

Arlington Hgts SD 25 Regular

GASB Statement No. 68 Employer Reporting
Accounting Schedules
December 31, 2019



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March 26, 2020

Arlington Hgts SD 25
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 No. 68 may produce significantly different results. This report may be provided to parties other than the Arlington Hgts SD 25 only in its entirety and only with the permission of Arlington Hgts SD 25. 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 by us.

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, 2019 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 Arlington Hgts SD 25. 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:sc

SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2019

Actuarial Valuation Date	December 31, 2019
Measurement Date of the Net Pension Liability	December 31, 2019
Fiscal Year End	June 30, 2020

Membership

Number of	
- Retirees and Beneficiaries	305
- Inactive, Non-Retired Members	285
- Active Members	268
- Total	858
Covered Valuation Payroll ⁽¹⁾	\$ 7,992,929

Net Pension Liability

Total Pension Liability/(Asset)	\$ 50,383,606
Plan Fiduciary Net Position	46,432,060
Net Pension Liability/(Asset)	\$ 3,951,546
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	92.16%
Net Pension Liability as a Percentage of Covered Valuation Payroll	49.44%

Development of the Single Discount Rate as of December 31, 2019

Long-Term Expected Rate of Investment Return	7.25%
Long-Term Municipal Bond Rate ⁽²⁾	2.75%
Last year ending December 31 in the 2020 to 2119 projection period for which projected benefit payments are fully funded	2119
Resulting Single Discount Rate based on the above development	7.25%

Single Discount Rate calculated using December 31, 2018 Measurement Date 7.25%

Total Pension Expense/(Income) \$ 1,174,451

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	\$ 585,970	\$ 0
Changes in assumptions	299,879	5,851
Net difference between projected and actual earnings on pension plan investments	3,443,741	5,394,514
Total	\$ 4,329,590	\$ 5,400,365

⁽¹⁾ Does not necessarily represent Covered Employee Payroll as defined in GASB Statement No. 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, 2019. 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, 2019.

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, 2019 Annual Actuarial Valuation report dated March 13, 2020);
- 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 11);
- significant assumptions and methods used to calculate the total pension liability (page 16);
- inputs to the single discount rate (page 17);
- certain information about mortality assumptions and the dates of experience studies (page 14 and page 16);
- 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 14 and 16);
- 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 pages A-3, B-5 and Section D of the December 31, 2019 Annual Actuarial Valuation report dated March 13, 2020, as well as page 14);
- 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 11);
- 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 11); 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 12);
- 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 12); and
- comparison of actual employer contributions to the actuarially determined contributions based on the plan's funding policy (page 13).

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, 2019 and a measurement date of December 31, 2019.

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 2.75% (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 the 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 2119 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 an 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, 2019

A. Expense/(Income)

1. Service Cost	\$	826,609
2. Interest on the Total Pension Liability		3,418,240
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(367,632)
5. Projected Earnings on Plan Investments (made negative for addition here)		(2,861,926)
6. Other Changes in Plan Fiduciary Net Position		(372,955)
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		594,430
8. Recognition of Outflow (Inflow) of Resources due to Assets		(62,315)
9. Total Pension Expense/(Income)	\$	1,174,451

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 2,258.38 years. Additionally, the total plan membership (active employees and inactive employees) was 823. 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 2.7441 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, 2019

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$	840,609
2. Assumption Changes (gains) or losses	\$	0
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		2.7441
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	\$	306,333
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$	0
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$	306,333
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	\$	534,276
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$	0
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$	534,276

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$	(4,754,943)
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	\$	(950,989)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$	(3,803,954)

* 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, 2019

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	\$ 1,060,264	\$ 465,834	\$ 594,430
2. Due to Assets	1,683,955	1,746,270	(62,315)
3. Total	\$ 2,744,219	\$ 2,212,104	\$ 532,115

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	\$ 614,809	\$ 781	\$ 614,028
2. Assumption changes	445,455	465,053	\$ (19,598)
3. Net difference between projected and actual earnings on pension plan investments	1,683,955	1,746,270	(62,315)
4. Total	\$ 2,744,219	\$ 2,212,104	\$ 532,115

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	\$ 585,970	\$ 0	\$ 585,970
2. Assumption changes	299,879	5,851	294,028
3. Net difference between projected and actual earnings on pension plan investments	3,443,741	5,394,514	(1,950,773)
4. Total	\$ 4,329,590	\$ 5,400,365	\$ (1,070,775)

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
2020	\$ 81,897
2021	(384,510)
2022	182,825
2023	(950,987)
2024	0
Thereafter	0
Total	\$ (1,070,775)

Recognition of Deferred Outflows and Inflows of Resources Reporting Date - December 31, 2019

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2014	\$ 347,151	3.0847	\$ 0	\$ 0	0.0000
2015	265,732	3.0759	0	0	0.0000
2016	(35,527)	3.0673	(781)	0	0.0000
2017	711,424	3.0127	236,142	2,998	0.0127
2018	193,364	2.6732	72,334	48,696	0.6732
2019	840,609	2.7441	306,333	534,276	1.7441
Total			\$ 614,028	\$ 585,970	
Deferred Outflow (Inflow) due to Assumption Changes					
2014	\$ 1,806,494	3.0847	\$ 0	\$ 0	0.0000
2015	94,426	3.0759	0	0	0.0000
2016	(194,112)	3.0673	(4,260)	0	0.0000
2017	(1,388,230)	3.0127	(460,793)	(5,851)	0.0127
2018	1,190,789	2.6732	445,455	299,879	0.6732
2019	0	2.7441	0	0	1.7441
Total			\$ (19,598)	\$ 294,028	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2015	\$ 2,539,218	5.0000	\$ 507,842	\$ 0	0.0000
2016	211,489	5.0000	42,298	42,297	1.0000
2017	(3,976,403)	5.0000	(795,281)	(1,590,560)	2.0000
2018	5,669,074	5.0000	1,133,815	3,401,444	3.0000
2019	(4,754,943)	5.0000	(950,989)	(3,803,954)	4.0000
Total			\$ (62,315)	\$ (1,950,773)	

Schedule of Changes in Net Pension Liability and Related Ratios Current Period Calendar Year Ended December 31, 2019

A. Total pension liability	
1. Service Cost	\$ 826,609
2. Interest on the Total Pension Liability	3,418,240
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	840,609
5. Changes of assumptions	0
6. Benefit payments, including refunds of employee contributions	(2,873,366)
7. Net change in total pension liability	\$ 2,212,092
8. Total pension liability – beginning	48,171,514
9. Total pension liability – ending	<u><u>\$ 50,383,606</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 813,477
2. Contributions – employee	367,632
3. Net investment income	7,616,869
4. Benefit payments, including refunds of employee contributions	(2,873,366)
5. Other (Net Transfer)	372,955
6. Net change in plan fiduciary net position	\$ 6,297,567
7. Plan fiduciary net position – beginning	40,134,493
8. Plan fiduciary net position – ending	<u><u>\$ 46,432,060</u></u>
C. Net pension liability/(asset)	<u><u>\$ 3,951,546</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	92.16%
E. Covered Valuation payroll	\$ 7,992,929
F. Net pension liability as a percentage of covered valuation payroll	49.44%

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

	1% Decrease 6.25%	Current Single Discount Rate Assumption 7.25%	1% Increase 8.25%
Total Pension Liability	\$ 55,986,169	\$ 50,383,606	\$ 45,711,683
Plan Fiduciary Net Position	46,432,060	46,432,060	46,432,060
Net Pension Liability/(Asset)	\$ 9,554,109	\$ 3,951,546	\$ (720,377)



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,	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Total Pension Liability										
Service Cost	\$ 826,609	\$ 777,672	\$ 848,202	\$ 866,048	\$ 869,695	\$ 915,435				
Interest on the Total Pension Liability	3,418,240	3,324,644	3,251,677	3,120,202	2,969,300	2,690,242				
Benefit Changes	0	0	0	0	0	0				
Difference between Expected and Actual Experience	840,609	193,364	711,424	(35,527)	265,732	347,151				
Assumption Changes	0	1,190,789	(1,388,230)	(194,112)	94,426	1,806,494				
Benefit Payments and Refunds	(2,873,366)	(2,509,401)	(2,320,450)	(2,115,056)	(2,021,132)	(1,798,506)				
Net Change in Total Pension Liability	2,212,092	2,977,068	1,102,623	1,641,555	2,178,021	3,960,816				
Total Pension Liability - Beginning	48,171,514	45,194,446	44,091,823	42,450,268	40,272,247	36,311,431				
Total Pension Liability - Ending (a)	\$ 50,383,606	\$ 48,171,514	\$ 45,194,446	\$ 44,091,823	\$ 42,450,268	\$ 40,272,247				
Plan Fiduciary Net Position										
Employer Contributions	\$ 813,477	\$ 912,384	\$ 919,875	\$ 943,309	\$ 896,167	\$ 916,975				
Employee Contributions	367,632	351,229	365,413	348,069	348,858	346,070				
Pension Plan Net Investment Income	7,616,869	(2,448,992)	6,780,945	2,489,530	180,413	2,091,460				
Benefit Payments and Refunds	(2,873,366)	(2,509,401)	(2,320,450)	(2,115,056)	(2,021,132)	(1,798,506)				
Other	372,955	543,908	(743,786)	384,179	358,469	360,607				
Net Change in Plan Fiduciary Net Position	6,297,567	(3,150,872)	5,001,997	2,050,031	(237,225)	1,916,606				
Plan Fiduciary Net Position - Beginning	40,134,493	43,285,365	38,283,368	36,233,337	36,470,562	34,553,956				
Plan Fiduciary Net Position - Ending (b)	\$ 46,432,060	\$ 40,134,493	\$ 43,285,365	\$ 38,283,368	\$ 36,233,337	\$ 36,470,562				
Net Pension Liability/(Asset) - Ending (a) - (b)	3,951,546	8,037,021	1,909,081	5,808,455	6,216,931	3,801,685				
Plan Fiduciary Net Position as a Percentage										
of Total Pension Liability	92.16%	83.32 %	95.78 %	86.83%	85.35 %	90.56 %				
Covered Valuation Payroll	\$ 7,992,929	\$ 7,804,690	\$ 7,779,557	\$ 7,734,843	\$ 7,633,456	\$ 7,545,460				
Net Pension Liability as a Percentage										
of Covered Valuation Payroll	49.44%	102.98 %	24.54 %	75.09%	81.44 %	50.38 %				



Multiyear Schedule of Contributions

Last 10 Calendar Years

Calendar Year Ending December 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Valuation Payroll	Actual Contribution as a % of Covered Valuation Payroll
2014	\$ 909,982	\$ 916,975	\$ (6,993)	\$ 7,545,460	12.15%
2015	896,168	896,167	1	7,633,456	11.74%
2016	931,275	943,309	(12,034)	7,734,843	12.20%
2017	908,652	919,875	(11,223)	7,779,557	11.82%
2018	898,320	912,384	(14,064)	7,804,690	11.69%
2019	805,687 *	813,477	(7,790)	7,992,929	10.18%

* Estimated based on contribution rate of 10.08% and covered valuation payroll of \$7,992,929.
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 2019 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 2019 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): 24-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 19 years for most employers (three employers were financed over 28 years and four others were financed over 29 years).
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage growth	3.25%
Price Inflation	2.50%
Salary Increases	3.35% to 14.25% 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 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 Healthy 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 adjustments 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.

* Based on Valuation Assumptions used in the December 31, 2017 actuarial valuation.

Development of Market Value of Assets

Market Value of Assets as of December 31, 2019

1. Employee Contribution Reserve (MDF Assets from IMRF)	\$	7,021,990
2. Employer Contribution Reserve (EAF assets from IMRF)	\$	10,430,275
3. Annuitant Reserve	\$	28,949,316
4. Miscellaneous Adjustment*	\$	<u>30,479</u>
5. Net Market Value	\$	46,432,060

* Includes an adjustment factor of 0.0006568629 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	\$	805,078
b.) Accelerated payments and Reserve Payments		<u>8,399</u>
	\$	813,477

2. Member

a.) Wage Reporting	\$	359,494
b.) Member Payments (i.e. ERI, Pension Payments)		<u>8,138</u>
Sub-total (Amount used for valuation on Schedule of Changes Page 10)	\$	367,632
c.) Voluntary Additional Plan	\$	<u>90,226</u>
Total Member Contributions (a+b+c)	\$	457,858

Total Employer and Member Contributions (1+2) \$ **1,271,335**

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	3.35% 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 Healthy 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 adjustments 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, 2019 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 2.75%; 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
2019	\$ 7,992,929				
2020	7,781,507	\$ 350,168	\$ 467,069	\$ 435,301	\$ 1,252,538
2021	7,168,456	322,580	425,994	404,463	1,153,038
2022	6,656,656	299,550	388,960	368,581	1,057,090
2023	6,217,100	279,770	362,658	326,987	969,414
2024	5,826,934	262,212	338,739	278,900	879,851
2025	5,476,977	246,464	316,216	285,873	848,553
2026	5,153,885	231,925	296,025	293,020	820,969
2027	4,851,742	218,328	277,223	300,345	795,896
2028	4,580,088	206,104	259,879	307,854	773,837
2029	4,325,550	194,650	243,715	315,550	753,915
2030	4,069,822	183,142	227,688	323,439	734,269
2031	3,819,203	171,864	212,527	331,525	715,916
2032	3,579,078	161,058	197,741	339,813	698,613
2033	3,347,929	150,657	183,971	348,308	682,936
2034	3,122,096	140,494	170,320	357,016	667,830
2035	2,875,905	129,416	156,031	365,941	651,388
2036	2,614,136	117,636	140,529	375,090	633,255
2037	2,365,272	106,437	126,210	384,467	617,114
2038	2,130,326	95,865	112,614	394,079	602,558
2039	1,923,708	86,567	100,544	403,931	591,042
2040	1,729,346	77,821	89,353	414,029	581,203
2041	1,543,926	69,477	79,005	424,380	572,862
2042	1,379,872	62,094	69,924	434,989	567,007
2043	1,233,098	55,489	61,751	0	117,240
2044	1,105,524	49,749	54,812	0	104,561
2045	993,073	44,688	48,546	0	93,234
2046	890,029	40,051	42,800	0	82,851
2047	791,284	35,608	37,343	0	72,951
2048	703,663	31,665	32,648	0	64,313
2049	617,908	27,806	28,239	0	56,045
2050	516,872	23,259	23,313	0	46,573
2051	437,309	19,679	19,638	0	39,317
2052	386,565	17,395	17,244	0	34,639
2053	333,654	15,014	14,718	0	29,732
2054	281,001	12,645	12,283	0	24,928
2055	235,104	10,580	10,230	0	20,810
2056	206,565	9,295	8,886	0	18,181
2057	161,777	7,280	6,879	0	14,159
2058	91,396	4,113	3,877	0	7,990
2059	40,333	1,815	1,739	0	3,554
2060	13,069	588	587	0	1,175
2061	5,168	233	256	0	489
2062	2,458	111	139	0	250
2063	1,442	65	87	0	152
2064	1,072	48	67	0	116
2065	832	37	54	0	91
2066	582	26	39	0	65
2067	381	17	26	0	44
2068	299	13	21	0	34
2069	136	6	9	0	15

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
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
2119	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		Projected Total		Projected Benefit		Projected		Projected Ending Plan	
	Plan Net Position	Contributions	Payments	Earnings at 7.25%	Investment	Net Position				
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)					
2020	\$ 46,432,060	\$ 1,252,538	\$ 3,003,985	\$ 3,303,945	\$ 47,984,558					
2021	47,984,558	1,153,037	3,167,796	3,407,123	49,376,923					
2022	49,376,923	1,057,091	3,323,496	3,499,107	50,609,625					
2023	50,609,625	969,414	3,470,374	3,580,124	51,688,789					
2024	51,688,789	879,852	3,594,957	3,650,737	52,624,420					
2025	52,624,420	848,553	3,747,487	3,712,023	53,437,509					
2026	53,437,509	820,969	3,886,151	3,765,051	54,137,377					
2027	54,137,377	795,896	4,021,700	3,810,070	54,721,644					
2028	54,721,644	773,837	4,133,595	3,847,659	55,209,544					
2029	55,209,544	753,915	4,242,144	3,878,456	55,599,771					
2030	55,599,771	734,269	4,353,746	3,902,073	55,882,367					
2031	55,882,367	715,916	4,455,196	3,918,294	56,061,382					
2032	56,061,382	698,613	4,541,695	3,927,576	56,145,875					
2033	56,145,875	682,936	4,624,287	3,930,202	56,134,726					
2034	56,134,726	667,830	4,708,179	3,925,868	56,020,245					
2035	56,020,245	651,388	4,803,946	3,913,571	55,781,259					
2036	55,781,259	633,255	4,891,820	3,892,469	55,415,164					
2037	55,415,164	617,114	4,964,141	3,862,777	54,930,914					
2038	54,930,914	602,557	5,016,661	3,825,280	54,342,090					
2039	54,342,090	591,041	5,041,851	3,781,283	53,672,563					
2040	53,672,563	581,203	5,055,754	3,731,896	52,929,908					
2041	52,929,908	572,862	5,057,803	3,677,684	52,122,651					
2042	52,122,651	567,008	5,041,468	3,619,531	51,267,722					
2043	51,267,722	117,240	5,024,991	3,542,117	49,902,088					
2044	49,902,088	104,561	4,987,195	3,444,003	48,463,457					
2045	48,463,457	93,234	4,921,933	3,341,623	46,976,381					
2046	46,976,381	82,851	4,846,482	3,236,127	45,448,877					
2047	45,448,877	72,951	4,763,670	3,127,980	43,886,139					
2048	43,886,139	64,313	4,667,004	3,017,817	42,301,265					
2049	42,301,265	56,045	4,583,374	2,905,597	40,679,533					
2050	40,679,533	46,573	4,494,318	2,790,856	39,022,645					
2051	39,022,645	39,317	4,369,140	2,674,932	37,367,753					
2052	37,367,753	34,639	4,240,757	2,559,358	35,720,993					
2053	35,720,993	29,732	4,119,066	2,444,127	34,075,787					
2054	34,075,787	24,928	3,993,318	2,329,157	32,436,554					
2055	32,436,554	20,810	3,860,407	2,214,900	30,811,857					
2056	30,811,857	18,181	3,703,065	2,102,620	29,229,593					
2057	29,229,593	14,159	3,584,556	1,991,983	27,651,179					
2058	27,651,179	7,990	3,482,266	1,880,971	26,057,874					
2059	26,057,874	3,554	3,358,910	1,769,692	24,472,211					
2060	24,472,211	1,175	3,209,912	1,659,954	22,923,427					
2061	22,923,427	489	3,048,065	1,553,407	21,429,257					
2062	21,429,257	250	2,887,839	1,450,777	19,992,446					
2063	19,992,446	152	2,731,176	1,352,185	18,613,607					
2064	18,613,607	116	2,578,018	1,257,673	17,293,378					
2065	17,293,378	91	2,428,561	1,167,278	16,032,186					
2066	16,032,186	65	2,282,980	1,081,026	14,830,297					
2067	14,830,297	44	2,141,286	998,935	13,687,989					
2068	13,687,989	34	2,003,702	921,017	12,605,339					
2069	12,605,339	15	1,870,627	847,264	11,581,991					

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)
2070	\$ 11,581,991	\$ 0	\$ 1,741,968	\$ 777,653	\$ 10,617,675
2071	10,617,675	0	1,618,034	712,154	9,711,795
2072	9,711,795	0	1,499,172	650,711	8,863,334
2073	8,863,334	0	1,385,657	593,241	8,070,918
2074	8,070,918	0	1,277,748	539,634	7,332,803
2075	7,332,803	0	1,175,695	489,755	6,646,863
2076	6,646,863	0	1,079,655	443,445	6,010,653
2077	6,010,653	0	989,626	400,526	5,421,553
2078	5,421,553	0	905,498	360,813	4,876,867
2079	4,876,867	0	827,076	324,116	4,373,907
2080	4,373,907	0	754,082	290,251	3,910,075
2081	3,910,075	0	686,193	259,041	3,482,923
2082	3,482,923	0	623,066	230,321	3,090,178
2083	3,090,178	0	564,341	203,939	2,729,776
2084	2,729,776	0	509,682	179,756	2,399,850
2085	2,399,850	0	458,793	157,649	2,098,705
2086	2,098,705	0	411,402	137,504	1,824,807
2087	1,824,807	0	367,301	119,217	1,576,723
2088	1,576,723	0	326,319	102,690	1,353,095
2089	1,353,095	0	288,311	87,831	1,152,615
2090	1,152,615	0	253,185	74,547	973,976
2091	973,976	0	220,873	62,747	815,850
2092	815,850	0	191,277	52,337	676,910
2093	676,910	0	164,303	43,224	555,831
2094	555,831	0	139,867	35,316	451,280
2095	451,280	0	117,884	28,519	361,915
2096	361,915	0	98,266	22,739	286,388
2097	286,388	0	80,913	17,881	223,356
2098	223,356	0	65,721	13,853	171,488
2099	171,488	0	52,588	10,560	129,460
2100	129,460	0	41,400	7,911	95,971
2101	95,971	0	32,023	5,817	69,765
2102	69,765	0	24,298	4,193	49,660
2103	49,660	0	18,058	2,957	34,559
2104	34,559	0	13,123	2,038	23,475
2105	23,475	0	9,309	1,370	15,536
2106	15,536	0	6,432	897	10,001
2107	10,001	0	4,321	571	6,251
2108	6,251	0	2,819	353	3,785
2109	3,785	0	1,781	211	2,215
2110	2,215	0	1,087	122	1,250
2111	1,250	0	639	68	679
2112	679	0	360	36	355
2113	355	0	195	19	179
2114	179	0	102	9	87
2115	87	0	51	4	40
2116	40	0	25	2	17
2117	17	0	12	1	6
2118	6	0	5	0	2
2119	2	0	2	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

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}
2020	\$ 46,432,060	\$ 3,003,985	\$ 3,003,985	\$ 0	\$ 2,900,675	\$ 0	\$ 2,900,675
2021	47,984,558	3,167,796	3,167,796	0	2,852,077	0	2,852,077
2022	49,376,923	3,323,496	3,323,496	0	2,789,985	0	2,789,985
2023	50,609,625	3,470,374	3,470,374	0	2,716,350	0	2,716,350
2024	51,688,789	3,594,957	3,594,957	0	2,623,650	0	2,623,650
2025	52,624,420	3,747,487	3,747,487	0	2,550,087	0	2,550,087
2026	53,437,509	3,886,151	3,886,151	0	2,465,683	0	2,465,683
2027	54,137,377	4,021,700	4,021,700	0	2,379,194	0	2,379,194
2028	54,721,644	4,133,595	4,133,595	0	2,280,084	0	2,280,084
2029	55,209,544	4,242,144	4,242,144	0	2,181,780	0	2,181,780
2030	55,599,771	4,353,746	4,353,746	0	2,087,812	0	2,087,812
2031	55,882,367	4,455,196	4,455,196	0	1,992,039	0	1,992,039
2032	56,061,382	4,541,695	4,541,695	0	1,893,441	0	1,893,441
2033	56,145,875	4,624,287	4,624,287	0	1,797,551	0	1,797,551
2034	56,134,726	4,708,179	4,708,179	0	1,706,444	0	1,706,444
2035	56,020,245	4,803,946	4,803,946	0	1,623,454	0	1,623,454
2036	55,781,259	4,891,820	4,891,820	0	1,541,399	0	1,541,399
2037	55,415,164	4,964,141	4,964,141	0	1,458,449	0	1,458,449
2038	54,930,914	5,016,661	5,016,661	0	1,374,247	0	1,374,247
2039	54,342,090	5,041,851	5,041,851	0	1,287,783	0	1,287,783
2040	53,672,563	5,055,754	5,055,754	0	1,204,041	0	1,204,041
2041	52,929,908	5,057,803	5,057,803	0	1,123,104	0	1,123,104
2042	52,122,651	5,041,468	5,041,468	0	1,043,801	0	1,043,801
2043	51,267,722	5,024,991	5,024,991	0	970,060	0	970,060
2044	49,902,088	4,987,195	4,987,195	0	897,682	0	897,682
2045	48,463,457	4,921,933	4,921,933	0	826,047	0	826,047
2046	46,976,381	4,846,482	4,846,482	0	758,400	0	758,400
2047	45,448,877	4,763,670	4,763,670	0	695,050	0	695,050
2048	43,886,139	4,667,004	4,667,004	0	634,914	0	634,914
2049	42,301,265	4,583,374	4,583,374	0	581,387	0	581,387
2050	40,679,533	4,494,318	4,494,318	0	531,552	0	531,552
2051	39,022,645	4,369,140	4,369,140	0	481,816	0	481,816
2052	37,367,753	4,240,757	4,240,757	0	436,045	0	436,045
2053	35,720,993	4,119,066	4,119,066	0	394,902	0	394,902
2054	34,075,787	3,993,318	3,993,318	0	356,966	0	356,966
2055	32,436,554	3,860,407	3,860,407	0	321,758	0	321,758
2056	30,811,857	3,703,065	3,703,065	0	287,779	0	287,779
2057	29,229,593	3,584,556	3,584,556	0	259,739	0	259,739
2058	27,651,179	3,482,266	3,482,266	0	235,270	0	235,270
2059	26,057,874	3,358,910	3,358,910	0	211,595	0	211,595
2060	24,472,211	3,209,912	3,209,912	0	188,540	0	188,540
2061	22,923,427	3,048,065	3,048,065	0	166,931	0	166,931
2062	21,429,257	2,887,839	2,887,839	0	147,465	0	147,465
2063	19,992,446	2,731,176	2,731,176	0	130,037	0	130,037
2064	18,613,607	2,578,018	2,578,018	0	114,447	0	114,447
2065	17,293,378	2,428,561	2,428,561	0	100,524	0	100,524
2066	16,032,186	2,282,980	2,282,980	0	88,110	0	88,110
2067	14,830,297	2,141,286	2,141,286	0	77,055	0	77,055
2068	13,687,989	2,003,702	2,003,702	0	67,230	0	67,230
2069	12,605,339	1,870,627	1,870,627	0	58,522	0	58,522

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.



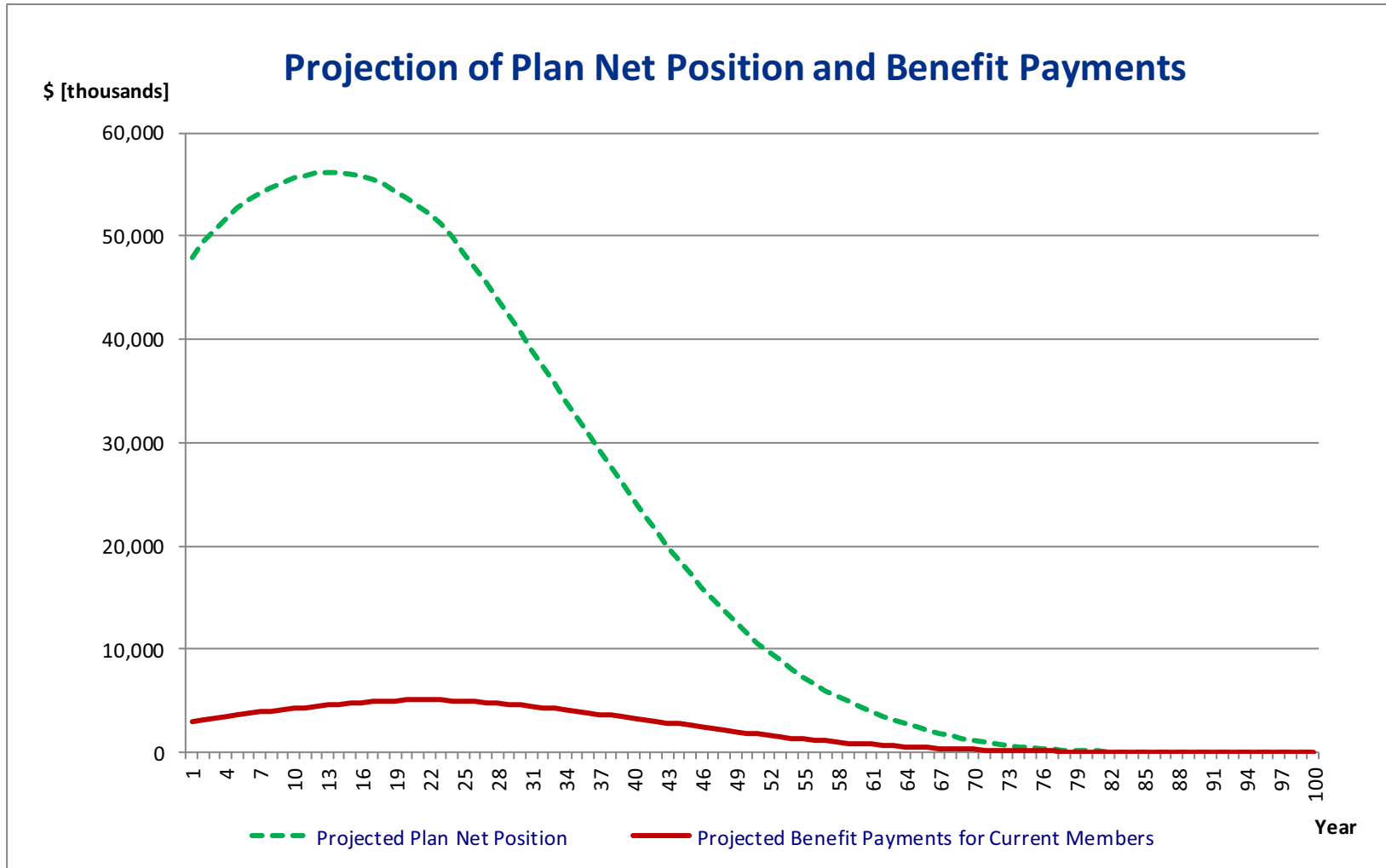
Single Discount Rate Development

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 ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=(c)/(1+sdr) ^a ((a)-.5)
2070	\$ 11,581,991	\$ 1,741,968	\$ 1,741,968	\$ 0	\$ 50,813	\$ 0	\$ 50,813
2071	10,617,675	1,618,034	1,618,034	0	44,007	0	44,007
2072	9,711,795	1,499,172	1,499,172	0	38,018	0	38,018
2073	8,863,334	1,385,657	1,385,657	0	32,764	0	32,764
2074	8,070,918	1,277,748	1,277,748	0	28,170	0	28,170
2075	7,332,803	1,175,695	1,175,695	0	24,168	0	24,168
2076	6,646,863	1,079,655	1,079,655	0	20,694	0	20,694
2077	6,010,653	989,626	989,626	0	17,686	0	17,686
2078	5,421,553	905,498	905,498	0	15,088	0	15,088
2079	4,876,867	827,076	827,076	0	12,850	0	12,850
2080	4,373,907	754,082	754,082	0	10,924	0	10,924
2081	3,910,075	686,193	686,193	0	9,269	0	9,269
2082	3,482,923	623,066	623,066	0	7,847	0	7,847
2083	3,090,178	564,341	564,341	0	6,627	0	6,627
2084	2,729,776	509,682	509,682	0	5,581	0	5,581
2085	2,399,850	458,793	458,793	0	4,684	0	4,684
2086	2,098,705	411,402	411,402	0	3,916	0	3,916
2087	1,824,807	367,301	367,301	0	3,260	0	3,260
2088	1,576,723	326,319	326,319	0	2,700	0	2,700
2089	1,353,095	288,311	288,311	0	2,225	0	2,225
2090	1,152,615	253,185	253,185	0	1,821	0	1,821
2091	973,976	220,873	220,873	0	1,482	0	1,482
2092	815,850	191,277	191,277	0	1,196	0	1,196
2093	676,910	164,303	164,303	0	958	0	958
2094	555,831	139,867	139,867	0	761	0	761
2095	451,280	117,884	117,884	0	598	0	598
2096	361,915	98,266	98,266	0	465	0	465
2097	286,388	80,913	80,913	0	357	0	357
2098	223,356	65,721	65,721	0	270	0	270
2099	171,488	52,588	52,588	0	202	0	202
2100	129,460	41,400	41,400	0	148	0	148
2101	95,971	32,023	32,023	0	107	0	107
2102	69,765	24,298	24,298	0	75	0	75
2103	49,660	18,058	18,058	0	52	0	52
2104	34,559	13,123	13,123	0	35	0	35
2105	23,475	9,309	9,309	0	23	0	23
2106	15,536	6,432	6,432	0	15	0	15
2107	10,001	4,321	4,321	0	9	0	9
2108	6,251	2,819	2,819	0	6	0	6
2109	3,785	1,781	1,781	0	3	0	3
2110	2,215	1,087	1,087	0	2	0	2
2111	1,250	639	639	0	1	0	1
2112	679	360	360	0	1	0	1
2113	355	195	195	0	0	0	0
2114	179	102	102	0	0	0	0
2115	87	51	51	0	0	0	0
2116	40	25	25	0	0	0	0
2117	17	12	12	0	0	0	0
2118	6	5	5	0	0	0	0
2119	2	2	2	0	0	0	0
Totals					\$ 56,242,831	\$ -	\$ 56,242,831

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.





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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)

<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Amortization Method</i>	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).
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	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.
<i>Covered Valuation Payroll</i>	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.
<i>Deferred Inflows and Outflows</i>	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.
<i>Discount Rate</i>	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: <ol style="list-style-type: none">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; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.
<i>Entry Age Actuarial Cost Method (EAN)</i>	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.