

Village of Alsip Regular

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



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March 27, 2019

Village of Alsip
Illinois Municipal Retirement Fund

Ladies and Gentlemen:

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

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

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

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

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

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

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

Respectfully submitted,



Mark Buis, FSA, EA, FCA, MAAA



Francois Pieterse, ASA, FCA, MAAA

MB/FP:dj

SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2018

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

Membership

Number of	
- Retirees and Beneficiaries	69
- Inactive, Non-Retired Members	40
- Active Members	53
- Total	162
Covered Valuation Payroll ⁽¹⁾	\$ 3,063,320

Net Pension Liability

Total Pension Liability/(Asset)	\$ 19,487,274
Plan Fiduciary Net Position	16,801,783
Net Pension Liability/(Asset)	\$ 2,685,491
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	86.22%
Net Pension Liability as a Percentage of Covered Valuation Payroll	87.67%

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

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

Single Discount Rate calculated using December 31, 2017 Measurement Date 7.50%

Total Pension Expense/(Income) \$ 457,726

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	\$ 99,884	\$ 479,329
Changes in assumptions	391,348	322,985
Net difference between projected and actual earnings on pension plan investments	2,211,181	1,028,435
Total	\$ 2,702,413	\$ 1,830,749

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

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

Discussion

Accounting Standard

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

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

Financial Statements

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

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

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

Notes to Financial Statements

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

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

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

Required Supplementary Information

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

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

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

Timing of the Valuation

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

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

Single Discount Rate

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

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

Other Observations

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

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

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

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

Limitations of Assets as a Percent of Total Pension Liability Measurements

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

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

Limitations of Funded Status Measurements

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

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

Limitation of Project Scope

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

SECTION B

FINANCIAL STATEMENTS

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

Calendar Year Ended December 31, 2018

A. Expense/(Income)

1. Service Cost	\$	298,594
2. Interest on the Total Pension Liability		1,350,147
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(152,794)
5. Projected Earnings on Plan Investments (made negative for addition here)		(1,365,031)
6. Other Changes in Plan Fiduciary Net Position		170,228
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		(271,502)
8. Recognition of Outflow (Inflow) of Resources due to Assets		428,084
9. Total Pension Expense/(Income)	\$	457,726

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 629.58 years. Additionally, the total plan membership (active employees and inactive employees) was 159. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 3.9596 years.

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

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

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (44,804)
2. Assumption Changes (gains) or losses	\$ 521,012
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	3.9596
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	\$ (11,315)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ 131,582
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	<u>\$ 120,267</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	\$ (33,489)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ 389,430
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	<u>\$ 355,941</u>

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ 2,436,726
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	\$ 487,345
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ 1,949,381

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

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

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

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 281,228	\$ 552,730	\$ (271,502)
2. Due to Assets	770,895	342,811	428,084
3. Total	\$ 1,052,123	\$ 895,541	\$ 156,582

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	\$ 97,931	\$ 414,232	\$ (316,301)
2. Assumption changes	183,297	138,498	44,799
3. Net difference between projected and actual earnings on pension plan investments	770,895	342,811	428,084
4. Total	\$ 1,052,123	\$ 895,541	\$ 156,582

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	\$ 99,884	\$ 479,329	\$ (379,445)
2. Assumption changes	391,348	322,985	68,363
3. Net difference between projected and actual earnings on pension plan investments	2,211,181	1,028,435	1,182,746
4. Total	\$ 2,702,413	\$ 1,830,749	\$ 871,664

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

Year Ending December 31	Net Deferred Outflows of Resources
2019	\$ 191,527
2020	41,352
2021	151,439
2022	487,346
2023	0
Thereafter	0
Total	\$ 871,664

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

A. Total pension liability	
1. Service Cost	\$ 298,594
2. Interest on the Total Pension Liability	1,350,147
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	(44,804)
5. Changes of assumptions	521,012
6. Benefit payments, including refunds of employee contributions	(980,672)
7. Net change in total pension liability	\$ 1,144,277
8. Total pension liability – beginning	18,342,997
9. Total pension liability – ending	<u><u>\$ 19,487,274</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 344,230
2. Contributions – employee	152,794
3. Net investment income	(1,071,695)
4. Benefit payments, including refunds of employee contributions	(980,672)
5. Other (Net Transfer)	(170,228)
6. Net change in plan fiduciary net position	\$ (1,725,571)
7. Plan fiduciary net position – beginning	18,527,354
8. Plan fiduciary net position – ending	<u><u>\$ 16,801,783</u></u>
C. Net pension liability/(asset)	<u><u>\$ 2,685,491</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	86.22%
E. Covered Valuation payroll	\$ 3,063,320
F. Net pension liability as a percentage of covered valuation payroll	87.67%

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

	1% Decrease	Current Single Discount Rate Assumption	1% Increase
	6.25%	7.25%	8.25%
Total Pension Liability	\$ 21,850,959	\$ 19,487,274	\$ 17,543,397
Plan Fiduciary Net Position	16,801,783	16,801,783	16,801,783
Net Pension Liability/(Asset)	\$ 5,049,176	\$ 2,685,491	\$ 741,614

Schedules of Required Supplementary Information

Multiyear Schedule of Changes in Net Pension Liability and Related Ratios

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

Calendar year ending December 31,	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Pension Liability										
Service Cost	\$ 298,594	\$ 348,838	\$ 350,949	\$ 338,319						
Interest on the Total Pension Liability	1,350,147	1,382,356	1,310,052	1,342,439						
Benefit Changes	0	0	0	0						
Difference between Expected and Actual Experience	(44,804)	(629,401)	304,721	(1,141,983)						
Assumption Changes	521,012	(565,439)	(44,517)	21,342						
Benefit Payments and Refunds	(980,672)	(900,714)	(1,104,864)	(846,048)						
Net Change in Total Pension Liability	1,144,277	(364,360)	816,341	(285,931)						
Total Pension Liability - Beginning	18,342,997	18,707,357	17,891,016	18,176,947						
Total Pension Liability - Ending (a)	\$ 19,487,274	\$ 18,342,997	\$ 18,707,357	\$ 17,891,016						
Plan Fiduciary Net Position										
Employer Contributions	\$ 344,230	\$ 340,719	\$ 589,469	\$ 628,890						
Employee Contributions	152,794	147,870	153,572	146,561						
Pension Plan Net Investment Income	(1,071,695)	2,911,791	1,046,264	80,013						
Benefit Payments and Refunds	(980,672)	(900,714)	(1,104,864)	(846,048)						
Other	(170,228)	(296,330)	197,015	(604,709)						
Net Change in Plan Fiduciary Net Position	(1,725,571)	2,203,336	881,456	(595,293)						
Plan Fiduciary Net Position - Beginning	18,527,354	16,324,018	15,442,562	16,037,855						
Plan Fiduciary Net Position - Ending (b)	\$ 16,801,783	\$ 18,527,354	\$ 16,324,018	\$ 15,442,562						
Net Pension Liability/(Asset) - Ending (a) - (b)	2,685,491	(184,357)	2,383,339	2,448,454						
Plan Fiduciary Net Position as a Percentage										
of Total Pension Liability	86.22%	101.01 %	87.26 %	86.31%						
Covered Valuation Payroll	\$ 3,063,320	\$ 3,164,658	\$ 3,409,309	\$ 3,256,920						
Net Pension Liability as a Percentage										
of Covered Valuation Payroll	87.67%	(5.83)%	69.91 %	75.18%						

Multiyear Schedule of Contributions

Last 10 Calendar Years

<u>Calendar Year Ending December 31,</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Valuation Payroll</u>	<u>Actual Contribution as a % of Covered Valuation Payroll</u>
2015	\$ 545,860	\$ 628,890	\$ (83,030)	\$ 3,256,920	19.31%
2016	589,470	589,469	1	3,409,309	17.29%
2017	341,467	340,719	748	3,164,658	10.77%
2018	343,092 *	344,230	(1,138)	3,063,320	11.24%

* Estimated based on contribution rate of 11.20% and covered valuation payroll of \$3,063,320.
This number should be verified by the auditor.

Notes to Schedule of Contributions

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

Valuation Date:

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

Methods and Assumptions Used to Determine 2018 Contribution Rates:

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

Other Information:

Notes There were no benefit changes during the year.

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

Development of Market Value of Assets

Market Value of Assets as of December 31, 2018

1. Employee Contribution Reserve (MDF Assets from IMRF)	\$	2,707,418
2. Employer Contribution Reserve (EAF assets from IMRF)	\$	2,797,682
3. Annuitant Reserve	\$	11,250,261
4. Miscellaneous Adjustment*	\$	46,422
5. Net Market Value	\$	16,801,783

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

Schedule of Contributions

Total Contributions

1. Employer

a.) Wage Reporting	\$	344,230
b.) Accelerated payments and Reserve Payments		-
	\$	344,230

2. Member

a.) Wage Reporting	\$	138,238
b.) Member Payments (i.e. ERI, Pension Payments)		14,556
Sub-total (Amount used for valuation on Schedule of Changes Page 10)	\$	152,794
 c.) Voluntary Additional Plan	 \$	 29,271
Total Member Contributions (a+b+c)	\$	182,065

Total Employer and Member Contributions (1+2)	\$	526,295
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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	3.39% to 14.25%
Investment Rate of Return	7.25%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2017 valuation pursuant to an experience study of the period 2014-2016.
Mortality	For non-disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Blue Collar Health Annuitant Mortality Table with adjustments to match current IMRF experience. For disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Disabled Retirees Mortality Table applying the same adjustment that were applied for non-disabled lives. For active members, an IMRF specific mortality table was used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Employee Mortality Table with adjustments to match current IMRF experience.

Other Information:

Notes	There were no benefit changes during the year.
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A detailed description of the actuarial assumptions and methods can be found in the December 31, 2018 Illinois Municipal Retirement Fund annual actuarial valuation report.

SECTION C

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

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

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

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

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

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

Expected Contributions are developed based on the following:

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

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

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

Single Discount Rate Development Projection of Contributions

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
2018	\$ 3,063,320				
2019	2,754,296	\$ 123,943	\$ 161,395	\$ 118,360	\$ 403,698
2020	2,647,929	119,157	163,909	137,888	420,954
2021	2,568,186	115,568	157,945	159,289	432,802
2022	2,492,926	112,182	153,815	183,369	449,366
2023	2,402,369	108,107	148,228	210,156	466,490
2024	2,319,674	104,385	143,125	215,410	462,921
2025	2,256,942	101,562	139,029	220,795	461,386
2026	2,199,101	98,960	135,026	226,315	460,300
2027	2,143,922	96,476	131,423	231,973	459,872
2028	2,066,986	93,014	126,500	237,772	457,286
2029	1,979,376	89,072	120,742	243,716	453,530
2030	1,911,794	86,031	116,045	249,809	451,885
2031	1,851,547	83,320	111,832	256,055	451,207
2032	1,789,765	80,539	107,742	262,456	450,738
2033	1,725,251	77,636	103,513	269,017	450,167
2034	1,661,238	74,756	99,174	275,743	449,672
2035	1,598,159	71,917	94,928	282,636	449,481
2036	1,534,139	69,036	90,665	289,702	449,403
2037	1,461,456	65,766	85,931	296,945	448,641
2038	1,377,694	61,996	80,454	304,368	446,818
2039	1,284,989	57,824	74,268	311,978	444,071
2040	1,195,342	53,790	68,250	319,777	441,817
2041	1,095,990	49,320	61,919	327,772	439,010
2042	985,748	44,359	54,901	335,966	435,226
2043	884,920	39,821	48,311	0	88,133
2044	788,902	35,501	42,201	0	77,701
2045	705,117	31,730	37,013	0	68,743
2046	631,319	28,409	32,507	0	60,917
2047	566,310	25,484	28,536	0	54,020
2048	494,834	22,268	24,489	0	46,756
2049	410,973	18,494	19,968	0	38,462
2050	348,313	15,674	16,750	0	32,424
2051	276,585	12,446	13,134	0	25,581
2052	183,180	8,243	8,680	0	16,923
2053	126,840	5,708	6,150	0	11,858
2054	108,135	4,866	5,330	0	10,196
2055	100,246	4,511	4,871	0	9,382
2056	81,262	3,657	3,859	0	7,516
2057	58,494	2,632	2,760	0	5,392
2058	49,136	2,211	2,323	0	4,535
2059	38,106	1,715	1,771	0	3,486
2060	24,229	1,090	1,119	0	2,209
2061	15,412	694	726	0	1,419
2062	8,947	403	423	0	826
2063	2,939	132	141	0	274
2064	878	40	46	0	86
2065	462	21	25	0	46
2066	187	8	11	0	20
2067	7	0	0	0	1
2068	2	0	0	0	0

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

Single Discount Rate Development Projection of Contributions (Concluded)

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

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

Single Discount Rate Development Projection of Plan Fiduciary Net Position

Year	Projected Beginning		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)	
2019	\$	16,801,783	\$	403,698	\$	1,052,796	\$	1,195,011	\$	17,347,696
2020		17,347,696		420,954		1,074,673		1,234,425		17,928,402
2021		17,928,402		432,802		1,097,334		1,276,141		18,540,012
2022		18,540,012		449,366		1,131,179		1,319,868		19,178,066
2023		19,178,066		466,490		1,176,500		1,365,122		19,833,178
2024		19,833,178		462,920		1,226,425		1,410,713		20,480,386
2025		20,480,386		461,386		1,260,019		1,456,384		21,138,137
2026		21,138,137		460,300		1,337,470		1,501,274		21,762,241
2027		21,762,241		459,872		1,416,151		1,543,704		22,349,666
2028		22,349,666		457,286		1,490,849		1,583,540		22,899,643
2029		22,899,643		453,530		1,544,806		1,621,357		23,429,725
2030		23,429,725		451,885		1,580,799		1,658,448		23,959,259
2031		23,959,259		451,207		1,616,465		1,695,545		24,489,545
2032		24,489,545		450,738		1,659,201		1,732,452		25,013,534
2033		25,013,534		450,167		1,698,080		1,769,036		25,534,656
2034		25,534,656		449,672		1,732,268		1,805,582		26,057,643
2035		26,057,643		449,482		1,770,550		1,842,128		26,578,703
2036		26,578,703		449,403		1,816,824		1,878,254		27,089,536
2037		27,089,536		448,641		1,862,782		1,913,626		27,589,020
2038		27,589,020		446,819		1,916,419		1,947,863		28,067,283
2039		28,067,283		444,071		1,988,646		1,979,867		28,502,574
2040		28,502,574		441,817		2,039,477		2,009,535		28,914,449
2041		28,914,449		439,010		2,110,047		2,036,782		29,280,194
2042		29,280,194		435,226		2,178,708		2,060,719		29,597,430
2043		29,597,430		88,133		2,230,727		2,069,504		29,524,339
2044		29,524,339		77,701		2,309,732		2,061,019		29,353,327
2045		29,353,327		68,743		2,348,887		2,046,907		29,120,090
2046		29,120,090		60,917		2,396,725		2,028,015		28,812,296
2047		28,812,296		54,020		2,426,915		2,004,379		28,443,781
2048		28,443,781		46,756		2,461,854		1,976,159		28,004,842
2049		28,004,842		38,462		2,489,213		1,943,066		27,497,157
2050		27,497,157		32,424		2,489,795		1,906,023		26,945,808
2051		26,945,808		25,581		2,532,129		1,864,298		26,303,558
2052		26,303,558		16,923		2,580,596		1,815,701		25,555,587
2053		25,555,587		11,858		2,572,661		1,761,575		24,756,358
2054		24,756,358		10,196		2,534,097		1,704,945		23,937,402
2055		23,937,402		9,382		2,486,003		1,647,255		23,108,036
2056		23,108,036		7,516		2,454,442		1,588,183		22,249,293
2057		22,249,293		5,392		2,416,226		1,527,210		21,365,670
2058		21,365,670		4,535		2,362,969		1,465,014		20,472,249
2059		20,472,249		3,486		2,312,938		1,401,985		19,564,783
2060		19,564,783		2,209		2,262,307		1,337,952		18,642,637
2061		18,642,637		1,419		2,202,395		1,273,202		17,714,863
2062		17,714,863		826		2,140,720		1,208,114		16,783,082
2063		16,783,082		274		2,075,371		1,142,867		15,850,852
2064		15,850,852		86		2,003,102		1,077,848		14,925,683
2065		14,925,683		46		1,928,522		1,013,428		14,010,634
2066		14,010,634		20		1,852,464		949,795		13,107,985
2067		13,107,985		1		1,774,632		887,124		12,220,478
2068		12,220,478		0		1,695,333		825,604		11,350,749

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

Single Discount Rate Development

Projection of Plan Fiduciary Net Position (Concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.25%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
2069	\$ 11,350,749	\$ 0	\$ 1,614,702	\$ 765,420	\$ 10,501,468
2070	10,501,468	0	1,532,896	706,761	9,675,333
2071	9,675,333	0	1,450,127	649,814	8,875,020
2072	8,875,020	0	1,366,655	594,765	8,103,130
2073	8,103,130	0	1,282,695	541,793	7,362,228
2074	7,362,228	0	1,198,505	491,076	6,654,799
2075	6,654,799	0	1,114,463	442,780	5,983,117
2076	5,983,117	0	1,030,990	397,056	5,349,183
2077	5,349,183	0	948,514	354,034	4,754,703
2078	4,754,703	0	867,494	313,819	4,201,028
2079	4,201,028	0	788,477	276,492	3,689,044
2080	3,689,044	0	712,015	242,097	3,219,126
2081	3,219,126	0	638,676	210,640	2,791,089
2082	2,791,089	0	568,921	182,091	2,404,259
2083	2,404,259	0	503,117	156,390	2,057,532
2084	2,057,532	0	441,675	133,440	1,749,297
2085	1,749,297	0	384,897	113,116	1,477,516
2086	1,477,516	0	332,926	95,262	1,239,853
2087	1,239,853	0	285,814	79,710	1,033,749
2088	1,033,749	0	243,538	66,273	856,483
2089	856,483	0	205,999	54,758	705,243
2090	705,243	0	173,019	44,968	577,191
2091	577,191	0	144,323	36,706	469,575
2092	469,575	0	119,585	29,785	379,775
2093	379,775	0	98,470	24,027	305,332
2094	305,332	0	80,619	19,265	243,979
2095	243,979	0	65,635	15,351	193,695
2096	193,695	0	53,134	12,150	152,711
2097	152,711	0	42,770	9,548	119,489
2098	119,489	0	34,232	7,444	92,701
2099	92,701	0	27,222	5,751	71,229
2100	71,229	0	21,483	4,399	54,145
2101	54,145	0	16,809	3,327	40,664
2102	40,664	0	13,024	2,484	30,124
2103	30,124	0	9,974	1,829	21,979
2104	21,979	0	7,535	1,325	15,768
2105	15,768	0	5,607	944	11,105
2106	11,105	0	4,102	659	7,663
2107	7,663	0	2,943	451	5,171
2108	5,171	0	2,067	301	3,405
2109	3,405	0	1,417	196	2,185
2110	2,185	0	947	125	1,363
2111	1,363	0	616	77	824
2112	824	0	388	46	482
2113	482	0	237	27	272
2114	272	0	140	15	147
2115	147	0	80	8	75
2116	75	0	44	4	35
2117	35	0	23	2	14
2118	14	0	11	1	3

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

Single Discount Rate Development

Present Values of Projected Benefits

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{(a)-.5}	(g)=(e)*vf ^{(a)-.5}	(h)=(c)/(1+sdr) ^{(a)-.5}
2019	\$ 16,801,783	\$ 1,052,796	\$ 1,052,796	\$ 0	\$ 1,016,590	\$ 0	\$ 1,016,590
2020	17,347,696	1,074,673	1,074,673	0	967,566	0	967,566
2021	17,928,402	1,097,334	1,097,334	0	921,182	0	921,182
2022	18,540,012	1,131,179	1,131,179	0	885,403	0	885,403
2023	19,178,066	1,176,500	1,176,500	0	858,626	0	858,626
2024	19,833,178	1,226,425	1,226,425	0	834,557	0	834,557
2025	20,480,386	1,260,019	1,260,019	0	799,456	0	799,456
2026	21,138,137	1,337,470	1,337,470	0	791,233	0	791,233
2027	21,762,241	1,416,151	1,416,151	0	781,147	0	781,147
2028	22,349,666	1,490,849	1,490,849	0	766,760	0	766,760
2029	22,899,643	1,544,806	1,544,806	0	740,802	0	740,802
2030	23,429,725	1,580,799	1,580,799	0	706,818	0	706,818
2031	23,959,259	1,616,465	1,616,465	0	673,907	0	673,907
2032	24,489,545	1,659,201	1,659,201	0	644,964	0	644,964
2033	25,013,534	1,698,080	1,698,080	0	615,456	0	615,456
2034	25,534,656	1,732,268	1,732,268	0	585,406	0	585,406
2035	26,057,643	1,770,550	1,770,550	0	557,895	0	557,895
2036	26,578,703	1,816,824	1,816,824	0	533,777	0	533,777
2037	27,089,536	1,862,782	1,862,782	0	510,284	0	510,284
2038	27,589,020	1,916,419	1,916,419	0	489,489	0	489,489
2039	28,067,283	1,988,646	1,988,646	0	473,601	0	473,601
2040	28,502,574	2,039,477	2,039,477	0	452,873	0	452,873
2041	28,914,449	2,110,047	2,110,047	0	436,871	0	436,871
2042	29,280,194	2,178,708	2,178,708	0	420,593	0	420,593
2043	29,597,430	2,230,727	2,230,727	0	401,525	0	401,525
2044	29,524,339	2,309,732	2,309,732	0	387,642	0	387,642
2045	29,353,327	2,348,887	2,348,887	0	367,565	0	367,565
2046	29,120,090	2,396,725	2,396,725	0	349,697	0	349,697
2047	28,812,296	2,426,915	2,426,915	0	330,165	0	330,165
2048	28,443,781	2,461,854	2,461,854	0	312,278	0	312,278
2049	28,004,842	2,489,213	2,489,213	0	294,404	0	294,404
2050	27,497,157	2,489,795	2,489,795	0	274,567	0	274,567
2051	26,945,808	2,532,129	2,532,129	0	260,360	0	260,360
2052	26,303,558	2,580,596	2,580,596	0	247,406	0	247,406
2053	25,555,587	2,572,661	2,572,661	0	229,972	0	229,972
2054	24,756,358	2,534,097	2,534,097	0	211,212	0	211,212
2055	23,937,402	2,486,003	2,486,003	0	193,197	0	193,197
2056	23,108,036	2,454,442	2,454,442	0	177,850	0	177,850
2057	22,249,293	2,416,226	2,416,226	0	163,246	0	163,246
2058	21,365,670	2,362,969	2,362,969	0	148,855	0	148,855
2059	20,472,249	2,312,938	2,312,938	0	135,854	0	135,854
2060	19,564,783	2,262,307	2,262,307	0	123,898	0	123,898
2061	18,642,637	2,202,395	2,202,395	0	112,463	0	112,463
2062	17,714,863	2,140,720	2,140,720	0	101,924	0	101,924
2063	16,783,082	2,075,371	2,075,371	0	92,133	0	92,133
2064	15,850,852	2,003,102	2,003,102	0	82,914	0	82,914
2065	14,925,683	1,928,522	1,928,522	0	74,430	0	74,430
2066	14,010,634	1,852,464	1,852,464	0	66,662	0	66,662
2067	13,107,985	1,774,632	1,774,632	0	59,544	0	59,544
2068	12,220,478	1,695,333	1,695,333	0	53,038	0	53,038

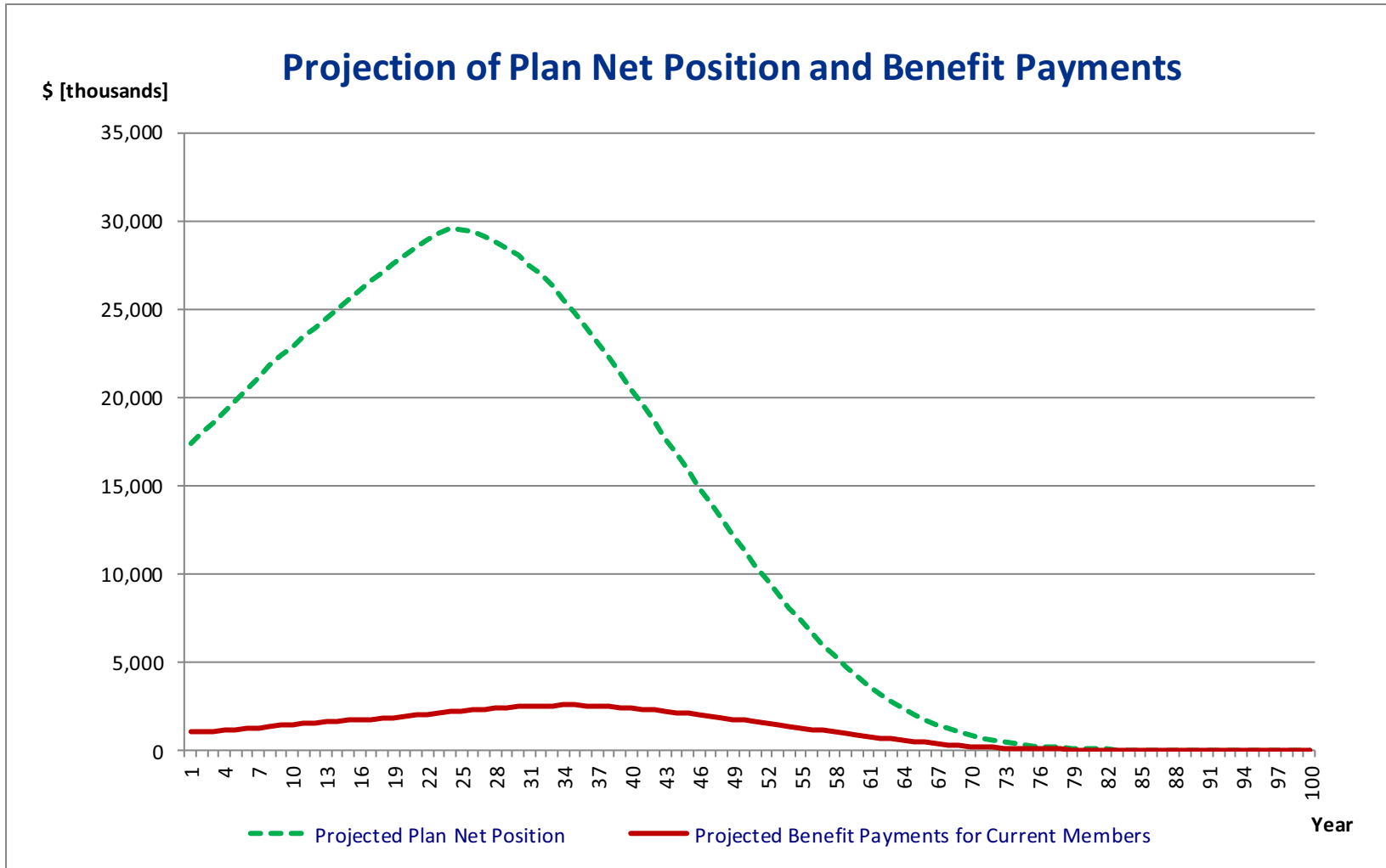
The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

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)
2069	\$ 11,350,749	\$ 1,614,702	\$ 1,614,702	\$ 0	\$ 47,101	\$ 0	\$ 47,101
2070	10,501,468	1,532,896	1,532,896	0	41,692	0	41,692
2071	9,675,333	1,450,127	1,450,127	0	36,775	0	36,775
2072	8,875,020	1,366,655	1,366,655	0	32,315	0	32,315
2073	8,103,130	1,282,695	1,282,695	0	28,279	0	28,279
2074	7,362,228	1,198,505	1,198,505	0	24,637	0	24,637
2075	6,654,799	1,114,463	1,114,463	0	21,361	0	21,361
2076	5,983,117	1,030,990	1,030,990	0	18,425	0	18,425
2077	5,349,183	948,514	948,514	0	15,805	0	15,805
2078	4,754,703	867,494	867,494	0	13,478	0	13,478
2079	4,201,028	788,477	788,477	0	11,422	0	11,422
2080	3,689,044	712,015	712,015	0	9,617	0	9,617
2081	3,219,126	638,676	638,676	0	8,044	0	8,044
2082	2,791,089	568,921	568,921	0	6,681	0	6,681
2083	2,404,259	503,117	503,117	0	5,509	0	5,509
2084	2,057,532	441,675	441,675	0	4,509	0	4,509
2085	1,749,297	384,897	384,897	0	3,664	0	3,664
2086	1,477,516	332,926	332,926	0	2,955	0	2,955
2087	1,239,853	285,814	285,814	0	2,365	0	2,365
2088	1,033,749	243,538	243,538	0	1,879	0	1,879
2089	856,483	205,999	205,999	0	1,482	0	1,482
2090	705,243	173,019	173,019	0	1,161	0	1,161
2091	577,191	144,323	144,323	0	903	0	903
2092	469,575	119,585	119,585	0	697	0	697
2093	379,775	98,470	98,470	0	535	0	535
2094	305,332	80,619	80,619	0	409	0	409
2095	243,979	65,635	65,635	0	310	0	310
2096	193,695	53,134	53,134	0	234	0	234
2097	152,711	42,770	42,770	0	176	0	176
2098	119,489	34,232	34,232	0	131	0	131
2099	92,701	27,222	27,222	0	97	0	97
2100	71,229	21,483	21,483	0	72	0	72
2101	54,145	16,809	16,809	0	52	0	52
2102	40,664	13,024	13,024	0	38	0	38
2103	30,124	9,974	9,974	0	27	0	27
2104	21,979	7,535	7,535	0	19	0	19
2105	15,768	5,607	5,607	0	13	0	13
2106	11,105	4,102	4,102	0	9	0	9
2107	7,663	2,943	2,943	0	6	0	6
2108	5,171	2,067	2,067	0	4	0	4
2109	3,405	1,417	1,417	0	3	0	3
2110	2,185	947	947	0	2	0	2
2111	1,363	616	616	0	1	0	1
2112	824	388	388	0	1	0	1
2113	482	237	237	0	0	0	0
2114	272	140	140	0	0	0	0
2115	147	80	80	0	0	0	0
2116	75	44	44	0	0	0	0
2117	35	23	23	0	0	0	0
2118	14	11	11	0	0	0	0
Totals					\$ 22,060,954	\$ -	\$ 22,060,954

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.