COUNTY EMPLOYEES' AND OFFICERS' ANNUITY AND BENEFIT FUND OF COOK COUNTY

Actuarial Valuation Report as of December 31, 2015

June 2016

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Principal and
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June, 2016

Board of Trustees
County Employees' and Officers' Annuity and Benefit Fund of Cook County
Chicago, Illinois

Certification of Actuarial Valuation

Ladies and Gentlemen:

This report summarizes the actuarial valuation results of the County Employees' and Officers' Annuity and Benefit Fund of Cook County ("CEABF" or "the Fund") as of December 31, 2015 performed by Buck Consultants, LLC. For purposes of GASB Statement No. 67 and GASB Statement No. 43, we have performed separate actuarial valuations of the pension benefits and retiree health insurance benefits provided by the CEABF and have prepared actuarial reports based on these valuations. As has been done in past years, we have also performed this combined actuarial valuation of the pension and retiree health insurance benefits provided by the Fund to measure the overall funded status and contribution requirements of the Fund. We believe that such a combined valuation is required under Section 9-199 of the Illinois Pension Code which provides that the Fund shall submit a report each year "containing a detailed statement of the affairs of the Fund, its income and expenditures, and assets and liabilities….". This report is intended to present the results of the combined valuation. For more details on the Plans, readers are encouraged to review the separate GASB 67 and 43 reports. In particular, the separate GASB 43 report values retiree health liabilities at an unfunded 4.50% discount rate and excludes the value of the Retiree Drug Subsidy, while this combined report values retiree health liabilities at the funded discount rate of 7.50% and fully reflects the Retiree Drug Subsidy as an offset to results.

The actuarial valuation is based on audited financial and member data provided by the CEABF staff and summarized in this report. The benefits considered are those delineated in the Plan, the CEABF was established on January 1, 1926 and is governed by legislation contained in the Illinois Compiled statutes, particularly Chapter 40, as amended and restated effective December 31, 2015. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Certain historical information with respect to costs, liabilities, assets, accounting disclosure information, etc. has been derived from the prior actuary's reports and information provided by the Plan sponsor. That information is presented for comparison purposes and Buck Consultants has not verified the validity of any of those calculations or data. Buck Consultants, LLC is solely responsible for the actuarial data and actuarial results presented in this report, excluding the historical information and data just described. This report fully and fairly discloses the actuarial position of the Plan.

The CEABF is funded by Employer and Member Contributions. During 2015 an Intergovernmental Agreement (IGA) was entered into between the Employer and CEABF which established an additional employer contribution for 2016 in excess of the statutory contribution, but less than the Actuarially Required Contribution because the IGA covers funding of Pension Benefits. Funding of Retiree Health Insurance is on a pay as you go basis, with contributions being sufficient to pay for projected benefits coming due in the year.

In addition, the IGA stipulates that as CEABF's actuary, Buck Consultants will calculate the required contribution based on an alternative funding policy that would be sufficient to pay the Normal Costs of active Plan members, Plan expenses, and amortizes the Unfunded Actuarial Accrued Liability over a period of 30 years, with an annual 2% escalation factor applied to the amortization payments. This alternative funding policy is shown in the Comparative Summary of Key Actuarial Results on page 8 and is the basis of the projections on page 26. The alternative funding policy would provide for a higher Employer contribution than the current statutory contribution mechanism which is not sufficient in its current construct to fund the plan in an actuarially sound manner. Under the statutory funding provision, the Employer levies a tax annually equal to the total amount of contributions made by the members in the calendar year 2 years prior to the year of the levy, multiplied by 1.54. This statutory methodology currently represents less than 30% of the actuarial required contribution and results in projected insolvency of CEABF by 2041.

The actuary for the CEABF performs an analysis of Plan experience periodically and recommends changes in basic assumptions if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. Many of the assumptions used in this valuation are based on an experience analysis of the CEABF, over the period 2009 through 2012. This experience study was performed by Buck in January, 2014. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 5 beginning on page 38.

The assumptions and methods used to determine the Annual Determined Contributions (ADC) of the CEABF as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans. Based on member data and asset information provided by the CEABF staff, we have prepared the Schedule of Funding Progress and Schedule of Employer Contributions that are included in the Financial Section of the Comprehensive Annual Financial Report.

No one may make any representations or warranties based on any statements or conclusions contained in this report without the written consent of Buck.

The undersigned are Enrolled Actuaries, Associates of the Society of Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. They are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

BUCK CONSULTANTS, LLC

Daniel A. Levin

Larry Langer, EA, ASA, MAAA, FCA
Principal, Retirement

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Principal, Health and Productivity

cc: Wendy Ludbrook

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Executive Summary

Overview

The County Employees' and Officers' Annuity and Benefit Fund of Cook County ("CEABF" or the Fund") provides pension and ancillary benefit payments to the active, retired and separated employees of Cook County. A Retirement Board comprised of retiree, employee, and appointed representatives is responsible for administering the Plan and providing oversight of the investment policy. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of December 31, 2015.

Purpose

An actuarial valuation is performed on the Plan annually as of the end of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

1. To determine the employer contribution necessary to fund the CEABF in an actuarially sound manner;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To disclose the accounting measures for the Plan required by GASB No. 67 as of the end of the last fiscal year;
4. To review the current funded status of the Plan;
5. To compare actual and expected experience under the Plan during the last fiscal year;
6. And to report trends in contributions, assets, liabilities, and funded status over the last several years.

Because of the risk of misinterpretation of actuarial results, you should ask us to review any statement you wish to make on the results contained in this report. Buck will accept no liability for any such statement made without our prior review. This actuarial valuation provides a "snapshot" of the funded position of the Plan based on the Plan provisions, membership, assets, and actuarial assumptions as of the valuation date. Actuarial projections are also performed to provide a long-term view of the expected future funding status and contribution patterns.

Membership

Actives: As of December 31, 2015, there were 21,596 employees in active service (including 171 on disability) covered under the provisions of the Plan. The significant age, service, salary and accumulated contribution information for these employees is summarized below, along with comparative figures from the last actuarial valuation one year earlier.

	December 31, 2015	December 31, 2014
Number of active employees	21,596	21,656
Average age	47.1	47.2
Average years of service	13.5	13.7
Total annual salary	$1,572,417,298	$1,514,550,023
Average annual salary	$72,811	$69,937
Total accumulated contributions	$1,755,975,205	$1,738,182,146
Average accumulated contributions	$81,310	$80,263

The number of active members decreased by 0.3% from the previous valuation date. The average age and service of the active members decreased slightly. The total annual valuation salary increased by 3.8%. The average salary increased by 4.1% from the previous valuation.

Distributions of active members by age, service, and salary are given in Section 4.2 on page 30. The December 31, 2015 salaries shown for active members are the actual salaries reported, but limited by the dollar amount defined under Internal Revenue Code Section 401(a)(17) for affected Tier 1 members and to the paycap legislated for affected Tier 2 members. Salaries shown for December 31, 2014 used unlimited pay for all participants.

A schedule of active member data and reconciliation of the active membership from the previous year is shown in Sections 4.3 and 4.4 beginning on page 31.

Disabilities: There were 171 disabled members (included in the active data). There were 189 disabilities in the prior year.

Retirees and Beneficiaries: In addition to the active members, there were 14,922 retired members and 2,675 beneficiaries who are receiving monthly benefit payments on the valuation date. The significant age and annual benefit information for these members are summarized below with comparative figures from the last actuarial valuation performed one year earlier.

	December 31, 2015	December 31, 2014
Number of members receiving payments		
➢ Retirees	14,922	14,437
➢ Beneficiaries	2,675	2,639
➢ Total	17,597	17,076
Average age	71.6	71.6
Annual benefit amounts		
➢ Retirees	$608,178,046	$564,016,560
➢ Beneficiaries	$46,814,690	$43,348,872
➢ Total	$654,992,736	$607,365,432
Average annual benefit payments	$37,222	$35,568

The number of retired members and beneficiaries increased by 3.4% from the previous valuation date. The average age of the retired members remained unchanged. The total annual benefit payments for these members increased by 7.8% from the previous valuation date.

Distributions of retired members by age and form of payment are given in Section 4.6 through 4.9 on pages 34 through 37.

Inactives: In addition to the active and retired members, there were 13,190 inactive members who did not elect to receive their accumulated contributions when they left covered employment. The age information for these inactive members is summarized below with comparative figures from the last actuarial valuation one year earlier.

	December 31, 2015	December 31, 2014
Number of inactive members	13,190	13,194
Average age	47.4	46.6

The number of inactive members remained close to the same from the previous valuation. The average age of the inactive members increased by 0.8 years.

In our opinion, the membership data collected and prepared for use in this actuarial valuation meets the data quality standards required under Actuarial Standards of Practice No. 23.

Plan Assets

The Plan's assets are held in trust and invested for the exclusive benefit of Plan members. The trust is funded by member and employer contributions, and pays benefits directly to eligible members in accordance with Plan provisions. The assets are audited annually and are reported at fair value. On a fair value basis, the Plan has Net Position Available for Benefits of $8.64 billion as of December 31, 2015. This includes a decrease of $425.4 million over the Net Position Available for Benefits of $9.07 billion as of December 31, 2014. During 2015, the fair value of assets experienced an investment rate of return of -0.1% (net of investment expenses), as reported by the investment consultant.

In order to reduce the volatility investment gains and losses can have on the Plan's actuarially required contribution and funded status, the Board has adopted a five-year smoothing method to determine the actuarial value of assets used for funding purposes. This method recognizes gains and losses, i.e. the difference between actual investment return during the year and the expected return based on the valuation interest rate, on a level basis over a five year period. In our opinion, this method complies with Actuarial Standards of Practice No. 44.

As of December 31, 2015, the assets available for benefits on an actuarial value basis were $9.0 billion. This includes an increase of $180.5 million over the actuarial value of assets of $8.8 billion as of December 31, 2014. During 2015, the actuarial value of assets experienced an actuarial rate of return of 6.6%.
A summary of the assets held for investment, a summary of changes in assets, and the development of the actuarial value of assets is shown in Section 2 beginning on page 16.

Actuarial Experience

Differences between the expected experience based on the actuarial assumptions and the actual experience create changes in the actuarial accrued liability, actuarial value of assets, and the unfunded actuarial accrued liability from one year to the next. These changes create an actuarial gain if the experience is favorable and an actuarial loss if the experience is unfavorable. The Plan experienced a total net actuarial loss of $314.9 million during the prior year. This net loss is about 2.1% of the Plan's prior year actuarial accrued liability. The net loss is a combination of two principal factors, demographic experience and investment performance under actuarial smoothing. Below is a more detailed discussion.

The demographic experience tracks actual changes in the Plan's population compared to the assumptions for decrements such as mortality, turnover, and retirement, as well as pay increases. The Plan experienced a demographic loss of $252.9 million during the year ending December 31, 2015. This loss increased the unfunded actuarial accrued liability by $252.9 million and decreased the funded ratio by 0.9%.

There were 19,621 active members who were also reported active in the December 31, 2014 actuarial valuation. The total salary for this group increased by 7.5%, which was higher than the 4.2% increase we expected for the group.

Continued tracking of the demographic experience is warranted in order to confirm the appropriateness of the actuarial assumptions. Details of the demographic, economic, and other assumptions used to value the Plan liabilities and normal cost can be found in Section 5. In our opinion, the economic assumptions comply with

Actuarial Standards of Practice No. 27 and the demographic assumptions comply with Actuarial Standards of Practice No. 35.

On the asset side, the Plan experienced a loss on an actuarial value of assets basis. The actual rate of return on the actuarial value of Plan assets for the year ending December 31, 2015 was approximately 6.6% compared to the assumption of 7.5%, resulting in an asset loss of $62.0 million. This loss increased the unfunded actuarial accrued liability by $62.0 million and decreased the funded ratio by 0.4%.

The rate of return on the fair value of assets for the year ending December 31, 2014 was lower than the assumed rate of 7.5%. The actuarial value of the assets recognizes only 20% of the 2015 gain on fair value, delaying the recognition of the remaining 80% over the next four years. Moreover, the actuarial value of assets also recognizes deferred portions of prior years' gains and losses on fair value. The investment loss recognized this year is primarily due to the investment loss in 2015. It should be noted that the Plan's assumed asset return of 7.5% is a long-term rate and short-term performance is not necessarily indicative of expected long-term future returns.

A summary of the actuarial gains and losses experienced during the prior year is shown in Section 1.5 on page 14.

Actuarial Contributions

The current contribution mechanism is not sufficient to fund the CEABF in an actuarially sound manner. The County levies a tax annually equal to the total amount of contributions made by the members in the calendar year 2 years prior to the year of the levy, multiplied by 1.54. This funding policy is insufficient to meet the needs of the CEABF. We project that the CEABF will become insolvent in 2041. **We recommend that a funding policy be legislated that is sufficient to pay the Normal Costs of active Plan members, Plan expenses, and amortize the unfunded actuarial accrued liability as a level dollar amount over a period no longer than 30 years.** We summarize those costs in the next paragraph.

The normal cost represents the cost of the benefits that accrue during the year for active members under the Entry Age Actuarial Cost Method. It is determined as a level percentage of pay which, if paid from entry age to the assumed retirement age, assuming all the actuarial assumptions are exactly met by experience would accumulate to a fund sufficient to pay all benefits provided by the Plan. The expected member contributions are subtracted from this amount to determine the employer normal cost. The employer normal cost for 2016 has been determined to be $125.7 million, or 7.99% of pay. This represents a decrease in the employer normal cost rate of 0.55% of pay from last year's employer normal cost rate of 8.54%.

The cost method also determines the actuarial accrued liability which represents the value of all accumulated past normal cost payments. This amount is compared to the actuarial value of assets to determine if the Plan is ahead or behind in funding as of the valuation date. The difference between the total actuarial accrued liability and the actuarial value of assets equals the amount of unfunded actuarial accrued liability or surplus (if negative) on the valuation date. This amount is amortized and added to the employer normal cost to determine the annual actuarially required employer contribution for the year.

The unfunded actuarial accrued liability as of December 31, 2015 is $7.24 billion. This represents an increase of $732.9 million in the unfunded actuarial accrued liability from last year's amount of $6.51 billion. The annual payment required to amortize the unfunded actuarial accrued liability of $7.24 billion as of December 31, 2015 is $570.3 million, or 36.27% of pay.

The annual actuarially required employer contribution for 2016 is $696.0 million, or 44.26% of pay. This represents an increase of $56.2 million in the employer contribution amount of $639.8 million for 2015, or a 1.28% of pay from last year's employer contribution rate of 42.98%.

The actuarial liabilities and development of the annual actuarial employer contribution is shown in Sections 1.1 and 1.2 beginning on page 10.

In our opinion, the measurement of the benefit obligations and determination of the actuarial cost of the Plan is performed in compliance with Actuarial Standards of Practice No. 4.

Funded Status

The funded status is a measure of the progress that has been made in funding the Plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. A ratio of over 100% represents a plan that is ahead in funding, and a ratio of less than 100% represents a plan that is behind in funding on the valuation date.

As of December 31, 2015 the funded ratio of the Plan is 55.4%. This represents a decrease of 2.1% from last year's funded ratio of 57.5% as of December 31, 2014.

Where presented, references to "funded ratio" and "unfunded accrued liability" are typically measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

A history of the unfunded actuarial accrued liability and the funded ratio is shown in Section 1.6 on page 15.

Accounting Information

The Governmental Accounting Standards Board (GASB) issues statements which establish financial reporting standards for defined benefit pension plans and accounting for the pension expenditures and expenses for governmental employers. The required financial reporting information for the Plan and the Employer under GASB No. 67 and GASB No. 43 can be found in separate reports.

Projections

As part of the annual actuarial valuation, a forecast of expected future valuation results is performed over a 30 year period beginning on the valuation date. This analysis provides a dynamic look into the future to identify trends in future employer contributions and funded status. The forecast replaces active members who are assumed to decrement (retire, separate, etc.) during the period with new employees resulting in a stable active membership. The forecast assumes all actuarial assumptions are exactly realized each year during the forecast period. The results of these forecasts can be found in Section 3.

Changes in Plan Provisions

There were no changes in benefits or other Plan provisions considered in the pension valuation since the last valuation performed as of December 31, 2014. The following changes in benefits and other plan provisions in the

Retiree Health Insurance actuarial valuation have been made since the last valuation performed as of December 31, 2014:

- The Pre-Medicare participant contribution rates for the Choice Plus PPO plan increased from 48% to 53% for annuitants and from 33% to 38% for survivors.
- The preferred-brand and non-preferred brand prescription drug copays increased from $55 to $65 and from $90 to $100, respectively, for both the Choice HMO and Choice Plus PPO plans.

Changes in Actuarial Assumptions, Methods, or Procedures

There have been no changes in asset valuation method or actuarial assumptions in the pension valuation since the last actuarial valuation performed as of December 31, 2014. The following changes in the actuarial assumptions or valuation procedures in the Retiree Health Insurance actuarial valuation have been made since the last valuation performed as of December 31, 2014:

- The methodology used to determine per capita plan costs was updated to reflect claims experience. Previously, the per capita costs were solely based on premiums.
- The age morbidity curve was updated to reflect the study "Health Care Costs—From Birth to Death", sponsored by the Society of Actuaries and prepared by Dale H. Yamamoto (May 2013).

Comparative Summary of Key Actuarial Valuation Results

Comparative Summary of Key Actuarial Valuation Results

	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Summary of Member Data		
Number of Members Included in the Valuation		
• Active Members	21,596	21,656
• Retirees and Beneficiaries	17,597	17,076
• Inactive Members	13,190	13,194
• Total	52,383	51,926
Annual Payroll		
• Average (actual)	$72,811	$69,937
Annual Benefit Payments		
• Retirees and Beneficiaries (Average) [1]	$37,222	$35,568
Investment Returns		
Fair Value		
• *Rate of Return (net of investment expenses)* [2]	-0.1%	5.9%
Actuarial Value		
• *Rate of Return*	6.6%	8.9%
Summary of Assets and Liabilities		
Total Actuarial Accrued Liability	$16,232,185,534	$15,318,790,688
Actuarial Value of Assets	$8,991,018,918	$8,810,509,070
Unfunded Actuarial Accrued Liability	$7,241,166,616	$6,508,281,618
Funded Ratio	55.39%	57.51%
Employer Actuarial Required Contribution		
Fiscal Year Ending		
Employer Normal Cost	$125,664,434	$127,176,855
Amortization of Unfunded Actuarial Accrued Liability (Surplus)	$570,342,815	$512,617,904
Employer Actuarial Required Contribution	$696,007,249	$639,794,759
Actual/Statutory Contribution	**$193,186,160**	**$190,598,752**
Amount by which employer contributions are expected to fall short of the actuarially determined contribution	$502,821,089	$449,196,007
Required tax multiple for employer contribution to meet actuarially determined contribution	5.55	5.17
Solvency Date	2041	2039
Alternative Funding Policy Contribution[3,4]	**$572,550,203**	**$460,600,000**

[1] The average annual benefit payments for retirees only is $40,757 as of December 31, 2015 and $39,067 as of December 31, 2014.

[2] Rate of return determined by the investment consultant.

[3] The Fiscal Year Ending December 31, 2016 contribution includes an additional $270.5 M as discussed under Section 5.1 of the Intergovernmental Agreement entered into during 2015.

[4] The Fiscal Year Ending December 31, 2017 contribution is the amount the actuary is required to develop as outlined in Section 7 the Intergovernmental Agreement entered into during 2015.

Section 1: Actuarial Funding Results

Section 1.1 - Actuarial Liabilities and Normal Cost

Actuarial Liabilities	Totals
1. Present Value of Projected Benefits	
Active Members	
• Retirement Benefits	7,523,557,710
• Withdrawal Benefits	327,860,331
• Death Benefits	156,091,467
• Retiree Health Insurance	920,101,948
Total	8,927,611,456
2. Retired Members and Beneficiaries Receiving Pension Benefits	7,864,534,443
3. Retired Members' Retiree Health Insurance	595,387,113
4. Inactive Members with Deferred Pension Benefits	659,001,722
5. Inactive Members' Retiree Health Insurance	26,904,502
6. Total Present Value of Projected Benefits (1. + 2. + 3. + 4. + 5.)	18,073,439,236
7. Present Value of Future Normal Costs	1,841,253,702
8. Total Actuarial Accrued Liability (6. - 7.)	**16,232,185,534**

Normal Cost	Totals	% of Pay
1. Active Members		
a. Retirement Benefits	185,570,353	11.79%
b. Withdrawal Benefits	31,911,981	2.03%
c. Duty Disability Benefits	0	0.00%
d. Ordinary Disability Benefits	377,604	0.02%
e. Death Benefits	5,514,489	0.35%
f. Retiree Health Insurance	30,716,379	
g. Administrative Expenses	5,408,666	0.34%
2. Total Normal Cost	259,499,472	16.47%
3. Expected Member Contribution	**133,835,038**	**8.49%**
4. Employer Normal Cost (2. - 3.)	**125,664,434**	**7.98%**

Section 1.2 - Actuarial Contributions

Development of Employer Contribution	Fiscal Year Ending December 31, 2016	Fiscal Year Ending December 31, 2015
1. Valuation Payroll	**1,572,417,298**	**1,488,404,826**
2. Total Actuarial Accrued Liability		
a. Active Members		
i. Retirement Benefits	6,134,621,054	5,889,309,065
ii. Withdrawal Benefits	162,369,404	158,524,080
iii. Death Benefits	116,064,713	112,447,660
iv. Retiree Health Insurance	673,302,583	601,695,342
v. Total	7,086,357,754	6,761,976,147
b. Retired Members and Beneficiaries Receiving Benefits	7,864,534,443	7,295,515,219
c. Retired Members' Retiree Health Insurance	595,387,113	553,642,693
d. Inactive Members with Deferred Benefits	659,001,722	684,751,329
e. Inactive Members' Retiree Health Insurance	26,904,502	22,905,300
f. Total (2.a.v. + 2.b. + 2.c. + 2.d. + 2.e.)	16,232,185,534	15,318,790,688
3. Actuarial Value of Assets	8,991,018,918	8,810,509,070
4. Unfunded Actuarial Accrued Liability (UAAL) (2.f - 3.)	7,241,166,616	6,508,281,618
5. Funded Ratio (3. / 2.f)	55.39%	57.51%
6. UAAL as a Percent of Annual Payroll (4. / 1.)	460.51%	437.27%
7. Amortization Payment for UAAL		
a. Amount	570,342,815	512,617,904
b. As a % of pay	36.27%	34.44%
8. Employer Normal Cost		
a. Amount	125,664,434	127,176,855
b. As a % of pay	7.99%	8.54%
10. Employer Actuarial Required Contribution		
a. Amount	696,007,249	639,794,759
b. As a % of pay	44.26%	42.98%
11. Actual/Statutory Contribution	193,186,160	190,598,752
12. Required tax multiple for Employer ARC	5.55	5.17
13. Funding Period (years)	30	30

* The contribution rates above are amounts needed to fund the CEABF in an actuarially responsible manner.

Section 1.3 – Actuarial Balance Sheet

Financial Resources	December 31, 2015
1. Actuarial Value of Assets	8,991,018,918
2. Present Value of Future Contributions	
a. Expected Member Contributions	949,613,721
b. Employer Normal Cost	891,639,981
c. Total	1,841,253,702
3. Unfunded Actuarial Accrued Liability/(Reserve)	7,241,166,616
4. Total Assets [1. + 2.c. + 3.]	18,073,439,236

Benefit Obligations	December 31, 2015
1. Present Value of Future Benefits	
a. Active Members	8,927,611,456
b. Retirees and Beneficiaries	8,459,921,556
c. Inactive Members	685,906,224
d. Total	18,073,439,236

Section 1.4 – Solvency Test

	Aggregate Accrued Liability For:						
Year Ended	(1) Active and Inactive Members Accumulated Contributions	(2) Members Currently Receiving Benefits	(3) Active and Inactive Members Employer Portion	Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Assets (1)	(2)	(3)
December 31, 2007	$1,569,401,144	$4,466,816,242	$4,387,512,514	$8,059,879,804	100.00%	100.00%	46.12%
December 31, 2008	1,650,186,209	4,649,512,515	4,773,482,625	8,036,074,797	100.00%	100.00%	36.38%
December 31, 2009	1,749,058,834	5,479,822,836	5,346,634,079	7,945,567,096	100.00%	100.00%	13.40%
December 31, 2010	1,824,472,753	5,826,424,289	5,491,240,133	7,982,368,659	100.00%	100.00%	6.04%
December 31, 2011	1,662,273,117	6,355,248,044	5,706,491,238	7,897,102,116	100.00%	98.11%	0.00%
December 31, 2012	1,821,792,594	6,995,185,945	5,813,272,416	7,833,882,926	100.00%	85.95%	0.00%
December 31, 2013	1,854,155,647	7,373,618,621	5,584,313,409	8,381,444,287	100.00%	88.52%	0.00%
December 31, 2014	1,897,951,260	7,849,157,912	6,091,016,420	8,810,509,070	100.00%	88.07%	0.00%
December 31, 2015	1,914,569,837	8,459,921,556	5,857,694,141	8,991,018,918	100.00%	83.65%	0.00%

Section 1.5 – Reconciliation of Change in Unfunded Actuarial Liability

Development of Unfunded Actuarial Liability	Amount
1. Unfunded Actuarial Accrued Liability as of December 31, 2014	6,508,281,618
2. Employer Contribution Requirement of Normal Cost Plus Interest on Unfunded Liability for Period January 1, 2015 to December 31, 2015	624,836,240
3. Actual Employer Contribution for the Year, Plus Interest	193,711,873
4. Increase in Unfunded Liability Due to Employer Contribution Plus Interest Being Less Than Normal Cost Plus Interest on Unfunded Liability (2. -3.)	431,124,367
5. Increase/(Decrease) in Unfunded Liability Due to Investment Return Lower/(Higher) Than Assumed	61,964,372
6. Increase/(Decrease) in Unfunded Liability Due to Salary Increases Higher/(Lower) Than Assumed	164,977,011
7. Increase/(Decrease) in Unfunded Liability Due to Other Sources	74,819,248
8. Net Increase/(Decrease) in Unfunded Liability for the Year (4. + 5. + 6. + 7.)	732,884,998
9. Unfunded Actuarial Liability as of December 31, 2015 (1. + 8.)	7,241,166,616

Section 1.6 - History of UAAL and Funded Ratio

Valuation Date	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Funded Ratio (AVA as a % of AAL)	Unfunded Actuarial Accrued Liability (UAAL)
December 31, 2006	9,904,578,174	7,462,683,122	75.35%	2,441,895,052
December 31, 2007	10,423,729,900	8,059,879,804	77.32%	2,363,850,096
December 31, 2008	11,073,181,349	8,036,074,797	72.57%	3,037,106,552
December 31, 2009	12,575,515,749	7,945,567,096	63.18%	4,629,948,653
December 31, 2010	13,142,137,175	7,982,368,659	60.74%	5,159,768,516
December 31, 2011	13,724,012,399	7,897,102,116	57.54%	5,826,910,283
December 31, 2012	14,630,250,955	7,833,882,926	53.55%	6,796,368,029
December 31, 2013	14,812,087,677	8,381,444,287	56.59%	6,430,643,390
December 31, 2014	15,318,790,688	8,810,509,070	57.51%	6,508,281,618
December 31, 2015	16,232,185,534	8,991,018,918	55.39%	7,241,166,616

Section 2: Plan Assets

Section 2.1 - Summary of Fair Value of Assets

Asset Category	Fair Value as of December 31, 2015		Fair Value as of December 31, 2014	
	Amount	%	Amount	%
1. Short-Term Investments	$453,717,122	4.74%	$587,544,323	5.79%
2. Investments at Fair Value				
a. U.S. and International Equities	$3,925,905,225	41.00%	$4,110,040,451	40.54%
b. U.S. Government and Government Agency Obligations	1,031,502,731	10.77%	1,109,668,190	10.94%
c. Corporate Bonds	765,044,107	7.99%	857,209,577	8.45%
d. Collective International Equity Fund	51,962,976	0.54%	57,477,592	0.57%
e. Commingled Fixed Income Fund	25,666,065	0.27%	25,893,428	0.26%
f. Exchange Traded Funds	458,949,498	4.79%	607,454,824	5.99%
g. Private Equities	352,130,755	3.68%	285,899,168	2.82%
h. Hedge Funds	803,013,247	8.39%	800,093,500	7.89%
i. Real Estate	591,993,643	6.18%	388,902,521	3.84%
j. Total	$8,006,168,247	83.62%	$8,242,639,251	81.30%
3. Collateral Held for Securities Lending	$1,114,387,026	11.64%	$1,308,676,647	12.91%
4. Total Assets (1. + 2.j + 3.)	$9,574,272,395	100.00%	$10,138,860,221	100.00%
5. Receivables				
a. Interest and Dividends	$20,729,923		$22,205,338	
b. Investments Sold	101,749,176		162,275,218	
c. Other Receivables	204,508,397		203,906,316	
d. Total	$326,987,496		$388,386,872	
6. Payables				
a. Investments Purchased	$128,697,672		$135,337,446	
b. Securities Lending Collateral	1,114,387,026		1,308,676,647	
c. Other Payables	15,130,918		14,834,220	
d. Total	$1,258,215,616		$1,458,848,313	
7. Net Position for Pension Benefits [4. + 5.d – 6.d.]	**$8,643,044,275**		**$9,068,398,780**	

Section 2.2 - Changes in Fair Value of Assets

Transactions	December 31, 2015	December 31, 2014
Additions		
1. Contributions		
a. Contributions from Employers	$186,832,321	$190,032,872
b. Contributions from Plan Members	137,707,719	129,325,318
c. Total	$324,540,040	$319,358,190
2. Net Investment Income		
a. Interest and Dividends	$180,001,278	$190,780,701
b. Net Appreciation (Depreciation)	(173,161,584)	325,036,291
c. Net Securities Lending Income	4,962,545	4,865,250
d. Total	$11,802,239	$520,682,242
e. Less Investment Expense	33,698,935	31,791,345
f. Net Investment Income	(21,896,696)	488,890,897
g. Miscellaneous	11,439,473	9,566,692
h. Employee Transfers	18,370	175,370
3. Total Additions	**$314,101,187**	**$817,991,149**
Deductions		
4. Benefits and Expenses		
a. Retirement Benefits	$701,031,411	$645,601,458
b. Refund of Contributions	33,273,171	26,347,361
c. Administrative Expenses	5,151,110	5,010,206
d. Employee Transfers	0	0
5. Total Deductions	**$739,455,692**	**$676,959,025**
6. Net Increase (Decrease)	**($425,354,505)**	**$141,032,124**
7. Net Position Held in Trust for Pension Benefits		
a. Beginning of Year	**$9,068,398,780**	**$8,927,366,656**
b. End of Year	**$8,643,044,275**	**$9,068,398,780**

Section 2.3 - Actuarial Value of Assets

Development of Actuarial Value of Assets	Amount
1. Actuarial Value of Assets as of December 31, 2014	8,810,509,070
2. Unrecognized Return as of December 31, 2014	257,889,710
3. Fair Value of Assets as of December 31, 2014 (1. + 2.)	9,068,398,780
4. Contributions	
a. Member (includes purchased service)	137,707,719
b. Employer	186,832,321
c. Miscellaneous contributions	11,457,843
d. Total	335,997,883
5. Distributions	
a. Benefit payments	701,031,411
b. Refund of contributions	33,273,171
c. Administrative expenses	5,151,110
d. Total	739,455,692
6. Expected Return at 7.50% on	
a. Item 1.	660,788,180
b. Item 2.	19,341,728
c. Item 4.d.	12,372,137
d. Item 5.d.	27,228,288
e. Total [a. + b. + c. – d.]	665,273,757
7. Actual Return on Fair Value for Fiscal Year, Net of Investment Expenses	-21,896,696
8. Return to be Spread for Fiscal Year (7. – 6.e)	(687,170,453)
9. Total Fair Value of Assets as of December 31, 2015	8,643,044,275
10. Return to be Spread	

Fiscal Year	Return to be Spread	Unrecognized Percent	Unrecognized Return
2015	(687,170,453)	80%	(549,736,362)
2014	(167,852,724)	60%	(100,711,634)
2013	586,433,767	40%	234,573,507
2012	339,499,232	20%	67,899,846
2011	(477,440,319)	0%	0
		Total	(347,974,643)

11. Actuarial Value of Assets (9. – 10.)	**8,991,018,918**
12. Recognized Rate of Return for the Year on Actuarial Value of Assets	**6.55%**
13. Rate of Return for the Year on Fair Value of Assets (reported by investment consultant - net of inv. exp.)	**-0.1%**

Section 3: Projections

Section 3.1 – Projection Assumptions and Methods

Actuarial assumptions:

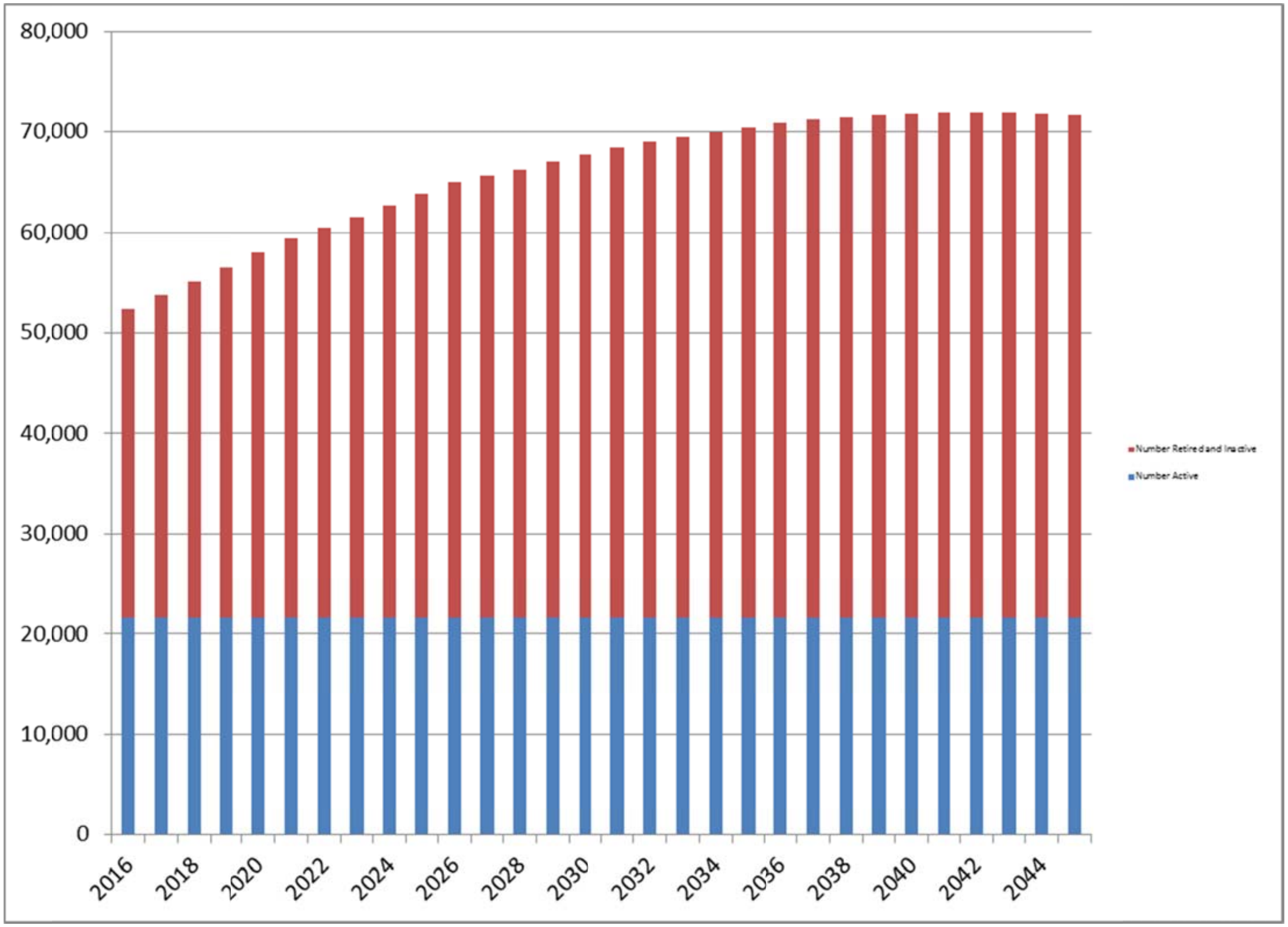
- Projected Salary Increases for New Hires	3.25%
- Projected Returns	7.50%
- Contributions Based On the Current Levy	N/A

During 2015 an Intergovernmental Agreement (IGA) was entered into between the Employer and CEABF which established an additional employer contribution for 2016 in excess of the statutory contribution, but less than the Actuarially Required Contribution.

In addition, the IGA stipulates that as CEABF's actuary, Buck Consultants will calculate the required contribution based on an alternative funding policy that would be sufficient to pay the Normal Costs of active Plan members, Plan expenses, and amortizes the Unfunded Actuarial Accrued Liability over a period of 30 years, with an annual 2% escalation factor applied to the amortization payments. This alternative funding policy is the basis for these projections.

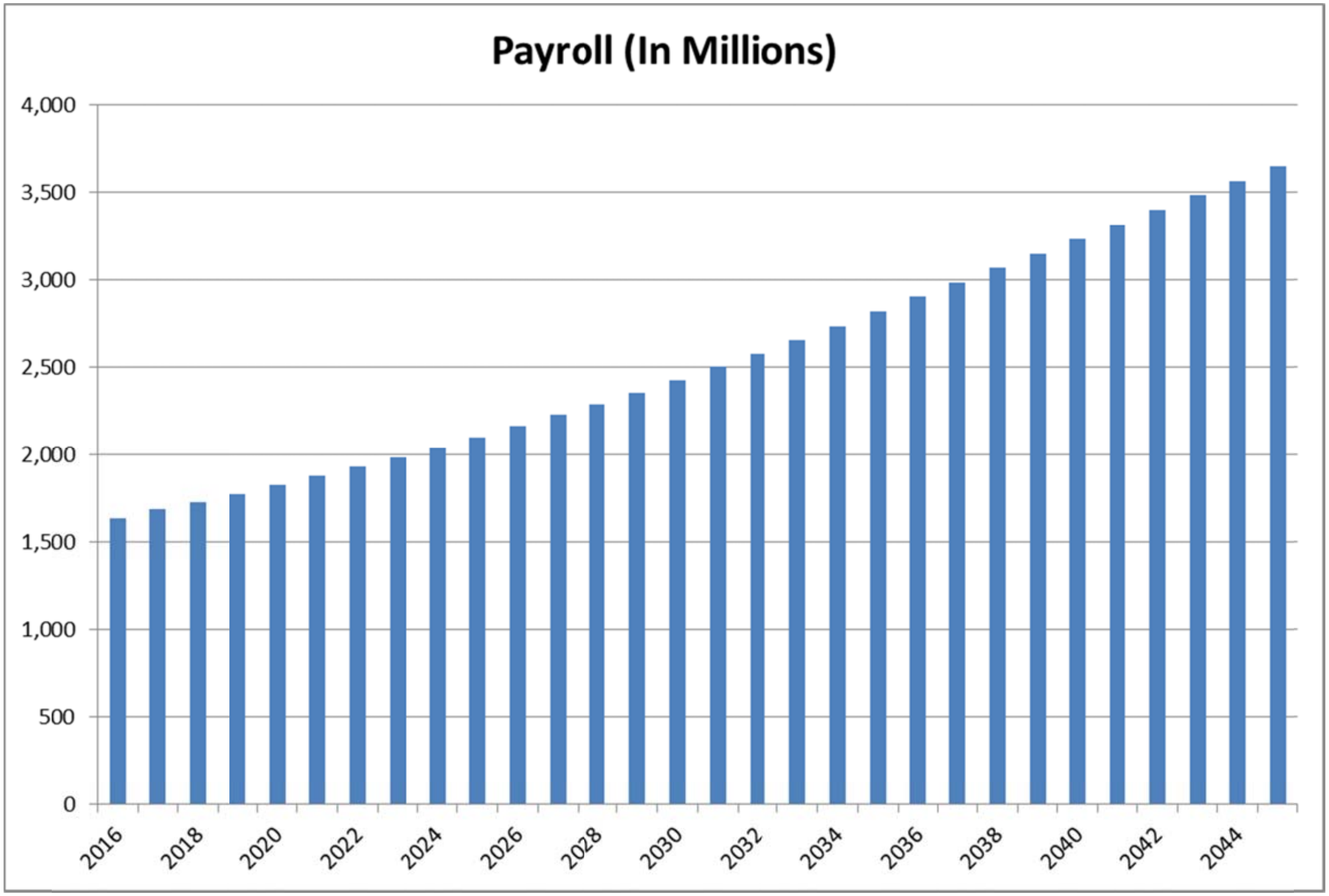
Section 3.2 – Membership Projections

Projected Member Count

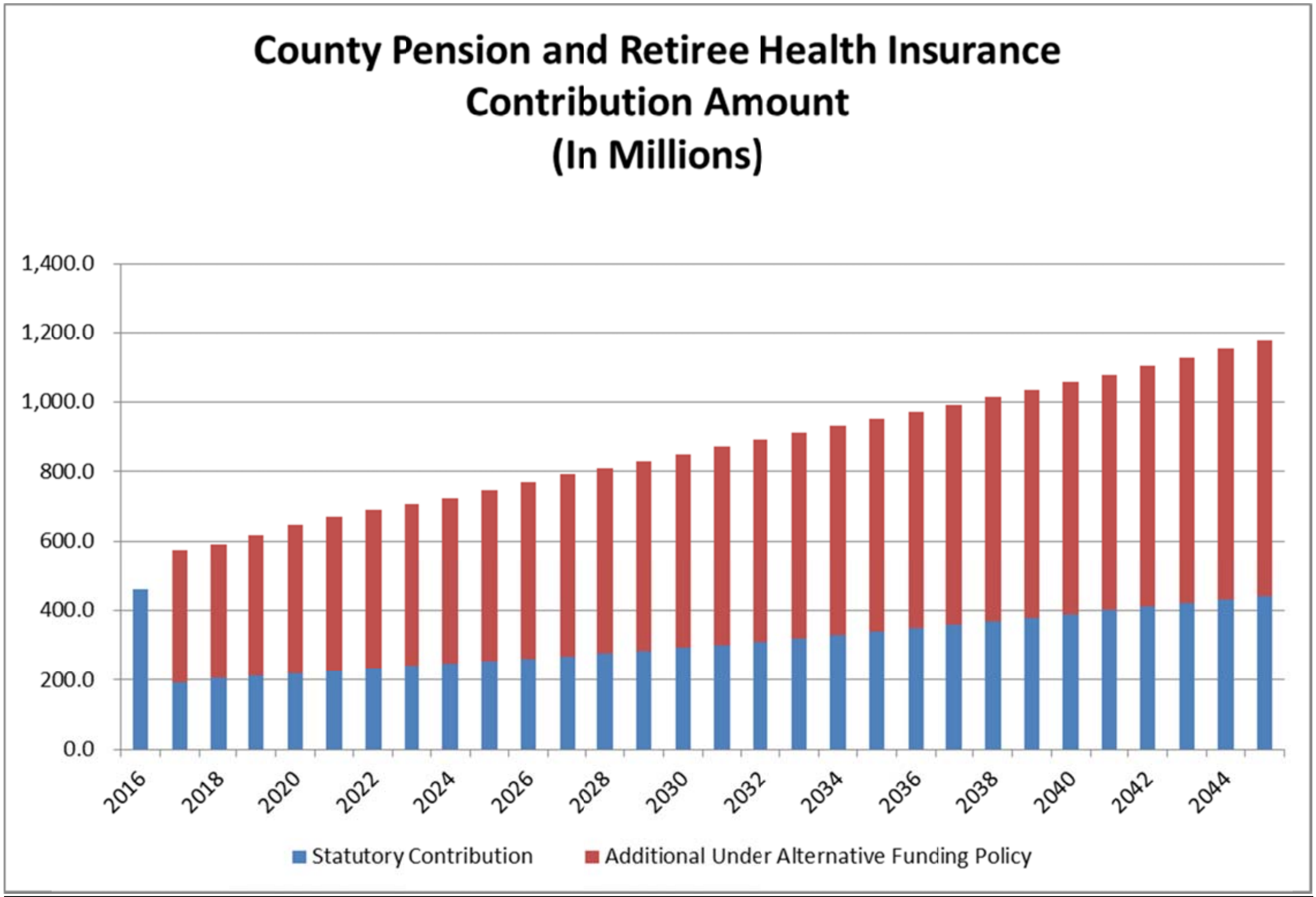


Section 3.2 – Membership Projections

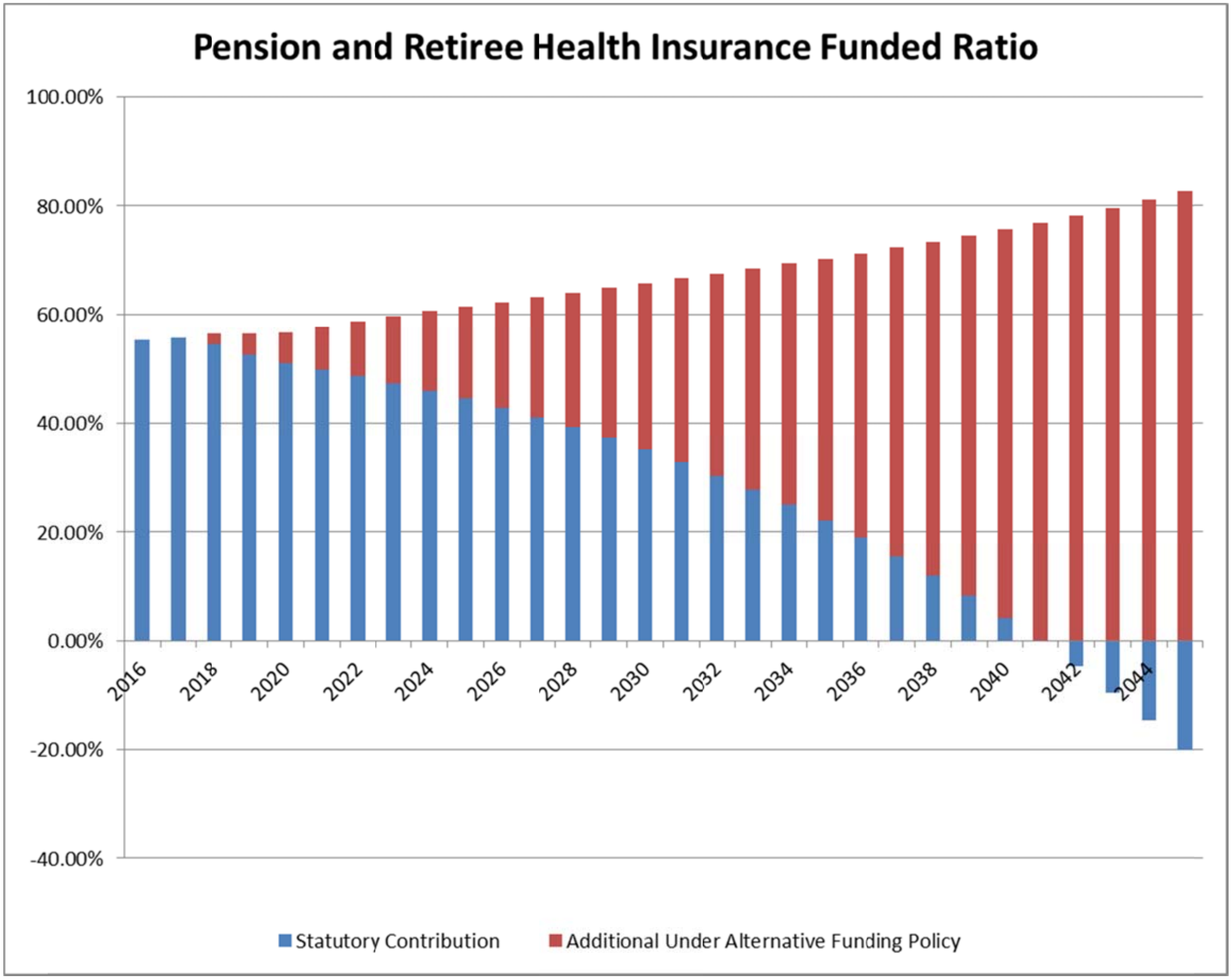
Projected Current and New Member Payroll



Section 3.3 – Projection of Employer Contribution Amounts



Section 3.4 – Projection of Funded Status



Section 3.5 – Table of Projected Actuarial Results (in Millions)

Based on the Alternative Funding Policy

		Pensions							Retiree Health Insurance								
		Beginning of Year				Cashflows during calendar year			Beginning of Year				Cashflows during calendar year				
Calendar Year	Payroll	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio	Total Payout	Employee Contributions	County Pension Contribution	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio	Total Payout	Employee Contributions	County Contribution	Total Projected County Contribution	Total as % of payroll
2016	1,639	14,937	8,991	5,946	60.2%	732	134.4	409.1	1,296	0	1,296	0%	51.5	0	51.5	460.6	28.10%
2017	1,686	15,538	9,446	6,092	60.8%	772	138.2	514.9	1,372	0	1,372	0%	57.7	0	57.7	572.6	33.97%
2018	1,731	16,152	9,945	6,207	61.6%	821	141.9	528.8	1,450	0	1,450	0%	63.5	0	63.5	592.3	34.21%
2019	1,777	16,764	10,334	6,431	61.6%	873	145.7	548.8	1,529	0	1,529	0%	69.8	0	69.8	618.6	34.81%
2020	1,826	17,372	10,770	6,602	62.0%	932	149.7	571.3	1,608	0	1,608	0%	76.2	0	76.2	647.5	35.46%
2021	1,879	17,971	11,352	6,619	63.2%	987	154.0	587.2	1,689	0	1,689	0%	82.9	0	82.9	670.0	35.66%
2022	1,932	18,569	11,941	6,628	64.3%	1,041	158.4	601.0	1,770	0	1,770	0%	90.2	0	90.2	691.3	35.78%
2023	1,985	19,164	12,537	6,627	65.4%	1,099	162.7	610.6	1,851	0	1,851	0%	96.8	0	96.8	707.4	35.64%
2024	2,039	19,749	13,132	6,617	66.5%	1,160	167.1	620.9	1,934	0	1,934	0%	103.8	0	103.8	724.8	35.55%
2025	2,097	20,318	13,723	6,595	67.5%	1,220	171.9	634.7	2,017	0	2,017	0%	110.9	0	110.9	745.6	35.56%
2026	2,160	20,877	14,315	6,562	68.6%	1,276	177.1	652.5	2,102	0	2,102	0%	118.0	0	118.0	770.5	35.67%
2027	2,225	21,432	14,916	6,516	69.6%	1,325	182.4	667.5	2,188	0	2,188	0%	124.2	0	124.2	791.6	35.58%
2028	2,290	21,988	15,532	6,455	70.6%	1,383	187.7	679.2	2,276	0	2,276	0%	131.5	0	131.5	810.7	35.41%
2029	2,356	22,532	16,152	6,379	71.7%	1,440	193.2	690.4	2,365	0	2,365	0%	138.7	0	138.7	829.1	35.19%
2030	2,427	23,062	16,776	6,286	72.7%	1,499	198.9	705.7	2,456	0	2,456	0%	144.8	0	144.8	850.6	35.05%
2031	2,502	23,582	17,407	6,175	73.8%	1,551	205.1	721.0	2,550	0	2,550	0%	150.9	0	150.9	872.0	34.85%
2032	2,579	24,096	18,053	6,044	74.9%	1,602	211.4	735.3	2,647	0	2,647	0%	157.6	0	157.6	892.9	34.62%
2033	2,657	24,606	18,715	5,890	76.1%	1,665	217.8	747.9	2,747	0	2,747	0%	164.5	0	164.5	912.4	34.34%
2034	2,737	25,094	19,381	5,714	77.2%	1,719	224.4	760.1	2,851	0	2,851	0%	170.8	0	170.8	930.9	34.02%
2035	2,819	25,570	20,059	5,511	78.4%	1,777	231.1	774.8	2,958	0	2,958	0%	176.7	0	176.7	951.6	33.76%
2036	2,903	26,030	20,749	5,281	79.7%	1,827	238.0	790.2	3,071	0	3,071	0%	182.6	0	182.6	972.8	33.51%
2037	2,987	26,483	21,462	5,021	81.0%	1,875	244.9	804.7	3,189	0	3,189	0%	188.2	0	188.2	992.9	33.24%
2038	3,070	26,928	22,200	4,728	82.4%	1,935	251.6	819.8	3,313	0	3,313	0%	194.2	0	194.2	1,014.0	33.04%
2039	3,151	27,354	22,954	4,400	83.9%	1,984	258.4	833.6	3,445	0	3,445	0%	201.4	0	201.4	1,035.1	32.84%
2040	3,233	27,767	23,733	4,033	85.5%	2,032	265.0	849.9	3,582	0	3,582	0%	206.9	0	206.9	1,056.7	32.69%
2041	3,315	28,170	24,545	3,625	87.1%	2,075	271.8	866.2	3,727	0	3,727	0%	213.7	0	213.7	1,079.9	32.57%
2042	3,398	28,567	25,394	3,172	88.9%	2,119	278.6	882.8	3,881	0	3,881	0%	221.0	0	221.0	1,103.8	32.48%
2043	3,482	28,957	26,286	2,671	90.8%	2,163	285.4	899.5	4,043	0	4,043	0%	228.8	0	228.8	1,128.3	32.41%
2044	3,565	29,340	27,223	2,117	92.8%	2,201	292.3	916.2	4,213	0	4,213	0%	236.8	0	236.8	1,152.9	32.34%
2045	3,650	29,721	28,214	1,507	94.9%	2,238	299.2	933.0	4,393	0	4,393	0%	243.4	0	243.4	1,176.4	32.23%
2046	3,737	30,099	29,264	836	97.2%	2,277	306.3	950.8	4,584	0	4,584	0%	251.5	0	251.5	1,202.3	32.18%
2047	3,825	30,475	30,377	98	99.7%	2,316	313.6	231.4	4,786	0	4,786	0%	260.1	0	260.1	491.5	12.85%
2048	3,916	30,848	30,793	55	99.8%	2,356	321.1	225.8	5,000	0	5,000	0%	271.3	0	271.3	497.1	12.69%
2049	4,009	31,217	31,200	17	99.9%	2,397	328.7	206.4	5,225	0	5,225	0%	283.6	0	283.6	490.0	12.22%
2050	4,104	31,582	31,582	0	100.0%	2,438	336.5	192.3	5,459	0	5,459	0%	293.1	0	293.1	485.4	11.83%

The estimates above are based upon assumptions regarding future events, which may or may not materialize.
The basis for this projection is the December 31, 2015 Actuarial Valuation performed by Buck Consultants.

Section 3.5 – Table of Projected Actuarial Results (in Millions) (continued)

Based on the Statutory Funding Policy

		Beginning of Year				Cashflows during Calendar Year			
Calendar Year	Payroll	Total Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio	Total Payout	Employee Contributions	County Contribution Based on Tax Levy	as a % of Payroll
2016	1,639	16,232	8,991	7,241	55.4%	783	134.4	460.6	28.10%
2017	1,686	16,911	9,446	7,464	55.9%	830	138.2	193.2	11.46%
2018	1,731	17,602	9,611	7,991	54.6%	885	141.9	205.7	11.88%
2019	1,777	18,293	9,640	8,653	52.7%	942	145.7	214.0	12.04%
2020	1,826	18,980	9,677	9,303	51.0%	1,008	149.7	219.8	12.04%
2021	1,879	19,659	9,813	9,846	49.9%	1,070	154.0	225.6	12.01%
2022	1,932	20,338	9,912	10,427	48.7%	1,131	158.4	231.9	12.00%
2023	1,985	21,015	9,973	11,043	47.5%	1,196	162.7	238.6	12.02%
2024	2,039	21,682	9,989	11,693	46.1%	1,264	167.1	245.3	12.03%
2025	2,097	22,336	9,955	12,380	44.6%	1,331	171.9	252.0	12.02%
2026	2,160	22,979	9,868	13,111	42.9%	1,394	177.1	258.8	11.98%
2027	2,225	23,620	9,728	13,892	41.2%	1,449	182.4	266.3	11.97%
2028	2,290	24,263	9,539	14,725	39.3%	1,514	187.7	274.3	11.98%
2029	2,356	24,897	9,289	15,607	37.3%	1,579	193.2	282.5	11.99%
2030	2,427	25,518	8,976	16,543	35.2%	1,644	198.9	290.7	11.98%
2031	2,502	26,131	8,591	17,541	32.9%	1,702	205.1	299.2	11.96%
2032	2,579	26,743	8,138	18,605	30.4%	1,759	211.4	308.1	11.95%
2033	2,657	27,353	7,614	19,739	27.8%	1,830	217.8	317.7	11.96%
2034	2,737	27,945	7,001	20,944	25.1%	1,890	224.4	327.5	11.97%
2035	2,819	28,528	6,302	22,226	22.1%	1,954	231.1	337.3	11.97%
2036	2,903	29,101	5,507	23,594	18.9%	2,010	238.0	347.5	11.97%
2037	2,987	29,672	4,618	25,054	15.6%	2,063	244.9	357.9	11.98%
2038	3,070	30,242	3,630	26,612	12.0%	2,129	251.6	368.6	12.01%
2039	3,151	30,798	2,523	28,275	8.2%	2,185	258.4	379.3	12.03%
2040	3,233	31,348	1,299	30,050	4.1%	2,239	265.0	389.7	12.06%
2041	3,315	31,897	(50)	31,947	-0.2%	2,289	271.8	400.1	12.07%
2042	3,398	32,448	(1,528)	33,975	-4.7%	2,340	278.6	410.4	12.08%
2043	3,482	33,000	(3,145)	36,145	-9.5%	2,392	285.4	420.9	12.09%
2044	3,565	33,553	(4,912)	38,465	-14.6%	2,437	292.3	431.5	12.10%
2045	3,650	34,113	(6,833)	40,947	-20.0%	2,482	299.2	442.1	12.11%
2046	3,737	34,683	(8,921)	43,604	-25.7%	2,528	306.3	452.7	12.11%
2047	3,825	35,261	(11,188)	46,449	-31.7%	2,576	313.6	463.4	12.11%
2048	3,916	35,848	(13,649)	49,497	-38.1%	2,627	321.1	474.4	12.11%
2049	4,009	36,441	(16,317)	52,759	-44.8%	2,680	328.7	485.7	12.11%
2050	4,104	37,041	(19,210)	56,251	-51.9%	2,731	336.5	497.2	12.11%

The estimates above are based upon assumptions regarding future events, which may or may not materialize.
The basis for this projection is the December 31, 2015 Actuarial Valuation performed by Buck Consultants.

Section 4: Member Data

Section 4.1 - Summary of Members Included

As of December 31	2015	2014
Active Members (includes 171 disabled in 2015 and 189 in 2014		
(1) Number	21,596	21,656
(2) Average Age	47.1	47.2
(3) Average Credited Service	13.5	13.7
(4) Average Annual Earnings (limited for Pension purposes)	$72,811	$69,937
Retirees and Beneficiaries		
(1) Number	17,597	17,076
(2) Average Age	71.6	71.6
(3) Average Monthly Pension Benefit	$3,102	$2,964
Inactive Members (not refunded contributions or commenced benefits)		
(1) Number	13,190	13,194
(2) Average Age	47.36	46.6
Total Number of Members	**52,383**	**51,926**

Section 4.2 - Age and Service Distribution of Active Members as of December 31, 2015

Attained Age		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	Total
Under 25	Number	224	0	0	0	0	0	0	0	0	224
	Average Salary	44,919	0	0	0	0	0	0	0	0	44,919
25-29	Number	1344	70	5	0	0	0	0	0	0	1,419
	Average Salary	52,380	57,899	48,417	0	0	0	0	0	0	52,639
30-34	Number	1296	595	171	21	0	0	0	0	0	2,083
	Average Salary	58,931	66,442	61,491	54,187	0	0	0	0	0	61,239
35-39	Number	790	556	803	237	8	0	0	0	0	2,394
	Average Salary	67,063	79,010	72,532	65,034	62,408	0	0	0	0	71,456
40-44	Number	597	478	705	853	358	18	0	0	0	3,009
	Average Salary	68,220	80,408	80,493	74,873	71,533	63,813	0	0	0	75,286
45-49	Number	484	353	516	743	942	365	12	0	0	3,415
	Average Salary	69,226	75,949	79,156	79,635	78,878	70,866	67,466	0	0	76,518
50-54	Number	353	268	441	541	848	798	133	3	0	3,385
	Average Salary	67,688	76,798	78,012	79,700	83,200	79,890	71,074	75,123	0	78,576
55-59	Number	314	225	330	531	640	645	181	31	1	2,898
	Average Salary	69,320	68,895	76,066	76,891	81,089	82,395	74,915	63,244	102,617	77,248
60-64	Number	147	162	261	318	379	272	119	39	2	1,699
	Average Salary	75,504	77,061	72,619	78,827	78,528	77,124	85,163	79,318	71,187	77,524
65-69	Number	48	72	153	166	159	78	37	19	5	737
	Average Salary	74,567	81,423	83,020	71,156	72,849	79,672	74,213	71,427	98,855	76,459
70 & Up	Number	16	23	43	60	68	64	31	11	17	333
	Average Salary	68,204	98,585	61,266	64,368	70,472	66,380	69,587	62,719	90,744	69,926
TOTAL	Number	5,613	2,802	3,428	3,470	3,402	2,240	513	103	25	21,596
	Average Salary	61,550	74,753	75,959	76,160	79,071	78,282	75,750	71,130	91,277	$72,811

Salaries are limited to the dollar amount defined under Internal Revenue Code Section 401(a)(17) for affected Tier 1 members and to the paycap legislated for the Tier 2 members.

Section 4.3 - Age and Salary Distribution of Active Members as of December 31, 2015

Age	Number	Annual Salaries	Average Annual Salary
Male			
Under 20	0	$0	$0
20-24	79	3,800,547	48,108
25-29	700	37,352,116	53,360
30-34	1,066	64,822,661	60,809
35-39	1,174	83,949,500	71,507
40-44	1,296	102,457,360	79,057
45-49	1,649	131,597,258	79,804
50-54	1,487	123,775,500	83,238
55-59	1,237	102,670,491	83,000
60-64	733	60,958,871	83,164
65-69	343	29,265,346	85,322
70 and over	179	14,401,065	80,453
Total Male	**9,943**	**$755,050,715**	**$75,938**
Female			
Under 20	0	$0	$0
20-24	91	3,686,867	40,515
25-29	609	30,945,656	50,814
30-34	936	55,901,485	59,724
35-39	1,243	86,874,691	69,891
40-44	1,595	114,655,418	71,884
45-49	1,786	130,601,162	73,125
50-54	1,888	140,864,354	74,610
55-59	1,766	131,222,622	74,305
60-64	1,081	78,086,974	72,236
65-69	462	32,317,099	69,950
70 and over	196	12,210,255	62,297
Total Female	**11,653**	**$817,366,583**	**$70,142**
Male and Female	**21,596**	**$1,572,417,298**	**$72,811**

Section 4.4 - Member Data Reconciliation

	Active Members	Retired Members	Beneficiaries	Inactive Members	Total
As of 12/31/2014	**21,656**	**14,437**	**2,639**	**13,194**	**51,926**
Retirements	(670)	927		(257)	0
Deaths With Beneficiary	(20)	(124)	158	(14)	0
Terminations	(1,345)			939	(406)
Rehires	269	(2)		(267)	0
Miscellaneous	0	(316)	(122)	(405)	(843)
Net Change	**(1,766)**	**485**	**36**	**(4)**	**(1,249)**
New Entrants During the Year	1,706				1,706
As of 12/31/2015	**21,596**	**14,922**	**2,675**	**13,190**	**52,383**

Section 4.5 – Schedule of Active Member Data

Valuation Date	Number	Annual Earnings	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings
December 31, 2010	23,165	$1,494,093,569	$64,498	
December 31, 2011	22,037	$1,456,444,123	$66,091	2.5%
December 31, 2012	21,447	1,478,253,368	68,926	4.3%
December 31, 2013	21,287	1,484,269,715	69,727	1.2%
December 31, 2014	21,656	1,514,550,023	69,937	0.3%
December 31, 2015	21,596	1,572,417,298	72,811	4.1%

Section 4.6 - Schedule of Retired Member Data

Valuation Date	Number	Annual Benefit Payments	Average Annual Benefit Payments
December 31, 2010	15,333	$445,909,273	$29,082
December 31, 2011	15,555	480,953,987	30,920
December 31, 2012	16,174	524,228,085	32,412
December 31, 2013	16,677	566,785,974	33,986
December 31, 2014	17,076	607,365,432	35,568
December 31, 2015	17,597	654,992,736	37,222

Section 4.7 - Schedule of Retired Members by Type of Benefit and Option Elected

Amount of Monthly Pension Benefit				Number of Recipients	Type of Pension Benefit		Option Selected		
					1	2	1	2	3
$	1	–	$ 500	2,035	1,401	634	1,305	640	90
	501	–	1,000	1,950	1,268	682	1,300	603	47
	1,001	–	1,500	1,607	1,216	391	1,056	551	0
	1,501	–	2,000	1,393	1,121	272	880	513	0
	2,001	–	2,500	1,434	1,228	206	848	586	0
	2,501	–	3,000	1,345	1,187	158	809	536	0
	3,001	–	3,500	1,247	1,112	135	711	536	0
	3,501	–	4,000	1,184	1,089	95	666	518	0
	4,001	–	4,500	947	907	40	460	487	0
	4,501	–	5,000	969	946	23	416	553	0
	5,001	–	5,500	754	743	11	302	452	0
	5,501	–	6,000	695	689	6	268	427	0
	6,001	–	6,500	724	721	3	246	478	0
	6,501	–	7,000	360	358	2	149	211	0
	7,001	–	7,500	268	267	1	97	171	0
	7,501	–	8,000	196	193	3	66	130	0
	8,001	–	8,500	120	118	2	38	82	0
	8,501	–	9,000	54	53	1	13	41	0
	9,001	–	9,500	28	26	2	9	19	0
	9,501	–	10,000	29	27	2	7	22	0
	10,001	–	10,500	20	19	1	1	19	0
	10,501	–	11,000	25	24	1	6	19	0
	11,001	–	11,500	24	23	1	4	20	0
	11,501	–	12,000	19	18	1	7	12	0
	12,001	–	12,500	17	17	0	4	13	0
	12,501	–	13,000	12	12	0	4	8	0
	13,001	–	13,500	19	19	0	3	16	0
	13,501	–	14,000	12	12	0	3	9	0
	14,001	–	14,500	7	7	0	2	5	0
	14,501	–	15,000	13	12	1	7	6	0
Over $15,000				90	89	1	19	71	0
Totals				17,597	14,922	2,675	9,706	7,754	137

Type of Pension Benefit

1. *Regular retirement*
2. *Survivor payment*

Option Selected

1. *Whole Life Annuity*
2. 65% Joint and Contingent Annuity
3. Temporary Annuity

Section 4.8 - Schedule of Retired Members and Beneficiaries

As of December 31	2015	2014
Retired		
(1) Number, Fiscal Year Start	14,437	14,080
(2) Net Change	485	357
(3) Number, Fiscal Year End	14,922	14,437
(4) Average Current Age	71.4	71.4
(5) Average Monthly Pension Benefit	$3,396	$3,256
Beneficiaries		
(1) Number, Fiscal Year Start	2,639	2,597
(2) Net Change	36	42
(3) Number, Fiscal Year End	2,675	2,639
(4) Average Current Age	72.5	72.5
(5) Average Monthly Pension Benefit	$1,458	$1,369
Total		
(1) Number, Fiscal Year Start	17,076	16,677
(2) Net Change	521	399
(3) Number, Fiscal Year End	17,597	17,076
(4) Average Current Age	71.6	71.6
(5) Average Monthly Pension Benefit	$3,102	$2,964

Section 4.9 - Schedule of Benefit Payments

Attained Ages	Number	Annual Payments
< 30	110	$636,229
30-34	2	7,736
35-39	5	33,353
40-44	23	170,202
45-49	39	346,457
50-54	292	10,971,955
55-59	1,118	51,261,664
60-64	2,516	113,222,440
65-69	3,647	150,448,926
70-74	3,359	132,581,633
75	589	21,310,224
76	529	18,220,836
77	561	19,391,615
78	495	16,274,038
79	462	15,561,987
80	450	13,969,017
81	415	12,481,458
82	381	11,192,815
83	335	10,857,192
84	303	8,809,292
85	306	8,119,815
86	263	7,360,188
87	243	6,141,044
88	202	5,116,170
89	189	4,907,831
90	128	3,008,812
91	151	3,423,068
92	118	2,578,413
93	91	1,911,124
94	77	1,574,410
95	58	1,068,529
96	45	737,096
97	25	511,514
98	25	178,407
99	20	353,605
100	6	31,846
101	12	92,585
102	3	83,235
103	0	0
104	0	0
105	2	25,220
106	0	0
107	2	20,755
Total	17,597	$654,992,736

Section 5: Basis of the Actuarial Valuation

Section 5.1A - Brief Summary of Benefit Provisions

Participant. A person employed by the County whose salary or wages is paid in whole or in part by the County. An employee in service on or after January 1, 1984 shall be deemed as a participant regardless of when he or she became an employee.

Service. For all purposes except the minimum retirement annuity and ordinary disability benefit, service during four months in any calendar year constitutes one year of service. For the minimum retirement annuity, all service is computed in whole calendar months. Service for any 15 days in a calendar month shall constitute a month of service.

For purposes of the minimum retirement annuity, service shall include:

a. Any time during which the employee performed the duties of his or her position and contributed to the County Employees' and Officers' Annuity and Benefit Fund of Cook County (CEABF).
b. Vacations and leaves of absence with whole or part pay.
c. Periods during which the employee receives a disability benefit from the CEABF, and
d. Certain periods of accumulated sick leave.

Retirement Annuity - Eligibility. An employee who withdraws from service with 10 or more years of service is entitled to a retirement annuity upon attainment of age 50.

Retirement Annuity - Amount

Money Purchase Annuity. The amount of annuity based on the sum accumulated from the employee's salary deductions for age and service annuity plus 1/10 of the sum accumulated from the contributions by the County for age and service annuity for each completed year of service after the first 10.

Minimum Formula Annuity. The amount of annuity provided is equal to 2.4% of final average salary for each year of service. Final average salary is the highest average monthly salary for any 48 consecutive months within the last 10 years of service. Salary for pension purposes is actual salary earned exclusive of overtime or extra salary. The maximum amount of annuity is 80% of final average salary.

If an employee retires before age 60, the annuity is reduced by .5% for each full month or fraction thereof that the employee is under age 60 when the annuity begins, unless the employee has 30 or more years of service, in which case there is no reduction for retirement before age 60.

If the Minimum Formula Annuity is greater than the Money Purchase Annuity, the employee is entitled to receive the Minimum Formula Annuity.

Automatic Increase in Retirement Annuity. Employees who retire from service having attained age 60 or more, or, if retirement occurs on or after January 1, 1991, with at least 30 years of service, 3% of the annuity beginning January of the year following the year in which the first anniversary of retirement occurs. If retirement is before age 60 with less than 30 years of service, increases begin in January of the year immediately following the year in which age 60 is attained. Beginning January 1, 1998, increases are calculated as 3% of the monthly annuity payable at the time of the increase.

Optional Plan of Contributions and Benefits. During the period through June 30. 2005, an employee may establish optional credit for additional benefits by making additional contributions of 3% of salary. The additional benefit is equal to 1% of final average salary for each year of service for which optional contributions have been paid. The additional benefit shall be included in the calculation of the automatic annual increase and the calculation of the survivor's annuity.

Alternate Annuity for County Officers. An alternate annuity is available for county officers elected on or before January 1, 2008. The amount of this alternate annuity is equal to 3% of final salary for the first 8 years of service, 4% for the next 4 years of service, and 5% thereafter, subject to a maximum of 80% of final salary. The elected county officer is required to contribute an additional 3% of salary to be eligible for the alternate annuity. The alternate survivor's annuity for survivors of elected county officers is 66-2/3% of the amount of the elected county officer's earned retirement annuity on the date of death, subject to a minimum payment of 10% of salary.

Annuities for Members of the Cook County Police Department. In lieu of the regular of minimum retirement annuity, a deputy sheriff who is a member of the County Police Department may be entitled to the following annuity:

Upon withdrawal from service after having attained age 50 in service with 20 or more years of service credit as a police officer, the officer shall be entitled to an annuity computed as follows: 50% of final average salary, plus 2% of final average salary for each year of service in excess of 20 years, subject to a maximum of 80% of final average salary.

Surviving Spouse's Annuity - Death in Service

Money Purchase Annuity. The amount of annuity based on the accumulated salary deductions and County contributions for both the employee and the spouse.

Minimum Formula Annuity. A minimum annuity is provided for the eligible surviving spouse of an employee who dies in service with any number of years of service. The amount of such minimum spouse's annuity is equal to 65% of the annuity the employee would have been entitled to as of the date of death, provided the spouse on such date is age 55 or older, or that the employee had 30 or more years of service. If the spouse is under age 55 and the employee had less than 30 years of service, the amount of the spouse's annuity shall be discounted by .5% for each month that the spouse is less than age 55 on the date of the employee's death. The amount of the surviving spouse's annuity shall not be less than 10% of the employee's final average salary as of the date of death.

If the Minimum Formula Annuity is greater than the Money Purchase Annuity, the surviving spouse shall be entitled to receive the Minimum Formula Annuity.

Surviving Spouse's Annuity - Death after Retirement. The amount of the annuity is the greater of the money purchase annuity or the minimum formula annuity. The surviving spouse of an annuitant who dies on or after July 1, 2002 shall be entitled to an annuity of 65% of the employee's annuity at the time of death if the employee had at least 10 years of service, reduced by .5% per month that the spouse is under age 55 at the time of the employee's death. There is no reduction for age if the employee had at least 30 years of service.

Automatic Annual Increase in Surviving Spouse's Annuity. On the January 1 occurring on or immediately after the first anniversary of the deceased employee's death, the surviving spouse's annuity shall be increased by 3% of the amount of annuity payable at the time of the increase. On each January 1 thereafter, the annuity shall be increased by an additional 3% of the amount of annuity payable at the time of the increase.

Child's Annuity. Annuities are provided for unmarried children of a deceased employee who are under age 18. An adopted child is entitled to the child's annuity if such child was legally adopted at least one year before the child's annuity becomes payable. The child's annuity is payable under the following conditions:

(a) the death of the employee was a duty related death; or (b) if the death is not a duty related death, the employee died while in service and had completed at least four years of service from the date of his or her original entrance in service and at least two years from the latest re-entrance: or (c) if the employee died while in receipt of an annuity, her or she must have withdrawn from service after attainment of age 50

The amount of the annuity is the greater of 10% of the employee's final salary at the date of death or $140 per month for each child.

Duty Disability Benefits. Duty disability benefits are payable to an employee who becomes disabled as a result of an accidental injury incurred while in the performance of an act of duty. Benefits begin on the first regular and normal work date for which the employee does not receive a salary. The amount of the duty disability benefit is equal to 75% of the employee's salary at the date of injury, reduced by the amount the employee receives from Workers' Compensation. However, if the disability, in any measure has resulted from any physical defect or disease that existed at the time such injury was sustained, the duty disability benefit shall be 50% of salary. The CEABF contributes the 8.5% (9% for County Police) of salary normally contributed by the employee for pension purposes.

If the disability commences prior to age 60, duty disability benefits are payable during disability until the employee attains age 65. If the disability begins after age 60, the benefit is payable during disability for a period of 5 years.

Recipients of duty disability benefits also have a right to receive child's disability benefits of $10 per month on account of each unmarried child less than age 18. Total children's disability benefits shall not exceed 15% of the employee's salary.

Ordinary Disability Benefits. Ordinary disability benefits are provided for employees who become disabled as the result of any cause other than injury incurred in the performance of an act of duty. The amount of the benefit is 50% of the employee's annual salary at the time of disability. The CEABF also contributes the 8.5% (9% for County Police) of salary normally contributed by the employee for pension purposes.

Ordinary disability benefits are payable after the first 30 days of disability provided the employee is not then in receipt of salary. Ordinary disability benefits are payable until the first of the following shall occur:

(a) the disability ceases; or
(b) the date that total payments equal the lesser of (1) 1/4 of the total service rendered prior to disability, and (2) five years.

An employee unable to return to work at the expiration of ordinary disability benefit is entitled to an annuity beginning on the date of the employee's withdrawal from service regardless of age on such date.

Death Benefit. Upon the death of an active or retired employee, a death benefit of $1,000 is payable to the employee's designated beneficiary or to the employee's estate if no beneficiary has been designated.

Group Health Benefits. The CEABF may pay all or any portion of the premium for health insurance on behalf of each annuitant who participates in any of the CEABF's health care plans. As of January 1. 2005, the CEABF is paying 55% of the premiums for retiree annuitants and 70% of the premiums for survivor annuitants.

Refund to Employee Upon Withdrawal From Service. Upon withdrawal from service, an employee under the age of 55, or anyone with less than 10 years of service is eligible for a refund. The employee is entitled to a refund of the amount accumulated to his or her credit for age and service annuity and the survivor's annuity together with the total amount contributed for the automatic annual increase, without interest. Upon receipt of such refund, the employee forfeits all rights to benefits from the CEABF.

Election of Refund in Lieu of Annuity. If an employee's annuity or spouse's annuity is less than $150.00 per month, such employee or spouse annuitant may elect a refund of the employee's accumulated contributions in lieu of a monthly annuity.

Refund For Surviving Spouse's Annuity. If an employee is unmarried at the time of retirement, all contributions for surviving spouse's annuity will be refunded with interest at the rate of 3% per year, compounded annually.

Refund of Remaining Amounts. In the event that the total amount accumulated to the account of employee from employee contributions for annuity purposes has not been paid to the employee and surviving spouse as a retirement or surviving spouse's annuity before the death of the survivor of the employee and spouse, a refund of any excess amount shall be paid to the children of the employee, in equal parts, or if there are no children, to the beneficiaries of the employee or the administrator of the estate.

Employee Contributions. Employees contribute through salary deductions 8.5% (9% for County Police) of salary to the CEABF, 6.5% (7% for County Police) being for the retirement annuity. 1.5% being for the surviving spouse's annuity, and .5% being for the automatic increase in retirement annuity.

Employer Contributions. The County levies a tax annually equal to the total amount of contributions made by employees in the calendar year 2 years prior to the year of the levy, multiplied by 1.54.

Employer Pick-up of Employee Contributions. Since April 15, 1982, regular employee contributions have been designated for federal income tax purposes as being made by the employer. The employee's W-2 salary is therefore reduced by the amount of contribution. For pension purposes, the salary remains unchanged. For purposes of benefits, refunds, and financing, these contributions are treated as employee contributions.

Persons Who First Become Participants On or After January 1, 2011

The following changes to the aforementioned provisions apply to persons who first become participants on or after January 1, 2011:

1. The highest salary for annuity purposes is equal to the average monthly salary obtained by dividing the participant's total salary during the 96 consecutive months of service within the last 120 months of service in which the total compensation was the highest by the number of months in that period.
2. For 2011, the annual salary is limited to the Social Security wage base of $106,800. Limitations for future years shall automatically be increased by the lesser of 3% or one-half of percentage change in the Consumer Price Index-U for the 12 months ending in September.
3. A participant is eligible to retire with unreduced benefits at age 67 with at least 10 years of service credit. However, a participant may elect to retire at age 62 with at least 10 years of service credit and receive a retirement annuity reduced by one-half of 1% for each month that his or her age is under 67.
4. The initial survivor's annuity is equal to 66-2/3% of the participant's earned retirement annuity at the date of death, subject to automatic annual increases of the lesser of 3% or one-half of the increase in the Consumer Price Index-U for the 12 months ending in September, based on the originally granted survivor's annuity.
5. Automatic annual increases in the retirement annuity then being paid are equal to the lesser of 3% or one-half the annual change in the Consumer Price Index-U, whichever is less, based on the originally granted retirement annuity.
6. Refund upon withdrawal from service. Upon withdrawal from service, an employee who withdraws from service before age 62 regardless of length of service or withdraws with less than 10 years of service regardless of age is entitled to a refund of total contributions made by the employee without interest.

Section 5.1B – Summary of Substantive Plan Provisions for Retiree Health Care

Eligibility

Tier 1 retirement (hired before January 1, 2011)

- Age 50 and 10 years of service

Tier 2 retirement (hired on or after January 1, 2011)

- Age 62 and 10 years of service

All active employee members who separate with 10 or more years of service can receive postretirement health benefits under the Plan upon receipt of annuity benefits, provided that if they elect to retire under the Illinois Reciprocal Act, CEABF is their final retirement system.

Surviving dependents of actively employed members and surviving dependents of covered annuitants are eligible for postretirement health benefits under the Plan upon receipt of annuity benefits.

Eligible annuitants may cover their spouses and dependent children under the age of 26 and all disabled children (no age limitation).

Medical Plans

Non-Medicare retirees can choose from:

- United Healthcare Choice HMO
- United Healthcare Choice Plus PPO

Medicare eligible retirees can choose from:

- United Healthcare Choice HMO
- United Healthcare Choice Plus PPO

All Medicare plans are supplemental to Medicare Part A & B benefits.
A retail and mail pharmacy benefit through CVS/Caremark is included with the election of any medical plan.

	UNITED HEALTHCARE		
PLAN FEATURES	CHOICE HMO	CHOICE PLUS PPO IN-NETWORK	CHOICE PLUS PPO OUT-OF-NETWORK
Annual Deductible	$0	$300 Individual/$600 Family	$600 Individual/$1200 Family
Out-of-Pocket Maximum	$1,500 Individual/ $3,000 Family	$1,500 Individual/ $3,000 Family	$5,000 Individual/ $10,000 Family
Annual Maximum	None	$1,250,000	$1,250,000
Doctors and Specialists			
Primary Care Visit	$15 Copay	15% after deductible	40% after deductible
Specialist Visit	$25 Copay	15% after deductible	40% after deductible
Physician Services			
Immunizations	$15 Copay	15% after deductible	40% after deductible
Preventive Care	Covered in full	15% after deductible	40% after deductible
Hospital Services			
Inpatient Care	Covered in full	15% after deductible	40% after deductible
Room & Board	$100 Copay (per admission)	15% after deductible	40% after deductible
Outpatient Services			
Outpatient Surgery	$100 Copay	15% after deductible	40% after deductible
Diagnostic Tests and X-rays	Covered in full	15% after deducible	40% after deductible
Chemotherapy / Radiation Therapy	Covered in full	15% after deducible	40% after deductible
Speech, Physical & Occupational Therapy	$15 Copay (60 visit combined limit/calendar year)	15% after deductible	40% after deductible
Chiropractor	$15 Copay (30 visit limit)	15% after deductible (30 visit limit)	40% after deductible (30 visit limit)
Behavioral Health Services			
Mental Health – Outpatient	$15 Copay	15% after deductible	40% after deductible
Mental Health – Inpatient	$100 Copay	15% after deductible	40% after deductible
Substance Abuse – Outpatient	$15 Copay	15% after deductible	40% after deductible
Substance Abuse – Inpatient	$100 Copay	15% after deductible	40% after deductible

	UNITED HEALTHCARE		
PLAN FEATURES	CHOICE HMO	CHOICE PLUS PPO IN-NETWORK	CHOICE PLUS PPO OUT-OF-NETWORK
Emergency Services			
Emergency Room	$100 Copay (waived if admitted)	$100 Copay (waived if admitted)	$100 Copay (waived if admitted)
Ambulance	Covered in full	15% after deductible	40% after deductible
Urgent Care Facility	$40 Copay (in-network only)	15% after deductible	40% after deductible
Hospital Alternatives			
Skilled Nursing Facility	Covered in full	15% after deductible (90 days per calendar year)	15% (90 days per calendar year)[1]
Home Health Care	Covered in full	15% after deductible	15% after deductible
Other Services			
Durable Medical Equipment	Covered in full	15% after deductible	15% after deductible
Wigs	$300 allowance	$300 allowance	$300 allowance
Routine Hearing Care	$15 Copay	15% after deductible	Not covered
Hearing Aids	$2,500 per ear (once per lifetime)	$2,500 per ear (once per lifetime)	Not covered
Vision Screening and Exams	$15 Copay (one every 12 months)	$15 Copay (one every 12 months)	40% after deductible
Eyeglasses and Contacts	$75 allowance (every 24 months)	$75 allowance (every 24 months)	$75 allowance (every 24 months)
Prescription Plan (same for all):	30 Day Supply at Retail: $10 Generic/$35 Preferred Brand/$50 Non-Preferred Brand – 90 Day Supply at CVS or Caremark Mail: $20 Generic / $65 Preferred Brand / $100 Non-Preferred Brand		

[1] 50% coverage with Medicare supplement (90 days per calendar year).

Coverage is identical between non-Medicare and Medicare supplement plans except where noted.

Contributions

CEABF pays 52% of the total premium for retiree annuitants, including the cost of family coverage, and 67% of the total premium for survivor annuitants, including the cost of family coverage.

The following are the annual working rates effective January 1, 2015. These rates represent an estimated cost of self-insured coverage and include administrative expenses.

The working rates below reflect expected RDS payments. It was assumed that in the absence of RDS, the working rates would increase by the assumed value of the subsidy.

	Choice HMO	Choice Plus PPO
Single w/o Medicare	$12,396	$15,600
Two w/o Medicare	$24,804	$31,212
Single w/ Medicare	$5,484	$4,716
Two w/ Medicare	$10,956	$9,444

Section 5.2 – Description of Actuarial Methods and Valuation Procedures

A. Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the **Entry Age Actuarial Cost Method** of funding.

Sometimes called a "funding method," this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the Plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

The Normal Cost for the Plan is determined by summing individual results for each active Member and determining an average normal cost rate by dividing the summed individual normal costs by the total payroll of Members before assumed retirement age.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the Normal Cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date.)

The **Unfunded Actuarial Accrued Liability** is the excess of the Actuarial Accrued Liability over the Actuarial Value of Plan Assets actually on hand on the valuation date. The Unfunded Actuarial Accrued Liability is amortized as a level dollar over an open 30-year period.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the Unfunded Actuarial Accrued Liability.

B. Asset Valuation Method

The actuarial value of assets is based on a five-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return. The Fair Value of assets at the valuation date is reduced by the sum of the following:

(i) 80% of the return to be spread during the first year preceding the valuation date,

(ii) 60% of the return to be spread during the second year preceding the valuation date,

(iii) 40% of the return to be spread during the third year preceding the valuation date, and

(iv) 20% of the return to be spread during the fourth year preceding the valuation date.

The return to be spread is the difference between (1) the actual investment return on Fair Value and (2) the expected return on Fair Value.

C. Valuation Procedures

No actuarial liability is included for members who terminated non-vested prior to the valuation date, except those due a refund of contributions.

The compensation amounts used in the projection of benefits and liabilities were December 31, 2015, rates of pay provided by staff of the CEABF.

No termination or retirement benefits were projected to be greater than the dollar limitation required by the Internal Revenue Code Section 415 for governmental plans.

The pension liabilities limit annual increases in salary to the dollar amount defined under Internal Revenue Code Section 401(a)(17) for affected members. The Retiree Health Care liabilities use unlimited pay.

Section 5.3A – Summary of Actuarial Assumptions and Changes in Assumptions for Pension

The actuarial assumptions used for the December 31, 2015 actuarial valuation are summarized below. The mortality rate, termination rate, retirement rate, and salary assumptions are based on an experience analysis of CEABF, over the period 2009 through 2012. These assumptions were adopted by the Board as of December 31, 2013, based on the recommendation from the actuary.

Mortality Rates. RP-2000 Blue Collar Mortality Table, base year 2000,fully generational based on Scale BB.

Termination Rates. Termination rates based on the recent experience of the CEABF were used. The following is a sample of the termination rates used:

Rates of Termination
Age at Entrance

Attained Age	Males				Females			
	22	27	32	37	22	27	32	37
22	.225				.200			
27	.128	.145			.115	.183		
32	.030	.116	.165		.030	.117	.165	
37	.030	.030	.105	.141	.030	.030	.093	.114
42	.030	.030	.030	.085	.030	.030	.030	.060
47	.030	.030	.030	.030	.030	.030	.030	.030

Retirement Rates. For persons who became participants prior to January 1, 2011, rates of retirement for each age from 50 to 75 based on the recent experience of the CEABF. The following are samples of the rates of retirement used:

Less Than 30 Years of Service at Retirement

Age	Rates of Retirement	
	Males	Females
50-54	.040	.040
55-58	.080	.060
59	.150	.100
60	.150	.150
61-64	.125	.145
65-69	.225	.200
70	.250	.200
71	.300	.240
72	.350	.280
73	.400	.320
74	.450	.360
75	1.000	1.000

30 or More Years of Service at Retirement

Age	Rates of Retirement	
	Males	Females
50-54	.350	.300
55-59	.275	.200
60	.225	.400
61-64	.225	.250
65-69	.270	.200
70	.450	.200
71	.540	.240
72	.630	.280
73	.720	.320
74	.810	.360
75	1.000	1.000

Retirement Rates for Deputy Sheriffs Who Are Members of the Cook County Police Department With 20 or More Years of Service at Retirement

Age	Rates of Retirement	
	Males	Females
50-59	.100	.100
60-64	.200	.200
65	1.000	1.000

Retirement Rates. For persons who became or will become participants on or after January 1, 2011, rates of retirement for each age from 62 to 75 were used. The following are samples of the rates of retirement that were used:

Age	Rates of Retirement	
	Males	Females
62	.400	.350
64	.225	.150
67	.400	.350
70	.450	.200
75	1.000	1.000

Interest Rate. 7.5% per year, compounded annually.

Inflation Rate. 3.25% per year, compounded annually.

Salary Rate (net of inflation):

Age	Rate
25	.0375
30	.0275
35	.0175
40	.0075
45+	.0050

Loading For Reciprocal Benefits. Costs and liabilities of active employees were loaded by 1% for reciprocal annuities where the County is the last employer. It was assumed that 50% of inactive members with one or more year of service would receive a reciprocal annuity where the County is not the last employer. These reciprocal annuities were valued as of the member's retirement date as 10 times an inactive member's accumulated contributions.

Marital Status. 85% of participants were assumed to be married.

Spouse's Age. The spouse of a male employee was assumed to be four years younger than the employee. The spouse of a female employee was assumed to be four years older than the age of the employee.

Inactives. Benefits were estimated based on service and pay and valued as deferred to 55 annuities.

Section 5.3B – Summary of Actuarial Assumptions and Methods for Retiree Health Care

The actuarial assumptions used for the December 31, 2015 actuarial valuation are summarized below. The mortality rate, termination rate, retirement rate and salary assumptions are based on an experience analysis of CEABF, over the period 2009 through 2012. These assumptions were adopted by the Board on January 9, 2014.

Valuation Date December 31, 2015

Discount Rate 7.50%

Salary Scale

Age	Inflation	Merit	Total
<21	3.25%	4.75%	8.00%
21	3.25%	4.55%	7.80%
22	3.25%	4.35%	7.60%
23	3.25%	4.15%	7.40%
24	3.25%	3.95%	7.20%
25	3.25%	3.75%	7.00%
26	3.25%	3.55%	6.80%
27	3.25%	3.35%	6.60%
28	3.25%	3.15%	6.40%
29	3.25%	2.95%	6.20%
30	3.25%	2.75%	6.00%
31	3.25%	2.55%	5.80%
32	3.25%	2.35%	5.60%
33	3.25%	2.15%	5.40%
34	3.25%	1.95%	5.20%
35	3.25%	1.75%	5.00%
36	3.25%	1.55%	4.80%
37	3.25%	1.35%	4.60%
38	3.25%	1.15%	4.40%
39	3.25%	0.95%	4.20%
40	3.25%	0.75%	4.00%
41	3.25%	0.55%	3.80%
42+	3.25%	0.50%	3.75%

Termination Rates:

The following is a sample of the termination rates used.

	Age at Entrance					
	Males			Females		
Attained Age	27	32	37	27	32	37
27	.145			.183		
32	.116	.165		.117	.165	
37	.030	.105	.141	.030	.093	.114
42	.030	.030	.085	.030	.030	.060
47	.030	.030	.030	.030	.030	.030

Retirement Rates

For deputy sheriffs who are members of the Cook County Police department who became participants prior to January 1, 2011 (Tier 1):

Svc at Ret	< 20 Years		>= 20 Years	
Age	Male	Female	Male	Female
50	.010	.012	.100	.100
55	.060	.072	.100	.100
60	.250	.216	.200	.200
65	.150	.120	1.000	1.000
70	.250	.200	1.000	1.000
75	1.000	1.000	1.000	1.000

For other members who became participants prior to January 1, 2011 (Tier 1):

Svc at Ret	< 30 Years		>= 30 Years	
Age	Male	Female	Male	Female
50	.040	.040	.350	.300
55	.080	.060	.275	.200
60	.150	.150	.225	.400
65	.225	.200	.270	.200
70	.250	.200	.450	.200
75	1.000	1.000	1.000	1.000

For members who became participants on or after January 1, 2011 (Tier 2):

Age	Male	Female
62	.400	.350
64	.225	.150
67	.400	.350
70	.450	.200
75	1.000	1.000

Mortality Rates

The RP-2000 Blue Collar table, base year 2000, fully generational based on scale BB.

Disability Rates

Included in termination and retirement rates.

Anticipated Plan Participation

70% of eligible employees are assumed to elect retiree medical benefits.

30% of vested terminated employees are assumed to elect retiree medical benefits upon retirement, and are assume to retire according to the rates below:

Age	% Who Elect
55-59	6%
60-61	20%
62-64	5%
65-69	20%
70-74	25%
75	15%
76+	0%

Based on recent experience, future annuitants are assumed to elect from among the available plans as follows:

% Who Elect	Choice HMO	Choice Plus PPO
Pre-Medicare	89%	11%
Post-Medicare	67%	33%

Current annuitants who elect coverage are assumed to remain in coverage. Current annuitants who have waived or deferred coverage are not assumed to participate in the future.

Dependent Coverage

40% of future annuitants are assumed to cover a dependent. 40% of surviving dependents are assumed to elect coverage upon the death of an actively employed member and are assumed to commence benefits when the actively employed member would have reached age 61. Males are assumed to be 4 years older than females. Actual ages were used for dependents of current annuitants.

Per Capita Health Plan Costs

Estimated net annual per capita incurred claim costs per covered adult for fiscal 2016 at age 65, reflecting administrative expenses, drug rebates and the Retiree Drug Subsidy.

	Choice HMO	Choice Plus PPO
Not Medicare eligible	$16,370	$18,550
Medicare eligible	$4,533	$3,947

Per capita medical costs were developed using a 50/50 blend of historical methodology, which bases the costs on the medical working rates provided by the Fund for calendar year 2016, and new methodology, which bases the costs on claims experience. The resulting costs were adjusted for age morbidity.

The working rates reflect expected RDS payments. The claims experience was also adjusted to reflect RDS payments. Since GASB 43/45 requires AAL and ARC to be calculated without reduction for RDS payments, the above per capita costs were then adjusted upward to include the assumed value of RDS payments, an average of $493 per eligible individual, for fiscal 2016.

The valuation relies on the accuracy of the rate calculations. We understand that the rates represent medical benefit costs only for annuitants under the Fund.

Age-based Morbidity

Per capita costs are adjusted to reflect expected cost differences due to age and gender. Ae morbidity factors for pre-Medicare morbidity were developed from "Health Care Costs—From Birth to Death" sponsored by the Society of Actuaries and prepared by Dale H. Yamamoto (May 2013). Table 4 from Mr. Yamamoto's study formed the basis of Medicare morbidity factors that are gender distinct and assumed a cost allocation of 60% for pharmacy, 20% for inpatient, 10% for outpatient, and 10% for professional services. Adjustments were made to Table 4 factors for inpatient costs at age 70 and below to smooth out what appears to be a spike in utilization for Medicare retirees gaining healthcare for the first time through Medicare. While such retirees were included in the study, their specific experience is not applicable for a valuation of an employer retiree medical plan where participants had group active coverage before retirement. Morbidity factors at sample ages are shown below:

Age	Male	Female
50	0.4612	0.5736
55	0.6085	0.6667
60	0.7829	0.7791
65	1.0000	0.9438
70	1.1873	1.1094
75	1.2752	1.2009
80	1.3381	1.2697
85	1.3479	1.3171
90	1.3235	1.3303

Health Care Cost Trend Rates

Health care cost trend rates apply to expected claims, premiums and retiree contributions:

Year	Pre-Medicare	Post-Medicare
2016	7.75%	6.25%
2017	7.50%	6.00%
2018	7.25%	5.75%
2019	7.00%	5.50%
2020	6.75%	5.25%
2021	6.50%	5.00%
2022	6.25%	4.75%
2023	6.00%	4.75%
2024	5.75%	4.75%
2025	5.50%	4.75%
2026	5.25%	4.75%
2027	5.00%	4.75%
2028+	4.75%	4.75%

Census Data The active, deferred vested and retiree census were provided by the Fund.

Actuarial Cost Method The entry age actuarial cost as a percentage of earnings was used.

Amortization Method 30 years open, level dollar.

Medicare Coordination Medicare is assumed to remain the primary payer for current and future retirees and spouses who are at least age 65 and who are currently on Medicare. Medicare is assumed to become primary for 95% of retirees and spouses who retired before January 1, 2014 and who are not yet age 65, when they attain that age. For all other retirees and spouses, Medicare is assumed to be the primary payer at the time they reach age 65.

IBNR The calculations do not include any explicit amount for incurred but not reported claims (IBNR).

Retiree Drug Subsidy

The value of the Retiree Drug Subsidy under Medicare Part D is not directly reflected in the valuation, in accordance with GASB Technical Bulletin No. 2006-1 Accounting and Financial Reporting by Employers and OPEB Plans for Payments from the Federal Government Pursuant to the Retiree Drug Subsidy Provisions of Medicare Part D, on this issue. An estimate of the value of the subsidy has been reflected in projecting the value of the Excise Tax on High-Cost Employer Plans (see next section).

Miscellaneous

The valuation was prepared on an on-going plan basis. This assumption does not imply that an obligation to continue the plan actually exists.

Considerations of the Patient Protection and Affordable Care Act (PPACA)

Summary of Effects of Selected Provisions

Early Retiree Reinsurance Program – Effective 6/1/2010: Due to the short-term nature of the payments expected to be received under this program, it is assumed to have no future impact on CEABF.

Removal of Lifetime/Annual Maximum: The plan is not subject to the requirement to eliminate lifetime maximums, since it is a retiree only plan.

Expansion of Child Coverage to Age 26: The impact of covering retiree children to age 26 is assumed to have already been reflected in the working rates provided.

Medicare Part D Retiree Drug Subsidy: RDS payments are not reflected as an ongoing offsetting item in GASB 43 valuations, and so no direct impact is reflected. The valuation does reflect the RDS in estimating the future impact of the Excise Tax on High-Cost Employer Health Plan.

Excise Tax on High-Cost Employer Health Plans (aka "Cadillac Tax") - Effective 1/1/2020. We performed a projection of the calculation on the Plan using a CPI of 3.25%, blending non-Medicare and Medicare retiree coverage for testing purposes. The tax amount expected is based on projected net employer costs for Medicare retirees after RDS, as this is the way we expect costs to be determined for tax purposes. The projection indicates that the overall increase in liability would be approximately 0.46% and we have adjusted the results accordingly. Additional commentary on this issue can be found on the following page.

Other Revenue Raisers: The PPACA legislation includes a variety of other revenue raisers that involve additional costs on employers, providers (such as medical device manufacturers) and insurers. We considered these factors when developing the trend assumption used.

Other: We have not identified any other specific provision of the PPACA legislation that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

High-Cost Plan Excise Tax: The PPACA legislation added a new High-Cost Plan Excise Tax (also known as the "Cadillac Tax") starting in calendar year 2020. For valuation purposes, we assumed that the value of the tax will be passed back to the Plan in higher premium rates.

Based on our understanding of the tax, we think it is clear that the tax does not apply directly to CEABF. Rather, the tax applies to the administrator of the benefits, UnitedHealthcare, which in turn is then expected to pass the additional cost along to CEABF.

The tax is 40% of the excess of a) the cost of coverage over b) the limit. We modeled the cost of the tax by calculating “a” (the cost of coverage) using the working rates projected with trend. We calculated “b” (the limit) starting with the statutory limits ($10,200 single and $27,500 family), adjusted for the following:

- Limits will increase from 2018 to 2019 by 4.25% (CPI plus 1%);
- Limits will increase after 2019 by 3.25% (CPI); and
- For retirees over age 55 but not on Medicare, the limit is increased by an additional dollar amount of $1,650 for single coverage, $3,450 for family coverage[1].

We also examined the possibility that the limits would be increased due to excess trend. An estimate of trend for the period from 2010 through 2018 for the federal standard Blue Cross Blue Shield option (using actual increase rates from 2010 to 2015 and the valuation trend from 2015 to the valuation 2018) is compared to the statutory “assumed” 55% trend, with trend in excess of 55% applied on the base amount before the additional amount for “early” retirees. However, it appears due to favorable experience in the federal benchmark Blue Cross Blue Shield plan that there will not be any excess trend.

[1] These additional amounts are available at other ages for plans sponsored by an employer where the majority of employees are engaged in high risk professions including law enforcement officers and fire fighters. Since only a minority of the retirees included in this valuation is police and fire, we are assuming that this exception would not apply.

Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund pension or Other Postemployment Benefits (OPEB) arising from service in all prior years.
Actuarial Cost Method	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension or OPEB plan for a group of plan members to the years of service that give rise to that cost.
Actuarial Present Value of Future Benefits	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
Actuarial Valuation	Study of probable amounts of future pension benefits and the necessary amount of contributions to fund those benefits.
Actuary	Person who performs mathematical calculations pertaining to pension or OPEB and insurance benefits based on specific procedures and assumptions.
Annual Determined Contribution	Disclosure measure of annual pension or OPEB cost.
GASB 67	Governmental Accounting Standards Board Statement Number 67
GASB 43	Governmental Accounting Standards Board Statement Number 43 which specifies how the Annual Required Contribution (ARC) is to be calculated and disclosure requirement for CEABF.
GASB 45	Governmental Accounting Standards Board Statement Number 45 which specifies how to calculate the Annual OPEB Cost that the employer recognizes.
Maturity Ratio	The ratio of the actuarial accrued liability for members who are no longer active to the total actuarial accrued liability. A ratio of over 50% indicates a mature plan. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and losses.
Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the Plan as a whole.
Unfunded Actuarial Accrued Liability (UAAL)	The portion of the actuarial accrued liability not offset by plan assets.
Vested Benefits	Benefits which are unconditionally guaranteed regardless of employment status.

Summary of Legislative Changes

1982 Session

SB 1147

- Actuarial reporting to Insurance Department and Pension Laws Commission. Actuarial statements prepared by a qualified actuary for plan years ending after December 31, 1984 including actuarial present value of credited projected benefits.

SB 1452

- Allows a participant who served as Village Trustee and was not then eligible to participate in the IMRF for such service, to obtain credit in this fund by making the required contributions. Four-year maximum credit.

SB 1579

- Permitted investment list moved to general section of the statute. Expanded fiduciary standards, prohibited transactions, civil action may be brought by Attorney General or by a participant.

HB 2286

- Deputy Sheriff may elect between January 1, 1983 and January 15, 1983 to transfer credit to this Fund from the State Employees' Retirement System.

1983 Session

SB 22

- Delegation of investment authority restrictions.

HB 514

- 10% prudent person investment category.
- 10% increase in spouse benefits to spouses receiving benefits as of January 1. 1984.
- Immediate participation rather than after 1 year of service.
- Refunds if off the payroll at least 30 days.
- Money purchase annuity for County Sheriffs service not counted for Sheriff Formula.
- Elected sheriff may be covered by Sheriff Formula with contributions.

HB 637

- Allows an active member of the General Assembly to establish credit in this fund for time for which he or she could have elected to participate with interest at 6% and to transfer credits to the Park Fund.

1984 Session

- No legislative changes.

1985 Session

HB 17

- For withdrawals on or after July 1, 1985, 10 year vesting formula (for employee minimum and spouse minimum annuity) providing the employee 2% of final average earnings for each year of service reduced 0.5% (for ages 55-60) for each month under age 60 (but no reduction with at least 30 years of service). Spouse minimum amount is 50% of the employee's amount at retirement (reduced 0.5% for each month the spouse is under age 60) but not less than 10% of the final average earnings.
- Unisex money purchase factors for widows/widowers.
- Disability provisions extended to 70 in certain cases.
- Sheriff formula for withdrawals after December 31,1985 after having attained age 50 in service with 20 or more years of service of 50% of 4 year average earnings plus 2% for each year or fraction of service over 20.
- Changes in the reversionary annuity provisions.
- Optional plan of 3% contributions for 1% optional benefit per year of service. Provisions for payment of past service with interest. Provisions expire July 1, 1990. Such plan, if elected by a member, would require a 3% of salary contribution (with interest for past service) and would produce an additional 1% per year of service benefit and would increase the employee annuity, post-retirement increase and spouse annuity. Membership in this plan is optional and as such, it is possible to delay election to just prior to retirement. Therefore, at this time, there is no accurate estimate of how many members will actually elect the optional benefits. The liabilities and the annual cost requirements of the fund may be substantially understated (up to 50% in some cases) if participation is high. It is difficult to pre-fund an unknown benefit. Actuarial losses may occur as experience develops.

1986 Session

HB 2630

- Allows for a member of a County police department to establish service credit for approved leaves of absence without pay, during which the employee served as head of an employee association consisting of other police officers by making the required contributions.
- Allows for the use of service of less than one year for calculating reciprocal annuities in the case of employees who transfer or are transferred as a class from one participating system to another.

HB 2715

- For withdrawals after January 1, 1988, and for employees with at least 10 years of service and age 50, the minimum formula annuity is increased to 2.2% of the Final Average Salary for each of the first 20 years of service and 2.4% for each year thereafter, not to exceed the maximum of 80% of Final Average Salary. For retirement between age 50 (new minimum retirement age) and age 60, the annuity thus computed will be reduced 0.5% for each month the employee is under age 60 unless the employee has 30 or more years of service in which case no reduction will apply.
- The surviving spouse of an employee who retires on or after January 1. 1988, with at least 10 years of service is entitled to 50% of the annuity including increases that the deceased annuitant was receiving as of his or her date of death. Such annuity to be reduced 0.5% for each month the surviving spouse is under age 60 at the date of the annuitant's death.
- Effective January 1, 1988, any child's annuity being paid shall be increased from $140 per month to 10% of the employee's salary at the date of death provided that the increased annuity would be greater than $140 per month, subject to Statutory maximums.

- Effective January 1, 1987, the maximum age conditions for any disability are removed for employees whose disability continued past that date.
- A Deputy Sheriff with at least 15 years of service as a Deputy Sheriff can receive credit under the Police formula for other Cook County service by electing to pay an additional contribution prior to retirement. In addition, any Police Officer who has rendered at least 20 years of service and who separates from service prior to age 50 and does not withdraw his or her contributions can apply for pension benefits at age 50 without returning to duty.
- Effective July 1, 1988, all employee and surviving spouse annuitants will receive a one-time increase. Such increase to be an additional 1% for each full year that the annuitant has received benefits as of July 1. 1988.
- An alternative plan for elected officials of 3% of the Final Average Salary for the first 8 years, 4% for the next 4 years and 5% thereafter, subject to the maximum of 80%, is available. The elected official must contribute an additional 3% of salary to receive these benefits.
- Effective December 1, 1988, the Retirement Board will be increased from 5 to 7 Trustees. One annuitant Trustee to be elected for a 3 year term by those persons receiving annuity or disability benefits and 1 Forest Preserve District Trustee to be elected by the Forest Preserve District contributors for a term of 3 years beginning December 1, 1988.

1988 Session

- No legislative changes

1989 Session

SB 95

- Allows active members of the General Assembly to transfer credits and creditable service established in the Fund to a Fund established under Article 5 of the Pension Code.
- For withdrawals on or after July 1, 1985, provides that for employees with at least 30 years of service, no reduction for age less than 60 will apply for the spouse annuity.

SB 1096

- Extends the Optional Plan of benefits from the original expiration date of July 1, 1990 to July 1, 1992.

HB 332

- Signed August 23, 1989.
- Eliminated age-related discriminatory provisions as required by Federal law or regulations.
- Provided for age discrimination changes effective January 1, 1988 to eliminate age 65 requirements for marriage in service and children's benefits, provided contributions after age 65 for spouse benefits, provided employee accumulation annuities be computed after age 70. provided employee and spouse accumulation annuities not be "fixed" at age 65, provided no age 70 restriction on disability benefits, provided for active members over age 65 that their accounts be "unfixed" and accumulate interest until the date of withdrawal, and provided that there be no age 70 membership limitation and removed the permitted "no spouse" refund at age 65.
- Provides that for employees retiring after January 1, 1988, but before age 55, Section 20-131 shall not apply; therefore, they are not entitled to the alternative formula set forth in Section 20-122 repealed in 1975.

HB 158

- Provides for payment by the Fund of 50% of the health care premiums for annuitants who participate in any of the County's health care programs beginning January 1, 1990 and ending December 31, 1993, subject to the following maximums:

Single coverage, no Medicare	$130.00 per month
Single coverage, with Medicare	39.00 per month
Annuitant + 1 family member, no Medicare	212.00 per month
Annuitant + 1 family member. 1 with Medicare	168.00 per month
Annuitant + 1 family member, both with Medicare	78.00 per month
Annuitant + 2 or more family members, no Medicare	280.00 per month

1990 Session

SB 1951

- Signed January 14, 1991.
- Raises the maximum annuity for a Deputy Sheriff from 75% of final average salary to 80% of final average salary.
- Provides for a revised table to be used for reversionary annuities to allow for the younger age 50 retirement approved in previous legislation.
- Allows for the refund of the additional 0.5% contributions that are paid by a Deputy Sheriff for the special Sheriff's formula to be refunded if the regular formula is used to calculate the employee annuity at the time of retirement. The refund, if given, is to include the interest as well as the 0.5% contributions.
- In the case where an employee who is disabled and cannot return to work after all his/her disability credit has expired, and chooses the option to pay for up to one additional year of service under Section 9-174, this additional service will not affect the resignation date for annuity purposes, but the salary and service will be used for such purposes.
- Provides for employees who retire on or after November 1, 1990, any accumulated vacation paid out in a lump-sum at the time of retirement will not affect the employees' withdrawal date for purposes of annuity. Any service will be granted and used for annuity purposes, but the final average salary will not include the salary for any vacation paid out.

SB 136

- Amends Chapter 120, Paragraph 671 of the Revenue Act to provide for a separate listing on the tax bill of the dollar amount of tax due from the person assessed which is allocable to a tax levied under the Illinois Pension Code, or any other tax levied by a municipality or township for public pension or retirement purposes. Effective January 1, 1990.

1991 Session

HB 971

- Signed November 19, 1991.
- Early Retirement Window for employees attaining age 55 prior to withdrawal and withdrawing on or after January 1, 1992, but before December 31, 1992, the service requirement for minimum formula annuity is reduced to 5 years. In addition, for the same period above, the age discount for retirement prior to age 60 is reduced to 0.25% per month under age 60 at retirement. The widow(er)'s annuity for the above early retirement window is 50% of the employee's annuity reduced by 0.5% for each month the widow(er) is under the age 60 at the time of the employee's death.

Other Changes

- Provides that the 3% annuity increase will begin on January 1st following the first anniversary of retirement for employees who retired with 30 or more years of service and were under age 60 at retirement.
- Extends the Optional Plan of Benefits for an additional 5 years to July 1, 1997.
- Allows for an employee to make contributions and receive service credit for any unused accumulated sick leave up to 180 days, at retirement.
- Employees may now discontinue making contributions to the Pension Fund after 35 (previously 42) years of contributing service upon notification to the Retirement Board at least 60 days before the deductions cease.
- For widow(er)s of employees or annuitants who die after November 19, 1991, the maximum limit on the spouse annuity is removed provided that the employee was at least 60 with at least 20 years of service or also if retirement occurred on or after January 1, 1982, at age 65 or over with at least 10 years of service for retirements.
- For widow(er)s of employees who retired on or after January 1, 1984, but before July 1. 1985. with at least 30 years of service, the annuity is 50% of the employee's annuity as of the date of retirement with no discount for under age 60.
- Beginning with retirements or deaths on January 1, 1992, with at least 10 years of service, the age discount for a widow(er)'s annuity will be 0.5% for each month the widow(er) is under age 55 at the date of the employee's death. This is reduced from age 60 for prior deaths or retirements.
- Beginning on November 19, 1991, provides for a $1,000.00 death benefit payable upon the death of employee or annuitant to the employee's designated beneficiary, or to the employee's estate if no beneficiary has been named.
- Beginning December 1, 1991, the Fund may pay, on behalf of each of the Fund's annuitants who choose to participate in any of the County's health care plans, all or any portion of the total health care premium (including coverage for other family members) due from each such annuitant.
- Allows the annuitant to authorize the withholding of dues from annuity checks for certain labor organizations.
- Allows participation for all employees with at least one month of service.
- Provides for a repayment of contributions and transfer of service from the General Assembly and for former members of the General Assembly through February 1, 1993.
- Grants the authority to rent or lease office space to the Board of Trustees when deemed desirable for the purposes of the Fund.
- Allows the Pension Fund to withhold contributions to a labor organization from annuity checks provided that at least 100 annuitants authorize withholdings from their checks.
- Provides for the repayment of contributions by former members of the County Police who were the head of an employee association, to include both the employee and employer shares.

1992 Session
SB 1770

- Signed September 16, 1992.
- Early Retirement Incentive
  - Provides an extra 1% per year of County service, up to 10 maximum, times the final four year average salary for those eligible employees. There is no cost to the employee. The age discount from age 55 to 60 is eliminated if eligible.

  - Eligible if a contributing member on May 1, 1992 and:
    - Retires on or after December 1, 1992 and on or before May 29. 1993;
    - Attains age 55 or more on or before the date of retirement; and
    - Has at least 10 years of creditable service.

1993 Session
SB 1650

- Signed January 26, 1993.
- Provides that the 3% annuity increase will begin no later than January 1, 1993 for employees who retire before age 60 before January 1, 1991 with at least 30 years of service.
- For widow(er)s of annuitants who die on or after January 1, 1993, the widow(er)'s annuity shall be 50% of employee's retirement annuity at death discounted 0.5% per month the widow(er)'s age is less than 55, except if the employee had 30 years of service.
- Allows an employee with 25 years of service to pay for up to 2 years of military service, whether or not followed by County service.
- Two year minimum subsequent service is changed to six months for employees who apply to repay a refund between January I, 1993 and March 1, 1993.
- Employees may transfer to County up to 10 years with Municipal or Laborers' until March 1 1993.
- Allows for transfer of County service credit to Judges.
- Allows a State Policeman to transfer all or some of his service with County Police to State Employees Retirement System until July 1, 1993 and reinstate service credit terminated by a refund by paying 6% compounded annually until July 1, 1993.
- Former members of County Police who retire January 1, 1993 to March 1, 1993 do not have to pay employer contribution for periods served as head of an employee association.

1994 Session

- No legislative changes.

1995 Session
SB 114

- Approved July 14, 1995.
- The amount of earnings that may be taken into account by any retirement system is limited to the maximum dollar limitation specified in Section 401(a)(17) of the Internal Revenue Code, except for persons who became participants before 1996.
- Allows for active participants employed be the Cook County State's Attorney's office on January 1, 1995 to transfer to this Fund credits accumulated under a pension fund established under Article 5 of this Code and to transfer said credits from said fund to the Cook County fund upon payment of both employee and employer contributions with 6% interest to the County Employees' Annuity and Benefit Fund.

- The Fund is authorized to make certain involuntary distributions required by Section 401(a)(9) of the Internal Revenue Code.

SB 424

- Approved July 7, 1995.
- The Pension Laws Commission was created as a legislative support services agency.

1996 Session

SB 1456

- Approved August 9, 1996.
- Any chief of the County Police Department or undersheriff of the County Sheriffs Department may elect to be included as a deputy sheriff.

1997 Session

HB 313

- Signed June 27, 1997.
- Change county size necessary for fund creation to 3,000,000 from the previously required 500.000.
- As of January 1, 1998 the automatic annual increase for employee and spouse annuitants changed to 3% compounded for all past, current, and future annuitants, regardless of the effective date of the annuity. Term annuities are not eligible for the automatic annual increase.
- Early Retirement Incentive
    - Provides an extra 1% per year of County service, up to 10 maximum, times the final four year average salary for those eligible employees. There is no cost to the employee. The age discount from age 55 to 60 is eliminated if eligible.
    - Eligible if a contributing member on May 1. 1997 and:
        - Retires on or after September 1. 1997 and on or before February 28, 1998;
        - Attains age 55 or more on or before the date or retirement; and
        - Has at least 10 years of creditable service.

- Effective January 1, 1998 all widow(er) annuitants will have their annuities increased by 3% and will receive the automatic increase of 3% compounded annually. Those widow(er) annuitants receiving a Term annuity will not be eligible for the automatic annual increase.
- Extends the Optional Plan of benefits to July 1,2002.
- Allows members of the Cook County police department to transfer their service into the Policemen's fund until July 1, 1998. and to reinstate service credit terminated by a refund by paying 6% compounded annually.
- Allows members of the fund with at least 20 years of service credit to make contributions, until June 1, 1998, into the fund based on CTA compensation and creditable service is granted for this period for up to 10 years of service credit.

1998 Session

- Effective July 1, 1999, Public Act 90-731, allows an alternate payee (former spouse, child, or dependent) designated in a Qualified Domestic Relations Order to receive all or a specified portion of a member's retirement benefits or refund otherwise payable to the member.

1999 Session

- No legislative changes.

2000 Session

- Passed Public Act 87-1130, which removes the remarriage penalty. Effective September 6, 2000 widow annuities will no longer be ceased due to their remarriage.

2001 Session

- No legislative changes.

2002 Session

HB 5168

- Signed June 28, 2002.
- Contractual service to the Retirement Board, of at least 5 years, can be purchased as creditable service in the fund for up to 10 years of services by making a written application to the board before July 1, 2003. A person who establishes such credit may, at the same time, reinstate credit in the Fund and repay a refund without a return to service.
- An employee, who withdraws on or after July 1, 1996 but before August 1, 1996, at age 55 or over with 8 or more years of service, may elect to receive a minimum formula annuity equal to 2.2% of the Final Average Salary for each of the first 20 years of service and 2.4% for each year thereafter, not to exceed the maximum of 80% of Final Average Salary. There will be an age discount of 0.25% for each month that the employee is under the age of 60, unless the employee has at least 30 years of service.
- For withdrawals after June 30, 2002, with at least 10 years of service and age 50. the minimum formula annuity is increased to 2.4% of the Final Average Salary for each year of service, not to exceed the maximum of 80% of Final Average Salary.
- Early Retirement Incentive
    - Provides an extra 1% per year of County service, up to 10 maximum, times the highest consecutive four year average salary in the last 10 years of service for those eligible employees. There is no cost to the employee. The age discount for attained age under 60 is eliminated if eligible.
    - Eligible if a contributing member on January 1, 2001 and:
        - Retires on or after November 30, 2002 and on or before March 31, 2003;
        - Attains age 50 or more on or before the date of retirement; and
        - Has at least 20 years of creditable service in the Fund.

- For widow(er)s of annuitants who die in service or after July 1, 2002, or has at least 10 years of service and dies on or after July 1, 2002 while receiving an annuity, the widow(er)'s annuity shall be 65% of employee's retirement annuity at death discounted 0.5% per month the widow(er)'s age is less than 55, except if the employee had 30 years of service.
- For widow(er)s of annuitants who were not married at the time of retirement, but married after retirement for at least one year prior to annuitant's death, the widow(er) will be eligible for an annuity if the refunded contributions for a widow(er)s annuity are repaid, plus interest at the rate of 6% per year. (The Pension Fund Board has received a legal opinion that has interpreted this to include the current widow(er). The legal opinion was that, since in these instances no refund of spouse contributions was made, there is no payment due from the widow.)

- Extends the Optional Plan of benefits to July 1. 2005.

2003 Session

- No legislative changes.

2004 Session

- No legislative changes.

2005 Session

SB 1446

- Made certain changes to the provisions relating to QILDRO, effective July 1, 2006. It makes an alternate payee entitled to receive death benefits and allows the alternate payee to receive a percentage of the employee's retirement benefits (instead of only a fixed dollar amount).
- Public Act 94-0079, prohibits Illinois public pension funds from investing or depositing in entities doing business in or with die government of Sudan.

2006 Session

- No legislative changes.

2007 Session

HB 49

- Public Act 95-279, effective January 1, 2008.
- Provides that legally adopted children shall be entitled to the same benefits as other children, and no child's or survivor's benefit shall be disallowed because the child is an adopted child.

HB 3578

- Public Act 95-0654, effective January 1, 2008.
- Eliminated the alternative formula for county officers elected after January 1, 2008.

HB 5168

- Signed into law on August 23, 2007 as Public Act 95-0369.
- Provided that members who were in active employee status on December 31, 2006, applies for a refund of contributions between the dates of August 23, 2007 and October 7, 2007, and resigns their position between August 23, 2007 and October 22,2007, shall be entitled to receive a one-time lump sum retirement cancellation payment equal to the member's accumulated contributions with interest, multiplied by 1.5, in lieu of any retirement annuity or other benefit provided by the fund. An employee who receives a retirement cancellation payment may not be rehired until after being out of service for at least 365 days. A person who has received an alternative retirement cancellation payment and who returns to service under the Fund must repay the regular refund with interest at 3% per year and the 50% enhancement payment with interest at 6% per year.
- Eliminated the requirement to maintain various reserve accounts no longer needed for the administration of the fund.

SB 1380

- Signed into law on August 28, 2007 as Public Act 95-0504.
- Provides that for 6 months from the effective date, an employee may transfer to this Fund up to 6 years of creditable service accumulated under Article 3 of the Pension Code upon payment to this Fund of the

amount of employee and employer contribution that would have been required if the employee had participated in this Fund during the period for which credits is being transferred plus interest at the rate of 6% per year.

2008 Session

SB 2520

- Public Act 95-1036, effective February 17. 2009.
- Provides that duty disability and child's disability benefits shall not be allowed unless application therefor is made while the disability exists; except that this limitation does not apply if the Board finds that there was reasonable cause for delay in filing the application while the disability existed. Provides that this is intended to be a restatement and clarification of existing law and does not imply that application for a duty disability benefit made after the disability had ceased, without a finding of reasonable cause, was previously allowed under this Article.
- Provides that (i) before any action may be taken by the Board of Trustees on an application for duty disability benefit or widow's compensation or supplemental benefit, the related applicant must file a timely claim under the Workers' Compensation Act or the Workers' Occupational Diseases Act, as applicable, to establish that the disability or death resulted from an injury incurred in the performance of an act or acts of duty, and the applicant must receive compensation or payment from the claim or the claim must otherwise be finally adjudicated and (ii) with respect to duty disability', satisfactory proof must be provided to the Board that the final adjudication of the claim established that the disability or death resulted from an injury incurred in the performance of an act or acts of duty.
- Amends the Cook County Forest Preserve Article of the Illinois Pension Code. Adds a provision imposing forfeiture of benefits upon conviction of a felony arising out of or in connection with the member's employment.

2009 Session

SB 0364

- Public Act 96-0006 effective April 3, 2009.
- Requires Board members to file a verified written statement of economic interest annually with the office of the Clerk of Cook County.
- Requires the Board to adopt a policy that sets quantifiable utilization goals for the management of assets in specific asset classes for emerging investment managers. Goals shall be separated by minority ownership, female ownership, and person with a disability ownership.
- Requires that if at least one emerging firm meets criteria of search process, at least one shall be invited to present to the Board for final consideration.
- Requires the Board to adopt a policy that sets forth goals for increasing the racial, ethnic, and gender diversity of its fiduciaries, including its consultants and senior staff.
- Requires the Board to adopt a policy that sets forth goals for utilization of WMDBE firms for all contracts and services, based on the percentage of total dollar amounts of all contracts let.
- Requires the Board to adopt a policy that sets forth goals for increasing the utilization of minority broker-dealers.
- Requires an annual report to the Governor and General Assembly on the utilization of "emerging firms" as defined by Article 1 of the Pension Code.
- Requires the Board to award all contracts for investment services using a competitive process that is substantially similar to the process required for the procurement of professional services under Article 35 of the Illinois Procurement Code. Requires the Board to adopt a procurement policy which will be posted on the Fund's website and filed with the Illinois Procurement Policy Board.

- Provides that a person may not act as a consultant or investment adviser unless that person is registered as an investment adviser or bank under the federal Investment Advisers Act of 1940.
- Requires investment contracts between the Retirement Board and investment service providers to include certain required information.
- Provides consultant contracts cannot exceed five years in duration; however, incumbent consultants may compete for new contracts.
- Requires investment consultants and advisers to disclose all direct and indirect fees, commissions, penalties, and other compensation paid by or on behalf of the investment consultant or adviser in connection with the services provided.
- Requires that a description of every contract let for investment services be posted on the website, including name of entity awarded the contract, amount of contract, total fees paid, and disclosure describing the factors that contributed to the selection.
- Requires the Fund to maintain a website that shall include standard investment reporting, a copy of relevant Board policies, a listing of investment consultants and managers, a notification of any requests for investment services, and the names and e-mail addressed of Board members, Fund directors, and senior staff.
- Requires Board members to attend at least eight hours of ethics training per year and requires each Board to annually certify its member's compliance and submit an annual certification to the Division of Insurance of the Department of Financial and Professional Regulation.
- Prohibits any Fund trustee or employee or their spouses or immediate family living with them to intentionally solicit or accept any gift from any prohibited source as prescribed in Article 10 of the State Officials and Employees Ethics Act, including educational materials and missions and travel expenses for discussing Fund business.
- Provides that any person who knowingly makes any false statement or falsifies or permits falsifying any record of the pension fund in an attempt to defraud is guilty of a Class 3 felony.
- Provides that no person or entity shall retain a person or entity to influence the outcome of an investment decision or the procurement of investment advice to a pension fund for compensation, contingent upon the decision of the Board.
- Requires approval for travel or education mission expense of a Trustee by a majority of the Board prior to mission.

SB 0189

- Public Act 96-0542 effective August 17, 2009.
- Amends the Open Meetings Act and the Freedom of Information Act.

2010 Session

SB 1946 and SB 550

- Public Acts 96-0889, effective April 14, 2010, added 5/1-160 and Public Act 96-1490, effective December 30, 2010, made technical changes 5/1-160. These acts created a 2nd Tier of benefits for all reciprocal systems of the Pension Code.
- Members first participating in any reciprocal fund, except Judges and GARS, on or after January 1, 2011 will be Tier 2 members.
- Tier 2 members will have their salary capped at $106,800 for all purposes. The amount of the cap is subject to increase annually at the lesser of 1/2 of the change in CPI-U or 3%. If the change in CPI-U is zero or negative, the cap will not change.
- Tier 2 member's Final Average Salary (FAS) used in annuity benefit calculations will be based on the highest consecutive 96 months in the last 10 years.
- Tier 2 members will not be able to receive an unreduced retirement annuity until age 67 and the earliest they can receive any retirement annuity is age 62. Annuities payable before age 67 are reduced 1/2% for each full month under 67 regardless of service. Tier 2 members must have at least 10 years of service to qualify for a retirement annuity.
- Tier 2 members will not be able to receive a COLA until the January 1 following their 67th birthday or following the 1 year anniversary of retirement, whichever is later. The COLA will not be compounded and will be the lesser of 1/2 the change in CPI-U or 3%. If the change in CPI-U is zero or negative, there will be no increase.
- The Tier 2 surviving spouse annuity will be 66-2/3% of the member's retirement annuity at death. If the member is not retired, it is 66-2/3% of the member's earned retirement annuity.
- The Tier 2 COLA for a surviving spouse annuity will begin the January 1 following the member's death if the member was retired. If the member was not retired it will begin on the January 1 following the 1 year anniversary of the member's death. The COLA will not be compounded and will be the lesser of the 1/2 change in CPI-U or 3%. If the change in CPI-U is zero or negative, there will be no increase.
- Tier 2 members receiving a retirement annuity will have their annuity suspended if they go to work on a full time basis with any reciprocal fund except Judges and GARS.
- There was no change in the member's benefit accrual percentage (2.4% per year) or the employee or employer contributions.

HB 4644

- Public Act 96-0961 effective July 2, 2010 added 5/9-128.2 allows elected officials to establish earnings credit for the amount of stipend that was not received.
- Member must pay employee contributions and employer's normal cost on the stipend not received and actuarially assumed interest. Payment must be received by January 2, 2011.

2011 Session

SB 1716

- Public Act 96-1513 effective June 1, 2011 allows 2 unmarried people to enter into a Civil Union. Partners of a Civil Union are to be treated the same as a spouse in the State of Illinois.
- The Fund will now grant spouse annuity benefits to a partner of a Civil Union and annuitants can cover their Civil Union partners under the Fund's Health Benefit plan. A Civil Union certificate will be treated as the equivalent to a Marriage certificate.

SB 1672

- Public Act 97-0530 effective August 23. 2011 requires all Funds to comply with the Federal H.E.A.R.T. Act of 2008.

- Public Act 97-0609 effective January 1, 2012 amends 5/1-160(h) stating members that first become participants on or after the effective date will have their retirement annuity suspended if they return to work for the employer on a contractual basis.
- The member is required to notify the Fund prior to accepting the contractual employment.

HB 1670

- Public Act 97-0504 effective January 1, 2012 amends the Open Meetings Act to require elected or appointed members of public bodies to take electronic training by the Attorney General's Public Access Counselor. Training must be completed by the end of 2012. Members that are elected or appointed after January 1, 2012 must complete the training within 90 days of taking the oath or assuming the responsibilities of the position.

HB 3813

- Public Act 97-0651 effective January 5, 2012 amends Article 1 in regards to Fraud and Fiduciary Liability.
- Requires fiduciaries to report reasonable suspicion of false statements. The Board of Trustees must report reasonable suspicion of false statements to the State's Attorney.
- The Act also amends 5/9-219 requiring sheriff police and correction officers that purchase service while on approved leave to represent a labor organization to remain in sworn status during the leave to be eligible to purchase service credit.

2012 Session

HB 3969

- Public Act 97-0967 effective August 16, 2012 amends Article 1 adding 5/1-166 which requires an employer to pay GARS for any additional liability created from a reciprocal retirement if the retiree's FAS is higher than their highest GARS salary, and they were employed by the non-GARS agency for 2 years or less since leaving GARS.

2013 Session

SB 1921

- Public Act 98-0551 effective August 27, 2013 amends Article 9 adds 5/9-119.1, which defines "earned annuity" to clarify how the Fund should administer Tier 2 Spouse Annuity benefits.
- Adds 5/9-202.1 to allow images to be treated as original records.
- Amends 5/9-112 to simplify the definition of salary and spells out how salary is defined for determining Ordinary Disability benefits.

SB 1

- Public Act 98-0599 effective June 1, 2014 amends Article 9 sections 219 and 220 so that new employees starting on or after June 1, 2014 shall not receive credit for lump sum vacation time paid and will not be allowed to purchase unused sick time.

2014 Session

SB 2809

- Public Act 98-1137 effective June 1, 2015 amends Article 5/1-115 to allow the Attorney General to bring a civil action to enjoin the payment of benefits to any person who is convicted of any felony relating to or arising out of or in connection with that person's service as an employee under the Code.

2015 Session

SB 842

- Public Act 99-0008 effective July 1, 2015 creates Articles 5/9-184.5 and 5/10-107.5 which, if the County or Forest Preserve District fails to transmit the required contribution to the Fund, allows the IL State Comptroller to deduct the amount due from payments of State Funds due to the Employer and remit to the Fund.

SB 1334

- Public Act 99-0462 effective January 1, 2016 amends Article 5/1-109.1 to include aspirational goals for retirement systems to use emerging investment managers for not less than 20% of the total funds under management. It also sets aspirational goal that not less than 20% of investment advisors and other contracts to utilize businesses owned by minorities, females, and persons with disabilities as those terms are defined in the Business Enterprise from Minorities, Females, and Persons with Disabilities Act.