



FUNDING ACTUARIAL VALUATION

As of December 31, 2020

Waterford Township Retiree Healthcare Trust

CONTACT

Cody Kocher, ASA, MAAA
cody.kocher@nyhart.com

ADDRESS

Nyhart
8415 Allison Pointe Blvd. Suite 300
Indianapolis, IN 46250

PHONE

General	(317) 845-3500
Toll-Free	(800) 428-7106
Fax	(317) 845-3654

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December 16, 2021

Bonnie Verbos
Waterford Township Retiree Healthcare Trust
5200 Civic Center Drive
Waterford, MI 48329

This report summarizes the funding recommendations for calendar years 2021 and 2022 for Waterford Township. To the best of our knowledge, the report presents a fair position of the funded status of the plan.

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 is intended to be used as a funding valuation report, and is not appropriate for State reporting under uniform assumptions. Assumptions and results for GASB 74/75 are reported separately.

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor, with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

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); and
- changes in plan provisions or applicable law.

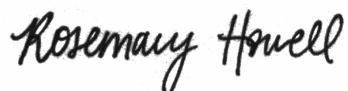
We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.



Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.

A handwritten signature in black ink that reads "Rosemary Howell".

Rosemary Howell, FSA, EA, MAAA

A handwritten signature in black ink that reads "Cody Kocher".

Cody Kocher, ASA, MAAA

Executive Summary

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Summary of Results

Presented below is the summary of results as of December 31, 2020 compared to results from the prior year funding valuation as of December 31, 2018.

	As of December 31, 2018	As of December 31, 2020
Expected Return on Assets	6.50%	6.50%
	As of December 31, 2018	As of December 31, 2020
Total Active Participants	201	187
Total Terminated Vested Participants	33	26
Total Retiree Participants	291	327

The active participants' number above may include active employees who currently have no health care coverage.

	FY 2021	FY 2022
Actuarially Determined Contribution	\$ 12,538,544	\$ 12,598,797
Expected Benefit Payments	\$ 7,849,714	\$ 8,433,457

Unfunded Actuarial Accrued Liability

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Determination of Unfunded Actuarial Accrued Liability

	General	Police	Total
A. Present Value of Future Benefits			
Retirees & Beneficiaries	\$ 55,387,228	\$ 42,768,260	\$ 98,155,488
Vested Termination Members	10,100,063	526,596	10,626,659
Active Members	35,397,376	27,815,892	63,213,268
Total Present Value of Future Benefits	\$ 100,884,667	\$ 71,110,748	\$ 171,995,415
B. Present Value of Future Normal Costs			
	8,615,420	8,387,311	17,002,731
C. Actuarial Accrued Liability (A. – B.)			
	92,269,247	62,723,437	154,992,684
D. Actuarial Value of Assets			
			30,597,183
E. Unfunded Actuarial Accrued Liability (C. – D.)			
			\$ 124,395,501
F. Funded Ratio (D./C.)			
			19.7%

Asset Information

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Asset Breakdown

	FY 2019	FY 2020
Assets		
Cash and cash equivalents	\$ 3,430,143	\$ 5,897,418
Securities lending cash collateral	\$	\$
Total Cash	\$ 3,430,143	\$ 5,897,418
Receivables	\$ 0	\$ 0
Contributions	0	0
Due from other parties	0	0
Accrued interest	0	0
Total receivables	0	0
Investments		
Fixed Income & Equity Investments	\$ 18,722,817	\$ 21,690,637
Other	0	3,009,128
Total investments	\$ 18,722,817	\$ 24,699,765
Total assets	\$ 22,152,960	\$ 30,597,183
Liabilities		
Payables	\$ 0	\$ 0
Investment management fees	0	0
Due to other parties	0	0
Securities lending expense	0	0
Total liabilities	\$ 0	\$ 0
Net position restricted to OPEB	\$ 22,152,960	\$ 30,597,183

Asset Information

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Reconciliation of Assets – Market Value Basis

	FY 2019	FY 2020
Additions		
Contributions received		
Employer	\$ 10,583,514	\$ 11,561,752
Employee	53,342	53,019
Total contributions	\$ 10,636,856	\$ 11,614,771
Investment income		
Net increase in fair value of investments	\$ 3,235,415	\$ 3,146,387
Interests and dividends	487,829	478,131
Investment expense, other than from securities lending	(81,325)	(101,034)
Securities lending income	0	0
Securities lending expense	0	0
Other investment income	0	0
Net investment income	\$ 3,641,919	\$ 3,523,484
Total additions	\$ 14,278,775	\$ 15,138,255
Deductions		
Benefit payments (including employee refunds)	\$ (6,127,114)	\$ (6,689,934)
Administrative expenses	(56,734)	(4,098)
Other	0	0
Total deductions	\$ (6,183,848)	\$ (6,694,032)
Net increase in net position	\$ 8,094,927	\$ 8,444,223
Net position restricted to OPEB		
Beginning of year	\$ 14,058,033	\$ 22,152,960
End of year	\$ 22,152,960	\$ 30,597,183

Actuarially Determined Contributions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the Township has the ability to contribute these amounts on an annual basis. The Township has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

	FY 2021	FY 2022
Discount rate	6.50%	6.00%
Payroll growth factor used for amortization ³	3.50%	3.50%
Actuarial cost method	Entry Age Normal Level Dollar	Entry Age Normal Level Dollar
Amortization type	Level Dollar	Level Dollar
Amortization period	27 years	26 years
AAL as of January 1, 2020	\$ 154,992,684	\$ 159,612,651
AVA as of January 1, 2020	(30,597,183)	(37,424,818)
Unfunded AAL as of January 1, 2020	\$ 124,395,501	\$ 122,187,833
Funded Ratio	19.7%	23.4%
Normal cost as of beginning of year	\$ 2,484,747	\$ 2,571,713
Amortization of UAAL	9,288,534	9,258,143
Total normal cost plus amortization	\$ 11,773,281	\$ 11,829,856
Interest to end of year	765,263	768,941
Actuarially Determined Contribution (ADC) - Preliminary	\$ 12,538,544	\$ 12,598,797
Expected Benefit Payments	\$ 7,849,714	\$ 8,433,457
Final Recommended ADC	\$ 12,538,544	\$ 12,598,797

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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.

Spouse Benefit

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

Retiree Cost Sharing

Depending on the union / group, the Township pays a percentage of health coverage.

Explicit Subsidy

The Township subsidized the cost of coverage in excess of retiree contributions.

Medicare Provisions

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

Life Insurance

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.

Opt-out Benefits

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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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 changed to the 10/40/80 Rx as of 6/22/2020.

Firefighters - INS Code R30A (included in Fire group)

Health BCBS Traditional w/\$5 Rx (pre-65 or MCR eligible) or BCBS CB1 w/ \$5 Rx (pre-65 or MCR eligible) (Retired on or prior to 1/31/2008).

Health BCBS CB1 w \$5 Rx (pre 65 or MCR eligible) (Retiring on or after 1/31/2008)

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 1/1/2018)

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 and 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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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

Health BCBS Traditional w/\$5 Rx (pre-65 or MCR eligible) (Retired prior to 1/1/2008)

Health BCBS (pre-65 or MCR eligible) CB1 w/\$10/\$20 Rx (Retiring after 1/1/2008)

Health BCBS CB4 (2) w/ \$10/40/80 Rx (pre-65 or MCR eligible) (Retiring on or after 1/1/2018)

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
Retiring on or after 6/22/2020	w/\$10/\$40/\$80 Rx

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

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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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

Health BCBS Traditional w/\$5 Rx (pre-65 or MCR eligible) (Retired prior to 1/1/1998)

Health BCBS CB1 w/ \$5 Rx (pre-65 or MCR eligible) (Retiring on or after 1/1/2001)

Health BCBS CB1 w/\$10/\$20 Rx (pre-65 or MCR eligible) (Retiring on or after 6/1/2008)

Health BCBS CB4(2) w/ \$10/40/80 Rx (pre-65 or MCR eligible) (Retiring on or after 9/1/2019)

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

Retiring on or after 6/22/2020 w/\$10/\$40/\$80 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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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

Health BCBS Traditional w/\$5 Rx - M-65 w/\$5 Rx (pre-65 or MCR eligible) (retired prior to 1/1/2001)

Health CB1 w/\$5Rx (pre-65 or MCR eligible) (Retiring on or after 1/1/2001)

Health CB1 w/\$10/\$20 Rx (pre-65 or MCR eligible) (Retiring on or after 1/1/2011)

Health CB10 w/\$10/\$20 Rx (pre-65 or MCR eligible) (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 July 5, 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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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.

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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.

Health BCBS (prior to M65) CB1 w/\$10/\$20 Rx – retiring on or after 4/10/2007 (no matter when hired)

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

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

Retiring prior to 4/10/2007 w/\$10/\$20 Rx

Retiring on or after 1/1/2016 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 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 hired after 10/13/1999

50% vested after 15 years

75% vested after 20 years

100% vested after 25 years

Vested requirements for health, dental, life – hired after 10/13/1999 retired on or after 8/1/2012

50% vested after 15 years

75% vested after 20 years

80% vested after 25 years

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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

Hired prior to 4/1/2002

Health BCBS Traditional w/\$5 Rx

Health BCBS CB10 w/\$10/\$20 Rx (prior to M65) (Retiring on or after 1/1/2009)

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

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.

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

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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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

Health BCBS Traditional w/\$5

Health BCBS CB10 w/\$10/\$20 Rx (prior to M65) (Retiring on or after 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 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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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) (Retiring on or after 1/1/2009)

Health BCBS CB4 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 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 with the \$10/40/80 Rx coverage as long as it is eligible to them with the vesting requirements.

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

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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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/ \$2 Rx at age 65 - Hired prior to or on 2/25/1997

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

Retiring on or after 8/11/2008 (no matter when hired) – CB1 w/\$10/\$20 Rx (pre-65 or MCR eligible)

Retiring on or after 1/1/2013 - CB10 w/\$10/\$20 Rx (pre-65 or MCR eligible)

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 8/11/2008 w/\$5 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.

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Management & Administrative Fire (deputy chief / chief only)

INS Code R10P

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 \$10/20 Rx (pre 65 or MCR eligible) (Retiring on or after 1/1/2008)

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

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

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

**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 Policy

Substantive Plan Provisions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

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.

**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 Policy

Actuarial Methods and Assumptions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and Township experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

There have been changes to the actuarial methods and assumptions since the last funding valuation, which was as of December 31, 2018. Please refer to the Detailed Actuary's Notes in the appendix for complete information on these changes. For the current year funding valuation, we have also updated the per capita costs.

Measurement Date For fiscal year ending December 31, 2020, December 31, 2020 measurement date was used.

Actuarial Valuation Date December 31, 2020

Discount Rate 6.50% for funding disclosure purposes (in calculating the Actuarially Determined Contribution)

Payroll Growth 3.5% for general inflation plus merit increases as follows:

Age	General	Police / Fire
20	3.21%	7.92%
25	3.01%	5.76%
30	2.51%	3.99%
35	2.41%	2.89%
40	2.11%	2.10%
45	1.50%	1.48%
50	1.20%	0.96%
55	1.00%	0.53%
60	0.00%	0.15%

Inflation Rate 3.50% per year (wage inflation for payroll growth assumption)

Actuarial Methods and Assumptions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant's benefit at retirement; and
- Annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.

Census Data

Census information was provided by the Township as of December 31, 2020. We have reviewed it for reasonableness and no material modifications were made.

Disability

Annual sample rates are as shown below. Disability benefit is only valued for the Police / Fire groups.

Age	Rates
20	0.11%
25	0.11%
30	0.14%
35	0.26%
40	0.39%
45	0.74%
50	1.18%
55	1.62%

Actuarial Methods and Assumptions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Mortality

Group	Healthy Retirees	Disabled Retirees	Surviving Beneficiaries
General	Pub-2010 General Headcount-weighted Morality Table fully generational using scale MP-2020	Pub-2010 Non-Public Safety Headcount-weighted Disabled Morality Table fully generational using scale MP-2020	Pub-2010 General Headcount-weighted Morality Table fully generational using scale MP-2020
Police	Pub-2010 Public Safety Headcount-weighted Morality Table fully generational using scale MP-2020	Pub-2010 Public Safety Headcount-weighted Disabled Morality Table fully generational using scale MP-2020	Pub-2010 General Headcount-weighted Morality Table fully generational using scale MP-2020
Fire	Pub-2010 Public Safety Headcount-weighted Morality Table fully generational using scale MP-2020	Pub-2010 Public Safety Headcount-weighted Disabled Morality Table fully generational using scale MP-2020	Pub-2010 General Headcount-weighted Morality Table fully generational using scale MP-2020

Actuarial Methods and Assumptions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The rates represent the probability of termination in the next 12 months.

Age	General					
	0 YOS	1 YOS	2 YOS	3 YOS	4 YOS	5+ YOS
< 20	0%	0%	0%	0%	0%	0%
20 - 25	10%	8%	7%	6%	5%	7.8%
30	10%	8%	7%	6%	5%	6.6%
35	10%	8%	7%	6%	5%	5.7%
40	10%	8%	7%	6%	5%	4.2%
45	10%	8%	7%	6%	5%	2.7%
50+	10%	8%	7%	6%	5%	2.2%

Age	Police / Fire					
	0 YOS	1 YOS	2 YOS	3 YOS	4 YOS	5+ YOS
< 20	0%	0%	0%	0%	0%	0.00%
20	10%	8%	7%	6%	5%	4.80%
25	10%	8%	7%	6%	5%	4.60%
30	10%	8%	7%	6%	5%	4.00%
35	10%	8%	7%	6%	5%	2.40%
40	10%	8%	7%	6%	5%	0.50%
45+	10%	8%	7%	6%	5%	0.00%

Actuarial Methods and Assumptions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Retirement Rate

Annual rates of retirement by group are as shown below:

Age	Rule of 75	General Other	Police / Fire	Service	Police / Fire	CSI and Dispatchers
45 - 49	12%			25	35%	42%
50 - 54	12%	24%		26	30%	36%
55 - 59	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 +	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 Methods and Assumptions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Health Care Trend Rates

FYE	Rates
2021	8.0%
2022	7.5%
2023	7.0%
2024	6.5%
2025	6.0%
2026	5.5%
2027	5.0%
2028+	4.5%

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Retiree Contributions

Retiree contributions are assumed to increase according to health care trend rates.

Health Care Coverage Election Rate

100%

Spousal Coverage

Spousal coverage and age for current retirees is based on actual data. 100% of employees are assumed to be married at retirement. Husbands are assumed to be three years older than wives.

Actuarial Methods and Assumptions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Per Capita Costs

Annual per capita costs were calculated based on the blended premium rates effective on January 1, 2021 actuarially increased using health index factors and current enrollment. The costs are assumed to increase with health care trend rates. Annual per capita costs applicable to all groups are as shown below:

General / Fire			Police	
Age	Male	Female	Male	Female
< 50	\$ 8,800	\$ 12,200	\$ 9,500	\$ 13,000
50 - 55	\$ 12,400	\$ 14,200	\$ 13,200	\$ 15,200
55 - 59	\$ 16,700	\$ 16,200	\$ 17,900	\$ 17,300
60 - 64	\$ 21,900	\$ 19,900	\$ 23,500	\$ 21,200

Annual dental per capita costs are \$649, and annual vision per capita costs are \$66; they are assumed to increase with dental trend rates.

Explicit Subsidy

The difference between (a) the blended premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a Fire retiree.

	Blended Premium Rate A	Retiree Contribution B	Explicit Subsidy C = A - B	The per capita costs represent the cost of coverage for a retiree-only population.	
				Retiree	Spouse
Retiree	\$ 910.12	\$ 0.00	\$ 910.12		
Spouse	\$ 1,274.18	\$ 0.00	\$ 1,274.18		

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

Actuarial Methods and Assumptions

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Implicit Subsidy

The difference between (a) the per capita cost and (b) the illustrative rate. Below is an example of the monthly implicit subsidies for a male retiree age 60 with a spouse of the same age.

	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A - B
Retiree	\$ 1,825.00	\$ 910.12	\$ 914.88
Spouse	\$ 1,658.33	\$ 1,274.18	\$ 384.15

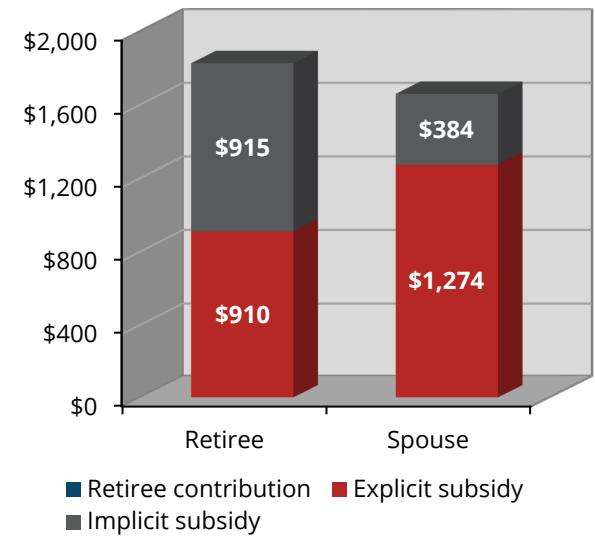
All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.

Subsidy Breakdown

Below is a breakdown of the monthly total cost for a male retiree age 60 with a spouse of the same age enrolled in the non-hardship plan.

	Retiree	Spouse
Retiree contribution	\$ 910.12	\$ 1,274.18
Explicit subsidy	\$ 0.00	\$ 0.00
Implicit subsidy	\$ 914.88	\$ 384.15
Total monthly cost	\$ 1,825.00	\$ 1,658.33

Subsidy Breakdown



APPENDIX

Appendix

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Comparison of Participant Demographic Information

The active participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

	<i>As of December 31, 2018</i>	<i>As of December 31, 2020</i>
Active Participants	201	187
Terminated Vested Participants	33	26
Retired Participants	291	327
Averages for Active		
Age	47.7	47.7
Service	16.6	15.7
Averages for Inactive		
Age	66.7	66.5

Appendix

Waterford Township Retiree Healthcare Trust as of December 31, 2020

Detailed Actuary's Notes

This is Nyhart's first year working with the Township. We have matched the results of the prior actuary as prescribed by Actuarial Standards of Practice.

Per capita costs have been updated for the most recent premiums and enrollment. We have updated the methodology to use age banding according to Nyhart's standards of practice.

There have been no substantive plan provision changes since the last full valuation, which was as of December 31, 2018.

The following assumptions have also been updated:

1. Mortality generational improvement scales have been updated from RP-2014 Mortality Table projected to 2026 using scale MP-2017 to:

Group	Healthy Retirees	Disabled Retirees	Surviving Beneficiaries
General	Pub-2010 General Headcount-weighted Morality Table fully generational using scale MP-2020	Pub-2010 Non-Public Safety Headcount-weighted Disabled Morality Table fully generational using scale MP-2020	Pub-2010 General Headcount-weighted Morality Table fully generational using scale MP-2020
Police	Pub-2010 Public Safety Headcount-weighted Morality Table fully generational using scale MP-2020	Pub-2010 Public Safety Headcount-weighted Disabled Morality Table fully generational using scale MP-2020	Pub-2010 General Headcount-weighted Morality Table fully generational using scale MP-2020
Fire	Pub-2010 Public Safety Headcount-weighted Morality Table fully generational using scale MP-2020	Pub-2010 Public Safety Headcount-weighted Disabled Morality Table fully generational using scale MP-2020	Pub-2010 General Headcount-weighted Morality Table fully generational using scale MP-2020

The impact of this change is an increase in liabilities.

2. Health care trend rates have been updated to an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.5%. The impact of this change is an increase in liabilities.

GLOSSARY

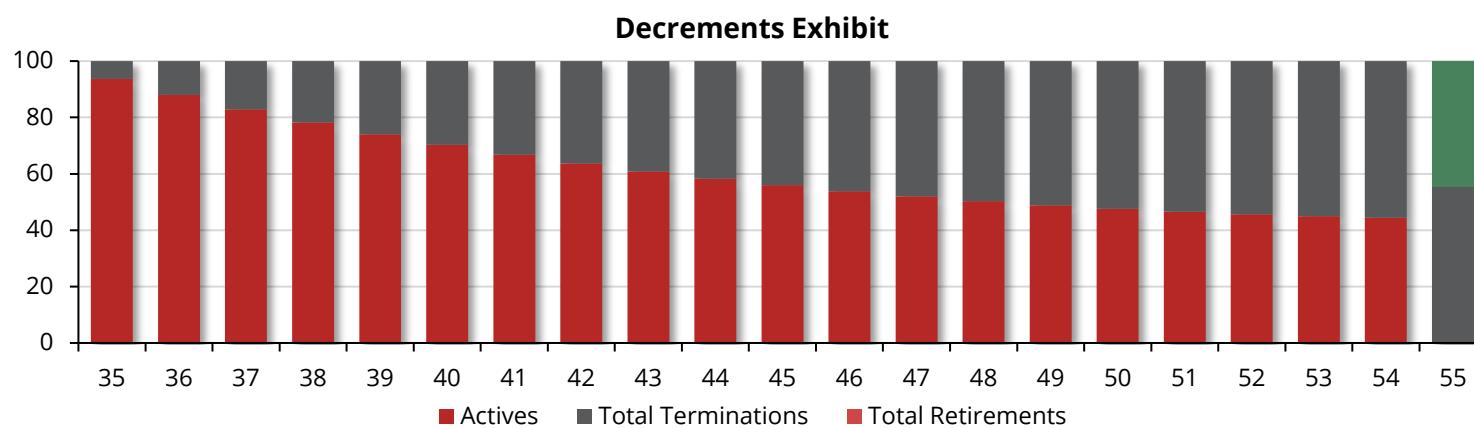
Glossary – Decrements Exhibit

Waterford Township Retiree Healthcare Trust as of December 31, 2020

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.43 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

Age	# Remaining Employees	# of Terminations per Year ¹	# of Retirements per Year	Total Decremnts
35	100.000	6.276	0.000	6.276
36	93.724	5.677	0.000	5.677
37	88.047	5.136	0.000	5.136
38	82.911	4.648	0.000	4.648
39	78.262	4.209	0.000	4.209
40	74.053	3.814	0.000	3.814
41	70.239	3.456	0.000	3.456
42	66.783	3.131	0.000	3.131
43	63.652	2.835	0.000	2.835
44	60.817	2.564	0.000	2.564
45	58.253	2.316	0.000	2.316

Age	# Remaining Employees	# of Terminations per Year	# of Retirements per Year	Total Decremnts
46	55.938	2.085	0.000	2.085
47	53.853	1.866	0.000	1.866
48	51.987	1.656	0.000	1.656
49	50.331	1.452	0.000	1.452
50	48.880	1.253	0.000	1.253
51	47.627	1.060	0.000	1.060
52	46.567	0.877	0.000	0.877
53	45.690	0.707	0.000	0.707
54	44.983	0.553	0.000	0.553
55	44.430	0.000	44.430	44.430



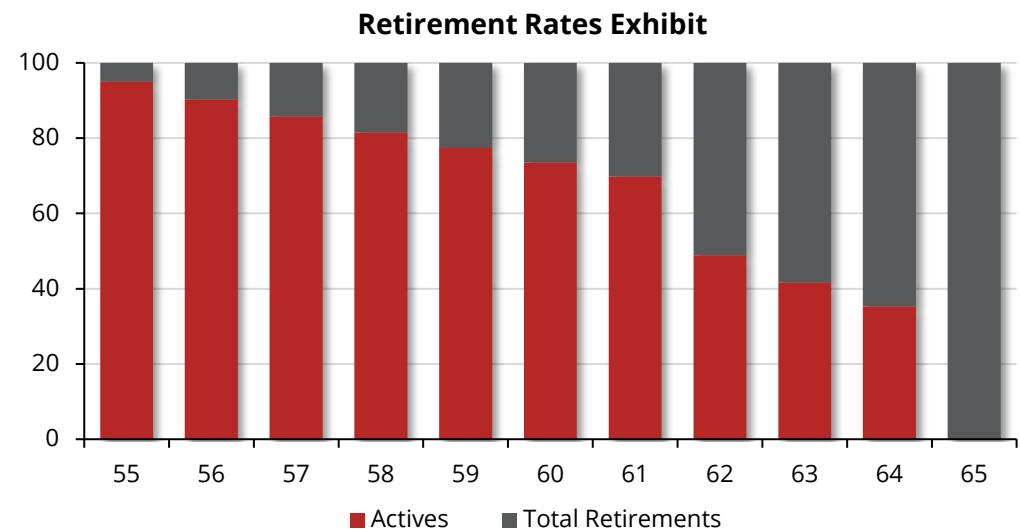
¹ The above rates are illustrative rates and are not used in our calculations.

Glossary – Retirement Rates Exhibit

Waterford Township Retiree Healthcare Trust as of December 31, 2020

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

Age	Active Employees BOY	Annual Retirement Rates*	# Retirements per Year	Active Employees EOY
55	100.000	5.0%	5.000	95.000
56	95.000	5.0%	4.750	90.250
57	90.250	5.0%	4.513	85.738
58	85.738	5.0%	4.287	81.451
59	81.451	5.0%	4.073	77.378
60	77.378	5.0%	3.869	73.509
61	73.509	5.0%	3.675	69.834
62	69.834	30.0%	20.950	48.884
63	48.884	15.0%	7.333	41.551
64	41.551	15.0%	6.233	35.318
65	35.318	100.0%	35.318	0.000



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