

# Arbor Park SD 145 Regular

GASB Statement No. 68 Employer Reporting  
Accounting Schedules  
December 31, 2017



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April 6, 2018

Arbor Park SD 145  
Illinois Municipal Retirement Fund

Ladies and Gentlemen:

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

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

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement No. 68. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the Arbor Park SD 145 only in its entirety and only with the permission of Arbor Park SD 145. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by 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 Illinois Municipal Retirement Fund and should be considered in conjunction with that report. Please see the actuarial valuation report as of December 31, 2017 for additional discussions of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, the information contained in this report is accurate, and fairly represents the GASB 68 information related to Arbor Park SD 145. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Mark Buis and Francois Pieterse are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinions herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

A handwritten signature in black ink that reads "Mark Buis".

Mark Buis, FSA, EA, FCA, MAAA

A handwritten signature in black ink that reads "Francois Pieterse".

Francois Pieterse, ASA, FCA, MAAA

## **SECTION A**

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### **EXECUTIVE SUMMARY**

# Executive Summary as of December 31, 2017

Actuarial Valuation Date	December 31, 2017
Measurement Date of the Net Pension Liability	December 31, 2017
Fiscal Year End	June 30, 2018

## Membership

Number of	
- Retirees and Beneficiaries	246
- Inactive, Non-Retired Members	251
- Active Members	88
- Total	585
Covered Valuation Payroll <sup>(1)</sup>	\$ 2,028,804

## Net Pension Liability

Total Pension Liability/(Asset)	\$ 11,951,538
Plan Fiduciary Net Position	11,503,608
Net Pension Liability/(Asset)	\$ 447,930
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	96.25%
Net Pension Liability as a Percentage of Covered Valuation Payroll	22.08%

## Development of the Single Discount Rate as of December 31, 2017

Long-Term Expected Rate of Investment Return	7.50%
Long-Term Municipal Bond Rate <sup>(2)</sup>	3.31%
Last year ending December 31 in the 2018 to 2117 projection period for which projected benefit payments are fully funded	2117
Resulting Single Discount Rate based on the above development	7.50%

Single Discount Rate calculated using December 31, 2016 Measurement Date 7.50%

**Total Pension Expense/(Income)** \$ 360,202

## 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	\$ 0	\$ 51,623
Changes in assumptions	0	56,612
Net difference between projected and actual earnings on pension plan investments	365,166	980,221
<b>Total</b>	<b>\$ 365,166</b>	<b>\$ 1,088,456</b>

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

<sup>(2)</sup> 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 29, 2017. 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, 2017.

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, 2017 Annual Actuarial Valuation report dated March 22, 2018);
- 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, 2017 Annual Actuarial Valuation report dated March 22, 2018, 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, 2017 and a measurement date of December 31, 2017.

## 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 3.31% (based on the daily 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 2117 and a discount rate of 7.50%. 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**

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**FINANCIAL STATEMENTS**

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

## Calendar Year Ended December 31, 2017

**A. Expense/(Income)**

1. Service Cost	\$	217,754
2. Interest on the Total Pension Liability		904,517
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(91,154)
5. Projected Earnings on Plan Investments (made negative for addition here)		(756,826)
6. Other Changes in Plan Fiduciary Net Position		689,907
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		(546,797)
8. Recognition of Outflow (Inflow) of Resources due to Assets		(57,199)
<b>9. Total Pension Expense/(Income)</b>	<b>\$</b>	<b>360,202</b>

# Statement of Outflows and Inflows Arising from Current Reporting Period Calendar Year Ended December 31, 2017

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

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (354,752)
2. Assumption Changes (gains) or losses	\$ (389,040)
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	1.1703
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	\$ (303,129)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ (332,428)
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ (635,557)
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	\$ (51,623)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ (56,612)
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ (108,235)

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

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (1,225,276)
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	\$ (245,055)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (980,221)

\* 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, 2017

## 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	\$ 94,144	\$ 640,941	\$ (546,797)
2. Due to Assets	187,856	245,055	(57,199)
<b>3. Total</b>	<b>\$ 282,000</b>	<b>\$ 885,996</b>	<b>\$ (603,996)</b>

## 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	\$ 94,144	\$ 303,129	\$ (208,985)
2. Assumption changes	0	337,812	\$ (337,812)
3. Net difference between projected and actual earnings on pension plan investments	187,856	245,055	(57,199)
<b>4. Total</b>	<b>\$ 282,000</b>	<b>\$ 885,996</b>	<b>\$ (603,996)</b>

## 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	\$ 0	\$ 51,623	\$ (51,623)
2. Assumption changes	0	56,612	\$ (56,612)
3. Net difference between projected and actual earnings on pension plan investments	365,166	980,221	(615,055)
<b>4. Total</b>	<b>\$ 365,166</b>	<b>\$ 1,088,456</b>	<b>\$ (723,290)</b>

## 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
2018	\$ (165,436)
2019	(85,316)
2020	(227,482)
2021	(245,056)
2022	0
Thereafter	0
<b>Total</b>	<b>\$ (723,290)</b>

# Schedule of Changes in Net Pension Liability and Related Ratios

## Current Period

### Calendar Year Ended December 31, 2017

<b>A. Total pension liability</b>	
1. Service Cost	\$ 217,754
2. Interest on the Total Pension Liability	904,517
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	(354,752)
5. Changes of assumptions	(389,040)
6. Benefit payments, including refunds of employee contributions	(756,569)
7. Net change in total pension liability	\$ (378,090)
8. Total pension liability – beginning	12,329,628
9. Total pension liability – ending	<u><u>\$ 11,951,538</u></u>
<b>B. Plan fiduciary net position</b>	
1. Contributions – employer	\$ 216,301
2. Contributions – employee	91,154
3. Net investment income	1,982,102
4. Benefit payments, including refunds of employee contributions	(756,569)
5. Other (Net Transfer)	(689,907)
6. Net change in plan fiduciary net position	\$ 843,081
7. Plan fiduciary net position – beginning	10,660,527
8. Plan fiduciary net position – ending	<u><u>\$ 11,503,608</u></u>
<b>C. Net pension liability/(asset)</b>	<u><u>\$ 447,930</u></u>
<b>D. Plan fiduciary net position as a percentage of the total pension liability</b>	<b>96.25%</b>
<b>E. Covered Valuation payroll</b>	<b>\$ 2,028,804</b>
<b>F. Net pension liability as a percentage of covered valuation payroll</b>	<b>22.08%</b>

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

	1% Decrease	Current Single Discount Rate Assumption	1% Increase
	<u>6.50%</u>	<u>7.50%</u>	<u>8.50%</u>
Total Pension Liability	\$ 13,178,493	\$ 11,951,538	\$ 10,915,897
Plan Fiduciary Net Position	11,503,608	11,503,608	11,503,608
Net Pension Liability/(Asset)	\$ 1,674,885	\$ 447,930	\$ (587,711)

# 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,	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Total Pension Liability</b>										
Service Cost	\$ 217,754	\$ 242,420	\$ 217,911	\$ 240,979						
Interest on the Total Pension Liability	904,517	846,188	816,194	764,359						
Benefit Changes	0	0	0	0						
Difference between Expected and Actual Experience	(354,752)	425,635	33,893	(192,102)						
Assumption Changes	(389,040)	(24,340)	11,816	495,070						
Benefit Payments and Refunds	(756,569)	(703,481)	(649,543)	(559,875)						
<b>Net Change in Total Pension Liability</b>	<b>(378,090)</b>	<b>786,422</b>	<b>430,271</b>	<b>748,431</b>						
<b>Total Pension Liability - Beginning</b>	<b>12,329,628</b>	<b>11,543,206</b>	<b>11,112,935</b>	<b>10,364,504</b>						
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 11,951,538</b>	<b>\$ 12,329,628</b>	<b>\$ 11,543,206</b>	<b>\$ 11,112,935</b>						
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 216,301	\$ 253,337	\$ 270,455	\$ 255,429						
Employee Contributions	91,154	92,944	96,371	88,024						
Pension Plan Net Investment Income	1,982,102	667,131	50,337	582,648						
Benefit Payments and Refunds	(756,569)	(703,481)	(649,543)	(559,875)						
Other	(689,907)	210,870	163,369	182,698						
<b>Net Change in Plan Fiduciary Net Position</b>	<b>843,081</b>	<b>520,801</b>	<b>(69,011)</b>	<b>548,924</b>						
<b>Plan Fiduciary Net Position - Beginning</b>	<b>10,660,527</b>	<b>10,139,726</b>	<b>10,208,737</b>	<b>9,659,813</b>						
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 11,503,608</b>	<b>\$ 10,660,527</b>	<b>\$ 10,139,726</b>	<b>\$ 10,208,737</b>						
<b>Net Pension Liability/(Asset) - Ending (a) - (b)</b>	<b>447,930</b>	<b>1,669,101</b>	<b>1,403,480</b>	<b>904,198</b>						
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	<b>96.25%</b>	<b>86.46%</b>	<b>87.84%</b>	<b>91.86%</b>						
<b>Covered Valuation Payroll</b>	<b>\$ 2,028,804</b>	<b>\$ 2,067,791</b>	<b>\$ 2,137,254</b>	<b>\$ 1,911,173</b>						
<b>Net Pension Liability as a Percentage of Covered Valuation Payroll</b>	<b>22.08%</b>	<b>80.72%</b>	<b>65.67%</b>	<b>47.31%</b>						



# Multiyear Schedule of Contributions

## Last 10 Calendar Years

<u>Calendar Year Ending December 31,</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Valuation Payroll</u>	<u>Actual Contribution as a % of Covered Valuation Payroll</u>
2014	\$ 254,377	\$ 255,429	\$ (1,052)	\$ 1,911,173	13.37%
2015	270,790	270,455	335	2,137,254	12.65%
2016	247,101	253,337	(6,236)	2,067,791	12.25%
2017	216,676 *	216,301	375	2,028,804	10.66%

\* Estimated based on contribution rate of 10.68% and covered valuation payroll of \$2,028,804.

# Notes to Schedule of Contributions

## Summary of Actuarial Methods and Assumptions Used in the Calculation of the 2017 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 2017 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): 26-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 21 years for most employers (two employers were financed over 30 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, 2015 actuarial valuation

# Development of Market Value of Assets

## Market Value of Assets as of December 31, 2017

1. Employee Contribution Reserve (MDF Assets from IMRF)	\$	1,468,611
2. Employer Contribution Reserve (EAF assets from IMRF)	\$	2,028,874
3. Annuitant Reserve	\$	8,007,067
4. Miscellaneous Adjustment*	\$	(944)
<b>5. Net Market Value</b>	\$	<b>11,503,608</b>

\* Includes an adjustment factor of (0.0000820765) 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	\$	216,301
b.) Accelerated payments and Reserve Payments		-
	\$	<b>216,301</b>

#### 2. Member

a.) Wage Reporting	\$	91,154
b.) Member Payments (i.e. ERI, Pension Payments)		-
<b>Sub-total (Amount used for valuation on Schedule of Changes Page 10)</b>	\$	<b>91,154</b>

c.) Voluntary Additional Plan	\$	17,104
<b>Total Member Contributions (a+b+c)</b>	\$	<b>108,258</b>

<b>Total Employer and Member Contributions (1+2)</b>	\$	<b>324,559</b>
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## SECTION C

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### 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 (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 3.31%; 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
2017	\$ 2,028,804				
2018	2,074,635	\$ 93,359	\$ 131,217	\$ 76,054	\$ 300,630
2019	1,891,851	85,133	102,188	66,230	253,551
2020	1,727,505	77,738	92,462	54,986	225,186
2021	1,580,497	71,122	84,439	42,144	197,705
2022	1,446,410	65,088	76,849	27,503	169,440
2023	1,326,152	59,677	69,938	28,190	157,805
2024	1,220,426	54,919	63,643	28,895	147,457
2025	1,121,223	50,455	57,809	29,617	137,881
2026	1,029,254	46,316	52,461	30,358	129,135
2027	952,200	42,849	48,159	31,117	122,125
2028	888,862	39,999	44,519	31,895	116,413
2029	833,164	37,492	41,402	32,692	111,586
2030	777,195	34,974	38,392	33,509	106,875
2031	723,865	32,574	35,615	34,347	102,536
2032	678,555	30,535	33,186	35,206	98,927
2033	635,899	28,615	30,975	36,086	95,676
2034	590,627	26,578	28,596	36,988	92,162
2035	545,548	24,550	26,252	37,913	88,715
2036	504,302	22,694	24,168	38,860	85,722
2037	469,216	21,115	22,395	39,832	83,341
2038	440,416	19,819	20,934	40,828	81,580
2039	413,642	18,614	19,539	41,848	80,001
2040	387,278	17,427	18,218	42,895	78,540
2041	362,317	16,304	16,937	43,967	77,208
2042	339,725	15,288	15,814	45,066	76,168
2043	312,270	14,052	14,475	0	28,527
2044	281,166	12,652	12,867	0	25,520
2045	257,344	11,581	11,524	0	23,105
2046	239,800	10,791	10,527	0	21,318
2047	221,342	9,960	9,629	0	19,590
2048	202,818	9,127	8,684	0	17,811
2049	188,996	8,505	7,962	0	16,467
2050	178,948	8,053	7,398	0	15,451
2051	153,960	6,928	6,244	0	13,172
2052	123,565	5,560	4,927	0	10,487
2053	100,426	4,519	3,955	0	8,474
2054	76,342	3,435	2,991	0	6,427
2055	57,889	2,605	2,274	0	4,879
2056	44,583	2,006	1,760	0	3,766
2057	26,836	1,208	1,059	0	2,267
2058	9,263	417	376	0	793
2059	4,346	196	200	0	396
2060	2,693	121	141	0	262
2061	1,944	87	111	0	199
2062	1,490	67	89	0	156
2063	1,121	50	66	0	116
2064	834	38	50	0	87
2065	377	17	23	0	40
2066	0	0	0	0	0
2067	0	0	0	0	0

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

# Single Discount Rate Development Projection of Contributions (Concluded)

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
2068	\$ 0	\$ 0	\$ 0	\$ 0	0
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

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



# Single Discount Rate Development

## Projection of Plan Fiduciary Net Position

Year	Projected Beginning		Projected Total		Projected Benefit		Projected	Projected Ending Plan		
	Plan	Net Position	Contributions	Payments	Earnings at 7.50%	Net Position				
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)					
2018	\$	11,503,608	\$	300,630	\$	780,862	\$	845,087	\$	11,868,464
2019		11,868,464		253,551		809,880		869,650		12,181,785
2020		12,181,785		225,186		852,019		890,553		12,445,504
2021		12,445,504		197,705		887,112		908,027		12,664,125
2022		12,664,125		169,440		924,016		922,024		12,831,573
2023		12,831,573		157,805		962,435		932,740		12,959,683
2024		12,959,683		147,457		993,780		940,813		13,054,173
2025		13,054,173		137,881		1,022,943		946,473		13,115,585
2026		13,115,585		129,135		1,060,263		949,383		13,133,839
2027		13,133,839		122,125		1,090,574		949,378		13,114,767
2028		13,114,767		116,412		1,109,395		947,044		13,068,828
2029		13,068,828		111,586		1,124,653		942,859		12,998,621
2030		12,998,621		106,875		1,137,819		936,935		12,904,611
2031		12,904,611		102,536		1,147,299		929,375		12,789,223
2032		12,789,223		98,927		1,153,199		920,371		12,655,323
2033		12,655,323		95,676		1,157,222		910,061		12,503,837
2034		12,503,837		92,162		1,160,651		898,444		12,333,792
2035		12,333,792		88,715		1,161,464		885,534		12,146,576
2036		12,146,576		85,722		1,156,871		871,551		11,946,979
2037		11,946,979		83,341		1,150,224		856,739		11,736,835
2038		11,736,835		81,580		1,154,238		840,765		11,504,942
2039		11,504,942		80,002		1,139,707		823,850		11,269,086
2040		11,269,086		78,540		1,130,568		806,444		11,023,502
2041		11,023,502		77,208		1,118,635		788,415		10,770,489
2042		10,770,489		76,168		1,098,432		770,145		10,518,370
2043		10,518,370		28,527		1,080,930		750,126		10,216,092
2044		10,216,092		25,520		1,063,308		727,993		9,906,297
2045		9,906,297		23,105		1,038,722		705,575		9,596,255
2046		9,596,255		21,318		1,010,586		683,292		9,290,279
2047		9,290,279		19,590		981,907		661,336		8,989,299
2048		8,989,299		17,811		951,566		639,815		8,695,358
2049		8,695,358		16,467		917,691		618,967		8,413,101
2050		8,413,101		15,451		882,220		599,066		8,145,399
2051		8,145,399		13,172		867,591		579,443		7,870,424
2052		7,870,424		10,487		850,606		559,347		7,589,652
2053		7,589,652		8,474		836,283		538,742		7,300,586
2054		7,300,586		6,427		822,979		517,477		7,001,510
2055		7,001,510		4,879		801,163		495,792		6,701,019
2056		6,701,019		3,766		773,836		474,221		6,405,169
2057		6,405,169		2,267		758,985		452,524		6,100,975
2058		6,100,975		793		737,283		430,454		5,794,938
2059		5,794,938		396		704,696		408,687		5,499,325
2060		5,499,325		262		672,100		387,711		5,215,197
2061		5,215,197		199		640,559		367,560		4,942,397
2062		4,942,397		156		610,648		348,200		4,680,106
2063		4,680,106		116		582,351		329,569		4,427,440
2064		4,427,440		87		555,176		311,618		4,183,970
2065		4,183,970		40		529,649		294,296		3,948,657
2066		3,948,657		0		504,922		277,557		3,721,292
2067		3,721,292		0		481,056		261,383		3,501,619

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	Projected Total	Projected Benefit	Projected	Projected Ending Plan
	Plan Net Position	Contributions	Payments	Investment Earnings at 7.50%	Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
2068	\$ 3,501,619	\$ 0	\$ 458,194	\$ 245,750	\$ 3,289,174
2069	3,289,174	0	436,225	230,625	3,083,574
2070	3,083,574	0	415,048	215,985	2,884,511
2071	2,884,511	0	394,577	201,809	2,691,743
2072	2,691,743	0	374,729	188,082	2,505,097
2073	2,505,097	0	355,433	174,794	2,324,458
2074	2,324,458	0	336,615	161,940	2,149,783
2075	2,149,783	0	318,205	149,517	1,981,095
2076	1,981,095	0	300,147	137,530	1,818,478
2077	1,818,478	0	282,398	125,987	1,662,068
2078	1,662,068	0	264,942	114,899	1,512,026
2079	1,512,026	0	247,762	104,279	1,368,543
2080	1,368,543	0	230,855	94,140	1,231,828
2081	1,231,828	0	214,216	84,499	1,102,112
2082	1,102,112	0	197,830	75,374	979,655
2083	979,655	0	181,718	66,783	864,721
2084	864,721	0	165,928	58,744	757,536
2085	757,536	0	150,523	51,273	658,287
2086	658,287	0	135,566	44,380	567,101
2087	567,101	0	121,131	38,072	484,042
2088	484,042	0	107,301	32,352	409,093
2089	409,093	0	94,169	27,214	342,139
2090	342,139	0	81,822	22,648	282,964
2091	282,964	0	70,328	18,633	231,269
2092	231,269	0	59,748	15,145	186,665
2093	186,665	0	50,138	12,154	148,681
2094	148,681	0	41,526	9,622	116,776
2095	116,776	0	33,914	7,509	90,372
2096	90,372	0	27,291	5,773	68,854
2097	68,854	0	21,621	4,368	51,601
2098	51,601	0	16,845	3,250	38,005
2099	38,005	0	12,897	2,376	27,484
2100	27,484	0	9,694	1,704	19,494
2101	19,494	0	7,147	1,199	13,546
2102	13,546	0	5,161	826	9,211
2103	9,211	0	3,648	556	6,120
2104	6,120	0	2,520	366	3,966
2105	3,966	0	1,698	235	2,503
2106	2,503	0	1,114	147	1,537
2107	1,537	0	711	89	915
2108	915	0	440	52	527
2109	527	0	264	30	293
2110	293	0	153	16	156
2111	156	0	85	9	80
2112	80	0	45	4	39
2113	39	0	23	2	19
2114	19	0	11	1	8
2115	8	0	5	0	3
2116	3	0	3	0	1
2117	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)
2018	\$ 11,503,608	\$ 780,862	\$ 780,862	\$ 0	\$ 753,130	\$ 0	\$ 753,130
2019	11,868,464	809,880	809,880	0	726,621	0	726,621
2020	12,181,785	852,019	852,019	0	711,096	0	711,096
2021	12,445,504	887,112	887,112	0	688,730	0	688,730
2022	12,664,125	924,016	924,016	0	667,331	0	667,331
2023	12,831,573	962,435	962,435	0	646,584	0	646,584
2024	12,959,683	993,780	993,780	0	621,062	0	621,062
2025	13,054,173	1,022,943	1,022,943	0	594,686	0	594,686
2026	13,115,585	1,060,263	1,060,263	0	573,379	0	573,379
2027	13,133,839	1,090,574	1,090,574	0	548,624	0	548,624
2028	13,114,767	1,109,395	1,109,395	0	519,155	0	519,155
2029	13,068,828	1,124,653	1,124,653	0	489,577	0	489,577
2030	12,998,621	1,137,819	1,137,819	0	460,752	0	460,752
2031	12,904,611	1,147,299	1,147,299	0	432,178	0	432,178
2032	12,789,223	1,153,199	1,153,199	0	404,093	0	404,093
2033	12,655,323	1,157,222	1,157,222	0	377,212	0	377,212
2034	12,503,837	1,160,651	1,160,651	0	351,935	0	351,935
2035	12,333,792	1,161,464	1,161,464	0	327,610	0	327,610
2036	12,146,576	1,156,871	1,156,871	0	303,549	0	303,549
2037	11,946,979	1,150,224	1,150,224	0	280,748	0	280,748
2038	11,736,835	1,154,238	1,154,238	0	262,073	0	262,073
2039	11,504,942	1,139,707	1,139,707	0	240,720	0	240,720
2040	11,269,086	1,130,568	1,130,568	0	222,130	0	222,130
2041	11,023,502	1,118,635	1,118,635	0	204,451	0	204,451
2042	10,770,489	1,098,432	1,098,432	0	186,752	0	186,752
2043	10,518,370	1,080,930	1,080,930	0	170,955	0	170,955
2044	10,216,092	1,063,308	1,063,308	0	156,435	0	156,435
2045	9,906,297	1,038,722	1,038,722	0	142,156	0	142,156
2046	9,596,255	1,010,586	1,010,586	0	128,657	0	128,657
2047	9,290,279	981,907	981,907	0	116,284	0	116,284
2048	8,989,299	951,566	951,566	0	104,829	0	104,829
2049	8,695,358	917,691	917,691	0	94,044	0	94,044
2050	8,413,101	882,220	882,220	0	84,101	0	84,101
2051	8,145,399	867,591	867,591	0	76,936	0	76,936
2052	7,870,424	850,606	850,606	0	70,168	0	70,168
2053	7,589,652	836,283	836,283	0	64,173	0	64,173
2054	7,300,586	822,979	822,979	0	58,746	0	58,746
2055	7,001,510	801,163	801,163	0	53,199	0	53,199
2056	6,701,019	773,836	773,836	0	47,799	0	47,799
2057	6,405,169	758,985	758,985	0	43,611	0	43,611
2058	6,100,975	737,283	737,283	0	39,409	0	39,409
2059	5,794,938	704,696	704,696	0	35,039	0	35,039
2060	5,499,325	672,100	672,100	0	31,087	0	31,087
2061	5,215,197	640,559	640,559	0	27,561	0	27,561
2062	4,942,397	610,648	610,648	0	24,441	0	24,441
2063	4,680,106	582,351	582,351	0	21,682	0	21,682
2064	4,427,440	555,176	555,176	0	19,228	0	19,228
2065	4,183,970	529,649	529,649	0	17,064	0	17,064
2066	3,948,657	504,922	504,922	0	15,133	0	15,133
2067	3,721,292	481,056	481,056	0	13,411	0	13,411

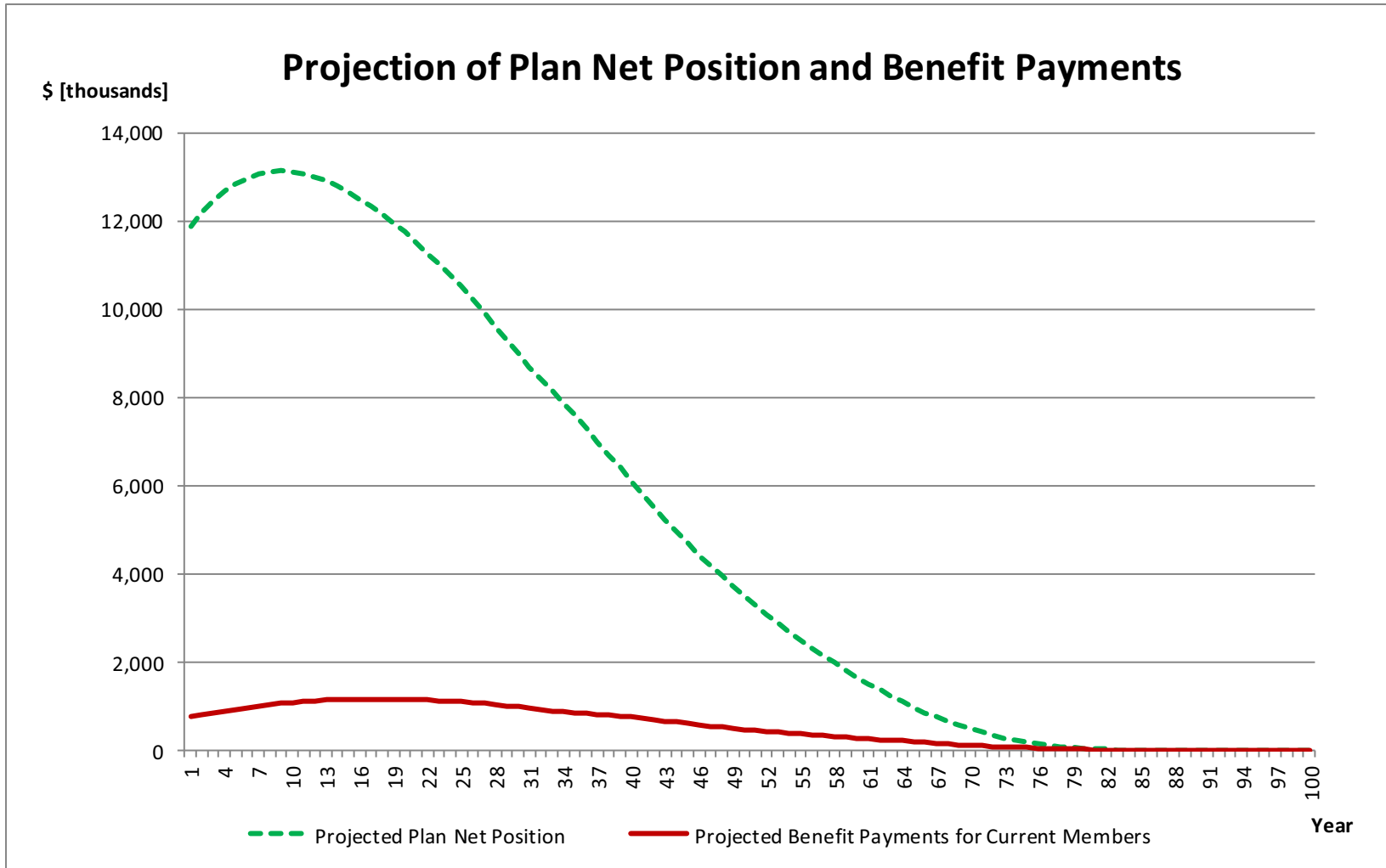
The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

# 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)-.5)</sup>	(g)=(e)*vf <sup>((a)-.5)</sup>	(h)=(c)/(1+sdr) <sup>((a)-.5)</sup>
2068	\$ 3,501,619	\$ 458,194	\$ 458,194	\$ 0	\$ 11,883	\$ 0	\$ 11,883
2069	3,289,174	436,225	436,225	0	10,524	0	10,524
2070	3,083,574	415,048	415,048	0	9,314	0	9,314
2071	2,884,511	394,577	394,577	0	8,237	0	8,237
2072	2,691,743	374,729	374,729	0	7,277	0	7,277
2073	2,505,097	355,433	355,433	0	6,421	0	6,421
2074	2,324,458	336,615	336,615	0	5,657	0	5,657
2075	2,149,783	318,205	318,205	0	4,974	0	4,974
2076	1,981,095	300,147	300,147	0	4,365	0	4,365
2077	1,818,478	282,398	282,398	0	3,820	0	3,820
2078	1,662,068	264,942	264,942	0	3,334	0	3,334
2079	1,512,026	247,762	247,762	0	2,900	0	2,900
2080	1,368,543	230,855	230,855	0	2,514	0	2,514
2081	1,231,828	214,216	214,216	0	2,170	0	2,170
2082	1,102,112	197,830	197,830	0	1,864	0	1,864
2083	979,655	181,718	181,718	0	1,593	0	1,593
2084	864,721	165,928	165,928	0	1,353	0	1,353
2085	757,536	150,523	150,523	0	1,142	0	1,142
2086	658,287	135,566	135,566	0	956	0	956
2087	567,101	121,131	121,131	0	795	0	795
2088	484,042	107,301	107,301	0	655	0	655
2089	409,093	94,169	94,169	0	535	0	535
2090	342,139	81,822	81,822	0	432	0	432
2091	282,964	70,328	70,328	0	346	0	346
2092	231,269	59,748	59,748	0	273	0	273
2093	186,665	50,138	50,138	0	213	0	213
2094	148,681	41,526	41,526	0	164	0	164
2095	116,776	33,914	33,914	0	125	0	125
2096	90,372	27,291	27,291	0	93	0	93
2097	68,854	21,621	21,621	0	69	0	69
2098	51,601	16,845	16,845	0	50	0	50
2099	38,005	12,897	12,897	0	36	0	36
2100	27,484	9,694	9,694	0	25	0	25
2101	19,494	7,147	7,147	0	17	0	17
2102	13,546	5,161	5,161	0	11	0	11
2103	9,211	3,648	3,648	0	8	0	8
2104	6,120	2,520	2,520	0	5	0	5
2105	3,966	1,698	1,698	0	3	0	3
2106	2,503	1,114	1,114	0	2	0	2
2107	1,537	711	711	0	1	0	1
2108	915	440	440	0	1	0	1
2109	527	264	264	0	0	0	0
2110	293	153	153	0	0	0	0
2111	156	85	85	0	0	0	0
2112	80	45	45	0	0	0	0
2113	39	23	23	0	0	0	0
2114	19	11	11	0	0	0	0
2115	8	5	5	0	0	0	0
2116	3	3	3	0	0	0	0
2117	1	1	1	0	0	0	0
<b>Totals</b>					\$ 13,344,482	\$ -	\$ 13,344,482

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**

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### **GLOSSARY OF TERMS**

# 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)

### ***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.