

**VILLAGE OF ALSIP REGULAR**

GASB STATEMENT NO. 68 EMPLOYER REPORTING  
ACCOUNTING SCHEDULES  
DECEMBER 31, 2016

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April 17, 2017

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.

This report is based upon information, furnished to us by 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.

Please see the actuarial valuation report for the Illinois Municipal Retirement Fund as of December 31, 2016 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,

By



Mark Buis  
FSA, EA, MAAA

By



Francois Pieterse  
ASA, MAAA

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**SECTION A**  
EXECUTIVE SUMMARY

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## EXECUTIVE SUMMARY

### AS OF DECEMBER 31, 2016

Actuarial Valuation Date	December 31, 2016
Measurement Date of the Net Pension Liability	December 31, 2016
Fiscal Year End	April 30, 2017

#### Membership

Number of	
- Retirees and Beneficiaries	61
- Inactive, Non-Retired Members	35
- Active Members	64
- Total	160
Covered Valuation Payroll <sup>(1)</sup>	\$ 3,409,309

#### Net Pension Liability

Total Pension Liability/(Asset)	\$ 18,707,357
Plan Fiduciary Net Position	16,324,018
Net Pension Liability/(Asset)	\$ 2,383,339
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	87.26%
Net Pension Liability as a Percentage of Covered Valuation Payroll	69.91%

#### Development of the Single Discount Rate as of December 31, 2016

Long-Term Expected Rate of Investment Return	7.50%
Long-Term Municipal Bond Rate <sup>(2)</sup>	3.78%
Last year ending December 31 in the 2017 to 2116 projection period for which projected benefit payments are fully funded	2116
Resulting Single Discount Rate based on the above development	7.50%

Single Discount Rate calculated using December 31, 2015 Measurement Date	7.48%
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<b>Total Pension Expense/(Income)</b>	<b>\$ 202,357</b>
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#### 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	\$ 236,442	\$ 622,273
Changes in assumptions	11,630	34,542
Net difference between projected and actual earnings on pension plan investments	743,100	0
Total	\$ 991,172	\$ 656,815

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

<sup>(2)</sup> Source: "20-Bond GO Index" is the Bond Buyer Index, general obligation, 20 years to maturity, mixed quality. In describing this index, the Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA. The rate shown is as of December 29, 2016, the most recent date available on or before the measurement date.

## **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, 2016.

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, 2016 Annual Actuarial Valuation report dated March 22, 2017);
- 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, 2016 Annual Actuarial Valuation report dated March 22, 2017, 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, 2016 and a measurement date of December 31, 2016.

**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 7.50%; the municipal bond rate is 3.78% (based on the weekly rate closest to but not later than the measurement date of the "20-Bond Go Index" described on page 1 and the resulting Single Discount Rate is 7.50%.



## 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 7.50% 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 2116 and a discount rate of 7.5%. 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.

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## **SECTION B**

### FINANCIAL STATEMENTS

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**PENSION EXPENSE/(INCOME) UNDER GASB STATEMENT NO. 68**  
**CALENDAR YEAR ENDED DECEMBER 31, 2016**

**A. Expense/(Income)**

1. Service Cost	\$ 350,949
2. Interest on the Total Pension Liability	1,310,052
3. Current-Period Benefit Changes	0
4. Employee Contributions (made negative for addition here)	(153,572)
5. Projected Earnings on Plan Investments (made negative for addition here)	(1,152,012)
6. Other Changes in Plan Fiduciary Net Position	(197,015)
7. Recognition of Outflow (Inflow) of Resources due to Liabilities	(196,695)
8. Recognition of Outflow (Inflow) of Resources due to Assets	240,650
<b>9. Total Pension Expense/(Income)</b>	<b>\$ 202,357</b>

**STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM CURRENT REPORTING  
PERIOD  
CALENDAR YEAR ENDED DECEMBER 31, 2016**

**A. Outflows (Inflows) of Resources due to Liabilities**

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ 304,721
2. Assumption Changes (gains) or losses	\$ (44,517)
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	4.4629
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	\$ 68,279
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ (9,975)
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	<u>\$ 58,304</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	\$ 236,442
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ (34,542)
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	<u>\$ 201,900</u>

**B. Outflows (Inflows) of Resources due to Assets**

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ 105,748
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	\$ 21,150
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ 84,598

\* 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, 2016**

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

	<b>Outflows of Resources</b>	<b>Inflows of Resources</b>	<b>Net Outflows of Resources</b>
1. Due to Liabilities	\$ 73,135	\$ 269,830	\$ (196,695)
2. Due to Assets	240,650	0	240,650
<b>3. Total</b>	<b>\$ 313,785</b>	<b>\$ 269,830</b>	<b>\$ 43,955</b>

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

	<b>Outflows of Resources</b>	<b>Inflows of Resources</b>	<b>Net Outflows of Resources</b>
1. Differences between expected and actual experience	\$ 68,279	\$ 259,855	\$ (191,576)
2. Assumption changes	4,856	9,975	\$ (5,119)
3. Net difference between projected and actual earnings on pension plan investments	240,650	0	240,650
<b>4. Total</b>	<b>\$ 313,785</b>	<b>\$ 269,830</b>	<b>\$ 43,955</b>

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

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>	<b>Net Deferred Outflows of Resources</b>
1. Differences between expected and actual experience	\$ 236,442	\$ 622,273	\$ (385,831)
2. Assumption changes	11,630	34,542	\$ (22,912)
3. Net difference between projected and actual earnings on pension plan investments	743,100	0	743,100
<b>4. Total</b>	<b>\$ 991,172</b>	<b>\$ 656,815</b>	<b>\$ 334,357</b>

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

<b>Year Ending December 31</b>	<b>Net Deferred Outflows of Resources</b>
2017	\$ 43,955
2018	43,955
2019	198,311
2020	48,136
2021	0
Thereafter	0
<b>Total</b>	<b>\$ 334,357</b>

**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS**  
**CURRENT PERIOD**  
**CALENDAR YEAR ENDED DECEMBER 31, 2016**

**A. Total pension liability**

1. Service Cost	\$	350,949
2. Interest on the Total Pension Liability		1,310,052
3. Changes of benefit terms		0
4. Difference between expected and actual experience of the Total Pension Liability		304,721
5. Changes of assumptions		(44,517)
6. Benefit payments, including refunds of employee contributions		(1,104,864)
7. Net change in total pension liability	\$	816,341
8. Total pension liability – beginning		17,891,016
9. Total pension liability – ending	<b>\$</b>	<b>18,707,357</b>

**B. Plan fiduciary net position**

1. Contributions – employer	\$	589,469
2. Contributions – employee		153,572
3. Net investment income		1,046,264
4. Benefit payments, including refunds of employee contributions		(1,104,864)
5. Other (Net Transfer)		197,015
6. Net change in plan fiduciary net position	\$	881,456
7. Plan fiduciary net position – beginning		15,442,562
8. Plan fiduciary net position – ending	<b>\$</b>	<b>16,324,018</b>

**C. Net pension liability/(asset)**

<b>\$</b>	<b>2,383,339</b>
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**D. Plan fiduciary net position as a percentage of the total pension liability**

87.26%
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**E. Covered Valuation payroll**

\$	3,409,309
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**F. Net pension liability as a percentage of covered valuation payroll**

69.91%
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**SENSITIVITY OF NET PENSION LIABILITY/(ASSET) TO THE SINGLE DISCOUNT RATE ASSUMPTION**

	1% Decrease	Current Single Discount Rate Assumption	1% Increase
	6.50%	7.50%	8.50%
Total Pension Liability	\$ 21,113,972	\$ 18,707,357	\$ 16,735,089
Plan Fiduciary Net Position	16,324,018	16,324,018	16,324,018
Net Pension Liability/(Asset)	\$ 4,789,954	\$ 2,383,339	\$ 411,071

**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,	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Total Pension Liability</b>										
Service Cost	\$ 350,949	\$ 338,319								
Interest on the Total Pension Liability	1,310,052	1,342,439								
Benefit Changes	0	0								
Difference between Expected and Actual Experience	304,721	(1,141,983)								
Assumption Changes	(44,517)	21,342								
Benefit Payments and Refunds	(1,104,864)	(846,048)								
<b>Net Change in Total Pension Liability</b>	816,341	(285,931)								
<b>Total Pension Liability - Beginning</b>	17,891,016	18,176,947								
<b>Total Pension Liability - Ending (a)</b>	<u>\$ 18,707,357</u>	<u>\$ 17,891,016</u>								
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 589,469	\$ 628,890								
Employee Contributions	153,572	146,561								
Pension Plan Net Investment Income	1,046,264	80,013								
Benefit Payments and Refunds	(1,104,864)	(846,048)								
Other	197,015	(604,709)								
<b>Net Change in Plan Fiduciary Net Position</b>	881,456	(595,293)								
<b>Plan Fiduciary Net Position - Beginning</b>	15,442,562	16,037,855								
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 16,324,018</u>	<u>\$ 15,442,562</u>								
<b>Net Pension Liability/(Asset) - Ending (a) - (b)</b>	2,383,339	2,448,454								
<b>Plan Fiduciary Net Position as a Percentage</b>										
<b>of Total Pension Liability</b>	87.26%	86.31 %								
<b>Covered Valuation Payroll</b>	\$ 3,409,309	\$ 3,256,920								
<b>Net Pension Liability as a Percentage</b>										
<b>of Covered Valuation Payroll</b>	69.91%	75.18 %								



## MULTIYEAR SCHEDULE OF CONTRIBUTIONS

### Last 10 Calendar Years

<b>Calendar Year Ending December 31,</b>	<b>Actuarially Determined Contribution</b>	<b>Actual Contribution</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Valuation Payroll</b>	<b>Actual Contribution as a % of Covered Valuation Payroll</b>
2015	\$ 545,860	\$ 628,890	\$ (83,030)	\$ 3,256,920	19.31%
2016	589,470 *	589,469	1	3,409,309	17.29%

\* Estimated based on contribution rate of 17.29% and covered valuation payroll of \$3,409,309.  
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 2016 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 2016 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): 27-year closed period until remaining period reaches 15 years (then 15-year rolling 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 22 years for most employers (two employers were financed over 31 years).
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage growth	3.50%
Price Inflation	2.75% -- approximate; No explicit price inflation assumption is used in this valuation.
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, 2014 actuarial valuation

## DEVELOPMENT OF MARKET VALUE OF ASSETS

### Market Value of Assets as of December 31, 2016

1. Employee Contribution Reserve (MDF Assets from IMRF)	\$	2,834,627
2. Employer Contribution Reserve (EAF assets from IMRF)		4,105,553
3. Annuitant Reserve		9,350,322
4. Miscellaneous Adjustment*		33,516
<b>5. Net Market Value</b>	<b>\$</b>	<b>16,324,018</b>

\* Includes an adjustment factor of .002057409 on Items 1 through 4 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	\$	589,469
b.) Accelerated payments and Reserve Payments		-
	<b>\$</b>	<b>589,469</b>

#### 2. Member

a.) Wage Reporting	\$	153,419
b.) Member Payments (i.e. ERI, Pension Payments)		153
<b>Sub-total (Amount used for valuation on Schedule of Changes Page 10)</b>	<b>\$</b>	<b>153,572</b>

c.) Voluntary Additional Plan	\$	17,099
<b>Total Member Contributions (a+b+c)</b>	<b>\$</b>	<b>170,671</b>

<b>Total Employer and Member Contributions (1+2)</b>	<b>\$</b>	<b>760,140</b>
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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	2.75%
Salary Increases	3.75% to 14.50%
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.
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A detailed description of the actuarial assumptions and methods can be found in the December 31, 2016 Illinois Municipal Retirement Fund annual actuarial valuation report.

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## **SECTION C**

### **CALCULATION OF THE SINGLE DISCOUNT RATE**

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## 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 (which is published by the Federal Reserve) 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 7.50%; the municipal bond rate is 3.78%; and the resulting single discount rate is 7.50%.

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
0	\$ 3,409,309				
1	3,250,990	\$ 146,295	\$ 222,809	\$ 115,764	\$ 484,868
2	3,086,993	138,915	206,646	133,773	479,334
3	2,949,823	132,742	196,876	138,741	468,359
4	2,839,571	127,781	189,801	146,755	464,336
5	2,748,830	123,697	183,735	155,383	462,816
6	2,665,966	119,968	177,931	160,712	458,612
7	2,578,918	116,051	171,864	166,337	454,253
8	2,500,693	112,531	166,152	172,159	450,843
9	2,435,002	109,575	161,060	178,184	448,819
10	2,370,029	106,651	156,290	184,421	447,362
11	2,311,534	104,019	152,202	190,876	447,096
12	2,237,871	100,704	147,128	197,556	445,389
13	2,152,871	96,879	141,111	204,471	442,461
14	2,078,628	93,538	135,830	211,627	440,996
15	2,008,624	90,388	130,855	219,034	440,278
16	1,940,918	87,341	126,251	226,700	440,293
17	1,876,547	84,445	121,877	234,635	440,956
18	1,816,530	81,744	117,617	242,847	442,208
19	1,756,604	79,047	113,386	251,347	443,780
20	1,695,345	76,291	109,094	260,144	445,529
21	1,626,356	73,186	104,169	269,249	446,603
22	1,545,921	69,566	98,554	278,673	446,793
23	1,456,571	65,546	92,132	288,426	446,104
24	1,364,783	61,415	85,646	298,521	445,583
25	1,259,095	56,659	78,386	308,970	444,015
26	1,141,388	51,362	70,489	319,783	441,635
27	1,021,916	45,986	62,398	0	108,384
28	901,230	40,555	54,310	0	94,866
29	790,703	35,582	47,098	(0)	82,680
30	695,256	31,287	40,928	(0)	72,214
31	614,961	27,673	35,710	0	63,384
32	527,878	23,755	30,233	0	53,987
33	432,172	19,448	24,493	0	43,941
34	351,258	15,807	19,802	0	35,609
35	271,543	12,219	15,254	(0)	27,473
36	187,317	8,429	10,616	(0)	19,045
37	123,804	5,571	7,263	0	12,834
38	88,604	3,987	5,454	0	9,441
39	64,915	2,921	4,125	0	7,047
40	43,640	1,964	2,878	0	4,842
41	31,858	1,434	2,237	(0)	3,671
42	24,159	1,087	1,738	(0)	2,825
43	18,953	853	1,373	0	2,226
44	14,861	669	1,081	0	1,749
45	10,840	488	788	0	1,276
46	7,784	350	567	0	917
47	5,465	246	397	(0)	643
48	2,840	128	207	(0)	334
49	1,623	73	118	0	191
50	754	34	55	0	89

*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
51	\$ 0	\$ 0	\$ 0	\$ 0	0
52	0	0	0	0	0
53	0	0	0	0	0
54	0	0	0	0	0
55	0	0	0	0	0
56	0	0	0	0	0
57	0	0	0	0	0
58	0	0	0	0	0
59	0	0	0	0	0
60	0	0	0	0	0
61	0	0	0	0	0
62	0	0	0	0	0
63	0	0	0	0	0
64	0	0	0	0	0
65	0	0	0	0	0
66	0	0	0	0	0
67	0	0	0	0	0
68	0	0	0	0	0
69	0	0	0	0	0
70	0	0	0	0	0
71	0	0	0	0	0
72	0	0	0	0	0
73	0	0	0	0	0
74	0	0	0	0	0
75	0	0	0	0	0
76	0	0	0	0	0
77	0	0	0	0	0
78	0	0	0	0	0
79	0	0	0	0	0
80	0	0	0	0	0
81	0	0	0	0	0
82	0	0	0	0	0
83	0	0	0	0	0
84	0	0	0	0	0
85	0	0	0	0	0
86	0	0	0	0	0
87	0	0	0	0	0
88	0	0	0	0	0
89	0	0	0	0	0
90	0	0	0	0	0
91	0	0	0	0	0
92	0	0	0	0	0
93	0	0	0	0	0
94	0	0	0	0	0
95	0	0	0	0	0
96	0	0	0	0	0
97	0	0	0	0	0
98	0	0	0	0	0
99	0	0	0	0	0
100	0	0	0	0	0

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



## SINGLE DISCOUNT RATE DEVELOPMENT

### PROJECTION OF PLAN FIDUCIARY NET POSITION

Year		Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.50%	Projected Ending Plan Net Position
		(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
1	\$	16,324,018	\$ 484,868	\$ 870,921	\$ 1,210,086	\$ 17,148,051
2		17,148,051	479,334	965,801	1,268,191	17,929,776
3		17,929,776	468,359	1,029,022	1,324,088	18,693,202
4		18,693,202	464,336	1,074,523	1,379,522	19,462,538
5		19,462,538	462,816	1,121,024	1,435,454	20,239,783
6		20,239,783	458,612	1,180,487	1,491,403	21,009,310
7		21,009,310	454,253	1,246,262	1,546,535	21,763,836
8		21,763,836	450,843	1,311,266	1,600,605	22,504,017
9		22,504,017	448,819	1,362,796	1,654,147	23,244,188
10		23,244,188	447,362	1,444,000	1,706,616	23,954,166
11		23,954,166	447,096	1,524,416	1,756,893	24,633,740
12		24,633,740	445,389	1,603,351	1,804,892	25,280,670
13		25,280,670	442,461	1,667,943	1,850,925	25,906,114
14		25,906,114	440,996	1,716,864	1,895,978	26,526,224
15		26,526,224	440,278	1,766,117	1,940,647	27,141,031
16		27,141,031	440,293	1,821,842	1,984,706	27,744,187
17		27,744,187	440,956	1,870,078	2,028,191	28,343,257
18		28,343,257	442,208	1,912,921	2,071,590	28,944,133
19		28,944,133	443,780	1,960,160	2,114,974	29,542,726
20		29,542,726	445,529	2,017,605	2,157,817	30,128,468
21		30,128,468	446,603	2,072,749	2,199,757	30,702,079
22		30,702,079	446,793	2,133,421	2,240,551	31,256,002
23		31,256,002	446,104	2,217,533	2,278,972	31,763,546
24		31,763,546	445,583	2,284,559	2,314,551	32,239,121
25		32,239,121	444,015	2,371,987	2,346,942	32,658,091
26		32,658,091	441,635	2,463,889	2,374,893	33,010,731
27		33,010,731	108,384	2,536,016	2,386,414	32,969,514
28		32,969,514	94,866	2,613,576	2,379,969	32,830,774
29		32,830,774	82,680	2,666,039	2,367,183	32,614,598
30		32,614,598	72,214	2,709,244	2,348,994	32,326,562
31		32,326,562	63,384	2,741,909	2,325,863	31,973,900
32		31,973,900	53,987	2,782,346	2,297,579	31,543,119
33		31,543,119	43,941	2,822,165	2,263,434	31,028,329
34		31,028,329	35,609	2,839,034	2,223,897	30,448,800
35		30,448,800	27,473	2,871,793	2,178,926	29,783,406
36		29,783,406	19,045	2,907,024	2,127,414	29,022,841
37		29,022,841	12,834	2,911,229	2,069,988	28,194,435
38		28,194,435	9,441	2,884,331	2,008,723	27,328,268
39		27,328,268	7,047	2,851,395	1,944,885	26,428,805
40		26,428,805	4,842	2,812,173	1,878,789	25,500,262
41		25,500,262	3,671	2,762,614	1,810,930	24,552,248
42		24,552,248	2,825	2,707,474	1,741,828	23,589,427
43		23,589,427	2,226	2,648,373	1,671,770	22,615,051
44		22,615,051	1,749	2,586,297	1,600,960	21,631,463
45		21,631,463	1,276	2,523,056	1,529,503	20,639,185
46		20,639,185	917	2,455,560	1,457,554	19,642,097
47		19,642,097	643	2,386,676	1,385,299	18,641,362
48		18,641,362	334	2,315,688	1,312,846	17,638,854
49		17,638,854	191	2,240,671	1,240,415	16,638,789
50		16,638,789	89	2,164,462	1,168,213	15,642,629

*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 7.50%	Projected Ending Plan Net Position
		(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
51	\$	15,642,629	\$ 0	\$ 2,085,244	\$ 1,096,414	\$ 14,653,799
52		14,653,799	0	2,003,444	1,025,264	13,675,618
53		13,675,618	0	1,919,657	954,986	12,710,947
54		12,710,947	0	1,833,854	885,795	11,762,887
55		11,762,887	0	1,746,103	817,921	10,834,705
56		10,834,705	0	1,656,536	751,606	9,929,775
57		9,929,775	0	1,565,258	687,097	9,051,614
58		9,051,614	0	1,472,423	624,653	8,203,844
59		8,203,844	0	1,378,337	564,535	7,390,043
60		7,390,043	0	1,283,405	506,996	6,613,633
61		6,613,633	0	1,188,064	452,276	5,877,844
62		5,877,844	0	1,092,823	400,598	5,185,619
63		5,185,619	0	998,327	352,161	4,539,453
64		4,539,453	0	905,282	307,125	3,941,296
65		3,941,296	0	814,465	265,607	3,392,437
66		3,392,437	0	726,598	227,678	2,893,517
67		2,893,517	0	642,325	193,362	2,444,554
68		2,444,554	0	562,395	162,633	2,044,792
69		2,044,792	0	487,488	135,409	1,692,714
70		1,692,714	0	418,110	111,558	1,386,161
71		1,386,161	0	354,651	90,903	1,122,413
72		1,122,413	0	297,366	73,231	898,278
73		898,278	0	246,353	58,300	710,225
74		710,225	0	201,570	45,845	554,500
75		554,500	0	162,820	35,592	427,272
76		427,272	0	129,768	27,267	324,772
77		324,772	0	101,997	20,602	243,377
78		243,377	0	79,036	15,343	179,684
79		179,684	0	60,344	11,254	130,594
80		130,594	0	45,355	8,125	93,364
81		93,364	0	33,532	5,768	65,600
82		65,600	0	24,375	4,022	45,247
83		45,247	0	17,404	2,753	30,596
84		30,596	0	12,185	1,846	20,257
85		20,257	0	8,356	1,212	13,112
86		13,112	0	5,608	777	8,281
87		8,281	0	3,673	486	5,094
88		5,094	0	2,341	296	3,049
89		3,049	0	1,453	175	1,771
90		1,771	0	875	101	997
91		997	0	510	56	543
92		543	0	289	30	284
93		284	0	157	16	143
94		143	0	81	8	70
95		70	0	41	4	32
96		32	0	20	2	14
97		14	0	9	1	5
98		5	0	4	0	2
99		2	0	2	0	1
100		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 <sup>a</sup> ((a)-.5)	(g)=(e)*vf <sup>a</sup> ((a)-.5)	(h)=(c)/(1+sdr) <sup>a</sup> ((a)-.5)
1	\$ 16,324,018	\$ 870,921	\$ 870,921	\$ 0	\$ 839,991	\$ 0	\$ 839,991
2	17,148,051	965,801	965,801	0	866,512	0	866,512
3	17,929,776	1,029,022	1,029,022	0	858,823	0	858,823
4	18,693,202	1,074,523	1,074,523	0	834,230	0	834,230
5	19,462,538	1,121,024	1,121,024	0	809,612	0	809,612
6	20,239,783	1,180,487	1,180,487	0	793,076	0	793,076
7	21,009,310	1,246,262	1,246,262	0	778,851	0	778,851
8	21,763,836	1,311,266	1,311,266	0	762,303	0	762,303
9	22,504,017	1,362,796	1,362,796	0	736,985	0	736,985
10	23,244,188	1,444,000	1,444,000	0	726,418	0	726,418
11	23,954,166	1,524,416	1,524,416	0	713,370	0	713,370
12	24,633,740	1,603,351	1,603,351	0	697,961	0	697,961
13	25,280,670	1,667,943	1,667,943	0	675,422	0	675,422
14	25,906,114	1,716,864	1,716,864	0	646,728	0	646,728
15	26,526,224	1,766,117	1,766,117	0	618,866	0	618,866
16	27,141,031	1,821,842	1,821,842	0	593,854	0	593,854
17	27,744,187	1,870,078	1,870,078	0	567,048	0	567,048
18	28,343,257	1,912,921	1,912,921	0	539,572	0	539,572
19	28,944,133	1,960,160	1,960,160	0	514,322	0	514,322
20	29,542,726	2,017,605	2,017,605	0	492,460	0	492,460
21	30,128,468	2,072,749	2,072,749	0	470,623	0	470,623
22	30,702,079	2,133,421	2,133,421	0	450,604	0	450,604
23	31,256,002	2,217,533	2,217,533	0	435,692	0	435,692
24	31,763,546	2,284,559	2,284,559	0	417,545	0	417,545
25	32,239,121	2,371,987	2,371,987	0	403,278	0	403,278
26	32,658,091	2,463,889	2,463,889	0	389,677	0	389,677
27	33,010,731	2,536,016	2,536,016	0	373,102	0	373,102
28	32,969,514	2,613,576	2,613,576	0	357,686	0	357,686
29	32,830,774	2,666,039	2,666,039	0	339,411	0	339,411
30	32,614,598	2,709,244	2,709,244	0	320,847	0	320,847
31	32,326,562	2,741,909	2,741,909	0	302,061	0	302,061
32	31,973,900	2,782,346	2,782,346	0	285,131	0	285,131
33	31,543,119	2,822,165	2,822,165	0	269,034	0	269,034
34	31,028,329	2,839,034	2,839,034	0	251,760	0	251,760
35	30,448,800	2,871,793	2,871,793	0	236,898	0	236,898
36	29,783,406	2,907,024	2,907,024	0	223,074	0	223,074
37	29,022,841	2,911,229	2,911,229	0	207,810	0	207,810
38	28,194,435	2,884,331	2,884,331	0	191,526	0	191,526
39	27,328,268	2,851,395	2,851,395	0	176,129	0	176,129
40	26,428,805	2,812,173	2,812,173	0	161,587	0	161,587
41	25,500,262	2,762,614	2,762,614	0	147,665	0	147,665
42	24,552,248	2,707,474	2,707,474	0	134,621	0	134,621
43	23,589,427	2,648,373	2,648,373	0	122,495	0	122,495
44	22,615,051	2,586,297	2,586,297	0	111,278	0	111,278
45	21,631,463	2,523,056	2,523,056	0	100,983	0	100,983
46	20,639,185	2,455,560	2,455,560	0	91,425	0	91,425
47	19,642,097	2,386,676	2,386,676	0	82,661	0	82,661
48	18,641,362	2,315,688	2,315,688	0	74,607	0	74,607
49	17,638,854	2,240,671	2,240,671	0	67,153	0	67,153
50	16,638,789	2,164,462	2,164,462	0	60,344	0	60,344

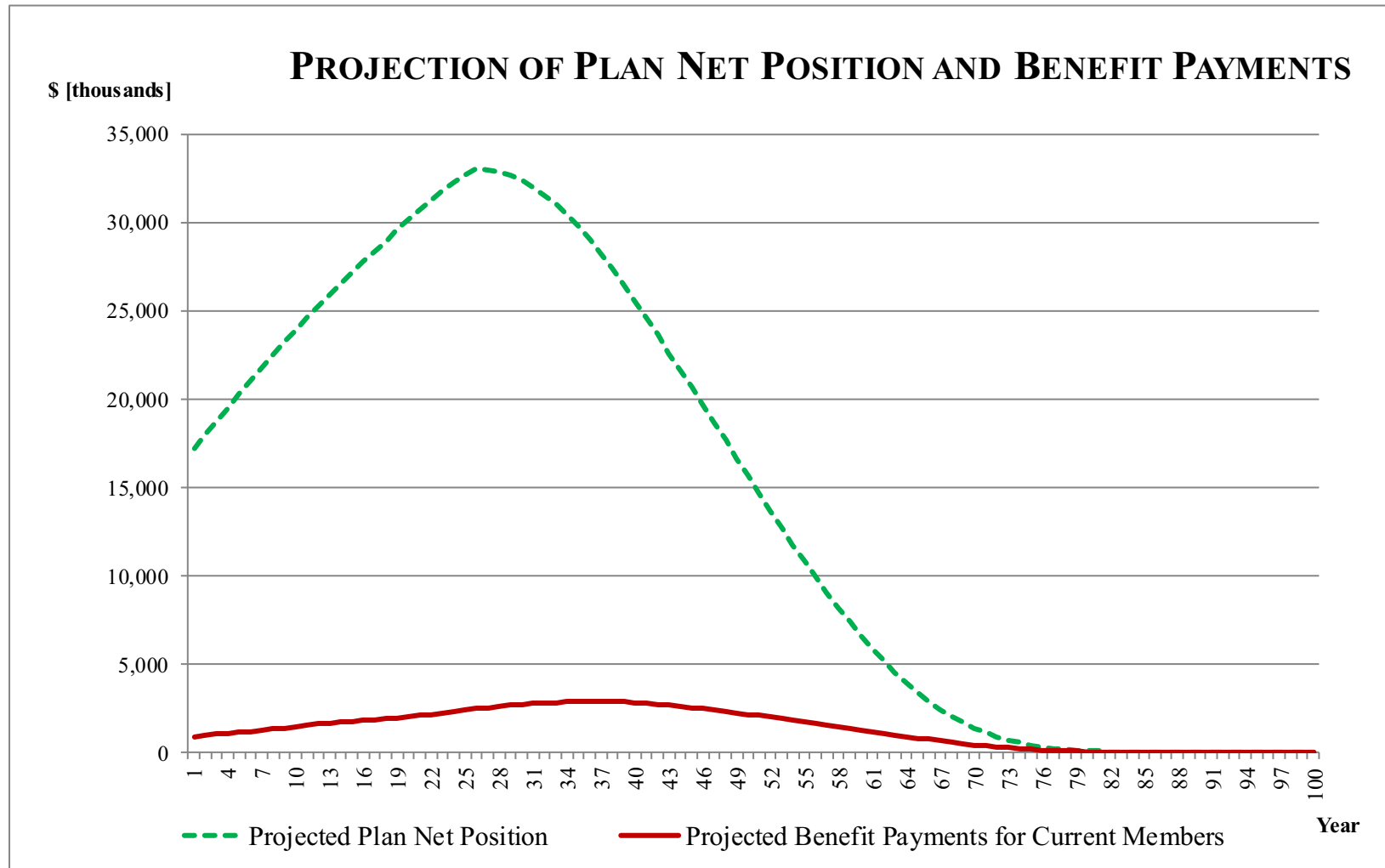
*The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.*

## 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 <sup>a</sup> ((a)-.5)	(g)=(e)*vf <sup>a</sup> ((a)-.5)	(h)=(c)/(1+sdr) <sup>a</sup> ((a)-.5)
51	\$ 15,642,629	\$ 2,085,244	\$ 2,085,244	\$ 0	\$ 54,079	\$ 0	\$ 54,079
52	14,653,799	2,003,444	2,003,444	0	48,333	0	48,333
53	13,675,618	1,919,657	1,919,657	0	43,080	0	43,080
54	12,710,947	1,833,854	1,833,854	0	38,284	0	38,284
55	11,762,887	1,746,103	1,746,103	0	33,909	0	33,909
56	10,834,705	1,656,536	1,656,536	0	29,925	0	29,925
57	9,929,775	1,565,258	1,565,258	0	26,303	0	26,303
58	9,051,614	1,472,423	1,472,423	0	23,017	0	23,017
59	8,203,844	1,378,337	1,378,337	0	20,043	0	20,043
60	7,390,043	1,283,405	1,283,405	0	17,360	0	17,360
61	6,613,633	1,188,064	1,188,064	0	14,950	0	14,950
62	5,877,844	1,092,823	1,092,823	0	12,792	0	12,792
63	5,185,619	998,327	998,327	0	10,870	0	10,870
64	4,539,453	905,282	905,282	0	9,170	0	9,170
65	3,941,296	814,465	814,465	0	7,674	0	7,674
66	3,392,437	726,598	726,598	0	6,369	0	6,369
67	2,893,517	642,325	642,325	0	5,237	0	5,237
68	2,444,554	562,395	562,395	0	4,266	0	4,266
69	2,044,792	487,488	487,488	0	3,439	0	3,439
70	1,692,714	418,110	418,110	0	2,744	0	2,744
71	1,386,161	354,651	354,651	0	2,165	0	2,165
72	1,122,413	297,366	297,366	0	1,689	0	1,689
73	898,278	246,353	246,353	0	1,302	0	1,302
74	710,225	201,570	201,570	0	991	0	991
75	554,500	162,820	162,820	0	744	0	744
76	427,272	129,768	129,768	0	552	0	552
77	324,772	101,997	101,997	0	403	0	403
78	243,377	79,036	79,036	0	291	0	291
79	179,684	60,344	60,344	0	207	0	207
80	130,594	45,355	45,355	0	144	0	144
81	93,364	33,532	33,532	0	99	0	99
82	65,600	24,375	24,375	0	67	0	67
83	45,247	17,404	17,404	0	45	0	45
84	30,596	12,185	12,185	0	29	0	29
85	20,257	8,356	8,356	0	19	0	19
86	13,112	5,608	5,608	0	12	0	12
87	8,281	3,673	3,673	0	7	0	7
88	5,094	2,341	2,341	0	4	0	4
89	3,049	1,453	1,453	0	2	0	2
90	1,771	875	875	0	1	0	1
91	997	510	510	0	1	0	1
92	543	289	289	0	0	0	0
93	284	157	157	0	0	0	0
94	143	81	81	0	0	0	0
95	70	41	41	0	0	0	0
96	32	20	20	0	0	0	0
97	14	9	9	0	0	0	0
98	5	4	4	0	0	0	0
99	2	2	2	0	0	0	0
100	1	1	1	0	0	0	0
<b>Totals</b>					\$ 21,743,729	\$ -	\$ 21,743,729

*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**

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## GLOSSARY OF TERMS

<b><i>Actuarial Accrued Liability (AAL)</i></b>	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."
<b><i>Actuarial Assumptions</i></b>	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.
<b><i>Accrued Service</i></b>	Service credited under the fund which was rendered before the date of the actuarial valuation.
<b><i>Actuarial Equivalent</i></b>	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.
<b><i>Actuarial Cost Method</i></b>	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.
<b><i>Actuarial Gain (Loss)</i></b>	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.
<b><i>Actuarial Present Value (APV)</i></b>	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.
<b><i>Actuarial Valuation</i></b>	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.
<b><i>Actuarial Valuation Date</i></b>	The date as of which an actuarial valuation is performed.
<b><i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i></b>	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)

<b><i>Amortization Payment</i></b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b><i>Amortization Method</i></b>	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).
<b><i>Cost-of-Living Adjustments</i></b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b><i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i></b>	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.
<b><i>Covered Valuation Payroll</i></b>	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.
<b><i>Deferred Inflows and Outflows</i></b>	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.
<b><i>Discount Rate</i></b>	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"> <li>1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and</li> <li>2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.</li> </ol>
<b><i>Entry Age Actuarial Cost Method (EAN)</i></b>	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)

<b><i>GASB</i></b>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<b><i>Fiduciary Net Position</i></b>	The fiduciary net position is the value of the assets of the trust.
<b><i>Long-Term Expected Rate of Return</i></b>	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.
<b><i>Money-Weighted Rate of Return</i></b>	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.
<b><i>Multiple-Employer Defined Benefit Pension Plan</i></b>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<b><i>Municipal Bond Rate</i></b>	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.
<b><i>Net Pension Liability (NPL)</i></b>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<b><i>Non-Employer Contribution Entities</i></b>	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.
<b><i>Normal Cost</i></b>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
<b><i>Other Postemployment Benefits (OPEB)</i></b>	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.
<b><i>Real Rate of Return</i></b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b><i>Service Cost</i></b>	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)

<b><i>Total Pension Expense</i></b>	<p>The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:</p> <ol style="list-style-type: none"><li>1. Service Cost;</li><li>2. Interest on the Total Pension Liability;</li><li>3. Current-Period Benefit Changes;</li><li>4. Employee Contributions (made negative for addition here);</li><li>5. Projected Earnings on Plan Investments (made negative for addition here);</li><li>6. Pension Plan Administrative Expense;</li><li>7. Other Changes in Plan Fiduciary Net Position;</li><li>8. Recognition of Outflow (Inflow) of Resources due to Liabilities; and</li><li>9. Recognition of Outflow (Inflow) of Resources due to Assets.</li></ol>
<b><i>Total Pension Liability (TPL)</i></b>	<p>The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.</p>
<b><i>Unfunded Actuarial Accrued Liability (UAAL)</i></b>	<p>The UAAL is the difference between actuarial accrued liability and valuation assets.</p>
<b><i>Valuation Assets</i></b>	<p>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.</p>