# CITY OF LAWRENCE
## POSTRETIREMENT HEALTH INSURANCE

**GASB 45 INFORMATION**

**FOR**

**FISCAL YEAR ENDING**
**DECEMBER 31, 2015**

**BASED ON A**
**VALUATION DATE OF JANUARY 1, 2015**

***MARCH 2016***

Actuaries &
Consultants

**LEWIS & ELLIS, INC.**
**OVERLAND PARK, KS**

March 17, 2016

City of Lawrence
Mr. Bryan Kidney
Finance Director
6 East 6th Street
Lawrence, KS 66044

Dear Bryan:

This report presents actuarial information determined in accordance with Governmental Accounting Standards Board Statement No. 45 (“GASB 45” or “GASB”) regarding the insurance benefits available to retirees of the City of Lawrence, Kansas (“City”). The purpose of this report is to:

- Present information that provides a basis for disclosure on the financial statements as of the fiscal year ending December 31, 2015; and

- Determine the Annual OPEB Cost for fiscal year 2015.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices. Employee data, claim experience, and plan information were furnished by the City and its vendors. The data provided has been reviewed for reasonableness, but no attempt has been made to audit such information. The valuation is based on the provisions of the plan as of the time of completion of this study. Each actuarial assumption used in this valuation represents reasonable expectations of future experience under the postretirement insurance program.

The undersigned is a member of the American Academy of Actuaries and meets its qualification standards to render the actuarial information contained herein.

Respectfully submitted,

LEWIS & ELLIS, INC.

Patrick Glenn

Patrick Glenn, ASA, ACAS, MAAA, CPA (inactive)

# TABLE OF CONTENTS

PAGE

# SUMMARY

The valuation procedures noted below and information presented in this report are based on provisions underlying Government Accounting Standards Board Statement No. 45. GASB stipulates retiree insurance costs be measured taking age into account. The excess of expected costs by age over retiree contributions forms the basis for the valuation. The amount of annual expense accrued under GASB is equal to the Annual OPEB Cost. The offsetting liability, called the Net OPEB Obligation, is reduced by the amount of retiree benefits (i.e. employer cost) provided during the year.

## VALUATION PROCEDURES

The financial information for fiscal year 2015 is based upon a measurement date of January 1, 2015 using the participant census data as of January 1, 2015. The financial information for fiscal year 2013 was based upon a measurement date of January 1, 2013 using the participant census data as of January 1, 2013. Updated valuations are required every two years for the City. Financial results for interim years are based on the prior "full" or updated valuation unless a material change occurs.

## SUBSTANTIVE PLAN

The City of Lawrence, Kansas allows qualifying retirees to continue insurance coverage under the City's group insurance program until Medicare eligibility (i.e., age 65). Employees must terminate service and commence immediate retirement or disability benefits under KPERS / KP&F to be eligible. The retiree benefit program operates as a single-employer defined benefit plan. Medical, Rx and Dental coverage are provided. All coverage is arranged through self-insurance with stop-loss coverage for Medical / Rx. Retirees must contribute group premiums to maintain coverage unless Single or Family coverage is elected. Retirees contribute 80% of group premiums when these coverage tiers apply.

## FUNDING OF BENEFITS

Benefits are paid from a Health Insurance fund. This arrangement does not qualify as an "OPEB Plan" under GASB requirements and thus the assets of the fund may not be reported as an offset to GASB liabilities. Whether or not assets may be reported, GASB requires that the valuation interest rate be based on expected returns pertaining to the source of funds projected to provide for the payment of benefits. Based on long-term historical return experience of comparable asset classes anticipated to be held by the City, an annual valuation interest rate of 3.50% is assumed. This is unchanged from the prior valuation.

## RESULTS

The actuarial cost method is a procedure to allocate present value costs to different time periods. The entry age normal – level percent-of-pay actuarial cost method has been utilized for allocation. This same method was utilized for the prior valuation.

The Actuarial Present Value (APV) of benefits is shown for informational / instructional purposes; it is not required to be disclosed or recognized. The Normal Cost is the amount of the APV of benefits allocated to the current year. The amount of Actuarial Accrued Liability (AAL) is the portion of the APV allocated to all prior years. Annual OPEB Cost consists of the Annual Required Contribution (ARC) and the Interest and ARC Adjustments. The ARC equals the Normal Cost plus amortization of the AAL.

We have used a 30 year closed-period amortization of the AAL (based on level percent-of-pay) to produce the Annual OPEB Cost (i.e. expense). As of January 1, 2015 the remaining amortization period equals 22 years. While only a portion of the AAL is currently recognized, the full amount of AAL must be disclosed.

The Annual OPEB Cost is a charge of $1,417,819 for fiscal year 2015. The APV and AAL are $20,880,472 and $10,639,177, respectively.

Changes and items of impact relative to the prior valuation are described below:

- The disability, turnover and retirement rates were updated where applicable to be based on the latest available rates from KPERS / KP&F.
- The assumed mortality was updated to reflect the Society of Actuaries Adjusted RPH-2014 Total Dataset Mortality table with MP-2015 full generational improvement.
- The assumed trend rates, per capita costs and retiree contribution premiums were updated as part of the ongoing valuation analysis.
- We factored into the projection the increase in the deductible from 2015 to 2016.

The actual GASB 45 costs may differ from expected due to experience gains / losses and changes in plan provisions, assumptions and/or actuarial methods. Example sources of experience gains may include lower retirements than assumed and lower medical inflation than assumed. Example sources of experience losses may include lower turnover than assumed and less increase in retiree contribution premiums than assumed. The projected AAL as of January 1, 2015 based on the 2013 valuation parameters was $10.7 million. The actual AAL as of January 1, 2015 is $10.6 million.

## FUTURE REPORTING

The current valuation as of January 1, 2015 provides information for fiscal years 2015 and 2016. The Annual Required Contribution for interim year 2016 will remain at $1,523,533 but the Annual OPEB Cost will change. After the implementation year, the Annual Required Contribution (ARC) and Annual OPEB Cost do not equal due to two adjustments. These are the Interest cost and the ARC adjustments. The Net OPEB Obligation at any point in time equals the accumulated Annual OPEB Cost minus accumulated Employer Contributions since implementation of GASB 45.

GASB 43 and 45 are being replaced by GASB 74 (OPEB Plans) and 75 (Employers). These new standards become effective for fiscal years beginning after June 15, 2016 and June 15, 2017, respectively.

| | | |
|---|---|---|
| A. | Actuarial Present Value of Benefits | |
| | Future Retirees | 18,676,887 |
| | Current Retirees | 2,203,585 |
| | | 20,880,472 |
| B. | Actuarial Accrued Liability | |
| | Future Retirees | 8,435,592 |
| | Current Retirees | 2,203,585 |
| | | 10,639,177 |
| C. | OPEB Plan Assets | -0- |
| D. | Unfunded Actuarial Accrued Liability (B – C) | 10,639,177 |
| E. | Amortization Factor (Closed – 22 years remaining, Level %-of-Pay) | 18.06197 |
| F. | Amortization of Unfunded | 609,654 |
| G. | Normal Cost | 913,879 |
| H. | Annual Required Contribution (ARC) (F + G) | 1,523,533 |
| I. | Net OPEB Obligation at Beginning of Year | 5,191,000 |
| J. | Interest on Net OPEB Obligation to end of year (I x .035) | 181,685 |
| K. | Adjustment to the ARC (I / E) | 287,399 |
| **L.** | **Annual OPEB Cost (H + J – K)** | **1,417,819** |
| M. | Valuation Interest Rate | 3.50% |
| N. | Aggregate Payroll Growth | 1.50% |
| O. | Measurement Date | January 1, 2015 |

## DISCLOSURE INFORMATION

**1. Annual OPEB Cost for 2015**

| | |
|---|---|
| A. Normal Cost | $913,879 |
| B. Amortization of Unfunded Actuarial Accrued Liability | 609,654 |
| C. Annual Required Contribution (with interest) | 1,523,533 |
| D. Interest on Net OPEB Obligation | 181,685 |
| E. Adjustment to the ARC | 287,399 |
| F. Annual OPEB Cost (C + D – E) | $1,417,819 |

**2. Employer Contributions for 2015**

| | |
|---|---|
| A. Retiree Claims | $1,047,547 |
| B. Retiree Admin Fees and Stop-Loss Premiums | 97,711 |
| C. City Contributions for HRA and Wellness | 21,800 |
| D. Retiree Contribution Premiums | 438,785 |
| E. Employer Contributions (A + B + C - D) | $728,273 |

**3. Schedule of Employer Contributions**

Fiscal Year Ending December 31

| Year Ending | Annual OPEB Cost | Employer Contributions | Percentage Contributed | Net OPEB Obligation |
|---|---|---|---|---|
| 2012 | 2,066,000 | 85,000 | 4.0% | 4,468,000 |
| 2013 | 1,077,000 | 653,000 | 60.7% | 4,892,000 |
| 2014 | 1,070,000 | 771,000 | 72.1% | 5,191,000 |
| 2015 | 1,418,000 | 728,000 | 51.3% | 5,881,000 |

**4. Net OPEB Obligation at 12/31/2015**

| | |
|---|---|
| A. Balance at 12/31/2014 | $5,191,000 |
| B. Annual OPEB Cost for 2015 | 1,418,000 |
| C. Employer Contributions for 2015 | 728,000 |
| D. Balance at 12/31/2015 (A + B - C) | $5,881,000 |

## 5. Schedule of Funding Progress

| | (a) | (b) | (b-a) | (a / b) | (c) | ((b-a) / c) |
|---|---|---|---|---|---|---|
| Valuation Date | Actuarial Value of Assets | Actuarial Accrued Liability (AAL) | Unfunded AAL (UAAL) | Funded Ratio | Covered Payroll * | UAAL as a Percent Of Covered Payroll |
| 1/1/2007 | 0 | 5,521,200 | 5,521,200 | 0% | 40,195,095 | 13.7% |
| 1/1/2009 | 0 | 16,186,403 | 16,186,403 | 0% | 43,646,468 | 37.1% |
| 1/1/2011 | 0 | 21,303,407 | 21,303,407 | 0% | 42,671,173 | 49.9% |
| 1/1/2013 | 0 | 9,414,166 | 9,414,166 | 0% | 43,500,165 | 21.6% |
| 1/1/2015 | 0 | 10,639,177 | 10,639,177 | 0% | 46,184,545 | 23.0% |

* Annualized pay of active employees as of the valuation date.

## 6. Measurement of Annual OPEB Cost

| | | |
|---|---|---|
| **Actuarial Valuation Date** | January 1, 2015 | |
| **Actuarial Cost Method** | Entry Age Normal - Level Percent-of-Pay | |
| **Amortization Method** | Level Percent-of-Pay, Closed | |
| **Remaining Amortization Period** | 22 years | |
| **Asset Valuation Method** | Not Applicable | |
| **Valuation Interest Rate (assumed investment return)** | 3.5% | |
| **Aggregate Payroll Growth (inflationary effects only)** | 1.5% | |
| **Salary Scale General / Police & Fire** | 3.5% / 6.5% | |
| **Projected Healthcare Inflation** | Medical / Rx<br>7.5% grading down to 5.0% over 7 years | Dental<br>Flat 3.5% |
| **Inflation Rate (not used directly)** | 2.75%<br>(Reasonable in conjunction with other assumptions) | |
| **Post Retirement Increase** | Not Applicable | |

## SUMMARY OF PARTICIPANT DATA

Data on employees and retirees electing insurance coverage was provided by the City of Lawrence. A summary of participants utilized for the current and prior valuation is presented here.

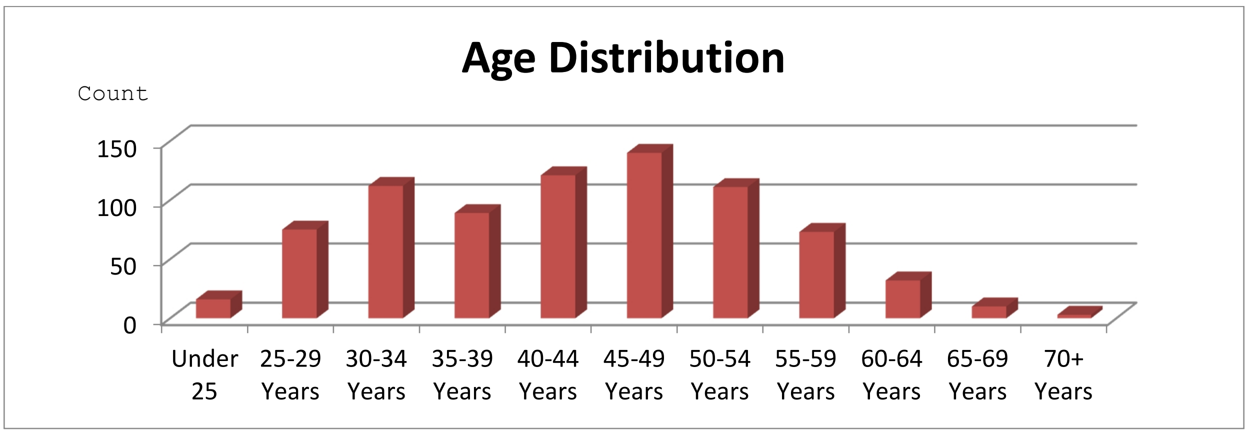
| **Participant Summary** | January 1, 2013 | January 1, 2015 |
|---|---|---|
| **Active Employees** | | |
| KPERS – Tier I | 421 | 360 |
| KPERS – Tier II | 64 | 135 |
| Police & Fire | 280 | 287 |
| Total Active Employees | 765 | 782 |
| **Inactives** | | |
| Retirees / Disableds - Subscribers | 59 | 51 |
| Spouses of Retirees / Disableds | 19 | 17 |
| Total Inactive Covered Members | 78 | 68 |
| **Total** | 843 | 850 |
| Average Age of Actives | 43.3 years | 43.2 years |
| Average Service of Actives | 12.4 years | 12.1 years |
| Average Age of Inactives | 58.8 years | 58.9 years |

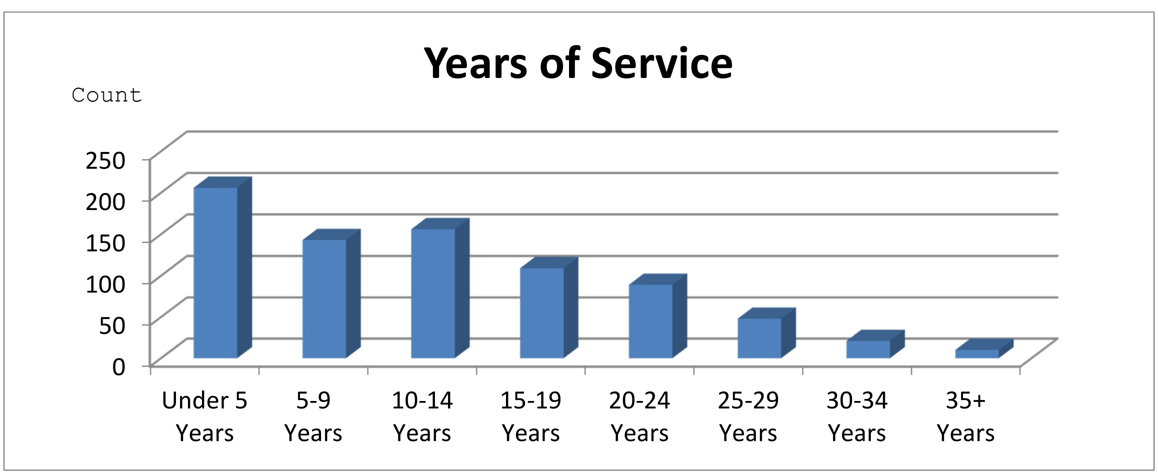
**Medical, Rx and Dental Coverage at January 1, 2015**

| Coverage Tier | Actives | Retirees | Total |
|---|---|---|---|
| Single | 277 | 32 | 309 |
| Single + Spouse | 96 | 12 | 108 |
| Single + Child(ren) | 95 | 2 | 97 |
| Family | 314 | 5 | 319 |
| Total | 782 | 51 | 833 |

### Distribution of Active Participants

| Age | Years of Service as of January 1, 2015 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35+ | Total |
| Under 25 | 16 | | | | | | | | 16 |
| 25-29 | 57 | 17 | 1 | | | | | | 75 |
| 30-34 | 59 | 41 | 11 | 1 | | | | | 112 |
| 35-39 | 23 | 29 | 32 | 5 | | | | | 89 |
| 40-44 | 20 | 23 | 38 | 34 | 6 | | | | 121 |
| 45-49 | 16 | 13 | 26 | 37 | 42 | 5 | 1 | | 140 |
| 50-54 | 4 | 14 | 25 | 15 | 19 | 22 | 10 | 2 | 111 |
| 55-59 | 8 | 4 | 12 | 12 | 13 | 16 | 5 | 3 | 73 |
| 60-64 | 1 | 2 | 6 | 3 | 7 | 4 | 4 | 5 | 32 |
| 65-69 | 2 | | 5 | | 1 | 1 | 1 | | 10 |
| 70+ | | | | 2 | 1 | | | | 3 |
| Totals | 206 | 143 | 156 | 109 | 89 | 48 | 21 | 10 | 782 |



**Distribution of Inactive Participants**

| Age | Retirees / Disableds | Spouses |
|---|---|---|
| ≤50 | 1 | 1 |
| 51 | 0 | 0 |
| 52 | 0 | 0 |
| 53 | 3 | 2 |
| 54 | 0 | 0 |
| 55 | 1 | 1 |
| 56 | 2 | 0 |
| 57 | 5 | 4 |
| 58 | 5 | 0 |
| 59 | 7 | 4 |
| 60 | 6 | 1 |
| 61 | 7 | 1 |
| 62 | 6 | 1 |
| 63 | 5 | 0 |
| 64 | 3 | 1 |
| > 64 to < 65 | 0 | 1 |
| **Totals** | **51** | **17** |
| | | |
| **Average Age** | **59.2** | **57.9** |

# SUMMARY OF PLAN PROVISIONS

The City of Lawrence, Kansas offers Medical, Rx and Dental insurance to its employees during retirement to Medicare eligibility (i.e. age 65). Below is a summary of the provisions of the healthcare program utilized in completing this valuation study.

## OPEB ELIGIBILITY

Employees must terminate service and receive immediate benefits (retirement or disability) through KPERS / KP&F.

| Category | Pension Eligibility | |
|---|---|---|
| | Unreduced Retirement | Reduced Retirement |
| KPERS – Tier I | 62 & 10<br>Rule of 85<br>65 & 1 | 55 & 10 |
| KPERS – Tier II | 60 & 30<br>65 & 5 | 55 & 10 |
| KP&F – Tier II | 50 & 25<br>55 & 20<br>60 & 15 | 50 & 20 |

For Disability retirement, members at any level of service who qualify for disability under KPERS / KP&F are also eligible to continue City insurance benefits as a retiree.

## BENEFITS

Medical / Rx and Dental benefits are self-funded with stop-loss coverage for Medical / Rx. A specific stop loss level of $125,000 applies. All benefits renew on a calendar year basis. Retiree benefits are provided through the City's group insurance program. Retiree coverage ends when the retiree reaches age 65. Spouses may elect to continue coverage upon retiree death or retiree attainment of age 65 under Cobra. Any retiree who waives continuing participation during open enrollment is not eligible to participate at a later date.

The City offers an Open Access plus HRA Plan. City HRA contributions are available to retirees at $250 – Single ($500 – Other) per year. Retirees may also receive City Wellness contributions upon meeting stipulated criteria at $300 ($400 in 2016) per year.

A summary of the 2016 plan design for Medical / Rx is shown below:

| | OAP<br>In-Network | OAP<br>Out of Network |
|---|---|---|
| **Deductible**<br>Individual / Family | $1,200 / $2,400 | $1,200 / $2,400 |
| **Coinsurance – Plan Pays** | 80% | 60% |
| **Out of Pocket**<br>Individual / Family | $2,400 / $4,800 | $4,800 / $9,600 |
| **Office Visit Copays**<br>Primary Care<br>Specialist | <br>Deductible + Coinsurance<br>Deductible + Coinsurance | <br>Deductible + Coinsurance<br>Deductible + Coinsurance |
| **Wellness Benefit** | 100% Covered | 60% Coinsurance |
| **Emergency Room** | $100 Copay + Coinsurance | |
| **Prescription Drugs**<br>Retail Copays (30 days)<br>Generic<br>Brand Formulary<br>Non-formulary<br>Mail Order Copays (90 days) | <br><br>20%<br>20% + $25<br>20% + $25<br>Brand – 20% + $50 | |
| **Lifetime Limit** | Unlimited | |

A summary of the 2016 plan design for Dental is shown below:

| | |
|---|---|
| Deductible | None |
| Diagnostic | 100% |
| Preventative | 100% |
| Basic | 80% |
| Major | 50% |
| Coverage Maximum | Unlimited for all Covered Services |

## RETIREE CONTRIBUTION PREMIUMS

The City pays 20% of the group plan premium when Single or Family coverage is elected. Otherwise, the retiree is required to pay 100% of the group premium.

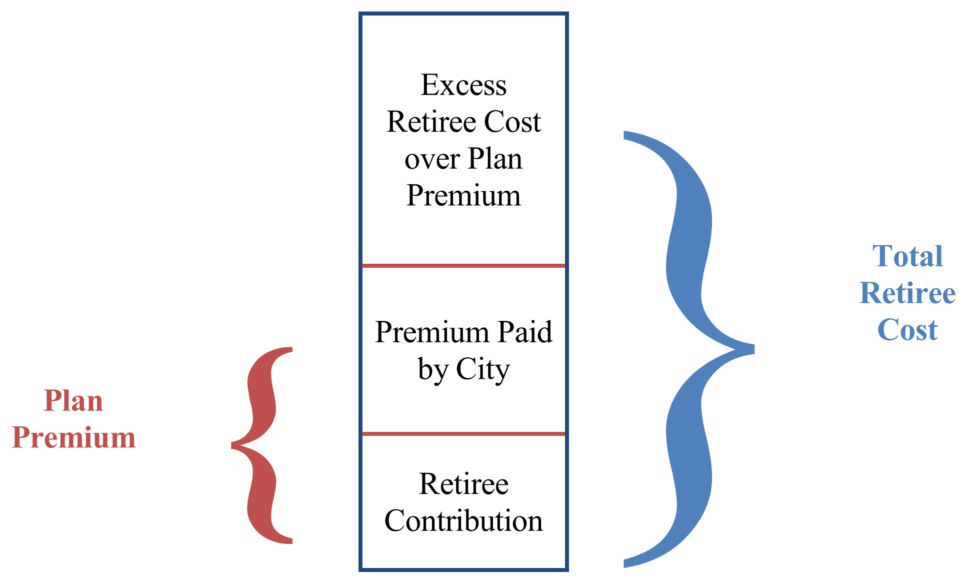
**Group Plan Premiums**

| Coverage Tier | Medical / Rx | Dental | Total |
|---|---|---|---|
| | | | |
| **2015** | | | |
| Single | 534 | 27 | 561 |
| Single + Spouse | 1,149 | 54 | 1,203 |
| Single + Child(ren) | 1,034 | 57 | 1,091 |
| Family | 1,649 | 84 | 1,733 |
| | | | |
| **2016** | | | |
| Single | 545 | 29 | 574 |
| Single + Spouse | 1,173 | 58 | 1,231 |
| Single + Child(ren) | 1,055 | 61 | 1,116 |
| Family | 1,683 | 90 | 1,773 |
| | | | |

## EXPECTED COST BY AGE

The cost to the City for retiree health insurance benefits is the retiree claims and administrative expenses minus retiree contribution premiums. Therefore, the "benefit" to the retiree that is valued under GASB 45 equals the age-adjusted cost (sample ages shown below) less retiree contribution premiums. Age-adjusted costs are the estimated costs that would result if a credible-size group of like-age participants was measured.

The GASB 45 benefit may consist of direct and indirect components. The direct component is equal to the portion of the plan premium paid by the City. The indirect component is equal to the retiree cost less the plan premium. This is the age subsidy that exists because the plan premium is based on the combined pool of actives and retirees. The pool is largely composed of younger actives that drive the overall blended average below the cost at retiree ages. The indirect benefit is paid for through higher plan premiums than would exist over time if retirees were not part of the covered group.



## EXPECTED COST BY AGE *(CONTINUED)*

We studied City claim experience split between actives and retirees separately for Medical, Prescription Drug and Dental. We evaluated plan design, claim patterns and trends including the impact of any large claims. Weight was applied to each of the overall group, retiree buckets and industry retiree experience.

Historical average per member costs were adjusted to the appropriate plan design basis and trended to the average expected exposure point. Age-based cost relativities were applied to expected per member costs to derive expected costs by age. Cost relativities were calculated by fitting industry cost factors to the age distribution of the current covered group of the City. Expected administrative costs were determined by an analysis of vendor contract rates.

Fixed costs including administration fees, stop-loss premiums, Wellness, PPACA fees and HRA contributions were factored into our analysis. Fixed costs plus expected retiree claims that vary by age equal the total age-adjusted cost.

Age-adjusted expected costs during 2015 on a per member per month (PMPM) basis are shown below at sample ages. The cost levels reflect Medical, Rx and Dental coverage. These cost levels, along with 2015 retiree contribution premiums, serve as a starting point for the valuation.

| Expected Retiree Cost Levels During 2015 (PMPM) | | | |
|---|---|---|---|
| **Age** | **Medical / Rx** | **Dental** | **Total** |
| 55 | 790 | 25 | 815 |
| 58 | 877 | 26 | 903 |
| 62 | 998 | 27 | 1,025 |
| 63 | 1,023 | 27 | 1,050 |
| 64 | 1,050 | 28 | 1,078 |

## ACTUARIAL ASSUMPTIONS

***A. Valuation Interest Rate*** 3.5%

***B. Measurement Date*** January 1, 2015

***C. Medical / Rx Cost Trend Rate***

| Year | Trend |
|---|---|
| 2015 | 7.50% |
| 2016 | 7.00% |
| 2017 | 6.50% |
| 2018 | 6.00% |
| 2019 | 5.75% |
| 2020 | 5.50% |
| 2021 | 5.25% |
| 2022 (to Ultimate) | 5.00% |

Retiree contribution premiums and Admin / Wellness / HRA costs are trended based on actual when available. An annual trend of 2.5% was applied to Wellness costs and HRA contributions.

***D. Dental Cost Trend Rate*** 3.5%

***E. Age-Adjusted Costs*** The estimated age-adjusted cost for retiree insurance coverage during 2015 at various sample ages is shown in the Expected Cost by Age section.

***F. Healthy Life Mortality*** Society of Actuaries RPH-2014 Adjusted to 2006 Total Dataset Headcount-weighted Mortality with MP-2015 Full Generational Improvement

***G. Disabled Life Mortality*** Society of Actuaries RPH-2014 adjusted to 2006 Disabled Retiree Headcount-weighted Mortality with MP-2015 Full Generational Improvement

***H. Retirement Due to Disability***

Assumed disability rates are based on those utilized for the KPERS-Local and KP&F-Local pension valuations. Illustrations of assumed annual rates of disablement are shown below for selected ages.

**Employees Covered by Kansas Public Employees Retirement System (KPERS)**

| Age | Rate |
|---|---|
| 30 | .052% |
| 40 | .114% |
| 50 | .290% |
| 60 | .680% |

**Employees Covered by Kansas Police & Firemen's (KP&F) Retirement System**

| Age | Rate |
|---|---|
| 30 | .12% |
| 40 | .48% |
| 50 | .88% |
| 60 | 1.00% |

***I. Turnover Incidence (Other than Retirement)***

Assumed turnover rates are based on those used for the KPERS-Local and KP&F-Local pension valuations. Turnover rates are not applied when retirement eligibility is achieved. Illustrations of annual rates of turnover are shown below at sample levels of service.

**Employees Covered by Kansas Public Employees Retirement System (KPERS)**

| Service From Hire | Probability Per Year Males | Probability Per Year Females |
|---|---|---|
| 0 | 20.0% | 23.0% |
| 1 | 16.0% | 20.0% |
| 2 | 13.2% | 17.0% |
| 3 | 11.0% | 14.0% |
| 4 | 9.6% | 11.5% |
| 5 | 8.3% | 9.0% |
| 7 | 6.1% | 6.8% |
| 10 | 4.1% | 5.0% |
| 12 | 3.6% | 4.2% |
| 15 | 3.1% | 3.3% |
| 17 | 2.8% | 2.8% |
| 20 | 2.4% | 2.2% |
| 23 | 1.8% | 1.6% |
| 25 | 1.4% | 1.2% |

**Employees Covered by Kansas Police & Firemen's (KP&F) Retirement System**

| Service From Hire | Probability Per Year |
|---|---|
| 0 | 13.00% |
| 1 | 13.00% |
| 2 | 11.25% |
| 3 | 9.50% |
| 4 | 7.75% |
| 5 | 6.00% |
| 7 | 4.60% |
| 10 | 2.50% |
| 12 | 1.90% |
| 15 | 1.00% |
| 20 | 1.00% |

***J. Retirement Age***

Assumed rates are based on those used for the KPERS-Local and KP&F-Local pension valuations. Retirement rates project the percentage of eligible employees who will retire.

**Employees Covered by Kansas Public Employees Retirement System (KPERS)**

**Tier I**

| ***Unreduced Retirement*** | |
|---|---|
| Age(s) | Annual Probability |
| ≤ 54 | 7% |
| 55-58 | 10% |
| 59-60 | 12% |
| 61-62 | 25% |
| 63 | 20% |
| 64 | 30% |
| 65 | 35% |
| 66 | 25% |
| 67-74 | 20% |
| 75 | 100% |

| ***Reduced Retirement*** | |
|---|---|
| Age(s) | Annual Probability |
| 55-58 | 5% |
| 59-60 | 7% |
| 61 | 20% |

**Tier II**

| ***Unreduced Retirement*** | |
|---|---|
| Age(s) | Annual Probability |
| 60 | 20% |
| 61-62 | 25% |
| 63 | 20% |
| 64 | 30% |
| 65 | 35% |
| 66 | 25% |
| 67-74 | 20% |
| 75 | 100% |

| ***Reduced Retirement*** | |
|---|---|
| Age(s) | Annual Probability |
| 55-58 | 5% |
| 59-60 | 7% |
| 61 | 20% |
| 62 | 20% |
| 63 | 20% |
| 64 | 20% |

**Employees Covered by Kansas Police & Firemen's (KP&F) Retirement System**

| ***Reduced Retirement*** | |
|---|---|
| Age(s) | Probability Per Year |
| 50 to 53 | 10% |
| 54 | 20% |

| ***Unreduced Retirement*** | |
|---|---|
| Age(s) | Probability Per Year |
| 50-55 | 25% |
| 56-59 | 20% |
| 60-62 | 25% |
| 63 | 100% |

***K. Spouse Age Difference***

Male employees are assumed to be 2 years older than their wives. Female employees are assumed to be 3 years younger than their husbands. Actual spousal age was valued for current retirees.

***L. Participation in Coverage for Future Retirees***

Sixty percent (60%) of future employees are assumed to elect coverage upon retirement. This is based on multiple years of City experience.

***M. Coverage Tier Elections For Future Retirees***

| | |
|---|---|
| Single | 65% |
| Single + Spouse | 25% |
| Single + Child(ren) | 0% |
| Family | 10% |

The same coverage tier is assumed to apply to Medical / Rx and Dental.

***N. Medicare Eligibility Age***

Age 65

***O. Aggregate City Payroll Growth***

1.5% per year (inflationary effects only)

***P. Salary Scale***

3.5% - General Employees
6.5% - Police & Fire Employees

***Q. Retiree Wellness Participation***

10%

***R. Inflation Rate***

An estimated implied inflation rate that is reasonable in conjunction with the trend assumptions is 2.75%.

# ACTUARIAL METHODS

## A. POPULATION VALUED

The valuation is based on a closed group. Current employees and covered retirees as of the valuation date are considered; no provision is made for future new hires. No future benefits are assumed for those waiving coverage.

## B. ACTUARIAL COST METHOD -- ENTRY AGE NORMAL (LEVEL PERCENT-OF-PAY)

The actuarial calculations were performed in accordance with the Entry Age Normal (Level percent-of-pay) Actuarial Cost Method as allowed under GASB 45.

- The actuarial present value of each member's projected benefits is allocated on a level basis over the member's assumed compensation between entry age and the last age with a future benefit. Entry age equals date of hire.
- The portion of the actuarial present value allocated to the valuation year is called the Normal Cost. The sum over all active employees is the Employer Normal Cost. Normal Cost does not apply to current retirees as all benefits are previously earned due to past service.
- The actuarial present value of benefits allocated to prior years of service is called the Actuarial Accrued Liability (AAL). The sum over all active employees and retirees is the Employer AAL.
- The Unfunded AAL represents the difference between the AAL and the actuarial value of plan assets as of the valuation date.

## C. AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

| | |
|---|---|
| **Amortization Method** | Level Percent-of-Pay |
| **Valuation Interest Rate** | 3.5% |
| **Aggregate Payroll Growth** (inflation only) | 1.5% per year |
| **Amortization Basis** | Closed |
| **Initial Amortization Period** | 30 years |
| **Remaining Amortization Period** | 22 years |

## D. ANNUAL REQUIRED CONTRIBUTION (ARC)

The sum of the Normal Cost and the amortization of the Unfunded Actuarial Accrued Liability comprise the ARC.

### E. ANNUAL OPEB COST

The Annual OPEB Cost equals the Annual Required Contribution when reporting for the GASB 45 implementation year. After the implementation year, the Annual OPEB Cost consists of the following components:

(i) Annual Required Contribution (ARC)
(ii) Interest on the Net OPEB Obligation
(iii) Adjustment to the ARC

### F. ACTUARIAL VALUE OF ASSETS

As of the date of this valuation, it is our understanding there are no assets set aside in a separate trust as recognized under GASB rules. Rather, the cost of retiree benefits are paid as they come due from a Health Insurance Fund. The City does maintain a reserve in this fund in order to provide for payments of future healthcare costs.

### G. CALCULATION OF PRESENT VALUES

Using the actuarial assumptions, the number of retired participants is projected each year in the future. Costs are projected for each future year at each age using the trend and aging assumptions. The projected costs less projected retiree contribution premiums are multiplied by the expected number of retirees in each future year to produce expected employer contributions (i.e. retiree benefits). These contributions are discounted using the valuation interest rate to determine the present value of the projected liabilities.

The actuarial calculations reflect a long-term perspective that involves estimates of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

The actuarial calculations are based on the substantive plan and pertinent law as they exist at the time of the preparation of this valuation study. The substantive plan is the plan that operates in practice.

## GLOSSARY

**Actuarial Accrued Liability (AAL)**. That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of plan benefits which is allocated to periods prior to the valuation date.

**Actuarial Cost Method**. A procedure for allocating the Actuarial Present Value of plan benefits to time periods, usually in the form of a Normal Cost and Actuarial Accrued Liability.

**Actuarial Present Value.** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of actuarial assumptions, and plan provisions. Actuarial Present Value takes into account the probability of payment as well as the time value of money.

**Adjustment to the ARC.** An adjustment made to Annual OPEB Cost to avoid double counting of the Amortization of the AAL when full funding of the ARC does not occur.

**Age-Adjusted Cost.** The projected cost that would result if a credible-size group of like-age participants was measured.

**Age-Subsidy.** The difference between the age-adjusted cost and the plan premium. An age-subsidy may occur because the plan premium, based on the combined pool of actives and retirees, is lower than the age-adjusted cost at retiree ages.

**Amortization Payment**. That portion of the Annual Required Contribution that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

**Annual OPEB Cost.** The amount of expense an employer must recognize under accrual accounting in accordance with a Defined Benefit OPEB Plan, calculated in accordance with the parameters.

**Annual Required Contribution (ARC)**. The portion of expense an employer must recognize in accordance with a Defined Benefit OPEB Plan equal to the Amortization Payment plus the Normal Cost, calculated in accordance with the assumptions and plan provisions.

**Defined Benefit OPEB Plan**. An OPEB plan having terms that specify the amount of benefits to be provided at a future date or after a certain period of time. The amount specified usually is a function of one or more factors such as age and years of service.

**Employer Contribution**. An employer may make contributions through an irrevocable transfer of assets to a qualifying trust, direct payment of benefits or a combination of these. Without a trust and self-funded, the contribution equals retiree claims plus admin costs, less any retiree contribution premiums. Without a trust and not self-funded, the contribution equals age-adjusted premium costs, less any retiree contribution premiums.

**Healthcare Cost Trend Rate**. The rate of change in per capita health claims cost over time as a result of factors such as medical inflation, utilization of healthcare services, plan design and technological developments.

**Net OPEB Obligation**. The cumulative difference since the effective date of GASB 45 between the amount of Annual OPEB Cost and Employer Contributions. This is the liability required to be recognized under accrual accounting.

**Normal Cost.** That portion of the Actuarial Present Value of OPEB plan benefits that is allocated to a valuation year by the Actuarial Cost Method.

**Other Postemployment Benefits (OPEB)**. Postemployment benefits other than pension benefits. OPEB includes Postemployment Healthcare Benefits, regardless of the type of plan that provides them, and all post-employment benefits provided separately from a pension plan, excluding benefits defined as termination offers and benefits.

**Postemployment Healthcare Benefits**. Medical, dental, vision and other health-related benefits provided to retired employees and their dependents and beneficiaries.

**Substantive Plan**. The terms of the OPEB plan as understood by the employer and plan members.

**Unfunded Actuarial Accrued Liability**. The excess, if any, of the Actuarial Accrued Liability over the assets of the plan.

**Valuation Interest Rate (or Discount Rate)**. The expected long-term rate of return on the source of assets used to pay retiree insurance benefits.