
2060	3,496,652	364,870	364,870	0	19,983	0	19,983
2061	3,372,296	359,175	359,175	0	18,341	0	18,341
2062	3,244,820	353,076	353,076	0	16,811	0	16,811
2063	3,114,418	346,573	346,573	0	15,386	0	15,386
2064	2,981,297	339,631	339,631	0	14,058	0	14,058
2065	2,845,714	332,215	332,215	0	12,822	0	12,822
2066	2,707,981	324,293	324,293	0	11,670	0	11,670
2067	2,568,467	315,832	315,832	0	10,597	0	10,597
2068	2,427,600	306,806	306,806	0	9,598	0	9,598

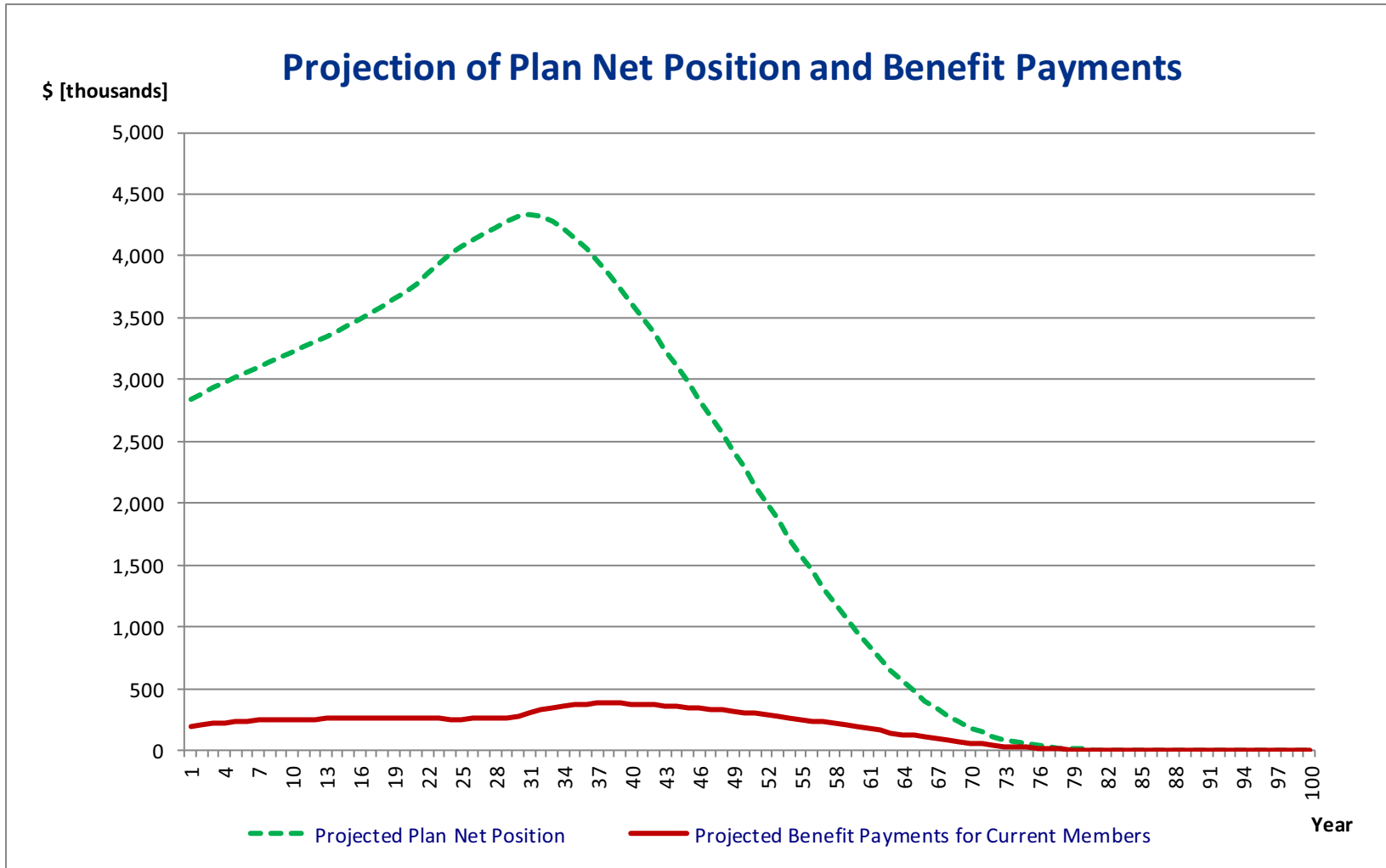
The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Single Discount Rate Development

Present Values of Projected Benefits (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{(a)-5}	(g)=(e)*vf ^{(a)-5}	(h)=(c)/(1+sdr) ^{(a)-5}
2069	\$ 2,285,868	\$ 297,202	\$ 297,202	\$ 0	\$ 8,669	\$ 0	\$ 8,669
2070	2,143,807	287,009	287,009	0	7,806	0	7,806
2071	2,002,002	276,229	276,229	0	7,005	0	7,005
2072	1,861,080	264,874	264,874	0	6,263	0	6,263
2073	1,721,701	252,968	252,968	0	5,577	0	5,577
2074	1,584,547	240,553	240,553	0	4,945	0	4,945
2075	1,450,306	227,672	227,672	0	4,364	0	4,364
2076	1,319,673	214,370	214,370	0	3,831	0	3,831
2077	1,193,344	200,716	200,716	0	3,345	0	3,345
2078	1,071,997	186,793	186,793	0	2,902	0	2,902
2079	956,271	172,706	172,706	0	2,502	0	2,502
2080	846,743	158,588	158,588	0	2,142	0	2,142
2081	743,896	144,571	144,571	0	1,821	0	1,821
2082	648,109	130,790	130,790	0	1,536	0	1,536
2083	559,648	117,377	117,377	0	1,285	0	1,285
2084	478,665	104,435	104,435	0	1,066	0	1,066
2085	405,214	92,056	92,056	0	876	0	876
2086	339,257	80,324	80,324	0	713	0	713
2087	280,669	69,309	69,309	0	574	0	574
2088	229,240	59,085	59,085	0	456	0	456
2089	184,670	49,710	49,710	0	358	0	358
2090	146,578	41,224	41,224	0	277	0	277
2091	114,512	33,657	33,657	0	211	0	211
2092	87,958	27,019	27,019	0	158	0	158
2093	66,354	21,299	21,299	0	116	0	116
2094	49,106	16,468	16,468	0	83	0	83
2095	35,612	12,475	12,475	0	59	0	59
2096	25,274	9,244	9,244	0	41	0	41
2097	17,533	6,692	6,692	0	28	0	28
2098	11,874	4,727	4,727	0	18	0	18
2099	7,840	3,253	3,253	0	12	0	12
2100	5,039	2,178	2,178	0	7	0	7
2101	3,149	1,416	1,416	0	4	0	4
2102	1,911	893	893	0	3	0	3
2103	1,125	546	546	0	1	0	1
2104	641	322	322	0	1	0	1
2105	354	184	184	0	0	0	0
2106	189	101	101	0	0	0	0
2107	98	53	53	0	0	0	0
2108	51	27	27	0	0	0	0
2109	27	13	13	0	0	0	0
2110	15	6	6	0	0	0	0
2111	10	3	3	0	0	0	0
2112	8	1	1	0	0	0	0
2113	7	0	0	0	0	0	0
2114	7	0	0	0	0	0	0
2115	7	0	0	0	0	0	0
2116	8	0	0	0	0	0	0
2117	9	0	0	0	0	0	0
2118	9	0	0	0	0	0	0
Totals					\$ 3,549,250	\$ -	\$ 3,549,250

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.



The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

SECTION D

GLOSSARY OF TERMS

Glossary of Terms

<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Accrued Service</i>	Service credited under the fund which was rendered before the date of the actuarial valuation.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Glossary of Terms (Continued)

Amortization Payment

The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.

Amortization Method

The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).

Cost-of-Living Adjustments

Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)

A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

Covered Valuation Payroll

The earnings of covered employees for the year ended on the valuation date, which is typically only the pensionable pay and does not include pay above any pay cap. It is not necessarily the same as payroll actually paid because it excludes all pay for people who exited during the year.

Deferred Inflows and Outflows

The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.

Discount Rate

For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically:

1. The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and
2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Entry Age Actuarial Cost Method (EAN)

The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Glossary of Terms (Continued)

<i>GASB</i>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<i>Fiduciary Net Position</i>	The fiduciary net position is the value of the assets of the trust.
<i>Long-Term Expected Rate of Return</i>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<i>Money-Weighted Rate of Return</i>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 68, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<i>Multiple-Employer Defined Benefit Pension Plan</i>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<i>Municipal Bond Rate</i>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<i>Net Pension Liability (NPL)</i>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<i>Non-Employer Contribution Entities</i>	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered non-employer contribution entities.
<i>Normal Cost</i>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
<i>Other Postemployment Benefits (OPEB)</i>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<i>Real Rate of Return</i>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<i>Service Cost</i>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

Glossary of Terms (Concluded)

Total Pension Expense

The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

1. Service Cost;
2. Interest on the Total Pension Liability;
3. Current-Period Benefit Changes;
4. Employee Contributions (made negative for addition here);
5. Projected Earnings on Plan Investments (made negative for addition here);
6. Pension Plan Administrative Expense;
7. Other Changes in Plan Fiduciary Net Position;
8. Recognition of Outflow (Inflow) of Resources due to Liabilities;
and
9. Recognition of Outflow (Inflow) of Resources due to Assets.

Total Pension Liability (TPL)

The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued Liability (UAAL)

The UAAL is the difference between actuarial accrued liability and valuation assets.

Valuation Assets

The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of the GASB Statement No. 68, the valuation asset is equal to the market value of assets.