

Arbor Park SD 145 Regular

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



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March 26, 2020

Arbor Park SD 145
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 Arbor Park SD 145 only in its entirety and only with the permission of Arbor Park SD 145. 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 Arbor Park SD 145. 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	262
- Inactive, Non-Retired Members	254
- Active Members	84
- Total	600
Covered Valuation Payroll ⁽¹⁾	\$ 2,402,690

Net Pension Liability

Total Pension Liability/(Asset)	\$ 13,374,227
Plan Fiduciary Net Position	12,217,842
Net Pension Liability/(Asset)	\$ 1,156,385
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	91.35%
Net Pension Liability as a Percentage of Covered Valuation Payroll	48.13%

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) \$ 540,823

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	\$ 61,927	\$ 0
Changes in assumptions	0	0
Net difference between projected and actual earnings on pension plan investments	951,415	1,522,151
Total	\$ 1,013,342	\$ 1,522,151

⁽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	\$	238,994
2. Interest on the Total Pension Liability		897,692
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(108,121)
5. Projected Earnings on Plan Investments (made negative for addition here)		(750,830)
6. Other Changes in Plan Fiduciary Net Position		(107,297)
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		402,431
8. Recognition of Outflow (Inflow) of Resources due to Assets		(32,046)
9. Total Pension Expense/(Income)	\$	540,823

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 703.36 years. Additionally, the total plan membership (active employees and inactive employees) was 588. 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 1.1962 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	\$ 377,556
2. Assumption Changes (gains) or losses	\$ 0
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	1.1962
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	\$ 315,629
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	<u>\$ 315,629</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	\$ 61,927
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	<u>\$ 61,927</u>

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (1,290,050)
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	\$ (258,010)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (1,032,040)

* 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	\$ 402,431	\$ 0	\$ 402,431
2. Due to Assets	471,019	503,065	(32,046)
3. Total	\$ 873,450	\$ 503,065	\$ 370,385

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	\$ 342,972	\$ 0	\$ 342,972
2. Assumption changes	59,459	0	59,459
3. Net difference between projected and actual earnings on pension plan investments	471,019	503,065	(32,046)
4. Total	\$ 873,450	\$ 503,065	\$ 370,385

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	\$ 61,927	\$ 0	\$ 61,927
2. Assumption changes	0	0	0
3. Net difference between projected and actual earnings on pension plan investments	951,415	1,522,151	(570,736)
4. Total	\$ 1,013,342	\$ 1,522,151	\$ (508,809)

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	\$ (112,285)
2021	(191,786)
2022	53,272
2023	(258,010)
2024	0
Thereafter	0
Total	\$ (508,809)

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	\$ (192,102)	1.2402	\$ 0	\$ 0	0.0000
2015	33,893	1.2621	0	0	0.0000
2016	425,635	1.2840	0	0	0.0000
2017	(354,752)	1.1703	0	0	0.0000
2018	133,408	1.2578	27,343	0	0.0000
2019	377,556	1.1962	315,629	61,927	0.1962
Total			\$ 342,972	\$ 61,927	
Deferred Outflow (Inflow) due to Assumption Changes					
2014	\$ 495,070	1.2402	\$ 0	\$ 0	0.0000
2015	11,816	1.2621	0	0	0.0000
2016	(24,340)	1.2840	0	0	0.0000
2017	(389,040)	1.1703	0	0	0.0000
2018	290,097	1.2578	59,459	0	0.0000
2019	0	1.1962	0	0	0.1962
Total			\$ 59,459	\$ 0	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2015	\$ 710,843	5.0000	\$ 142,167	\$ 0	0.0000
2016	87,861	5.0000	17,572	17,573	1.0000
2017	(1,225,276)	5.0000	(245,055)	(490,111)	2.0000
2018	1,556,402	5.0000	311,280	933,842	3.0000
2019	(1,290,050)	5.0000	(258,010)	(1,032,040)	4.0000
Total			\$ (32,046)	\$ (570,736)	

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	\$ 238,994
2. Interest on the Total Pension Liability	897,692
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	377,556
5. Changes of assumptions	0
6. Benefit payments, including refunds of employee contributions	(804,945)
7. Net change in total pension liability	\$ 709,297
8. Total pension liability – beginning	12,664,930
9. Total pension liability – ending	<u><u>\$ 13,374,227</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 230,899
2. Contributions – employee	108,121
3. Net investment income	2,040,880
4. Benefit payments, including refunds of employee contributions	(804,945)
5. Other (Net Transfer)	107,297
6. Net change in plan fiduciary net position	\$ 1,682,252
7. Plan fiduciary net position – beginning	10,535,590
8. Plan fiduciary net position – ending	<u><u>\$ 12,217,842</u></u>
C. Net pension liability/(asset)	<u><u>\$ 1,156,385</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	91.35%
E. Covered Valuation payroll	\$ 2,402,690
F. Net pension liability as a percentage of covered valuation payroll	48.13%

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	\$ 14,728,642	\$ 13,374,227	\$ 12,225,957
Plan Fiduciary Net Position	12,217,842	12,217,842	12,217,842
Net Pension Liability/(Asset)	\$ 2,510,800	\$ 1,156,385	\$ 8,115



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	\$ 238,994	\$ 218,681	\$ 217,754	\$ 242,420	\$ 217,911	\$ 240,979				
Interest on the Total Pension Liability	897,692	874,444	904,517	846,188	816,194	764,359				
Benefit Changes	0	0	0	0	0	0				
Difference between Expected and Actual Experience	377,556	133,408	(354,752)	425,635	33,893	(192,102)				
Assumption Changes	0	290,097	(389,040)	(24,340)	11,816	495,070				
Benefit Payments and Refunds	(804,945)	(803,238)	(756,569)	(703,481)	(649,543)	(559,875)				
Net Change in Total Pension Liability	709,297	713,392	(378,090)	786,422	430,271	748,431				
Total Pension Liability - Beginning	12,664,930	11,951,538	12,329,628	11,543,206	11,112,935	10,364,504				
Total Pension Liability - Ending (a)	\$ 13,374,227	\$ 12,664,930	\$ 11,951,538	\$ 12,329,628	\$ 11,543,206	\$ 11,112,935				
Plan Fiduciary Net Position										
Employer Contributions	\$ 230,899	\$ 272,104	\$ 216,301	\$ 253,337	\$ 270,455	\$ 255,429				
Employee Contributions	108,121	100,401	91,154	92,944	96,371	88,024				
Pension Plan Net Investment Income	2,040,880	(703,549)	1,982,102	667,131	50,337	582,648				
Benefit Payments and Refunds	(804,945)	(803,238)	(756,569)	(703,481)	(649,543)	(559,875)				
Other	107,297	166,264	(689,907)	210,870	163,369	182,698				
Net Change in Plan Fiduciary Net Position	1,682,252	(968,018)	843,081	520,801	(69,011)	548,924				
Plan Fiduciary Net Position - Beginning	10,535,590	11,503,608	10,660,527	10,139,726	10,208,737	9,659,813				
Plan Fiduciary Net Position - Ending (b)	\$ 12,217,842	\$ 10,535,590	\$ 11,503,608	\$ 10,660,527	\$ 10,139,726	\$ 10,208,737				
Net Pension Liability/(Asset) - Ending (a) - (b)	1,156,385	2,129,340	447,930	1,669,101	1,403,480	904,198				
Plan Fiduciary Net Position as a Percentage										
of Total Pension Liability	91.35%	83.19 %	96.25 %	86.46%	87.84 %	91.86 %				
Covered Valuation Payroll	\$ 2,402,690	\$ 2,228,531	\$ 2,028,804	\$ 2,067,791	\$ 2,137,254	\$ 1,911,173				
Net Pension Liability as a Percentage										
of Covered Valuation Payroll	48.13%	95.55 %	22.08 %	80.72%	65.67 %	47.31 %				



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	\$ 254,377	\$ 255,429	\$ (1,052)	\$ 1,911,173	13.37%
2015	270,790	270,455	335	2,137,254	12.65%
2016	247,101	253,337	(6,236)	2,067,791	12.25%
2017	216,676	216,301	375	2,028,804	10.66%
2018	272,104	272,104	0	2,228,531	12.21%
2019	230,899 *	230,899	0	2,402,690	9.61%

* Estimated based on contribution rate of 9.61% and covered valuation payroll of \$2,402,690.
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)	\$	1,632,191
2. Employer Contribution Reserve (EAF assets from IMRF)	\$	1,869,759
3. Annuitant Reserve	\$	8,707,872
4. Miscellaneous Adjustment*	\$	8,020
5. Net Market Value	\$	12,217,842

* 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	\$	230,899
b.) Accelerated payments and Reserve Payments		-
	\$	230,899

2. Member

a.) Wage Reporting	\$	108,121
b.) Member Payments (i.e. ERI, Pension Payments)		-
Sub-total (Amount used for valuation on Schedule of Changes Page 10)	\$	108,121

c.) Voluntary Additional Plan	\$	21,271
Total Member Contributions (a+b+c)	\$	129,392

Total Employer and Member Contributions (1+2)	\$	360,291
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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.
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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	\$ 2,402,690				
2020	2,254,660	\$ 101,460	\$ 134,202	\$ 124,684	\$ 360,347
2021	2,051,389	92,312	121,492	116,823	330,627
2022	1,879,259	84,567	108,870	107,642	301,079
2023	1,729,260	77,817	99,837	96,963	274,617
2024	1,599,140	71,961	91,689	84,583	248,233
2025	1,475,456	66,396	83,718	86,698	236,811
2026	1,357,949	61,108	76,511	88,865	226,483
2027	1,260,948	56,743	70,419	91,087	218,249
2028	1,182,081	53,194	65,545	93,364	212,102
2029	1,109,958	49,948	60,994	95,698	206,640
2030	1,036,023	46,621	56,623	98,090	201,334
2031	966,230	43,480	52,616	100,543	196,639
2032	905,689	40,756	49,139	103,056	192,951
2033	847,657	38,145	45,822	105,633	189,600
2034	785,081	35,329	42,206	108,273	185,807
2035	721,901	32,486	38,522	110,980	181,988
2036	661,859	29,784	35,187	113,755	178,725
2037	608,941	27,402	32,192	116,599	176,193
2038	564,618	25,408	29,624	119,514	174,546
2039	522,509	23,513	27,155	122,501	173,169
2040	482,547	21,715	24,887	125,564	172,165
2041	435,781	19,610	22,345	128,703	170,658
2042	387,500	17,437	19,523	131,921	168,881
2043	349,106	15,710	17,172	0	32,882
2044	314,893	14,170	15,208	0	29,378
2045	286,949	12,913	13,602	0	26,514
2046	264,328	11,895	12,372	0	24,267
2047	240,692	10,831	11,170	0	22,001
2048	215,906	9,716	9,891	0	19,607
2049	196,223	8,830	8,892	0	17,722
2050	182,630	8,218	8,185	0	16,403
2051	166,719	7,502	7,373	0	14,875
2052	152,716	6,872	6,647	0	13,519
2053	147,192	6,624	6,304	0	12,928
2054	140,382	6,317	5,929	0	12,246
2055	111,328	5,010	4,658	0	9,667
2056	79,976	3,599	3,346	0	6,945
2057	58,777	2,645	2,459	0	5,104
2058	36,824	1,657	1,544	0	3,201
2059	19,766	889	837	0	1,726
2060	6,018	271	260	0	530
2061	2,338	105	110	0	215
2062	1,240	56	67	0	123
2063	826	37	51	0	88
2064	574	26	38	0	64
2065	233	10	15	0	26
2066	1	0	0	0	0
2067	0	0	0	0	0
2068	0	0	0	0	0
2069	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
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		Investment Earnings at 7.25%		Net Position	
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)					
2020	\$ 12,217,842	\$ 360,347	\$ 874,628	\$ 867,477	\$ 12,571,037					
2021	12,571,037	330,628	910,834	890,736	12,881,566					
2022	12,881,566	301,079	949,443	910,822	13,144,023					
2023	13,144,023	274,617	981,907	927,751	13,364,483					
2024	13,364,483	248,233	1,014,024	941,651	13,540,343					
2025	13,540,343	236,811	1,045,206	952,883	13,684,832					
2026	13,684,832	226,483	1,076,246	961,885	13,796,954					
2027	13,796,954	218,248	1,101,250	968,830	13,882,782					
2028	13,882,782	212,102	1,134,024	973,667	13,934,528					
2029	13,934,528	206,640	1,164,012	976,156	13,953,311					
2030	13,953,311	201,334	1,195,220	976,217	13,935,643					
2031	13,935,643	196,639	1,221,061	973,849	13,885,069					
2032	13,885,069	192,952	1,232,243	969,652	13,815,430					
2033	13,815,430	189,600	1,240,940	964,174	13,728,265					
2034	13,728,265	185,808	1,249,993	957,397	13,621,476					
2035	13,621,476	181,988	1,256,754	949,278	13,495,989					
2036	13,495,989	178,725	1,258,753	939,993	13,355,954					
2037	13,355,954	176,193	1,258,396	929,763	13,203,514					
2038	13,203,514	174,546	1,267,804	918,318	13,028,573					
2039	13,028,573	173,170	1,259,597	905,878	12,848,023					
2040	12,848,023	172,165	1,254,891	892,920	12,658,218					
2041	12,658,218	170,658	1,252,763	879,181	12,455,294					
2042	12,455,294	168,881	1,242,521	864,770	12,246,424					
2043	12,246,424	32,882	1,229,000	845,265	11,895,570					
2044	11,895,570	29,378	1,212,879	820,278	11,532,347					
2045	11,532,347	26,514	1,189,740	794,666	11,163,786					
2046	11,163,786	24,267	1,163,159	768,812	10,793,706					
2047	10,793,706	22,001	1,135,149	742,898	10,423,456					
2048	10,423,456	19,607	1,105,930	717,010	10,054,142					
2049	10,054,142	17,722	1,072,323	691,365	9,690,906					
2050	9,690,906	16,403	1,035,691	666,288	9,337,906					
2051	9,337,906	14,875	1,004,816	641,741	8,989,705					
2052	8,989,705	13,519	970,220	617,680	8,650,685					
2053	8,650,685	12,928	930,547	594,493	8,327,558					
2054	8,327,558	12,246	896,550	572,253	8,015,507					
2055	8,015,507	9,667	887,764	549,850	7,687,260					
2056	7,687,260	6,945	868,100	526,656	7,352,761					
2057	7,352,761	5,104	848,944	503,021	7,011,942					
2058	7,011,942	3,201	828,201	478,983	6,665,925					
2059	6,665,925	1,726	806,777	454,607	6,315,482					
2060	6,315,482	530	778,610	430,161	5,967,563					
2061	5,967,563	215	742,473	406,212	5,631,517					
2062	5,631,517	123	706,401	383,130	5,308,370					
2063	5,308,370	88	671,484	360,945	4,997,919					
2064	4,997,919	64	637,868	339,633	4,699,748					
2065	4,699,748	26	605,663	319,162	4,413,273					
2066	4,413,273	0	574,234	299,510	4,138,549					
2067	4,138,549	0	543,755	280,679	3,875,473					
2068	3,875,473	0	514,337	262,653	3,623,789					
2069	3,623,789	0	485,950	245,417	3,383,257					

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	\$ 3,383,257	\$ 0	\$ 458,578	\$ 228,953	\$ 3,153,632
2071	3,153,632	0	432,223	213,244	2,934,654
2072	2,934,654	0	406,888	198,271	2,726,036
2073	2,726,036	0	382,588	184,011	2,527,460
2074	2,527,460	0	359,315	170,444	2,338,588
2075	2,338,588	0	337,052	157,543	2,159,079
2076	2,159,079	0	315,787	145,286	1,988,579
2077	1,988,579	0	295,498	133,648	1,826,729
2078	1,826,729	0	276,163	122,602	1,673,168
2079	1,673,168	0	257,741	112,125	1,527,552
2080	1,527,552	0	240,179	102,193	1,389,566
2081	1,389,566	0	223,404	92,787	1,258,950
2082	1,258,950	0	207,322	83,890	1,135,517
2083	1,135,517	0	191,856	75,492	1,019,153
2084	1,019,153	0	176,949	67,586	909,791
2085	909,791	0	162,563	60,170	807,397
2086	807,397	0	148,675	53,241	711,963
2087	711,963	0	135,275	46,799	623,488
2088	623,488	0	122,385	40,844	541,947
2089	541,947	0	110,045	35,372	467,274
2090	467,274	0	98,281	30,377	399,370
2091	399,370	0	87,123	25,851	338,098
2092	338,098	0	76,604	21,784	283,277
2093	283,277	0	66,756	18,160	234,681
2094	234,681	0	57,597	14,963	192,047
2095	192,047	0	49,137	12,173	155,083
2096	155,083	0	41,401	9,769	123,451
2097	123,451	0	34,415	7,724	96,761
2098	96,761	0	28,186	6,011	74,586
2099	74,586	0	22,710	4,599	56,475
2100	56,475	0	17,975	3,454	41,954
2101	41,954	0	13,961	2,544	30,538
2102	30,538	0	10,625	1,836	21,749
2103	21,749	0	7,910	1,295	15,134
2104	15,134	0	5,751	892	10,276
2105	10,276	0	4,079	600	6,796
2106	6,796	0	2,817	392	4,371
2107	4,371	0	1,891	250	2,730
2108	2,730	0	1,231	154	1,652
2109	1,652	0	776	92	968
2110	968	0	473	53	548
2111	548	0	279	30	299
2112	299	0	158	16	158
2113	158	0	86	8	80
2114	80	0	45	4	39
2115	39	0	23	2	18
2116	18	0	11	1	8
2117	8	0	5	0	3
2118	3	0	2	0	1
2119	1	0	1	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	\$ 12,217,842	\$ 874,628	\$ 874,628	\$ 0	\$ 844,549	\$ 0	\$ 844,549
2021	12,571,037	910,834	910,834	0	820,056	0	820,056
2022	12,881,566	949,443	949,443	0	797,032	0	797,032
2023	13,144,023	981,907	981,907	0	768,564	0	768,564
2024	13,364,483	1,014,024	1,014,024	0	740,049	0	740,049
2025	13,540,343	1,045,206	1,045,206	0	711,241	0	711,241
2026	13,684,832	1,076,246	1,076,246	0	682,856	0	682,856
2027	13,796,954	1,101,250	1,101,250	0	651,488	0	651,488
2028	13,882,782	1,134,024	1,134,024	0	625,526	0	625,526
2029	13,934,528	1,164,012	1,164,012	0	598,664	0	598,664
2030	13,953,311	1,195,220	1,195,220	0	573,160	0	573,160
2031	13,935,643	1,221,061	1,221,061	0	545,970	0	545,970
2032	13,885,069	1,232,243	1,232,243	0	513,724	0	513,724
2033	13,815,430	1,240,940	1,240,940	0	482,378	0	482,378
2034	13,728,265	1,249,993	1,249,993	0	453,051	0	453,051
2035	13,621,476	1,256,754	1,256,754	0	424,710	0	424,710
2036	13,495,989	1,258,753	1,258,753	0	396,630	0	396,630
2037	13,355,954	1,258,396	1,258,396	0	369,713	0	369,713
2038	13,203,514	1,267,804	1,267,804	0	347,298	0	347,298
2039	13,028,573	1,259,597	1,259,597	0	321,725	0	321,725
2040	12,848,023	1,254,891	1,254,891	0	298,855	0	298,855
2041	12,658,218	1,252,763	1,252,763	0	278,181	0	278,181
2042	12,455,294	1,242,521	1,242,521	0	257,255	0	257,255
2043	12,246,424	1,229,000	1,229,000	0	237,255	0	237,255
2044	11,895,570	1,212,879	1,212,879	0	218,315	0	218,315
2045	11,532,347	1,189,740	1,189,740	0	199,674	0	199,674
2046	11,163,786	1,163,159	1,163,159	0	182,016	0	182,016
2047	10,793,706	1,135,149	1,135,149	0	165,625	0	165,625
2048	10,423,456	1,105,930	1,105,930	0	150,454	0	150,454
2049	10,054,142	1,072,323	1,072,323	0	136,021	0	136,021
2050	9,690,906	1,035,691	1,035,691	0	122,493	0	122,493
2051	9,337,906	1,004,816	1,004,816	0	110,808	0	110,808
2052	8,989,705	970,220	970,220	0	99,760	0	99,760
2053	8,650,685	930,547	930,547	0	89,213	0	89,213
2054	8,327,558	896,550	896,550	0	80,143	0	80,143
2055	8,015,507	887,764	887,764	0	73,993	0	73,993
2056	7,687,260	868,100	868,100	0	67,463	0	67,463
2057	7,352,761	848,944	848,944	0	61,515	0	61,515
2058	7,011,942	828,201	828,201	0	55,955	0	55,955
2059	6,665,925	806,777	806,777	0	50,823	0	50,823
2060	6,315,482	778,610	778,610	0	45,733	0	45,733
2061	5,967,563	742,473	742,473	0	40,662	0	40,662
2062	5,631,517	706,401	706,401	0	36,072	0	36,072
2063	5,308,370	671,484	671,484	0	31,971	0	31,971
2064	4,997,919	637,868	637,868	0	28,317	0	28,317
2065	4,699,748	605,663	605,663	0	25,070	0	25,070
2066	4,413,273	574,234	574,234	0	22,162	0	22,162
2067	4,138,549	543,755	543,755	0	19,567	0	19,567
2068	3,875,473	514,337	514,337	0	17,258	0	17,258
2069	3,623,789	485,950	485,950	0	15,203	0	15,203

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.



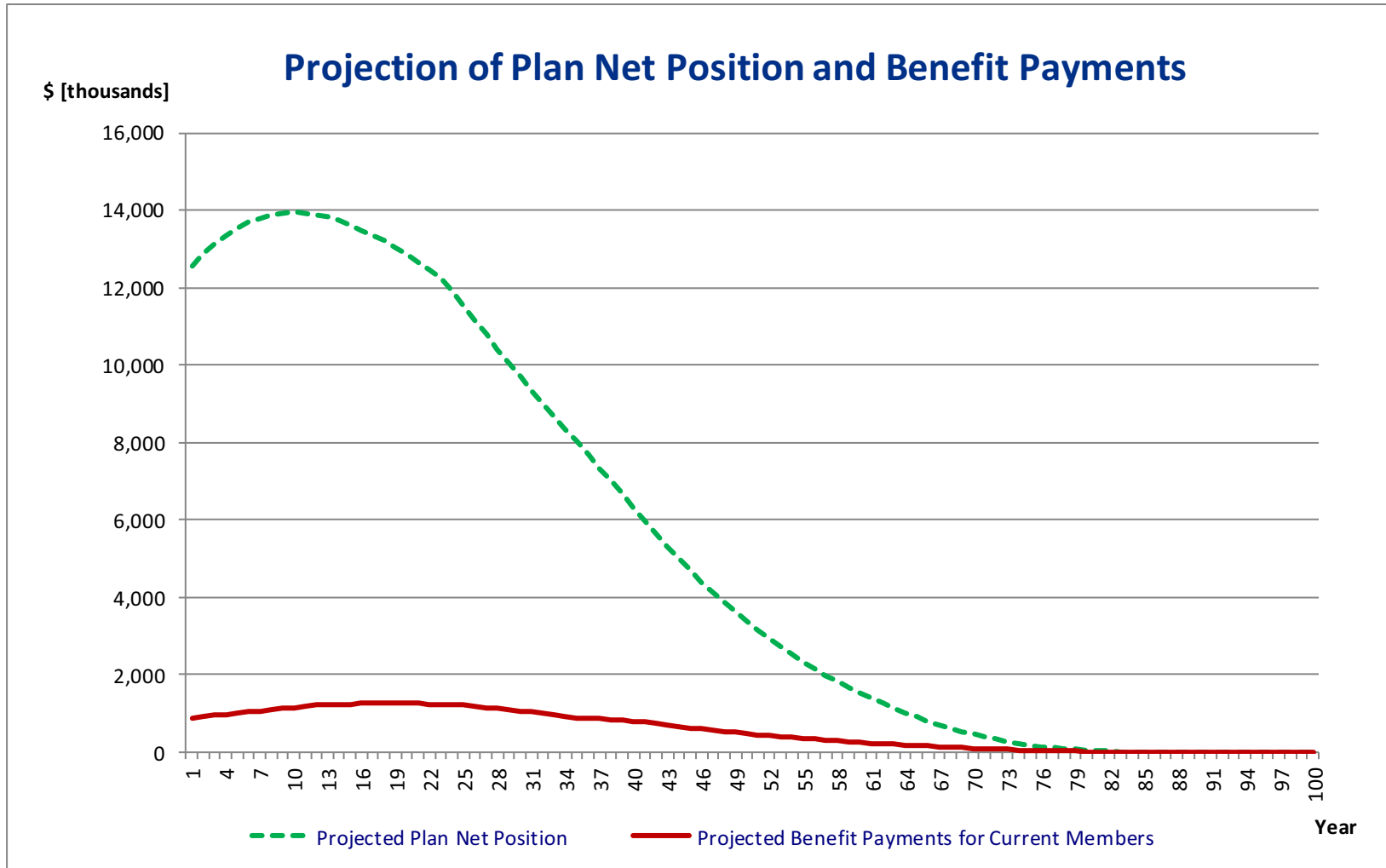
Single Discount Rate Development

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}	
2070	\$ 3,383,257	\$ 458,578	\$ 458,578	\$ 0	\$ 13,377	\$ 0	\$ 13,377	
2071	3,153,632	432,223	432,223	0	11,756	0	11,756	
2072	2,934,654	406,888	406,888	0	10,319	0	10,319	
2073	2,726,036	382,588	382,588	0	9,046	0	9,046	
2074	2,527,460	359,315	359,315	0	7,922	0	7,922	
2075	2,338,588	337,052	337,052	0	6,929	0	6,929	
2076	2,159,079	315,787	315,787	0	6,053	0	6,053	
2077	1,988,579	295,498	295,498	0	5,281	0	5,281	
2078	1,826,729	276,163	276,163	0	4,602	0	4,602	
2079	1,673,168	257,741	257,741	0	4,004	0	4,004	
2080	1,527,552	240,179	240,179	0	3,479	0	3,479	
2081	1,389,566	223,404	223,404	0	3,018	0	3,018	
2082	1,258,950	207,322	207,322	0	2,611	0	2,611	
2083	1,135,517	191,856	191,856	0	2,253	0	2,253	
2084	1,019,153	176,949	176,949	0	1,937	0	1,937	
2085	909,791	162,563	162,563	0	1,660	0	1,660	
2086	807,397	148,675	148,675	0	1,415	0	1,415	
2087	711,963	135,275	135,275	0	1,201	0	1,201	
2088	623,488	122,385	122,385	0	1,013	0	1,013	
2089	541,947	110,045	110,045	0	849	0	849	
2090	467,274	98,281	98,281	0	707	0	707	
2091	399,370	87,123	87,123	0	584	0	584	
2092	338,098	76,604	76,604	0	479	0	479	
2093	283,277	66,756	66,756	0	389	0	389	
2094	234,681	57,597	57,597	0	313	0	313	
2095	192,047	49,137	49,137	0	249	0	249	
2096	155,083	41,401	41,401	0	196	0	196	
2097	123,451	34,415	34,415	0	152	0	152	
2098	96,761	28,186	28,186	0	116	0	116	
2099	74,586	22,710	22,710	0	87	0	87	
2100	56,475	17,975	17,975	0	64	0	64	
2101	41,954	13,961	13,961	0	47	0	47	
2102	30,538	10,625	10,625	0	33	0	33	
2103	21,749	7,910	7,910	0	23	0	23	
2104	15,134	5,751	5,751	0	16	0	16	
2105	10,276	4,079	4,079	0	10	0	10	
2106	6,796	2,817	2,817	0	7	0	7	
2107	4,371	1,891	1,891	0	4	0	4	
2108	2,730	1,231	1,231	0	3	0	3	
2109	1,652	776	776	0	1	0	1	
2110	968	473	473	0	1	0	1	
2111	548	279	279	0	0	0	0	
2112	299	158	158	0	0	0	0	
2113	158	86	86	0	0	0	0	
2114	80	45	45	0	0	0	0	
2115	39	23	23	0	0	0	0	
2116	18	11	11	0	0	0	0	
2117	8	5	5	0	0	0	0	
2118	3	2	2	0	0	0	0	
2119	1	1	1	0	0	0	0	
Totals	\$	14,988,421	\$	-	\$	14,988,421	\$	14,988,421

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.