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Lake County, FL

GASB 45 Actuarial Valuation

Fiscal Year Ending September 30, 2014

Added to portal 2/2/15

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January 29, 2015

Barbara Lehman
Lake County, FL
315 West Main Street
Taveres, FL 32778

This report summarizes the GASB actuarial valuation for the Lake County, FL 2013/14 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 valuation is also based upon our understanding of the plan provisions as summarized within the report.

The information presented herein is based on the information furnished to us by the Plan Sponsor that has been reconciled and reviewed for reasonableness. We are not aware of any material inadequacy in employee census provided by the Plan Sponsor. We 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.

The actuarial assumptions were 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 computations have been made in accordance with generally accepted actuarial principles and practice.

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

Randy Gomez, FSA, MAAA
Consulting Actuary

Summary of Results

Presented below is the summary of GASB 45 results for the fiscal year ending September 30, 2014 compared to the prior fiscal year. The results provided include the following County agencies: Board of County Commissioners, Clerk's Office, Property Appraiser, Tax Collector, and Supervisor of Elections. The Lake County Sheriff's Office is not included.

The 2012/13 and 2013/14 annual employer contribution below is based on the actual Lake County Board of County Commissioners' (BCC) employer contribution for retiree health benefits provided by the County.

		As of October 1, 2012		*As of October 1, 2013*
Actuarial Accrued Liability	$	6,248,998	$	6,559,116
Actuarial Value of Assets	$	0	$	0
Unfunded Actuarial Accrued Liability	$	6,248,998	$	6,559,116
Funded Ratio		0.0%		0.0%

		FY 2012/13		*FY 2013/14*
Annual Required Contribution	$	839,103	$	711,529
Annual OPEB Cost	$	832,900	$	697,423
Annual Employer Contribution	$	49,713	$	229,530

		As of September 30, 2013		*As of September 30, 2014*
Net OPEB Obligation	$	3,698,006	$	4,165,899

	As of September 30, 2014
Total Active Participants	985
Total Retiree Participants	67

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. The active and retiree participant figures include Property Appraisers and Tax Collectors. Retiree participant figures include those employees in DROP.

Below is a breakdown of total GASB 45 liabilities allocated to past, current, and future service as of October 1, 2013 compared to the prior year.

	As of October 1, 2012	*As of October 1, 2013*
Present Value of Future Benefits	$ **13,299,550**	$ **13,657,155**
Active Employees	11,690,928	10,241,430
Retired Employees	1,608,622	3,415,725
Actuarial Accrued Liability	$ **6,248,998**	$ **6,559,116**
Active Employees	4,640,376	3,143,391
Retired Employees	1,608,622	3,415,725
Normal Cost	$ **560,521**	$ **414,537**
Future Normal Cost	$ **6,490,031**	$ **6,683,502**

Present Value of Future Benefits (PVFB) is the amount needed as of October 1, 2013 to fully fund the County's retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

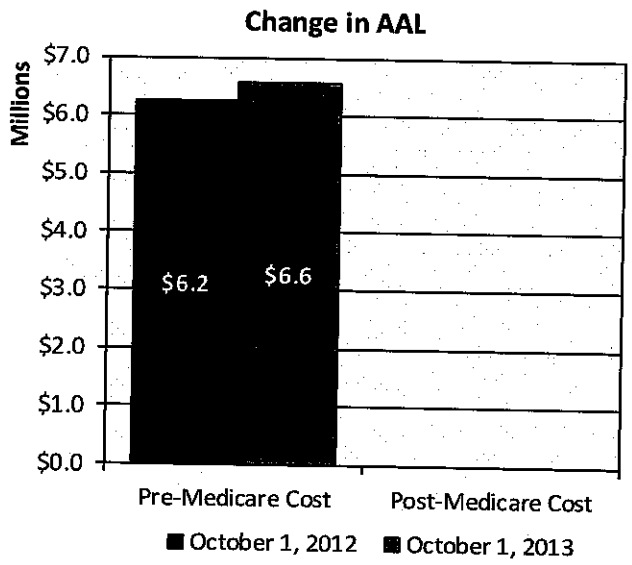
Actuarial Accrued Liability is the portion of PVFB considered to be accrued or earned as of October 1, 2013 This amount is a required disclosure in the Required Supplementary Information section.

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 by the actuarial cost method.

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. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor's GASB subsidies.

Actuarial Accrued Liability (AAL)	*As of October 1, 2012*	*As of October 1, 2013*
Active Pre-Medicare	$ 4,640,376	$ 3,143,391
Active Post-Medicare	0	0
Total Active AAL	$ 4,640,376	$ 3,143,391
Retirees Pre-Medicare	$ 1,608,622	$ 3,415,725
Retirees Post-Medicare	0	0
Total Retirees AAL	$ 1,608,622	$ 3,415,725
Total AAL	**$ 6,248,998**	**$ 6,559,116**

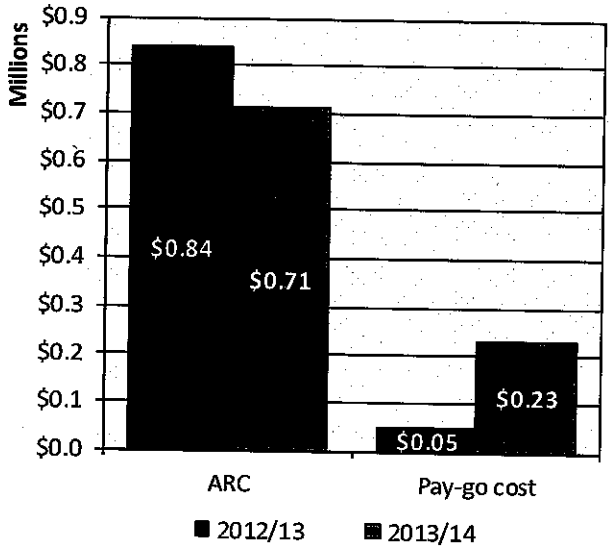


Development of Annual Required Contribution (ARC)

Required Supplementary Information		FY 2012/13		FY 2013/14
Actuarial Accrued Liability as of beginning of year	$	6,248,998	$	6,559,116
Actuarial Value of Assets as of beginning of year		0		0
Unfunded Actuarial Accrued Liability (UAAL)	**$**	**6,248,998**	**$**	**6,559,116**
Covered payroll	$	35,485,193	$	36,161,988
UAAL as a % of covered payroll		17.6%		18.1%

Annual Required Contribution		FY 2012/13		FY 2013/14
Normal cost as of beginning of year	$	560,521	$	414,537
Amortization of the UAAL		247,085		270,284
Total normal cost and amortization payment	$	807,606	$	684,821
Interest to end of year		31,497		26,708
Total Annual Required Contribution (ARC)	**$**	**839,103**	**$**	**711,529**

Cash vs Accrual Accounting



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

The 2012/13 and 2013/14 annual employer pay-go cost is based on the actual Lake County Board of County Commissioners (BCC) employer contribution for retiree health benefits provided by the County.

Net OPEB Obligation		*FY 2012/13*		*FY 2013/14*
ARC as of end of year	$	839,103	$	711,529
Interest on Net OPEB Obligation (NOO) to end of year		113,678		144,222
NOO amortization adjustment to the ARC		(119,881)		(158,328)
Annual OPEB cost	$	832,900	$	697,423
Annual employer contribution for pay-go cost[1]		(49,713)		(229,530)
Annual employer contribution for pre-funding		0		0
Change in NOO	$	783,187	$	467,893
NOO as of beginning of year		2,914,819		3,698,006
NOO as of end of year	**$**	**3,698,006**	**$**	**4,165,899**

Actual Pay-go Costs Breakdown for BCC		*FY 2012/13*		*FY 2013/14*
Actual Claims Paid	$	214,915	$	317,087
Adjustment to Incurred (Retired Claims IBNR)		3,886		7,547
Stop Loss Premiums		6,585		7,610
Administration Expenses		17,637		14,968
Stop Loss Reimbursements		0		0
Premiums Paid by Retirees		(193,310)		(200,032)
Total Actual Pay-Go Costs	$	49,713	$	147,180

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.

[1] The annual employer contribution for pay-go costs for FY 2013/14 is estimated based on actual BCC pay-go costs ($147,180) and actuarially determined contributions for non-BCC reporting groups.

Summary of GASB 45 Financial Results

Presented below is the summary of GASB 45 results for the fiscal year ending September 30, 2014 and prior fiscal years.

Schedule of Funding Progress

As of	Actuarial Accrued Liability (AAL) A	Actuarial Value of Assets (AVA) B	Unfunded Actuarial Accrued Liability (UAAL) C = A - B	Funded Ratio D = B / A	Covered Payroll E	UAAL as % of Covered Payroll F = C / E
October 1, 2013	$ 6,559,116	$ -	$ 6,559,116	0.0%	$ 36,161,988	18.1%
October 1, 2012	$ 6,248,998	$ -	$ 6,248,998	0.0%	$ 35,485,193	17.6%
October 1, 2011	$ 5,862,575	$ -	$ 5,862,575	0.0%	$ 34,120,378	17.2%

Schedule of Employer Contributions

FYE	Employer Contributions A	Annual Required Contribution (ARC) B	% of ARC Contributed C = A / B
September 30, 2014	$ 229,530	$ 711,529	32.3%
September 30, 2013	$ 49,713	$ 839,103	5.9%
September 30, 2012	$ 6,349	$ 791,992	0.8%

Historical Annual OPEB Cost

As of	Annual OPEB Cost	% of Annual OPEB Cost Contributed	Net OPEB Obligation
September 30, 2014	$ 697,423	32.9%	$ 4,165,899
September 30, 2013	$ 833,034	6.0%	$ 3,698,140
September 30, 2012	$ 790,963	0.8%	$ 2,914,819

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.

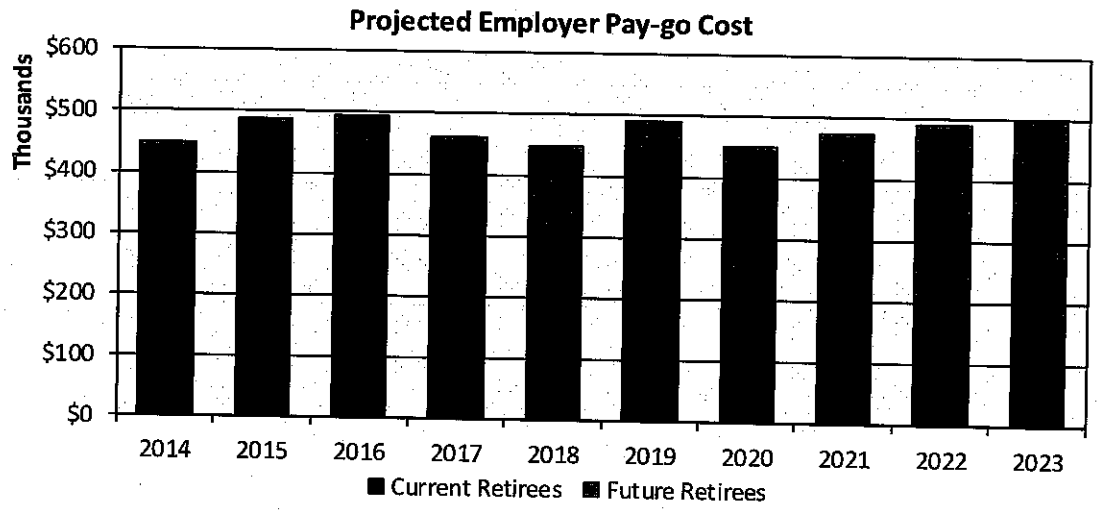
		FY 2012/13		*FY 2013/14*[2]
Actuarial Accrued Liability as of beginning of year	$	6,248,998	$	6,559,116
Normal cost as of beginning of year		560,521		414,537
Expected benefit payments during the year		(403,770)		(492,308)
Interest adjustment to end of year		257,773		262,464
Expected Actuarial Accrued Liability as of end of year	$	6,663,522	$	6,743,809
Actuarial (gain) / loss		(104,406)		0
Actual Actuarial Accrued Liability as of end of year	$	6,559,116	$	6,743,809

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.

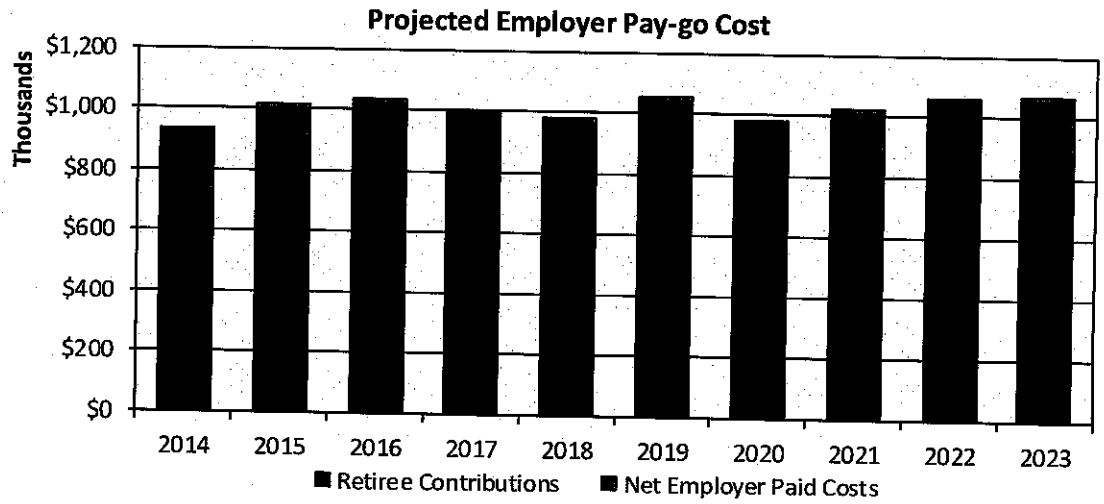
[2] Actuarial Accrued Liability (AAL) as of beginning of year was actuarially rolled-back from end of year AAL on a "no gain/loss" basis.

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. These projections include explicit and implicit subsidies. The projections do not include the Tax Collector or Property Appraiser groups.

FYE	Current Retirees	Future Retirees[3]	Total
2014	$ 436,966	$ 10,914	$ 447,880
2015	$ 476,293	$ 11,896	$ 488,189
2016	$ 452,641	$ 42,277	$ 494,918
2017	$ 377,282	$ 84,931	$ 462,213
2018	$ 318,612	$ 128,588	$ 447,200
2019	$ 327,888	$ 164,449	$ 492,337
2020	$ 253,739	$ 197,927	$ 451,666
2021	$ 220,620	$ 255,285	$ 475,905
2022	$ 199,907	$ 291,774	$ 491,681
2023	$ 164,222	$ 335,262	$ 499,484



FYE	Estimated Claims Costs	Retiree Contributions	Net Employer-Paid Costs
2014	$ 932,070	$ 484,190	$ 447,880
2015	$ 1,015,956	$ 527,767	$ 488,189
2016	$ 1,034,899	$ 539,981	$ 494,918
2017	$ 992,679	$ 530,466	$ 462,213
2018	$ 977,017	$ 529,817	$ 447,200
2019	$ 1,056,950	$ 564,613	$ 492,337
2020	$ 978,222	$ 526,556	$ 451,666
2021	$ 1,019,231	$ 543,326	$ 475,905
2022	$ 1,060,169	$ 568,488	$ 491,681
2023	$ 1,068,452	$ 568,968	$ 499,484



[3] Projections for future retirees do not take into account future new hires.

Eligibility

Employees are eligible for health coverage after meeting the following eligibility requirements for early or normal retirement benefits.

For employees hired prior to July 1, 2011:

1. All employees are eligible for early retirement benefit upon attainment of age 42 with 6 years of service.
2. Normal retirement eligibility requirements:
    a. Regular, Elected Officials, and Senior Management (FRS DB Plan) – earlier of:
        i. Age 62 with 6 years of service
        ii. 30 years of service (no age requirement)
    b. Special Risk (FRS DB Plan) – earlier of:
        i. Age 55 with 6 years of special risk service
        ii. Age 52 with 25 years of combined special risk and military service (up to 4 years of military service)
        iii. 25 years of special risk service (no age requirement)
        iv. 30 years of any service (no age requirement)
    c. Special Risk Administrative Support (FRS DB Plan) – same as special risk if the member has 6 years of special risk service, otherwise regular class requirements apply.
    d. FRS Investment Plan participants – age 59 ½ and 5 years of service, or after meeting the Normal Retirement requirements for the DB plan.

For employees hired on/after July 1, 2011:

1. All employees are eligible for early retirement benefit upon attainment of age 45 with 8 years of service.
2. Normal retirement eligibility requirements:
    a. Regular, Elected Officials, and Senior Management (FRS DB Plan) – earlier of:
        i. Age 65 with 8 years of service
        ii. 33 years of service (no age requirement)
    b. Special Risk (FRS DB Plan) – earlier of:
        i. Age 60 with 8 years of special risk service
        ii. Age 57 with 30 years of combined special risk and military service (up to 4 years of military service)
        iii. 30 years of special risk service (no age requirement)
        iv. 33 years of any service (no age requirement)
    c. Special Risk Administrative Support (FRS DB Plan) – same as special risk if the member has 8 years of special risk service, otherwise regular class requirements apply.
    d. FRS Investment Plan participants – age 59 ½ and 1 year of service, or after meeting the Normal Retirement requirements for the DB plan.

Spouse Benefit

Upon death of retiree, coverage continues to surviving spouses for life and they are subject to a single retiree premium. Upon death of active employees (regardless of retirement eligibility), surviving spouses are covered under COBRA for 36 months.

Explicit Subsidy

None

Retiree Cost Sharing

Retirees pay the full cost of coverage. If a retiree is eligible for FRS Health Insurance Subsidy (HIS) payment from the State, they can use this payment to cover their premiums. If a retiree has a Post-Employment Health Plan (PEHP) account, which was funded by the County, the retiree can specifically use the funds for health insurance premiums.

Medical Benefit

Same benefit options are available to retirees as active employees. Pre-Medicare health plans are self-funded.

Upon Medicare eligibility, retirees are not required to enroll in Medicare Parts A and B. The plan will only cover claims secondary to Medicare if retirees are actually enrolled in Medicare Parts A and B. The County offers a Medicare Advantage Plan with mandatory Part D prescription drug coverage for Medicare retirees. Retirees electing to enroll in this plan must enroll in Medicare Parts A and B.

Monthly premiums effective on October 1, 2014 by plan are as shown below.

Plan	Single	Family
Blue Care HMO	$ 581.98	$ 1,367.51
Blue Choice PPO	$ 598.44	$ 1,406.19
Blue Medicare PPO Option 1*	$ 377.66	N/A
Blue Medicare PPO Option 2*	$ 310.21	N/A

* This plan is a Medicare Advantage Plan that requires enrollment in Medicare Parts A and B and includes mandatory Part D prescription drug coverage.

Sick Leave Conversion

This report does not reflect any liabilities for sick leave conversion. Paragraph 9 of GASB 45 details when sick leave conversions may become a GASB 45 liability.

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 plan provisions and actuarial methods and assumptions since the last GASB valuation, which was for the fiscal year ending September 30, 2012. For the current year GASB valuation, we have updated the per capita costs, mortality table, 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 September 30, 2016.

Measurement Date	October 1, 2014 with results actuarially rolled back to October 1, 2013 on a "no gain/no loss" basis
Discount Rate	3.9%
Payroll Growth	4.0% + merit scale
Inflation Rate	3.0% per year
Cost Method	Entry Age Normal Level % of Salary
Amortization	Level % of pay over 24 years based on a closed group; prior year used 25 years
Census Data	Census information was provided by the County as of December 2014. We have reviewed it for reasonableness and no material modifications were made.
Health Care Coverage Election Rate	Active employees with current coverage: 40% Active employees with no coverage: 0% Inactive employees with current coverage: 100% Inactive employees with no coverage: 0%
Spousal Coverage	33% of employees are assumed to be married at retirement. Husbands are assumed to be three years older than wives. Actual spousal coverage and age is used for retirees.
Employer Funding Policy	Pay-as-you-go cash basis

Mortality

Healthy Retirees: SOA RP-2014 Total Dataset Mortality Table fully generational using Scale MP-2014 (prior valuation used RP-2000 Combined Mortality Table fully generational using Scale AA)

Disabled Retirees: SOA RP-2014 Disabled Retiree Mortality Table fully generational using Scale MP-2014 (prior valuation used RP-2000 Disabled Retirees Mortality Table fully generational using Scale AA)

Disability

Sample annual disability rates based on FRS actuarial valuation as of June 30, 2011 are shown below:

	Regular non LOD		Elected Official / Senior Management non LOD		Special Risk LOD	
Age	Male	Female	Male	Female	Male	Female
20	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%
30	0.05%	0.03%	0.02%	0.02%	0.02%	0.02%
40	0.09%	0.07%	0.03%	0.05%	0.05%	0.07%
50	0.20%	0.18%	0.12%	0.15%	0.14%	0.15%
60	0.44%	0.42%	0.31%	0.16%	0.30%	0.15%

Medical Trend Rates

FYE	Rates	FYE	Rates
2015	9.00%	2020	6.50%
2016	8.50%	2021	6.00%
2017	8.00%	2022	5.50%
2018	7.50%	2023+	5.00%
2019	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 medical trend rates.

Payroll Growth

4.0% plus merit increases that vary by employee group. Sample merit increases based on FRS actuarial valuation as of June 30, 2011 are as shown below:

	Regular (Male)			Regular (Female)			Elected Officials	
Age	0 YOS	5 YOS	10 YOS	0 YOS	5 YOS	10 YOS	<10 YOS	10+ YOS
25	4.3%	2.5%	3.0%	4.2%	2.5%	3.0%	0.4%	0.4%
35	4.3%	2.5%	3.0%	4.2%	2.5%	3.0%	0.4%	0.4%
45	4.3%	2.5%	2.0%	4.2%	2.5%	2.0%	0.4%	0.2%
55	4.3%	2.5%	1.0%	4.2%	2.5%	0.0%	0.4%	0.0%

	Senior Management (Male)			Senior Management (Female)		
Age	0 YOS	5 YOS	10 YOS	0 YOS	5 YOS	10 YOS
25	4.4%	2.2%	2.2%	4.0%	2.6%	2.2%
35	4.4%	2.2%	2.2%	4.0%	2.6%	2.2%
45	4.4%	2.2%	1.3%	4.0%	2.6%	1.2%
55	4.4%	2.2%	0.9%	4.0%	2.6%	0.5%

	Special Risk (Male)			Special Risk (Female)		
Age	0 YOS	5 YOS	10 YOS	0 YOS	5 YOS	10 YOS
25	5.0%	2.9%	2.5%	4.6%	2.5%	2.5%
35	5.0%	2.9%	2.5%	4.6%	2.5%	2.5%
45	5.0%	2.9%	2.0%	4.6%	2.5%	1.5%
55	5.0%	2.9%	0.5%	4.6%	2.5%	0.8%

Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The rates represent the probability of termination in the next 12 months. Sample annual turnover rates based on FRS actuarial valuation as of June 30, 2011 are as shown below:

	Regular Class				Elected Officials			
	Male		Female		Male		Female	
Age	0 YOS	10+ YOS	0 YOS	10+ YOS	0 YOS	10+ YOS	0 YOS	10+ YOS
20	32.9%	9.8%	30.3%	11.6 %	8.2%	5.7%	0.0%	4.2 %
30	25.9%	4.7%	25.4%	5.4 %	8.2%	5.7%	0.0%	4.2 %
40	24.4%	3.0%	24.4%	3.3 %	8.2%	5.7%	0.0%	4.2 %
50	23.4%	3.0%	23.2%	3.0 %	8.2%	5.6%	0.0%	4.1 %
60	27.4%	5.3%	23.2%	3.0 %	8.2%	5.2%	0.0%	3.8 %

	Senior Management				Special Risk			
	Male		Female		Male		Female	
Age	0 YOS	10+ YOS	0 YOS	10+ YOS	0 YOS	10+ YOS	0 YOS	10+ YOS
20	21.1%	4.8%	21.1%	4.8%	21.4%	2.3%	21.3%	1.9 %
30	21.1%	4.1%	21.1%	3.9%	20.6%	2.1%	21.3%	1.7 %
40	21.1%	3.2%	21.1%	2.7%	20.6%	1.9%	21.3%	2.5 %
50	21.1%	3.0%	21.1%	2.1%	20.6%	1.8%	21.3%	1.6 %
60	21.1%	3.5%	21.1%	1.9%	20.6%	1.8%	21.3%	4.0 %

Retirement Rate

Sample annual retirement rates for general employees and elected officials based on FRS actuarial valuation report as of June 30, 2011 are as shown below:

FRS Regular Tier I (Hired prior to July 1, 2011)

	Male				Female			
Age	1 YOS	20 YOS	30 YOS	31+ YOS	1 YOS	20 YOS	30 YOS	31+ YOS
50	0.0%	3.0%	39.5%	9.5%	0.0%	3.0%	35.9%	6.2%
55	0.0%	4.5%	49.9%	9.1%	0.0%	3.0%	44.8%	7.6%
60	0.0%	5.3%	63.0%	10.4%	0.0%	3.0%	57.7%	14.6%
65	0.0%	11.0%	11.0%	11.0%	0.0%	19.0%	19.0%	19.0%
70	0.0%	12.3%	12.3%	12.3%	0.0%	15.1%	15.1%	15.1%

FRS Regular Tier II, Elected Officials, Senior Management (Hired on/after July 1, 2011)

	Male				Female			
Age	1 YOS	20 YOS	33 YOS	34+ YOS	1 YOS	20 YOS	33 YOS	34+ YOS
50	0.0%	3.0%	39.5%	9.5%	0.0%	3.0%	35.9%	6.2%
55	0.0%	4.5%	49.9%	9.1%	0.0%	3.0%	44.8%	7.6%
60	0.0%	5.3%	63.0%	10.4%	0.0%	3.0%	57.7%	14.6%
65	0.0%	47.0%	47.0%	11.0%	0.0%	58.4%	58.4%	19.0%
70	0.0%	12.3%	12.3%	12.3%	0.0%	15.1%	15.1%	15.1%

Elected Officials (Hired prior to July 1, 2011)

	Male				Female			
Age	1 YOS	20 YOS	30 YOS	31+ YOS	1 YOS	20 YOS	30 YOS	31+ YOS
50	0.0%	0.0%	12.0%	0.9%	0.0%	0.0%	16.0%	1.5%
55	0.0%	0.0%	17.9%	1.9%	0.0%	0.0%	21.3%	5.0%
60	0.0%	0.0%	24.1%	6.2%	0.0%	0.0%	17.3%	9.0%
65	0.0%	12.0%	12.0%	12.0%	0.0%	13.4%	13.4%	13.4%
70	0.0%	15.2%	15.2%	15.2%	0.0%	13.4%	13.4%	13.4%

Retirement Rate (Continued)

Sample annual retirement rates for senior management and special risk employees based on FRS actuarial valuation report as of June 30, 2011 are as shown below.

Senior Management (Hired prior to July 1, 2011)

	Male				Female			
Age	1 YOS	20 YOS	30 YOS	31+ YOS	1 YOS	20 YOS	30 YOS	31+ YOS
50	0.0%	0.0%	29.5%	13.5%	0.0%	0.0%	25.5%	7.2%
55	0.0%	0.0%	35.5%	12.5%	0.0%	0.0%	30.9%	8.1%
60	0.0%	0.0%	45.4%	18.2%	0.0%	0.0%	48.8%	15.6%
65	0.0%	25.0%	25.0%	25.0%	0.0%	24.8%	24.8%	24.8%
70	0.0%	18.1%	18.1%	18.1%	0.0%	17.1%	17.1%	17.1%

Special Risk Tier I (Hired prior to July 1, 2011)

	Male				Female			
Age	1 YOS	20 YOS	25 YOS	26+ YOS	1 YOS	20 YOS	25 YOS	26+ YOS
50	0.0%	1.8%	20.9%	4.5%	0.0%	1.7%	23.8%	4.4%
55	0.0%	25.6%	25.6%	4.7%	0.0%	21.4%	21.4%	4.8%
60	0.0%	4.9%	4.9%	4.9%	0.0%	7.9%	7.9%	7.9%
65	0.0%	14.5%	14.5%	14.5%	0.0%	10.6%	10.6%	10.6%
70	0.0%	13.6%	13.6%	13.6%	0.0%	9.2%	9.2%	9.2%

Special Risk Tier II (Hired on/after July 1, 2011)

	Male				Female			
Age	1 YOS	20 YOS	30 YOS	31+ YOS	1 YOS	20 YOS	30 YOS	31+ YOS
50	0.0%	1.8%	34.8%	44.7%	0.0%	1.6%	23.8%	4.4%
55	0.0%	1.8%	42.3%	4.7%	0.0%	4.0%	33.9%	4.8%
60	0.0%	28.2%	28.2%	4.9%	0.0%	28.2%	28.2%	28.2%
65	0.0%	10.6%	10.6%	10.6%	0.0%	10.6%	10.6%	10.6%
70	0.0%	9.2%	9.2%	9.2%	0.0%	9.2%	9.2%	9.2%

Per Capita Costs

Annual per capita costs were calculated based on 2014/15 blended premium rates increased using health index factors and current enrollment. The costs are assumed to increase with health care trend rates. Sample annual per capita costs are as shown below:

Age	Male	Female
45	$ 6,845	$ 8,961
50	$ 9,261	$ 10,494
55	$ 12,104	$ 12,442
60	$ 15,206	$ 14,616
64	$ 17,699	$ 16,406
65+	$ 0	$ 0

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.

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 retiree in the Blue Care HMO plan.

	Premium Rate	Retiree Contribution	Explicit Subsidy
	A	B	C = A – B
Retiree	$ 581.98	$ 581.98	$ 0.00
Spouse	$ 785.53	$ 785.53	$ 0.00

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-year old male retiree in the Blue Care HMO plan.

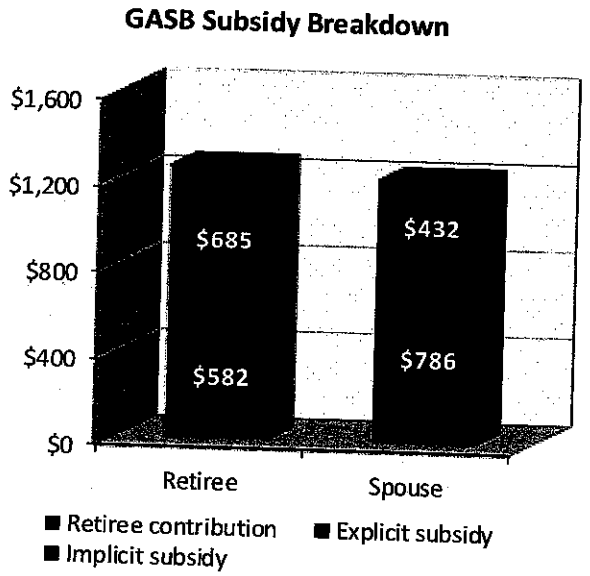
	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A – B
Retiree	$ 1,267.17	$ 581.98	$ 685.19
Spouse	$ 1,218.00	$ 785.53	$ 432.47

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

GASB Subsidy Breakdown

Below is a breakdown of the GASB 45 monthly total cost for a male retiree age 60 with spouse of the same age.

	Retiree	Spouse
Retiree contribution	$ 581.98	$ 785.53
Explicit subsidy	$ 0.00	$ 0.00
Implicit subsidy	$ 685.19	$ 432.47
Total monthly cost	$ 1,267.17	$ 1,218.00



Actives with coverage	*Single*	*Family*	*Total*	*Avg. Age*	*Avg. Svc*	*Salary*
HMO	210	366	576	44.1	8.7	$ 23,451,026
PPO	96	119	215	46.9	9.1	$ 9,340,578
Total actives with coverage	**306**	**485**	**791**	**44.9**	**8.8**	**$ 32,791,604**

Actives without coverage	*Total*	*Avg. Age*	*Avg. Svc*	*Salary*
Actives without coverage	89	45.5	5.2	$ 3,370,384
Total actives without coverage	**89**	**45.4**	**5.3**	**$ 3,370,384**

Actives with coverage number above includes Lake County's BCC, Supervisor of Elections, and Clerk Office, but excludes Property Appraiser and Tax Collector. There are 33 Property Appraisers and 72 Tax Collectors that were included in this GASB valuation.

Active employees who currently have no coverage are assumed not to elect coverage at retirement. They have been excluded from the GASB valuation.

Retirees with coverage	*Single*	*Non-Single*	*Total*	*Avg. Age*
HMO	20	16	36	61.1
PPO	16	9	25	61.8
Total retirees with coverage	**36**	**25**	**61**	**61.4**

Inactives with coverage also include 46 DROP participants. Additionally, there are 2 Property Appraisers and 4 Tax Collectors that were included in this GASB valuation.

Active Age-Service Distribution

Includes active employees eligible for retiree health benefits only. Excludes Tax Collectors and Property Appraisers.

	Years of Service										
Age	*< 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*	*Total*
Under 25	15	19									34
25 to 29	18	37	19								74
30 to 34	6	33	48	23							110
35 to 39	5	22	49	22	9						107
40 to 44	5	22	35	23	25	1	1				112
45 to 49	7	13	40	23	15	6	8				112
50 to 54	5	23	33	30	19	13	5	1	1		130
55 to 59	7	15	31	22	12	11	7	3			108
60 to 64	3	8	22	17	9	6	3	1			69
65 to 69	3		6	5	1	1	1				17
70 & up				3			1	1	1	1	7
Total	**74**	**192**	**283**	**168**	**90**	**38**	**26**	**6**	**2**	**1**	**880**

APPENDIX

Appendix A – GASB Results by Group for FYE September 30, 2014

Required Supplementary Information	BCC	Clerk	Supervisor of Elections	Tax Collector[4]	Property Appraiser
Actuarial Accrued Liability as of beginning of year	$ 4,635,782	$ 1,215,915	$ 33,166	$ 456,518	$ 217,733
Actuarial Value of Assets as of beginning of year	0	0	0	0	0
Unfunded Actuarial Accrued Liability (UAAL)	**$ 4,635,782**	**$ 1,215,915**	**$ 33,166**	**$ 456,518**	**$ 217,733**

Annual Required Contribution	BCC	Clerk	Supervisor of Elections	Tax Collector	Property Appraiser
Normal cost as of beginning of year	$ 298,090	$ 63,473	$ 4,395	$ 33,311	$ 15,268
Amortization of the UAAL	191,028	50,105	1,367	18,812	8,972
Total normal cost and amortization payment	$ 489,118	$ 113,578	$ 5,762	$ 52,123	$ 24,240
Interest to end of year	19,075	4,430	225	2,033	945
Total Annual Required Contribution (ARC)	**$ 508,193**	**$ 118,008**	**$ 5,987**	**$ 54,156**	**$ 25,185**

Net OPEB Obligation	BCC	Clerk	Supervisor of Elections	Tax Collector	Property Appraiser
ARC as of end of year	$ 508,193	$ 118,008	$ 5,987	$ 54,156	$ 25,185
Interest on Net OPEB Obligation (NOO) to end of year	102,174	24,437	2,584	9,777	5,250
NOO amortization adjustment to the ARC	(112,169)	(26,827)	(2,836)	(10,733)	(5,763)
Annual OPEB cost	$ 498,198	$ 115,618	$ 5,735	$ 53,200	$ 24,672
Annual employer contribution for pay-go cost[5]	(147,180)	(61,490)	(146)	(13,822)	(6,892)
Annual employer contribution for pre-funding	0	0	0	0	0
Change in NOO	$ 351,018	$ 54,128	$ 5,589	$ 39,378	$ 17,780
NOO as of beginning of year	2,619,858	626,592	66,252	250,691	134,613
NOO as of end of year	**$ 2,970,876**	**$ 680,720**	**$ 71,841**	**$ 290,069**	**$ 152,393**

[4] Census data for Tax Collector and Property Appraiser was not available at the time of this GASB valuation. Liabilities for these two groups were estimated based on enrollment provided by Lake County and liabilities for the BCC, Clerk, and Supervisor of Election groups.

[5] Annual employer contribution for BCC is an actual amount provided by the County. The employer contributions for non-BCC groups are estimates based on BCC actual employer contributions.

Appendix B – Comparison of Participant Demographic Information

The active 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.

	As of October 1, 2011	*As of October 1, 2014*
Active Participants[6]	872	880
Retired Participants	55	61
Averages for Active		
Age	44.8	44.9
Service	8.9	8.4
Averages for Inactive		
Age	67.4	61.4

[6] Figures shown above include active employees who currently have no coverage. It excludes Tax Collectors and Property Appraisers.

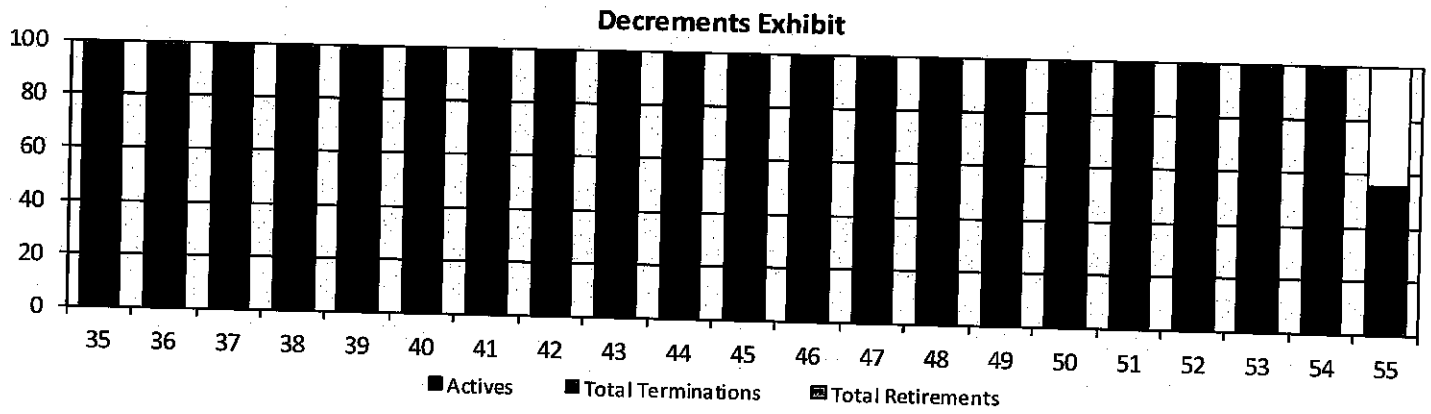
Glossary

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

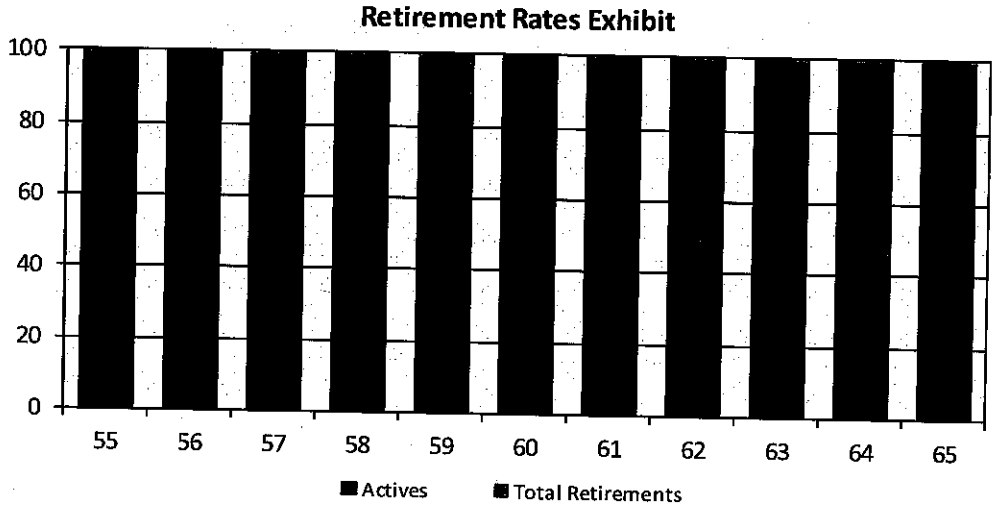


* The above rates are illustrative rates and are not used in our GASB calculations.

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 x 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% x (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.