December 20, 2019

City of Marysville
1111 Delaware Ave.
P.O. Box 389
Marysville, MI 48040-0389

   Attention: Michael Booth, Finance Director

   Re: Retiree Health Care Fund

This report contains the results of an actuarial valuation of the City of Marysville Retiree Health Care Fund.

The date of the valuation was June 30, 2019.

The purpose of the actuarial valuation is to:

- Compute the liabilities associated with post-retirement health benefits likely to be paid on behalf of current retired and active participants covered by the Fund, and

- Compute a pre-funding contribution rate for the City to finance retiree health benefits as they accrue.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. Data concerning active members, retirees, beneficiaries and assets was provided by the City of Marysville. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. This valuation has been prepared under the supervision of a Member of the American Academy of Actuaries who meets the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Denise M. Jones
Senior Consultant

Sandra W. Rodwan
Member, American Academy of Actuaries

City of Marysville
Retiree Health Care Fund

Actuarial Valuation as of June 30, 2019

Table of Contents

Section One: Valuation Summary

Section Two: Actuarial Calculations – Funding

Section Three: Benefit Provisions

Section Four: Actuarial Assumptions and Methods

Section Five: Valuation Data

RODWAN
consulting
company

Section One:

Valuation Summary

RODWAN
consulting
company

Purpose of Valuation

The purpose of the annual actuarial valuation of the City of Marysville Retiree Health Care Fund as of June 30, 2019 is to:

❖ Compute the liabilities associated with health insurance benefits likely to be paid on behalf of current retired and active participants,

❖ Compute a pre-funding contribution rate to finance the benefits as they accrue.

Assumptions Used in the Valuation

The liabilities and pre-funding contribution rate are very sensitive to the long-term assumptions used in making the valuation. The assumptions used in making this valuation, summarized in Section Four, are only one reasonable set out of a large number of possibilities. To the extent that actual experience differs from the long-term assumptions, the liabilities and contribution rates will be greater or less than those indicated in this report. The assumptions having the greatest impact are the rate of medical care inflation and the investment return rate. We have assumed a 8.5% annual increase for medical care inflation in the first year, decreasing in increments of 0.1% over the next 10 years to the ultimate 4.5% assumption. The assumed investment return rate was 7.50%. Please refer to Comment 2 on page 7. Liabilities and computed contributions can change significantly in future years depending upon the actual and assumed rates of medical care inflation, investment return, benefit provisions and demographics of the participant group.

Actuarial Accrued Liabilities

Accrued liabilities of the Plan as of June 30, 2019 were computed to be $20,995,764. Of this total, $7,634,439 was attributable to current active participants, $13,361,325 to the retired participants.

Funding Value of Assets

As of June 30, 2019 the asset balance was reported to be $14,072,766.

Computed City Contribution Rate

The total contribution rate computed to pre-fund the benefits was computed to be 27.49% of active participant payroll. There are two components of this rate, the normal cost and an amortization payment for unfunded actuarial accrued liability. The normal cost contribution rate was computed to be 8.71% of payroll. The amortization payment was computed to be 18.78% of payroll. The amortization period used 30 years.

Participants

	General Employees	Police and Fire	Total
Active Employees	22	19	41
Active Employees Payroll	$1,379,490	$1,630,900	3,010,390
Retirees	48	22	70
Inactive vested	-	-	-

Post-Retirement Health Care Rates

Data was submitted concerning claims paid and covered retirees for the two year period ended June 30, 2019 along with 2019 illustrative premium rates. This data was analyzed and together with the data submitted for the annual actuarial valuations of the Retirement Systems, was the basis for this actuarial valuation.

Section Two:

Actuarial Calculations – Funding

Actuarial Accrued Liabilities

The actuarial accrued liabilities as of June 30, 2019 were computed to be the following:

	General	Police/Fire	Total
Active participants	$3,696,152	$3,938,287	$7,634,439
Retirees and beneficiaries	8,803,948	4,557,377	13,361,325
Total	12,500,100	8,495,664	20,995,764
Less: Valuation Assets			14,072,766
Unfunded Actuarial Accrued Liabilities			$6,922,998

Computed Contribution Rates – Health Benefits

The computed contribution rate consists of two components: normal cost and amortization of unfunded actuarial accrued liability. Normal cost was computed to be a level percent of payroll from date of hire to date of termination. The normal cost can be considered to be the ongoing cost of the Plan.

The portion of the total present value of future benefits allocated to service already rendered is the actuarial accrued liability. Deducting the valuation assets produces the unfunded actuarial accrued liability. The valuation assets were first applied to current retiree accrued liability. We have amortized the remaining unfunded actuarial accrued liability (UAAL) as level dollar payments over 30 years.

The contribution rates shown below are expressed as percents of active participant payroll. Actual premiums paid on behalf of retirees may be treated as employer contributions for purposes of the Annual Required Contribution.

	Computed Annual Contribution as Percent of Participant Payroll
Normal Cost	8.71%
Unfunded Actuarial Accrued Liability	18.78
Total Computed Contribution Rate	27.49%
Dollars Based on Valuation Payroll*	$827,556

*Participant payroll for participants was $3,010,390 as of June 30, 2019.

Medicare Part B Reimbursement

In addition to the Traditional and PPO coverage, the City also provides reimbursement for Medicare Part B premium for eligible retirees. We performed an actuarial valuation to compute the liabilities and contribution rates related to Medicare Part B premium reimbursements. The 2019 Medicare Part B premium is $135.50 per month. Based on the same assumptions used for the other retiree health benefits, the computed liabilities and contribution rates are as follows.

The actuarial accrued liabilities as of June 30, 2019 for Medicare Part B reimbursements were computed to be the following:

	General	**Police/Fire**	**Total**
Active participants	$311,827	$303,950	$615,777
Retirees and beneficiaries	557,684	227,624	785,308
Total	$869,511	$531,574	$1,401,085

The computed contribution rates shown below are expressed as percents of active payroll. Unfunded actuarial accrued liability was amortized over 30 years.

	Computed Annual Contribution for Medicare Part B Reimbursement as Percent of Participant Payroll
Normal Cost	0.66%
Unfunded Actuarial Accrued Liability	3.80
Total Computed Contribution Rate	4.46%
Dollars Based on Valuation Payroll*	$134,263

   *Participant payroll was $3,010,390 as of June 30, 2019.

Life Insurance

The City also pays life insurance premiums for eligible retirees. We performed an actuarial valuation to compute the liabilities and contribution rates related to the life insurance premium payments. The face amount of life insurance provided to future retirees is $5,000. Based on the same assumptions used for the other retiree health benefits, the computed liabilities and contribution rates are as follows.

The actuarial accrued liabilities as of June 30, 2019 for life insurance premiums were computed to be the following:

	General	**Police/Fire**	**Total**
Active participants	$17,169	$18,663	$35,832
Retirees and beneficiaries	71,271	29,473	100,744
Total	$88,440	$48,136	$136,576

The computed contribution rates shown below are expressed as percents of active participant payroll. Unfunded actuarial accrued liability was amortized over 30 years.

	Computed Annual Contribution for Life Insurance Premiums As a Percent of Payroll
Normal Cost	0.04%
Unfunded Actuarial Accrued Liability	0.36
Total Computed Contribution Rate	0.40%
Dollars Based on Valuation Payroll*	$11,151

  *Participant payroll was $3,010,390 as of June 30, 2019.

Total Employer Provided Life and Health Post-Employment Health Benefits

The actuarial accrued liabilities as of June 30, 2019 for all employer provided Life and Health post-employment benefits were computed to be the following:

	General	**Police/Fire**	**Total**
Active Participants	$4,025,148	$4,260,900	$8,286,048
Retirees and Beneficiaries	9,432,903	4,814,474	14,247,377
Total	$13,458,051	$9,075,374	$22,533,425

The total contribution rates shown below are expressed as percents of active participant payroll. Actual premiums paid on behalf of retirees may be treated as employer contributions for purposes of the Annual Retired Contribution.

	Computed Annual Contribution for Life and Health As Percent of Level Dollars
Normal Cost	9.41%
Unfunded Actuarial Accrued Liability	22.94%
Total Computed Contribution Rate	32.35%
Dollars based on Valuation Payroll*	$973,861

*Participant payroll for participants was $3,010,390 as of June 30, 2019.

Comments

Comment 1: For purposes of this valuation we have assumed a rate of investment return (7.50%) based upon the assumption that the City will contribute the actuarially determined annual required contribution. If a lower rate of investment return is assumed, the liabilities and ARC would be greater. If a higher rate of investment return is assumed the liabilities and ARC would be lower.

Comment 2: Liabilities for health insurance premiums are highly dependent upon the underlying assumptions concerning medical care inflation and the investment return rate. For the purposes of this valuation, we assumed a 7.50% investment return rate and an 8.5% annual medical care inflation rate in the first year, decreasing in 0.1% increments over the following 10 years to the ultimate assumed rate of 4.5%. Liabilities and computed contributions would be greater if a higher medical care inflation rate is assumed or a lower investment return rate. Liabilities and computed contributions would be less if a lower medical care inflation rate is assumed or a higher investment return rate. If the City does not plan to contribute the Annual Required Contribution Rate, the assumed rate of investment return would be lower.

Comment 3: The unfunded actuarial accrued liabilities were amortized as level dollar payments over a 30 year period.

Comment 4: In order for assets to be considered in determining the unfunded actuarial accrued liability, the assets must be a) irrevocably held in a trust or equivalent arrangement, b) dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan, and c) legally protected from creditors of the employer or plan.

Section Three:

Benefit Provisions

Benefit Provision Summary

Eligibility for Post-Retirement Health Insurance Benefits

Administrative employees hired prior to December 1, 2005 who retire directly from the City are eligible for retiree health for themselves, their spouse and eligible dependents. Employees hired prior to December 1, 2005 who terminate employment with 10 or more years of continuous service and defer retirement until normal retirement age are eligible at normal retirement for benefits for themselves only.

Union employees hired before July 1, 2013 are eligible for retiree health benefits for themselves, their spouse and eligible dependents.

Retirement System eligibility conditions are as follows:

General: Age 60 with 5 or more years of service or age 55 and 25 years of service.

526M: If hired before 7/1/84, attainment of age 60 and 5 years of service.
If hired after 7/1/84, age 62 and 5 years of service; or age 55 and 25 years of service regardless of date of hire.

Police/Fire: Age 55 with 5 or more years of service.

Administrative employees hired after December 1, 2005 and who retire directly, not deferred, after 20 years of continuous employment are eligible for retiree health benefits. All employees hired on or after July 1, 2013 are not eligible for City-financed retiree health benefits.

Health Insurance Benefits

Retiree health benefits are the equivalent of their health care benefits on the last day of employment with the City.

Life Insurance Benefit

The City pays the premium for a life insurance policy in the amount of $5,000 for retirees.

Note: This is a brief summary only for purposes of the valuation. Benefit provisions are governed by the plan documents and collective bargaining agreements.

Section Four:

Actuarial Assumptions And Methods

RODWAN
consulting
company

Actuarial Assumptions

Economic Assumptions

(i) Interest Rate   7.5% (net of expenses)

(ii) Medical Inflation Rate   8.5%, graded down to 4.5% in 0.1%
                                                  increments over 10 years

(iii) Salary Increases
      Across-the-Board   4.0%
      Merit and Longevity   Not applicable for medical valuation

Demographic Assumptions

(i)   Mortality   RP2000 Combined Healthy
                                                                         Mortality Table Projected to 2014

Sample Ages	Future Life Expectancy (Years)	
	Men	**Women**
50	32.2	34.4
55	27.5	29.6
60	23.0	25.1
65	18.8	20.8
70	14.9	16.9
75	11.3	13.3
80	8.3	10.1

(ii)   Disability

Sample Ages	Disability Rates Per 1,000 Members	
	Male	**Female**
25	.2	.1
30	.5	.4
35	.8	.7
40	1.1	1.0
45	1.9	1.7
50	2.7	2.3
55	4.7	3.5
60	6.7	4.6

(iii)

Termination of Employment - Police

Sample Ages	Termination Rates Per 1,000 Members	
	Male	**Female**
25	108.8	173.8
30	68.9	98.9
35	48.4	73.4
40	27.9	47.9
45	16.1	31.1
50	4.4	14.4
55	-	-
60	-	-
65	-	-
70	-	-
75	-	-
80	-	-

Termination of Employment - General

Sample Ages	Years of Service	Percent Terminating
All	0	20.00%
	1	15.00
	2	10.00
	3	8.00
	4	7.00
20	5 and over	6.00
25		6.00
30		5.50
35		4.40
40		1.85
45		1.25
50		1.25
55		1.25
60		1.25
65		1.25

(iv) Retirement Rates   Retirement assumed at earliest age participant becomes eligible for normal retirement.

Actuarial Method Used for the Valuation

Normal Cost. Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry age actuarial cost method having the following characteristics:

❖ The annual normal costs for each individual active participant, payable from date of hire to date of retirement, are sufficient to accumulate the value of the participant's benefit at the time of retirement;

❖ Each annual normal cost is a constant percentage of the participant's year-by-year projected covered pay.

Financing of Unfunded Actuarial Accrued Liability. Unfunded actuarial accrued liability was amortized as a level dollar payments over 30 years.

Section Five:

Valuation Data

RODWAN
consulting
company

Participant Summary

Retirees and Beneficiaries

As of June 30, 2019, there were 70 retirees included in the valuation.

	General	Police and Fire	Total
Number	48	22	70

Retirees and Survivors - June 30, 2019

Attained Age	General	Police/Fire	Totals
55-59	3	3	6
60-64	9	4	13
65-69	12	5	17
70-74	6	4	10
75-79	8	3	11
80-84	6	2	8
85-89	1	1	2
90-94	2		2
95-99	1		1
Total	**48**	**22**	**70**

Active Participants

As of June 30, 2019, there were 41 active participants.

	General	**Police and Fire**	**Total**
Number	22	19	41
Payroll	$1,379,490	$1,630,900	$3,010,390
Averages			
Age	47.3 yrs.	47.6 yrs.	47.5yrs.
Service	16.4 yrs.	18.4 yrs.	17.4 yrs.
Salary	$62,704	$85,837	$74,424

General Active Participants as of June 30, 2019
Age and Service Distribution

Attained Age	Service 0-4	5-9	10-14	15-19	20-24	30-34	Totals No.	Payroll
30-34	1						1	50,275
35-39			2				2	113,884
40-44		1	1	1	1		4	288,378
45-49			2	3	1		6	379,221
50-54		1	1	1	2	1	6	390,198
55-59			1	1	1	0	3	157,534
Totals	**1**	**2**	**7**	**6**	**5**	**1**	**22**	**$ 1,379,490**

Group Averages:
Age: 47.3 years
Service: 16.4 years
Annual Pay: $62,704

Police/Fire Active Participants as of June 30, 2019
Age and Service Distribution

Attained Age	5-9	10-14	15-19	20-24	25-29	No.	Totals Payroll
35-39			2			2	$158,898
40-44	1		2			3	247,569
45-49			2	3		5	418,985
50-54		1	4	2	1	8	701,942
55-59				1		1	103,506
Totals	**1**	**1**	**10**	**5**	**1**	**19**	**$1,630,900**

Group Averages:

Age: 47.6 years
Service: 18.4 years
Annual Pay: $85,837

Inactive Vested

As of June 30, 2019, there were 10 inactive vested participants included in the valuation.