TSW
Actuary

CITY OF AURORA

AURORA POLICE PENSION FUND

Actuarial Valuation Report

For the Year

Beginning January 1, 2015

And Ending December 31, 2015

Timothy W. Sharpe, Actuary, Geneva, IL (630) 262-0600

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INTRODUCTION

Police-sworn personnel of the City of Aurora are covered by the Police Pension Plan that is a defined-benefit, single-employer pension plan. The purpose of this report is to provide to the Intended Users of this report, specifically the Intended Users are the City Officials, the Pension Board and the City and Pension Board auditors, the reporting requirements of the Illinois Pension Code, the GASB Statements No. 67 & 68 financial information and related actuarial information for the year stated in this report. This report is not intended for distribution or usage to or by anyone who is not an Intended User and should not be used for any other purpose.

The valuation results reported herein are based on the employee data, plan provisions and the financial data provided by the City. The actuary has relied on this information and does not assume responsibility for the accuracy or completeness of this information. I hereby certify that to the best of my knowledge this report is complete and accurate and fairly presents the actuarial position of the Fund in accordance with generally accepted actuarial principles and procedures. In my opinion, the assumptions used are reasonably related to the experience of the Plan and to reasonable expectations. A reasonable request for supplementary information not included in this report should be directed to the undersigned actuary.

The actuary cautions the Intended Users of the possibility of uncertainty or risks in any of the results in this report.

I, Timothy W. Sharpe, am an Enrolled Actuary and a member of the American Academy of Actuaries, and I meet the Qualifications Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Timothy W. Sharpe

Timothy W. Sharpe, EA, MAAA
Enrolled Actuary No. 14-4384

7/17/2015
Date

SUMMARY OF RESULTS

There were no material changes with respect to Plan Provisions, Actuarial Methods or Actuarial Assumptions from the prior year.

Based on the plan sponsor’s funding policy and future expected plan contributions and funded status, the plan is to be expected to produce adequate assets to make benefit payments when they are due.

The benefit payment default risk or the financial health of the plan sponsor was not deemed to be material.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan’s funded status); and changes in plan provisions or applicable law.

Due to the limited scope of the actuary’s assignment, the actuary did not perform an analysis of the potential range of such future measurements.

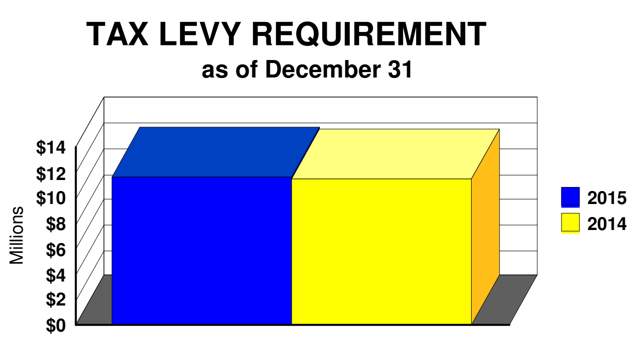
There were no unexpected changes with respect to the participants included in this actuarial valuation (10 new members, 1 termination, 6 retirements, 2 incidents of disability, annual payroll increase -0.4%, average increase 0.7%).

There were no unexpected changes with respect to the Fund's investments from the prior year (annual investment return 5.65%).

The City's Tax Levy Requirement has increased slightly from $11,515,940 last year to $11,651,149 this year (1.2%). The slight increase in the Tax Levy is due to the new incidents of disability and the investment return was less than assumed. The Percent Funded has increased from 51.8% last year to 53.9% this year.

SUMMARY OF RESULTS (Continued)

	For Year Ending December 31 2015	For Year Ending December 31 2014
Tax Levy Requirement	$ 11,651,149	$ 11,515,940
	as of January 1 2015	as of January 1 2014
City Normal Cost	5,270,534	5,210,232
Anticipated Employee Contributions	2,656,143	2,667,000
Accrued Liability	315,098,992	302,951,454
Actuarial Value of Assets	169,712,135	156,912,689
Unfunded Accrued Liability/(Surplus)	145,386,857	146,038,765
Amortization of Unfunded Accrued Liability/(Surplus)	5,643,891	5,577,534
Percent Funded	53.9%	51.8%
Annual Payroll	$ 26,802,659	$ 26,912,214



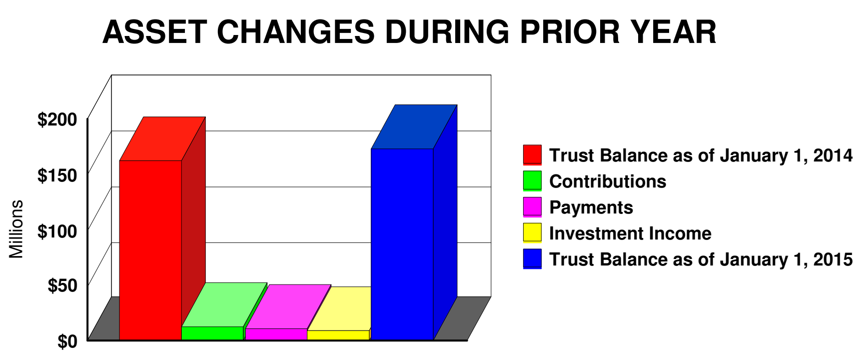
ACTUARIAL VALUATION OF ASSETS

	as of January 1	
	2015	2014
Cash and Equivalents	$ 7,561,370	$ 25,512
Money Market, NOW, IL Fund	0	5,829,548
Certificates of Deposit	0	5,648,250
Government Securities	58,799,375	30,063,238
Corporate Bonds	59,706,392	17,703,544
Foreign Bonds	27,700,334	3,154,877
Equities	0	37,408,812
Mutual Funds	8,373,794	63,071,718
REITs	10,756,576	0
Interest Receivable	1,024,926	923,505
Miscellaneous Receivable	153,530	(33,155)
Market Value of Assets	174,076,297	$ 163,795,849
Actuarial Value of Assets	$ 169,712,135	156,912,689

FYE 2011-2014 (G)/L: $6,249,187, ($3,782,389); ($8,891,753); $$1,813,966

ASSET CHANGES DURING PRIOR YEAR

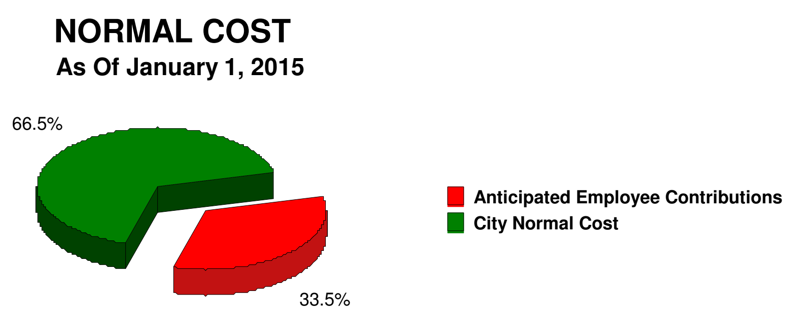
Trust Balance as of January 1, 2014		$	163,795,849
Contributions			
City	10,092,419		
Employee	2,936,722		
Total			13,029,141
Payments			
Benefit Payments	11,942,967		
Expenses	81,875		
Total			12,024,842
Investment Income			9,276,149
Trust Balance as of January 1, 2015		$	174,076,297
Approximate Annual Rate of Return			5.65%



NORMAL COST

The Normal Cost is the actuarial present value of the portion of the projected benefits that are expected to accrue during the year based upon the actuarial valuation method and actuarial assumptions employed in the valuation.

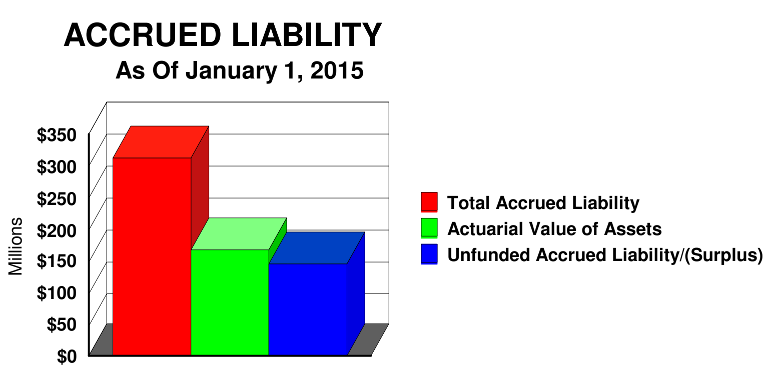
	as of January 1	
	2015	2014
Total Normal Cost	$ 7,926,677	$ 7,877,232
Anticipated Employee Contributions	2,656,143	2,667,000
City Normal Cost	5,270,534	5,210,232
Normal Cost Payroll	$ 26,802,659	$ 26,912,214
City Normal Cost Rate	19.66%	19.36%
Total Normal Cost Rate	29.57%	29.27%



ACCRUED LIABILITY

The Accrued Liability is the actuarial present value of the portion of the projected benefits that has been accrued as of the valuation date based upon the actuarial valuation method and actuarial assumptions employed in the valuation. The Unfunded Accrued Liability is the excess of the Accrued Liability over the Actuarial Value of Assets.

	as of January 1 2015	2014
Accrued Liability		
Active Employees	$ 149,220,072	$ 144,237,297
Children Annuities	0	0
Disability Annuities	10,960,468	9,092,610
Retirement Annuities	146,591,023	143,112,465
Surviving Spouse Annuities	6,247,256	4,541,370
Terminated Vested Annuities	2,080,173	1,967,712
Total Annuities	165,878,920	158,714,157
Total Accrued Liability	315,098,992	302,951,454
Actuarial Value of Assets	169,712,135	156,912,689
Unfunded Accrued Liability/(Surplus)	$ 145,386,857	$ 146,038,765
Percent Funded	53.9%	51.8%

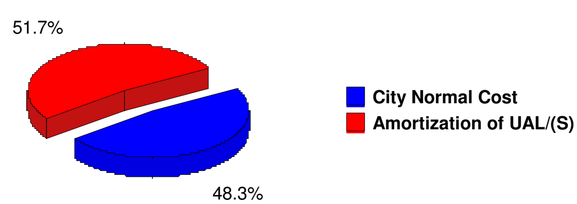


TAX LEVY REQUIREMENT

The Tax Levy Requirement is determined as the annual contribution necessary to fund the normal cost, plus the amount to amortize the excess (if any) of ninety percent (90%) of the accrued liability over the actuarial value of assets as a level percentage of payroll over a thirty (30) year period which commenced in 2011, plus an adjustment for interest. Prior to 2011, the amortization amount was equal to the amount to amortize the unfunded accrued liability as a level percentage of payroll over a forty (40) year period which commenced in 1993.

	For Year Ending December 31 2015	2014
City Normal Cost as of Beginning of Year	$ 5,270,534	$ 5,210,232
Amortization of Unfunded Accrued Liability/(Surplus)	5,643,891	5,577,534
Interest for One Year	736,724	728,174
Tax Levy Requirement as of End of Year	11,651,149	11,515,940
Public Act 096-1495 Tax Levy Requirement		
1) Normal Cost (PUC)	5,270,534	5,210,232
2) Accrued Liability (PUC)	315,098,992	302,951,454
3) Amortization Payment	5,643,891	5,577,534
4) Interest for One Year	736,724	728,174
5) PA 096-1495 Tax Levy Requirement (1 + 3 + 4)	$ 11,651,149	$ 11,515,940

TAX LEVY REQUIREMENT
For Fiscal Year Ending December 31, 2015



SUMMARY OF PLAN PARTICIPANTS

The actuarial valuation of the Plan is based upon the employee data furnished by the City. The information provided for Active participants included:

- Name
- Sex
- Date of Birth
- Date of Hire
- Compensation
- Employee Contributions

The information provided for Inactive participants included:

- Name
- Sex
- Date of Birth
- Date of Pension Commencement
- Monthly Pension Benefit
- Form of Payment

Membership	2015	2015	2014	2014
Current Employees				
Vested	218		208	
Nonvested	71		80	
Total	289		288	
Inactive Participants		Annual Benefits		Annual Benefits
Children	0	$ 0	0	$ 0
Disabled Employees	15	617,022	13	514,943
Retired Employees	152	10,666,229	152	10,334,999
Surviving Spouses	25	790,741	21	631,001
Terminated Vesteds	4	149,763	3	120,870
Total	196	12,223,755	189	11,601,813
Annual Payroll		$ 26,802,659		$ 26,912,214

SUMMARY OF PLAN PARTICIPANTS (Continued)

Age and Service Distribution

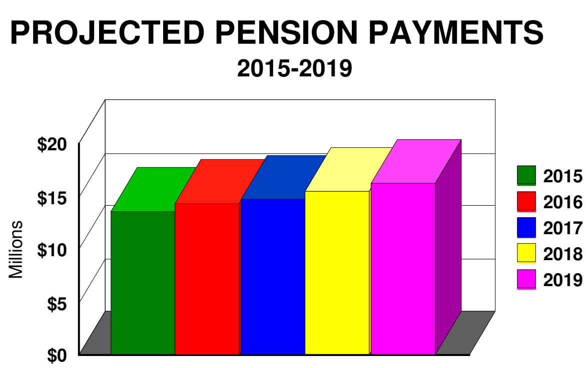
Service Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total	Salary
20-24	11							11	63,009
25-29	10	13						23	80,137
30-34	4	30	16					50	86,455
35-39		23	19	10				52	88,513
40-44		8	16	33	18			75	97,263
45-49			6	12	25	10		53	100,150
50-54				3	10	5	1	19	107,745
55-59					2	4		6	115,200
60+									
Total	25	74	57	58	55	19	1	289	92,743
Salary	67,631	87,278	89,307	96,862	102,843	111,368	172,467		

Average Age: 39.4 Average Service: 13.6

DURATION (years) Active Members: 20.4 Retired Members: 10.9 All Members: 15.7

PROJECTED PENSION PAYMENTS

2015	2016	2017	2018	2019
$13,586,921	$14,398,885	$14,872,539	$15,542,502	$16,375,708



SUMMARY OF PLAN PROVISIONS

The Plan Provisions have not been changed from the prior year.

The City of Aurora Police Pension Fund was created and is administered as prescribed by "Article 3. Police Pension Fund - Municipalities 500,000 and Under" of the Illinois Pension Code (Illinois Compiled Statutes, 1992, Chapter 40). A brief summary of the plan provisions is provided below.

Employees attaining the age of (50) or more with (20) or more years of creditable service are entitled to receive an annual retirement benefit of (2.5%) of final salary for each year of service up to (30) years, to a maximum of (75%) of such salary.

Employees with at least (8) years but less than (20) years of credited service may retire at or after age (60) and receive a reduced benefit of (2.5%) of final salary for each year of service.

Surviving spouses receive the greater of (50%) of final salary or the employee's retirement benefit.

Employees disabled in the line of duty receive (65%) of final salary.

The monthly pension of a covered employee who retired with (20) or more years of service after January 1, 1977, shall be increased annually, following the first anniversary date of retirement and be paid upon reaching the age of at least (55) years, by (3%) of the originally granted pension. Beginning with increases granted on or after July 1, 1993, the second and subsequent automatic annual increases shall be calculated as (3%) of the amount of the pension payable at the time of the increase.

Employees are required to contribute (9.91%) of their base salary to the Police Pension Plan. If an employee leaves covered employment with less than (20) years of service, accumulated employee contributions may be refunded without accumulated interest.

For Employees hired after January 1, 2011, the Normal Retirement age is attainment of age 55 and completion of 10 years of service; Early Retirement age is attainment of age 50, completion of 10 years of service and the Early Retirement Factor is 6% per year; the Employee’s Accrued Benefit is based on the Employee’s final 8-year average salary not to exceed $106,800 (as indexed); Cost-of-living adjustments are simple increases (not compounded) of the lesser of 3% or 50% of CPI beginning the later of the anniversary date and age 60; Surviving Spouse’s Benefits are 66 2/3% of the Employee’s benefit at the time of death.

ACTUARIAL METHODS

The Actuarial Methods employed for this valuation are as follows:

Projected Unit Credit Cost Method (for years beginning on or after 2011)

Under the Projected Unit Credit Cost Method, the Normal Cost is the present value of the projected benefit (including projected salary increases) earned during the year.

The Accrued Liability is the present value of the projected benefit (including projected salary increases) earned as of the actuarial valuation date. The Unfunded Accrued Liability is the excess of the Accrued Liability over the plan's assets. Experience gains or losses adjust the Unfunded Accrued Liability.

Entry Age Normal Cost Method (for years beginning prior to 2011)

Under the Entry Age Normal Cost Method the Normal Cost for each participant is computed as the level percentage of pay which, if paid from the earliest age the participant is eligible to enter the plan until retirement or termination, will accumulate with interest to sufficiently fund all benefits under the plan. The Normal Cost for the plan is determined as the greater of a) the sum of the Normal Costs for all active participants, and b) 17.5% of the total payroll of all active participants.

The Accrued Liability is the theoretical amount that would have accumulated had annual contributions equal to the Normal Cost been paid. The Unfunded Accrued Liability is the excess of the Accrued Liability over the plan's assets. Experience gains or losses adjust the Unfunded Accrued Liability.

ACTUARIAL ASSUMPTIONS

The Actuarial Assumptions used for determining the Tax Levy Requirement and GASB Statements No. 67 & 68 Disclosure Information are the same (except where noted) and have not been materially changed from the prior year. The methods and assumptions disclosed in this report may reflect statutory requirements and may reflect the responsibility of the Principal and its advisors. Unless specifically noted otherwise, each economic and demographic assumption was selected in accordance with Actuarial Standards of Practice 27 and 35 and may reflect the views and advice of advisors to the Principal. In the event a method or assumption conflicts with the actuary's professional judgment, the method or assumption is identified in this report. The Actuarial Assumptions employed for this valuation are as follows:

Valuation Date	January 1, 2015
Asset Valuation Method	5-year Average Market Value (PA 096-1495)
Investment Return	6.75% net of investment expenses.
Salary Scale	11.0% - 4.0% (after 30 years of service)
Payroll Growth	4.50%
Mortality	RP 2000 Mortality Table (CHBCA). There is no margin for future mortality improvement beyond the valuation date.
Withdrawal	Based on studies of the Fund and the Department of Insurance, Sample Rates below
Disability	Based on studies of the Fund and the Department of Insurance, Sample Rates below
Retirement	Based on studies of the Fund and the Department of Insurance, Sample Rates below (100% by age 70)
Marital Status	80% Married, Female spouses 3 years younger

ACTUARIAL ASSUMPTIONS *(Continued)*

	Sample Annual Rates Per 100 Participants			
Age	Mortality	Withdrawal	Disability	Retirement
20	0.03	10.00	0.05	
25	0.04	7.50	0.05	
30	0.07	5.00	0.22	
35	0.11	3.00	0.26	
40	0.14	2.00	0.40	
45	0.18	2.00	0.65	
50	0.24	3.50	0.95	20.00
55	0.42	3.50	1.30	25.00
60	0.83	3.50	1.65	33.00
65	1.55	3.50	2.00	50.00
70	2.68			100.00

GASB STATEMENTS NO. 25 & 27 DISCLOSURE INFORMATION

The Governmental Accounting Standards Board (GASB) issued Statements No. 25 & 27 that established generally accepted accounting principles for the annual financial statements for defined benefit pension plans. The required information is as follows:

Membership in the plan consisted of the following as of:

	December 31, 2014	December 31, 2013
Retirees and beneficiaries receiving benefits	192	186
Terminated plan members entitled to but not yet receiving benefits	4	3
Active vested plan members	218	208
Active nonvested plan members	71	80
Total	485	477
Number of participating employers	1	1

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) -Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
12/31/12	144,783,442	297,045,318	152,261,876	48.7%	26,708,019	570.1%
12/31/13	163,795,849	316,818,365	153,022,516	51.7%	26,912,214	568.6%
12/31/14	174,076,297	329,052,844	154,976,547	52.9%	26,802,659	578.2%

GASB STATEMENTS NO. 25 & 27 DISCLOSURE INFORMATION (Continued)

ANNUAL PENSION COST AND NET PENSION OBLIGATION

	December 31, 2014	December 31, 2013
Annual required contribution	11,704,569	9,494,992
Interest on net pension obligation	188,399	141,845
Adjustment to annual required contribution	(121,395)	(88,626)
Annual pension cost	11,771,573	9,548,211
Contributions made	10,092,419	8,858,531
Increase (decrease) in net pension obligation	1,679,154	689,680
Net pension obligation beginning of year	2,791,090	2,101,410
Net pension obligation end of year	4,470,244	2,791,090

THREE-YEAR TREND INFORMATION

Fiscal Year Ending	Annual Pension Cost (APC)	Percentage of APC Contributed	Net Pension Obligation
12/31/12	9,066,508	91.2%	2,101,410
12/31/13	9,548,211	92.8%	2,791,090
12/31/14	11,771,573	85.7%	4,470,244

FUNDING POLICY AND ANNUAL PENSION COST

Contribution rates:		
City	37.65%	32.92%
Plan members	9.91%	Same
Annual pension cost	11,771,573	9,548,211
Contributions made	10,092,419	8,858,531
Actuarial valuation date	12/31/2014	12/31/2013
Actuarial cost method	Entry age	Same
Amortization period	Level percentage of pay, closed	Same
Remaining amortization period	26 years	27 years
Asset valuation method	Market	Same
Actuarial assumptions:		
Investment rate of return*	6.75%	Same
Projected salary increases*	11.0% - 4.0%	Same
*Includes inflation at	3.00%	Same
Cost-of-living adjustments	Tier 1: 3.00% per year, compounded Tier 2: 2.00% per year, simple	Same

STATEMENTS NO. 67 & 68 DISCLOSURE INFORMATION

Plan Membership	December 31, 2014
Inactive plan members or beneficiaries currently receiving benefits	192
Inactive plan members entitled to but not yet receiving benefits	4
Active plan members	289
Total	485

Net Pension Liability of the City	
Total pension liability	351,250,751
Plan fiduciary net position	174,076,297
City's net pension liability	177,174,454
Plan fiduciary net position as a percentage of the total pension liability	49.56%

Actuarial Assumptions	
Inflation	3.00%
Salary increases	11.00% - 4.00%
Investment rate of return	6.25% net of expenses

The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that City contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the discount rate was determined in accordance with paragraphs 40-45. Therefore, the discount rate was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

	1% Decrease 5.25%	Current Discount Rate 6.25%	1% Increase 7.25%
Net Pension Liability	228,963,470	177,174,454	134,870,348

STATEMENTS NO. 67 & 68 DISCLOSURE INFORMATION (continued)

Schedule of Changes in the City's Net Pension Liability and Related Ratios

Total Pension Liability	December 31, 2014
Service cost	7,426,768
Interest	20,900,924
Changes of benefit terms	0
Differences between expected and actual experience	(3,884,620)
Changes of assumptions	12,703,751
Benefit payments, including refunds of member contributions	11,942,967
Net change in total pension liability	25,203,856
Total pension liability - beginning	326,046,895
Total pension liability - ending	351,250,751
Plan Fiduciary Net Position	
Contributions - employer	10,092,419
Contributions - member	2,936,722
Net investment income	9,276,149
Benefit payments, including refunds of member contributions	11,942,967
Administrative expense	81,875
Other	0
Net change in plan fiduciary net position	10,280,448
Plan fiduciary net position - beginning	163,795,849
Plan fiduciary net position - ending	174,076,297
City's net pension liability	177,174,454
Plan fiduciary net position as a percentage of the total pension liability	49.56%
Covered-employee payroll	26,802,659
City's net pension liability as a percentage of covered-employee payroll	661.03%

STATEMENTS NO. 67 & 68 DISCLOSURE INFORMATION (continued)

Schedule of City Contributions

	December 31, 2014
Actuarially determined contribution	10,091,124
Contributions in relation to the actuarially determined contribution	10,092,419
Contribution deficiency (Excess)	(1,295)
Covered-employee payroll	26,802,659
Contributions as a percentage of covered-employee payroll	37.65%

Notes to schedule

Valuation date	December 31, 2014
Methods and assumptions used to determine contribution rates:	
Actuarial cost method	Projected Unit Credit
Amortization method	Level Percentage of Pay
Remaining amortization period	26 years
Asset valuation method	Market Value
Inflation	3.00%
Salary increases	11.00% - 4.00%
Investment rate of return	6.25%
Retirement age	50-70
Mortality	RP 2000 CHBCA
Other	

Mortality rates were based on the RP-2000 Mortality Table (CHBCA). The actuarial assumptions used in the December 31, 2014 valuation were based on the results of an actuarial experience study conducted by the Illinois Department of Insurance dated September 26, 2012.