

ALSIP ELEMENTARY SD 126 REGULAR GASB STATEMENT NO. 68 EMPLOYER REPORTING ACCOUNTING SCHEDULES

DECEMBER 31, 2015

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April 15, 2016

Alsip Elementary SD 126 Illinois Municipal Retirement System

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 system'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 Alsip Elementary SD 126 only in its entirety and only with the permission of Alsip Elementary SD 126.

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 otherwise audited.

Please see the actuarial valuation report for the Illinois Municipal Retirement Fund as of December 31, 2015 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 relates to Alsip Elementary SD 126. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Mark Buis and Francois Pieterse are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinions herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

Mark Buis FSA, EA, MAAA

Francois Pieterse ASA, MAAA

SECTION A EXECUTIVE SUMMARY

EXECUTIVE SUMMARY AS OF DECEMBER 31, 2015

Actuarial Valuation Date	December 31, 2013			
Measurement Date of the Net Pension Liability	December 31, 2015			
Fiscal Year End	Ju	ne 30, 2016		
Membership				
Number of				
- Retirees and Beneficiaries		231		
- Inactive, Non-Retired Members		174		
- Active Members		84		
- Total		489		
Covered Valuation Payroll	\$	2,240,192		
Net Pension Liability				
Total Pension Liability/(Asset)	\$	15,775,542		
Plan Fiduciary Net Position		14,292,782		
Net Pension Liability/(Asset)	\$	1,482,760		
Plan Fiduciary Net Position as a Percentage				
of Total Pension Liability		90.60%		
Net Pension Liability as a Percentage				
of Covered Valuation Payroll		66.19%		
Development of the Single Discount Rate as of December 31, 2015				
Long-Term Expected Rate of Investment Return		7.50%		
Long-Term Municipal Bond Rate*		3.57%		
Last year ending December 31 in the 2016 to 2115 projection period				
for which projected benefit payments are fully funded		2078		
Resulting Single Discount Rate based on the above development		7.47%		
Single Discount Rate calculated using December 31, 2014 Measurement Date		7.49%		
Total Pension Expense/(Income)	\$	575,226		

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

	red Outflows Resources	Deferred Inflows of Resources		
Difference between expected and actual experience	\$ 28,594	\$	0	
Changes in assumptions	12,410		0	
Net difference between projected and actual earnings				
on pension plan investments	 929,553		0	
Total	\$ 970,557	\$	0	

*Source: "State & local bonds" rate from Federal Reserve statistical release (H.15) as of December 31, 2015. The statistical release describes this rate as "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.

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 system 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, 2015.

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, 2015 Annual Actuarial Valuation report dated April 1, 2016);
- 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, 2015 Annual Actuarial Valuation report dated April 1, 2016, 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 system 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, 2015 and a measurement date of December 31, 2015.

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 3.57% (based on the weekly rate closest to but not later than the measurement date of the "state & local bonds" rate from Federal Reserve statistical release (H.15)); and the resulting single discount rate is 7.47%.

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 2078 and a discount rate of 7.47%. The projections in this report are strictly for the purposes of determining the GASB discount rate and are different from a funding projection for the ongoing plan.

Limitations of Assets as a Percent of Total Pension Liability Measurements

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

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

Limitations of Funded Status Measurements

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

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

Limitation of Project Scope

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

SECTION B FINANCIAL STATEMENTS

PENSION EXPENSE/(INCOME) UNDER GASB STATEMENT NO. 68 CALENDAR YEAR ENDED DECEMBER 31, 2015

A. Expense/(Income)

9. Total Pension Expense/(Income)	\$ 575,226
8. Recognition of Outflow (Inflow) of Resources due to Assets	 242,412
7. Recognition of Outflow (Inflow) of Resources due to Liabilities	310,635
6. Other Changes in Plan Fiduciary Net Position	(154,278)
5. Projected Earnings on Plan Investments (made negative for addition here)	(1,083,427)
4. Employee Contributions (made negative for addition here)	(101,091)
3. Current-Period Benefit Changes	0
2. Interest on the Total Pension Liability	1,117,228
1. Service Cost	\$ 243,747

STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM CURRENT REPORTING PERIOD CALENDAR YEAR ENDED DECEMBER 31, 2015

A. Outflows (Inflows) of Resources due to Liabilities

The outlious (minous) of Resources due to Examines	
1. Difference between expected and actual experience	
of the Total Pension Liability (gains) or losses	\$ 75,801
2. Assumption Changes (gains) or losses	\$ 32,898
3. Recognition period for Liabilities: Average of the	
expected remaining service lives of all employees {in years}	1.6057
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	\$ 47,207
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for	
Assumption Changes	\$ 20,488
6. Outflow (Inflow) of Resources to be recognized in the current pension expense	
due to Liabilities	\$ 67,695
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	\$ 28,594
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for	
Assumption Changes	\$ 12,410
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses	
due to Liabilities	\$ 41,004
B. Outflows (Inflows) of Resources due to Assets	
1. Net difference between projected and actual earnings on	
pension plan investments (gains) or losses	\$ 1,011,584
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	\$ 202,317
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses	
due to Assets	\$ 809,267

* 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, 2015

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

	0	Outflows		nflows	Net Outflows		
	of R	of Resources			of Resources		
1. Due to Liabilities	\$	314,353	\$	3,718	\$	310,635	
2. Due to Assets		242,412	_	0		242,412	
3. Total	\$	556,765	\$	3,718	\$	553,047	

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

	Outflows	Inflows		Net Outflows		
	of Resources	ofResources		of Resources		
1. Differences between expected and actual experience	\$ 47,207	\$ 3,718	\$	43,489		
2. Assumption changes	267,146	()	267,146		
3. Net difference between projected and actual						
earnings on pension plan investments	242,412	()	242,412		
4. Total	\$ 556,765	\$ 3,718	\$	553,047		

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

	eferred Outflows of Resources	Deferred Inflows of Resources			Net Deferred Outflows of Resources		
1. Differences between expected and actual experience	\$ 28,594	\$	0	\$	28,594		
2. Assumption changes	12,410		0		12,410		
3. Net difference between projected and actual							
earnings on pension plan investments	 929,553		0		929,553		
4. Total	\$ 970,557	\$	0	\$	970,557		

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				
2016	\$	283,416			
2017		242,412			
2018		242,413			
2019		202,316			
2020		0			
Thereafter		0			
Total	\$	970,557			

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS CURRENT PERIOD CALENDAR YEAR ENDED DECEMBER 31, 2015

A. Total pension liability 1. Service Cost \$ 243.747 2. Interest on the Total Pension Liability 1,117,228 3. Changes of benefit terms 0 4. Difference between expected and actual experience of the Total Pension Liability 75,801 32,898 5. Changes of assumptions 6. Benefit payments, including refunds (977,052)of employee contributions \$ 492,622 7. Net change in total pension liability 15,282,920 8. Total pension liability - beginning 15,775,542 9. Total pension liability – ending \$ B. Plan fiduciary net position 1. Contributions - employer \$ 272,182 2. Contributions - employee 101,091 3. Net investment income 71,843 4. Benefit payments, including refunds of employee contributions (977,052) 5. Other (Net Transfer) 154,278 \$ 6. Net change in plan fiduciary net position (377,658) 7. Plan fiduciary net position - beginning 14,670,440 8. Plan fiduciary net position - ending \$ 14,292,782 C. Net pension liability/(asset) \$ 1,482,760 D. Plan fiduciary net position as a percentage of the total pension liability 90.60% E. Covered Valuation payroll \$ 2,240,192 F. Net pension liability as a percentage of covered valuation payroll 66.19%

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

	Current Single Discount							
	10	6 Decrease	Rate	e Assumption		1% Increase		
		6.47%		7.47%	8.47%			
Total Pension Liability	\$	17,558,492	\$	15,775,542	\$	14,298,564		
Plan Fiduciary Net Position		14,292,782		14,292,782		14,292,782		
Net Pension Liability/(Asset)	\$	3,265,710	\$	1,482,760	\$	5,782		

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,		2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Total Pension Liability											
Service Cost	\$	243,747	\$ 245,612								
Interest on the Total Pension Liability		1,117,228	1,048,075								
Benefit Changes		0	0								
Difference between Expected and Actual Experience		75,801	(9,337)								
Assumption Changes		32,898	619,422								
Benefit Payments and Refunds		(977,052)	(944,746)								
Net Change in Total Pension Liability		492,622	959,026								
Total Pension Liability - Beginning		15,282,920	14,323,894								
Total Pension Liability - Ending (a)	\$	15,775,542	\$ 15,282,920								
Plan Fiduciary Net Position											
Employer Contributions	\$	272,182	\$ 253,324								
Employee Contributions		101,091	91,631								
Pension Plan Net Investment Income		71,843	853,732								
Benefit Payments and Refunds		(977,052)	(944,746)								
Other		154,278	121,005								
Net Change in Plan Fiduciary Net Position		(377,658)	374,946								
Plan Fiduciary Net Position - Beginning		14,670,440	14,295,494								
Plan Fiduciary Net Position - Ending (b)	\$	14,292,782	\$ 14,670,440								
Net Pension Liability/(Asset) - Ending (a) - (b)		1,482,760	612,480								
Plan Fiduciary Net Position as a Percentage											
of Total Pension Liability	1	90.60%	95.99 %								
Covered Valuation Payroll	\$	2,240,192	\$ 2,066,746								
Net Pension Liability as a Percentage											
of Covered Valuation Payroll		66.19%	29.63 %								

MULTIYEAR SCHEDULE OF CONTRIBUTIONS

Calendar Year	Ac	tuarially			Con	tribution		Covered	Actual Contribution
Ending	De	Determined		Actual		Deficiency		Valuation	as a % of
December 31,	Contribution		Co	Contribution		(Excess)		Payroll	Covered Valuation Payroll
2014	\$	281,284	\$	253,324	\$	27,960	\$	2,066,746	12.26%
2015		272,183	*	272,182		1		2,240,192	12.15%

Last 10 Calendar Years

* Estimated based on contribution rate of 12.15% and covered valuation payroll of \$2,240,192. 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 2015 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 2015 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): 28-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 23 years for most employers (two employers were financed over 32 years).
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage growth	4.00%
Price Inflation	3.0% approximate; No explicit price inflation assumption is used in this valuation.
Salary Increases	4.40% to 16.00% 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 2011 valuation pursuant to an experience study of the period 2008 - 2010.
Mortality	RP-2000 Combined Healthy Mortality Table, adjusted for mortality improvements to 2020 using projection scale AA. For men 120% of the table rates were used. For women 92% of the table rates were used. For disabled lives, the mortality rates are the rates applicable to non-disabled lives set forward 10 years.
Other Information:	
Notes	There were no benefit changes during the year.

* Based on Valuation Assumptions used in the December 31, 2013 actuarial valuation

DEVELOPMENT OF MARKET VALUE OF ASSETS

Market Value of Assets as of December 31, 2015

1. Employee Contribution Reserve (MDF Assets from IMRF)	\$ 1,750,950
2. Employer Contribution Reserve (EAF assets from IMRF)	2,567,170
3. Annuitant Reserve	9,972,324
4. Miscellaneous Adjustment*	 2,338
5. Net Market Value	\$ 14,292,782

* Includes an adjustment factor of .000163582 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.

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	7.47%
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 2014). 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 2014). The IMRF specific rates were developed from the RP-2014 (base year 2014). 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 2014). The IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2014). The IMRF specific rates were developed from the RP-2014 (base year 2014). The IMRF specific rates were developed from the RP-2014 (base year 2014). The IMRF specific rates were developed from the RP-2014 (base year 2014). The IMRF specific rates were developed from the RP-2014 (base year 2014). The IMRF specific rates were developed from the RP-2014 Employee Mortality Table with adjustments to match current IMRF experience.
Other Information:	
Notes	There were no benefit changes during the year.

A detailed description of the actuarial assumptions and methods can be found in the December 31, 2015 Illinois Municipal Retirement Fund annual actuarial valuation report.

SECTION C CALCULATION OF THE SINGLE DISCOUNT RATE

CALCULATION OF THE SINGLE DISCOUNT RATE

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

The *Single Discount Rate* (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (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 3.57%; and the resulting single discount rate is 7.47%.

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

22,068,73193,093142,40180,31631,928,54086,784131,40886,05441,803,84981,173123,09192,29251,690,14676,057115,33299,08261,586,36771,386108,092106,48771,487,69666,946101,073110,21481,392,01062,64094,157114,07191,297,44458,38587,244118,064101,202,23654,10180,124122,196111,112,75850,07473,496126,473121,030,32546,36567,436130,90013955,95443,01861,903135,48114890,06340,05357,105133,149	l tions
1 2,231,811 \$ 100,432 \$ 155,625 \$ 93,707 \$ 2 2,068,731 93,093 142,401 80,316 3 1,928,540 86,784 131,408 86,054 4 1,803,849 81,173 123,091 92,292 5 1,690,146 76,057 115,332 99,082 6 1,586,367 71,386 108,092 106,487 7 1,487,696 66,946 101,073 110,214 8 1,392,010 62,640 94,157 114,071 9 1,297,444 58,385 87,244 118,064 10 1,202,236 54,101 80,124 122,196 11 1,112,758 50,074 73,496 126,473 12 1,030,325 46,365 67,436 130,900 13 955,954 43,018 61,903 135,481 14 890,063 40,053 57,105 133,149	
2 2,068,731 93,093 142,401 80,316 3 1,928,540 86,784 131,408 86,054 4 1,803,849 81,173 123,091 92,292 5 1,690,146 76,057 115,332 99,082 6 1,586,367 71,386 108,092 106,487 7 1,487,696 66,946 101,073 110,214 8 1,392,010 62,640 94,157 114,071 9 1,297,444 58,385 87,244 118,064 10 1,202,236 54,101 80,124 122,196 11 1,112,758 50,074 73,496 126,473 12 1,030,325 46,365 67,436 130,900 13 955,954 43,018 61,903 135,481 14 890,063 40,053 57,105 133,149	240 762
3 1,928,540 86,784 131,408 86,054 4 1,803,849 81,173 123,091 92,292 5 1,690,146 76,057 115,332 99,082 6 1,586,367 71,386 108,092 106,487 7 1,487,696 66,946 101,073 110,214 8 1,392,010 62,640 94,157 114,071 9 1,297,444 58,385 87,244 118,064 10 1,202,236 54,101 80,124 122,196 11 1,112,758 50,074 73,496 126,473 12 1,030,325 46,365 67,436 130,900 13 955,954 43,018 61,903 135,481 14 890,063 40,053 57,105 133,149	349,763
41,803,84981,173123,09192,29251,690,14676,057115,33299,08261,586,36771,386108,092106,48771,487,69666,946101,073110,21481,392,01062,64094,157114,07191,297,44458,38587,244118,064101,202,23654,10180,124122,196111,112,75850,07473,496126,473121,030,32546,36567,436130,90013955,95443,01861,903135,48114890,06340,05357,105133,149	315,810
5 1,690,146 76,057 115,332 99,082 6 1,586,367 71,386 108,092 106,487 7 1,487,696 66,946 101,073 110,214 8 1,392,010 62,640 94,157 114,071 9 1,297,444 58,385 87,244 118,064 10 1,202,236 54,101 80,124 122,196 11 1,112,758 50,074 73,496 126,473 12 1,030,325 46,365 67,436 130,900 13 955,954 43,018 61,903 135,481 14 890,063 40,053 57,105 133,149	304,246
61,586,36771,386108,092106,48771,487,69666,946101,073110,21481,392,01062,64094,157114,07191,297,44458,38587,244118,064101,202,23654,10180,124122,196111,112,75850,07473,496126,473121,030,32546,36567,436130,90013955,95443,01861,903135,48114890,06340,05357,105133,149	296,556
71,487,69666,946101,073110,21481,392,01062,64094,157114,07191,297,44458,38587,244118,064101,202,23654,10180,124122,196111,112,75850,07473,496126,473121,030,32546,36567,436130,90013955,95443,01861,903135,48114890,06340,05357,105133,149	290,471
8 1,392,010 62,640 94,157 114,071 9 1,297,444 58,385 87,244 118,064 10 1,202,236 54,101 80,124 122,196 11 1,112,758 50,074 73,496 126,473 12 1,030,325 46,365 67,436 130,900 13 955,954 43,018 61,903 135,481 14 890,063 40,053 57,105 133,149	285,966
9 1,297,444 58,385 87,244 118,064 10 1,202,236 54,101 80,124 122,196 11 1,112,758 50,074 73,496 126,473 12 1,030,325 46,365 67,436 130,900 13 955,954 43,018 61,903 135,481 14 890,063 40,053 57,105 133,149	278,233
101,202,23654,10180,124122,196111,112,75850,07473,496126,473121,030,32546,36567,436130,90013955,95443,01861,903135,48114890,06340,05357,105133,149	270,869
111,112,75850,07473,496126,473121,030,32546,36567,436130,90013955,95443,01861,903135,48114890,06340,05357,105133,149	263,693
121,030,32546,36567,436130,90013955,95443,01861,903135,48114890,06340,05357,105133,149	256,421
13955,95443,01861,903135,48114890,06340,05357,105133,149	250,043
14 890,063 40,053 57,105 133,149	244,701
	240,402
	230,307
	221,183
	213,067
	204,850
	196,409
	188,478
	180,845
	173,850
	167,306
	160,912
24 410,410 18,468 24,534 111,929	154,932
	149,311
	143,942
27 310,533 13,974 18,038 106,249	138,261
28 275,470 12,396 15,837 104,420	132,653
	127,420
	122,479
31 183,827 8,272 10,276 99,121	117,669
32 151,747 6,829 8,362 97,415	112,605
	107,714
34 88,022 3,961 4,850 94,091	102,902
35 51,950 2,338 2,894 92,471	97,703
36 26,698 1,201 1,572 90,880	93,653
37 17,858 804 1,174 89,316	91,294
38 13,594 612 952 87,779	89,342
39 10,640 479 767 86,268	87,514
40 8,521 383 615 84,783	85,781
41 6,842 308 495 83,324	84,127
42 5,346 241 390 81,890	82,521
43 4,247 191 310 80,481	80,982
44 3,132 141 228 79,095	79,465
45 2,123 96 154 77,734	77,984
46 1,658 75 120 76,396	76,591
47 1,353 61 98 75,082	75,241
48 788 35 58 73,789	73,883
49 173 8 13 72,519	72,540
50 0 0 0 71,271	71,271

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	\$ 70,045	\$ 70,045
52	\$ 0 0	\$ 0 0	3 0 0	68,839	68,839
53	0	0	0	67,654	67,654
55 54	0	0	0	66,490	
					66,490
55	0	0	0	65,346	65,346
56	0	0	0 0	64,221	64,221
57 58	0 0	0	0	63,116 62,029	63,116
58 59	0	0 0	0	60,962	62,029
59 60					60,962 50,012
61	0 0	0 0	0 0	59,913	59,913
	0			58,882	58,882
62 63	0	0 0	0 0	57,868 56,872	57,868 56,872
64	0	0	0		
65	0	0	0	55,893 54,931	55,893
66	0	0	0		54,931
67	0	0	0	53,986 53,057	53,986 52,057
68	0	0	0	52,144	53,057 52,144
69	0	0	0	51,246	51,246
70	0	0	0	50,364	50,364
70	0	0	0	49,497	49,497
72	0	0	0	48,646	48,646
73	0	0	0	47,808	47,808
74	0	0	0	46,985	46,985
75	0	0	0	46,177	46,177
76	0	0	0	45,382	45,382
77	0	0	0	44,601	44,601
78	0	0	0	43,833	43,833
79	0	0	0	43,079	43,079
80	0	0	0	42,338	42,338
81	0	0	0	41,609	41,609
82	0	0	0	40,893	40,893
83	0	0	0	40,189	40,189
84	0	0	0	39,497	39,497
85	0	0	0	38,817	38,817
86	0	0	0	38,149	38,149
87	0	0	0	37,493	37,493
88	0	0	0	36,848	36,848
89	0	0	0	36,213	36,213
90	0	0	0	35,590	35,590
91	0	0	0	34,978	34,978
92	0	0	0	34,376	34,376
93	0	0	0	33,784	33,784
94	0	0	0	33,202	33,202
95	0	0	0	32,631	32,631
96	0	0	0	32,069	32,069
97	0	0	0	31,518	31,518
98	0	0	0	30,975	30,975
99	0	0	0	30,442	30,442
100	0	0	0	29,918	29,918
	0	Ū	0	2,,,10	

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	\$ 14,292,782	\$ 349,763	\$ 997,451	\$ 1,048,109	\$ 14,693,204
2	14,693,204	315,810	1,022,469	1,075,970	15,062,515
3	15,062,515	304,246	1,060,852	1,101,829	15,407,738
4	15,407,738	296,556	1,110,383	1,125,614	15,719,524
5	15,719,524	290,471	1,153,806	1,147,175	16,003,364
6	16,003,364	285,966	1,195,127	1,166,775	16,260,978
7	16,260,978	278,233	1,234,779	1,184,351	16,488,783
8	16,488,783	270,869	1,271,531	1,199,812	16,687,933
9	16,687,933	263,693	1,321,979	1,212,627	16,842,274
10	16,842,274	256,421	1,370,295	1,222,155	16,950,555
11	16,950,555	250,043	1,415,171	1,228,389	17,013,817
12	17,013,817	244,701	1,459,108	1,228,389	17,030,729
	17,013,317	240,402			
13	17,030,729		1,495,189	1,231,101	17,007,042
14		230,307	1,520,321	1,228,027	16,945,055
15	16,945,055	221,183	1,539,818	1,222,324	16,848,745
16	16,848,745	213,067	1,554,015	1,214,279	16,722,076
17	16,722,076	204,850	1,569,134	1,203,920	16,561,713
18	16,561,713	196,409	1,580,515	1,191,163	16,368,770
19	16,368,770	188,478	1,592,112	1,175,973	16,141,108
20	16,141,108	180,845	1,601,155	1,158,284	15,879,083
21	15,879,083	173,850	1,601,792	1,138,351	15,589,493
22	15,589,493	167,306	1,599,761	1,116,466	15,273,503
23	15,273,503	160,912	1,596,723	1,092,643	14,930,335
24	14,930,335	154,932	1,590,287	1,066,922	14,561,902
25	14,561,902	149,311	1,577,720	1,039,546	14,173,039
26	14,173,039	143,942	1,562,929	1,010,728	13,764,780
27	13,764,780	138,261	1,550,796	980,346	13,332,591
28	13,332,591	132,653	1,535,981	948,271	12,877,534
29	12,877,534	127,420	1,514,704	914,732	12,404,983
30	12,404,983	122,479	1,488,246	880,083	11,919,299
31	11,919,299	117,669	1,461,650	844,459	11,419,777
32	11,419,777	112,605	1,435,893	807,757	10,904,246
33	10,904,246	107,714	1,406,919	769,979	10,375,021
34	10,375,021	102,902	1,380,061	731,099	9,828,961
35	9,828,961	97,703	1,350,290	691,049	9,267,423
36	9,267,423	93,653	1,308,690	650,317	8,702,703
37	8,702,703	91,294	1,258,713	609,716	8,145,000
38	8,145,000	89,342	1,204,773	569,802	7,599,371
39	7,599,371	87,514	1,149,317	530,855	7,068,423
40	7,068,423	85,781	1,092,932	493,046	6,554,319
40	6,554,319	84,127	1,036,447	456,508	6,058,506
42	6,058,506			430,308	
		82,521	980,045	-	5,582,321
43	5,582,321	80,982	923,949	387,634	5,126,989
44	5,126,989	79,465	869,144	355,447	4,692,756
45	4,692,756	77,984	815,308	324,807	4,280,239
46	4,280,239	76,591	762,574	295,759	3,890,015
47	3,890,015	75,241	711,561	268,320	3,522,014
48	3,522,014	73,883	662,953	242,460	3,175,404
49	3,175,404	72,540	616,460	218,127	2,849,611
50	2,849,611	71,271	571,850	195,288	2,544,321

SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF PLAN FIDUCIARY NET POSITION (CONCLUDED)

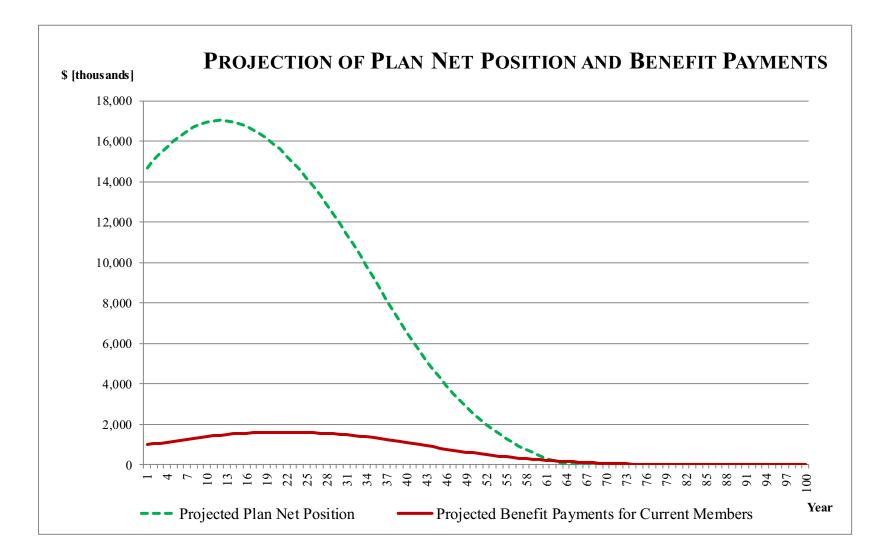
Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.50%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
51	\$ 2,544,321	\$ 70,045	\$ 529,498	\$ 173,906	\$ 2,258,773
52	2,258,773	68,839	489,468	153,920	1,992,064
53	1,992,064	67,654	451,680	135,264	1,743,303
54	1,743,303	66,490	416,009	117,878	1,511,661
55	1,511,661	65,346	382,316	101,703	1,296,394
56	1,296,394	64,221	350,475	86,689	1,096,829
57	1,096,829	63,116	320,381	72,789	912,353
58	912,353	62,029	291,943	59,961	742,400
59	742,400	60,962	265,088	48,164	586,437
60	586,437	59,913	239,754	37,361	443,957
61	443,957	58,882	215,885	27,516	314,469
62	314,469	57,868	193,432	18,593	197,499
63	197,499	56,872	172,357	10,560	92,574
64	92,574	55,893	152,620	3,381	0
65	92,574	54,931	132,020	0	0
		53,986			
66	0	· · · · · · · · · · · · · · · · · · ·	117,021	0	0
67	0	53,057	101,124	0	0
68	0	52,144	86,492	0	0
69	0	51,246	73,129	0	0
70	0	50,364	61,036	0	0
71	0	49,497	50,215	0	0
72	0	48,646	40,669	0	0
73	0	47,808	32,385	0	0
74	0	46,985	25,320	0	0
75	0	46,177	19,405	0	0
76	0	45,382	14,561	0	0
77	0	44,601	10,682	0	0
78	0	43,833	7,647	0	0
79	0	43,079	5,332	0	0
80	0	42,338	3,617	0	0
81	0	41,609	2,384	0	0
82	0	40,893	1,523	0	0
83	0	40,189	942	0	0
84	0	39,497	562	0	0
85	0	38,817	323	0	0
86	0	38,149	180	0	0
87	0	37,493	97	0	0
88	0	36,848	51	0	0
89	0	36,213	26	0	0
90	0	35,590	13	0	0
91	0	34,978	6	0	0
92	0	34,376	2	0	0
93	0	33,784	1	0	0
94	0	33,202	0	0	0
95	0	32,631	0	0	0
96	0	32,069	0	0	0
97	0	31,518	0	0	0
98	0	30,975	0	0	0
99	0	30,442	0	0	0

SINGLE DISCOUNT RATE DEVELOPMENT PRESENT VALUES OF PROJECTED BENEFITS

$\begin{array}{c c c c c c c c c c c c c c c c c c c $	5) (h)=((c)/(1+sdr)^(a5) 0 \$ 962,174 0 \$ 962,174 0 \$ 962,174 0 \$ 962,174 0 \$ 962,174 0 \$ 917,775 0 \$ 864,064 0 \$ 862,993 0 \$ 884,433 0 \$ 804,260 0 773,208 740,897 0 716,770 691,343 0 \$ 643,744 0 \$ 637,404 0 \$ 607,782 0 \$ 575,057 0 \$ 508,955 0 \$ 508,955 0 \$ 478,199 0 \$ 448,199
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 917,775 0 886,064 0 862,993 0 834,433 0 804,260 0 773,208 0 740,897 0 716,770 0 691,343 0 664,374 0 637,404 0 607,782 0 575,057 0 541,963 0 508,955 0 478,199
3 $15,062,515$ $1,060,852$ $1,060,852$ 0 $885,388$ 4 $15,407,738$ $1,110,383$ $1,110,383$ 0 $862,072$ 5 $15,719,524$ $1,153,806$ $1,153,806$ 0 $833,287$ 6 $16,003,364$ $1,195,127$ $1,195,127$ 0 $802,911$ 7 $16,260,978$ $1,234,779$ 0 $771,675$ 8 $16,488,783$ $1,271,531$ $1,271,531$ 0 $739,202$ 9 $16,687,933$ $1,321,979$ $1,321,979$ 0 $714,912$ 10 $16,842,274$ $1,370,295$ $1,370,295$ 0 $689,340$ 11 $16,950,555$ $1,415,171$ $1,415,171$ 0 $662,247$ 12 $17,013,817$ $1,459,108$ $1,495,189$ 0 $635,170$ 13 $17,030,729$ $1,495,189$ $1,495,189$ 0 $572,692$ 15 $16,945,055$ $1,539,818$ $1,539,818$ 0 $539,569$ 16 $16,848,745$ $1,554,015$ $1,554,015$ 0 $506,552$ 17 $16,722,076$ $1,569,134$ $1,569,134$ 0 $475,795$ 18 $16,561,713$ $1,592,112$ $1,592,112$ 0 $417,751$	0 886,064 0 862,993 0 834,433 0 804,260 0 773,208 0 740,897 0 716,770 0 691,343 0 664,374 0 637,404 0 607,782 0 575,057 0 541,963 0 508,955 0 478,199
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 862,993 0 834,433 0 804,260 0 773,208 0 740,897 0 716,770 0 691,343 0 664,374 0 637,404 0 607,782 0 575,057 0 541,963 0 508,955 0 478,199
5 $15,719,524$ $1,153,806$ $1,153,806$ 0 $833,287$ 6 $16,003,364$ $1,195,127$ $1,195,127$ 0 $802,911$ 7 $16,260,978$ $1,234,779$ 0 $771,675$ 8 $16,488,783$ $1,271,531$ $1,271,531$ 0 $739,202$ 9 $16,687,933$ $1,321,979$ 0 $714,912$ 10 $16,842,274$ $1,370,295$ $1,370,295$ 0 $689,340$ 11 $16,950,555$ $1,415,171$ $1,415,171$ 0 $662,247$ 12 $17,013,817$ $1,459,108$ $1,495,189$ 0 $635,170$ 13 $17,030,729$ $1,495,189$ $1,495,189$ 0 $605,467$ 14 $17,007,042$ $1,520,321$ $1,520,321$ 0 $572,692$ 15 $16,945,055$ $1,554,015$ $1,554,015$ 0 $506,552$ 17 $16,722,076$ $1,569,134$ $1,569,134$ 0 $475,795$ 18 $16,561,713$ $1,592,112$ 0 $417,751$	0 834,433 0 804,260 0 773,208 0 740,897 0 716,770 0 691,343 0 664,374 0 637,404 0 607,782 0 575,057 0 541,963 0 508,955 0 478,199
616,003,3641,195,1271,195,1270802,911716,260,9781,234,7791,234,7790771,675816,488,7831,271,5311,271,5310739,202916,687,9331,321,9791,321,9790714,9121016,842,2741,370,2951,370,2950689,3401116,950,5551,415,1711,415,1710662,2471217,013,8171,459,1081,459,1080635,1701317,030,7291,495,1891,495,1890605,4671417,007,0421,520,3211,520,3210572,6921516,945,0551,539,8181,539,8180539,5691616,848,7451,554,0151,554,0150506,5521716,722,0761,569,1341,569,1340475,7951816,561,7131,580,5150445,8111916,368,7701,592,1121,592,1120417,751	0 804,260 0 773,208 0 740,897 0 716,770 0 691,343 0 664,374 0 637,404 0 607,782 0 575,057 0 541,963 0 508,955 0 478,199
716,260,9781,234,7791,234,7790771,675816,488,7831,271,5311,271,5310739,202916,687,9331,321,9791,321,9790714,9121016,842,2741,370,2951,370,2950689,3401116,950,5551,415,1711,415,1710662,2471217,013,8171,459,1081,459,1080635,1701317,030,7291,495,1891,495,1890605,4671417,007,0421,520,3211,520,3210572,6921516,945,0551,539,8181,539,8180539,5691616,848,7451,554,0151,554,0150506,5521716,722,0761,569,1341,569,1340475,7951816,561,7131,580,5150445,8111916,368,7701,592,1121,592,1120417,751	0 773,208 0 740,897 0 716,770 0 691,343 0 664,374 0 637,404 0 607,782 0 575,057 0 541,963 0 508,955 0 478,199
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20 16,141,108 1,601,155 1,601,155 0 390,812	0 393,146
21 15,879,083 1,601,792 1,601,792 0 363,691	0 365,975
22 15,589,493 1,599,761 1,599,761 0 337,888	0 340,114
23 15,273,503 1,596,723 1,596,723 0 313,718	0 315,881
24 14,930,335 1,590,287 1,590,287 0 290,654	0 292,747
25 14,561,902 1,577,720 1,577,720 0 268,239	0 270,254
26 14,173,039 1,562,929 1,562,929 0 247,186	0 249,118
27 13,764,780 1,550,796 1,550,796 0 228,155	0 230,009
28 13,332,591 1,535,981 1,535,981 0 210,210	0 211,982
29 12,877,534 1,514,704 1,514,704 0 192,835	0 194,521
30 12,404,983 1,488,246 1,488,246 0 176,248	0 177,843
31 11,919,299 1,461,650 1,461,650 0 161,022	0 162,529
32 11,419,777 1,435,893 1,435,893 0 147,148	0 148,571
33 10,904,246 1,406,919 1,406,919 0 134,120	0 135,458
34 10,375,021 1,380,061 1,380,061 0 122,381	0 123,639
35 9,828,961 1,350,290 1,350,290 0 111,387	0 112,567
36 9,267,423 1,308,690 1,308,690 0 100,424	0 101,518
37 8,702,703 1,258,713 1,258,713 0 89,850	0 90,857
38 8,145,000 1,204,773 1,204,773 0 80,000	0 80,921
39 7,599,371 1,149,317 1,149,317 0 70,993	0 71,832
40 7,068,423 1,092,932 1,092,932 0 62,800	0 63,562
41 6,554,319 1,036,447 1,036,447 0 55,399	0 56,089
42 6,058,506 980,045 980,045 0 48,730	0 49,351
43 5,582,321 923,949 923,949 0 42,735	0 43,294
44 5,126,989 869,144 869,144 0 37,396	0 37,896
45 4,692,756 815,308 815,308 0 32,632	0 33,079
46 4,280,239 762,574 762,574 0 28,392	0 28,789
47 3,890,015 711,561 711,561 0 24,644	0 24,997
48 3,522,014 662,953 662,953 0 21,359	0 21,671
49 3,175,404 616,460 616,460 0 18,475	0 18,751
50 2,849,611 571,850 571,850 0 15,943	0 16,186

SINGLE DISCOUNT RATE DEVELOPMENT PRESENT VALUES OF PROJECTED BENEFITS (CONCLUDED)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)5)		(h)=((c)/(1+sdr)^(a5)
51	\$ 2,544,321						\$ 13,945
52	2,258,773	489,468	489,468	0	11,808	0	11,995
53	1,992,064	451,680	451,680	0	10,136	0	10,300
54	1,743,303	416,009	416,009	0	8,685	0	8,828
55	1,511,661	382,316	382,316	0	7,424	0	7,549
56	1,296,394	350,475	350,475	0	6,331	0	6,439
57	1,096,829	320,381	320,381	0	5,384	0	5,477
58	912,353	291,943	291,943	0	4,564	0	4,644
59	742,400	265,088	265,088	0	3,855	0	3,924
60	586,437	239,754	239,754	0	3,243	0	3,303
61	443,957	215,885	215,885	0	2,717	0	2,767
62	314,469	193,432	193,432	0	2,264	0	2,307
63	197,499	172,357	172,357	0	1,877	0	1,913
64	92,574	152,620	95,982	56,638	972	6,106	1,576
65	0	134,184	0	134,184	0	13,967	1,289
66	0	117,021	0	117,021	0	11,761	1,046
67	0	101,124	0	101,124	0	9,813	841
68	0	86,492	0	86,492	0	8,104	670
69	0	73,129	0	73,129	0	6,615	527
70	0	61,036	0	61,036	0	5,331	409
71	0	50,215	0	50,215	0	4,235	313
72	0	40,669	0	40,669	0	3,312	236
73	0	32,385	0	32,385	0	2,546	175
74	0	25,320	0	25,320	0	1,922	127
75	0	19,405	0	19,405	0	1,422	91
76	0	14,561	0	14,561	0	1,030	63
77	0	10,682	0	10,682	0	730	43
78	0	7,647	0	7,647	0	505	29
79	0	5,332	0	5,332	0	340	19
80	0	3,617	0	3,617	0	222	12
81	0	2,384	0	2,384	0	142	7
82	0	1,523	0	1,523	0	87	4
83	0	942	0	942	0	52	2
84	0	562	0	562	0	30	1
85	0	323	0	323	0	17	1
86	0	180	0	180	0	9	0
87	0	97	0	97	0	5	0
88	0	51	0	51	0	2	0
89	0	26	0	26	0	1	0
90	0	13	0	13	0	1	0
91	0	6	0	6	0	0	0
92	0	2	0	2	0	0	0
93	0	1	0	1	0	0	0
94	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0
99	0	0	0	0		0	0
100	0	0	0		0	0	
				Totals	\$ 17,547,682	\$ 78,307	\$ 17,625,989



SECTION D GLOSSARY OF TERMS

GLOSSARY OF TERMS

- Actuarial Accrued Liability 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."
- Actuarial Assumptions 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.
- *Accrued Service* Service credited under the system which was rendered before the date of the actuarial valuation.
- *Actuarial Equivalent* 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.
- Actuarial Cost Method 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.
- Actuarial Gain (Loss) 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.
- Actuarial Present ValueThe 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.
- *Actuarial Valuation* 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.
- *Actuarial Valuation Date* The date as of which an actuarial valuation is performed.

Actuarially Determined
Contribution (ADC) or
Annual RequiredA 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)

Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Amortization Method	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.
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple- Employer Defined Benefit Pension Plan (cost-sharing pension plan)	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.
Covered Valuation Payroll	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.
Deferred Inflows and Outflows	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.
Discount Rate	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:
	 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 The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.
Entry Age Actuarial Cost Method (EAN)	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)

GASB	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
Fiduciary Net Position	The fiduciary net position is the value of the assets of the trust.
Long-Term Expected Rate of Return	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.
Money-Weighted Rate of Return	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.
Multiple-Employer Defined Benefit Pension Plan	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Municipal Bond Rate	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.
Net Pension Liability (NPL)	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
Non-Employer Contribution Entities	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.
Normal Cost	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
Other Postemployment Benefits (OPEB)	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.
Real Rate of Return	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
Service Cost	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:		
	 Service Cost; Interest on the Total Pension Liability; Current-Period Benefit Changes; Employee Contributions (made negative for addition here); Projected Earnings on Plan Investments (made negative for addition here); Pension Plan Administrative Expense; Other Changes in Plan Fiduciary Net Position; Recognition of Outflow (Inflow) of Resources due to Liabilities; and 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.		