



***Racine County & Racine County School  
Office (RCSO)***

*GASB 45 Actuarial Valuation*

*Fiscal Year Ending December 31, 2015*

***Prepared by:***  
***Nyhart Actuary & Employee Benefits***  
*8415 Allison Pointe Blvd., Suite 300*  
*Indianapolis, IN 46250*  
*Ph: (317) 845-3500*  
*www.nyhart.com*

## Table of Contents

	<b>Page</b>
Certification	1
Executive Summary	3
GASB Disclosures	
For FY 2015	6 – 7
For FY 2014	8 – 9
Schedule of Funding Progress	10
Schedule of Employer Contributions	11
Historical Annual OPEB Cost	11
Reconciliation of Actuarial Accrued Liability (AAL)	12
Employer Contribution Cash Flow Projections	13
Substantive Plan Provisions	15
Actuarial Methods and Assumptions	18
Summary of Plan Participants	23
Appendix	26
Comparison of Participant Demographic Information	27
GASB Results by Group	28
Glossary	29
Decrements Exhibit	30
Retirement Rates Exhibit	31
Illustrations of GASB Calculations	32
Definitions	34



**June 2, 2016**

**Alexandra Tillmann  
Racine County  
730 Wisconsin Avenue  
Racine, WI 53403**

This report summarizes the GASB actuarial valuation for the Racine County & Racine County School Office 2015 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 45 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions).

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate and other economic assumptions have been selected by the Plan Sponsor. Demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

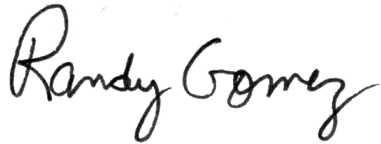
- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.

Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.



Randy Gomez, FSA, MAAA  
Consulting Actuary



Suraj Datta, ASA, MAAA  
Valuation Actuary

## Summary of Results

Presented below is the summary of GASB 45 results for the fiscal year ending December 31, 2015 compared to the prior fiscal years as shown in the County's Notes to Financial Statement. Summary include Racine County School Office (RCSO) results.

	<i>As of January 1, 2014<sup>1</sup></i>		<i>As of January 1, 2015</i>	
<b>Actuarial Accrued Liability</b>	\$	253,640,311	\$	193,366,046
<b>Actuarial Value of Assets</b>	\$	0	\$	0
<b>Unfunded Actuarial Accrued Liability</b>	\$	253,640,311	\$	193,366,046
<b>Funded Ratio</b>		0.0%		0.0%

	<i>FY 2014</i>		<i>FY 2015</i>	
<b>Annual Required Contribution</b>	\$	12,371,773	\$	9,701,816
<b>Annual OPEB Cost</b>	\$	12,392,012	\$	9,723,006
<b>Annual Employer Contribution</b>	\$	10,872,393	\$	9,391,432

	<i>As of December 31, 2014</i>		<i>As of December 31, 2015</i>	
<b>Net OPEB Obligation</b>	\$	81,792,948	\$	82,124,522

	<i>As of December 31, 2015</i>	
<b>Total Active Participants</b>		646
<b>Total Retiree Participants</b>		787 <sup>2</sup>

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

<sup>1</sup> GASB 45 actuarial valuation report was not prepared in the interim year. The results shown above are based on GASB 45 actuarial valuation report for the fiscal year ending December 31, 2013.

<sup>2</sup> Includes retirees with life insurance benefits only, and 17 former RCSO terminated vested employees.

Below is a breakdown of total GASB 45 liabilities allocated to past, current, and future service as of January 1, 2015 for both the County and RCSO compared to the prior year.

	<i>As of January 1, 2014<sup>3</sup></i>	<i>As of January 1, 2015</i>
<b>Present Value of Future Benefits</b>	<b>\$ 276,996,284</b>	<b>\$ 212,632,575</b>
Active Employees	58,849,391	53,478,421
Retired Employees	218,146,893	159,154,154
<b>Actuarial Accrued Liability</b>	<b>\$ 253,640,311</b>	<b>\$ 193,366,046</b>
Active Employees	35,493,418	34,211,892
Retired Employees	218,146,893	159,154,154
<b>Normal Cost</b>	<b>\$ 2,203,719</b>	<b>\$ 1,939,680</b>
<b>Future Normal Cost</b>	<b>\$ 21,152,254</b>	<b>\$ 17,326,849</b>

**Present Value of Future Benefits** is the amount needed as of January 1, 2015 and January 1, 2014 to fully fund the County's (including RCSO) retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

**Actuarial Accrued Liability** is the portion of PVFB considered to be accrued or earned as of January 1, 2015 and January 1, 2014. This amount is a required disclosure in the Required Supplementary Information section.

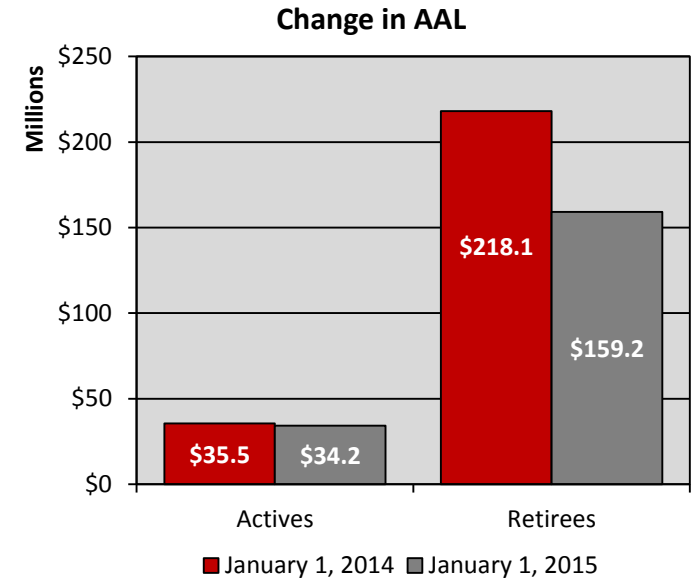
**Normal Cost** is the portion of the total liability amount that is attributed and accrued for current year's active employee service by the actuarial cost method.

**Future Normal Cost** is the portion of the total liability amount that is attributed to the future employee service by the current year's valuation by the actuarial cost method.

<sup>3</sup> GASB 45 actuarial valuation was not prepared in the interim year. The results shown above are based on GASB 45 actuarial valuation for the fiscal year ending December 31, 2013.

Below is a breakdown of total GASB 45 Actuarial Accrued Liability (AAL) allocated to pre and post Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies for both the County and RCSO. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor’s GASB subsidies.

	<i>As of January 1, 2014<sup>4</sup></i>	<i>As of January 1, 2015</i>
Active Pre-Medicare	\$ 19,005,282	\$ 18,846,763
Active Post-Medicare	16,488,136	15,365,129
<b>Total Active AAL</b>	<b>\$ 35,493,418</b>	<b>\$ 34,211,892</b>
Retirees Pre-Medicare	\$ 54,618,265	\$ 35,026,771
Retirees Post-Medicare	103,528,628	124,127,383
<b>Total Retirees AAL</b>	<b>\$ 218,146,893</b>	<b>\$ 159,154,154</b>
<b>Total AAL</b>	<b>\$ 253,640,311</b>	<b>\$ 193,366,046</b>



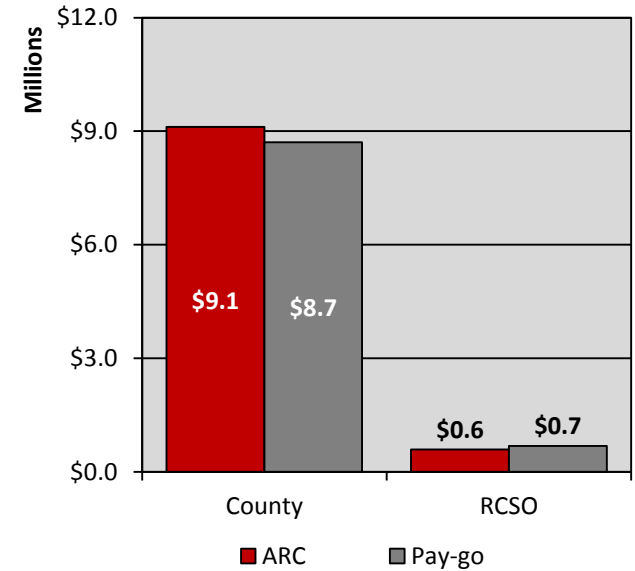
<sup>4</sup> GASB 45 actuarial valuation was not prepared in the interim year. The results shown above are based on GASB 45 actuarial valuation for the fiscal year ending December 31, 2013.

**Development of Annual Required Contribution (ARC) for FY 2015**

Required Supplementary Information	County		RCSO		Total
Actuarial Accrued Liability as of beginning of year	\$	178,537,928	\$	14,828,118	\$ 193,366,046
Actuarial Value of Assets as of beginning of year		0		0	0
<b>Unfunded Actuarial Accrued Liability (UAAL)</b>	<b>\$</b>	<b>178,537,928</b>	<b>\$</b>	<b>14,828,118</b>	<b>\$ 193,366,046</b>
Covered payroll		N/A		N/A	N/A
UAAL as a % of covered payroll		N/A		N/A	N/A

Annual Required Contribution	County		RCSO		Total
Normal cost as of beginning of year	\$	1,939,680	\$	0	\$ 1,939,680
Amortization of the UAAL		6,822,370		566,619	7,388,989
Total normal cost and amortization payment	\$	8,762,050	\$	566,619	\$ 9,328,669
Interest to end of year		350,482		22,665	373,147
<b>Annual Required Contribution (ARC)</b>	<b>\$</b>	<b>9,112,532</b>	<b>\$</b>	<b>589,284</b>	<b>\$ 9,701,816</b>

**Cash vs Accrual Accounting (FY 2015)**



**Annual Required Contribution (ARC)** is the annual expense recorded in the income statement under GASB 45 accrual accounting. It replaces the cash basis method of accounting recognition with an accrual method. The GASB 45 ARC is higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.



## Development of Annual OPEB Cost and Net OPEB Obligation for FY 2015

<b>Net OPEB Obligation (NOO)</b>	<i>County</i>		<i>RCSO</i>		<i>Total</i>
ARC as of end of year	\$	9,112,532	\$	589,284	\$ 9,701,816
Interest on NOO to end of year		3,216,134		55,584	3,271,718
NOO amortization adjustment to the ARC		(3,195,304)		(55,224)	(3,250,528)
Annual OPEB cost	\$	9,133,362	\$	589,644	\$ 9,723,006
Annual employer contribution for pay-go cost <sup>5</sup>		(8,704,297)		(687,135)	(9,391,432)
Annual employer contribution for pre-funding		(0)		(0)	(0)
Change in NOO	\$	429,065	\$	(97,491)	\$ 331,574
NOO as of beginning of year		80,403,350		1,389,598	81,792,948
<b>NOO as of end of year</b>	<b>\$</b>	<b>80,832,415</b>	<b>\$</b>	<b>1,292,107</b>	<b>\$ 82,124,522</b>

**Pay-as-you-go Cost** is the expected total employer cash cost for the coming period based on all explicit and implicit subsidies. It is also the amount recognized as expense on the Income Statement under pay-as-you-go accounting.

**Net OPEB Obligation** is the cumulative difference between the annual OPEB cost and employer contributions. This obligation will be created if cash contributions are less than the current year expense under GASB 45 accrual rules.

The net obligation is recorded as a liability on the employer's balance sheet which will reduce the net fund balance.

The value of implicit subsidies is considered as part of cash contributions for the current period. Other cash expenditures that meet certain conditions are also considered as contributions for GASB 45 purposes.

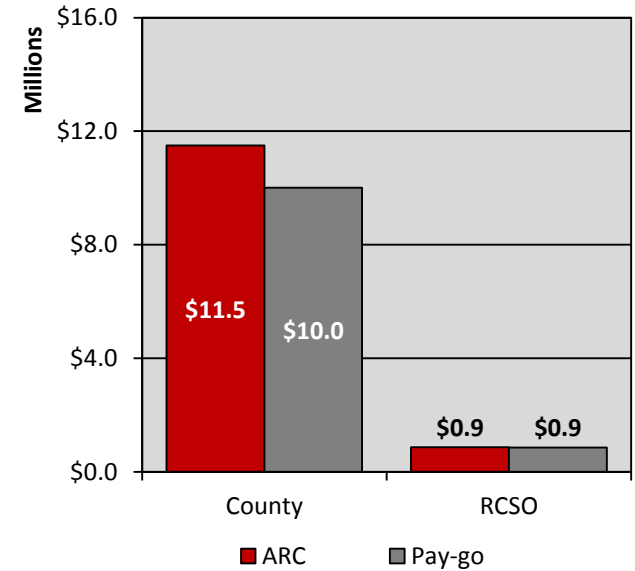
<sup>5</sup> FY 2015 annual contribution for pay-go cost is based on the County's actual retiree health expenditures less retiree contributions towards the cost of coverage. Data was provided by the County.

Development of Annual Required Contribution (ARC) for FY 2014<sup>6</sup>

Required Supplementary Information	County	RCSO	Total
Actuarial Accrued Liability as of beginning of year	\$ 231,780,548	\$ 21,859,763	\$ 253,640,311
Actuarial Value of Assets as of beginning of year	0	0	0
<b>Unfunded Actuarial Accrued Liability (UAAL)</b>	<b>\$ 231,780,548</b>	<b>\$ 21,859,763</b>	<b>\$ 253,640,311</b>
Covered payroll	\$ 41,575,017	N/A	\$ 41,575,017
UAAL as a % of covered payroll	557.5%	N/A	610.1%

Annual Required Contribution	County	RCSO	Total
Normal cost as of beginning of year	\$ 2,203,719	\$ 0	\$ 2,203,719
Amortization of the UAAL	8,856,901	835,315	\$ 9,692,216
Total normal cost and amortization payment	\$ 11,060,620	\$ 835,315	\$ 11,895,935
Interest to end of year	442,425	33,413	\$ 475,838
<b>Total Annual Required Contribution (ARC)</b>	<b>\$ 11,503,045</b>	<b>\$ 868,728</b>	<b>\$ 12,371,773</b>

Cash vs Accrual Accounting (FY 2014)



**Annual Required Contribution (ARC)** is the annual expense recorded in the income statement under GASB 45 accrual accounting. It replaces the cash basis method of accounting recognition with an accrual method. The GASB 45 ARC is higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

<sup>6</sup> GASB 45 actuarial valuation was not prepared in the interim year. The results shown above are based on GASB 45 actuarial valuation for the fiscal year ending December 31, 2013.

## Development of Annual OPEB Cost and Net OPEB Obligation for FY 2014

Results are as shown in the Racine County Notes to Financial Statement as of fiscal year ending December 31, 2014.

<b>Net OPEB Obligation (NOO)</b>	<i>County</i>		<i>RCSO</i>		<i>Total</i>
ARC as of end of year	\$	11,503,045	\$	868,728	\$ 12,371,773
Interest on NOO to end of year		3,073,790		51,107	3,124,897
NOO amortization adjustment to the ARC		(3,053,882)		(50,776)	(3,104,658)
Annual OPEB cost	\$	11,522,953	\$	869,059	\$ 12,392,012
Annual employer contribution for pay-go cost		(10,011,124)		(861,269)	(10,872,393)
Annual employer contribution for pre-funding		(0)		(0)	(0)
Change in NOO	\$	1,511,829	\$	7,790	\$ 1,519,619
NOO as of beginning of year		78,891,521		1,381,808	80,273,329
<b>NOO as of end of year</b>	<b>\$</b>	<b>80,403,350</b>	<b>\$</b>	<b>1,389,598</b>	<b>\$ 81,792,948</b>

**Pay-as-you-go Cost** is the expected total employer cash cost for the coming period based on all explicit and implicit subsidies. It is also the amount recognized as expense on the Income Statement under pay-as-you-go accounting.

**Net OPEB Obligation** is the cumulative difference between the annual OPEB cost and employer contributions. This obligation will be created if cash contributions are less than the current year expense under GASB 45 accrual rules.

The net obligation is recorded as a liability on the employer's balance sheet which will reduce the net fund balance.

The value of implicit subsidies is considered as part of cash contributions for the current period. Other cash expenditures that meet certain conditions are also considered as contributions for GASB 45 purposes.

### Summary of GASB 45 Financial Results

Presented below is the summary of GASB 45 results for the fiscal year ending December 31, 2015 and prior fiscal years as shown in the County’s Notes to Financial Statements.

#### Schedule of Funding Progress

<i>As of</i>		<i>Actuarial Accrued Liability (AAL)</i>	<i>Actuarial Value of Assets (AVA)</i>	<i>Unfunded Actuarial Accrued Liability (UAAL)</i>		<i>Funded Ratio</i>	<i>Covered Payroll</i>	<i>UAAL as % of Covered Payroll</i>
		<i>A</i>	<i>B</i>	<i>C = A - B</i>		<i>D = B / C</i>	<i>E</i>	<i>F = C / E</i>
January 1, 2015	County	\$ 178,537,928	\$ -	\$ 178,537,928		0.0%	N/A	N/A
	RCSO	\$ 14,828,118	\$ -	\$ 14,828,118		0.0%	N/A	N/A
	Total	\$ 193,366,046	\$ -	\$ 193,366,046		0.0%	N/A	N/A
January 1, 2014	County	\$ 231,780,548	\$ -	\$ 231,780,548		0.0%	\$ 41,575,017	557.5%
	RCSO	\$ 21,859,769	\$ -	\$ 21,859,769		0.0%	N/A	N/A
	Total	\$ 253,640,311	\$ -	\$ 253,640,311		0.0%	\$ 41,575,017	557.5%
January 1, 2013	County	\$ 231,780,548	\$ -	\$ 231,780,548		0.0%	\$ 31,507,744	735.6%
	RCSO	\$ 21,859,769	\$ -	\$ 21,859,769		0.0%	N/A	N/A
	Total	\$ 253,640,311	\$ -	\$ 253,640,311		0.0%	\$ 31,507,744	735.6%

**Summary of GASB 45 Financial Results (continued)**

Presented below is the summary of GASB 45 results for the fiscal year ending December 31, 2015 and prior fiscal years as shown in the County’s Notes to Financial Statements. Summary below includes Racine County School Office (RCSO) results.

**Schedule of Employer Contributions**

<i>FYE</i>	<i>Employer Contributions</i>	<i>Annual Required Contribution (ARC)</i>	<i>% of ARC Contributed</i>
	<i>A</i>	<i>B</i>	<i>C = A / B</i>
December 31, 2015	\$ 9,391,432	\$ 9,701,816	96.8%
December 31, 2014	\$ 10,872,393	\$ 12,371,772	87.9%
December 31, 2013	\$ 10,241,100	\$ 12,371,773	82.8%

**Historical Annual OPEB Cost**

<i>As of</i>	<i>Annual OPEB Cost</i>	<i>% of Annual OPEB Cost Contributed</i>	<i>Net OPEB Obligation</i>
December 31, 2015	\$ 9,723,006	96.6%	\$ 82,124,522
December 31, 2014	\$ 12,392,012	87.7%	\$ 81,792,948
December 31, 2013	\$ 12,392,012	82.6%	\$ 80,273,329

The Actuarial Accrued Liability (AAL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the AAL and whether they increase or decrease the liability.

Expected Events

- Increases in AAL due to additional benefit accruals as employees continue to earn service each year
- Increases in AAL due to interest as the employees and retirees age
- Decreases in AAL due to benefit payments

Unexpected Events

- Increases in AAL when actual premium rates increase more than expected. A liability decrease occurs when premium rates increase less than expected.
- Increases in AAL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in AAL depending on whether benefit provisions are improved or reduced.

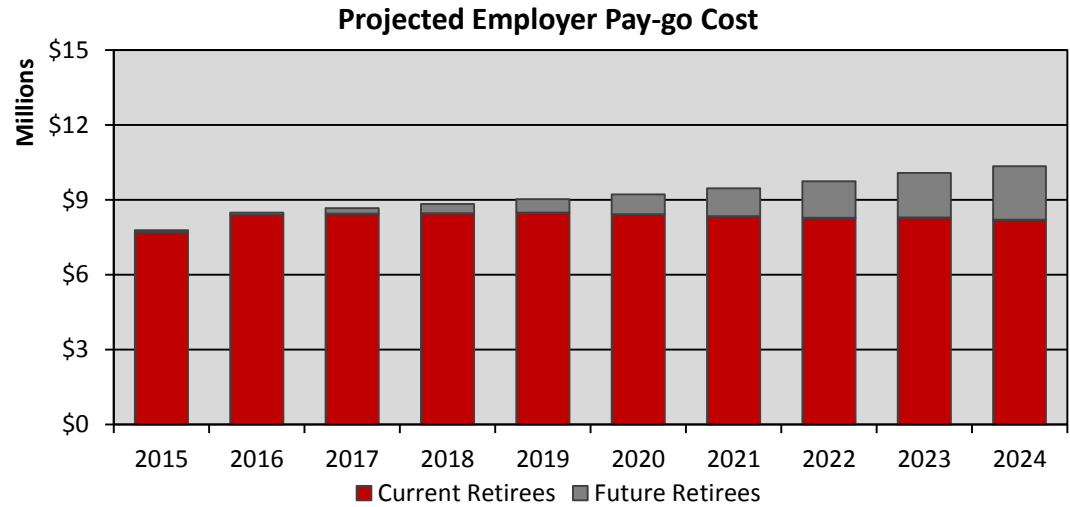
For FY 2015	County		RCSO		Total
Actuarial Accrued Liability as of beginning of year <sup>7</sup>	\$	178,537,928	\$	14,828,118	\$ 193,366,046
Normal cost as of beginning of year		1,939,680		0	1,939,680
Expected benefit payments during the year		(7,020,397)		(771,795)	(7,792,192)
Interest adjustment to end of year		7,080,073		577,840	7,657,913
Expected Actuarial Accrued Liability as of end of year	\$	180,537,284	\$	14,634,163	\$ 195,171,447
Actuarial (gain) / loss due to experience		0		0	0
Actuarial (gain) / loss due to provisions / assumptions changes		0		0	0
Actual Actuarial Accrued Liability as of end of year	\$	180,537,284	\$	14,634,163	\$ 195,171,447

**Reconciliation of AAL** shows what the actuary expects the actuarial accrued liability to be at the beginning of the following fiscal year based on current assumptions and plan provisions. The expected end of year AAL will change as actual plan experience varies from assumptions. Generally, the AAL is expected to have a net increase each year.

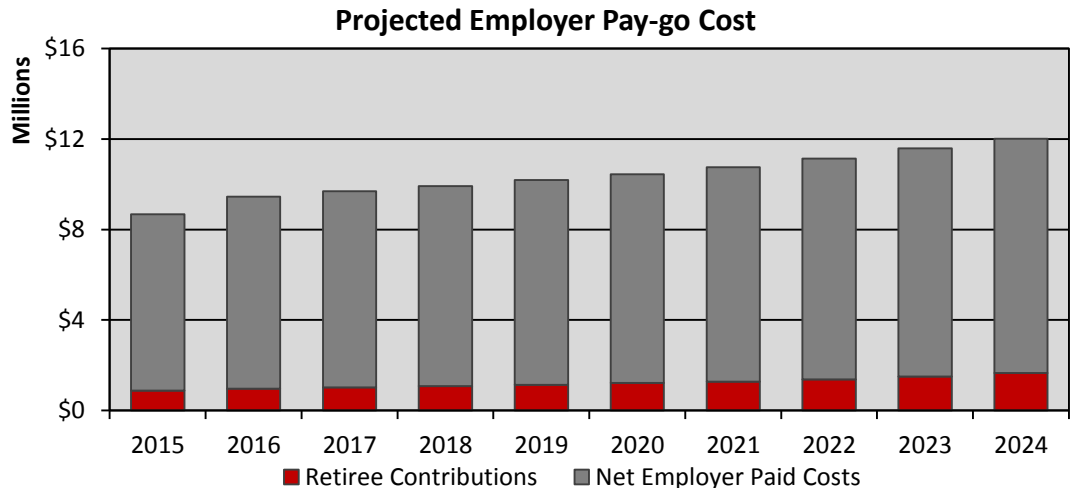
<sup>7</sup> Actuarial Accrued Liability (AAL) as of beginning of year was actuarially rolled-back from end of year AAL on a “no gain/loss” basis.

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next ten years. Results are shown separately for current /future retirees and gross claim costs/retiree contributions for the County and RCSO. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees <sup>8</sup>	Total
2015	\$ 7,707,904	\$ 84,288	\$ 7,792,192
2016	\$ 8,401,616	\$ 91,874	\$ 8,493,490
2017	\$ 8,456,760	\$ 216,128	\$ 8,672,888
2018	\$ 8,464,273	\$ 370,847	\$ 8,835,120
2019	\$ 8,490,967	\$ 545,775	\$ 9,036,742
2020	\$ 8,433,463	\$ 792,695	\$ 9,226,158
2021	\$ 8,349,988	\$ 1,115,591	\$ 9,465,579
2022	\$ 8,293,471	\$ 1,460,293	\$ 9,753,764
2023	\$ 8,302,393	\$ 1,777,104	\$ 10,079,497
2024	\$ 8,212,374	\$ 2,136,724	\$ 10,349,098



FYE	Estimated Claims Costs	Retiree Contributions	Net Employer-Paid Costs
2015	\$ 8,675,281	\$ 883,089	\$ 7,792,192
2016	\$ 9,456,056	\$ 962,566	\$ 8,493,490
2017	\$ 9,689,570	\$ 1,016,682	\$ 8,672,888
2018	\$ 9,910,478	\$ 1,075,358	\$ 8,835,120
2019	\$ 10,178,834	\$ 1,142,092	\$ 9,036,742
2020	\$ 10,442,448	\$ 1,216,290	\$ 9,226,158
2021	\$ 10,747,663	\$ 1,282,084	\$ 9,465,579
2022	\$ 11,129,958	\$ 1,376,194	\$ 9,753,764
2023	\$ 11,584,475	\$ 1,504,978	\$ 10,079,497
2024	\$ 12,009,515	\$ 1,660,417	\$ 10,349,098



<sup>8</sup> Projections for future retirees do not take into account future new hires.

Below is the employer contribution cash flow projections split between the County and RCSO.

FYE	Racine County			RCSO			Total		
	Current Retirees	Future Retirees <sup>9</sup>	Total	Current Retirees <sup>10</sup>	Future Retirees	Total	Current Retirees	Future Retirees <sup>5</sup>	Total
2015	\$ 6,936,110	\$ 84,288	\$ 7,020,398	\$ 771,794	\$ 0	\$ 771,794	\$ 7,707,904	\$ 84,288	\$ 7,792,192
2016	\$ 7,560,360	\$ 91,874	\$ 7,652,234	\$ 841,256	\$ 0	\$ 841,256	\$ 8,401,616	\$ 91,874	\$ 8,493,490
2017	\$ 7,604,209	\$ 216,128	\$ 7,820,337	\$ 852,551	\$ 0	\$ 852,551	\$ 8,456,760	\$ 216,128	\$ 8,672,888
2018	\$ 7,621,433	\$ 370,847	\$ 7,992,280	\$ 842,840	\$ 0	\$ 842,840	\$ 8,464,273	\$ 370,847	\$ 8,835,120
2019	\$ 7,610,653	\$ 545,775	\$ 8,156,428	\$ 880,314	\$ 0	\$ 880,314	\$ 8,490,967	\$ 545,775	\$ 9,036,742
2020	\$ 7,569,247	\$ 792,695	\$ 8,361,942	\$ 864,216	\$ 0	\$ 864,216	\$ 8,433,463	\$ 792,695	\$ 9,226,158
2021	\$ 7,492,528	\$ 1,115,591	\$ 8,608,119	\$ 857,460	\$ 0	\$ 857,460	\$ 8,349,988	\$ 1,115,591	\$ 9,465,579
2022	\$ 7,460,446	\$ 1,460,293	\$ 8,920,739	\$ 833,025	\$ 0	\$ 833,025	\$ 8,293,471	\$ 1,460,293	\$ 9,753,764
2023	\$ 7,477,398	\$ 1,777,104	\$ 9,254,502	\$ 824,995	\$ 0	\$ 824,995	\$ 8,302,393	\$ 1,777,104	\$ 10,079,497
2024	\$ 7,401,696	\$ 2,136,724	\$ 9,538,420	\$ 810,678	\$ 0	\$ 810,678	\$ 8,212,374	\$ 2,136,724	\$ 10,349,098

FYE	Estimated Claims Costs	Retiree Contributions	Net Employer-Paid Costs	Estimated Claims Costs	Retiree Contributions	Net Employer-Paid Costs	Estimated Claims Costs	Retiree Contributions	Net Employer-Paid Costs
2015	\$ 7,791,021	\$ 770,623	\$ 7,020,398	\$ 884,260	\$ 112,466	\$ 771,794	\$ 8,675,281	\$ 883,089	\$ 7,792,192
2016	\$ 8,492,213	\$ 839,979	\$ 7,652,234	\$ 963,843	\$ 122,587	\$ 841,256	\$ 9,456,056	\$ 962,566	\$ 8,493,490
2017	\$ 8,708,078	\$ 887,741	\$ 7,820,337	\$ 981,492	\$ 128,941	\$ 852,551	\$ 9,689,570	\$ 1,016,682	\$ 8,672,888
2018	\$ 8,933,906	\$ 941,626	\$ 7,992,280	\$ 976,572	\$ 133,732	\$ 842,840	\$ 9,910,478	\$ 1,075,358	\$ 8,835,120
2019	\$ 9,159,366	\$ 1,002,938	\$ 8,156,428	\$ 1,019,468	\$ 139,154	\$ 880,314	\$ 10,178,834	\$ 1,142,092	\$ 9,036,742
2020	\$ 9,443,737	\$ 1,081,795	\$ 8,361,942	\$ 998,711	\$ 134,495	\$ 864,216	\$ 10,442,448	\$ 1,216,290	\$ 9,226,158
2021	\$ 9,764,730	\$ 1,156,611	\$ 8,608,119	\$ 982,933	\$ 125,473	\$ 857,460	\$ 10,747,663	\$ 1,282,084	\$ 9,465,579
2022	\$ 10,180,612	\$ 1,259,873	\$ 8,920,739	\$ 949,346	\$ 116,321	\$ 833,025	\$ 11,129,958	\$ 1,376,194	\$ 9,753,764
2023	\$ 10,648,810	\$ 1,394,308	\$ 9,254,502	\$ 935,665	\$ 110,670	\$ 824,995	\$ 11,584,475	\$ 1,504,978	\$ 10,079,497
2024	\$ 11,092,087	\$ 1,553,667	\$ 9,538,420	\$ 917,428	\$ 106,750	\$ 810,678	\$ 12,009,515	\$ 1,660,417	\$ 10,349,098

<sup>9</sup> Projections for future retirees do not take into account future new hires.

<sup>10</sup> Includes RCSO terminated vested employees



**Eligibility**

Racine County employees are eligible for retiree health benefits provided they:

1. Are enrolled in the County’s health insurance at the time of retirement.
2. Meet the age and other requirements for retirement under Wisconsin Retirement System (WRS)
3. Have at least 15 years of service with Racine County for those retiring on/after January 1, 2013
4. Make the necessary premium contributions as specified by the County.

WRS requirements are as follows:

1. General employees:
  - a. Early retirement – age 55 and vested
  - b. Normal retirement – earlier of age 65 or age 57 with 30 years of service
2. Protective service:
  - a. Early retirement – age 50 and vested
  - b. Normal retirement – earlier of age 54 or age 53 with 25 years of service
3. Elected officials:
  - a. Early retirement – age 55 and vested
  - b. Normal retirement – earlier of age 62 or age 57 with 30 years of service

WRS vesting requirement is immediately for members prior to July 1, 2011 and 5 years of service for members on/after July 1, 2011.

General employees who become disabled in the line of duty are able to retire immediately and be eligible for retiree health benefits if they were hired prior to November 1, 2003. General employees who retire due to disability on/after November 1, 2003 are only eligible for COBRA coverage. All Protective service employees are eligible to retire immediately and be eligible for retiree health benefits in the event of line-of-duty disability.

**Length of Coverage**

Employees hired prior to the hire date cut off shown below are eligible for lifetime retiree health benefits. Everybody else is eligible for retiree health benefits until Medicare eligibility, which is currently at age 65.

<b>Employee Groups</b>	<b>Hire Date Cut-Off</b>
Non-Represented	September 1, 1998
Deputies and Command Staff	June 1, 1998
Teamsters	September 1, 2000
Ridgewood RN	January 1, 2000

**Spouse Benefit**

For deaths occurring on/after January 1, 2012, retiree health coverage continues to surviving spouses of retirees until they are eligible for Medicare coverage. County’s explicit subsidy will continue to surviving spouses provided that the retirees receive County’s explicit subsidy prior to their deaths.

**Retiree Cost Sharing**

Employees (except for Deputies and Command Staff) hired on/after January 1, 2012 who retire on/after January 1, 2013 are required to pay the full cost of coverage.

Retiree contribution requirements for employees hired prior to January 1, 2012 who retire on/after January 1, 2013 (including all Deputies and Command Staff) are as follows:

1. Prior to Medicare eligibility – retirees’ share is based on years of service at retirement as shown below:

YOS at Retirement	Retiree Contribution %	Notes
20+	15%	Same premium share as actives, which is 15% of premium effective on January 1, 2014
15 – 19	25%	10% more than actives’ premium share

2. Upon Medicare eligibility – retirees’ share is the greater of (a) the share based listed in item (1) above (based on years of service) and (b) the share listed below (based on retirement year)

Retirement Year	Retiree Contribution %	Retirement Year	Retiree Contribution %
2012	10%	2017	35%
2013	15%	2018	40%
2014	20%	2019	45%
2015	25%	2020 – 2021	50%
2016	30%	2022+	100%

Eligible employees who are required to retire due to disability are eligible for lifetime coverage and they will be required to contribute 15% of the premium.

Retiree contributions for existing retirees who retired prior to January 1, 2013 vary from 5% to 50% of premium.

One retiree has been provided County medical benefits through an arbitration settlement. The retiree is required to contribute 15% of the premium, and is able to stay on the plan until age 65.

**Life Insurance**

The County provides fully-paid life insurance benefits that vary from \$1,000 to \$5,000 for existing retirees who elected this coverage. Effective January 1, 2012, life insurance benefit is no longer available to all employee groups except for Deputies and Command Staff who are still eligible for a fully-paid \$5,000 life insurance benefit.

**Medical Benefit**

Pre-Medicare medical and prescription health plans are self-insured. Effective January 1, 2013, future retirees are only able to elect Plan 8 during retirement. Current retirees that are under 65 and retired prior to January 1, 2013 may continue to stay in currently enrolled plans. Post-Medicare plan benefits are fully-insured and experience rated by Humana. Effective January 1, 2013, future retirees are only able to elect Plan 8 during retirement. Current retirees that are under 65 and retired prior to January 1, 2013 may continue to stay in currently enrolled plans. The combined premium rates effective January 1, 2016 for medical and prescription drug benefits are as shown below.

Plans	Pre-Medicare		Post-Medicare	
	Single	Family	Single	Family
Plans 2, 3	N/A	N/A	\$ 414.42	\$ 828.84
Plan 6A	\$ 1,390.00	\$ 2,988.00	\$ 437.20	\$ 874.40
Plan 6B	\$ 1,341.00	\$ 2,882.00	\$ 414.42	\$ 828.84
Plan 6C	\$ 1,297.00	\$ 2,790.00	\$ 414.42	\$ 828.84
Plan 7	\$ 1,270.00	\$ 2,728.00	\$ 414.42	\$ 828.84
Plan 8	\$ 891.00	\$ 2,124.00	\$ 725.00	\$ 1,544.00

**Dental Benefits**

There is no GASB 45 liability for dental coverage as retirees pay the full cost of coverage.

**Racine County School Office**

The Racine County School Office (RCSO) will continue its contributions towards current retirees’ medical premiums at the percentages that were determined at termination. The retiree health benefits coverage duration and continuation of benefits to surviving spouses depend on specific requirements that were implemented between 1999 and 2006. As of the valuation date, there are 63 existing RCSO retirees and 17 former RCSO employees who are eligible for the aforementioned benefits but have not yet started their retiree health benefits. Those who have not elected coverage as of the valuation date have been assigned terminated vested status and benefits will not commence until specific age/service requirements noted below are met. The eligibility, length of coverage, and retiree contribution requirement as a percent of premium for the 17 former RCSO employees are as follows:

Employee Groups	Commencement of Benefits	Length of Coverage	Retiree Contribution
Group 2	WRS Pension eligible	Lifetime	5% or 10%
Group 3	WRS Pension eligible	Lifetime	Between 10% to 40%
Group 4	Age 60	Until age 65	20%

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and County experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

There are no significant changes to the actuarial methods and assumptions since the last GASB valuation, which was for the fiscal year ending December 31, 2013. For the current year GASB valuation, we have updated the mortality assumption, per capita costs and health care trend rates. We expect to update health care trend rates and per capita costs again in the next full GASB valuation, which will be for the fiscal year ending December 31, 2017.

<b>Measurement Date</b>	December 31, 2015 with results actuarially rolled-back to January 1, 2015 on a “no loss/no gain” basis.
<b>Discount Rate</b>	4.0%
<b>Payroll Growth</b>	3.0% (for amortization purposes only)
<b>Inflation Rate</b>	3.0% per year
<b>Cost Method</b>	Projected Unit Credit with linear proration to decrement
<b>Amortization</b>	Level % of pay over thirty years based on an open group
<b>Census Data</b>	Census information was provided by the County as of December 2015. We have reviewed it for reasonableness and no material modifications were made to the census data.
<b>Health Care Coverage Election Rate</b>	<p>Active employees with current coverage: 90%</p> <p>Active employees with no current coverage: 0%</p> <p>Active employees who retire due to disability: 100%</p> <p>Inactive employees with current coverage: 100%</p> <p>Inactive employees with no coverage but with life insurance: 100%</p> <p>Inactive employees with neither current coverage nor life insurance: 0%</p> <p>Terminated vested RCSO former employees in Groups 2 and 3: 100%</p> <p>Terminated vested RCSO former employees in Group 4: 80%</p>
<b>Spousal Coverage</b>	<p>Spousal coverage and ages for current retirees is based on actual data.</p> <p>75% of male and 50% of female employees are assumed to be married at retirement. Husbands are assumed to be three years older than wives.</p>

**Employer Funding Policy**

Pay-as-you-go cash basis

**Turnover Rate**

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The annual turnover rates by group are based on the assumption used in the WRS Active Actuarial Valuation as of December 31, 2012. Sample annual turnover rates are as shown below:

General and Elected Officials						Protective with Social Security (SS)			
All Ages			YOS 10+			All Ages		YOS 10+	
YOS	Male	Female	Age	Male	Female	YOS	Unisex	Age	Unisex
0	17.5%	19.5%	25	2.5%	3.8%	0	15.0%	25	1.7%
1	13.0%	13.5%	30	2.5%	3.3%	1	7.0%	30	1.6%
2	8.5%	10.0%	35	2.1%	2.8%	2	4.3%	35	1.4%
3	6.8%	8.0%	40	1.6%	2.2%	3	3.8%	40	1.2%
4	6.0%	7.4%	45	1.3%	1.8%	4	3.4%	45	1.1%
5	4.5%	6.0%	50	1.1%	1.6%	5	2.6%	50	1.0%
6	4.0%	5.0%	55	1.1%	1.5%	6	2.5%	55	1.0%
7	3.5%	4.5%	60	1.1%	1.5%	7	2.3%	60	1.0%
8	3.0%	4.0%				8	2.0%		
9	2.5%	3.8%				9	1.7%		

**Disability**

Disability rates by group are based on the assumption used in the WRS Active Actuarial Valuation as of December 31, 2012. Sample annual disability rates are as shown below:

Age	General and Elected		Protective with SS
	Male	Female	Unisex
20	0.01%	0.01%	0.01%
25	0.01%	0.01%	0.01%
30	0.01%	0.03%	0.01%
35	0.01%	0.04%	0.02%
40	0.04%	0.05%	0.03%
45	0.07%	0.07%	0.05%
50	0.15%	0.11%	0.08%
55	0.29%	0.20%	1.21%
60+	0.51%	0.29%	2.04%

**Mortality**

RPH-2015 Total Dataset Mortality Table fully generational using scale MP-2015; the RPH-2015 table is developed from RPH-2014 table with 8 years of mortality improvement based on MP-2014 scale removed, projected to 2014 using MP-2015 scale. (Prior valuations used RP-2000 Combined Mortality Table fully generational projected using Scale AA)

**Retirement Rate**

Annual retirement rates are based on the assumption used in the WRS Active Actuarial Valuation as of December 31, 2012.

General and Elected					Protective with SS <sup>11</sup>	
Age	Male		Female		Age	Unisex All YOS
	Early	Normal	Early	Normal		
55	8.0%		6.1%		50	6.0%
56	8.0%		6.4%		51	7.0%
57	4.3%	20.0%	4.2%	17.0%	52	8.0%
58	5.3%	20.0%	5.5%	17.0%	53	23.0%
59	5.5%	20.0%	5.3%	17.0%	54	18.0%
60	7.5%	20.0%	8.1%	20.0%	55	17.0%
61	8.0%	20.0%	7.0%	20.0%	56 – 59	16.0%
62	14.0%	27.0%	15.0%	27.0%	60 – 61	18.0%
63	16.0%	32.0%	15.0%	28.0%	62	22.0%
64	17.0%	24.0%	15.0%	25.0%	63	29.0%
65		24.0%		25.0%	64	16.0%
66		30.0%		29.0%	65	30.0%
67		24.0%		20.0%	66	20.0%
68 – 71		17.0%		18.0%	67	15.0%
72 – 74		17.0%		15.0%	68	25.0%
75+		100.0%		100.0%	69	20.0%
					70+	100.0%

<sup>11</sup> Includes early retirements.

**Health Care Trend Rates**

FYE	Trend	FYE	Trend
2016	9.00%	2021	6.50%
2017	8.50%	2022	6.00%
2018	8.00%	2023	5.50%
2019	7.50%	2024+	5.00%
2020	7.00%		

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

**Retiree Contributions**

Retiree contributions are assumed to increase according to health care trend rates.

**Per Capita Costs**

Annual per capita costs were calculated based on the County’s retiree premium rates effective on January 1, 2016 actuarially increased using health index factors and retiree enrollment. The costs are assumed to increase with health care trend rates. Annual per capita costs by plan are as shown below:

Age	Plan 6A	Plan 6B	Plan 6C	Plan 7	Plan 8
50 – 54	\$ 12,198	\$ 11,766	\$ 11,380	\$ 11,138	\$ 7,827
55 – 59	\$ 14,901	\$ 14,369	\$ 13,895	\$ 13,603	\$ 9,566
60 – 64	\$ 18,273	\$ 17,631	\$ 17,059	\$ 16,692	\$ 11,715
65 – 69	\$ 4,376	\$ 4,148	\$ 4,148	\$ 4,148	\$ 7,257
70 – 74	\$ 5,197	\$ 4,926	\$ 4,926	\$ 4,926	\$ 8,618
75 – 79	\$ 6,017	\$ 5,704	\$ 5,704	\$ 5,704	\$ 9,979
80+	\$ 6,017	\$ 5,704	\$ 5,704	\$ 5,704	\$ 9,979

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

All RCSO terminated vested employees are assumed to elect Plan 6B when they start receiving retiree health benefits.

**Explicit Subsidy**

The difference between (a) the premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a future retiree enrolled in pre-Medicare Plan 8 who was hired prior to January 1, 2012 and retiring with 20 years of service.

	Premium Rate	Retiree Contribution	Explicit Subsidy
	A	B = 15% x A	C = A – B
Retiree	\$ 891.00	\$ 133.65	\$ 757.35
Spouse	\$ 1,233.00	\$ 184.95	\$ 1,048.05

**Implicit Subsidy**

The difference between (a) the per capita cost and (b) the premium rate. Below is an example of the monthly implicit subsidies for a 60 – 64 retiree with spouse of the same age enrolled in Plan 8.

	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A – B
Retiree	\$ 976.25	\$ 891.00	\$ 85.25
Spouse	\$ 976.25	\$ 1,233.00	\$ 0.00*

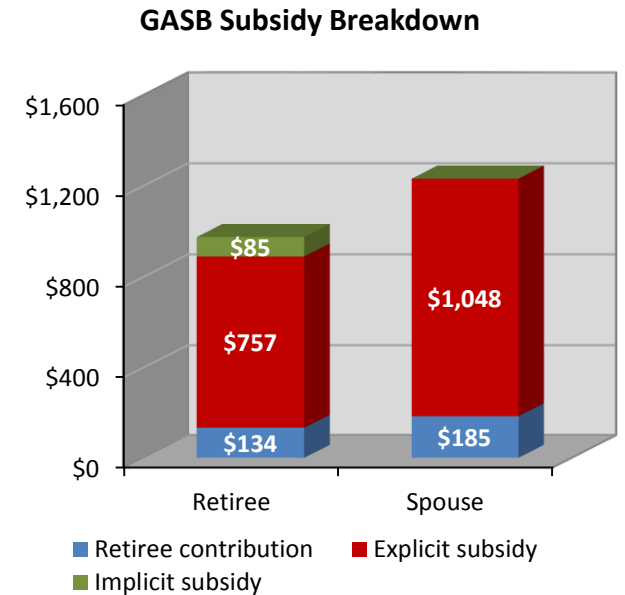
All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.

\* Limited to \$0

**GASB Subsidy Breakdown**

Below is a breakdown of the GASB 45 monthly total cost for a 60 – 64 retiree with a spouse of the same age enrolled in Plan 8 who was hired prior to January 1, 2012 and retiring with 20 years of service.

	Retiree	Spouse
Retiree contribution	\$ 133.65	\$ 184.95
Explicit subsidy	\$ 757.35	\$ 1,048.05
Implicit subsidy	\$ 85.25	\$ 0.00
<b>Total monthly cost</b>	<b>\$ 976.25</b>	<b>\$ 1,233.00</b>





**County Employees and Retirees**

<i>Actives with coverage</i>	<i>Single</i>	<i>Non-Single<sup>12</sup></i>	<i>Total</i>	<i>Avg. Age</i>	<i>Avg. Svc</i>	<i>Salary</i>
Plan 8	308	338	646	43.8	11.8	N/A
<b>Total actives with coverage</b>	<b>308</b>	<b>338</b>	<b>646</b>	<b>43.8</b>	<b>11.8</b>	<b>N/A</b>

No information was provided on active employees without coverage.

<i>Retirees with coverage<sup>13</sup></i>	<i>Single</i>	<i>Non-Single</i>	<i>Total</i>	<i>Avg. Age</i>
Plan 6A	219	4	223	76.1
Plan 6B	262	69	331	66.7
Plan 6C	18	14	32	58.1
Plan 8	9	20	29	58.2
<b>Total retirees with coverage</b>	<b>508</b>	<b>107</b>	<b>615</b>	<b>69.3</b>

<i>Retirees without coverage<sup>14</sup></i>	<i>Total</i>	<i>Avg. Age</i>
<b>Total retirees without coverage</b>	<b>92</b>	<b>73.2</b>

<sup>12</sup> Includes participants with Employee/Spouse and Family coverage levels.

<sup>13</sup> Retirees with coverage single counts include 190 spouses of retirees or surviving spouses enrolled in the County’s Medicare options with individual coverage.

<sup>14</sup> All County retirees without coverage have life insurance benefits. They have been included in the GASB valuation.

**RCSO Former Employees and Retirees**

<i>RCSO retirees with coverage<sup>15</sup></i>	<i>Single</i>	<i>Non-Single<sup>16</sup></i>	<i>Total</i>	<i>Avg. Age</i>
Plan 6A	21	0	21	77.3
Plan 6B	32	2	34	70.4
Plan 7	2	2	4	62.9
Plan 8	2	2	4	62.7
<b>Total retirees with coverage</b>	<b>57</b>	<b>6</b>	<b>63</b>	<b>71.8</b>

<i>RCSO former employees</i>	<i>Total</i>	<i>Avg. Age</i>
<b>Total</b>	<b>17</b>	<b>62.1</b>

<sup>15</sup> Additionally, there are 27 spouses of retirees or surviving spouses separately enrolled in the County’s Medicare options with individual coverage. These spouses have not been included above but are included in the GASB valuation.

<sup>16</sup> Includes participants with Employee/Spouse and Family coverage levels.

Active Age-Service Distribution

Age	Years of Service										Total
	< 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	6	8	2								16
25 to 29	15	41	7								63
30 to 34	9	40	27	4							80
35 to 39	1	23	27	21	7						79
40 to 44	1	17	13	19	30	5					85
45 to 49	4	15	13	17	45	20	7				121
50 to 54	6	6	14	9	16	24	27	5			107
55 to 59	2	5	6	9	15	14	8	2	2		63
60 to 64		4	3	2	6	4	3	1			23
65 to 69			1	2	1		1	1			6
70 & up			1	2							3
<b>Total</b>	<b>44</b>	<b>159</b>	<b>114</b>	<b>85</b>	<b>120</b>	<b>67</b>	<b>46</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>646</b>

**APPENDIX**

## Comparison of Participant Demographic Information

The active and retiree participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

	<i>As of January 1, 2014</i>	<i>As of January 1, 2016</i>
Active Participants	636	646
Retired Participants	823	787
County <sup>17</sup>	738	707
RCSO <sup>18</sup>	85	80
Averages for Active		
Age	43.1	43.8
Service	11.2	11.8
Averages for Inactive		
Age	68.9	69.8

<sup>17</sup> Includes retirees with life insurance benefits only.

<sup>18</sup> RCSO counts shown above include 19 RCSO former employees as of January 1, 2014 and 17 RCSO former employees as of January 1, 2016.

**GASB Results by Group**

Below is the summary of the GASB results for fiscal year ending December 31, 2015 based on the Projected Unit Credit cost method with a discount rate of 4.0%.

<i>Fund</i>	<i>Unfunded Actuarial Accrued Liability (UAAL)</i>		<i>Annual Required Contribution (ARC)</i>		<i>Net OPEB Obligation (NOO)</i>
	<i>As of January 1, 2015</i>		<i>For 2015</i>		<i>As of December 31, 2015</i>
RCSO	\$	14,828,117	\$	589,284	\$ 1,292,107
Development	\$	1,183,915	\$	70,692	\$ 555,112
Ed/Rec	\$	1,060,417	\$	53,467	\$ 513,070
General	\$	47,759,695	\$	2,130,458	\$ 20,872,180
HHS	\$	1,852,034	\$	124,648	\$ 909,420
Highway	\$	20,056,623	\$	989,411	\$ 8,938,134
Human Services	\$	34,410,215	\$	1,635,851	\$ 15,468,355
Other PS	\$	768,732	\$	97,850	\$ 444,035
Ridgewood RN	\$	4,950,534	\$	353,329	\$ 2,490,349
Sheriff's	\$	66,495,764	\$	3,656,826	\$ 30,641,760
<b>Total</b>	<b>\$</b>	<b>193,366,046</b>	<b>\$</b>	<b>9,701,816</b>	<b>\$ 82,124,522</b>

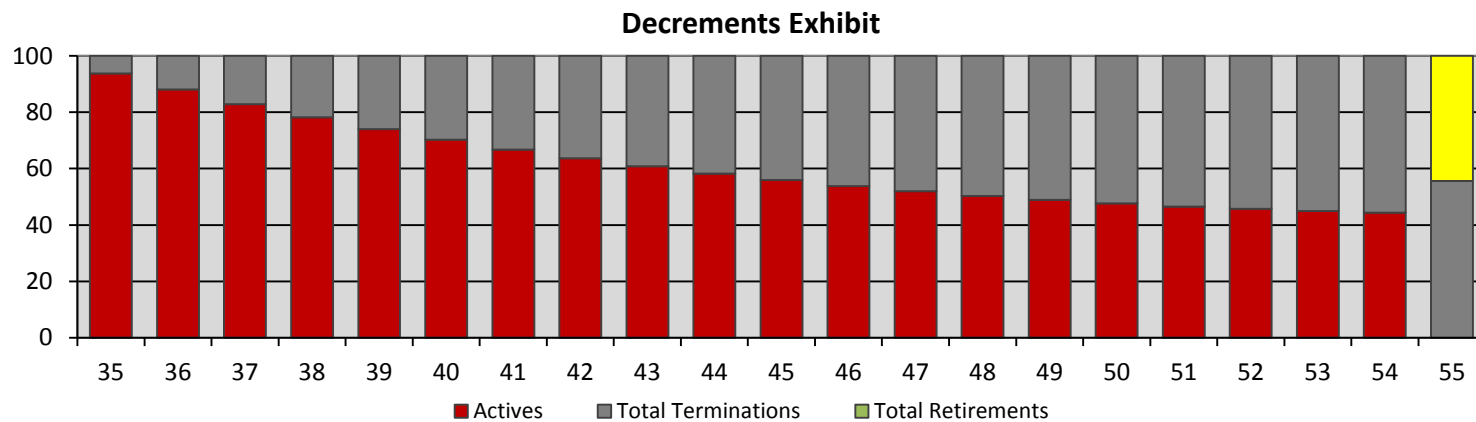
## Glossary

### Decrements Exhibit

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.430 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

Age	# Remaining Employees	# of Terminations per Year*	# of Retirements per Year*	Total Decrements
35	100.000	6.276	0.000	6.276
36	93.724	5.677	0.000	5.677
37	88.047	5.136	0.000	5.136
38	82.911	4.648	0.000	4.648
39	78.262	4.209	0.000	4.209
40	74.053	3.814	0.000	3.814
41	70.239	3.456	0.000	3.456
42	66.783	3.131	0.000	3.131
43	63.652	2.835	0.000	2.835
44	60.817	2.564	0.000	2.564
45	58.253	2.316	0.000	2.316

Age	# Remaining Employees	# of Terminations per Year*	# of Retirements per Year*	Total Decrements
46	55.938	2.085	0.000	2.085
47	53.853	1.866	0.000	1.866
48	51.987	1.656	0.000	1.656
49	50.331	1.452	0.000	1.452
50	48.880	1.253	0.000	1.253
51	47.627	1.060	0.000	1.060
52	46.567	0.877	0.000	0.877
53	45.690	0.707	0.000	0.707
54	44.983	0.553	0.000	0.553
55	44.430	0.000	44.430	44.430



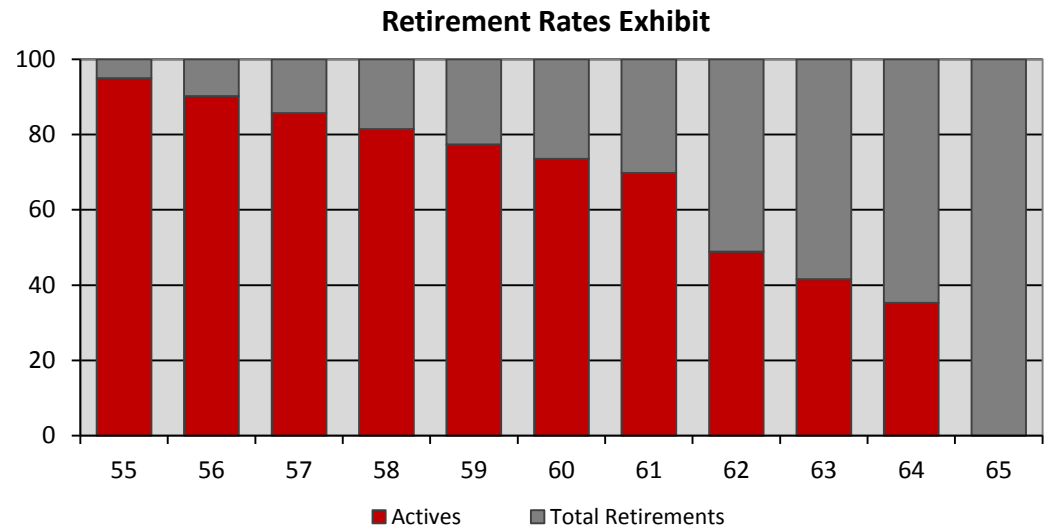
\* The above rates are illustrative rates and are not used in our GASB calculations.



### Retirement Rates Exhibit

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

Age	Active Employees BOY	Annual Retirement Rates*	# Retirements per Year	Active Employees EOY
55	100.000	5.0%	5.000	95.000
56	95.000	5.0%	4.750	90.250
57	90.250	5.0%	4.513	85.738
58	85.738	5.0%	4.287	81.451
59	81.451	5.0%	4.073	77.378
60	77.378	5.0%	3.869	73.509
61	73.509	5.0%	3.675	69.834
62	69.834	30.0%	20.950	48.884
63	48.884	15.0%	7.333	41.551
64	41.551	15.0%	6.233	35.318
65	35.318	100.0%	35.318	0.000



\* The above rates are illustrative rates and are not used in our GASB calculations.

## Illustration of GASB Calculations

The purpose of the illustration is to familiarize non-actuaries with the GASB 45 actuarial calculation process.

### I. Facts

1. The employer provides subsidized retiree health coverage worth \$100,000 to employees retiring at age 55 with 25 years of service. The employer funds for retiree health coverage on a pay-as-you-go basis.
2. Employee X is age 50 and has worked 20 years with the employer.
3. Retiree health subsidies are paid from the general fund assets which are expected to earn 4.5% per year on a long-term basis.
4. Based on Employee X's age and sex he has a 98.0% probability of living to age 55 and a 95.0% probability of continuing to work to age 55.

### II. Calculation of Present Value of Future Benefits

**Present Value of Future Benefits** represents the cost to finance benefits payable in the future to current and future retirees and beneficiaries, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

	Value	Description
A.	\$100,000	Projected benefit at retirement
B.	80.2%	Interest discount for five years = $(1 / 1.045)^5$
C.	98.0%	Probability of living to retirement age
D.	95.0%	Probability of continuing to work to retirement age
E.	\$74,666	Present value of projected retirement benefit measured at employee's current age = A x B x C x D

## Illustration of GASB Calculations (continued)

### III. Calculation of Actuarial Accrued Liability

**Actuarial Accrued Liability** represents the portion of the Present Value of Future Benefits which has been accrued recognizing the employee's past service with the employer. The Actuarial Accrued Liability is a required disclosure in the Required Supplementary Information section of the employer's financial statement.

	Value	Description
A.	\$74,666	Present value of projected retirement benefit measured at employee's current age
B.	20	Current years of service with employer
C.	25	Projected years of service with employer at retirement
D.	\$59,733	Actuarial accrued liability measured at employee's current age = $A \times B / C$

### IV. Calculation of Normal Cost

**Normal Cost** represents the portion of the Present Value of Future Benefits allocated to the current year.

	Value	Description
A.	\$74,666	Present value of projected retirement benefit measured at employee's current age
B.	25	Projected years of service with employer at retirement
C.	\$2,987	Normal cost measured at employee's current age = $A / B$

### V. Calculation of Annual Required Contribution

**Annual Required Contribution** is the total expense for the current year to be shown in the employer's income statement.

	Value	Description
A.	\$2,987	Normal Cost for the current year
B.	\$3,509	30-year amortization (level dollar method) of Unfunded Actuarial Accrued Liability using a 4.5% interest rate discount factor
C.	\$292	Interest adjustment = $4.5\% \times (A + B)$
D.	\$6,788	Annual Required Contribution = $A + B + C$

## Definitions

GASB 45 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Accrued Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of plan benefits and expenses which is not provided for by the future Normal Costs.
2. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
3. **Actuarial Cost Method** – A procedure for determining the Actuarial Present Value of future benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.
4. **Actuarial Present Value** – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
  - a) adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
  - b) multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
  - c) discounted according to an assumed rate (or rates) of return to reflect the time value of money.
5. **Annual OPEB Cost** – An accrual-basis measure of the periodic cost of an employer’s participation in a defined benefit OPEB plan.
6. **Annual Required Contribution (ARC)** – The employer’s periodic required contributions to a defined benefit OPEB plan, calculated in accordance with the parameters.
7. **Explicit Subsidy** – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
8. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the actuarial accrued liability.
9. **Healthcare Cost Trend Rate** – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

**Definitions (continued)**

10. **Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
11. **Net OPEB Obligation** – The cumulative difference since the effective date of this Statement between annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt.
12. **Normal Cost** – The portion of the Actuarial Present Value of plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.
13. **Pay-as-you-go** – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
14. **Per Capita Costs** – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
15. **Present Value of Future Benefits** – Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.
16. **Select and Ultimate Rates** – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% select rates, and 7% is the ultimate rate.
17. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.