

**CITY OF ST. CLAIR SHORES**  
**RETIREE HEALTH CARE PLANS**  
ACTUARIAL VALUATION REPORT  
AS OF JUNE 30, 2016

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May 11, 2017

General Employee Retiree Health Care Board  
Police and Fire Retiree Health Care Trust Board  
Attn: Board Members  
City of St. Clair Shores  
27600 Jefferson Circle Drive  
St. Clair Shores, Michigan 48081-2093

Dear Board Members:

Submitted in this report are the results of an Actuarial Valuation of the assets and liabilities associated with the employer financed retiree health benefits provided by the City of St. Clair Shores General Retiree Health Care Plan and the City of St. Clair Shores Police and Fire Retiree Health Care Plan. The date of the valuation was June 30, 2016.

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

The purposes of the valuation are to measure the System's funding progress and to determine the Actuarially Computed Employer Contributions for the fiscal years beginning July 1, 2017 and July 1, 2018. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different. This report is not compliant with GASB Statements No. 74 and No. 75. A separate report that incorporates GASB Statements No. 74 and No. 75 will be prepared at a later date.

The findings in this report are based on data and other information through June 30, 2016. 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

The valuation was based upon information furnished by the City of St. Clair Shores concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability 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 City of St. Clair Shores.

In addition, this report was prepared using certain assumptions approved by the Board as described in the section of this report entitled Actuarial Cost Method and Actuarial Assumptions.

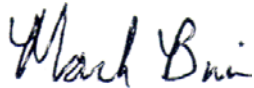
This report has been prepared by actuaries who have substantial experience valuing public employee retiree health plans. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the City of St. Clair Shores General Retiree Health Care Plan and the City of St. Clair Shores Police and Fire Retiree Health Care Plan 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.

Mark Buis and Rebecca L. Stouffer are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,



Mark Buis, FSA, EA, FCA, MAAA



Rebecca L. Stouffer, ASA, MAAA

MB/RLS:mrh

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## EXECUTIVE SUMMARY

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## EXECUTIVE SUMMARY

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### Actuarially Computed Employer Contribution

Please note that beginning with the fiscal year ending June 30, 2017, GASB Statement No. 43 will be replaced by GASB Statement No. 74. Also, beginning with the fiscal year ending June 30, 2018, GASB Statement No. 45 will be replaced by GASB Statement No. 75. A separate GASB report will be issued to comply with the actuarial requirements of the new GASB Statements, beginning with the fiscal year ending June 30, 2017. As such, there will no longer be an “Annual Required Contribution” calculated in the valuation reports. Therefore, we have determined the “Actuarially Computed Employer Contribution” for subsequent years.

We have calculated the Actuarially Computed Employer Contribution for the fiscal years beginning July 1, 2017 and July 1, 2018 under one interest rate assumption of 5.00%. Below is a summary of the results. The Actuarially Computed Employer Contributions and estimated retiree claims and premiums shown below include an adjustment for any implicit rate subsidy present in your pre-65 rates.

For additional details please see the Section titled “Valuation Results.”

<b>General</b>	<b>Actuarially Computed Employer Contribution</b>	<b>Estimated Claims Paid for Retirees</b>
Fiscal Year Beginning July 1, 2017	\$4,715,106	\$2,764,573
Fiscal Year Beginning July 1, 2018	4,636,891	2,965,954

<b>Police and Fire</b>	<b>Actuarially Computed Employer Contribution</b>	<b>Estimated Claims Paid for Retirees</b>
Fiscal Year Beginning July 1, 2017	\$6,191,702	\$3,134,955
Fiscal Year Beginning July 1, 2018	6,470,329	3,427,986

## EXECUTIVE SUMMARY

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### Liabilities and Assets

The Present Value of Future Benefit Payments (PVFB) is the present value of all benefits projected to be paid from the plan for past and future service to current members. The Actuarial Accrued Liability is the portion of the PVFB allocated to past service by the Plan's funding method (see the Section titled "Actuarial Cost Method and Actuarial Assumptions").

<b>General</b>	
1. Present Value of Future Benefit Payments	\$67,000,917
2. Actuarial Accrued Liability	60,611,047
3. Plan Assets	5,237,384
4. Unfunded Actuarial Accrued Liability (2) – (3)	55,373,663
5. Funded Ratio (3)/(2)	8.6%

<b>Police &amp; Fire</b>	
1. Present Value of Future Benefit Payments	\$128,109,823
2. Actuarial Accrued Liability	97,811,726
3. Plan Assets	11,139,475
4. Unfunded Actuarial Accrued Liability (2) – (3)	86,672,251
5. Funded Ratio (3)/(2)	11.4%

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**SECTION A**  
**VALUATION RESULTS**

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**CITY OF ST. CLAIR SHORES - RESULTS BY PLAN  
AS OF JUNE 30, 2016**

	<u>General</u>	<u>Police/Fire</u>
A. Present Value of Future Benefits		
i) Retirees and Beneficiaries	\$38,907,250	\$61,213,423
ii) Vested Terminated Members	5,513,285	765,912
iii) Active Members	<u>22,580,382</u>	<u>66,130,488</u>
Total Present Value of Future Benefits	\$67,000,917	\$128,109,823
B. Present Value of Future Normal Costs	\$6,389,870	\$30,298,097
C. Actuarial Accrued Liability (A.-B.)	60,611,047	97,811,726
D. Actuarial Value of Assets	5,237,384	11,139,475
E. Unfunded Actuarial Accrued Liability (C.-D.)	\$55,373,663	\$86,672,251
F. Funded Ratio (D./C.)	8.6%	11.4%
<b>G. Fiscal Year Beginning July 1, 2017</b>		
i) Employer Normal Cost	\$906,876	\$2,642,540
ii) Amortization of Unfunded Actuarial Accrued Liability	<u>3,808,230</u>	<u>3,549,162</u>
Actuarially Computed Employer Contribution	\$4,715,106	\$6,191,702
<b>H. Fiscal Year Beginning July 1, 2018</b>		
i) Employer Normal Cost	\$828,661	\$2,761,455
ii) Amortization of Unfunded Actuarial Accrued Liability	<u>3,808,230</u>	<u>3,708,874</u>
Actuarially Computed Employer Contribution	4,636,891	6,470,329

The unfunded actuarial accrued liabilities were amortized over a closed period of 28 years as of July 1, 2017 and decreasing by 1 each year thereafter. For the General Retirees Health Care Plan the unfunded actuarial accrued liabilities were amortized as a level dollar amount. For the Police and Fire Retiree Health Care Plan the unfunded actuarial accrued liabilities were amortized as a level percent of payroll.

The long term rate of investment return used in this valuation was 5.00%.

## COMMENTS

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**COMMENT A:** One of the key assumptions used in any valuation of the cost of postemployment benefits is the rate of return on the assets that will be used to pay Plan benefits. Higher assumed investment returns will result in a lower Actuarially Computed Employer Contribution. Lower returns will tend to increase the Actuarially Computed Employer Contribution. We have calculated the liability and the resulting Actuarially Computed Employer Contribution using an assumed annual rate of investment return of 5.00%, as requested by the Plan Sponsor. This rate may be appropriate in the case the Plan Sponsor is partially funding the plan. In addition to making pay-as-you-go payments, some additional assets are put in the trust which will be used to pay future benefits. The choice of interest rate should be confirmed by the Plan's auditor.

**COMMENT B:** The Plan Sponsor is required by GASB to perform actuarial valuations at least biennially, unless there are significant changes in the OPEB.

**COMMENT C:** The contribution rates shown include amortization of the unfunded actuarial accrued liability over a closed period of 28 years. A shorter amortization period would result in a higher Actuarially Computed Employer Contribution.

**COMMENT D:** 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 2020. 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 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. Based on the current plan provisions and assumptions, we did not develop a load for future excise tax liability. We have not identified any other specific provision of health care reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will review and monitor the impact.

## COMMENTS

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**COMMENT E:** For the General Retiree Health Care Plan, the Actuarially Computed Employer Contribution has increased, more than anticipated, since the last valuation. Factors contributing to this increase include, but are not limited to:

- The implementation of new assumptions which increase the actuarially accrued liability roughly \$5.3 million. Since the completion of the June 30, 2014 valuation, an assumption study dated August 11, 2016 was prepared. As a result of this study, updates to the mortality table and other technical assumptions are reflected in the June 30, 2016 valuation results. For a detailed description of the Valuation Assumptions and Methods utilized please see Section E.
- Resetting the short term health care assumed rates of increase.
- Contributions to the Plan at a lower level than the recommended actuarially computed employer contribution.

Partially offsetting these factors were decreases due to:

- More favorable health care claims experience than expected and
- Lowering of the ultimate health care assumed rate of increase.

**COMMENT F:** Many factors contribute to a change in the level of recommended actuarially computed employer contribution from one valuation to the next. For the Police and Fire Plan some factors contributing to the change since the last valuation are shown below. Factors contributing to the increase include, but are not limited to:

- The implementation of new assumptions which increase the actuarially accrued liability roughly \$8.1 million. Since the completion of the June 30, 2014 valuation, a limited scope experience study was performed. As a result of this study, updates to the mortality table and other technical assumptions are reflected in the June 30, 2016 valuation results. For a detailed description of the Valuation Assumptions and Methods utilized please see Section E.
- Resetting the short term health care assumed rates of increase.
- Contributions to the Plan at a lower level than the recommended actuarially computed employer contribution.

## COMMENTS (CONCLUDED)

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Partially offsetting these factors were decreases due to:

- More favorable health care claims experience than expected.
- Changes to the plan design; specifically the implementation of member contributions to the Plan for certain groups.

The net impact is an actuarially computed employer contribution that is slightly larger than expected.

**COMMENT G:** The GASB issued Statements Nos. 74 and 75 for OPEB valuations similar to the new pension standards. GASB Statement No. 74 for the plan OPEB disclosures is effective for fiscal years beginning after June 15, 2016. GASB Statement No. 75 for employer OPEB disclosures is effective for employer fiscal years beginning after June 15, 2017. The GASB has not yet issued finalized implementation guides for these new standards. These guides will provide additional clarification related to the implementation of Statements No. 74 and No. 75. Our understanding of the application of the recent GASB Statements is stated below; however, GRS consultants are not auditors and we recommend consultation with your auditor for final determination of which standards will be applicable. The City currently partially pre-funds the benefits and has assets in a qualifying trust, as a result, it is our opinion that the City will need to comply with GASB Statement No. 74 for the fiscal year ending June 30, 2017. We recommend you verify this with your auditors. The City will also need to comply with GASB Statement No. 75 for the fiscal year ending June 30, 2018. The information necessary for GASB Statement No. 74 for the June 30, 2017 fiscal year end will need to be developed at a later date. The basis for the GASB Statement No. 74 information is expected to be this valuation (as of June 30, 2016), where roll-forward techniques will be applied.

**COMMENT H:** Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the market value of assets. Unless otherwise indicated, with regards to any funded status measurements presented in this report:

- The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, and
- The measurement is inappropriate for assessing the need for or the amount of future employer contributions.

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**SECTION B**

**RETIREE PREMIUM RATE DEVELOPMENT**

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**CITY OF ST. CLAIR SHORES**  
**RETIREE PREMIUM RATE DEVELOPMENT**

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Initial premium rates were developed separately for each class (pre-65 and post-65). The rates were calculated by using actual paid retiree claims and exposure data for the period of July 2013 to June 2016, plus the load for administration fees. The self-insured medical and prescription drug retiree data were provided by the City of St. Clair Shores. The medical data was analyzed for the pre-65 and post-65 participants separately since Medicare is available for the post-65 participants and has a significant impact on the claim experience. Furthermore, since the prescription drug claims and the medical claims exhibit different trends and claim payment patterns, we analyzed these claims separately as well.

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.

The combined monthly one-person medical and drug premiums at select ages are shown below.

<b>Pre-65 Participants</b>				
<b>Age</b>	<b>Future Retirees</b>		<b>Current Retirees</b>	
	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
45	\$ 383.52	\$ 529.30	\$ 440.44	\$ 607.86
50	499.38	615.19	573.50	706.49
55	657.13	717.49	754.66	823.98
60	848.72	835.70	974.68	959.73
64	1,032.07	973.99	1,185.24	1,118.55

<b>Post-65 Participants</b>				
<b>Age</b>	<b>Future Retirees</b>		<b>Current Retirees</b>	
	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
65	\$ 400.24	\$ 377.51	\$ 493.01	\$ 465.01
70	436.01	421.90	537.07	519.70
75	468.28	456.94	576.82	562.85

**CITY OF ST. CLAIR SHORES**  
**RETIREE PREMIUM RATE DEVELOPMENT**

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We did not “age grade” the vision premium rates for this valuation, since vision claims do not vary significantly by age. The average monthly vision premiums (applicable to General member only) used in this valuation are as follows:

<b>Monthly Vision Premiums</b>			
<b>Age</b>	<b>Pre-65</b>		<b>Post-65</b>
1st Person	\$ 3.39	\$	2.78
2nd Person	3.38		2.78

James E. 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.



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James E. Pranschke, FSA, MAAA

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**SECTION C**  
**SUMMARY OF BENEFITS**

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**CITY OF ST. CLAIR SHORES  
GENERAL RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**AFSCME**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>					
Hired before 2/19/2008	50/25 60/10	Medical, Vision and prescription drug	Medical, Vision and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental: None Opt-Out: No
Hired after 2/19/2008 (DC Members)	50/25 60/15	same as above	same as above	Medical: 15 years of service: 40% of costs for member, spouse, dependents Each add'l. yr., 4% will be reduced up to add'l. 10 yrs. RX: Co-pays Spouse coverage continues as long as they receive a pension	same as above
Hired after 6/30/2013*	None				
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>					
Hired before 10/18/2004	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 10/18/2004 & before 2/19/2008	20 years of service	same as above	same as above	same as hired before above	same as above
Hired after 2/19/2008 (DC Members)	15 years of service	same as above	same as above	same as hired after above	same as above
<b>Non-Duty Disability</b>					
Hired before 10/18/2004	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 10/18/2004 & before 2/19/2008	15 years of service	same as above	same as above	same as hired before above	same as above
Hired after 2/19/2008 (DC Members)	15 years of service	same as above	same as above	same as hired after above	same as above
<b>Duty Disability</b>					
Hired before 2/19/2008	No age or service requirement	same as above	same as above	same as hired before above	same as above
Hired after 2/19/2008 (DC Members)	No age or service requirement	same as above	same as above	same as hired after above	same as above
<b>Non-Duty Death-in-Service</b>					
Hired before 10/18/2004	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 10/18/2004 & before 2/19/2008	20 years of service	same as above	same as above	same as hired before above	same as above
Hired after 2/19/2008 (DC Members)	15 years of service	same as above	same as above	same as hired after above	same as above
<b>Duty Death-in-Service</b>					
Hired before 2/19/2008	No age or service requirement	same as above	same as above	same as hired before above	same as above
Hired after 2/19/2008 (DC Members)	No age or service requirement	same as above	same as above	same as hired after above	same as above

\* Not eligible for retiree health benefit. Participate in RHSP only.

**CITY OF ST. CLAIR SHORES  
GENERAL AND POLICE AND FIRE RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**AR4/City Manager**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>					
Hired before 7/1/2005	50/25 60/10	Medical, Vision and prescription drug	Medical, Vision and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental: None Opt-Out: No
Hired after 7/1/2005 (DC Members and Police/Fire)	50/25 60/15	same as above	same as above	Medical: 15 years of service: 40% of costs for member, spouse, dependents Each add'l. yr., 4% will be reduced up to add'l. 10 yrs. RX: Co-pays Spouse coverage continues as long as they receive a pension	same as above
Hired after 9/30/2009 (DC Members)*	None				
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>					
Hired before 7/1/2005	60/10	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2005 (DC Members)	60/15	same as above	same as above	same as hired after above	same as above
<b>Non-Duty Disability</b>					
Hired before 7/1/2005	60/10	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2005 (DC Members)	60/15	same as above	same as above	same as hired after above	same as above
<b>Duty Disability</b>	No age or service requirement	same as above	same as above	same as hired before above	same as above
<b>Non-Duty Death-in-Service</b>					
Hired before 7/1/2005	60/10	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2005 (DC Members)	60/15	same as above	same as above	same as hired after above	same as above
<b>Duty Death-in-Service</b>	No age or service requirement	same as above	same as above	same as hired before above	same as above

\* General members hired after 9/30/2009 are not eligible for retiree health benefit. These members participate in RHSP only. Police and Fire members hired after 9/30/2009 continue to participate in the retiree health plan.

**CITY OF ST. CLAIR SHORES  
GENERAL RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**Court Clerical**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>					
Hired before 1/7/2008	50/25 60/10	Medical, Vision and prescription drug	Medical, Vision and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental: None Opt-Out: No
Hired after 1/7/2008 (DC Members)	same as above	same as above	same as above	Medical: 15 years of service: 40% of costs for member, spouse, dependents Each addl. yr., 4% will be reduced up to add'l. 10 yrs. RX: Co-pays Spouse coverage continues as long as they receive a pension	same as above
Hired After 6/30/2013*	None				
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>					
Hired before 1/7/2008	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 1/7/2008 (DC Members)	50/25 60/10	same as above	same as above	same as hired after above	same as above
<b>Non-Duty Disability</b>					
Hired before 1/7/2008	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 1/7/2008 (DC Members)	50/25 60/10	same as above	same as above	same as hired after above	same as above
<b>Duty Disability</b>					
Hired before 1/7/2008	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 1/7/2008 (DC Members)	50/25 60/10	same as above	same as above	same as hired after above	same as above
<b>Non-Duty Death-in-Service</b>					
Hired before 1/7/2008	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 1/7/2008 (DC Members)	50/25 60/10	same as above	same as above	same as hired after above	same as above
<b>Duty Death-in-Service</b>	No age or service requirement	same as above	same as above	same as hired before above	same as above

\* Not eligible for retiree health benefit. Participate in RHSP only.

**CITY OF ST. CLAIR SHORES  
GENERAL RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**PEA & UAW**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>					
Hired before 7/1/2002	50/25 60/10	Medical, Vision and prescription drug	Medical, Vision and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental: None Opt-Out: No
Hired after 7/1/2002 & before 11/15/2006	50/25 60/15	same as above	same as above	same as above	same as above
Hired after 11/15/2006 (DC)	50/25 60/15	same as above	same as above	Medical: 15 years of service: 40% of costs for member, spouse, dependent Each add'l yr., 4% will be reduced up to add'l 10 yrs. RX: Co-pays Spouse coverage continues as long as they receive a pension	same as above
Hired after 9/30/2009*	None				
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>					
Hired before 7/1/2002	60/10	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2002 & before 11/15/2006	60/15	same as above	same as above	same as hired before above	same as above
Hired after 11/15/2006	60/15	same as above	same as above	same as hired after above	same as above
<b>Non-Duty Disability</b>					
Hired before 7/1/2002	60/10	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2002 & before 11/15/2006	60/15	same as above	same as above	same as hired before above	same as above
Hired after 11/15/2006	60/15	same as above	same as above	same as hired after above	same as above
<b>Duty Disability</b>	No age or service requirement	same as above	same as above	same as hired before above	same as above
<b>Non-Duty Death-in-Service</b>					
Hired before 7/1/2002	60/10	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2002 & before 11/15/2006	60/15	same as above	same as above	same as hired before above	same as above
Hired after 11/15/2006	60/15	same as above	same as above	same as hired after above	same as above
<b>Duty Death-in-Service</b>	No age or service requirement	same as above	same as above	same as hired before above	same as above

Effective 10/19/2009: New hires will not be eligible for retiree health benefits. Instead, they will participate in a Retiree Health Savings account.

\* Not eligible for retiree health benefit. Participate in RHSP only.

**CITY OF ST. CLAIR SHORES  
GENERAL RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**Dispatchers**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>	50/25 60/10	Medical, Vision and prescription drug	Medical, Vision and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental: None Opt-Out: No
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>	10 years of service	same as above	same as above	same as above	same as above
<b>Non-Duty Disability</b>	10 years of service	same as above	same as above	same as above	same as above
<b>Duty Disability</b>	10 years of service	same as above	same as above	same as above	same as above
<b>Non-Duty Death-in-Service</b>	10 years of service	same as above	same as above	same as above	same as above
<b>Duty Death-in-Service</b>	No age or service requirement	same as above	same as above	same as above	same as above

Effective 2/1/2009: New hires will not be eligible for retiree health benefits. Instead, they will participate in a Retiree Health Savings account.

Effective 9/01/2011: No active Suffix for Dispatch employees; all transferred to SERESA insurance. Only will have original SCS Dispatchers as retirees.

**CITY OF ST. CLAIR SHORES  
GENERAL RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**Court Non-Union**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>					
Hired before 7/1/2005	50/25 60/10	Medical, Vision and prescription drug	Medical, Vision and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental: None Opt-Out: No
Hired after 7/1/2005 (DC Members)	50/25 60/15	same as above	same as above	Medical: 15 years of service: 40% of costs for member, spouse, dependents Each add'l. yr., 4% will be reduced up to add'l. 10 yrs. RX: Co-pays Spouse coverage continues as long as they receive a pension	same as above
Hired after 6/30/2013*					
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>					
Hired before 7/1/2005	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2005 (DC Members)	15 years of service	same as above	same as above	same as hired after above	same as above
<b>Non-Duty Disability</b>					
Hired before 7/1/2005	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2005 (DC Members)	15 years of service	same as above	same as above	same as hired after above	same as above
<b>Duty Disability</b>	No age or service requirement	same as above	same as above	same as hired before above	same as above
<b>Non-Duty Death-in-Service</b>					
Hired before 7/1/2005	10 years of service	same as above	same as above	same as hired before above	same as above
Hired after 7/1/2005 (DC Members)	15 years of service	same as above	same as above	same as hired after above	same as above
<b>Duty Death-in-Service</b>	No age or service requirement	same as above	same as above	same as hired before above	same as above

\* Not eligible for retiree health benefit. Participate in RHSP only.

**CITY OF ST. CLAIR SHORES  
POLICE AND FIRE RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**Police Command**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>	25 years of service 60/10	Medical and prescription drug	Medical and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental, Vision: None Opt-Out: No
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>	10 years of service	same as above	same as above	same as above	same as above
<b>Non-Duty Disability</b>	10 years of service	same as above	same as above	same as above	same as above
<b>Duty Disability</b>	No age or service requirement	same as above	same as above	same as above	same as above
<b>Non-Duty Death-in-Service</b>	10 years of service	same as above	same as above	same as above	same as above
<b>Duty Death-in-Service</b>	No age or service requirement	same as above	same as above	same as above	same as above

New hire employees after April 22, 2011 will pay 2% of their pay to the retiree health care fund. These employees shall be vested for purposes of retiree health care after ten years. Effective July 1, 2011, all current employees shall contribute 1% of their pay to the retiree health care fund, and shall be vested.

**CITY OF ST. CLAIR SHORES  
POLICE AND FIRE RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**Police Patrol**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>	25 years of service 60/10	Medical and prescription drug	Medical and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental, Vision: None Opt-Out: No
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>					
Hired before 7/1/2003	10 years of service	same as above	same as above	same as above	same as above
Hired after 7/1/2003	20 years of service	same as above	same as above	same as above	same as above
<b>Non-Duty Disability</b>					
Hired before 7/1/2003	10 years of service	same as above	same as above	same as above	same as above
Hired after 7/1/2003	20 years of service	same as above	same as above	same as above	same as above
<b>Duty Disability</b>					
Hired before 7/1/2003	10 years of service	same as above	same as above	same as above	same as above
Hired after 7/1/2003	20 years of service	same as above	same as above	same as above	same as above
<b>Non-Duty Death-in-Service</b>					
Hired before 7/1/2003	10 years of service	same as above	same as above	same as above	same as above
Hired after 7/1/2003	20 years of service	same as above	same as above	same as above	same as above
<b>Duty Death-in-Service</b>					
	No age or service requirement	same as above	same as above	same as above	same as above

New hire employees after the date of the award will pay 2% of their pay to the retiree health care fund. These employees shall be vested for purposes of retiree health care, after ten years. (signed 9/23/11)

Effective July 1, 2011, all current employees shall contribute 1% of their pay to the retiree health care fund.

All current employees who have not attained ten years as of July 1, 2011, shall become vested on their tenth anniversary date of employment for purposes of retiree health care.

All current employees who have ten years or more of employment as of July 1, 2011, shall be immediately vested for purposes of retiree health care.



**CITY OF ST. CLAIR SHORES  
POLICE AND FIRE RETIREE HEALTH CARE PLAN  
SUMMARY OF BENEFITS  
AS OF JUNE 30, 2016**

**Fire**

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer		Retiree Share of Cost	Other Info
		Retiree	Spouse		
<b>Normal Retirement</b>					
Hired before 1/1/2010	25 years of service 60/10	Medical and prescription drug	Medical and prescription drug	Medical: None RX: Co-pays Spouse coverage continues as long as they receive a pension	Retiree is reimbursed for Medicare Part B Life Insurance, Dental, Vision: None Opt-Out: No
Hired after 1/1/2010	50/25 60/10	same as above	same as above	same as above	same as above
<b>Early Retirement</b>	None				
<b>Deferred Vested Termination</b>					
Hired before 12/9/2005	10 years of service	same as above	same as above	same as above	same as above
Hired after 12/9/2005	20 years of service	same as above	same as above	same as above	same as above
<b>Non-Duty Disability</b>					
Hired before 12/9/2005	5 years of service	same as above	same as above	same as above	same as above
Hired after 12/9/2005	20 years of service	same as above	same as above	same as above	same as above
<b>Duty Disability</b>	No age or service requirement	same as above	same as above	same as above	same as above
<b>Non-Duty Death-in-Service</b>					
Hired before 12/9/2005	10 years of service	same as above	same as above	same as above	same as above
Hired after 12/9/2005	20 years of service	same as above	same as above	same as above	same as above
<b>Duty Death-in-Service</b>	No age or service requirement	same as above	same as above	same as above	same as above

New hire employees after the signing of the 2008-2011 agreement will pay 2% of their pay to the retiree health care fund. The agreement was assumed to be signed 7/1/2008.

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## **SECTION D**

### SUMMARY OF PARTICIPANT DATA

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**CITY OF ST. CLAIR SHORES - GENERAL  
ACTIVE MEMBERS AS OF JUNE 30, 2016  
BY AGE AND YEARS OF SERVICE**

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Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29									
30-34		1	2					3	\$ 179,617
35-39		4	4	2				10	545,656
40-44	1		4	6	1			12	713,567
45-49	2	4		5				11	621,911
50-54	2	2	4	6	4			18	1,053,005
55-59	1	2	1	12	2	1	4	23	1,635,216
60-64	1		1	1	3			6	393,411
65 & Over				2				2	154,315
<b>Totals</b>	<b>7</b>	<b>13</b>	<b>16</b>	<b>34</b>	<b>10</b>	<b>1</b>	<b>4</b>	<b>85</b>	<b>\$ 5,296,698</b>

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

**Age:** 50.0 years  
**Service:** 15.5 years  
**Annual Pay:** \$62,314

**CITY OF ST. CLAIR SHORES - POLICE AND FIRE  
ACTIVE MEMBERS AS OF JUNE 30, 2016  
BY AGE AND YEARS OF SERVICE**

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Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	5							5	\$ 169,183
25-29	11	3						14	959,524
30-34	7	17	4					28	2,169,002
35-39	2	9	6	4				21	1,738,619
40-44		1	4	13	2			20	1,711,689
45-49			1	4	22			27	2,714,409
50-54				1	10	2		13	1,308,249
55-59					1	1		2	190,375
60-64									
65 & Over									
<b>Totals</b>	<b>25</b>	<b>30</b>	<b>15</b>	<b>22</b>	<b>35</b>	<b>3</b>		<b>130</b>	<b>\$ 10,961,050</b>

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

**Age:** 38.7 years  
**Service:** 13.4 years  
**Annual Pay:** \$84,316

**CITY OF ST. CLAIR SHORES - GENERAL  
DEFERRED AND RETIRED MEMBERS AS OF JUNE 30, 2016**

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**Number of Retiree and Beneficiary Contracts**

	<b>Opt-Out/ Ineligible</b>	<b>One-Person Coverage</b>	<b>Two-Person Coverage*</b>	<b>Total</b>
Male	8	32	64	104
Female	12	67	29	108
<b>Total</b>	<b>20</b>	<b>99</b>	<b>93</b>	<b>212</b>

\* Includes family coverage.

**Number of Retiree and Beneficiary Contracts by Age**

<b>Age</b>	<b>Number of Those with Coverage</b>		
	<b>Male</b>	<b>Female</b>	<b>Total</b>
Under 55	2	0	2
55-59	2	1	3
60-64	24	12	36
65 & Over	68	83	151
<b>Totals</b>	<b>96</b>	<b>96</b>	<b>192</b>

**Number of Deferred Contracts by Age**

<b>Age</b>	<b>Number of Deferred</b>		
	<b>Male</b>	<b>Female</b>	<b>Total</b>
Under 45	0	1	1
45-49	2	4	6
50-54	3	5	8
55 & over	1	4	5
<b>Totals</b>	<b>6</b>	<b>14</b>	<b>20</b>

**CITY OF ST. CLAIR SHORES - POLICE AND FIRE  
DEFERRED AND RETIRED MEMBERS AS OF JUNE 30, 2016**

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**Number of Retiree and Beneficiary Contracts**

	<b>Opt-Out/ Ineligible</b>	<b>One-Person Coverage</b>	<b>Two-Person Coverage*</b>	<b>Total</b>
Male	3	25	127	155
Female	10	39	0	49
<b>Total</b>	<b>13</b>	<b>64</b>	<b>127</b>	<b>204</b>

\* Includes family coverage.

**Number of Retiree and Beneficiary Contracts by Age**

<b>Age</b>	<b>Number of Those with Coverage</b>		
	<b>Male</b>	<b>Female</b>	<b>Total</b>
Under 55	20	3	23
55-59	19	0	19
60-64	25	2	27
65 & Over	88	34	122
<b>Totals</b>	<b>152</b>	<b>39</b>	<b>191</b>

**Number of Deferred Contracts by Age**

<b>Age</b>	<b>Number of Deferred</b>		
	<b>Male</b>	<b>Female</b>	<b>Total</b>
Under 45	1	0	1
45-49	0	0	0
50-54	0	1	1
55 & over	0	0	0
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>2</b>

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**SECTION E**  
**ACTUARIAL COST METHOD AND ACTUARIAL**  
**ASSUMPTIONS**

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## VALUATION METHODS

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**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) (full funding credit if assets exceed liabilities) were amortized as a level percent-of-payroll if the group is open to new hires (Police and Fire) and as a level dollar if the group is closed to new hires (General). The UAAL was determined using the actuarial value of assets and actuarial accrued liability calculated as of the valuation date and projected to the beginning of the fiscal year at the assumed rate of investment return.

**Actuarial Value Assets.** The Actuarial Value of Assets is set equal to the reported market value of assets.

**Amortization Factors.** The following amortization factors were used in developing the Actuarially Computer Employer Contribution for the fiscal years shown:

	<b>Fiscal Year Beginning July 01,</b>	
	<b>2017</b>	<b>2018</b>
General (Level Dollar)	15.2676	15.0061
Police (Level Percent of Pay)	25.6415	24.7835



## ACTUARIAL ASSUMPTIONS - GENERAL

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*The rate of investment return* was 5.00% a year, compounded annually net after investment expenses.

*Rates of price inflation* are not explicitly utilized in the calculation of valuation results. A price inflation of approximately 2.75% was assumed.

*The rates of salary increase* used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which future contributions will be based. Base wage growth was set to 2.5% for 2012-2019.

### Sample Salary Adjustment Factors Used to Project Salaries in Years 2020 and Beyond

Age at Beginning of Year	Salary Increase Assumptions For an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
20	3.7 %	3.5 %	7.2 %
30	2.7	3.5	6.2
40	1.4	3.5	4.9
50	0.2	3.5	3.7
60	0.0	3.5	3.5
62 & Over	0.0	3.5	3.5
Ref	310		

## ACTUARIAL ASSUMPTIONS - GENERAL

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*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
50	20 %
51	20
52	20
53	20
54	20
55	25
56	25
57	25
58	25
59	25
60	30
61	30
62	30
63	30
64	30
65	100
Ref	1,612

These rates were first used for the June 30, 2008 valuation.

## ACTUARIAL ASSUMPTIONS - GENERAL

**Mortality.** This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. The mortality rates utilized are based upon the RP-2014 tables, as extended, and include a margin for future mortality improvement projected using a fully generational improvement scale. The tables used are as follows:

- **Healthy Pre-Retirement:** The RP-2014 Employee Generational Mortality Tables, with blue-collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.
- **Healthy Post-Retirement:** The RP-2014 Healthy Annuitant Generational Mortality Tables, with blue-collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.
- **Disability Retirement:** The RP-2014 Disabled Mortality Table, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

Sample Attained Ages	Healthy Pre- Retirement		Healthy Post-Retirement		Disabled Retirement	
	Future Life Expectancy (Years)*		Future Life Expectancy (Years)*		Future Life Expectancy (Years)*	
	Men	Women	Men	Women	Men	Women
55	30.29	35.49	29.10	32.02	21.94	25.77
60	25.45	30.49	24.54	27.28	18.89	22.16
65	20.91	25.58	20.21	22.70	15.90	18.57
70	16.72	20.81	16.15	18.34	12.98	15.06
75	12.90	16.27	12.47	14.34	10.25	11.85
80	9.51	12.00	9.28	10.82	7.83	9.11

\* Based on retirements in 2016. Retirements in future years will reflect improvements in life expectancy.

These rates were first used for the June 30, 2016 valuation.

## ACTUARIAL ASSUMPTIONS - GENERAL

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*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:

<b>Sample Ages</b>	<b>Years of Service</b>	<b>% of Active Members Separating within Next Year</b>
ALL	0	15.00 %
	1	12.00
	2	10.00
	3	8.00
	4	6.00
25	5 & Over	5.00
30		5.00
35		4.50
40		3.00
45		2.60
50		1.50
55		1.50
60		1.50

The rates were first used for the June 30, 2008 valuation.

*Rates of disability* are represented by the following table:

<b>Sample Ages</b>	<b>Percent Becoming Disabled Within Next Year</b>
20	0.03 %
25	0.05
30	0.07
35	0.13
40	0.19
45	0.28
50	0.45
55	0.76

These rates were first used for the June 30, 1986 valuation. For purposes of the valuation we assume that all disabilities are ordinary, as opposed to duty, disabilities.

## ACTUARIAL ASSUMPTIONS – GENERAL (CONCLUDED)

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

<b>Year Beginning July 1,</b>	<b>Medical and Prescription Drugs</b>	<b>Medicare Part B</b>	<b>Vision</b>
2017	9.00 %	10.02 %	3.5 %
2018	8.25	5.00	3.5
2019	7.50	5.00	3.5
2020	6.75	5.00	3.5
2021	6.25	5.00	3.5
2022	5.75	5.00	3.5
2023	5.25	5.00	3.5
2024	4.75	4.75	3.5
2025	4.25	4.25	3.5
2026 & Later	3.50	3.50	3.5

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS - GENERAL

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- Administrative Expenses:** No explicit assumption has been made for administrative expenses.
- Decrement Operation:** All decrements operate during the first 5 years of service. Only mortality operates during retirement eligibility.
- 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 contribution shown in this report.
- Marriage Assumption:** 100% of males and 100% of females in the General Retirement System 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:** Medicare Coverage is assumed to be available for all covered employees on attainment of age 65. Medicare Part B premium reimbursement is assumed to be available for all covered employees on attainment of age 65. For current retirees it was assumed that the relative value of the reported hold harmless premium and income adjusted premium will continue in the future.
- Loads:** A 50% load was applied to the deferred member liability for anticipated spouses.
- Assumption Rationale:** Certain actuarial assumptions were based upon the results of an assumption study for the City of St. Clair Shores Employees Retirement System. A report dated August 11, 2016 presented the results of this study. Other assumptions were based upon an experience study dated, September 23, 2008. The interest rate utilized was requested by the Plan Sponsor. We believe these assumptions continue to be suitable for the purposes of this study.
- Health Care Coverage at Retirement:** The table below shows the assumed portion of future retirees electing one-person or two-person/family coverage, or opting-out of coverage entirely.

General	One-Person	Two-Person/Family		Opt-Out
		Electing	Continuing	
Male	20%	75%	100%	5%
Female	20%	75%	100%	5%

## ACTUARIAL ASSUMPTIONS – POLICE AND FIRE

---

*The rate of investment return* was 5.00% a year, compounded annually net after investment expenses.

*Rates of price inflation* are not explicitly utilized in the calculation of valuation results. A price inflation of approximately 2.75% was assumed.

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

Age at Beginning of Year	Salary Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
20	3.0 %	4.5 %	7.5 %
30	2.6	4.5	7.1
40	0.2	4.5	4.7
50	0.2	4.5	4.7
60 & Over	0.0	4.5	4.5
Ref	56		

The number of active members is assumed to remain constant in the future.

The growth rate for amortizing the Unfunded Actuarial Accrued Liabilities was assumed to be 4.5%.

## ACTUARIAL ASSUMPTIONS – POLICE AND FIRE

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

<b>Retirement Ages</b>	<b>Percent of Eligible Active Members Retiring Within Next Year</b>	
	<b>All Others</b>	<b>Fire Hired After 1/1/2010</b>
45	30 %	
46	30	
47	30	
48	30	
49	30	
50	30	50 %
51	30	30
52	40	40
53	40	40
54	40	40
55	40	40
56	50	50
57	50	50
58	50	50
59	50	50
60 and above	100	100
Ref	1,602	



## ACTUARIAL ASSUMPTIONS – POLICE AND FIRE

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*The mortality rates* utilized are based upon the RP-2014 tables, as extended, and include a margin for future mortality improvements projected using a fully generational improvement scale. The tables used were as follows:

**Post-Retirement Mortality:** The RP-2014 Healthy Annuitant Generational Mortality Tables, with blue collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

**Pre-Retirement Mortality:** RP-2014 Employee Generational Mortality Tables, with blue collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

**Post-Retirement Disabled Mortality:** The RP-2014 Disabled Mortality Tables, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

These tables were first used for the June 30, 2015 valuation. Sample values for Post-Retirement Mortality follow:

Sample Ages	Single Life Retirement Values			
	Present Value of		Future Life	
	\$1 Monthly for Life*		Expectancy (Years)*	
	Men	Women	Men	Women
45	\$149.20	\$152.39	38.93	42.03
50	143.56	147.69	33.91	36.94
55	136.56	141.75	29.10	32.02
60	127.98	134.21	24.54	27.28
65	117.35	124.51	20.21	22.70
70	104.46	112.33	16.15	18.34
75	89.64	97.96	12.47	14.34
80	73.71	82.00	9.28	10.82

\* Based on retirements in 2016. Retirements in future years will reflect improvements in life expectancy.

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. For purposes of the valuation, we assume that 75% of deaths-in-service are duty related and 25% of deaths-in-service are non-duty related.

## ACTUARIAL ASSUMPTIONS – POLICE AND FIRE

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*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
ALL	0	10.00 %
	1	7.00
	2	5.00
	3	4.00
	4	3.50
25	5 & Over	3.50
30		2.90
35		1.50
40		0.60
45		0.50
50		0.50
55		0.50
60	0.50	
Ref		30
		54

*Rates of disability* were as follows:

Sample Ages	Percent Becoming Disabled Within Next Year	
	Male	Women
20	0.08 %	0.10 %
25	0.08	0.10
30	0.08	0.10
35	0.08	0.10
40	0.20	0.36
45	0.27	0.41
50	0.49	0.57
55	0.89	0.77
60	1.41	1.02
Ref	#9x0.25	

For purposes of the valuation we assume that 75% of disabilities are duty related and 25% of disabilities are non-duty related.

## ACTUARIAL ASSUMPTIONS – POLICE AND FIRE (CONCLUDED)

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

<b>Year Beginning July 1,</b>	<b>Medical and Prescription Drugs</b>	<b>Medicare Part A</b>	<b>Medicare Part B</b>
2017	9.00 %	5.00 %	10.02 %
2018	8.50	5.00	5.00
2019	8.00	5.00	5.00
2020	7.50	5.00	5.00
2021	7.00	5.00	5.00
2022	6.50	5.00	5.00
2023	6.00	5.00	5.00
2024	5.50	5.00	5.00
2025	5.00	5.00	5.00
2026 & Later	4.50	4.50	4.50

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS – POLICE AND FIRE

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- Administrative Expenses:** No explicit assumption has been made for administrative expenses.
- Decrement Operation:** All decrements operate during the first 5 years of service. Only mortality operates during retirement eligibility.
- Decrement Timing:** Decrement 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 contribution shown in this report.
- Marriage Assumption:** 100% of males and 100% of females in the Police and Fire Retirement System 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:** Medicare Coverage is assumed to be available for all covered employees on attainment of age 65. Medicare Part B premium reimbursement is assumed to be available for all covered employees on attainment of age 65. For current retirees it was assumed that the relative value of the reported hold harmless premium and income adjusted premium will continue in the future. Medicare Part A premium reimbursement is assumed to apply only to those reported with reimbursement. No future retirees were assumed to be eligible for Medicare Part A premium reimbursement.
- Loads:** A 50% load was applied to the deferred member liability for anticipated spouses.
- Assumption Rationale:** Certain actuarial assumptions were based upon the results of a limited scope assumption study for the City of St. Clair Shores Police and Fire Retirement System. A report dated July 20, 2015 presented the results of this study. The interest rate utilized was requested by the Plan Sponsor. We believe these assumptions continue to be suitable for the purposes of this study.
- Health Care Coverage at Retirement:** The table below shows the assumed portion of future retirees electing one-person or two-person/family coverage, or opting-out of coverage entirely.

Police/Fire	One-Person	Two-Person/Family		Opt-Out
		Electing	Continuing	
Male	5%	95%	100%	0%
Female	5%	95%	100%	0%

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## APPENDIX A

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## GLOSSARY

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

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

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

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

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

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

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

## GLOSSARY

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**Actuarially Computed Employer Contribution.** The Actuarially Computed Employer Contribution is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The Actuarially Computed Employer Contribution 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 actuarial accrued 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.

**Implicit Rate Subsidy.** It is common practice for employers to allow retirees to continue in the employer's group health insurance plan (which also covers active employees), often charging the retiree some portion of the premium charged for active employees. Under the theory that retirees have higher utilization of services, the difference between the true cost of providing retiree coverage and what the retiree is being charged is known as the implicit rate subsidy.

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

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

**Other Postemployment Benefits (OPEB).** OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance, dental, vision, prescription drugs, life insurance or other health care benefits.

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

## GLOSSARY

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

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



May 11, 2017

General Employee Retiree Health Care Board  
Police and Fire Retiree Health Care Trust Board  
Attn: Board Members  
City of St. Clair Shores  
27600 Jefferson Circle Drive  
St. Clair Shores, Michigan 48081-2093

**Re: City of St. Clair Shores General and Police and Fire Retiree Health Care Plans  
Valuation Report**

Dear Board Members:

Enclosed are 12 copies of our report of the actuarial valuation of the City of St. Clair Shores General Retiree Health Care Plan and the City of St Clair Shores Police and Fire Retiree Health Care Plan.

Respectfully submitted,



Rebecca L. Stouffer, ASA, MAAA

RLS:mrh  
Enclosures