

City of Tyler

Retiree Health Care Plan

ACTUARIAL VALUATION REPORT
AS OF DECEMBER 31, 2015



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February 6, 2018

Mr. Keidric Trimble
Director of Finance/CFO
City of Tyler
304 N. Border, P.O. Box 2039
Tyler, TX 75702

Dear Mr. Trimble:

Submitted in this report are the results of an Actuarial Valuation of the assets and benefits associated with the employer financed retiree health benefits provided by City of Tyler. The date of the valuation was December 31, 2015. The annual required contribution has been calculated for the fiscal year beginning October 1, 2016.

The actuarial calculations were prepared for purposes of complying with the requirements of Statements No. 43 and No. 45 of the Governmental Accounting Standards Board (GASB). The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying City of Tyler's financial reporting requirements may produce significantly different results. This report may be provided to parties other than City of Tyler only in its entirety and only with the permission of City of Tyler.

The valuation was based upon information, furnished by City of Tyler, concerning retiree health benefits and individual employees, and financial data. Data was checked for internal consistency but was not otherwise audited.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

The signing actuaries are independent of the plan sponsor. To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods. Mehdi Riazi is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

A handwritten signature in black ink that reads "Mehdi Riazi".

Mehdi Riazi, FSA, EA, MAAA

A handwritten signature in black ink that reads "Blake Orth".

Blake Orth, ASA, MAAA

EXECUTIVE SUMMARY

Executive Summary

Annual Required Contribution

This report presents the annual expense required to be recognized by the plan sponsor for purposes of complying with the accounting requirements of Government Accounting Standards Board Statement No. 45. In addition, the plan may also need to comply with GASB Statement No. 43. Please consult with legal counsel and the auditors to determine whether you have a plan for GASB Statement No. 43 purposes.

The Annual Required Contribution (ARC) for the FYE17, FYE18 and FYE19 are shown below. In the first year GASB Statement No. 45 is adopted, the annual OPEB cost required to be disclosed on the employer's financial statements is equal to the ARC. Actual claims/premiums paid on behalf of retirees may be treated as employer contributions in relation to the ARC and act to reduce the Net OPEB Obligation (NOO).

<u>Annual Required Contribution</u>	<u>Full Funding</u>
Fiscal Year Beginning 2016	\$2,988,214
Fiscal Year Beginning 2017	\$2,988,214
Fiscal Year Beginning 2018	\$2,988,214

As requested, we used the assets in calculating the ARC. However, these assets can only be used in calculation if they are held in a qualified trust as defined by GASB Statements No. 43 and 45. If the assets are not in a qualified trust, then those amounts cannot be used in the calculation of the ARC and the ARC will be higher than the results shown in this report.

Additional OPEB Reporting Requirements

In addition to the annual OPEB cost described above, employers will have to disclose a Net OPEB Obligation (or asset). The Net OPEB Obligation is the cumulative difference between annual OPEB costs and annual employer contributions in relation to the ARC, accumulated from the implementation of Statement No. 45. The Net OPEB Obligation is zero as of the beginning of the fiscal year that Statement No. 45 is implemented, unless the employer chooses to recognize a beginning balance. The requirements for determining the employer's contributions in relation to the ARC are described in paragraph 13 g. of Statement No. 45. Additional information required to be disclosed in the employer's financial statements is detailed in paragraphs 24 through 27 of Statement No. 45.

Executive Summary

Liabilities and Assets

Full Funding Assumption

This scenario assumes the employer has set up an irrevocable trust and will make annual employer contributions that are equal to the ARC. Under this funding policy, GASB 45 allows the use of a discount rate consistent with the investment return earned on the plan's assets. This rate should be based on the expected long-term investment return. In this valuation, the discount rate is 6.50%.

The present value of all benefits expected to be paid to current plan members as of December 31, 2015 is \$41,416,413. The actuarial accrued liability, which is the portion of the \$41,416,413 attributable to service accrued by plan members as of December 31, 2015, is \$37,070,789. As of December 31, 2015, there is \$8,973,312 in valuation assets available to offset the liabilities of the plan.

The funded status of the plan, which is the ratio of plan assets to actuarial accrued liability, as of December 31, 2015 is 24.21%.

SECTION A

OVERVIEW

GASB Background

The purpose of this valuation is to provide information on the cost associated with providing postemployment benefits other than pensions, or OPEB, to current and former employees. OPEB benefits are most often associated with postemployment health care, but cover almost any benefit not provided through a pension plan, including life insurance, dental and vision benefits. It is important to note that OPEB benefits, by definition, do not include benefits *currently* being provided to active employees – however, this report includes the liabilities for benefits expected to be paid to current active employees when they terminate employment at a future date.

The rising cost of health care has been a cause of concern to both individuals and employers who sponsor health care plans. The accounting community became concerned that many sponsors of public plans were accounting for the cost of their OPEB plans solely on the basis of benefits paid and that this method did not accurately reflect the ultimate cost of benefits promised to current and former employees. In 1988, the Governmental Accounting Standards Board (GASB) began working on a project to develop comprehensive standards for financial reporting of OPEB plans. The GASB worked on comprehensive standards for OPEB accounting for more than a decade, culminating with the release of GASB Statements No. 43 and No. 45 in the Spring of 2004. GASB Statement No. 43 covers the accounting rules for OPEB plans while GASB Statement No. 45 describes the rules for *employers* sponsoring OPEB plans.

The GASB determined that an OPEB plan was similar to a pension plan in that benefits are earned during an active employee's working lifetime but paid out at a future date. In the GASB's view, accounting for OPEB should follow the same basic principle as accounting for public plan pension cost: these benefits are compensation for employees' services and should be accounted for during the period of time that services are performed.

GASB Standards

Unlike pension plans, OPEB plans often do not have a formal document detailing the specific terms of the plan. Under GASB No. 43 and No. 45 the benefits to be accounted for are those provided by the *substantive plan* – loosely defined as the benefits covered by the plan as understood by the employer and plan members at the time of each actuarial valuation. The substantive plan provisions used in this valuation are summarized in Section E.

GASB also requires that the calculations assume the terms of the substantive plan continue indefinitely. It has been argued that there is a likelihood future OPEB plan provisions would be different than the current substantive plan (due to rising health care costs or social changes) and therefore liabilities based on the current substantive plan may overstate what will actually occur. However, the GASB Statement is designed to measure liabilities for the plan as it currently exists. While it may be reasonable to assume future changes in the OPEB plan for other purposes, recognition of anticipated changes is not allowed for purposes of accounting for OPEB.

The specific items required to be disclosed on an OPEB sponsor's financial statements are described in detail in GASB No. 43 and No. 45. In general terms, though, the plan sponsor is required to disclose an annual OPEB cost, the funded status of the plan and the funding progress on the valuation date.

Although GASB does not require OPEB contributions, it has chosen to call the base component of the annual OPEB cost the Annual Required Contribution, or ARC. The ARC consists of the cost of benefits accruing in a year plus an amount calculated to amortize any unfunded actuarial accrued liability over a period of not more than 30 years.

The plan is also required to disclose the cumulative difference between the ARC and the employer's actual contribution to the plan. This amount is known as the Net OPEB Obligation (NOO). Each year, the NOO accumulates with interest, plus the difference between the ARC and actual contributions for the year, plus some technical adjustments. It is the NOO, and not the unfunded actuarial accrued liability, that is disclosed on the employer's Statement of Net Position. **However, the GASB released Statement No. 75 in June of 2015 which will require balance sheet recognition of a liability which resembles the current unfunded accrued liability. GASB Statement No. 75 is effective for fiscal years beginning after June 15, 2017.**

OPEB Specific Assumptions

In any long-term actuarial valuation (such as for pensions and OPEB) certain demographic, economic and behavioral assumptions must be made concerning the population, investment discount rates, and the benefits provided. These actuarial assumptions form the basis for the actuarial model which is used to project the future population, benefits to be provided, and contributions to be collected. The investment return rate assumption is used to discount the future benefits to a present value on the valuation date. While assumptions such as future rates of retirement and mortality are similar for both OPEB and pension plans, there are some additional assumptions required when projecting benefits for a health care plan.

The cost of providing medical services has been increasing more rapidly than prices in general for many years. Health care spending as a percentage of GDP, has increased from 5.0% in 1960 to 17.9% in 2015. If this trend is projected to continue for years to come, it implies that years from now virtually all our expenditures will be for health care. The seemingly more reasonable alternative is that in the not too distant future medical expense inflation will stabilize at a level at or near general inflation. Furthermore, the percentage of GDP devoted to health care expenditures is expected to continue to increase. It is on this basis that we project retiree health care costs will continue to exceed general inflation in the near term, but by less each year until leveling off at an ultimate rate that is similar to general price increases.

Health care increase rates used in this valuation lie within a range of reasonable assumptions, and are described in Section G of this report. The health care increase rate assumption has a major effect on the calculation of plan liabilities. To illustrate the effect of differing future medical inflation rates, Section C of this report provides the ARC and associated liabilities based on an "optimistic" and "pessimistic" trend scenario.

OPEB Specific Assumptions (Concluded)

The selection of an investment return rate also has a major impact on the calculation of the reported GASB OPEB expense.

It is important to note that GASB Statements No. 43 and No. 45 require the selection of an interest rate assumption to be based on the expected long-term rate of return on the assets expected to pay the OPEB when due. GASB states that the return should be based on expected returns of:

- Plan assets – if the sponsor has been contributing the ARC on a regular basis;
- The employer's general assets – where no OPEB assets have been accumulated;
- A blend of plan and employer assets – in cases where OPEB assets exist but the plan is contributing amounts less than the ARC.

Actuarial Cost Method

GASB Statement No. 45 provides some flexibility to governmental employers (and their actuaries) in the use of various actuarial cost methods. It should be noted that an actuarial cost method determines a contribution or expense by assigning portions of the present value of projected benefits to various years with the general goal of accruing the cost of benefits over the working lifetime of the employees. The choice of a particular method does not change the ultimate cost of the promised benefits.

The Entry Age Normal actuarial cost method has been used to calculate the GASB ARC for this valuation. Using the plan benefits, the present health premiums and a set of actuarial assumptions, the anticipated future payments are projected. The entry age method then provides for a systematic funding for these anticipated payments. The yearly ARC is computed to cover the cost of benefits being earned by covered members as well as to amortize a portion of the unfunded accrued liability. This is both an acceptable and reasonable cost method. The use of another actuarial cost method would produce different results.

It is important to note that GASB Statement No. 75, which is effective for fiscal years beginning after June 15, 2017, will require employers to use the Entry Age Normal Actuarial Cost Method.

OPEB Prefunding

Many employers fund retiree health care benefits using the pay-as-you-go (or cash disbursement) method. The employer's annual contribution for these benefits is equal to the actual disbursements during the year for health care benefits for retired employees. This method of funding will result in increasing contributions over time. First, per capita cash disbursements will tend to increase from year to year as the cost of health care services, or the utilization of these services, increases. Second, the number of retired members is likely to increase for years to come. The more retirees there are, the greater the disbursements as a percentage of employee payroll.

A retiree health care plan is similar to a defined benefit pension plan, in that promises are made to employees to provide them with a benefit payable at some future date. For defined benefit pension plan sponsors a common funding objective is to contribute annual amounts to a fund which will i) remain level as a percentage of active member payroll, and ii) when combined with present assets and future investment return will be sufficient to meet the financial obligations of the Plan to current and future retirees.

The ultimate determination as to the level of pre-funding will be the result of decisions made in an attempt to reconcile the often conflicting needs of benefit security for members and fiscal responsibility for the employer. The GASB accounting standards noted in the previous section of the report can factor into decisions concerning the level of pre-funding.

SECTION B

VALUATION RESULTS

City of Tyler

Development of the Annual Required Contribution and Unfunded Actuarial Accrued Liability

Contributions for	Development of the Annual Required Contribution	
	<u>Fiscal Year Beginning 2016</u>	<u>Fiscal Year Beginning 2014</u>
	<u>Full Funding</u>	<u>Partial Funding</u>
Employer Normal Cost	\$648,567	\$816,388
Amortization of UAAL	<u>\$2,339,647</u>	<u>\$2,370,603</u>
Annual Required Contribution (ARC)	\$2,988,214	\$3,186,991
ARC Per Active Participant	\$3,739	\$4,059

	Determination of Unfunded Actuarial Accrued Liability	
	<u>Fiscal Year Beginning 2016</u>	<u>Fiscal Year Beginning 2014</u>
	<u>Full Funding</u>	<u>Partial Funding</u>
A. Present Value of Future Benefits		
i) Retirees and Beneficiaries	\$21,335,371	\$26,914,006
ii) Vested Terminated Members	\$0	\$0
iii) Active Members	<u>\$20,081,042</u>	<u>\$21,923,243</u>
Total Present Value of Future Benefits	\$41,416,413	\$48,837,249
B. Present Value of Future Normal Costs	\$4,345,624	\$5,366,025
C. Actuarial Accrued Liabilities (A.-B.)	\$37,070,789	\$43,471,224
D. Actuarial Value of Assets	\$8,973,312	\$6,204,387
E. Unfunded Actuarial Accrued Liability (C.-D.)	\$28,097,477	\$37,266,837
F. Funded Ratio (D./C.)	24.21%	14.27%

Comments

COMMENT A: One of the key assumptions used in any valuation of the cost of post-employment benefits is the rate of return on Plan assets. Higher assumed investment returns will result in a lower ARC. Lower returns will tend to increase the computed ARC. Under the Full Funding scenario, the assumed asset allocation is a mix of equities and bonds and therefore a 6.50% discount rate is assumed.

COMMENT B: Based on the number of plan members as of this valuation, the plan sponsor is required by GASB to perform actuarial valuations at least biennially. For funding purposes, the ARC that was developed in this report can be relied upon for FYE17, FYE18, and FYE19. The 12/31/2017 valuation will provide the ARC for FYE20 and FYE21.

COMMENT C: The UAAL amortization payment (one component of the contribution requirement), is the level dollar amount required to fully amortize the UAAL over a 25 year period. A 30-year amortization period for unfunded actuarial accrued liabilities is the maximum period that complies with the GASB requirements. However, because of the plan's shorter duration of benefits, a 25-year amortization period was used to determine the ARC for FYE2017. Because of the two-tier benefits structure, the majority of the benefits are expected to be paid in the near-term future. The amortization methodology was changed from a 22-year level percentage of payroll amortization to a 25-year level dollar amortization. This change will produce an ARC that remains more level in dollar terms.

COMMENT D: The Unfunded Actuarial Accrued Liability (UAAL) is not booked as an expense all in one year and does not appear in the Employer's Statement of Net Position. Currently, the UAAL is reported in the Notes to the Financial Statements and in the Required Supplementary Information. These are information sections within the employer's financial statements. **However, the GASB released Statement No. 75 in June of 2015 which will require balance sheet recognition of a liability which resembles the current unfunded accrued liability. GASB Statement No. 75 is effective for fiscal years beginning after June 15, 2017.**

SECTION C

SENSITIVITY ANALYSIS

Postemployment Health Insurance -- Sensitivity Tests

Actuarial valuations deal with the cost of benefits to be paid in the future. The payments considered will range from one month in the future to decades from the valuation date (for a young, newly hired employee who may retire many years from now and live many years after that). In order to establish a present day cost for these future benefit obligations, the actuary bases the valuation on a number of assumptions about future occurrences. The occurrences that must be considered include employee turnover, pay increases, disablement, retirements, deaths and investment income on anticipated plan assets.

When the benefits being valued are health care benefits, a key factor is the future cost of the medical benefits being promised. This is projected using the current cost of the System's health care benefits and assumed future health care cost increases. The final cost of providing retiree health care benefits will depend upon how the charges for health care services actually increase in the future.

In order to demonstrate how the cost of these benefits can vary depending upon future health care cost increases, we have performed additional valuations based upon alternative health care cost increase assumptions. The schedules on page C-2 compare (i) the computed cost of the retiree health care benefits using the valuation (Intermediate) assumptions to (ii) results of alternate valuations. The pessimistic and optimistic scenarios provide the impact on the valuation results of a 1% increase or decrease to the trend assumption.

City of Tyler Sensitivity Analysis

The selection of future health care cost increases is one of the key assumptions in determining plan liabilities. If the health care cost trend rates upon which the calculation of the Annual Required Contribution was based were changed by 1% in each future year, the annual contribution for the combined groups (illustrated using the entry age normal cost method) would change as follows.

Contributions for	Development of the Annual Required Contribution		
	<u>Fiscal Year Beginning 2016</u>		
	<u>Pessimistic</u>	<u>Intermediate</u>	<u>Optimistic</u>
Employer Normal Cost	\$729,815	\$648,567	\$581,139
Amortization of UAAL*	<u>\$2,554,851</u>	<u>\$2,339,647</u>	<u>\$2,149,463</u>
Annual Required Contribution (ARC)	\$3,284,666	\$2,988,214	\$2,730,602
ARC Per Active Participant	\$4,110	\$3,739	\$3,417

* Unfunded Actuarial Accrued Liabilities (UAAL) were amortized over 25 years.
All three scenarios above based on a Full Funding 6.50% discount rate

	Determination of Unfunded Actuarial Accrued Liability		
	<u>Pessimistic</u>	<u>Intermediate</u>	<u>Optimistic</u>
A. Present Value of Future Benefits			
i) Retirees and Beneficiaries	\$22,093,884	\$21,335,371	\$20,637,397
ii) Vested Terminated Members	\$0	\$0	\$0
iii) Active Members	<u>\$22,664,154</u>	<u>\$20,081,042</u>	<u>\$17,880,154</u>
Total Present Value of Future Benefits	\$44,758,038	\$41,416,413	\$38,517,551
B. Present Value of Future Normal Costs	\$5,102,801	\$4,345,624	\$3,730,732
C. Actuarial Accrued Liabilities (A.-B.)	\$39,655,237	\$37,070,789	\$34,786,819
D. Actuarial Value of Assets	\$8,973,312	\$8,973,312	\$8,973,312
E. Unfunded Actuarial Accrued Liability (C.-D.)	\$30,681,925	\$28,097,477	\$25,813,507
F. Funded Ratio (D./C.)	22.63%	24.21%	25.80%

SECTION D

UNDERLYING RETIREE CLAIMS COST DEVELOPMENT

Underlying Retiree Claims Cost Development

For the non-Medicare retirees, the initial per capita costs were developed using active and retiree claims experience from January 2013 through December 2015 in conjunction with census data for the active and retired members of the health care plan. For the post-65 Rx Card, the initial per capita costs were developed using claims from January 2013 through December 2015. These claims were projected on an incurred claim basis, adjusted for plan design changes, large claims, and loaded for administrative expenses. The costs were developed based on the actual experience and are used for both current and future retirees for all plans combined. For the fully-insured Medicare Supplement, the City's subsidies are based on the age-specific premiums shown on page E-4.

Age graded and sex distinct premiums are utilized by this valuation. These costs are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific costs more accurately reflect the health care utilization and cost at that age.

The monthly one-person premium including medical and prescription drug benefits at select ages are shown below:

FOR THOSE NOT ELIGIBLE FOR MEDICARE		
AGE	MALE	FEMALE
40	\$387.99	\$630.45
50	628.92	774.77
60	1,068.88	1,052.48
64	1,299.79	1,226.65

Underlying Retiree Claims Cost Development

The underlying claims for the post-65 Rx card benefit were assumed to be \$301.02 per subscriber in 2016. Based on the guidance provided by GASB on issues related to Medicare Part D payments to State and Local Governments effective June 30, 2006, an employer should apply the measurement requirements of GASB Statement No. 45 to determine the actuarial accrued liabilities, the annual required contribution of the employer, and the annual OPEB cost without reduction for Retiree Drug Subsidy (RDS) payments. Therefore, the impact of the RDS that is part of the Medicare Prescription Drug Improvement and Modernization Act of 2003 is not reflected in this report.

SECTION E

SUMMARY OF BENEFITS

City of Tyler

Summary of benefits as of December 31, 2015

Plan Participants

Retirees of the Municipality are eligible to receive full retiree health care benefits.

Normal Retirement Benefits

For General Employees (TMRS) - 5 years of service with TMRS and age 60 or 20 years of service at any age.

For Firefighters – age 50 with at least 25 years of service or age 55 with at least 20 years of service.

Health Care benefit Eligibility Conditions

Extension of Coverage for Retirees Not Eligible for Medicare

If an Employee is working for the City at the time of his retirement and is not eligible for Medicare (i.e. he is a “Non-Medicare Retiree”), then the Non-Medicare Retiree is eligible to continue Plan coverage for himself and his eligible Dependents. Retiree must inform the Finance Department not later than the date of his retirement if coverage is to be continued. Later election of extended coverage will not be permitted.

An Employee who elects to remain in the Plan as a Non-Medicare Retiree must continue to pay the portion of the cost of coverage for themselves and any eligible dependents covered at the time of retirement, and abide by other conditions of the Plan. Employees hired after January 1, 1997 must pay the blended cost of coverage.

An Employee's coverage under the Plan (including a retired Employee's coverage, as applicable) will terminate on the date a retired Employee becomes eligible for Medicare.

Deferred Retirement Benefits

Members who terminate employment and choose to retire at a later date, are not eligible for retiree health care benefits.

Duty and Non-Duty Death in Service Retirement Benefits

Survivors of employees who die while actively employed are not eligible for retiree health care benefits, unless the employee was eligible to retire at the time they passed away, then the spouse may choose to retire in his place, draw monthly benefits, and stay on the insurance plan in the employee's place if they were covered at the time of the employee's death.

City of Tyler

Summary of benefits as of December 31, 2015

Duty and Non-Duty Disabled Retirement Benefits

Employees who retire under a disability retirement are eligible for retiree health care benefits if they are approved for a monthly annuity, but if they are issued a lump sum retirement benefit they will not be eligible for continued City of Tyler retiree insurance.

Benefits for Spouses of Retired Employees

Spouses of retired employees are eligible to receive retiree health care benefits if they are currently covered at the time of the retiree's death. Coverage continues to non-Medicare eligible surviving spouses of deceased retirees (they move into the retirees spot) or if Medicare eligible the spouse may continue on the Medicare Supplement, prescription plan and dental if also covered either in the City Health Plan or Medicare Supplement at the time of the retiree's death.

Medicare – Eligibility Provisions

Retirees are required to enroll in Medicare once eligible. Employees hired after January 1, 1997 will be required to pay the full cost of the Medicare supplement. Effective January 1, 2013, the City's Medicare Supplement subsidies were capped at the 2013 rates.

Prescription Drug Card – Medicare Retirees

Retirees participating in Medicare are eligible at enrollment for a Prescription Drug Card provided by the City's Health Plan. The Prescription Drug plan is a Medicare Part D equivalent. Effective January 1, 2013, the City's contribution was capped at the 2013 rates.

Effective January 1, 2018, the Prescription Drug Card will be discontinued.

Dental Coverage

Employees who retire are eligible for dental coverage for the retiree and their dependents if covered at the time of their retirement. Coverage continues when the retiree becomes eligible for Medicare.

Vision Coverage

Retirees pay 100% of the vision plan premiums.

Life Insurance Coverage

Retirees are covered for life insurance in the amount of \$5,000.

Retiree Opt-Out

Retirees who decide to opt-out of the health care plan will not be eligible to opt back in for both non-Medicare and Medicare retirees. They also are not allowed to add dependents after retirement.

City of Tyler

Summary of benefits as of December 31, 2015

Employee/Retiree Monthly Health Care Premiums

2016 Health/Dental Retiree Rates		
Date of Hire	Before 01/01/1997	On and After 01/01/1997
Core Plan (Pre-65)		
Employee Only	\$30.30	\$496.08
Employee + Spouse	171.41	776.25
Employee +Child(ren)	144.43	688.12
Employee + Family	203.86	920.44
Dental (All ages)		
Employee Only	\$9.82	\$21.58
Employee + Spouse	36.10	49.22
Employee +Child(ren)	34.96	45.54
Employee + Family	54.34	68.54
Drug Card (Post-65)*		
Employee Only	\$62.64	\$208.80
Employee + Spouse	187.92	417.60

* Effective January 1, 2018, the Prescription Drug Card will be discontinued.

City of Tyler

Summary of benefits as of December 31, 2015

2013 Medicare Supplement Rates - Underwritten Issue*			
Attained Age	Area 1	Area 2	Area 3
65-66	\$137.00	\$149.00	\$166.00
67-69	155.00	172.00	189.00
70-74	183.00	202.00	220.00
75-79	205.00	229.00	250.00
80-84	232.00	257.00	283.00
85+	251.00	277.00	306.00

2013 Medicare Supplement Rates - Guaranteed Issue*			
Attained Age	Area 1	Area 2	Area 3
65-66	\$137.00	\$149.00	\$166.00
67-69	171.00	188.00	207.00
70-74	201.00	220.00	243.00
75-79	226.00	250.00	274.00
80-84	254.00	282.00	311.00
85+	275.00	304.00	337.00

*Premiums may differ for retirees who live out-of-area, are disabled, or reached 65 before January 1, 2005. Amounts shown above are the full age-rated premiums 2013 premiums.

Area Definitions by 3-Digit Zip Code:

Area 1: 754-759, 763-769, 778-792, 795-799, 885; Area 2: 750-753, 760-762, 774, 776-777, 793-794
 Area 3: 770-773, 775, all out of state zip codes

City Contributions for Medicare Supplement

Hired before 01/01/1997	Fixed at the 2013 subsidy level for age-band as of 12/31/2017
Hired on and after 01/01/1997	No City contribution

Effective January 1, 2013, the Medicare Supplement subsidies provided by the City were capped at the 2013 rates. Effective December 31, 2017, Retirees receive subsidies based on their age as of December 31, 2017. The amount of City subsidy for each age-band will be fixed at the 2013 levels. The City's subsidy for eligible retirees is 70% (40% for spouses) of the 2013 premiums shown above.

SECTION F

SUMMARY OF PARTICIPANT DATA

City of Tyler
Total Active Members as of December 31, 2015
By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Under 20	4							4
20-24	27							27
25-29	74	21	1					96
30-34	48	46	13					107
35-39	35	28	21	9				93
40-44	19	17	17	36	13			102
45-49	24	8	20	32	28	13		125
50-54	25	13	8	16	12	19	8	101
55-59	29	16	9	7	6	19	5	91
60-64	10	10	3	3	4	5	7	42
65 & Over	5	2	2		1	1		11
Totals	300	161	94	103	64	57	20	799

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 43.1 years
Service: 10.5 years

City of Tyler
Total Retired Members as of December 31, 2015
By Attained Age

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	40	13	53
55-59	53	14	67
60-64	62	18	80
65 & Over	198	112	310
Totals	353	157	510

The number counts above only include those retirees who have elected to receive retiree health care coverage through the City of Tyler Retiree Health Care Plan. The number counts above only include those retirees who have elected to receive retiree health care coverage through the City of Tyler Retiree Health Care Plan or are eligible for the \$5,000 life insurance benefit. The counts above include 167 retirees who do not have medical or Rx Card coverage through the city's plan. These 167 retirees have dental coverage and/or life insurance coverage only.

SECTION G

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Valuation Methods for City of Tyler as of December 31, 2015

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities (UAAL) (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) dollar contributions. The UAAL was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment (one component of the contribution requirement), is the level dollar amount required to fully amortize the UAAL over a 25 year period.

Actuarial Value of System Assets. The Actuarial Value of Assets is set equal to the reported market value of assets. The assets may not be allowed for consideration as GASB assets, but are shown for illustrative purposes.

Actuarial Assumptions for City of Tyler as of December 31, 2015

General inflation is assumed to be 2.50% per year.

The Discount Rate for the Full Funding scenario was 6.50% per year, compounded annually net after investment expenses.

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which future contributions will be based.

Firefighters:

Years of Service	Increase Next Year
1-5	9.71%
6-15	6.09
16&Over	3.50

TMRS:

TMRS Years of Service	% Increase in Salary
1	10.50%
2	7.50
3	7.00
4	6.50
5	6.00
6	5.50
7	5.25
8-10	4.75
11	4.50
12-13	4.25
14-16	4.00
17-24	3.75
25+	3.50

Actuarial Assumptions for City of Tyler as of December 31, 2015 (Continued)

Firefighters:

The rates of post retirement, pre-retirement, and post-disability mortality

RP-2000 Combined Healthy Mortality Table projected to 2024 using Scale AA for males and for females (sex distinct) for all three types of mortality.

TMRS:

The rates of post retirement mortality

For healthy retirees, the gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 109% and female rates multiplied by 103%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.

The mortality rates for TMRS disabled retirees are the same as for healthy retirees, except with a 3 year set-forward. In addition, there is a 3% minimum mortality probability to reflect impaired mortality for this group.

The rates of mortality for active members are the gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment with male rates multiplied by 54.5% and female rates multiplied by 51.5%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.

Actuarial Assumptions for City of Tyler as of December 31, 2015 (Continued)

The rates of retirement are described below:

Firefighters: The rates of retirement used for this valuation for Firefighters are 15% at age 50, 5% per year of those eligible to retire at ages 51 – 53, 10% per year for ages 54 – 55, 25% per year for ages 56 – 59, 50% per year at ages 60-64, and 100% at age 65.

TMRS: The base table rates vary by gender, entry age group, and age. These rates are adjusted then multiplied by 2 factors based on 1) employee contribution rate and employer match and 2) if the city has a recurring COLA. The base retirement rates shown in the table below do not include the employer specific plan design adjustments.

Age	Males Entry Age Groups			Females Entry Age Groups		
	Ages 32 & Under	Ages 33 - 47	Ages 48 & Over	Ages 32 & Under	Ages 33 - 47	Ages 48 & Over
40-44	0.06	-	-	0.06	-	-
45-49	0.06	-	-	0.06	-	-
50-52	0.08	-	-	0.08	-	-
53	0.08	0.10	-	0.08	0.10	-
54	0.08	0.10	-	0.11	0.10	-
55-59	0.14	0.10	-	0.11	0.10	-
60	0.20	0.15	0.10	0.14	0.15	0.10
61	0.25	0.30	0.20	0.28	0.26	0.20
62	0.32	0.25	0.12	0.28	0.17	0.12
63	0.32	0.23	0.12	0.28	0.17	0.12
64	0.32	0.35	0.20	0.28	0.22	0.20
65	0.32	0.32	0.20	0.28	0.27	0.20
66-69	0.22	0.22	0.17	0.22	0.22	0.17
70-74	0.20	0.22	0.25	0.22	0.22	0.25
75 and over	1.00	1.00	1.00	1.00	1.00	1.00

Note: For cities without a 20-year/any age retirement provision, the rates for entry ages 32 and under are multiplied by 20% for ages below 60.

Actuarial Assumptions for City of Tyler as of December 31, 2015 (Continued)

The rates of retirement (continued)

Plan Design Factors Applied to Base Retirement Rates

Employer Match	Employee Contribution Rate		
	5%	6%	7%
1 - 1	0.75	0.80	0.84
1.5 - 1	0.81	0.86	0.92
2 - 1	0.86	0.93	1.00

Recurring COLA: 1.00

No Recurring COLA: 0.90

The plan design factors are applied to the base retirement rates for ages less than 62.

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability).

Firefighters:

Years of Service	% of Active Members Separating Within Next Year	
	Male	Female
0	3.00%	3.00%
1	2.70	2.70
2	2.40	2.40
3	2.10	2.10
4	1.80	1.80
5	1.60	1.60
6	1.40	1.40
7	1.20	1.20
8	1.10	1.10
9	1.00	1.00
10	0.80	0.80
11	0.70	0.70
12	0.60	0.60
13-16	0.50	0.50
17-19	0.40	0.40
20&Over	0.00	0.00

Actuarial Assumptions for City of Tyler as of December 31, 2015 (Continued)

Rates of separation from active membership (continued)

TMRS:

1. For the first 10 years of service, the base table rates vary by gender, entry age, and length of service. For each city, the base table is then multiplied by a factor from 75% to 125% based on the experience of the individual city in comparison to the group as a whole. A further multiplier is applied depending on an employee's classification: 1) Fire - 63%, 2) Police - 88%, or 3) Other - 108%. Sample base rates are shown below:

Male Age	SERVICE									
	0	1	2	3	4	5	6	7	8	9
20	0.2920	0.2623	0.2186	0.1932	0.1850	0.1673	0.1529	0.1243	0.1022	0.0816
25	0.2563	0.2269	0.1812	0.1554	0.1429	0.1267	0.1148	0.1006	0.0926	0.0757
30	0.2451	0.2052	0.1610	0.1322	0.1079	0.0998	0.0896	0.0774	0.0744	0.0621
35	0.2505	0.2070	0.1577	0.1265	0.1050	0.0994	0.0848	0.0719	0.0621	0.0567
40	0.2467	0.2060	0.1561	0.1213	0.1046	0.0943	0.0805	0.0710	0.0601	0.0577
45	0.2268	0.1934	0.1556	0.1220	0.1053	0.0926	0.0813	0.0711	0.0605	0.0575
50	0.2078	0.1731	0.1412	0.1149	0.1016	0.0887	0.0807	0.0716	0.0604	0.0578
55	0.2003	0.1668	0.1265	0.1074	0.0861	0.0864	0.0771	0.0682	0.0609	0.0560
60	0.1999	0.1542	0.1231	0.1060	0.0790	0.0868	0.0753	0.0683	0.0571	0.0549
65	0.2000	0.1463	0.1238	0.1063	0.0803	0.0867	0.0757	0.0700	0.0547	0.0551
70	0.2000	0.1477	0.1237	0.1063	0.0802	0.0867	0.0756	0.0697	0.0551	0.0551

Female Age	SERVICE									
	0	1	2	3	4	5	6	7	8	9
20	0.3030	0.2790	0.2221	0.2098	0.1997	0.2021	0.1536	0.1539	0.1564	0.1574
25	0.2782	0.2409	0.2067	0.1962	0.1710	0.1663	0.1369	0.1352	0.1186	0.1125
30	0.2574	0.2188	0.1949	0.1762	0.1347	0.1348	0.1276	0.1126	0.0973	0.0804
35	0.2424	0.2118	0.1805	0.1438	0.1273	0.1238	0.1112	0.1085	0.1000	0.0769
40	0.2244	0.1993	0.1614	0.1342	0.1295	0.1097	0.1023	0.0924	0.0834	0.0733
45	0.2191	0.1853	0.1427	0.1337	0.1054	0.1017	0.0894	0.0784	0.0705	0.0725
50	0.2201	0.1793	0.1347	0.1229	0.0886	0.0881	0.0823	0.0723	0.0675	0.0617
55	0.2200	0.1738	0.1350	0.1199	0.0834	0.0806	0.0713	0.0705	0.0685	0.0551
60	0.2200	0.1523	0.1350	0.1172	0.0798	0.0843	0.0646	0.0639	0.0429	0.0379
65	0.2200	0.1431	0.1350	0.1150	0.0800	0.0857	0.0667	0.0593	0.0276	0.0280
70	0.2200	0.1447	0.1350	0.1154	0.0800	0.0854	0.0664	0.0601	0.0303	0.0298

The rates shown above do not include the employer and employee specific loads.

Actuarial Assumptions for City of Tyler as of December 31, 2015 (Continued)

Rates of Separation (continued)

2. After 10 years of service, separation rates vary by gender and by the number of years remaining until first retirement eligibility. For each city, the base table is then multiplied by a factor from 75% to 125% based on the experience of the individual city in comparison to the group as a whole (same factor as above). A further multiplier is applied depending on an employee's classification: 1) Fire - 52%, 2) Police - 79%, or 3) Other - 115%. Sample base rates are shown below:

Years from Retirement	Male	Female
1	1.72%	2.20%
2	2.29	2.97
3	2.71	3.54
4	3.06	4.01
5	3.35	4.41
6	3.61	4.77
7	3.85	5.10
8	4.07	5.40
9	4.28	5.68
10	4.47	5.94
11	4.65	6.19
12	4.82	6.43
13	4.98	6.66
14	5.14	6.87
15	5.29	7.08

Termination rates end at first eligibility for retirement.

The rates shown above do not include the employer and employee specific loads.

Actuarial Assumptions for City of Tyler as of December 31, 2015 (Continued)

Rates of disability among active members. Sample rates are shown below:

Firefighters:

Ordinary Disability		
Sample Ages	% Becoming Disabled within Next Year	
	Male	Female
20	0.01%	0.01%
25	0.02	0.02
30	0.03	0.03
35	0.05	0.05
40	0.09	0.09
45	0.21	0.21
50	0.38	0.38

TMRS:

Ordinary Disability		
Sample Ages	% Becoming Disabled within Next Year	
	Male	Female
20	0.00%	0.00%
25	0.00	0.00
30	0.01	0.01
35	0.03	0.03
40	0.05	0.05
45	0.08	0.08
50	0.12	0.12
55	0.16	0.16
60	0.22	0.22
65	0.28	0.28

Actuarial Assumptions for City of Tyler as of December 31, 2015 (Continued)

Health cost increases for active members are displayed in the following table:

Year	Health Care Trend Inflation Rates
	Medical and Drug
2016	6.50%
2017	6.40
2018	6.30
2019	6.20
2020	6.10
2021	6.00
2022	5.80
2023	5.60
2024	5.40
2025	5.20
2026	5.00
2027	4.80
2028	4.60
2029	4.40
2030	4.30
2031 & Later	4.25

The City's Medicare Supplement subsidies are not expected to increase in the future.

The cost of dental benefits is assumed to increase at 3.00% per year.

Miscellaneous and Technical Assumptions for City of Tyler as of December 31, 2015

Administrative Expenses	The age-related claims shown on page D-1 include administrative expenses related to the delivery of the health care benefits. The normal cost includes \$50,000 for OPEB plan administration fees.
Claims Utilization	To model the impact of aging on the underlying health care costs, the valuation relied on the Society of Actuaries' 2013 Study "Health Care Costs – From Birth to Death". Chart 1 (2010 Aggregate Commercial Costs) was used to model the impact of aging for ages less than 65 and Table 4 (Development of Plan Specific Medicare Age Curve) was used to model the impact of aging for ages 65 and over.
Decrement Timing	Decrements of all types are assumed to occur mid-year.
Decrement Operation	Disability does not operate during retirement eligibility.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Marriage Assumption	Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Medicare Coverage	Assumed to be available for all covered employees on attainment of age 65. Disabled retirees were assumed to be eligible for Medicare coverage at age 65.

Miscellaneous and Technical Assumptions for City of Tyler as of December 31, 2015 (Continued)

Election Percentage	<p>It was assumed that 85% of future retirees who were hired before 1/1/1997 and 25% of future retirees who were hired after 1/1/1997 would choose to receive retiree health care benefits through the City. Of those assumed to elect coverage, 50% of males and 20% of females were assumed to elect two-person coverage. For those that elect two-person coverage, it was assumed that coverage would continue to the spouse upon death of the retiree. 90% of retirees who were assumed to elect health coverage after the age of 65 were assumed to elect the Post-65 Prescription Drug Card.</p>
Demographic Assumptions	<p>This report has used the same demographic assumptions used to value the defined benefit retirement plan in which the members participate. We are reliant upon the retirement plan actuary to develop the demographic assumptions. Based on our experience, the assumptions appear reasonable.</p>
Excise Tax and Health Care Reform	<p>This report has not incorporated any additional liabilities associated with the excise tax on high-cost employer health plans effective January 1, 2020. The “Cadillac” tax is a 40% excise tax paid by the coverage provider (employer and/or insurer) on the value of health plan costs in excess of legislated thresholds. Premiums are not expected to reach the tax threshold for over a decade. Because non-grandfathered retirees pay 100% of the plan's premiums, we believe future Cadillac Tax costs associated with non-grandfathered retirees will be paid by those retirees.</p>
Assumption, Method, and Plan Changes	<ol style="list-style-type: none">1. In anticipation of GASB 75, the actuarial cost method was changed from the Projected Unit Credit Cost Method to the Individual Entry Age Normal Cost Method. This change increased the actuarial accrued liability by \$1.3 million and lowered the ARC by \$100,000.

Miscellaneous and Technical Assumptions for City of Tyler as of December 31, 2015 (Continued)

- Assumption, Method, and Plan Changes, continued**
2. The prescription drug card for Medicare retirees was discontinued, effective January 1, 2018. This plan change lowered the ARC and associated liabilities.
 3. The Medicare Supplement subsidies were frozen for current retirees, based on their age as of December 31, 2017. Any eligible members retiring after December 31, 2017 will receive the age 65 subsidy amount.
 4. The inflation rate assumption was lowered from 3.00% to 2.50%. This change affected the discount rate assumption and the ultimate trend assumption.
 5. The assumed long-term rate of return for the OPEB trust assets was decreased from 7.50% to 6.50%. Half of this change was attributable to the new inflation assumption and half was due to a lower real return assumption.
 6. The amortization method was changed from level percent of pay to level dollar and the amortization period was increased from 22 to 25. These changes were made to produce an ARC which will remain more level in dollar term in future years.
 7. The trend rates were reset to better reflect the plan's anticipated experience and the new inflation assumption. This change increased the ARC and associated liabilities.
 8. Mortality and other demographic assumptions have been updated to match those used in the TMRS and Firemen's pension valuations. These changes had very little impact on the OPEB liabilities.
 9. The tables used to model the impact of aging on the underlying claims were updated based on the Society of Actuaries' 2013 Study "Health Care Costs – From Birth to Death".

APPENDIX

Glossary

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Glossary (Concluded)

Annual Required Contribution (ARC). The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ARC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

Governmental Accounting Standards Board (GASB). GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Medical Trend Rate (Health Care Inflation). The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Other Post-Employment Employee Benefits (OPEB). OPEB are post-employment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other health care benefits.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes.