

Waterford Charter Township

Retiree Health Trust

Actuarial Valuation Report

December 31, 2018



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September 4, 2019

Ms. Bonnie G. Verbos
Payroll & Benefits Manager
Waterford Charter Township
5200 Civic Center Drive
Waterford, Michigan 48329-3773

Dear Ms. Verbos:

Submitted in this report are the results of an Actuarial Valuation of the employer-financed Other Postemployment Benefits (OPEB) provided by the Waterford Charter Township Retiree Health Trust. The date of the valuation was December 31, 2018.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation is to: 1) measure the System's funding progress (assuming continued pre-funding of the Plan), 2) to determine the Actuarially Determined Contribution (ADC) for the fiscal years ending December 31, 2019 and December 31, 2020, and 3) to determine the minimum employer contribution under MI P.A. 202 of 2017. This report is intended to be a funding valuation report and is not appropriate for State reporting under uniform assumptions. Assumptions and results for GASB 74/75 are contained in a separate report issued on May 15, 2019.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

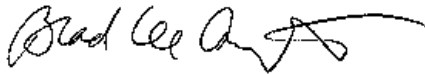
This report should not be relied on for any purpose other than the purpose described above. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The valuation was based upon information furnished by the Township concerning the employer financed Other Postemployment Benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Township.

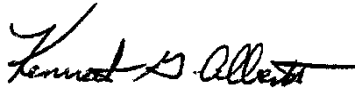
This report has been prepared by individuals who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Waterford Charter Township Retiree Health Trust as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Brad Lee Armstrong is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing individuals are independent of the plan sponsor.

Respectfully submitted,



Brad Lee Armstrong, ASA, EA, FCA, MAAA



Kenneth G. Alberts

BLA/KGA:sc

C2652



EXECUTIVE SUMMARY

Executive Summary

Actuarially Determined Contribution

This report describes the current actuarial condition of the plan, determines the Actuarially Determined Contribution (ADC), and analyzes the changes in principal values.

The ADC is determined based on the plan provisions in effect as of the valuation date and the actuarial assumptions adopted by the Board. Valuations are expected to be performed biennially. The next valuation will be performed as of December 31, 2020 and will determine the ADC for Plan years 2021 and 2022.

	Actuarially Determined Contribution (ADC)	Estimated Premiums Paid by Employer on Behalf of Retirees
Plan Year 2019	\$ 12,810,250	\$ 6,127,428
Plan Year 2020	\$ 12,775,978	\$ 6,690,068

Actual claims and premiums paid on behalf of retirees and adjusted for the implicit subsidy act to reduce Actuarial Accrued Liability (AAL).

For additional details, please see Section B of the report.

Liabilities and Assets

A. Total Present Value of Future Benefits	\$173,203,508
B. Present Value of Future Employer Normal Costs	18,783,325
C. Actuarial Accrued Liability (A.-B.)	154,420,183
D. Actuarial Value of Assets	14,058,033
E. Unfunded Actuarial Accrued Liability (C.-D.)	\$140,362,150
F. Funded Ratio (D./C.)	9.1%

The Present Value of Future Benefits (PVFB), which is the present value of all benefits expected to be paid from the plan for past and future service to current plan members as of December 31, 2018, is \$173,203,508. The Actuarial Accrued Liability, which is the portion of the above amounts attributable to service accrued by plan members as of December 31, 2018, is \$154,420,183. (These results are based on a 6.50% discount rate.) The fund assets currently available to pay Plan benefits as of December 31, 2018 are \$14,058,033.

SECTION A

VALUATION RESULTS

Development of the Actuarially Determined Contributions for the Other Postemployment Benefits for 2019 and 2020 Determined at December 31, 2018

Contributions for	Development of the Actuarially Determined Contribution for January 1, 2019 - December 31, 2019		
	General	Police/Fire	Grand Total
Employer Normal Cost	\$920,338	\$1,354,097	\$ 2,274,435
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 29 years)			\$ 10,535,815
Actuarially Determined Contribution (ADC)			\$ 12,810,250
ADC Per Active Participant			\$ 63,733

Contributions for	Development of the Actuarially Determined Contribution for December 31, 2020 - December 31, 2020		
	General	Police/Fire	Grand Total
Employer Normal Cost	\$ 867,453	\$ 1,374,985	\$ 2,242,438
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 28 years)			\$ 10,535,815
Actuarially Determined Contribution (ADC) for			\$ 12,775,978
ADC Per Active Participant			\$ 63,562

The 6.5% investment return assumption used to determine the results above is intended to reflect full payment of the Actuarially Determined Contribution and the investment policy of the fund.

The unfunded actuarial accrued liabilities were amortized as a closed level dollar period of 29 years starting with the 2019 Plan year ADC.

Determination of Unfunded Actuarial Accrued Liability as of December 31, 2018

	General	Police/Fire	Grand Total
A. Present Value of Future Benefits			
1. Retirees and Beneficiaries	\$ 44,297,450	\$ 56,334,197	\$ 100,631,647
2. Vested Terminated Members	5,252,165	332,131	5,584,296
3. Active Members	<u>28,415,823</u>	<u>38,571,742</u>	<u>66,987,565</u>
Total Present Value of Future Benefits	\$ 77,965,438	\$ 95,238,070	\$173,203,508
B. Present Value of Future Employer Normal Costs	7,038,869	11,744,456	18,783,325
C. Actuarial Accrued Liability (A.-B.)	70,926,569	83,493,614	154,420,183
D. Actuarial Value of Assets			14,058,033
E. Unfunded Actuarial Accrued Liability (C.-D.)			\$140,362,150
F. Funded Ratio (D./C.)			9.1%

The funded ratio is intended to measure progress towards achieving the Board's funding target of 100%. A ratio less than 100% indicates the need for future contributions above the annual normal cost and administrative expenses. The funded ratio is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the benefits.

The costs shown above are based on the assumption of pre-funding. Currently, the Township is only making contributions that meet or marginally exceed annual premiums. At this level the employer contributions are approximately 50%-60% of the ADC. If the Township chooses to continue this approach, the Plan will cost more than shown above due to the lost investment opportunity.

Summary of Current Asset Information

Receipts and Disbursements

	2017	2018
Valuation Assets - January 1	\$11,422,373	\$ 13,729,495
Receipts		
Member contributions	54,831	54,245
Employer contributions	6,646,677	7,011,665
Recognized investment income/assets sales	1,431,730	(934,859)
Total	\$ 8,133,238	\$ 6,131,051
Disbursements		
Benefit payments	5,795,277	5,753,465
Refund of member contributions	0	0
Administrative & investment expenses	30,839	49,048
Total	\$ 5,826,116	\$ 5,802,513
Valuation Assets December 31	\$13,729,495	\$14,058,033
Mean Rate of Return	11.80%	-6.84%

Derivation of Experience Gain (Loss) Year Ended December 31, 2018

Actual experience will never (except by coincidence) exactly match assumed experience. It is hoped that gains and losses will cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below:

	Year Ended December 31, 2017	Year Ended December 31, 2018
(1) UAAL at start of year [#]	\$141,728,018	\$146,783,387
(2) Normal cost from last valuation	2,675,404	2,652,565
(3) Actual employee contributions	54,831	54,245
(4) Actual employer contributions	6,646,677	7,011,665
(5) Interest	9,081,473	9,397,486
(6) Expected UAAL before changes: (1) + (2) - (3) + (4)	146,783,387	151,767,528
(7) Change from revised actuarial assumptions	0	2,002,899
(8) Expected UAAL after changes: (5) + (6) + (7)	146,783,387	153,770,427
(9) Actual UAAL at end of year		140,362,150
(10) Gain (loss): (8) - (9) *		13,408,277
(11) Portion of Gain (loss) due to change in premiums differing from assumed and change in future trend *		25,430,683

* For the most part benefit changes are incorporated in the medical rates so that the effect of the changes is not separable. Therefore, the effect of the benefit changes is included in items (10) and (11).

The December 31, 2017 UAAL was reduced by \$741,696 to reflect the removal of liabilities for life insurance, since the retiree life insurance is not part of this Trust.

Comments

Comment A: Overall experience was more favorable than assumed since the prior valuation resulting in a gain of approximately \$13.4 million. In addition, several actuarial assumptions were changed to coincide with the new demographic assumptions adopted by the respective Retirement System Boards, pursuant to the respective experience reviews. The following is a list of the major activities observed during the two year period since the last valuation:

- Investment return was lower than assumed; the actual market rate of return for the two year period was approximately 2.1% per year compared with an assumed 6.5% per year investment return, resulting in a loss of approximately \$1.2 million.
- Changes in demographic assumptions resulted in an increase in accrued liabilities of approximately \$2.6 million.
- Changes in benefits including a change to fully-insured premiums resulted in approximately a \$20 million reduction in liabilities.
- Changes in demographics during the two year period, resulted in approximately a \$7 million loss, including more retirements than expected, more disabilities than expected and fewer quits than expected.
- Other changes, including a change in the future trend, a change in the load related to the elimination of a 1% state tax and other minor modeling changes and updates.

Comment B: One of the key assumptions used in any valuation of the cost of postemployment benefits is the long-term rate of investment return on plan assets. Higher assumed investment returns will result in a lower Actuarially Determined Contribution (ADC). Lower assumed investment returns will result in a higher ADC. The 6.50% investment return assumption used to determine the results is intended to reflect full payment of the Actuarially Determined Contribution and the investment policy of the fund. If little or no pre-funding occurs (in excess of pay-as-you-go costs), costs will be significantly higher.

Comment C: The contribution rates shown include amortization of the unfunded actuarial accrued liability over 29 years for fiscal year 2019 and 28 years for fiscal year 2020. A shorter amortization period would result in a higher ADC. Since approximately 70% of the accrued liabilities are attributable to members who are no longer active, and the plan is mostly closed, a shorter period may be preferable for pre-funding purposes.

Comment D: The market value of assets held in the IRC Section 115 Trust was provided to us. Asset details are not provided separately between the groups. In the past, we developed an asset allocation based on the Annual Required Contribution (ARC) from the preceding GASB 45 valuation. That valuation was discontinued and the employer is not contributing based on the preceding funding valuation ADC (the closest replacement to the ARC). In addition, we understand that separate reporting may not be needed. We are, therefore, only showing assets, UAAL, and ADC for the plan as a whole. If it is determined that separate results are needed, we would be happy to work with the Board to determine a reasonable allocation of assets between the groups.

Comments

Comment E: Excise Tax on High-Cost Employer Health Plans (aka Cadillac Tax) Effective 1/1/2022. 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 certain thresholds. The thresholds are \$10,200 for single coverage or \$27,500 for family coverage in 2022. Many plans are below the thresholds today, but are likely to exceed them in the next decade. The thresholds will be indexed at CPI-U, which is lower than the medical inflation rates affecting the cost of the plans. There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. Combining early retiree and Medicare eligible retiree costs is allowed and can keep plans under the thresholds for a longer period of time.

For this Plan it is intended that, for purposes of the test, the pre- and post-Medicare members will be blended. The plan sponsor will need to decide whether to reduce benefits to avoid the tax, or how the additional cost will be allocated between the employer and the members. The excise tax is projected to be between 4%-10% of premiums. A 4% load was applied to the health care liabilities to approximate the cost of these future taxes. Another 2% load was applied for potential buy-ups.

Comment F: P.A. 202 of 2017 requires that Plan sponsors contribute at least the normal cost for members hired after June 30, 2018 plus any premiums on behalf of current retired participants. In order to comply with the new hire requirement, we recommend the employer contribute 21.96% multiplied by the 2019 payroll (or 2020 payroll for the 2020 ADC) for participating active police members hired after June 30, 2018.

Comment G: Effective with the December 31, 2017 pension valuations, the Pension Boards adopted revised assumptions. These assumptions are included in this December 31, 2018 Retiree Health Trust Valuation. The assumptions used for this valuation (December 31, 2018) do not satisfy the uniform assumptions set by the Treasury for reporting purposes under P.A. 202 of 2017 for fiscal year 2019. The FY2020 uniform assumptions have not been published as of the date of this valuation.

Comment H: Since the life insurance plan is not part of the Trust, the costs associated with life insurance have been excluded from the funding valuation. However, life insurance costs will need to be included in the GASB 74/75 report. For reference, as of December 31, 2018, the normal cost dollars for life insurance are \$6,650 and the accrued liability is \$868,909.

Other Observations

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected System Contributions and Funded Status

Currently, the fund has a small amount of assets. We understand the Plan sponsors current funding policy is to contribute amounts slightly in excess of annual premiums for the foreseeable future. Combining this policy with the fact that the Plan is mostly closed and new Michigan law requires contribution of at least normal cost for new hires, it is expected that if all assumptions are met (including the investment return assumption of 6.5%), that:

- (1) Actual employer contributions (minimum of Normal cost for post 6/30/2018 hires plus premiums for current retirees) will continue to increase.
- (2) The unfunded actuarial accrued liabilities will likely increase for several years before finally decreasing.
- (3) The funded status will gradually increase towards 100%, but it will likely take significantly longer than 29 years.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the Actuarial Accrued Liability and the Actuarial Value of Assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of Fund assets to cover the estimated cost of settling the Fund's benefit obligations; for example, transferring the liability to an unrelated third party in a market value type transaction.
- (2) The measurement is dependent upon the actuarial cost method which, in combination with the Fund's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. The current funded status is 9%. Even if the funded status measurement in this report was 100%, it would not be synonymous with no required future contributions. If the funded status were 100%, the Fund would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

Retiree Premium Rate Development

Initial premium rates were developed for the two classes of retirees (pre-65 and post-65). The Township became completely fully-insured as of August 1, 2018. For the fully-insured pre-65 and post-65 medical benefits, the August 1, 2018 premium rates provided by the Township were utilized to determine the appropriate initial costs used in the valuation. The pre-65 premiums are blended rates based on the combined experience of active and pre-65 retired members, therefore, there is an implicit employer subsidy for the pre-65 retirees since the average costs of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees. The estimated per capita cost for the pre-65 retirees is developed by adjusting the demographic differences between the active employees and retirees to reflect this implicit subsidy for the retirees. Starting January 1, 2015, all post-65 benefits will be provided through the Medicare Advantage benefits.

Age graded and sex distinct premiums are utilized by this valuation. The premiums developed by the preceding process 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 premiums more accurately reflect the health care utilization and cost at that age.

Police members were assumed to retire into the Community Blue 1 \$10/\$20 plan and General and Fire members were assumed to retire into the Community Blue 4 (2) \$10/\$40/\$80.

The combined monthly one-person medical and drug premiums for future retirees at select ages are shown below:

Police Members			General/Fire Members		
For Those Not Eligible for Medicare			For Those Not Eligible for Medicare		
Age	Male	Female	Age	Male	Female
45	\$ 632.45	\$ 872.86	45	\$ 530.83	\$ 732.62
50	823.52	1,014.50	50	691.20	851.49
55	1,083.66	1,183.20	55	909.55	993.09
60	1,399.61	1,378.13	60	1,174.73	1,156.70
For Those Eligible for Medicare			For Those Eligible for Medicare		
Age	Male	Female	Age	Male	Female
65	\$ 628.77	\$ 593.06	65	\$ 511.96	\$ 482.88
70	684.96	662.80	70	557.71	539.67
75	735.66	717.84	75	598.99	584.48


Retiree Premium Rate Development

The combined monthly one-person medical and drug premiums for current retired participants at select ages are shown below:

Police Members				General/Fire Members			
For Those Not Eligible for Medicare				For Those Not Eligible for Medicare			
Age	Male	Female		Age	Male	Female	
45	\$ 632.45	\$ 872.86		45	\$ 607.80	\$ 838.85	
50	823.52	1,014.50		50	791.43	974.96	
55	1,083.66	1,183.20		55	1,041.43	1,137.08	
60	1,399.61	1,378.13		60	1,345.06	1,324.42	
For Those Eligible for Medicare				For Those Eligible for Medicare			
Age	Male	Female		Age	Male	Female	
65	\$ 696.28	\$ 656.73		65	\$ 664.87	\$ 627.10	
70	758.50	733.96		70	724.28	700.85	
75	814.64	794.91		75	777.89	759.05	

We have not “age graded” the dental and vision premium rates for this valuation, since dental and vision claims do not vary significantly by age. The monthly per contract dental premium is \$56.83 and the per member vision premium is \$4.89 for retirees.

James F. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.


 James E. Pranschke, FSA, FCA, MAAA

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

Waterford Township Retiree Health Care Plan

Summary of Benefits as of December 31, 2018

Plan Participants

The following employees of the Township Retiree Health Care Plan are eligible to receive retiree health care benefits through the Township:

- Police Patrol
- Police Command
- Fire employees hired before February 1, 2012
- Teamsters, Court, and Management employees hired before January 1, 2016
- Dispatch employees hired before July 4, 2016

In lieu of the retiree health care plan, newly hired Teamster, Court, Management and Dispatch employees will participate in the Health Care Savings Plan where the employee contributes 2% of base wages with an employer match. These funds will be returned to the member upon separation from employment.

Benefit Eligibility

Eligibility conditions for retiree health care benefits are as follows:

All Members – see the attached summary of benefit sheets for the union/group and the criteria for collecting insurance benefits.

Health Care Benefit Provided by Plan:

- Member: Depending on union/group the Township pays a percentage of the health coverage.
- Spouse: Depending on union/group the Township pays a percentage of the health coverage as long as the spouse continues to receive a pension from the Township.
- Dependent: Depending on union/group the Township pays a percentage of the health coverage as long as the dependent is under age 26.

If medical coverage is available elsewhere, the retiree shall use that coverage.

Early Retirement Benefits

Members retiring under early retirement are eligible for retiree health care based on the same criteria that applies to the union/group that they were in at the time they retired.

Deferred Retirement Benefits

Health care begins the date the pension begins based on the same criteria that applies to the union/group they were in when they left the Township's employment.

Duty Death-in-Service Retirement Benefits

Health care begins the date the pension begins based on the same criteria that applies to the union/group they were in when they died.

Waterford Township Retiree Health Care Plan

Summary of Benefits as of December 31, 2018

Non-Duty Death-in-Service Retirement Benefits

Health care begins for the surviving spouse and dependents; the date the pension begins based on the same criteria that apply to the union/group they were in when they died.

Duty Disabled Retirement Benefits

Health care begins for the date the pension begins based on the same criteria that apply to the union/group they were in when they became disabled.

Non-Duty Disabled Retirement Benefits

Health care begins for the date the pension begins based on the same criteria that apply to the union/group they were in when they became disabled. General pension members must have 10 or more years of service, Police and Fire pension members must have 5 or more years of service.

Benefits for Spouses of Retired Employees

Spouses of retired employees are eligible to receive retiree health care benefits only if they continue to receive a pension from the Township.

Non-Medicare and Medicare-Eligible Provisions

Retirees are required to enroll in Medicare Part A & B once eligible. Retirees pay Medicare premiums.

Dental/Vision Coverage

Dental and vision coverage begins the date the pension begins based on the same criteria that apply to the union/group they were in when they retired from the Township.

Life Insurance Coverage

Life coverage begins the date the pension begins based on the same criteria that apply to the union/group they were in when they retired from the Township. Only Elected and Management (both Court and Township employee) receive a \$25,000.00 life policy paid for in full by the Township.

Retiree Opt-Out

Retirees who decide to opt-out of the Township's health coverage do not receive any opt out payment.

Waterford Township Retiree Health Care Plan

Summary of Benefits as of December 31, 2018

Current Retirees Contract Language Benefits

Effective January 1, 2015, all current and future retirees who qualify for Medicare must go into a BCBS Medicare Advantage (MCR) health/prescription coverage. All \$2 prescription coverage changed to \$5.
Note – All MCR ADV Rx coverage will mirror the CB coverage that is available to actives (except Patrol, COAM and Police mgmt) which is the 10/40/80 Rx coverage. For Patrol, COAM and Police mgmt the Rx coverage is still 10/20.

Firefighters - INS Code R30A (included in Fire group)

Health BCBS Traditional w/\$5 Rx (any age) or BCBS CB1 w/ \$5 Rx (any age) (Retired on or prior to 1/31/2008).

Health BCBS (prior to M65) CB1 w/\$10/\$20 Rx (Retiring after 1/31/2008)

BCBS MCR Advantage or equivalent for all at age 65 or MCR eligible:

Retiring prior to 1/31/2008	w/\$5 Rx
Retiring on or after 1/31/2008	w/\$5 Rx
Retiring on or after 1/1/2010	w/\$10/\$20 Rx
Retiring on or after 1/1/2018	w/\$10/\$40/\$80 Rx

Fire members hired on or after 2/1/2012 are not eligible to purchase retiree health care through the Township.

Vested requirements for health effective 1/1/1998 and for Dental effective 1/1/1998

50% vested after 15 years

75% vested after 20 years

100% vested after 25 years

Dental and Optical

Prior to 7/1/2001 no dental or optical coverage

On or after 7/1/2001 dental POS # 1 and Optical \$100 per retiree & dependent every 2 years

100% vested if retiring after age 60

100% vested if duty disability retired

Police Supervisors - COAM - INS Code R40A (included in Police group)

Health BCBS Traditional w/\$5 Rx (any age) or equivalent (Retired prior to 1/1/2008)

Health BCBS (prior to M65) CB1 w/\$10/\$20 Rx (Retiring after 1/1/2008)

BCBS MCR Advantage or equivalent for all at age 65 or MCR eligible:

Retiring prior to 1/31/2008	w/\$5 Rx
Retiring on or after 1/31/2008	w/\$10/\$20 Rx

As of January 1, 2013, all active Police Supervisors contribute 1% of base wages into the Retiree Health Trust.

Waterford Township Retiree Health Care Plan Summary of Benefits as of December 31, 2018 Current Retirees Contract Language Benefits

Vested requirements for health effective 1/1/1997

50% vested after 15 years
75% vested after 20 years
100% vested after 25 years

Dental and Optical

Prior to 1/1/2003 no dental or optical coverage
On or after 1/1/2003 dental Delta Premier 75/25 plan and Optical \$100 per retiree & dependent every 2 years
On or after 10/1/2003 dental POS # 1 and Optical \$100 per retiree & dependent every 2 years

100% vested if retiring after age 60
100% vested if duty disability retired

MAP Patrol - INS Code R50A (included in Police group)

Health BCBS Traditional w/\$5 Rx - M-65 w/\$2 Rx at age 65 (Retired prior to 1/1/1998)
Health BCBS Traditional w/\$5 Rx - M-65 w/\$5 (was a \$2Rx) at age 65 (Retiring on or after 1/1/1998)
Health BCBS (prior to M65) CB1 w/\$10/\$20 Rx (Retiring on or after 6/1/2008)
Health BCBS CB10 w/ 10/20 Rx (Retiring on or after 1/1/2011)

BCBS MCR Advantage or equivalent for all at age 65 or MCR eligible:

Retiring prior to 6/1/2008	w/\$5 Rx
Retiring on or after 6/1/2008	w/\$10/\$20 Rx

As of January 1, 2013, all active Police Patrol contribute 1% of base wages into the Retiree Health Trust.

Vested requirements for health effective 12/01/1998

50% vested after 15 years
75% vested after 20 years
100% vested after 25 years

Dental and Optical

Prior to 1/1/2001 no dental or optical coverage
On or after 1/1/2001 dental POS #1 and Optical \$100 per retiree & dependent every 2 years

100% vested if retiring after age 60
100% vested if duty disability retired

Waterford Township Retiree Health Care Plan Summary of Benefits as of December 31, 2018 Current Retirees Contract Language Benefits

MAP Dispatch - INS Code R55A (included in General group)

Health BCBS Traditional w/\$5 Rx - M-65 w/\$5 Rx at age 65 (retired prior to 1/1/2001)
Health CB1 w/\$5Rx (prior to age 65) (Retiring on or after 1/1/2001)
Health CB1 w/\$10/\$20 Rx (prior to age 65) (Retiring on or after 1/1/2011)
Health CB10 w/\$10/\$20 Rx (prior to age 65) (Retiring on or after 1/1/2013)
Health BCBS CB4 (2) w/ \$10/40/80 Rx (pre 65 or MCR eligible) (Retiring on or after 7/5/2016)

BCBS MCR Advantage or equivalent for all at age 65 or MCR eligible:

Retiring prior to 1/1/2001	w/\$5 Rx
Retiring on or after 1/1/2008	w/\$5 Rx
Retiring on or after 1/1/2011	w/\$10/\$20 Rx
Retiring on or after 7/5/2016	w/\$10/40/80 Rx

Those that retire on or after 7/5/2016 shall be provided with the PPO retiree healthcare benefits in effect at the time of their retirement which is presently the CB4(2) coverage with \$10/\$40/\$80 Rx coverage. Dispatch members hired on or after 7/5/2016 are not eligible to purchase retiree health care through the Township. Dispatch employees hired between August 1, 2012 and January 1, 2016, will contribute 3% of base wage into the Retiree Health Trust.

Dental and Optical

Prior to 4/1/2001 no dental or optical coverage

On or after 4/1/2001 dental POS #1 and Optical \$100 per retiree & dependent every 2 years

Vesting at 25 years – 100% paid base plan. Those with less than 25 years of service are not eligible to purchase coverage through the Township.

Teamsters - INS Code R20A (closed – retiree only) (included in General group)

Health BCBS Traditional w/\$5 Rx - M-65 at age 65 - Hired prior to 10/13/1999
Health BCBS Traditional w/\$5 Rx - M-65 w/\$5 Rx at age 65 - Hired after 10/13/1999

BCBS MCR Advantage or equivalent for all at age 65 or MCR eligible:

Retiring prior to 10/13/1999	w/\$5 Rx
Retiring on or after 10/13/1999	w/\$5 Rx

Teamsters hired on or after 1/1/2016 are not eligible to purchase retiree health care through the Township.

Delta Dental premier effective 1/1/1995

Delta Dental POS #1 effective 1/1/2003

Optical \$100 per retiree & dependent every 2 years

Waterford Township Retiree Health Care Plan Summary of Benefits as of December 31, 2018 Current Retirees Contract Language Benefits

Teamsters - INS Code R20B (included in General group)

Active Teamsters hired between 8/1/2012 and 1/1/2016, contribute 3% of their base pay toward retiree health care.

Retiring on or after 4/10/2007 (no matter when hired)

Health BCBS (prior to M65) CB1 w/\$10/\$20 Rx

Health BCBS Traditional or Equivalent w/\$5 Rx – M-65 at age 65

Health BCBS CB1 w/\$10/\$20 Rx as of 10/1/2007

Health BCBS CB4 (2) w/ \$10/40/80 Rx (pre 65 or MCR eligible) (Retiring on or after 1/1/2016)

BCBS MCR Advantage for all at age 65 or MCR eligible:

Retiring prior to 4/10/2007 w/\$5 Rx

Retiring on or after 4/10/2007 w/\$10/\$20 Rx

Those that retired prior to 8/1/2012 shall be allowed to maintain the health insurance coverage provided to them at the time of their retirement.

Those that retire on or after 8/1/2012 shall be provided the least expensive coverage that was selected by them in any of the 3 years prior to the employee's retirement as long as it is eligible to them with the vesting requirements.

Those that retire on or after 1/1/2016 shall be provided with the PPO retiree healthcare benefits in effect at the time of their retirement which is presently the CB4(2) coverage with the \$10/40/80 Rx coverage as long as it is eligible to them with the vesting requirements.

Teamsters hired on or after 1/1/2016 are not eligible to purchase retiree health care through the Township.

Delta Dental POS #1

Optical \$100 per retiree & dependent every 2 years

Vested requirements for health, dental, optical effective 10/13/1999

50% vested after 15 years

75% vested after 20 years

100% vested after 25 years

Waterford Township Retiree Health Care Plan Summary of Benefits as of December 31, 2018 Current Retirees Contract Language Benefits

District Court Employees Non Supv - INS Code R60A (included in General group)

Hired prior to 4/1/2002

Health BCBS Traditional w/\$5 Rx - M-65 at age 65

Health BCBS CB10 w/\$10/\$20 Rx as of 1/1/2009

Health BCBS CB4 (2) w/ \$10/40/80 Rx (pre 65 or MCR eligible) (Retiring on or after 1/1/2016)

BCBS MCR Advantage for all at age 65 or MCR eligible:

Retiring prior to 4/1/2002	w/\$5 Rx
Retiring on or after 1/1/2009	w/\$10/\$20 Rx
Retiring on or after 1/1/2016	w/\$10/40/80 Rx

Those that retire on or after 1/1/2016 shall be provided with the PPO retiree healthcare benefits in effect at the time of their retirement which is presently the CB4(2) coverage with the \$10/40/80 Rx coverage as long as it is eligible to them with the vesting requirements.

Court employees hired on or after 1/1/2016 are not eligible to purchase retiree health care through the Township.

Delta Dental Premier 50/50 plan effective 4/17/1997

Delta Dental Premier 75/25 plan effective 8/1/2005

Optical \$100 per retiree & dependent every 2 years

Vested requirements for health, dental, optical effective 4/1/2002

50% vested after 15 years

75% vested after 20 years

100% vested after 25 years

District Court Employees Supv - INS Code R60AS (included in General group)

Hired prior to 4/1/2002

Health BCBS Traditional w/\$5 Rx - M-65 at age 65

Health BCBS CB10 w/\$10/\$20 Rx as of 1/1/2009

Health BCBS CB4 (2) w/ \$10/40/80 Rx (pre 65 or MCR eligible) (Retiring on or after 1/1/2016)

BCBS MCR Advantage for all at age 65 or MCR eligible:

Retiring prior to 4/1/2002	w/\$5 Rx
Retiring on or after 1/1/2009	w/\$10/\$20 Rx
Retiring on or after 1/1/2016	w/\$10/40/80 Rx

Waterford Township Retiree Health Care Plan Summary of Benefits as of December 31, 2018 Current Retirees Contract Language Benefits

Those that retire on or after 1/1/2016 shall be provided with the PPO retiree healthcare benefits in effect at the time of their retirement which is presently the CB4(2) coverage with the \$10/40/80 Rx coverage as long as it is eligible to them with the vesting requirements.

Court employees hired on or after 1/1/2016 are not eligible to purchase retiree health care through the Township.

Delta Dental Premier 75/25 plan effective 4/17/1997

Delta Dental Premier 75/25 plan effective 8/1/2005

Optical \$100 per retiree & dependent every 2 years

Vested requirements for health, dental, optical, life effective 4/1/2002

50% vested after 15 years

75% vested after 20 years

100% vested after 25 years

Management retirees have a \$25,000 Life Insurance Policy

District Court Employees both non Supv and Supv - INS Code R60B (included in General group)

All active Court employees hired between 8/1/2012 and 1/1/2016, contribute 3% of the base pay toward retiree health care.

Hired after April 1, 2002

Health CB 10 w/\$10 / \$20 Rx (prior to M65)

Health BCBS CB4 w/ \$10/40/80 Rx (pre 65 or MCR eligible) (Retiring on or after 1/1/2016)

Health BCBS Traditional w/\$5 Rx - M-65 w/\$2 Rx at age 65

Retiring prior to 1/1/2016, hired prior to 4/1/2002 w/ \$5 Rx

Hired after 4/1/2002 w/ \$10/20 Rx

Retiring on or after 1/1/2016 w/ \$10/40/80 Rx

Those that retire on or after 1/1/2016 shall be provided with the PPO retiree healthcare benefits in effect at the time of their retirement which is presently the CB4(2) coverage.

Court members hired on or after 1/1/2016 are not eligible to purchase retiree health care through the Township.

Delta Dental POS #1 retired on or after 8/1/2005

Optical \$100 per retiree & dependent every 2 years

Waterford Township Retiree Health Care Plan Summary of Benefits as of December 31, 2018 Current Retirees Contract Language Benefits

Vested requirements for health, dental, optical, life effective 4/1/2002

50% vested after 15 years

75% vested after 20 years

100% vested after 25 years

Management & Administrative Employees - INS Code R10A (General employees included in General group; Police/Fire employees included in Fire group)

Active Management and Administrative employees including Police and Fire Management hired between 8/1/2012 and 1/1/2016, contribute 3% of the base pay toward retiree health care.

Health BCBS Traditional w/\$5 Rx - M-65 w/ \$5 (was \$2) Rx at age 65 - Hired prior to or on 2/25/1997

Health BCBS Traditional w/\$5 Rx - M-65 w/\$5 (was \$2) Rx at age 65 - Hired after 2/25/1997 **

Retiring on or after 8/11/2008 (no matter when hired)

Health BCBS (prior to M65) CB1 w/\$10/\$20 Rx

Health BCBS CB10 w/\$10/\$20 Rx (retiring on or after 1/1/2013)

Health BCBS Traditional or Equivalent w/\$5 Rx – M-65 at age 65

Police / Fire Management CB1 w/\$10/\$20 Rx (retiring prior to 1/1/2016)

Retiring on or after 4/1/2017 – CB4 (2) w/ \$10/40/80 Rx (pre 65 or MCR eligible)

BCBS MCR Advantage for all at age 65 or MCR eligible:

Retiring prior to 4/10/2007	w/\$5 Rx
Retiring on or after 8/11/2008	w/\$10/20 Rx
Retiring on or after 4/1/2017	w/\$10/40/80 Rx

Those that retired prior to 8/1/2012 shall be allowed to maintain the health insurance coverage provided to them at the time of their retirement.

Those that retire on or after 8/1/2012, with a hire date before 10/13/1999 shall be provided with the choice of their health insurance plans available at the time of their retirement.

Those that retire on or after 8/1/2012 with a hire date after 10/13/1999 shall be provided the least expensive coverage that was selected by them in any of the 3 years prior to the employee's retirement as long as it is eligible to them with the vesting requirements. ***

Those that retire on or after 1/1/2016 shall be provided with the PPO retiree healthcare benefits in effect at the time of their retirement which is presently the CB4(2) coverage with the \$10/40/80 Rx as long as it is eligible to them with the vesting requirements. This was changed by special agreement to retiring on or after 4/1/2017 the CB4 (2) is the coverage, if retiring prior to that it is still the CB10 coverage.

Waterford Township Retiree Health Care Plan Summary of Benefits as of December 31, 2018 Current Retirees Contract Language Benefits

Management members hired on or after 1/1/2016 are not eligible to purchase retiree health care through the Township.

****Vested requirements health, dental, life effective 2/25/1997**

50% vested after 15 years
75% vested after 20 years
100% vested after 25 years

*****Vested requirements health, dental, life effective 10/13/1999**

50% vested after 15 years
75% vested after 20 years
80% vested after 25 years

Delta Dental Premier 50/50 plan retired prior to 1/1/1991
Delta Dental Premier 75/25 plan retired prior to 11/1/2002
Delta Dental POS # 1 retired on or after 11/1/2002

Optical \$100 per retiree & dependent every 2 years

Management retirees have a \$25,000 Life Insurance Policy

Management & Administrative Fire (deputy chief / chief only)
INS Code R10F

Health BCBS Traditional w/\$5 Rx - M-65 w/ \$2 Rx at age 65 - Hired prior to or on February 25, 1997
Health BCBS Traditional w/\$5 Rx - M-65 w/\$2 Rx at age 65 - Hired after February 25, 1997
Health BCBS CB1 w \$5 Rx (pre 65 or MCR eligible) (prior to 8/11/2008)
Health BCBS CB1 w \$10/20 Rx (pre 65 or MCR eligible) (Retiring on or after 1/1/2010)
Health BCBS CB4 (2) w/\$10/40/80 Rx (pre 65 or MCR eligible) (Retiring on or after 8/1/2018)

BCBS MCR Advantage or equivalent for all at age 65 or MCR eligible:

Retiring prior to 1/1/2010	w/\$5 Rx
Retiring on or after 1/1/2010	w/\$10/\$20 Rx
Retiring on or after 8/1/2018	w/\$10/40/80 Rx

Retiree healthcare has been eliminated for all New Hires on or after 1/1/2016

See Special Note at beginning!

Waterford Township Retiree Health Care Plan Summary of Benefits as of December 31, 2018 Current Retirees Contract Language Benefits

****Vested requirements health, dental, life if hired after 2/25/1997**

50% vested after 15 years

75% vested after 20 years

100% vested after 25 years

Delta Dental Premier 50/50 plan retired prior to 1/1/1991

Delta Dental Premier 75/25 plan retired prior to 11/1/2002

Delta Dental POS # 1 retired on or after 11/1/2002

Optical \$100 per retiree & dependent every 2 years

\$25,000 Life insurance

Member Demographic Data as of December 31, 2018

Active Members

Attained Age	Years of Service to Valuation Date							Total No.	Valuation Payroll
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus		
20-24	1							1	\$ 47,660
25-29	9							9	429,035
30-34	2	4	2					8	581,050
35-39	4	5	3	3	1			16	1,019,566
40-44		2	3	12	3			20	1,398,688
45-49	4	1		27	25	3		60	4,392,257
50-54	5	5	4	12	13	3	4	46	2,907,781
55-59	2		3	3	4	8	4	24	1,529,239
60-64	4	1	2		3		2	12	719,578
65 & Over		1	2	1	1			5	335,052
Totals	31	19	19	58	50	14	10	201	\$ 13,359,906

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

Age: 47.7 years
Service: 16.6 years
Annual Pay: \$66,467

Two people were reported with \$0 payroll. For valuation purposes, they were valued with a \$1,000 pay. This has no impact on liabilities since benefits are not related to payroll.

Member Demographic Data as of December 31, 2018

Retired Members

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	22	6	28
55-59	27	11	38
60-64	34	15	49
65 & Over	97	79	176
Totals	180	111	291

Attained Age	General		Police /Fire		Total	
	Number	Expected Claims	Number	Expected Claims	Number	Expected Claims
25 - 29	0	\$ -	0	\$ -	0	\$ -
30 - 34	0	-	1	20,755	1	20,755
35 - 39	0	-	1	9,951	1	9,951
40 - 44	0	-	0	-	0	-
45 - 49	2	42,566	5	88,674	7	131,240
50 - 54	4	100,192	15	341,370	19	441,562
55 - 59	14	371,328	24	619,607	38	990,935
60 - 64	27	673,133	22	627,293	49	1,300,426
65 - 69	33	155,792	24	100,456	57	256,248
70 - 74	26	20,268	17	51,206	43	71,474
75 - 79	18	-	16	-	34	-
80 - 84	16	-	6	-	22	-
85 - 89	12	-	2	-	14	-
90 - 94	5	-	0	-	5	-
95 - 99	0	-	1	-	1	-
Totals	157	\$ 1,363,279	134	\$ 1,859,312	291	\$ 3,222,591

Deferred Members

Attained Age	Number of Deferred Retirees		
	Male	Female	Total
Under 55	12	6	18
55-59	8	6	14
60-64	0	0	0
65 & Over	0	1	1
Totals	20	13	33

SECTION D

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Valuation Methods

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; and
- (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) were amortized as a level dollar contribution. The UAAL were determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The unfunded actuarial accrued liability is projected to the beginning of the contribution period, assumption contributions equal to the expected benefits, and then amortized over a 29-year period from that date.

Rates of Investment Return under a pre-funding arrangement. **6.50% per year**, compounded annually, net of expenses. This assumption is used to equate the value of payments due at different points in time.

Actuarial Value of Assets is equal to the Market Value of Assets.

The rationale for the assumptions is:

- Experience observed in pension valuations (where assumptions are common).
- National trends for health care specific assumptions.
- The rate of investment return reflects the future expectation based on the current asset allocation and the policy of paying current premiums from sources outside the Trust for the foreseeable future.

We believe all the assumptions are reasonable for the purpose of the measurement.

Actuarial Assumptions

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

General

% Increase in Salary at Sample Ages			
Sample Ages	Merit & Seniority	Base (Economic)	Increase Next Year
20	3.21%	3.50%	6.71%
25	3.01%	3.50%	6.51%
30	2.51%	3.50%	6.01%
35	2.41%	3.50%	5.91%
40	2.11%	3.50%	5.61%
45	1.50%	3.50%	5.00%
50	1.20%	3.50%	4.70%
55	1.00%	3.50%	4.50%
60	0.00%	3.50%	3.50%

Police/Fire

% Increase in Salary at Sample Ages			
Sample Ages	Merit & Seniority	Base (Economic)	Increase Next Year
20	7.92%	3.50%	11.42%
25	5.76%	3.50%	9.26%
30	3.99%	3.50%	7.49%
35	2.89%	3.50%	6.39%
40	2.10%	3.50%	5.60%
45	1.48%	3.50%	4.98%
50	0.96%	3.50%	4.46%
55	0.53%	3.50%	4.03%
60	0.15%	3.50%	3.65%

Actuarial Assumptions (Continued)

Post-Retirement Health Mortality: RP-2014 Mortality Table projected to 2026 using projection scale MP-2017.

Sample Attained Ages	Percent Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
	45	0.27%	0.21%	37.15
50	0.38%	0.26%	32.69	35.16
55	0.54%	0.36%	28.37	30.64
60	0.76%	0.55%	24.18	26.24
65	1.11%	0.82%	20.16	22.02
70	1.66%	1.25%	16.35	17.99
75	2.60%	2.00%	12.80	14.21
80	4.34%	3.41%	9.61	10.76

This assumption is used to measure the probabilities of members dying after retirement. The projection to 2026 is the margin for mortality improvement.

Post-retirement disabled mortality: RP-2014 Disabled Retirement Annuitant Table project to 2026 using projection scale MP-2017 and multiplied by a factor of 50%.

Pre-retirement mortality: RP-2014 Employee Mortality Table projected to 2026 using projection scale MP-2017 and multiplied by a factor of 50%.

Actuarial Assumptions (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year, were as follows:

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year					CSI, and Dispatchers
	Rule of 75	General Other	Police/Fire	Service	Police/Fire	
45-49	12 %			25	35 %	42 %
50-54	12	24 %		26	30	36
55-60	12	24		27	30	36
60	12	24	40 %	28	30	36
61	12	24	40	29	30	36
62	36	24	40	30	30	36
63	12	24	40	31	30	36
64	12	30	40	32	30	36
65	100	36	40	33	30	36
66	100	30	35	34	40	48
67	100	30	25	35	100	100
68	100	30	25	36	100	100
69	100	48	25	37	100	100
70	100	100	25	38	100	100
71	100	100	25	39	100	100
72	100	100	25	40	100	100
73	100	100	25	41	100	100
74	100	100	25	42	100	100
75 and above	100	100	100	43	100	100

Management, and Elected Officials hired before January 1, 1999 and members of Court Supervisors before April 1, 2002 are eligible to retire once the sum of their age and credited service equals 75 or more or at age 60 with 5 years of service. Dispatchers and CSI are eligible to retire once they complete 25 years of service regardless of age (30 years for CSO). All other members are eligible for retirement after attaining age 55 with 25 years of service. All members are eligible at age 60 with 8 years (10 years of CSI) or more of service.

All Police-Fire members are eligible for retirement after attaining age 60 or with 25 years of service regardless of age. Police Officers and Police Supervisors hired after January 1, 2004 are eligible after attaining age 55 with 25 years of service or age 60 with 10 years of service. The retirement probabilities above apply after eligibility is reached.

Actuarial Assumptions (Continued)

DROP Plan Assumptions: Retirement probabilities were reduced by 60% in the first 5 years and increased by 60% in the second 5 years of eligibility, and for Fire members set to 100% in the 33rd year of service.

Rates of separation from active membership are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability.

Sample rates of separation from active employment are shown below:

Sample Ages	Years of Service	% of Active Members Separating within Next Year	
		General	Police/Fire
ALL	0	10.0 %	
	1	8.0	
	2	7.0	
	3	6.0	
	4	5.0	
20	5 & Over	7.8	4.8 %
25		7.8	4.6
30		6.6	4.0
35		5.7	2.4
40		4.2	0.5
45		2.7	0.0
50		2.2	0.0
55	2.2	0.0	
60	2.2	0.0	

Actuarial Assumptions (Concluded)

Rates of disability among active members are used to estimate the incidence of member disability in future years. 50% of disabilities were assumed to be duty related and 50% of disabilities were assumed to be non-duty related.

Sample Ages	Percent Becoming Disabled within Next Year			
	General		Police/Fire	
	Male	Female	Male	Female
20	0.00 %	0.00 %	0.11 %	0.11 %
25	0.00	0.00	0.11	0.11
30	0.00	0.00	0.14	0.14
35	0.00	0.00	0.26	0.26
40	0.00	0.00	0.39	0.39
45	0.00	0.00	0.74	0.74
50	0.00	0.00	1.18	1.18
55	0.00	0.00	1.62	1.62

Health care trend rates used in the valuation were as shown below:

Year	Medical/Rx	Dental
2019	8.25 %	3.50 %
2020	8.00	3.50
2021	7.75	3.50
2022	7.50	3.50
2023	7.25	3.50
2024	7.00	3.50
2025	6.75	3.50
2026	6.50	3.50
2027	6.25	3.50
2028	6.00	3.50
2029	5.50	3.50
2030	5.00	3.50
2031	4.50	3.50
2032	4.00	3.50
2033 & Later	3.50	3.50

Miscellaneous and Technical Assumptions

Decrement Timing:	Decrements of all types are assumed to occur mid-year.
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.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. 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.
Election Percentage:	<p>It was assumed that 100% of eligible retirees will elect to receive retiree health care benefits through the Township. Of those assumed to elect coverage, 80% of General and 90% of Police-Fire were assumed to elect two-person coverage, if eligible. For those that elect two-person coverage, it was assumed that a spouse would continue coverage upon death of the retiree 90% of the time for General and 100% of the time for Police-Fire, if eligible.</p> <p>For eligible active employees who have opted out of the Township's active health care plan, it was assumed 100% would elect retiree health care coverage upon retiring.</p> <p>Retirees opting not to receive retiree health care through the City were assumed to continue opting out.</p> <p>Terminated vested members were assumed to have the same election patterns as active members. Therefore we increased the single person cost by a factor of 1.8 for General members and 1.9 for Police and Fire members to estimate the costs of the dependent coverage.</p>
Buy-Up Assumption:	Liabilities were loaded 2.0% to account for the additional expense incurred by members who buy-up to more expensive coverage due to the implicit rate subsidy.
Tax Adjustment:	All costs were increased by 4% to reflect the projected excise tax from the Affordable Care Act.

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.

Actuarially Determined Contribution (ADC) - The ADC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ADC 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.

Glossary (Concluded)

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 Postemployment Employee Benefits (OPEB) - OPEB are postemployment 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 is 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.