

# Employees' Retirement System of the County of Milwaukee

## Actuarial Valuation Report

Plan Year

January 1, 2015 – December 31, 2015

August 2015





**Larry Langer**  
*Principal and  
Consulting Actuary*

Buck Consultants, LLC.  
123 North Wacker Drive  
Suite 1000  
Chicago, IL 60606

[larry.langer@xerox.com](mailto:larry.langer@xerox.com)  
tel 312.846.3669  
fax 312.846.3502

August 2015

The Retirement Board  
Employees' Retirement System of the County of Milwaukee  
901 N. 9th St.  
Milwaukee, WI 53233

## Certification of Actuarial Valuation

Ladies and Gentlemen:

This report presents the results of the annual actuarial valuation of the Employees' Retirement System of the County of Milwaukee as of January 1, 2015. The valuation takes into account all of the promised benefits to which members are entitled as of January 1, 2015, including pension and survivor benefits; and as required by the Retirement Code is the basis for the Budget Contribution for fiscal year 2015.

The valuation was based on the actuarial assumptions and methods as adopted by the Board of Trustees, including a valuation interest rate of 8% per annum compounded annually. Based on our recommendations in November 2012, the Board adopted revised actuarial assumptions effective with the January 1, 2013 valuation.

Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, you should ask Buck to review any statement you wish to make on the results contained in this report. Buck will not accept any liability for any such statement made without prior review by Buck.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, changes expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions, applicable law or regulations. Because of limited scope, Buck performed no analysis of the potential range of such future differences.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the Plan. The actuary performs an analysis of Plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The Experience Study for the period January 1, 2007 to December 31, 2011 was prepared by Buck Consultants and approved by the Board for use beginning with the January 1, 2013 actuarial valuation and will remain in effect for valuation purposes until such time as the Board adopts revised assumptions. The next Experience Study will be based on the period from January 1, 2012 to December 31, 2016 and upon approval by the Board will be the basis of valuations performed from January 1, 2018 through January 1, 2022. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Table 18.

### **Assets and Membership Data**

The Retirement System reported the individual data for members of the System as of the valuation date to the actuary. For 2015 we received the data in multiple files. Missing information was updated with either supplemental information sent or by using assumptions based on the prior year's data. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by the Retirement System.

### **Funding Adequacy**

The 2014 valuation performed last year resulted in an Actual Funding Contribution of \$29,564,925 against which \$19,005,395 in County contributions (adjusted for interest shown on Table 11) and \$10,051,605 in member contributions were actually contributed. The difference is a deficiency of \$507,925 that is included in the reestablished unfunded actuarial accrued liability amortization as of January 1, 2015.

The Actual Funding Contribution for 2015, based on the results of this valuation, is \$57,853,824. It is expected that \$38,305,000 (\$38,305,000 in expected contribution plus \$0 interest) will be contributed during 2015 on behalf of the 2015 plan year. The deficiency in contributions of \$19,548,824 will be included in the change in unfunded actuarial accrued liability amortization as of January 1, 2016.

The reestablished amortization amount is amortized over 20 years from January 1, 2016, which is 21 years from January 1, 2015. Contribution variances prior to 2016 are included in the reestablished amortization amounts. Variances in contributions for 2016 and later years will be amortized over five years.

### **Budget Contribution**

The 2016 Budget Contribution, expected to be contributed in 2017, is \$59,436,000.

### **Financial Results and Membership Data**

Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are shown in the valuation report. The actuary prepared supporting schedules and required supplementary information included in the County of Milwaukee Annual Report of the Pension Board.

### **Compliance with Actuarial Standards of Practice**

Except as specially noted otherwise, the work in this report was performed in accordance with all applicable Actuarial Standards of Practice.

### **Qualifications**

The undersigned actuaries are members of the American Academy of Actuaries and are experienced in performing actuarial valuations of public employee retirement systems. To the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice. We are qualified to render the opinions set forth in this report.

Respectfully submitted,



Larry Langer, ASA, EA, MAAA  
Principal, Consulting Actuary



Troy Jaros, FSA, EA, MAAA  
Senior Consultant, Retirement Actuary

<b>Executive Summary .....</b>	<b>1</b>
TABLE 1 - Summary of Results of Actuarial Valuation .....	10
TABLE 2 - Security of Promised Benefits - Unfunded Actuarial Accrued Liability - Funded Status .....	11
TABLE 3 – Unexpected Change in Unfunded Actuarial Accrued Liability for Plan Year Ending .....	12
TABLE 4 - Amortization Schedule for Funding .....	13
TABLE 5 - Development of Normal Cost for Current and Prior Plan Year Actual Funding Calculations .....	14
TABLE 6 - Gross Contribution Requirements .....	15
TABLE 7 - Summary Statement of Market Value of Plan Assets .....	17
TABLE 8 - Summary Reconciliation of Market Value of Plan Assets .....	18
TABLE 9 - Derivation of Actuarial Value of Plan Assets .....	19
TABLE 10 - Summary Reconciliation of Actuarial Value of Plan Assets .....	20
TABLE 11 - Contributions for 2014 Plan Year and Variance from the Funding Calculation Contribution .....	21
TABLE 12 - Actuarial Methods and Assumptions for GASB 67/68 Disclosure Purposes .....	21
TABLE 13 - GASB 67 Net Pension Liability as of December 31, 2014 .....	22
TABLE 14 – Sensitivity of the net pension liability as of December 31, 2014 to changes in the discount rate	23
TABLE 15 – Estimate of the Pension Expense for year ended December 31, 2015 .....	24
TABLE 16 – Projection of Fiduciary Net Position .....	25
TABLE 17 – Actuarial Present Values of Projected Benefit Payments .....	30
TABLE 18 – Description of Actuarial Assumptions and Methods .....	30
TABLE 19 – Summary of Benefit and Contribution Provisions .....	33
TABLE 20 - Summary of Membership Data as of January 1, 2015.....	42
TABLE 21 - Active Membership Statistics (Unaudited) .....	43
EXHIBIT I - Active Membership Data – All Employees.....	44
EXHIBIT II - Active Membership Data – General Employees .....	45
EXHIBIT III - Active Membership Data – Deputy Sheriffs.....	46
EXHIBIT IV - Active Membership Data – Elected Officials .....	47
EXHIBIT V - Active and Deferred Vested Members Obtaining Retirement Eligibility over Next Five Calendar Years .....	47
EXHIBIT VI - Retiree and Beneficiary Membership Data as of January 1, 2015.....	48
EXHIBIT VII - 5-Year History of Membership Data .....	50
EXHIBIT VIII - Detailed Tabulations of the Data .....	51
EXHIBIT IX - Glossary .....	70

## Executive Summary

This report presents the actuarial valuation as of January 1, 2015 for the Employees' Retirement System of the County of Milwaukee. The principal valuation results include:

- The Actual Funding Contribution for fiscal year 2015, which is \$57,853,824.
- The Budget Contribution for fiscal year 2016, which is \$59,436,000.
- The total funded ratio of the plan determined as of January 1, 2015, which is 79.8% based on the accrued liability and the actuarial value of assets. On a market value basis, the plan is 82.0% funded.
- The determination of the unexpected change in the unfunded accrued liability (UAL) as of January 1, 2015, which is an increase in the UAL of \$140,933,050.

The valuation was based on membership and financial data submitted by the Retirement System.

### Changes Since Last Year

#### Legislative and Administrative Changes

No legislative or administrative changes have been adopted since the previous valuation.

Note that for purposes of the contribution rates shown in the report, these amounts are gross contribution amounts. It is our understanding that County staff will net out the amount of employee contributions that are collected to arrive at a net County contribution. The benefit and contribution provisions are outlined in Table 19.

#### Actuarial Assumptions and Methods

No actuarial assumptions have changed for 2015 since the previous valuation.

For 2015, the Retirement Board has adopted the following funding policy changes:

- Recommend reducing the current 30 year amortization period to 20 years
- Immediately reflect expected administrative expenses rather than amortizing over 10 years
- Reduce future increases in amortization payments from the current 3.50% policy to expected revenue growth, which is assumed to be 1.75% per year
- Update the actuarial cost method from Aggregate Entry Age Normal to Individual Entry Age Normal

For purposes of implementing these plan changes, we have financed all unfunded accrued liability (UAL) as of January 1, 2015 over 21 years assuming that future payments for UAAL increase by 1.75%. The 2016 Budget Contribution will be based on financing all UAL as of January 1, 2016 over 20 years. Beginning with the January 1, 2017 contribution, a base for unexpected UAL will be established over 20 years, and a contribution variance will be established and amortized over 5 years for the amount of budget contribution determined in this report that is not contributed during 2016.

The actuarial assumptions and methods are outlined in Table 18.

## Contribution Amounts

The results of the valuation as of January 1, 2015 determine the Actual Funding Contribution for fiscal year 2015 and the Budget Contribution for fiscal year 2016. The Actual Funding Contribution for fiscal year 2015 is \$57,853,824. The Budget Contribution for fiscal year 2016 is \$59,436,000. These amounts are based on assumptions and methods as adopted by the Board and participant data as of January 1, 2015. Both amounts include the changes since last year listed above.

### Reasons for Change in Budget Contribution Calculated by the Actuary

The Budget Contribution calculated by the actuary increased from \$38,305,000 for fiscal year 2015 to \$59,436,000 for fiscal year 2016. A reconciliation of the increase of \$21,131,000 is shown in the following table:

Item	Amount
1. 2015 Budget Contribution	\$ 38,305,000
2. Increase / (Decrease) during 2014 due to	
a. Unanticipated liability loss (gain)	\$ (2,226,000)
b. Asset experience other than expected	317,000
c. 2014 reimbursable expenses other than assumed	-
d. 2014 contribution variance other than assumed	-
e. COLA reinclusion	11,112,000
f. Increase due to funding policy change	
i. Expected policy change	4,631,000
ii. COLA reinclusion of the policy change	4,473,000
iii. Updated assets and census	1,242,000
g. Total	<u>19,549,000</u>
3. 2015 Actual Contribution (1 + 2)	\$ 57,854,000
4. Expected Increase / (Decrease) during 2015 due to	
a. Normal cost and existing amortization base	\$ 758,000
b. Phase-in of deferred asset (gains) losses	(970,000)
c. Increase in reimburseable expenses	27,000
d. Expected contribution variance for 2015	1,767,000
e. Full recognition of bases	-
f. 2015 reimbursable expenses	-
g. Total	<u>1,582,000</u>
5. 2016 Budget Contribution (3 + 4)	\$ 59,436,000

## Summary of Principal Results

Summarized below are the principal financial results for the Employees' Retirement System of the County of Milwaukee based upon the actuarial valuation as of January 1, 2015. Comparable results from the January 1, 2014 valuation are also shown.

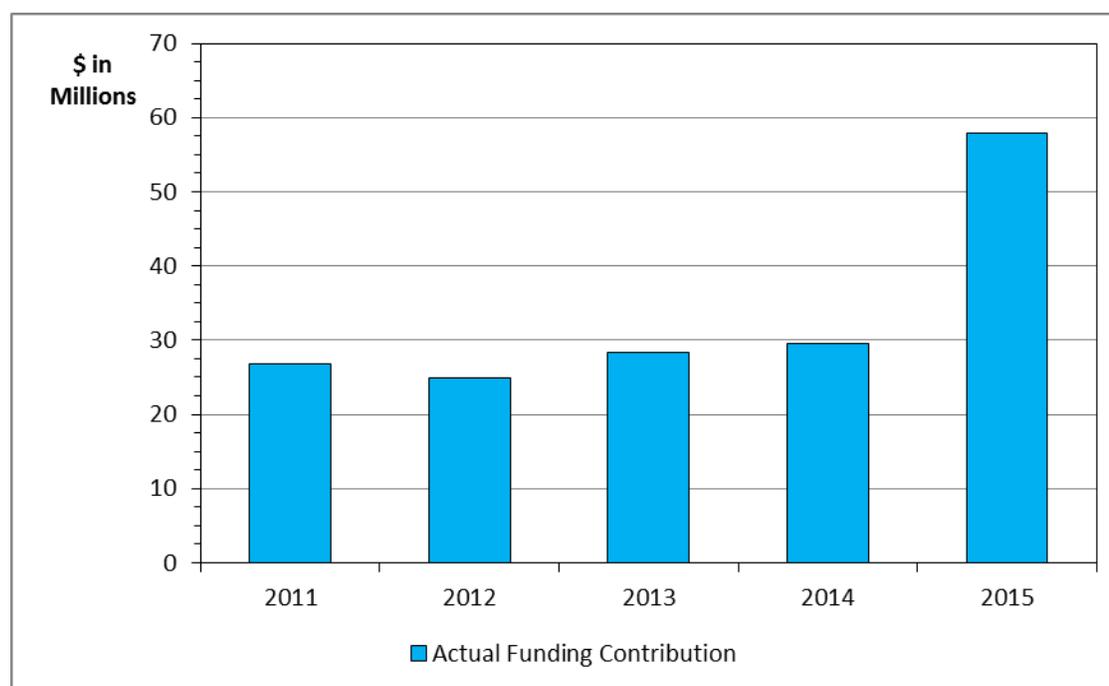
Item	January 1, 2015	January 1, 2014
<b>Demographics</b>		
<u>Active Members</u>		
• Number	3,680	3,911
• Average Annual Pay	\$ 53,868	\$ 48,224
<u>Inactive Members</u>		
• Members Receiving Benefits		
• Number	7,979	7,940
• Average Annual Benefit Payment	\$ 20,687	\$ 20,440
• Members With Deferred Benefits		
• Number	1,370	1,411
• Average Annual Benefit Payment	\$ 7,723	\$ 7,742
<b>Actual Funding Contribution</b>	<b>(Fiscal Year 2015)</b>	<b>(Fiscal Year 2014)</b>
• Normal Cost with Interest	\$ 16,999,506	\$ 15,235,436
• Net Amortization Payments	39,300,143	14,329,489
• Expense	<u>1,554,175</u>	<u>N/A</u>
• Total Contribution	\$ 57,853,824	\$ 29,564,925
<b>Actuarial Funded Status</b>		
• Accrued Liability	\$ 2,222,620,399	\$ 2,069,546,764
• Actuarial Value of Assets	<u>1,773,638,120</u>	<u>1,772,749,644</u>
• Unfunded Accrued Liability	\$ 448,982,279	\$ 296,797,120
• Funded Ratio	79.8%	85.7 %

## Five-Year History of Principal Financial Results

### Five-Year History of Contribution Amounts

Valuation as of January 1	Actual Funding Contributions			
	Normal Cost with Interest	Net Amortization Payments	Expenses	Total
2015	\$ 16,999,506	\$39,300,143	\$ 1,554,175	\$ 57,853,824
2014	15,235,436	14,329,489	N/A	29,564,925
2013	16,105,425	12,164,620	N/A	28,270,045
2012	14,488,711	10,386,482	N/A	24,875,193
2011	19,480,089	7,327,948	N/A	26,808,037

### Chart of Five-Year History of Actual Funding Contributions



## **Funded Ratio**

The financing objective of the System is to:

- Fully fund all current costs based on the normal contribution rate determined under the funding method;  
and
- Liquidate the unfunded accrued liability based on the amortization schedules as required by Section 3.1 of the retirement code, i.e., a schedule of 5 or 20 years for each change in the unfunded accrued liability.

The total Actual Funding Contribution of \$57,853,824, when taken together with the contributions payable by the members and asset returns, is the amount sufficient to achieve the financing objective for 2015.

The System's total funded ratio on the funding basis is measured by comparing the actuarial value of assets (based on a 10-year moving average market value) with the accrued liability. The accrued liability is the present value of benefits accumulated to date under the System's funding method and reflects future pay increases for active employees.

On this basis, the System's funded ratio is 79.8% as of January 1, 2015. This funded ratio is based on an actuarial value of assets of \$1,773,638,120 and an accrued liability of \$2,222,620,399.

## **Reasons for Change in the Funded Ratio**

The total funded ratio decreased from a *reported* 85.7% as of January 1, 2014 to 79.8% as of January 1, 2015. The majority of the difference is due to the re-inclusion of the COLA liabilities as of January 1, 2015; on a corrected basis, the 2014 total funded ratio was 79.0%. Returns on actuarial assets from 2014 were better than the expected return assumption of 8.0%. Overall liability experience was worse than expected, which was slightly offset by the favorable asset experience.

**Five-Year History of Funded Ratio Based on Actuarial Value of Assets**

(\$ Amounts in Thousands)

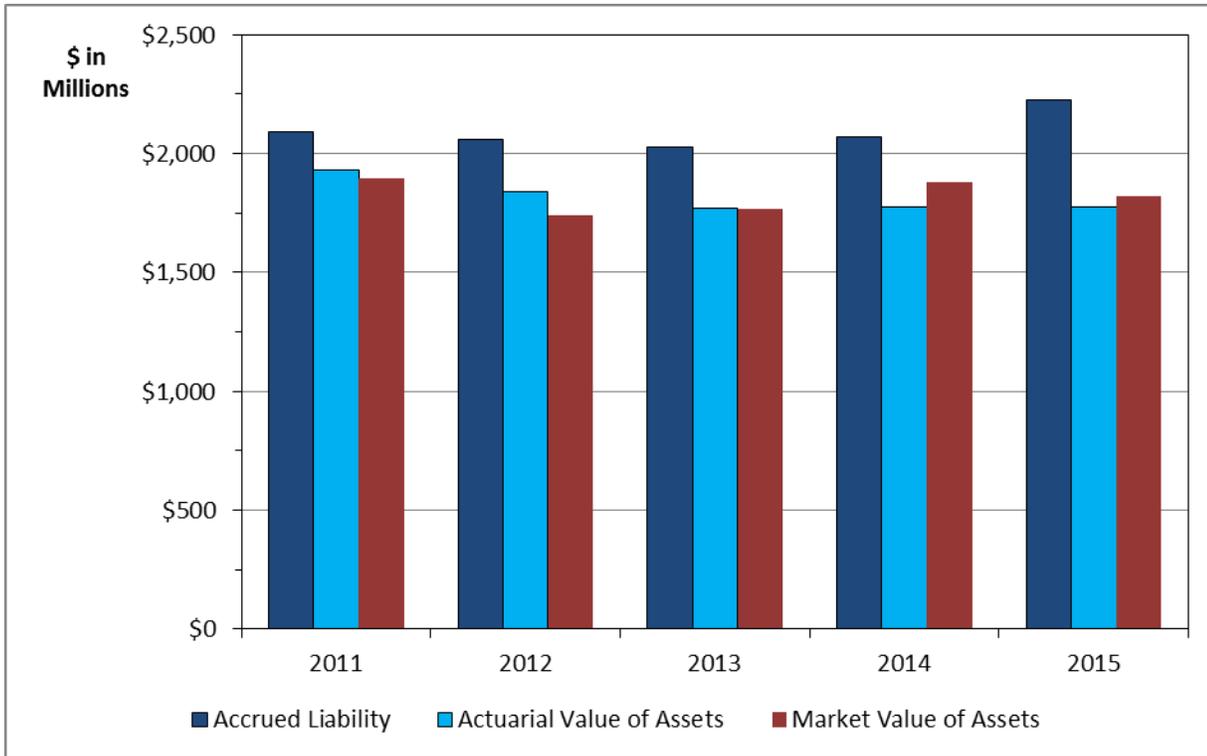
Valuation as of January 1	Actuarial Value of Assets (a)	Actuarial Accrued Liability	Funded Ratio (a / b)	Unfunded Actuarial Accrued	Covered Payroll (c)	Unfunded as a Percentage of Covered Payroll
2015	\$ 1,773,638	\$ 2,222,620	79.8%	\$ 448,982	\$ 191,432	234.5%
2014	1,772,750	2,069,547	85.7%	296,797	188,605	157.4%
2013	1,768,435	2,025,319	87.3%	256,884	189,132	135.8%
2012	1,836,543	2,059,554	89.2%	223,011	190,748	116.9%
2011	1,929,428	2,091,927	92.2%	162,499	221,647	73.3%

**Five-Year History of Funded Ratio Based on Market Value of Assets**

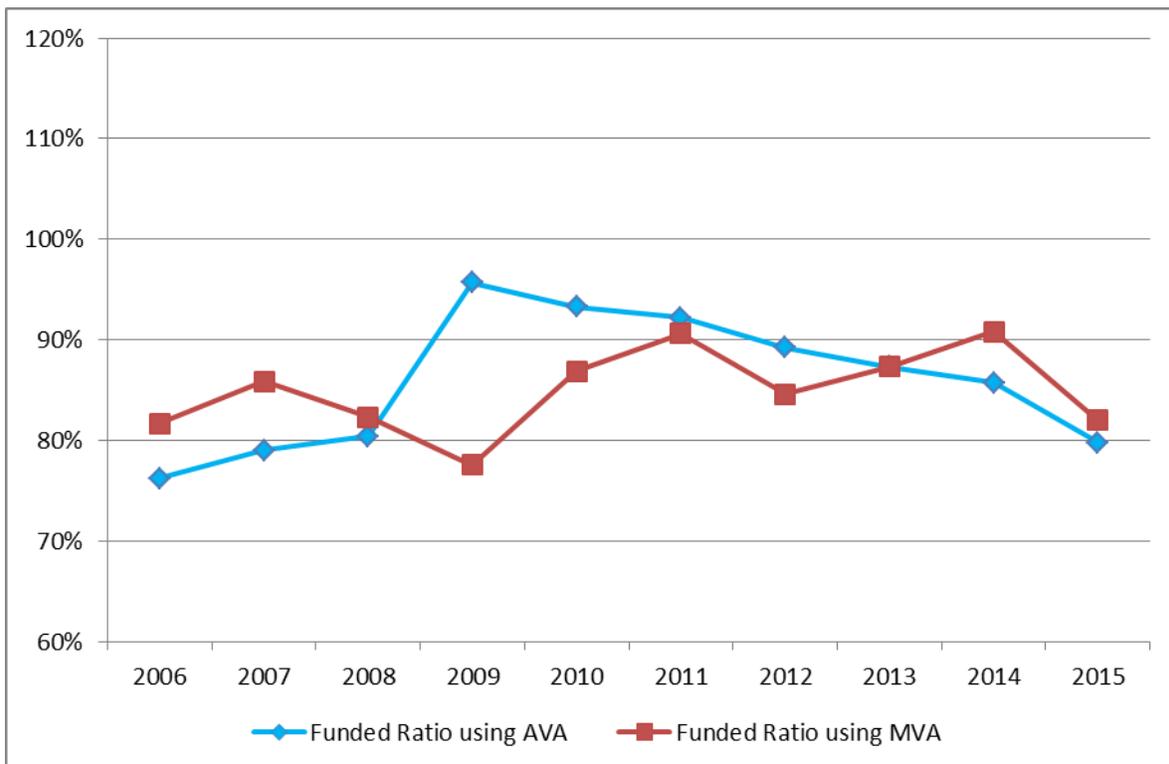
(\$ Amounts in Thousands)

Valuation as of January 1	Market Value of Assets (a)	Actuarial Accrued Liability	Funded Ratio (a / b)	Unfunded Actuarial Accrued	Covered Payroll (c)	Unfunded as a Percentage of Covered Payroll
2015	\$ 1,822,579	\$ 2,222,620	82.0%	\$ 400,041	\$ 191,432	209.0%
2014	1,879,234	2,069,547	90.8%	190,313	188,605	100.9%
2013	1,768,435	2,025,319	87.3%	256,884	189,132	135.8%
2012	1,742,107	2,059,554	84.6%	317,447	190,748	166.4%
2011	1,895,167	2,091,927	90.6%	196,760	221,647	88.8%

**Chart of Five-Year History of Accrued Liability and Actuarial Value of Assets**



**Ten-Year History of Funded Ratio**



### Rate of Return

The investment return of the trust fund (i.e. total return including both realized and unrealized gains and losses) for fiscal years 2010 through 2014 is shown in the table below. The return based on the actuarial value of assets used for determining annual contribution rates is also shown.

The rate of return on market value reflects the investment earnings on the market value of assets from the beginning of the fiscal year to the end of the fiscal year. The actuarial assets are the assets recognized for valuation purposes. Actuarial assets are based on a smoothed market value that spreads the difference between the actual and expected return over a period of ten years. The rate of return on the actuarial value of assets is a measure of the increase in the actuarial value of assets from the beginning of the fiscal year to the end of the fiscal year. The rates of return shown below have been developed by the actuary for illustrative purposes only. They are based on simplifying assumptions and, as such, likely will not exactly match the returns presented by your investment consultants. The reader is encouraged to use the returns developed by the investment consultants.

### Five-Year History of Asset Returns

As of 12/31	Asset Values		Rates of Return		
	Market	Actuarial	Market	Actuarial	Assumed
2010	\$ 1,895,166,843	\$ 1,929,427,864	11.7%	5.5%	8.0%
2011	1,742,106,887	1,836,542,926	0.2%	3.5%	8.0%
2012	1,768,434,628	1,768,434,628	10.8%	4.8%	8.0%
2013	1,879,234,430	1,772,749,644	15.0%	8.7%	8.0%
2014	1,822,579,695	1,773,638,120	5.2%	8.9%	8.0%
Compound Rate of Return (five years):			8.4%	6.3%	8.0%

### GASB No. 67 and GASB No. 68 Disclosure

Please note that GASB Statement No. 25 (Financial Reporting for Defined Benefit Pension Plans) is applicable for fiscal years ending prior to 2014 and has been replaced by GASB Statement No. 67 (Financial Reporting for Pension Plans) for fiscal years ending 2014 and later. Similarly, GASB Statement No. 27 (Accounting for Pensions by State and Local Governmental Employers) is applicable for fiscal years ending prior to 2015 and has been replaced by GASB Statement No. 68 (Accounting and Financial Reporting for Pensions) for fiscal years ending 2015 and later.

The discount rate used to measure the total pension liability was 8.0%. The projection of cash flows used to determine the discount rate assumed that System contributions will continue to follow the current funding policy. Based on those assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members.

<b>Net Pension Liability (Asset)</b>		
	<b>December 31, 2014</b>	<b>December 31, 2013</b>
Total Pension Liability	\$ 2,239,951,560	\$ 2,229,977,951
Plan Fiduciary Net Position	<u>1,822,579,695</u>	<u>1,879,234,430</u>
Net Pension Liability (Asset)	\$ 417,371,865	\$ 350,743,521
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (Asset)	81.37%	84.27%

Please see Tables 12 – 17 for a summary of all GASB 67 results.

**TABLE 1 - Summary of Results of Actuarial Valuation**

Item	January 1, 2015	January 1, 2014
<b>Participant Data</b>		
1. Number of Participants		
a) Active Participants	3,680	3,911
b) Participants with Deferred Benefits	1,370	1,411
c) Participants Receiving Benefits	7,979	7,940
d) Total	13,029	13,262
2. Annualized Salaries*	\$ 191,432,915	\$ 188,605,492
3. Annual Annuities	\$ 165,058,644	\$ 162,296,676
<b>Valuation Results</b>		
4. Present Value of Future Benefits		
a) Active Participants	\$ 605,180,196	\$ 625,424,284
b) Participants with Deferred Benefits	70,895,992	62,251,854
c) Participants Receiving Benefits	1,649,471,985	1,485,465,588
d) Total	\$ 2,325,548,173	\$ 2,173,141,726
5. Present Value of Future Normal Cost	\$ 102,927,774	\$ 103,594,962
6. Actuarial Accrued Liability: (4 - 5)	\$ 2,222,620,399	\$ 2,069,546,764
7. Actuarial Value of Assets	\$ 1,773,638,120	\$ 1,772,749,644
8. Funded Status: (7 / 6)	79.8 %	85.7 %
9. Unfunded Actuarial Accrued Liability: (6 - 7)	\$ 448,982,279	\$ 296,797,120
10. Normal Cost Rate	7.450 %	7.773 %
11. Normal Cost for the Plan Year	\$ 15,740,283	\$ 14,660,305
<b>Actual Funding Contribution and Annual Required Contribution for Fiscal Year **</b>		
12. Actual Funding Contribution Calculated by Actuary		
a) Normal Cost with Interest	\$ 16,999,506	\$ 15,235,436
b) Net Annual Amortization Payments	39,300,143	14,329,489
c) Expenses	1,554,175	N/A
d) Total Contribution: ((a + b + c), not less than zero)	\$ 57,853,824	\$ 29,564,925

\* For 2015, the amount displayed has been adjusted to reflect that there were 27 pay periods in 2014 rather than the typical 26

\*\* Effective January 1, 2011 Elected Officials and Non-Represented employees contributed 2% of compensation. For all Non-Represented employees (other than elected officials), the contribution rate increased to 4% of compensation effective December 11, 2011. During 2011, State mandated contributions were implemented. The amounts shown above are gross of member contributions.

**TABLE 2 - Security of Promised Benefits - Unfunded Actuarial Accrued Liability  
- Funded Status**

Item	January 1, 2015	January 1, 2014
1. Actuarial Accrued Liability		
a. Active Participants		
Retirement Benefits	\$ 467,388,602	\$ 485,283,111
Withdrawal Benefits	26,864,486	28,152,806
Disability Benefits	4,743,238	4,963,594
Death Benefits	<u>3,256,096</u>	<u>3,429,811</u>
Total Active	502,252,422	521,829,322
b. Participants with Deferred Benefits	70,895,992	62,251,854
c. Participants Receiving Benefits	<u>1,649,471,985</u>	<u>1,485,465,588</u>
d. Total All Participants	2,222,620,399	2,069,546,764
2. Actuarial Value of Assets	1,773,638,120	1,772,749,644
3. Unfunded Actuarial Accrued Liability (1d - 2)	448,982,279	296,797,120
4. Funded Status (2 / 1d)	79.8%	85.7%

The interest rate used as of January 1, 2015 and January 1, 2014 was 8.00%

**TABLE 3 – Unexpected Change in Unfunded Actuarial Accrued Liability for Plan Year Ending**

Item	December 31, 2014	December 31, 2013
1. Actuarial Accrued Liability at the Beginning of the Year	\$ 2,069,546,764	\$ 2,025,319,368
2. Increases/(Decreases) During the Year		
a. Normal Cost for the Year	14,660,305	15,497,452
b. Benefit Payments and Refunds	(177,366,124)	(172,248,723)
c. Assumed Interest to End of Year	159,575,042	156,227,411
d. Plan and Assumption Changes	-	-
e. Total: (a + b + c + d)	(3,130,777)	(523,860)
3. Expected Liability at the End of the Year: (1 + 2)	2,066,415,987	2,024,795,508
4. Impact of COLA reinclusion	178,053,780	N/A
5. Expected Accrued Liability at End of Year After COLA Reinclusion (3 + 4)	2,244,469,767	N/A
6. Actuarial Accrued Liability at the End of the Year	2,222,620,399	2,069,546,764
7. Other Unexpected Liability Changes at End of Year (6 - 5)	(21,849,368)	N/A
<b>8. Liability Unexpected Change on UAL:     (4 + 7) for 2014; (6 - 3) for 2013</b>	<b>\$ 156,204,412</b>	<b>\$ 44,751,256</b>
9. Actuarial Value of Assets at the Beginning of the Year	\$ 1,772,749,644	\$ 1,768,434,628
10. Increases/(Decreases) During the Year		
a. County Contributions	19,005,395	21,998,256
b. Member Contributions	10,051,605	8,954,525
c. Benefit Payments and Refunds	(177,366,124)	(172,248,723)
d. Administrative Expenses Payable to the County	(1,329,904)	(1,289,344)
e. Assumed Interest to End of Year	135,256,142	135,068,659
f. Total: (a + b + c + d + e)	(14,382,886)	(7,516,627)
11. Expected Actuarial Assets at the End of the Year (9 + 10)	1,758,366,758	1,760,918,001
12. Actuarial Value of Assets at the End of the Year	1,773,638,120	1,772,749,644
<b>13. Actuarial Asset Unexpected Change on UAL: (11 - 12)</b>	<b>\$ (15,271,362)</b>	<b>\$ (11,831,643)</b>
<b>14. Total Unexpected Change in UAL: (8 + 13)</b>	<b>\$ 140,933,050</b>	<b>\$ 32,919,613</b>

The unexpected change in UAL for the plan year ending December 31, 2014 includes the effects of the re-inclusion of the COLA liabilities that were not included in the valuations for the plan year ending December 31, 2013 and December 31, 2012.

**TABLE 4 - Amortization Schedule for Funding**

**For Actual Funding Contribution for 2015**

Type of Payment	Amortization Period				Balances		Payment
	Date Created	Initial Years	Remaining Years	Last Payment	Initial	Outstanding	
1. Charges							
Reestablished unfunded	1/1/2015	21	21	2035	\$ 448,982,279	\$ 448,982,279	\$ 39,300,143
Total Charges						\$ 448,982,279	39,300,143
2. Credits							
3. Net Amount (1 - 2)						\$ 448,982,279	\$ 39,300,143

**For Budget Contribution for 2016**

Type of Payment	Amortization Period				Balances		Payment
	Date Created	Initial Years	Remaining Years	Last Payment	Initial	Outstanding	
1. Charges							
Reestablished unfunded	1/1/2015	21	20	2035	\$ 448,982,279	\$ 445,600,718	\$ 39,987,896
Reestablished unfunded	1/1/2016	20	20	2035	8,880,918	8,880,918	\$ 796,967
Total Charges						\$ 454,481,636	40,784,863
2. Credits							
3. Net Amount (1 - 2)						\$ 454,481,636	\$ 40,784,863

**TABLE 5 - Development of Normal Cost for Current and Prior Plan Year Actual Funding Calculations**

Item	January 1, 2015	January 1, 2014
1. Present Value of Projected Benefits		
a. Active Participants		
Retirement Benefits	\$ 551,900,428	\$ 570,309,896
Withdrawal Benefits	39,095,107	40,616,108
Disability Benefits	6,596,585	6,767,529
Death Benefits	7,588,076	7,730,751
Total Active	605,180,196	625,424,284
b. Participants with Deferred Benefits	70,895,992	62,251,854
c. Participants Receiving Benefits	1,649,471,985	1,485,465,588
d. Total All Participants	2,325,548,173	2,173,141,726
2. Actuarial Value of Assets	1,773,638,120	1,772,749,644
3. Unfunded Actuarial Accrued Liability	448,982,279	296,797,120
4. Present Value of Future Normal Costs (1d - 2 - 3)	102,927,774	103,594,962
5. Present Value of Future Salaries	1,373,564,515	1,332,747,651
6. Aggregate Normal Cost Rate (4 / 5)	7.493%	7.773%
7. Expected Salaries for the Plan Year*	191,432,915	188,605,492
8. Aggregate Normal Cost (6 x 7)	N/A	14,660,305
9. Individual Normal Cost		
Retirement Benefits	\$ 12,896,983	N/A
Withdrawal Benefits	1,956,427	N/A
Disability Benefits	600,195	N/A
Death Benefits	286,678	N/A
Total Individual Normal Cost	15,740,283	N/A
10. <b>Normal Cost for the Plan Year</b> (8) for 2014 & (9) for 2015	<b>15,740,283</b>	<b>14,660,305</b>

\* Prior-year earnings increased by the salary assumption and limited by the IRS compensation limit for those under the mandatory retirement age.

**TABLE 6 - Gross Contribution Requirements**

Item	2016 Budget	2015	
		Actual	Budget
1. Normal Cost with Interest	\$ 17,070,000	\$ 16,999,506	\$ 15,769,000
2. Net Annual Amortizations	40,785,000	39,300,143	22,536,000
3. Expenses	<u>1,581,000</u>	<u>1,554,175</u>	<u>N/A</u>
4. Total Contribution (1 + 2 +3, not less than zero)	\$ 59,436,000	\$ 57,853,824	\$ 38,305,000

The budgeted contributions shown above for the 2016 and 2015 plan years were estimated based on participant data as of January 1, 2015, and January 1, 2014, respectively.

The 2015 actual contribution and 2016 budget contribution reflects the following plan changes adopted by the Retirement Board:

- Recommend reducing the current 30 year amortization period to 20 years
- Immediately reflect expected administrative expenses rather than amortizing over 10 years
- Reduce future increases in payments from the current 3.50% policy to expected revenue growth, which is assumed to be 1.75% per year
- Update the actuarial cost method from Aggregate Entry Age Normal to Individual Entry Age Normal

For purposes of implementing these plan changes, we have financed all unfunded actuarial accrued liability (UAAL) as of January 1, 2015 over 21 years assuming that future payments for UAAL increase by 1.75%. The 2016 Budget Contribution will be based on financing all UAAL as of January 1, 2016 over 20 years. Beginning with the January 1, 2017 contribution, a base for unexpected UAAL will be established over 20 years, and a contribution variance will be established and amortized over 5 years for the amount of budget contribution determined in this report that is not contributed during 2016.

Note that for purposes of the contribution rates shown in the report, these amounts are gross contribution amounts. It is our understanding that County staff will net out the amount of employee contributions that are collected to arrive at a net County contribution.



## STATE MANDATED MEMBER CONTRIBUTIONS

Item	Results Based on Current Contributions			
	Non-Contributors	Public Safety	General	All Members
<b>Valuation Results as of January 1, 2015</b>				
1. Present Value of Future Benefits				
a) Active Participants *	\$ -	\$ 89,261,127	\$ 515,919,069	\$ 605,180,196
b) Participants with Deferred Benefits	70,895,992	-	-	70,895,992
c) Participants Receiving Benefits	<u>1,649,471,985</u>	<u>-</u>	<u>-</u>	<u>1,649,471,985</u>
d) Total	\$ 1,720,367,977	\$ 89,261,127	\$ 515,919,069	\$ 2,325,548,173
2. Present Value of Future Normal Cost	\$ -	\$ 9,808,143	\$ 93,119,631	\$ 102,927,774
3. Actuarial Accrued Liability: (1 - 2)	\$ 1,720,367,977	\$ 79,452,984	\$ 422,799,438	\$ 2,222,620,399
4. Actuarial Value of Assets	\$ 1,372,843,615	\$ 63,403,018	\$ 337,391,487	\$ 1,773,638,120
5. Funded Status: (4 ÷ 3)	79.8%	79.8%	79.8%	79.8%
6. Unfunded Actuarial Accrued Liability: (3 - 4)	\$ 347,524,362	\$ 16,049,966	\$ 85,407,951	\$ 448,982,279
7. Total Normal Cost for the Plan Year	\$ -	\$ 1,499,915	\$ 14,240,368	\$ 15,740,283
<b>Projected Employee Contribution for 2016</b>				
1. Actual Contribution for 2015				
a) Normal Cost with Interest	\$ -	\$ 1,619,909	\$ 15,379,597	\$ 16,999,506
b) Net Annual Amortization Payments **	30,419,368	1,404,879	7,475,896	39,300,143
c) Expenses	<u>1,202,973</u>	<u>55,558</u>	<u>295,644</u>	<u>1,554,175</u>
d) Total Contribution: ((a + b + c), not less than zero)	\$ 31,622,341	\$ 3,080,346	\$ 23,151,137	\$ 57,853,824
2. Employee Contribution (50% of 1d for Contributors)	N/A	\$ 1,540,173	\$ 11,575,569	N/A
3. Expected Salaries in 2015	\$ -	\$ 18,870,924	\$ 172,561,991	\$ 191,432,915
4. Employee Contribution Rate (2 ÷ 3 ÷ 1.08 <sup>1/2</sup> )	N/A	7.9%	6.5%	N/A

\* The actives in the Public Safety group include 278 members comprised of Represented Firefighters and Sheriffs and Non-Represented Firefighters and Sheriffs.

\*\* The Net Annual Amortization Payments for the Contributors was prorated based on the contributors' actuarial accrued liability compared to total actuarial accrued liability of the Retirement System.

**TABLE 7 - Summary Statement of Market Value of Plan Assets**

Asset Category	Market Value as of December 31, 2014	Market Value as of December 31, 2013
1. Cash and Cash Equivalents	\$ 76,430,193	\$ 81,248,096
2. Investments at Fair Value		
a. Domestic common and preferred stocks	\$ 635,015,427	\$ 638,670,311
b. Futures contracts	-	-
c. Corporate bonds	331,429,376	368,539,958
d. International common and preferred stocks	156,474,024	206,675,087
e. Federal agency and mortgage-backed certificates	-	-
f. International fixed income	-	-
g. Venture Capital	-	-
h. Real estate investment trusts	180,397,035	166,037,665
i. Long/Short hedge funds	186,478,839	193,376,665
j. Infrastructure	151,805,271	134,856,078
k. Private equity	73,703,610	48,311,010
l. Total Investments	1,715,303,582	1,756,466,774
3. Contributions Receivable for OBRA and ERS	19,445,395	22,358,256
4. (Payable) to OBRA Pension Plan	(1,655,306)	(1,592,289)
5. Net All Other Receivables (Liabilities)	13,055,831	20,753,593
6. Net Assets Held in Trust for ERS Pension Benefits (1 + 2l + 3 + 4 + 5)	\$ 1,822,579,695	\$ 1,879,234,430

**TABLE 8 - Summary Reconciliation of Market Value of Plan Assets**

Item	Amount
1. Market Value of Assets as of December 31, 2013	\$ 1,879,234,430
2. Contributions for Plan Year	
a. County	\$ 19,005,395
b. Member	<u>10,051,605</u>
c. Total	29,057,000
3. Disbursements for Plan Year	
a. Benefit payments and refunds	\$ 177,366,124
b. Administrative expenses payable to County	<u>1,329,904</u>
c. Total	178,696,028
4. Market Value of Assets as of December 31, 2014	1,822,579,695
5. Net Investment Income * (4 - 1 - 2c + 3c)	92,984,293
6. Expected Net Investment Income (8.00% per annum)	143,774,924
7. Unexpected Change of Market Value of Assets (5 - 6)	(50,790,631)
8. Estimated Rate of Return	5.2%

\*Net Investment Income is the change in the value of assets for reasons other than contributions and disbursements.

**TABLE 9 - Derivation of Actuarial Value of Plan Assets**

1. Market Value of Assets as of December 31, 2014				\$ 1,822,579,695
2. Determination of Unexpected Change in Assets				
Year	Unexpected Change	Percentage Deferred	Amount Deferred	
2014	\$ (50,790,631)	90%	\$ (45,711,568)	
2013	\$ 118,316,429	80%	\$ 94,653,143	
2012	\$ -	70%	\$ -	
2011	\$ -	60%	\$ -	
2010	\$ -	50%	\$ -	
2009	\$ -	40%	\$ -	
2008	\$ -	30%	\$ -	
2007	\$ -	20%	\$ -	
2006	\$ -	10%	\$ -	
2005	\$ -	%	\$ -	
Total				48,941,575
3. Actuarial Value of Assets				\$ 1,773,638,120
(1 - 2)				

Assets were re-established at market value on January 1, 2013, so actual Unexpected Changes prior to 2013 are not applicable

**TABLE 10 - Summary Reconciliation of Actuarial Value of Plan Assets**

Item	For Year Ending December 31, 2014	For Year Ending December 31, 2013
1. Actuarial Value of Assets at the Beginning of the year	\$ 1,772,749,644	\$ 1,768,434,628
2. Contributions for Plan Year		
a. County	\$ 19,005,395	\$ 21,998,256
b. Member	<u>10,051,605</u>	<u>8,954,525</u>
c. Total	29,057,000	30,952,781
3. Disbursements for Plan Year		
a. Benefit payments and refunds	\$ 177,366,124	\$ 172,248,723
b. Administrative expenses payable to County	<u>1,329,904</u>	<u>1,289,344</u>
c. Total	178,696,028	173,538,067
4. Proceeds of Pension Obligation Bonds	-	-
5. Actuarial Value of Assets at the End of the Year	1,773,638,120	1,772,749,644
6. Net Investment Income *	150,527,504	146,900,302
(5 - 1 - 2c + 3c - 4)		
7. Expected Net Investment Income (8.00% per annum)	135,256,142	135,068,659
8. Unexpected Change of Actuarial Value of Assets (6 - 7)	15,271,362	11,831,643
9. Estimated Rate of Return	8.9%	8.7%

\* Net Investment Income is the change in the value of assets for reasons other than contributions and disbursements.

**TABLE 11 - Contributions for 2014 Plan Year and Variance from the Funding Calculation Contribution**

Item					Amount
1. Total Funding Calculation, End-of-Year Basis, for 2014 Plan Year (from January 1, 2014 actuarial valuation report)					\$ 29,564,925
2. Total Employer Contributions Made, End-of-Year Basis					
Contribution Made	Fraction of a Year Invested	Contribution Amount	Interest to Year End*	End of Year Amount	
Bi-weekly	50.0%	\$ -	\$ -	\$ -	
2/15/2015	0.0%	4,000,000	-	4,000,000	
3/15/2015	0.0%	4,000,000	-	4,000,000	
4/15/2015	0.0%	3,000,000	-	3,000,000	
5/15/2015	0.0%	3,000,000	-	3,000,000	
6/15/2015	0.0%	3,000,000	-	3,000,000	
7/15/2015	0.0%	<u>2,005,395</u>	<u>-</u>	<u>2,005,395</u>	
Total		\$ 19,005,395	\$ -	\$ 19,005,395	
3. Total Member Contributions					\$ 10,051,605
4. Variance from Funding Calculation Amount** (2 + 3 - 1)					\$ (507,925)

\* Interest to 12/31/2014 at 8.00% per annum

\*\* Variance is included in the reestablished UAAL amortization

Note that for purposes of the contribution rates shown in the report, these amounts are gross contribution amounts. It is our understanding that County staff will net out the amount of employee contributions that are collected to arrive at a net County contribution.

**TABLE 12 – Actuarial Methods and Assumptions for GASB 67/68 Disclosure Purposes**

The total pension liability as of December 31, 2014 was determined by rolling forward the total pension liability as of January 1, 2014 to December 31, 2014 using the following actuarial methods and assumptions, applied to all periods included in the measurement. All other assumptions such as retirement rates, termination rates, and disability rates used to determine the total pension liability are set forth in Table 18 – Description of Actuarial Assumptions and Methods.

Valuation Date:	January 1, 2014
Actuarial Cost Method:	Entry Age Normal – Level Percentage of Pay
Amortization Method:	For pension expense; the difference between expected and actual liability experience and changes of assumptions are amortized over the average of the expected remaining service lives of all members. The difference between projected and actual earnings is amortized over a closed period of five years.
Mortality:	<p>Healthy pensioners: The sex-distinct UP-1994 Mortality Table with Projection scale AA to 2012 and then fully generational thereafter using scale AA.</p> <p>Active members: 70% of the rates applicable to healthy pensioners.</p>
Experience Study:	The actuarial assumptions used were based on the results of an actuarial experience study for the period January 1, 2007 through December 31, 2011.

**TABLE 13 – GASB 67 Net Pension Liability as of December 31, 2014**

<b>Schedule of Changes in Net Pension Liability as of December 31, 2014</b>	
<b>Total Pension Liability</b>	
Service Cost	\$ 15,299,451
Interest	172,040,282
Changes of Benefit Terms	-
Difference between Expected and Actual Experience	-
Change of Assumptions	-
Benefit Payments, including Refund of Member Contributions	(177,366,124)
Net Change in Total Pension Liability	9,973,609
Total Pension Liability - Beginning of Year	\$ 2,229,977,951
Total Pension Liability - End of Year	\$ 2,239,951,560
<b>Plan Fiduciary Net Position</b>	
Employer Contributions	\$ 19,005,395
Member Contributions	10,051,605
Net Investment Income	96,721,345
Benefit Payments, including Refund of Member Contributions	(177,366,124)
Administrative Expenses	(5,066,956)
Other	-
Net Change in Plan Fiduciary Net Position	(56,654,735)
Plan Fiduciary Net Position - Beginning of Year	\$ 1,879,234,430
Plan Fiduciary Net Position - End of Year	\$ 1,822,579,695

<b>Net Pension Liability (Asset)</b>		
	<b>December 31, 2014</b>	<b>December 31, 2013</b>
Total Pension Liability	\$ 2,239,951,560	\$ 2,229,977,951
Plan Fiduciary Net Position	1,822,579,695	1,879,234,430
Net Pension Liability (Asset)	\$ 417,371,865	\$ 350,743,521
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (Asset)	81.37%	84.27%

**TABLE 14 – Sensitivity of the Net Pension Liability as of December 31, 2014 to Changes in the Discount Rate**

<b>Sensitivity of the Net Pension Liability to Changes in the Discount Rate</b>			
	<b>1% Decrease</b>	<b>Current</b>	<b>1% Increase</b>
Discount Rate	7.00%	8.00%	9.00%
Net Pension Liability (Asset)	638,609,811	417,371,865	229,353,095

**TABLE 15 – Estimate of the Pension Expense for Year Ended December 31, 2015**

<b>Estimated Pension Expense for The Fiscal Year Ended December 31, 2015</b>	
Service Cost	\$ 16,523,407
Interest	172,737,448
Difference between Expected and Actual Experience	-
Change of Assumptions	-
Estimated Contributions Member	(9,424,285)
Projected Earnings on Plan Investments	(138,883,580)
Difference between Expected and Actual Earnings	-
Administrative Expense	4,731,447
Other	-
Changes of Benefit Terms	-
<b>Total Pension Expense</b>	<b>45,684,437</b>

**TABLE 16 – Projection of Fiduciary Net Position**

<u>Year</u>	<u>Projected Beginning Fiduciary Net Position</u>	<u>Projected Total Contributions</u>	<u>Projected Benefit Payments</u>	<u>Projected Administrative Expense</u>	<u>Projected Investment Earnings</u>	<u>Projected Ending Fiduciary Net Position</u>
2015	\$ 1,822,579,695	\$ 28,429,680	\$ 181,157,539	\$ 4,731,447	\$ 152,434,120	\$ 1,817,554,509
2016	1,817,554,509	38,305,000	184,849,943	4,433,449	162,361,966	1,828,938,083
2017	1,828,938,083	58,451,303	188,580,796	4,145,865	141,273,838	1,835,936,563
2018	1,835,936,563	56,977,262	191,179,573	3,870,876	141,671,207	1,839,534,583
2019	1,839,534,583	55,663,308	193,798,233	3,619,381	141,797,750	1,839,578,027
2020	1,839,578,027	54,492,167	195,439,108	3,385,397	141,664,897	1,836,910,586
2021	1,836,910,586	53,435,974	196,662,523	3,166,384	141,325,435	1,831,843,088
2022	1,831,843,088	52,476,263	197,571,879	2,961,093	140,812,239	1,824,598,618
2023	1,824,598,618	51,607,629	197,862,749	2,764,034	140,166,540	1,815,746,004
2024	1,815,746,004	50,840,019	198,279,090	2,577,607	140,472,974	1,806,202,300
2025	1,806,202,300	51,235,514	198,212,174	2,401,923	139,186,378	1,796,010,095
2026	1,796,010,095	51,234,866	198,084,458	2,234,489	138,274,013	1,785,200,027
2027	1,785,200,027	51,255,428	197,920,441	2,064,768	137,320,502	1,773,790,748
2028	1,773,790,748	51,305,348	197,867,898	1,891,438	136,330,396	1,761,667,156
2029	1,761,667,156	51,402,363	197,152,219	1,717,357	135,310,820	1,749,510,763
2030	1,749,510,763	51,548,027	196,337,230	1,551,424	134,337,914	1,737,508,050
2031	1,737,508,050	51,780,550	195,276,347	1,400,362	133,387,320	1,725,999,211
2032	1,725,999,211	52,088,313	193,703,394	1,256,971	132,493,988	1,715,621,147
2033	1,715,621,147	52,462,422	191,904,311	1,124,105	131,700,225	1,706,755,378
2034	1,706,755,378	52,894,563	189,453,958	1,000,462	131,056,499	1,700,252,020
2035	1,700,252,020	53,380,704	186,928,533	886,737	130,624,348	1,696,441,802
2036	1,696,441,802	53,932,280	183,902,486	783,130	76,811,757	1,642,500,223
2037	1,642,500,223	1,643,390	180,357,762	687,218	124,606,886	1,587,705,519
2038	1,587,705,519	1,399,937	176,490,145	599,216	120,328,188	1,532,344,283
2039	1,532,344,283	1,177,555	172,201,960	517,931	116,031,857	1,476,833,804
2040	1,476,833,804	982,116	167,637,357	444,032	111,738,725	1,421,473,256
2041	1,421,473,256	812,121	162,740,935	375,595	107,471,734	1,366,640,581
2042	1,366,640,581	664,370	157,554,649	314,879	103,261,748	1,312,697,171
2043	1,312,697,171	536,305	152,278,295	260,305	99,894,458	1,260,589,334
2044	1,260,589,334	1,180,931	146,585,974	212,289	94,470,535	1,209,442,537
2045	1,209,442,537	393,053	140,877,659	170,377	91,272,624	1,160,060,178
2046	1,160,060,178	307,146	134,982,755	134,507	87,540,618	1,112,790,680
2047	1,112,790,680	235,982	129,076,649	104,314	83,981,083	1,067,826,782
2048	1,067,826,782	178,196	123,094,849	79,469	80,611,607	1,025,442,267
2049	1,025,442,267	132,323	117,142,371	59,188	77,448,607	985,821,638
2050	985,821,638	96,142	111,199,322	43,170	74,508,308	949,183,596
2051	949,183,596	68,354	105,385,028	30,672	71,802,332	915,638,582
2052	915,638,582	47,044	99,671,434	21,225	69,341,621	885,334,588
2053	885,334,588	31,653	94,114,780	14,302	67,134,242	858,371,401
2054	858,371,401	20,470	88,674,607	9,272	65,190,423	834,898,415
2055	834,898,415	12,916	83,377,948	5,828	63,520,130	815,047,685
2056	815,047,685	7,727	78,270,793	3,511	62,132,650	798,913,758
2057	798,913,758	4,513	73,284,310	2,076	61,037,548	786,669,433
2058	786,669,433	2,376	68,463,788	1,095	60,247,337	778,454,263
2059	778,454,263	1,203	63,812,391	572	59,772,721	774,415,224
2060	774,415,224	545	59,319,151	268	59,625,992	774,722,342
2061	774,722,342	237	54,986,083	120	59,820,608	779,556,984
2062	779,556,984	98	50,814,671	51	60,371,036	789,113,396
2063	789,113,396	21	46,800,241	8	61,293,066	803,606,234
2064	803,606,234	5	42,942,480	4	62,603,845	823,267,600

**TABLE 16 – Projection of Fiduciary Net Position - continued**

<u>Year</u>	<u>Projected Beginning Fiduciary Net Position</u>	<u>Projected Total Contributions</u>	<u>Projected Benefit Payments</u>	<u>Projected Administrative Expense</u>	<u>Projected Investment Earnings</u>	<u>Projected Ending Fiduciary Net Position</u>
2065	\$ 823,267,600	\$ 3	\$ 39,240,895	\$ -	\$ 64,321,966	\$ 848,348,674
2066	848,348,674	-	35,699,325	-	66,467,392	879,116,741
2067	879,116,741	-	32,326,250	-	69,061,165	915,851,656
2068	915,851,656	-	29,121,646	-	72,125,676	958,855,686
2069	958,855,686	-	26,090,032	-	75,684,930	1,008,450,584
2070	1,008,450,584	-	23,242,305	-	79,764,240	1,064,972,519
2071	1,064,972,519	-	20,577,193	-	84,390,548	1,128,785,874
2072	1,128,785,874	-	18,096,675	-	89,592,929	1,200,282,128
2073	1,200,282,128	-	15,802,193	-	95,402,643	1,279,882,578
2074	1,279,882,578	-	13,693,690	-	101,853,396	1,368,042,284
2075	1,368,042,284	-	11,769,984	-	108,981,641	1,465,253,941
2076	1,465,253,941	-	10,026,254	-	116,826,980	1,572,054,667
2077	1,572,054,667	-	8,457,096	-	125,432,597	1,689,030,168
2078	1,689,030,168	-	7,060,241	-	134,845,437	1,816,815,364
2079	1,816,815,364	-	5,828,439	-	145,116,577	1,956,103,502
2080	1,956,103,502	-	4,753,874	-	156,301,783	2,107,651,411

**TABLE 17 – Actuarial Present Values of Projected Benefit Payments**

Year	Projected Beginning		Funded Portion of		Unfunded Portion of		Present Value of		Present Value of Benefit Payments Using Single Discount Rate of 8.00%	
	Fiduciary	Net Position	Projected Benefit	Projected Benefit	Projected Benefit	Projected Benefit	Funded Benefit	Unfunded Benefit		
			Payments	Payments	Payments	Payments	Payments at 8.00%	Payments at 3.34%		
2015	\$	1,822,579,695	\$	181,157,539	\$	181,157,539	\$	181,157,539	-	181,157,539
2016		1,817,554,509		184,849,943		184,849,943		171,157,355	-	171,157,355
2017		1,828,938,083		188,580,796		188,580,796		161,677,637	-	161,677,637
2018		1,835,936,563		191,179,573		191,179,573		151,764,509	-	151,764,509
2019		1,839,534,583		193,798,233		193,798,233		142,447,487	-	142,447,487
2020		1,839,578,027		195,439,108		195,439,108		133,012,573	-	133,012,573
2021		1,836,910,586		196,662,523		196,662,523		123,930,749	-	123,930,749
2022		1,831,843,088		197,571,879		197,571,879		115,281,294	-	115,281,294
2023		1,824,598,618		197,862,749		197,862,749		106,899,087	-	106,899,087
2024		1,815,746,004		198,279,090		198,279,090		99,188,910	-	99,188,910
2025		1,806,202,300		198,212,174		198,212,174		91,810,588	-	91,810,588
2026		1,796,010,095		198,084,458		198,084,458		84,955,029	-	84,955,029
2027		1,785,200,027		197,920,441		197,920,441		78,596,930	-	78,596,930
2028		1,773,790,748		197,867,898		197,867,898		72,755,615	-	72,755,615
2029		1,761,667,156		197,152,219		197,152,219		67,122,650	-	67,122,650
2030		1,749,510,763		196,337,230		196,337,230		61,893,683	-	61,893,683
2031		1,737,508,050		195,276,347		195,276,347		56,999,304	-	56,999,304
2032		1,725,999,211		193,703,394		193,703,394		52,352,013	-	52,352,013
2033		1,715,621,147		191,904,311		191,904,311		48,023,868	-	48,023,868
2034		1,706,755,378		189,453,958		189,453,958		43,898,768	-	43,898,768
2035		1,700,252,020		186,928,533		186,928,533		40,105,182	-	40,105,182
2036		1,696,441,802		183,902,486		183,902,486		36,533,286	-	36,533,286
2037		1,642,500,223		180,357,762		180,357,762		33,175,098	-	33,175,098
2038		1,587,705,519		176,490,145		176,490,145		30,058,969	-	30,058,969
2039		1,532,344,283		172,201,960		172,201,960		27,156,135	-	27,156,135
2040		1,476,833,804		167,637,357		167,637,357		24,478,056	-	24,478,056
2041		1,421,473,256		162,740,935		162,740,935		22,002,861	-	22,002,861
2042		1,366,640,581		157,554,649		157,554,649		19,723,765	-	19,723,765
2043		1,312,697,171		152,278,295		152,278,295		17,651,144	-	17,651,144
2044		1,260,589,334		146,585,974		146,585,974		15,732,709	-	15,732,709
2045		1,209,442,537		140,877,659		140,877,659		14,000,046	-	14,000,046
2046		1,160,060,178		134,982,755		134,982,755		12,420,580	-	12,420,580
2047		1,112,790,680		129,076,649		129,076,649		10,997,336	-	10,997,336
2048		1,067,826,782		123,094,849		123,094,849		9,710,821	-	9,710,821
2049		1,025,442,267		117,142,371		117,142,371		8,556,700	-	8,556,700
2050		985,821,638		111,199,322		111,199,322		7,520,915	-	7,520,915
2051		949,183,596		105,385,028		105,385,028		6,599,693	-	6,599,693
2052		915,638,582		99,671,434		99,671,434		5,779,520	-	5,779,520
2053		885,334,588		94,114,780		94,114,780		5,053,068	-	5,053,068
2054		858,371,401		88,674,607		88,674,607		4,408,317	-	4,408,317
2055		834,898,415		83,377,948		83,377,948		3,837,965	-	3,837,965
2056		815,047,685		78,270,793		78,270,793		3,335,998	-	3,335,998
2057		798,913,758		73,284,310		73,284,310		2,892,100	-	2,892,100
2058		786,669,433		68,463,788		68,463,788		2,501,724	-	2,501,724
2059		778,454,263		63,812,391		63,812,391		2,159,035	-	2,159,035
2060		774,415,224		59,319,151		59,319,151		1,858,343	-	1,858,343
2061		774,722,342		54,986,083		54,986,083		1,594,998	-	1,594,998
2062		779,556,984		50,814,671		50,814,671		1,364,811	-	1,364,811
2063		789,113,396		46,800,241		46,800,241		1,163,879	-	1,163,879
2064		803,606,234		42,942,480		42,942,480		988,833	-	988,833

**TABLE 17 – Actuarial Present Values of Projected Benefit Payments - continued**

<b>Year</b>	<b>Projected Beginning Fiduciary Net Position</b>	<b>Projected Benefit Payments</b>	<b>Funded Portion of Projected Benefit Payments</b>	<b>Unfunded Portion of Projected Benefit Payments</b>	<b>Present Value of Funded Benefit Payments at 8.00%</b>	<b>Present Value of Unfunded Benefit Payments at 3.34%</b>	<b>Present Value of Benefit Payments Using Single Discount Rate of 8.00%</b>
2065	\$ 823,267,600	\$ 39,240,895	\$ 39,240,895	\$ -	\$ 836,664	\$ -	\$ 836,664
2066	848,348,674	35,699,325	35,699,325	-	704,772	-	704,772
2067	879,116,741	32,326,250	32,326,250	-	590,908	-	590,908
2068	915,851,656	29,121,646	29,121,646	-	492,898	-	492,898
2069	958,855,686	26,090,032	26,090,032	-	408,876	-	408,876
2070	1,008,450,584	23,242,305	23,242,305	-	337,266	-	337,266
2071	1,064,972,519	20,577,193	20,577,193	-	276,475	-	276,475
2072	1,128,785,874	18,096,675	18,096,675	-	225,136	-	225,136
2073	1,200,282,128	15,802,193	15,802,193	-	182,029	-	182,029
2074	1,279,882,578	13,693,690	13,693,690	-	146,056	-	146,056
2075	1,368,042,284	11,769,984	11,769,984	-	116,239	-	116,239
2076	1,465,253,941	10,026,254	10,026,254	-	91,683	-	91,683
2077	1,572,054,667	8,457,096	8,457,096	-	71,606	-	71,606
2078	1,689,030,168	7,060,241	7,060,241	-	55,351	-	55,351
2079	1,816,815,364	5,828,439	5,828,439	-	42,309	-	42,309
2080	1,956,103,502	4,753,874	4,753,874	-	31,952	-	31,952

**TABLE 18 – Description of Actuarial Assumptions and Methods**

**ASSUMPTIONS**

**Interest Rate:** 8.0% per annum, compounded annually. The components are 3.0% for inflation and 5.0% for the real rate of return.

**Separation from Service:** Illustrative rates of assumed separation from service are shown in the following tables.

**Annual Rates per 100 Participants**

<b>Mortality*</b>				
<b>Attained Age</b>	<b>Healthy Pensioners</b>		<b>Disabled Pensioners</b>	
	<b>Males</b>	<b>Females</b>	<b>Males</b>	<b>Females</b>
45	0.09	0.05	2.26	0.75
50	0.14	0.08	2.90	1.15
55	0.23	0.15	3.54	1.65
60	0.44	0.30	4.20	2.18
65	0.84	0.59	5.02	2.80
70	1.34	0.94	6.26	3.76
75	2.14	1.47	8.21	5.22
80	3.86	2.59	10.94	7.23
85	6.40	4.55	14.16	10.02

\* Healthy pensioners:

The sex-distinct UP-1994 Mortality Table with projection scale AA to 2012 and then fully generational thereafter using scale AA.

Active members:

70% of the rates applicable to healthy pensioners.

Disabled pensioners:

RP2000 Disabled Mortality Table.

**Annual Rates per 100 Participants**

Attained Age	Withdrawal – Ultimate			Disability
	General Employees	Elected Officials*	Deputy Sheriffs	
20	20.00	2.00	20.00	0.00
25	18.10	2.00	18.10	0.04
30	8.10	2.00	8.10	0.05
35	5.20	2.00	5.20	0.07
40	4.00	2.00	4.00	0.12
45	3.70	2.00	3.70	0.16
50	3.70	2.00	3.70	0.16
55	1.00	2.00	1.00	0.16
60	0.00	0.00	0.00	0.16
65	0.00	0.00	0.00	0.16

\* Select rates for elected officials assume no turnover for first four years.

**Annual Rates per 100 Participants**

<b>Retirement Rates</b>				
<b>Attained Age</b>	<b>General Employees (backdrop eligible)</b>	<b>General Employees (<u>not</u> backdrop eligible)</b>	<b>Elected Officials</b>	<b>Deputy Sheriffs</b>
45-49	14.0	0.0	0.0	15.0
50-54	14.0	14.0	0.0	30.0
55	14.0	14.0	19.8	30.0
56	15.0	15.0	19.8	30.0
57	16.0	16.0	23.0	30.0
58	17.0	17.0	20.4	30.0
59	17.0	17.0	24.8	30.0
60	17.0	17.0	19.4	30.0
61	25.0	25.0	22.5	50.0
62	30.0	30.0	28.4	50.0
63	30.0	30.0	26.6	50.0
64	30.0	30.0	24.3	50.0
65	40.0	40.0	30.4	100.0
66	40.0	40.0	22.5	100.0
67	40.0	40.0	25.7	100.0
68	40.0	40.0	34.2	100.0
69	40.0	40.0	36.0	100.0
70	100.0	100.0	100.0	100.0

**Salary Increase:** Effective average of 3.5% per annum, compounded annually. Representative values are as follows:

**Annual Rate of Salary Increase**

Age	General Employees	Elected Officials	Deputy Sheriffs
20	9.5%	3.0%	9.5%
25	5.0	3.0	8.0
30	4.0	3.0	6.1
35	3.7	3.0	4.6
40	3.5	3.0	3.7
45	3.0	3.0	3.3
50	3.0	3.0	3.0
55	3.0	3.0	3.0
60	3.0	3.0	3.0
Average	3.3	3.0	4.3

**Payroll Growth:** 3.5% per annum.

**MISCELLANEOUS**

**Percentage Married/Age Difference:** Male 80%, female 80%. Beneficiaries are assumed to be the same age as the participant.

**Percentage Married with at Least One Dependent Child:** 21.6% for General Employees, 43.2% for Deputy Sheriffs and Elected Officials. For those who die prior to age 60, it is assumed at least one child will remain a dependent until the member would have turned age 60.

**Backdrop Rate:** 75% of eligible retirees are assumed to elect a backdrop. Of those electing, 75% are assumed to take the maximum period available to them and 25% take half the maximum period available based on eligibility for an unreduced retirement benefit.

**Assumed Type of Disability:** For represented employees, the assumption is 50% Ordinary and 50% Accidental and for non-represented employees, the assumption is 100% Ordinary and 0% Accidental.

## METHODS

**Calculations:** The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system, and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

**Actuarial Cost Method:** Liabilities and contributions shown in this report are computed using the Individual Entry Age Normal Cost Method, effective for January 1, 2015. Prior results shown were computed using the Aggregate Entry Age Normal Cost Method. The outstanding balance of the unfunded actuarial accrued liability (UAAL) as of January 1, 2015 and any changes to the UAAL arising from plan changes, assumption changes, and unexpected changes in UAL are amortized as a level percentage of payroll over a 20-year period.

The full administrative expenses incurred by the County related to the System are payable by the System to the County. The County then reimburses the System for this payment in the annual contribution. The variance between the amount contributed to the System for a plan year, and the actual contribution requirement for that year is amortized on a level dollar basis over 5 years. POB proceeds were not subject to the contribution variance requirements.

**Asset Valuation Method:** A ten-year moving market average value of assets that recognizes the actuarial expected investment return immediately and spreads the difference between the actual and expected return over a period of ten years. Assets were re-established at market value on January 1, 2013.

## DATA

**Census and Assets:** The valuation was based on members of the System as of January 1, 2015 and does not take into account future members. All census data was supplied by the System and was subject to reasonable consistency checks. Asset data was supplied by the System.

**TABLE 19 - Summary of Benefit and Contribution Provisions**

**MEMBERSHIP**

Any person regularly employed by the County at an annual wage or salary, including any person employed by the State of Wisconsin, but receiving part of his compensation from the County.

**VESTING SERVICE**

Service during period of employment in the County or in any department in any town, village, city or metropolitan sewerage commission in the County, which department has by consolidation or merger been absorbed by the County.

Creditable service shall consist of “prior service”, “military service”, and “membership service”, for which service credit is allowable under Section 4, Chapter 201, Laws of 1937, as well as service under Executive Order 11231, July 8, 1965, for Vietnam. Additional credit for periods of military service will be earned in accordance with the following chart:

Years of Service with Milwaukee County	Maximum Years of Military Service Granted
0-4	0
5-9	1
10-14	2
15-19	3
20+	4

**BENEFIT SERVICE**

Same as vesting service except service prior to becoming a participant does not count.

**EARNINGS**

Earnable compensation is the full rate of compensation payable to member if he worked the full normal working time for his position, including authorized overtime payments and the compensation rate assumed to have been received while the member is on authorized leave of absence. In cases where compensation includes maintenance, the Pension Board shall fix the value of that part of the compensation not payable in money. Compensation shall not exceed \$260,000 in the pension calculation as indexed for changes in the cost of living.

For all members except certain deputy sheriffs hired on or after January 1, 1982, the final average salary means the average annual salary for the highest three (3) consecutive years of service. For deputy sheriffs hired on or after January 1, 1982, excluding DA Investigators and non-represented deputy sheriffs, the final average salary means the average annual salary for

the highest five (5) consecutive years of service. For DA Investigators and non-represented deputy sheriffs hired before July 1, 1995 and all non-deputy sheriff members hired before January 1, 1982, the final average salary is increased 7.5% for each year worked after January 1, 2001 to a maximum of 25%.

**VOLUNTARY  
EMPLOYEE  
CONTRIBUTION**

Up to 10% of earnings, provided that the employee was contributing on January 1, 1971.

**MANDATORY  
EMPLOYEE  
CONTRIBUTION**

Effective January 1, 2011 Elected Officials and Non-Represented employees contributed 2% of compensation. For all Non-Represented employees (other than elected officials), the contribution rate increased to 4% of compensation effective December 11, 2011.

**BENEFITS**

Normal Retirement

Eligibility

Elected Officials:

Age 60, or age 55 with 30 years of service. For elected officials hired before January 1, 2006, the combination of age and service adding up to 75 (Rule of 75) also applies.

General Employees:

For firefighters, Federated Nurses, and Machinists:

Age 60 with 5 years of service, or age 55 with 30 years of service. For firefighters hired before December 1, 1996, Federated Nurses hired before January 1, 1997, and Machinists hired before January 1, 1994, Rule of 75 also applies. For Federated Nurses and Machinists hired after January 1, 2012, age 64 or age 55 with 30 years of service.

For Attorneys, Skilled Trades, non-represented employees, DC48, and Teamco:

Age 60, or age 55 with 30 years of service. For attorneys, Skilled Trades, and non-represented employees hired before January 1, 2006 and DC48 and Teamco hired before January 1, 1994, Rule of 75 also applies.

For attorneys, Skilled Trades, non-represented employees, and TEAMCO hired after January 1, 2010, age 64 or age 55 with 30 years of service.

For DC48 hired after August 1, 2011, age 64 or age 55 with 30 years of service.

For non-represented employees (excluding Elected Officials, Deputy Sheriffs), attorneys, machinists and TEAMCO hired after January 1, 2010, retirement age is 64.

Deputy Sheriffs:

Age 57, or age 55 with 15 years of service. For deputy sheriffs, DA Investigators, and non-represented deputy sheriffs hired before January 1, 1994, Rule of 75 also applies.

Amount

Elected Officials:

For elected officials hired before March 15, 2002, 2.5% of final average salary per year of service before October 14, 2010 and 1.6% of final average salary per year of service thereafter, not greater than 80%. For elected officials hired on or after March 15, 2002, 2.0% of final average salary per year of service before October 14, 2010 and 1.6% of final average salary per year of service thereafter, not greater than 80%.

General Employees:

2.0% of final average salary per year of service, not greater than 80%. For non-represented employees (excluding Elected Officials and Deputy Sheriffs), 1.6% of final average salary per year of service from January 1, 2010; for attorneys and TEAMCO, the 1.6% provision is effective May 1, 2010; for machinists, June 1, 2010; for DC48, effective August 1, 2011; for building trades and FNHP, effective January 1, 2012.

Deputy Sheriffs:

For deputy sheriffs hired before July 1, 1995 and DA Investigators and non-represented deputy sheriffs, 2.5% of final average salary per year of service, not greater than 80%. For deputy sheriffs hired on or after July 1, 1995, 2.0% of final average salary per year of service, not greater than 80%.

For all members, 1.6% of final average salary per year of service after 80% of final average salary has been reached.

In addition to the pension portion, the benefit includes any voluntary contribution balance. Benefits should not be less than under previous system.

### Early Retirement

Eligibility	Age 55 with 15 years of service.
Amount	Benefits reduced by 5/12 of 1% for each month by which commencement of payments precedes Normal Retirement Age. For deputy sheriffs, DA Investigators, and non-represented deputy sheriffs, benefit reduction does not apply.

### Ordinary Disability Benefit

Eligibility	After 15 years of service.
Amount	Benefits calculated as for normal retirement benefits. Minimum benefit is 25% of final average salary.

### Accidental Disability Benefit

Eligibility	Immediate.
Amount	Benefits are the same as normal retirement benefits if the employee has attained the minimum Normal Retirement Age. If less than Normal Retirement Age at time of disability, the benefit is computed the same as for normal retirement but is not less than 75% or 60% of final average salary.

### Elected Officials

For elected officials hired before February 19, 1987, the benefit is not less than 75% of final average salary. For all other elected officials, the benefit is not less than 60% of final average salary.

### General Employees

For non-represented employees hired before February 19, 1987, attorneys hired on or after January 1, 1987, Skilled Trades hired before October 30, 1987, Federated Nurses hired before January 1, 1987, Machinists hired before May 18, 1988, DC48 hired before July 24, 1987, and Teamco hired before January 12, 1988, the benefit is not less than 75% of final average salary. For all other general employees, the benefit is not less than 60% of final average salary.

### Deputy Sheriffs

For all deputy sheriffs, the benefit is not less than 75% of final average salary. For DA Investigators and non-represented deputy sheriffs hired on or after February 19, 1987, the benefit is not less than 60% of final average salary.

### Ordinary Death Benefit

Upon the death of a deputy sheriff in active service for any cause other than accidental, the surviving spouse or child shall be entitled to receive the benefit under the provision of survivor benefits if the deceased member has completed at least one (1) year of service and is not eligible for normal retirement.

### Accidental Death Benefit

Upon the death of a deputy sheriff caused by an accident in active duty, a survivorship benefit equal to fifty (50) percent of final average salary shall be granted to the following members:

- 1) A surviving spouse for life or until remarriage, or
- 2) If there is no spouse or spouse dies or remarries before the youngest child has attained age 18, the benefit is payable to his child(ren) under age 18 until the youngest child attains said age, or
- 3) If there is no spouse or child(ren) under age 18, the benefit is payable to his dependent father or mother to continue for life.

The monthly benefit aforementioned shall not be less than the benefit under ordinary death benefit section if death had not occurred in performance of duty.

### Lump Sum Benefit upon Death

Upon a death of members, a lump sum benefit of one-half the final average salary of the deceased member, not greater than two thousand dollars (\$2,000) shall be paid to designated beneficiary if such member has completed one (1) year of service and no survivors' benefits payable under any other survivorship benefits.

### Deferred Vested Benefit

Upon termination of employment, a member who does not elect to withdraw any part of his membership account shall be eligible for a deferred vested benefit if:

- 1) The accrued benefit at age 60 is at least \$10 per month
- 2) 5 years of service

The benefit is computed the same as for a normal retirement benefit considering earnings and service prior to date of termination.

### Survivor Benefit

Upon the death of a member prior to age 60 and after completing at least one (1) year of service, a monthly benefit equal to 40% of the member's salary for the year of his death less monthly survivor benefits payable under the Social Security law shall be payable to his surviving spouse if she has at least one dependent child and was married to the member at least one (1) year prior to his death. Upon attainment of age 60 the dependent spouse shall be paid a benefit equal to 50% of the normal pension which the member would have received assuming service had continued to accrue to age 60 and the final average salary determined at death. In addition, a monthly benefit equal to 10% of the member's monthly salary less the benefits payable to child under Social Security law shall be payable to each eligible

children until he attains age 18 or marries, or until attainment of age 22 if he is a student and not married.

Any member eligible for normal retirement may elect the protective survivorship option by selecting option 2 or 3 under the Optional Benefit section. This survivorship option shall become effective at the death of the member. If any member eligible to elect an option shall die in active service, without selecting an option, his surviving spouse shall be paid a survivorship benefit equal to the amount that would have been payable if such member had retired under option 3 immediately prior to his death.

### Optional Benefit

In lieu of the full retirement benefit, any member at retirement may elect to receive an actuarial equivalent reduced retirement benefit in accordance with the following options:

Option 1. In case of death before benefits attributable to his mandatory account have equaled the amount of his membership account at the date of retirement, the balance shall be paid to a designated beneficiary or to his estate; or

Option 2. At the death of the member, one-half of the reduced benefit shall be continued throughout the life of designated beneficiary; or

Option 3. At the death of the member, the same reduced benefit shall be continued throughout the life of designated beneficiary.

### Other Benefits

Simple COLA	2% of original benefit increase per year to retired employees (surviving beneficiary receives proportionate amount based on survivorship percentage).
-------------	---

Contribution Refund	Refund of employee voluntary contribution upon severance.
---------------------	---

Backdrop Benefit	Employee may opt to receive a monthly benefit earned as of a specific date in the past (backdrop date). The backdrop date may not be prior to the earliest date that the member was eligible to retire and shall not be less than one (1) year prior to the date the member leaves active County service. Employee receives a cash payment equal to monthly benefits that would have been paid between backdrop date and actual retirement date plus interested earned.
------------------	---

Effective with backdrop dates on or after April 1, 2013, the monthly drop benefit shall be based on the salary, service and multipliers as of April 1, 2013, except for Elected Officials, Skilled Trades, Machinists, Federated Nurses and Firefighters.



Members not eligible for backdrop benefits are Elected Officials, non-represented employees and deputy sheriffs hired on or after March 15, 2002, Machinists and Teamco hired on or after November 4, 2005, Attorneys hired on or after January 1, 2006, Federated Nurses hired on or after December 15, 2005, Firefighters hired on or after June 19, 2007 and DC48 hired on or after February 1, 2007.

**TABLE 20 - Summary of Membership Data as of January 1, 2015**

**Active Participants**

Item	General Employees	Deputy Sheriffs *	Elected Officials	Total
Number of Participants	3,401	261	18	3,680
Average Annual Salaries **	\$ 52,470	\$ 69,989	\$ 70,513	\$ 53,868
Average Age	45.9	45.9	48.3	46.0
Average Service	11.2	18.7	9.5	11.7

\* Includes 4 non-represented deputy sheriffs.

\*\* The salaries shown in the table above represent a rate of pay increased by the salary assumption.

**Inactive Participants**

Item	Number	Annual Annuities	Average Annuities	Average Age
Participants with Deferred Benefits	1,370	\$ 10,580,271	\$ 7,723	50.7
Retired Participants	6,824	145,633,549	21,341	71.1
Beneficiaries	887	13,436,522	15,148	76.7
Disability Retirees	<u>268</u>	<u>5,988,573</u>	<u>22,345</u>	<u>63.8</u>
Total	9,349	\$ 175,638,915	\$ 18,787	68.4

**TABLE 21 - Active Membership Statistics (Unaudited)**

	<b>2014</b>
Members as of January 1	5,322 *
Changes during the year:	
New enrollments	350
Nonvested terminations	(365)
Retirements	(235)
Deaths in active service	(4)
New deferred beneficiaries	0
Data Adjustment	(18)
Members as of December 31	<u>5,050</u> *

\*This total includes vested inactive members.

**RETIREMENTS AND SURVIVORS (UNAUDITED)**

	Retirements granted							Survivors & Beneficiaries	Total	
	Maximum Pension	Options								
		Refund	100%	75%	50%	25%	10-yr			Other
January 1, 2014	3,284	366	1,418	252	1,052	465	213	49	841	7,940
Changes during the year:										
Adjustments (actuary) *	12	-	2	-	1	1	1	-	-	17
Retirements	130	-	46	8	18	18	15	-	93	328
Pensioner deaths	(123)	(33)	(30)	(2)	(59)	(6)	(2)	(4)	(47)	(306)
December 31, 2014	3,303	333	1,436	258	1,012	478	227	45	887	7,979

\* Adjustments as a result of reclassifications made to beginning balances by the actuary:

## EXHIBIT I - Active Membership Data – All Employees

### Number and Average Annual Salary\* as of January 1, 2015

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
<b>Under 25</b>	61 \$35,400									61 \$35,400
<b>25-29</b>	221 \$38,883	23 \$45,958								244 \$39,550
<b>30-34</b>	232 \$42,645	90 \$46,498	13							335 \$44,267
<b>35-39</b>	205 \$53,741	118 \$52,274	85 \$52,251	27 \$57,620						435 \$53,293
<b>40-44</b>	156 \$48,658	99 \$56,395	106 \$53,043	111 \$59,937	26 \$65,043	1				499 \$54,472
<b>45-49</b>	128 \$51,119	85 \$52,332	100 \$55,757	134 \$59,143	139 \$62,307	30 \$59,303	2			618 \$56,816
<b>50-54</b>	92 \$48,739	55 \$57,393	95 \$51,167	78 \$57,290	153 \$57,538	99 \$62,685	14			586 \$55,793
<b>55-59</b>	82 \$46,042	70 \$52,956	91 \$52,364	79 \$56,804	96 \$59,141	89 \$65,999	32 \$62,466	6		545 \$56,197
<b>60-64</b>	35 \$65,294	35 \$58,742	40 \$55,366	42 \$62,534	52 \$59,136	51 \$68,807	15	7	1	278 \$63,829
<b>Over 64</b>	7	16	16	13	8	11	3	5		79 \$ 63,162
<b>Total</b>	1,219 \$46,357	591 \$53,205	546 \$53,434	484 \$58,861	474 \$60,020	281 \$65,144	66 \$66,999	18	1	3,680 \$53,868

\* Compensation in cells with fewer than 20 records has been suppressed.

**EXHIBIT II - Active Membership Data – General Employees**

**Number and Average Annual Salary\*  
as of January 1, 2015**

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
<b>Under 25</b>	61 \$35,400									61 \$35,400
<b>25-29</b>	220 \$38,814	23 \$45,958								243 \$39,490
<b>30-34</b>	232 \$42,645	90 \$46,498	11							333 \$44,111
<b>35-39</b>	202 \$53,008	116 \$52,104	72 \$49,668	16						406 \$52,068
<b>40-44</b>	156 \$48,658	99 \$56,395	93 \$51,977	66 \$54,903	14	1				429 \$52,499
<b>45-49</b>	127 \$50,430	84 \$52,232	88 \$54,176	100 \$56,062	92 \$57,693	26 \$57,685	2			519 \$54,246
<b>50-54</b>	92 \$48,739	55 \$57,393	92 \$50,902	67 \$55,700	123 \$54,384	89 \$59,994	14			532 \$54,134
<b>55-59</b>	81 \$45,906	70 \$52,956	90 \$51,373	74 \$55,231	90 \$58,773	86 \$65,620	31 \$60,856	6		528 \$55,487
<b>60-64</b>	35 \$65,294	35 \$58,742	40 \$55,366	42 \$62,534	52 \$59,136	49 \$68,867	14	7	1	275 \$63,783
<b>Over 64</b>	7	15	14	12	8	11	3	5		75 \$ 63,168
<b>Total</b>	1,213 \$46,125	587 \$53,160	500 \$52,218	377 \$56,247	379 \$57,397	262 \$64,101	64 \$66,251	18	1	3,401 \$52,486

\* Compensation in cells with fewer than 20 records has been suppressed.  
Five non-represented deputy sheriffs are included with Deputy Sheriffs exhibit.

### EXHIBIT III - Active Membership Data – Deputy Sheriffs

Number and Average Annual Salary\*  
as of January 1, 2015

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 25										
25-29										
30-34			1							1
35-39	1	1	13	11						26 \$72,307
40-44			12	45	12					69 \$66,738
45-49		1	11	34	47	4				97 \$69,751
50-54			3	11	30	10				54 \$72,129
55-59				4	4	3	1			12
60-64						1	1			2
Over 64										
<b>Total</b>	1	2	40	105	93	18	2			261 \$69,981
			\$64,891	\$67,751	\$70,833					

**EXHIBIT IV - Active Membership Data – Elected Officials**

**Number and Average Annual Salary\*  
as of January 1, 2015**

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
<b>Under 25</b>										
<b>25-29</b>	1									1
<b>30-34</b>			1							1
<b>35-39</b>	2	1								3
<b>40-44</b>			1							1
<b>45-49</b>	1		1							2
<b>50-54</b>										
<b>55-59</b>	1		1	1	2					5
<b>60-64</b>						1				1
<b>Over 64</b>		1	2	1						4
<b>Total</b>	5	2	6	2	2	1				18 \$70,513

\* Compensation in cells with fewer than 20 records has been suppressed.

**EXHIBIT V - Active and Deferred Vested Members Obtaining Retirement Eligibility over Next Five Calendar Years**

**Actives Reaching Retirement Eligibility**

Year	General Employees	Elected Officials	Deputy Sheriffs	Total
Eligible at Valuation Date	546	8	9	563
2015	102	0	5	107
2016	148	1	13	162
2017	114	0	6	120
2018	130	0	14	144
2019	117	0	12	129
Total Over Next 5 Years	611	1	50	662
Grand Total Eligible	1,157	9	95	1,225

**Deferred Vesteds Reaching Retirement Age**

Year	Total
2015	77
2016	70
2017	75
2018	77
2019	65
Total Over Next 5 Years	364

**EXHIBIT VI - Retiree and Beneficiary Membership Data as of January 1, 2015**

**Number and Average Annual Benefit**

<b>Age Last Birthday</b>	<b>Number</b>	<b>Annual Benefit</b>	<b>Average Annual Benefit</b>
<b>Retired Participants</b>			
Under 60	631	\$ 17,890,060	\$ 28,352
60 - 64	1,431	30,850,345	21,559
65 - 69	1,634	36,478,437	22,325
70 - 74	976	21,273,863	21,797
75 - 79	782	15,875,744	20,301
Over 79	1,370	23,265,100	16,982
Total	6,824	\$ 145,633,549	\$ 21,341
<b>Beneficiary Participants</b>			
Under 60	95	\$ 1,360,720	\$ 14,323
60 - 64	64	1,092,479	17,070
65 - 69	89	1,652,722	18,570
70 - 74	90	1,436,422	15,960
75 - 79	116	1,883,069	16,233
Over 79	433	6,011,110	13,882
Total	887	\$ 13,436,522	\$ 15,148
<b>Disabled Participants</b>			
Under 60	113	\$ 2,931,840	\$ 25,945
60 - 64	40	948,479	23,712
65 - 69	28	583,057	20,823
70 - 74	36	680,508	18,903
75 - 79	15	290,561	19,371
Over 79	36	554,128	15,392
Total	268	\$ 5,988,573	\$ 22,345
<b>Grand Total</b>	<b>7,979</b>	<b>\$ 165,058,644</b>	<b>\$ 20,687</b>

## EXHIBIT VII - 5-Year History of Membership Data

### Active Participants

Item	General Employees	Deputy Sheriffs *	Elected Officials	Total
Number of Participants	3,401	261	18	3,680
Average Annual Salaries **	\$ 52,470	\$ 69,989	\$ 70,513	\$ 53,868
Average Age	45.9	45.9	48.3	46.0
Average Service	11.2	18.7	9.5	11.7

\* Includes 4 non-represented deputy sheriffs.

\*\* The salaries shown in the table above represent a rate of pay increased by the salary assumption.

### Inactive Participants

Item	Number	Annual Annuities	Average Annuities	Average Age
Participants with Deferred Benefits	1,370	\$ 10,580,271	\$ 7,723	50.7
Retired Participants	6,824	145,633,549	21,341	71.1
Beneficiaries	887	13,436,522	15,148	76.7
Disability Retirees	268	5,988,573	22,345	63.8
Total	9,349	\$ 175,638,915	\$ 18,787	68.4

**EXHIBIT VIII - Detailed Tabulations of the Data**

**TABLE VIII-A**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Age as of January 1, 2015  
All Employees**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Age	Men		Women	
	Number	Compensation	Number	Compensation
17				
18				
19				
20	2		1	
21			2	
22	6		1	
23	10		18	
24	10		11	
25	16		14	
26	16		31	\$ 1,156,697
27	23	\$ 962,996	22	745,398
28	39	1,693,308	24	910,692
29	30	1,177,466	29	1,146,368
30	29	1,293,126	35	1,422,412
31	30	1,377,460	38	1,464,576
32	31	1,342,276	36	1,555,880
33	28	1,367,903	35	1,404,855
34	33	1,712,955	40	1,888,008
35	38	1,898,439	35	1,675,341
36	32	1,500,248	53	2,829,567
37	48	2,763,485	41	2,114,594
38	42	2,273,788	46	2,546,268
39	57	3,502,021	43	2,078,516
40	44	2,651,264	52	2,448,084
41	27	1,610,364	49	2,401,489
42	52	2,814,897	46	2,474,889
43	57	3,327,686	54	2,707,766
44	58	3,540,723	60	3,204,155
45	73	4,352,934	65	3,692,832
46	42	2,464,305	60	3,141,821
47	55	3,526,659	67	3,313,782
48	66	4,351,270	73	3,740,069
49	55	3,356,992	62	3,171,793

**TABLE VIII-A**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Age as of January 1, 2015  
All Employees**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Age	Men		Women	
	Number	Compensation	Number	Compensation
50	45	\$ 2,694,878	67	\$ 3,384,523
51	47	2,953,662	65	3,721,418
52	62	3,511,910	66	3,445,091
53	42	2,490,223	49	2,556,891
54	63	3,969,561	80	4,030,825
55	53	3,097,987	61	3,059,008
56	51	2,831,799	70	3,555,916
57	47	2,832,767	49	2,704,696
58	53	3,402,679	60	3,011,104
59	53	3,649,740	48	2,481,563
60	42	2,875,704	35	1,956,965
61	43	2,812,429	33	2,097,426
62	16		33	1,964,071
63	27	2,160,961	20	1,108,784
64	15		14	
65	11		16	
66	10		6	
67	3		8	
68	6		4	
69			1	
70	1		1	
71	1		2	
72	1		3	
73	1			
74				
75				
76			2	
77				
78	1			
79				
80			1	
<b>Total</b>	1,743	\$ 100,816,251	1,937	\$ 97,419,529

**TABLE VIII-B**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Years of Credited Service as of January 1, 2015  
All Employees**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Years of Service	Men		Women	
	Number	Compensation	Number	Compensation
0	144	\$ 6,051,105	222	\$ 9,543,489
1	121	6,286,841	193	8,357,570
2	109	5,609,356	120	5,139,988
3	106	5,563,900	92	4,188,716
4	55	2,806,276	57	2,961,892
5	53	2,880,627	68	3,223,486
6	78	4,140,051	72	3,577,987
7	42	2,340,744	50	2,680,635
8	48	2,743,518	45	2,645,420
9	55	3,063,069	80	4,148,757
10	42	2,648,028	45	2,338,956
11	30	1,733,204	45	2,264,517
12	56	3,149,279	28	1,260,654
13	77	4,358,638	65	3,007,484
14	75	4,336,765	83	4,141,765
15	67	3,833,184	72	3,920,246
16	51	3,014,102	45	2,429,076
17	50	3,111,863	45	2,682,778
18	46	3,068,573	45	2,422,126
19	44	2,960,991	19	
20	48	3,080,309	46	2,606,129
21	37	2,283,946	46	2,596,505
22	61	4,005,419	55	2,956,841
23	52	3,504,037	49	2,754,587
24	41	2,757,518	39	1,903,977
25	30	1,885,972	60	3,620,997
26	29	2,024,290	44	2,771,196
27	20	1,728,772	24	1,489,011
28	14		15	
29	23	1,604,591	22	1,260,519
30	8		15	
31	8		9	
32	5		3	
33	4		8	
34	2		4	
35	4		3	
36	2		1	
37	2		1	
38	1		1	
39	3		1	
<b>Total</b>	1,743	\$ 100,816,252	1,937	\$ 97,419,529

**TABLE VIII-C**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Age as of January 1, 2015  
General Employees**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Age	Men		Women	
	Number	Compensation	Number	Compensation
17				
18				
19				
20	2		1	
21			2	
22	6		1	
23	10		18	
24	10		11	
25	16		14	
26	16		31	\$ 1,156,697
27	23	\$ 962,996	22	745,398
28	38	1,639,101	24	910,692
29	30	1,177,466	29	1,146,368
30	29	1,293,126	35	1,422,412
31	30	1,377,460	38	1,464,576
32	31	1,342,276	36	1,555,880
33	28	1,367,903	35	1,404,855
34	32	1,648,877	39	1,811,624
35	36	1,759,344	35	1,675,341
36	28	1,262,358	51	2,558,655
37	46	2,622,755	40	2,046,079
38	39	2,086,385	45	2,476,173
39	45	2,710,002	41	1,942,565
40	39	2,290,168	49	2,284,776
41	23	1,335,060	48	2,331,597
42	41	2,056,069	45	2,404,600
43	41	2,317,427	48	2,348,571
44	39	2,217,106	56	2,936,841
45	54	3,030,557	62	3,482,999
46	24	1,263,423	55	2,786,555
47	42	2,600,619	61	2,894,655
48	48	3,016,322	71	3,603,506
49	43	2,511,831	59	2,963,330

**TABLE VIII-C**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Age as of January 1, 2015  
General Employees**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Age	Men		Women	
	Number	Compensation	Number	Compensation
50	37	\$ 2,108,438	64	\$ 3,205,847
51	38	2,278,646	62	3,443,478
52	52	2,769,036	62	3,162,850
53	37	2,145,328	49	2,492,414
54	55	3,413,657	76	3,779,821
55	46	2,602,443	61	3,059,008
56	49	2,693,077	70	3,555,916
57	44	2,596,048	49	2,704,696
58	49	2,997,926	60	3,011,104
59	52	3,595,533	48	2,481,563
60	41	2,795,261	35	1,956,965
61	42	2,742,941	33	2,097,426
62	16		33	1,964,071
63	27	2,160,961	20	1,108,784
64	14		14	
65	10		16	
66	10		6	
67	3		7	
68	5		4	
69			1	
70	1		1	
71			2	
72	1		3	
73	1			
74				
75				
76			2	
77				
78	1			
79				
80			1	
<b>Total</b>	1,520	\$ 85,071,121	1,881	\$ 93,380,692

**TABLE VIII-D**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Years of Credited Service as of January 1, 2015  
General Employees**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Years of Service	Men		Women	
	Number	Compensation	Number	Compensation
0	144	\$ 6,051,105	222	\$ 9,543,489
1	121	6,286,841	193	8,357,570
2	106	5,443,850	120	5,139,988
3	104	5,371,060	92	4,188,716
4	55	2,806,276	56	2,761,087
5	53	2,880,627	68	3,223,486
6	76	4,015,749	72	3,577,987
7	42	2,340,744	49	2,626,427
8	48	2,743,518	45	2,645,420
9	54	3,002,357	80	4,148,757
10	39	2,500,225	43	2,208,365
11	26	1,429,767	45	2,200,041
12	48	2,590,345	27	1,192,139
13	70	3,868,095	63	2,900,662
14	62	3,470,711	77	3,748,713
15	50	2,664,887	68	3,644,303
16	40	2,261,817	38	1,964,366
17	30	1,719,353	41	2,429,721
18	30	1,984,648	41	2,145,980
19	24	1,567,707	15	
20	26	1,495,280	43	2,385,509
21	22	1,242,208	41	2,250,575
22	34	2,120,495	48	2,463,166
23	42	2,797,259	48	2,684,562
24	36	2,410,333	39	1,903,977
25	26	1,603,703	59	3,551,307
26	24	1,667,786	42	2,632,220
27	18		23	1,350,047
28	14		15	
29	19		22	1,260,519
30	7		15	
31	7		9	
32	5		3	
33	4		8	
34	2		4	
35	4		3	
36	2		1	
37	2		1	
38	1		1	
39	2		1	
40	1			
<b>Total</b>	<b>1,520</b>	<b>\$ 85,071,121</b>	<b>1,881</b>	<b>\$ 93,380,692</b>

**TABLE VIII-E**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Age as of January 1, 2015  
Deputy Sheriffs**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Age	Men		Women	
	Number	Compensation	Number	Compensation
31				
32				
33				
34	1			
35	2			
36	4		2	
37	2		1	
38	3		1	
39	9		2	
40	5		3	
41	4		1	
42	11		1	
43	16		6	
44	19		3	
45	19		3	
46	18		5	
47	13		6	
48	16		2	
49	12		3	
50	8		3	
51	9		3	
52	10		4	
53	5			
54	8		4	
55	6			
56	2			
57	2			
58	2			
59				
60	1			
61	1			
62				
63				
<b>Total</b>	208	\$ 14,526,730	53	\$ 3,740,378

**TABLE VIII-F**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Years of Credited Service as of January 1, 2015  
Deputy Sheriffs**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Years of Service	Men		Women	
	Number	Compensation	Number	Compensation
1				
2				
3				
4				
5			1	
6				
7	1			
8				
9				
10	1			
11	3			
12	3			
13	6		1	
14	7		2	
15	12		6	
16	17		4	
17	10		7	
18	20	\$ 1,392,509	4	
19	16		4	
20	19		4	
21	22	1,585,029	3	
22	15		5	
23	25	1,776,510	7	
24	10		1	
25	5			
26	4		1	
27	5		2	
28	1		1	
29				
30	4			
31	1			
32	1			
<b>Total</b>	208	\$ 14,526,730	53	\$ 3,740,378

**TABLE VIII-G**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Age as of January 1, 2015  
Elected Officials**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Age	Men		Women	
	Number	Compensation	Number	Compensation
28	1			
34			1	
39	3			
44			1	
48	2			
55	1			
57	1			
58	2			
59	1			
64	1			
65	1			
67			1	
68	1			
71	1			
<b>Total</b>	15		3	

**TABLE VIII-H**

**The Number and Annual Salaries  
of Members in Active Service Distributed by  
Years of Credited Service as of January 1, 2015  
Elected Officials**

**(Compensation in cells with fewer than 20 records has been suppressed)**

Years of Service	Men		Women	
	Number	Compensation	Number	Compensation
1				
2	3			
3	2			
4				
5				
6	1			
7			1	
8				
9				
10			2	
11	1			
12	2			
13				
14	1			
15				
16	1			
17				
18				
19	1			
20				
21				
22	2			
23				
24				
25				
26				
27	1		3	
<b>Total</b>	15		3	

**TABLE VIII-I**

**The Number and Annual Benefits Payable to  
All Members Receiving Benefits  
as of January 1, 2015**

Age	Men		Women	
	Number	Annuities	Number	Annuities
15	1	\$ 4,414		
16	1	3,995		
18	1	3,997		
20	1	4,001		
21	1		1	\$ 7,643
25	1	21,678	1	7,643
26			1	6,949
32	1	21,678		
34	1	20,048	2	9,012
36	1	2,326	1	15,982
37	1	34,234		
38			1	36,152
39	2	29,228	1	16,702
40	2	50,322	1	45,189
41	1	5,313		
42			1	4,871
43	4	160,300	3	66,433
44	4	139,892		
45	7	206,006		
46	2	51,856		
47	3	109,283	3	45,228
48	1	13,555	5	217,925
49	2	52,963	5	137,721
50	9	370,640	17	426,923
51	3	78,360	21	531,855
52	19	478,386	33	686,340
53	14	420,019	28	741,701
54	10	350,893	38	960,552
55	27	821,978	53	1,313,497
56	32	1,167,217	46	1,295,195
57	40	1,087,240	89	2,308,070
58	56	1,626,554	77	1,808,825
59	72	2,027,761	91	2,128,075
60	89	2,224,015	134	2,658,828
61	122	2,874,783	160	2,923,477
62	131	3,707,909	187	3,260,527
63	143	3,632,893	199	3,879,772
64	180	4,585,852	190	3,143,247
65	173	4,359,655	219	3,811,367

**TABLE VIII-I**

**The Number and Annual Benefits Payable to All Members Receiving Benefits as of January 1, 2015**

Age	Men		Women	
	Number	Annuities	Number	Annuities
66	160	\$ 4,563,824	192	\$ 3,548,521
67	186	4,473,532	221	4,187,547
68	149	4,153,797	194	4,102,742
69	119	2,887,764	138	2,625,467
70	103	2,504,079	145	2,746,011
71	99	2,618,105	144	2,508,395
72	102	2,868,969	138	2,406,871
73	72	1,742,842	115	2,037,358
74	85	2,264,625	99	1,693,538
75	79	1,960,469	114	2,007,776
76	64	1,528,600	114	2,068,444
77	72	1,657,757	111	1,573,783
78	78	1,911,547	110	1,879,506
79	51	1,341,459	120	2,120,033
80	55	1,564,468	96	1,662,433
81	52	1,480,709	86	1,354,418
82	65	1,428,472	97	1,571,393
83	64	1,559,606	89	1,555,376
84	47	1,040,335	132	1,867,473
85	37	710,905	111	1,497,111
86	44	909,268	95	1,286,513
87	46	964,877	105	1,352,641
88	25	566,509	85	1,127,393
89	34	720,867	62	756,777
90	27	481,716	65	835,089
91	19	316,552	61	693,066
92	12	211,636	46	496,376
93	18	274,229	41	366,919
94	7	75,861	32	307,620
95	7	70,751	21	184,008
96	2	31,876	24	196,174
97	1	43,688	10	51,571
98	2	51,205	6	52,173
99			3	38,628
100	1	6,062	5	45,471
101	1	15,631		
102			1	6,492
<b>Total</b>	<b>3,143</b>	<b>\$ 79,751,836</b>	<b>4,836</b>	<b>\$ 85,306,808</b>

**TABLE VIII-J**

**The Number and Annual Benefits Payable to Retired Members as of January 1, 2015**

Age	Men		Women	
	Number	Annuities	Number	Annuities
42				
43	1	\$ 43,733		
44				
45				
46				
47				
48			3	\$ 127,554
49			2	70,155
50	5	216,728	5	102,284
51	2	63,588	10	285,872
52	8	252,606	12	399,156
53	12	385,786	21	613,211
54	10	350,893	31	884,180
55	22	674,257	46	1,158,207
56	27	1,080,713	43	1,243,845
57	34	976,868	74	2,003,994
58	48	1,431,648	71	1,723,509
59	69	1,971,722	75	1,829,551
60	83	2,131,552	120	2,405,686
61	113	2,637,298	151	2,755,265
62	121	3,428,511	175	3,049,417
63	137	3,578,495	181	3,562,034
64	174	4,463,512	176	2,838,575
65	168	4,257,276	204	3,555,546
66	153	4,438,360	171	3,169,679
67	183	4,430,577	199	3,766,024
68	144	4,006,504	179	3,804,485
69	111	2,799,839	122	2,250,147
70	95	2,404,741	126	2,383,761
71	92	2,498,379	122	2,188,114
72	96	2,765,881	118	2,066,922
73	70	1,695,482	100	1,735,514
74	79	2,170,789	78	1,364,280
75	77	1,938,879	107	1,886,638
76	59	1,484,076	91	1,567,571
77	63	1,535,042	91	1,307,810
78	67	1,773,283	84	1,411,015
79	50	1,329,805	93	1,641,625
80	54	1,556,104	71	1,249,511
81	49	1,433,640	62	1,023,147
82	60	1,406,332	69	968,580
83	57	1,441,421	60	974,910
84	43	990,764	85	1,265,295

**TABLE VIII-J**

**The Number and Annual Benefits Payable to Retired Members as of January 1, 2015**

Age	Men		Women	
	Number	Annuities	Number	Annuities
85	33	\$ 690,375	74	\$ 987,546
86	43	905,679	62	781,119
87	44	934,737	64	783,782
88	24	544,257	50	568,089
89	30	689,308	41	522,608
90	20	431,686	41	474,654
91	17	309,075	40	408,048
92	10	187,663	29	334,641
93	17	263,906	28	203,879
94	6	64,129	21	193,293
95	6	68,090	16	139,511
96	2	31,876	18	151,384
97	1	43,688	7	40,554
98	2	51,205	6	52,173
99			2	34,619
100	1	6,062	4	42,129
101	1	15,631		
102				
103				
104				
<b>Total</b>	2,893	\$ 75,282,451	3,931	\$ 70,351,098

**TABLE VIII-K**

**The Number and Annual Benefits Payable to  
Beneficiary Members  
as of January 1, 2015**

Age	Men		Women	
	Number	Annuities	Number	Annuities
15	1	\$ 4,414		
16	1	3,995		
18	1	3,997		
20	1	4,001		
21	1		1	\$ 7,643
25	1	21,678	1	7,643
26			1	6,949
32	1	21,678		
34			2	9,012
36	1	2,326	1	15,982
38			1	36,152
39	1	5,120	1	16,702
40	1	7,880		
41	1	5,313		
42			1	4,871
43			2	33,973
45	2	19,953		
46	1	6,329		
47			1	5,400
49			1	8,017
50			4	73,588
51			3	95,469
52	7	98,504	20	273,522
53			2	53,355
54			5	43,555
55			2	37,256
56			2	29,896
57			6	85,584
58	2	61,845	2	23,266
59			13	225,852
60	2	11,043	12	221,764
61	2	14,507	7	122,192
62	2	61,835	10	175,695
63	2	12,668	12	155,453
64	4	70,147	11	247,175
65	2	14,589	11	176,778

**TABLE VIII-K**

**The Number and Annual Benefits Payable to  
Beneficiary Members  
as of January 1, 2015**

Age	Men		Women	
	Number	Annuities	Number	Annuities
66	4	\$ 52,248	18	\$ 335,273
67	2	10,193	19	370,709
68	2	51,149	14	288,622
69	3	38,264	14	314,897
70	4	23,691	13	283,261
71	5	65,771	19	264,721
72	3	32,713	14	243,459
73			11	213,490
74	3	36,025	18	273,291
75	1	3,977	6	100,734
76	4	19,212	22	486,278
77	6	61,935	18	227,309
78	8	71,549	24	444,384
79	1	11,654	26	456,037
80			21	361,106
81	1	10,137	22	303,823
82	5	22,140	23	517,614
83	4	31,992	26	544,006
84	4	49,571	45	575,141
85	4	20,530	32	443,679
86	1	3,589	30	463,910
87	2	30,140	40	555,556
88			34	545,975
89	4	31,559	20	221,864
90	6	39,483	24	360,435
91	2	7,477	20	269,445
92	2	23,973	17	161,735
93	1	10,323	13	163,040
94	1	11,732	11	114,327
95	1	2,661	5	44,497
96			6	44,790
97			3	11,017
99			1	4,009
100			1	3,342
102			1	6,492
<b>Total</b>	121	\$ 1,225,510	766	\$ 12,211,012

**TABLE VIII-L**

**The Number and Annual Benefits Payable to Disabled Members as of January 1, 2015**

Age	Men		Women	
	Number	Annuities	Number	Annuities
34	1	\$ 20,048		
37	1	34,234		
39	1	24,108		
40	1	42,442	1	\$ 45,189
43	3	116,567	1	32,460
44	4	139,892		
45	5	186,053		
46	1	45,527		
47	3	109,283	2	39,828
48	1	13,555	2	90,371
49	2	52,963	2	59,549
50	4	153,912	8	251,051
51	1	14,772	8	150,514
52	4	127,276	1	13,662
53	2	34,233	5	75,135
54			2	32,817
55	5	147,721	5	118,034
56	5	86,504	1	21,454
57	6	110,372	9	218,492
58	6	133,061	4	62,050
59	3	56,039	3	72,672
60	4	81,420	2	31,378
61	7	222,978	2	46,020
62	8	217,563	2	35,415
63	4	41,730	6	162,285

**TABLE VIII-L**

**The Number and Annual Benefits Payable to Disabled Members as of January 1, 2015**

Age	Men		Women	
	Number	Annuities	Number	Annuities
64	2	\$ 52,193	3	\$ 57,497
65	3	87,790	4	79,043
66	3	73,216	3	43,569
67	1	32,762	3	50,814
68	3	96,144	1	9,635
69	5	49,661	2	60,423
70	4	75,647	6	78,989
71	2	53,955	3	55,560
72	3	70,375	6	96,490
73	2	47,360	4	88,354
74	3	57,811	3	55,967
75	1	17,613	1	20,404
76	1	25,312	1	14,595
77	3	60,780	2	38,664
78	3	66,715	2	24,107
79			1	22,371
80	1	8,364	4	51,816
81	2	36,932	2	27,448
82			5	85,199
83	3	86,193	3	36,460
84			2	27,037
85			5	65,886
86			3	41,484
87			1	13,303
88	1	22,252	1	13,329
89			1	12,305
90	1	10,547		
91			1	15,573
<b>Total</b>	129	\$ 3,243,875	139	\$ 2,744,698

## EXHIBIT IX - Glossary

<b>Accrued Liability</b>	The difference between (a) the present value of future plan benefits, and (b) the present value of future normal cost. It is the portion of the present value of future plan benefits attributable to service accrued as of the valuation date. Sometimes referred to as “actuarial accrued liability.”
<b>Accrued Service</b>	The service credited under the plan, which was rendered before the date of the actuarial valuation.
<b>Actual Funding Contribution</b>	The Actual Funding Contribution for a plan year is calculated using census and asset information as of the first day of the plan year, and includes Normal Cost, with interest to the end of the plan year, and a net amortization payment.
<b>Actuarial Assumptions</b>	Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the “present value of future plan benefits” between the present value of future normal cost and the accrued liability. Sometimes referred to as the “actuarial funding method.”
<b>Actuarial Equivalent</b>	A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.
<b>Actuarial Value of Assets</b>	The value of current plan assets recognized for valuation purposes. Based on a smoothed market value that recognizes Unexpected Changes in the market value over a period of ten years.
<b>Amortization</b>	Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

## EXHIBIT IX - Glossary (cont'd)

<b>Annual Required Contribution</b>	The Annual Required Contribution, or ARC, is the amount determined in accordance with Governmental Accounting Standards Board Statements Nos. 25 and 27.
<b>Budget Contribution</b>	The Budget Contribution for a year is based on census and asset information as of the first day of the PRIOR plan year, rolled forward to the next plan year based on all actuarial assumptions being met. For example, the Budget Contribution for 2012 is based on census and asset information as of January 1, 2010, rolled forward to January 1, 2011.
<b>Contribution Variance</b>	The difference between the Actual Contribution and the Budget Contribution for a plan year is referred to as the Contribution Variance. A Contribution Variance resulting from an overpayment is amortized over 5 years as a level dollar credit. A Contribution Variance resulting from an underpayment is amortized over 5 years as a level dollar charge.
<b>Unexpected Experience</b>	A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.
<b>Normal Cost</b>	The annual cost assumed, under the actuarial funding method, for current and subsequent plan years. Sometimes referred to as "current service cost."
<b>Present Value</b>	The amount of funds presently required to provide a payment or series of payments in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.
<b>Unfunded Accrued Liability</b>	The difference between the actuarial accrued liability and valuation assets.