

October 3, 2018

The Retirement Board
City of Sterling Heights Police and Fire Retirement System
Sterling Heights, Michigan

Dear Board Members:

The purpose of the annual actuarial valuation of the City of Sterling Heights Police and Fire Retirement System as of June 30, 2018 is to:

- Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active members of the Retirement System,
- Compare accrued assets with accrued liabilities to assess the funded condition of the Retirement System, and
- Compute the City's recommended contribution rate for the Fiscal Year beginning July 1, 2019.

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 your staff. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. The valuation was based on the provisions of the Retirement System as amended through June 30, 2018. The actuarial assumptions used in this valuation represent reasonable expectations of future experience under the System. 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



Sandra W. Rodwan, M.A.A.A.

***City of Sterling Heights
Police and Fire Retirement System***

48th Actuarial Valuation as of June 30, 2018

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Section One:
Valuation Summary



Purpose of Valuation

The purpose of the annual actuarial valuation of the City of Sterling Heights Police and Fire Retirement System as of June 30, 2018 is to:

- ❖ Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active members of the Retirement System,
- ❖ Compare accrued assets with accrued liabilities to assess the funded condition of the Retirement System, and
- ❖ Compute the City's recommended contribution rate for the Fiscal Year beginning July 1, 2019.

Liabilities and Funded Condition of Retirement System

Accrued liabilities of the Retirement System as of June 30, 2018 were computed to be \$314,128,878. The funding value of accrued assets was \$205,007,419. The ratio of the funding value of accrued assets to accrued liabilities was 65.3%.

Funding Value of Assets

A smoothed market value of assets was used for the June 30, 2018 valuation. This method, which spreads the difference between actual and expected investment return over four years, is the same as the method used for last year's valuation.

Computed City's Contribution Rate

The City's normal cost contribution rate was computed to be 8.55% of total active member and DROP payroll (16.27% total normal cost less 7.72% member contributions). The unfunded accrued liabilities were amortized over 23 years as a level percent of future payroll. The amortization of the unfunded accrued liabilities was 34.13% of member payroll. The City's total contribution for the FY beginning July 1, 2019 was therefore computed to be 42.68% of total member payroll.

Retirement System Experience

Overall Retirement System experience for the year ending June 30, 2018 was less favorable than the assumed experience. The primary sources of unfavorable experience were: i) the rate of return on the smoothed funding value of assets which was less than assumed due to the carry-forwards of negative experience from 2015 and 2016, and ii) the rate of new retirements/EROPS during the year.

Assumption and Method Changes

There were no assumption or method changes included in this valuation.

Benefit Provision Change

There were no benefit changes included in this valuation.

Participant Data

	<u>06/30/2018</u>	<u>06/30/2017</u>
Active Members	240	220
Active Member Payroll	\$21,549,009	\$19,788,423
DROP Member Payroll	\$781,298	\$635,995
Retirees and Beneficiaries	387*	378**
Annual Pensions	\$20,321,634	\$19,648,401
Inactive Vested Members	5	4
Total Estimated Annual Pensions	\$201,037	\$143,743

*Includes 8 DROP members receiving \$630,664 in Annual Benefits.

**Includes 5 DROP members receiving \$348,120 in Annual Benefits.

Financial Data

	<u>06/30/2018</u>	<u>06/30/2017</u>
Actuarial Value of Assets	\$205,007,419	\$206,293,124
Market Value of Assets	206,639,692	201,782,196



Section Two:

***Actuarial Calculations –
Funding***



Computed Contribution Rates for the Year Beginning July 1, 2019

The contribution rates shown below are expressed as level percents of active member payroll.

The normal cost can be viewed as the long-term on-going cost of the Retirement System. Unfunded actuarial accrued liability as of June 30, 2018 was amortized as a level percent of payroll over 23 years and added to the computed normal cost. The City’s total contribution rate has been computed to be 42.68% of payroll (including DROP payroll) for the fiscal year beginning July 1, 2019.

	<u>Percents of Payroll</u>
Normal Cost	
Regular Retirement	13.97%
Pre-retirement Death	0.38
Disability	1.22
Withdrawal	<u>0.70</u>
Total Normal Cost	16.27%
Member Portion	7.72
City’s Computed Normal Cost	8.55%
Unfunded Actuarial Accrued Liability	34.13
City’s Total Contribution Rate	42.68%
City’s Dollar Contribution*	\$9,813,390

*Based on projected active member and DROP payroll.

Unfunded Actuarial Accrued Liability

	<u>June 30, 2018</u>	<u>June 30, 2017</u>
Actuarial Accrued Liabilities	\$314,128,878	\$309,385,005
Assets Allocated to Funding	<u>205,007,419</u>	<u>206,293,124</u>
Unfunded Actuarial Accrued Liabilities	\$109,121,460	\$103,091,882

Computed City Contributions

Valuation Date	Fiscal Year Beginning July 1	Recommended Dollar Contributions	Percent of Valuation Payroll
12/31/1997#	1998	\$2,504,024	15.48%
12/31/1998	1999	2,107,873	12.83
12/31/1999	2000	2,197,860	12.24
12/31/2000*	2001	1,634,437	9.18
12/31/2001	2002	2,747,983	14.01
12/31/2002#	2003	3,545,592	17.55
12/31/2003	2004	4,204,831	21.71
12/31/2004*	2005	2,993,592	14.46
12/31/2005	2006	2,646,459	12.86
12/31/2006	2007	1,707,910	8.28
12/31/2007	2008	2,594,194	11.89
12/31/2008*#	2009	4,925,570	19.86
12/31/2009*	2010	6,135,053	24.60
12/31/2010	2011	7,368,876	29.49
12/31/2011*	2012	8,815,031	37.20
12/31/2012#	2013	8,095,472	33.69
12/31/2013#	2014	7,953,970	35.67
12/31/2014	2015	7,986,312	35.76
06/30/2015	2016	7,994,747	37.60
06/30/2016*	2017	8,297,366	37.60
06/30/2017*	2018	9,091,402	43.22
06/30/2018	2019	9,813,390	42.68

After changes in benefit provisions.

* After changes in actuarial assumptions or methods.

Note: Results shown throughout this report for years prior to 2008 were prepared by the previous actuarial firm.

History of Assets and Accrued Liabilities

Valuation Date	Valuation Assets	Actuarial Accrued Liabilities	Funded Ratio	Unfunded Actuarial Accrued Liabilities
12/31/1992#	\$81,784,298	\$86,933,864	94.1%	\$5,149,566
12/31/1993#	92,169,549	96,031,011	96.0	3,861,462
12/31/1994	100,218,140	105,862,760	94.7	5,572,404
12/31/1995#	112,218,140	118,825,355	94.4	6,607,215
12/31/1996	127,129,909	123,395,111	103.0	(3,734,798)
12/31/1997*	142,931,956	131,793,861	108.5	(11,138,095)
12/31/1998	161,133,122	143,031,180	112.7	(18,101,942)
12/31/1999	174,770,699	153,383,231	113.9	(21,387,468)
12/31/2000*	185,771,342	124,915,986	148.7	(60,855,356)
12/31/2001	187,772,035	133,938,061	140.2	(53,833,974)
12/31/2002#	184,609,657	141,187,613	130.8	(43,422,044)
12/31/2003	183,664,050	149,968,630	122.5	(33,695,420)
12/31/2004*	187,265,961	155,818,664	120.2	(31,447,397)
12/31/2005	194,145,450	158,517,125	122.5	(35,628,325)
12/31/2006	204,756,058	156,707,512	130.7	(48,048,546)
12/31/2007	212,365,515	170,201,230	124.8	(42,164,285)
12/31/2008#*	202,192,211	212,914,310	95.0	10,722,099
12/31/2009*	193,164,045	227,549,069	84.9	34,385,024
12/31/2010	185,750,293	237,994,618	78.0	52,244,325
12/31/2011*	173,001,421	260,283,654	66.5	87,282,233
12/31/2012#	177,718,953	269,210,724	66.0	91,491,771
12/31/2013#	186,606,033	276,717,787	67.4	90,111,754
12/31/2014	195,103,903	285,081,193	68.4	89,977,290
06/30/2015	200,823,211	289,714,451	69.3	88,891,240
06/30/2016*	206,343,809	301,281,758	68.5	94,937,950
06/30/2017	206,293,124	309,385,005	66.7	103,091,882
06/30/2018	205,007,419	314,128,878	65.3	109,121,460

After changes in benefit provisions.

* After changes in actuarial assumptions or methods.

Note: Results shown throughout this report for years prior to 2008 were prepared by the previous actuarial firm.

Assets and Liabilities
Twenty Year Historical Schedule

Valuation Date	Actuarial Accrued Liabilities	Valuation Assets	Unfunded Accrued Liabilities	Percent Funded	UAAL as a % of Payroll	Gain/(Loss) as a % of Accrued Liability
12/31/1999	\$153,383,231	\$174,770,699	\$(21,387,468)	113.9%		2.1%
12/31/2000*	124,915,986	185,771,342	(60,855,356)	148.7%		6.6
12/31/2001	133,938,061	187,772,035	(53,833,974)	140.2%		(5.9)
12/31/2002#	141,187,613	184,609,657	(43,422,044)	130.8%		(9.2)
12/13/2003	149,968,630	183,664,050	(33,695,420)	122.5%		(7.4)
12/31/2004*	155,818,664	187,265,961	(31,447,297)	120.2%		(6.3)
12/31/2005	158,517,125	194,145,450	(35,628,325)	122.5%		2.4
12/31/2006	156,707,512	204,756,058	(48,048,546)	130.7%		7.6
12/31/2007	170,201,230	212,365,515	(42,164,285)	124.8%		(4.4)
12/31/2008#*	212,914,310	202,192,211	10,722,099	95.0%	48.6%	--
12/31/2009*	227,549,069	193,164,045	34,385,024	84.9%	152.8	(9.0)
12/31/2010	237,994,618	185,750,293	52,244,325	78.0%	232.9	(7.8)
12/31/2011	260,283,654	173,001,421	87,282,233	66.5%	454.3	(13.5)
1/31/2012#	269,210,724	177,718,953	91,491,771	66.0%	623.6	(2.5)
12/31/2013#	276,717,787	186,606,033	90,111,754	67.4%	630.2	1.7
12/31/2014	285,081,193	195,103,903	89,977,290	68.4%	585.1	(0.2)
06/30/2015	289,714,451	200,823,211	88,891,240	69.3%	535.8	1.7
06/30/2016*	301,281,758	206,343,809	94,937,950	68.5%	443.2	1.2
06/30/2017*	309,385,005	206,293,124	103,091,882	66.7%	504.7	(0.2)
06/30/2018	314,128,878	205,007,419	109,121,460	65.3%	488.7	(0.8)

#Plan Amended

*Revised methods and/or assumptions

Note: Results shown throughout this report for years prior to 2008 were prepared by the previous actuarial firm

Demographics and Employer Contributions

Valuation Date	Active Members				DROP Members			Retirees & Beneficiaries			Employer Contribution Rate			
	No.	Valuation Payroll			No.	Annual Benefits		No.	Active per Retired	Annual Benefits		Employer Normal Cost	UAAL	Total
		Total	Average	% Incr.		\$	% of Pay			\$	% of Pay			
12/31/1995#	256	\$15,159,081	\$59,215	3.5%				122	2.1	\$4,503,909	29.71%	23.16%	2.73%	25.89%
12/31/1996	263	15,190,682	57,759	(2.5)				138	1.9	5,229,252	34.42	23.16	(1.56)	21.60
12/31/1997*	263	15,251,674	57,991	0.4				153	1.7	5,812,977	38.11	20.55	(5.07)	15.48
12/31/1998	255	15,490,580	60,747	4.8				165	1.5	6,410,751	41.38	20.94	(8.11)	12.83
12/31/1999	263	16,930,450	64,374	6.0				178	1.5	7,228,950	42.70	20.88	(8.64)	12.24
12/31/2000*	261	16,796,531	63,354	0.0				184	1.4	7,524,942	44.80	33.95	(24.77)	9.18
12/31/2001	271	18,504,190	68,281	7.8				194	1.4	8,024,912	43.37	33.90	(19.89)	14.01
12/31/2002#	266	18,595,100	69,906	2.4	7	\$ 464,146	2.50%	199	1.3	8,200,739	44.10	33.12	(15.57)	17.55
12/31/2003	256	18,271,862	71,374	2.1	14	964,809	5.28	213	1.1	8,912,630	48.78	34.32	(12.61)	21.71
12/31/2004*	256	19,906,323	77,759	8.9	15	1,061,982	5.30	223	1.1	9,508,625	47.77	25.71	(11.25)	14.46
12/31/2005	251	19,787,496	78,835	1.4	18	1,273,334	6.44	227	1.0	9,674,813	48.89	25.68	(12.82)	12.86
12/31/2006	244	19,837,496	81,301	3.1	17	1,204,824	6.07	240	0.9	10,555,809	52.00	24.57	(16.29)	8.28
12/31/2007	253	20,979,120	82,291	2.0	18	1,213,292	5.78	247	1.0	11,073,395	52.78	25.94	(14.05)	11.89
12/31/2008#*	249	22,064,557	88,613	7.1	21	1,524,880	6.91	260	0.9	11,774,034	53.36	16.79	3.07	19.86
12/31/2009*	247	22,510,638	91,136	2.8	20	1,458,416	6.48	264	0.9	12,078,024	53.65	14.90	9.70	24.60
12/31/2010	239	22,432,921	93,862	3.0	21	1,607,528	7.17	271	0.8	12,438,018	55.45	14.79	14.70	29.49
12/31/2011*	206	19,213,007	93,267	(0.1)	46	3,408,375	17.74	284	0.6	13,320,874	69.33	11.30	25.90	37.20
12/31/2012#	162	14,671,724	90,566	(0.3)	71	5,363,537	36.56	293	0.4	13,875,174	94.57	6.92	26.77	33.69
12/31/2013#	159	14,300,045	89,937	(0.3)	69	5,223,572	36.53	300	0.4	14,295,306	99.97	7.25	28.42	35.67
12/31/2014	169	15,378,745**	90,998	1.2	55	4,111,448	26.73	318	0.5	15,464,181	100.56	7.42	28.34	35.76
06/30/2015	186	16,589,288	89,190	(0.2)	38	2,740,068	16.52	336	0.5	16,829,526	101.45	8.20	29.40	37.60
06/30/2016*	210	19,321,315	92,006	3.2	18	1,383,481	7.16	360	0.6	18,188,591	94.1	7.34	30.26	37.60
06/30/2017*	220	19,788,423	89,947	(2.2)	5	348,120	1.70	373	0.6	19,300,281	97.5	8.80	34.42	43.22
06/30/2018	240	21,549,009	89,788	(0.2)	8	630,664	2.80	379	0.6	19,690,970	91.4	8.55	34.13	42.68

#Plan Amended

*Revised methods and/or assumptions

**Adjusted for 27 pay periods.

Note: Results shown throughout this report for years prior to 2008 were prepared by the previous actuarial firm

Comment and Recommendation

Comment: Overall Retirement System experience for the year ending June 30, 2018 was less favorable than the assumed experience. As a result, the funded ratio decreased from 66.7% to 65.3%.

Recommendation: Retired life liabilities including DROPs as of June 30, 2018 were computed to be \$212,906,519 and the Reserve for Retired Benefit Payments was reported to be \$202,302,809. The following transfer from the Reserve for Employer Contributions to the Reserve for Retired Benefit Payments is recommended in order to fully cover the retired life liabilities as of June 30, 2018.

Recommended Transfer	
To Reserve for Retired Benefit Payments	From Reserve for Employer Contributions
\$10,603,710	\$(10,603,710)

Derivation of Recognized Investment Gain/(Loss)

1. Valuation Assets BOY	\$206,293,124
2. Contributions	10,363,748
3. Benefit and Administrative Expenses Paid	24,590,657
4. Valuation Assets EOY	205,007,419
5. Investment Return net of expenses ((4)-(1)-(2)+(3))	12,941,204
6. Expected Investment Return at 7.75%	15,436,424
7. Investment Gain/(Loss) (5)-(6)	\$(2,495,220)

Section Three:

***Retirement System
Benefit Provisions***



Benefit Provision Summary

Service Retirement

Eligibility: 25 or more years of service regardless of age.

Annual Benefit:

Straight life pension equals 2.8% of 3 year average final compensation (AFC) times the first 25 years of service plus 1% of AFC times years of service in excess of 25 years. Maximum benefit is 75% of AFC for Police members and 70% for Fire members. Fire hired after 1/2/13 and MAP hired after 9/17/12: Multiplier for all years of service is 2.0%.

Deferred Retirement

Eligibility: 10 or more years of service.

Annual Benefit:

Computed as service retirement but based upon service, AFC and benefit provisions in effect at termination. Benefit begins at date retirement would have occurred had member remained in employment.

Death After Retirement Survivor's Pension

Eligibility: Payable to a surviving spouse, if any, upon the death of a retired member who was receiving a straight life pension which was effective July 1, 1975 or later.

Annual Benefit:

Spouse's pension equals 60% of the straight life pension the deceased retiree was receiving.

Non-Duty Death in Service Survivor's Pension

Eligibility: Payable to a surviving spouse, if any, upon the death of a member with 10 or more years of service.

Annual Benefit:

Accrued straight life pension actuarially reduced in accordance with an Option I election.

Duty Death in Service Survivor's Pension

Eligibility: Payable upon the expiration of worker's compensation to the survivors of a member who died in the line of duty.

Annual Benefit:

Amount that was paid by worker's compensation or the Option I benefit.

Duty Disability Retirement

Eligibility: Payable upon the total and permanent disability of a member in the line of duty.
Fire members hired after 7/1/85 require at least 10 years of service.

Annual Benefit:

To service retirement conversion: 50% of AFC.

At service retirement conversion: Same as a service retirement pension with service credit from date of disability to service retirement conversion.

Service retirement conversion occurs at the earlier of age 55 or the date the member would have had at least 25 years of service.

Non-Duty Disability

Eligibility: Payable upon the total and permanent disability of a member with 5 or more years of service

Annual Benefit:

To Age 55: 1.5% of AFC times years of service.

At Age 55: Same as service retirement.

Member Contributions

Police Command: 8% of pay.

MAP: 8% of pay.

Fire members: 8% of pay.

DROP members do not contribute.

Annuity Withdrawal

Benefits are actuarially reduced if member contributions are withdrawn at retirement. Actuarial equivalence is based on the following:

- MAP – Merrill Lynch Bond Index interest rate
- COA and Fire – Merrill Lynch Bond Index interest rate up to 8%

Cost of Living Adjustments

An additional \$800 (\$500 for pre 7/1/93 MAP members) is paid to pre 7/1/94 COA and Fire retirees each January 1st following retirement until death.

Covered Compensation

The following is included in compensation for determining AFC:

- Base pay plus
- Overtime and compensatory pay
- Longevity
- Unused holiday, vacation and sick time subject to maximums
- Shift premium

The following lump sum payments at the time of retirement are considered compensation for purposes of determining AFC:

- Unused sick leave*
- Unused vacation time*

*Fire Maximums			*Police Maximums	
	56 Hrs	40 Hrs		Hrs
Vacation	295	176	Vacation	150
Sick	90	61	Sick/Personal	50
Personal	25	25		

Section Four:

***Actuarial Assumptions
And Methods***



Actuarial Assumptions

Economic Assumptions

(i) **Interest Rate** 7.75% (net of expenses)

(ii) **Salary Increases**
 Across-the-Board 2%
 Merit and Longevity Service related rates

Sample Annual Rates of Salary Increase

Service	Police			Fire	
	Base	Productivity /Seniority	Total	Productivity /Seniority	Total
1	2.0%	8.5%	10.5%	13.8%	15.8%
2	2.0	7.8	9.8	6.7	8.7
3	2.0	7.2	9.2	17.1	19.1
4	2.0	18.1	20.1	6.3	8.3
5	2.0	16.3	18.3	5.9	7.9
6+	2.0	1.0	3.0	1.0	3.0

Demographic Assumptions

(i) Mortality

RP 2000 projected to 2014 Mortality Table

Sample Ages	Future Life Expectancy (Years)	
	Men	Women
55	27.5	29.6
60	23.0	25.1
65	18.8	20.8
70	19.9	16.9
75	11.3	13.3
80	8.3	10.1

(ii) Disability

Sample Ages	Percent Becoming Disabled Within Next Year
20	0.05%
25	0.07
30	0.09
35	0.13
40	0.20
45	0.30
50	0.50
55	0.85

(iii) Termination of Employment

Service related rates for first 5 years of employment. Age related rates after first 5 years of employment

Age	Years of Service	Percent of Active Members Terminating within Next Year
All	0	15.00%
	1	10.00
	2	8.50
	3	6.00
	4	4.00
25	5 & Over	1.25
30		1.25
35		1.20
40		0.30
45		0.25
50		0.25
55		0.25
60		0.25

(iv) Retirement Rates

**Active Members Retiring within Year
Following Attainment of Indicated Retirement Age**

Years of Service	Probability of Retiring within Next Year	
	Police	Fire
25	70%	80%
26	50	70
27	50	60
28	50	50
29	50	50
30	50	100
31	50	100
32	100	100

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 member, payable from date of hire to date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;
- ❖ Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

Financing of Unfunded Actuarial Accrued Liability. Unfunded actuarial accrued liability was amortized as a level percent of payroll over a 23 year period and added to the computed employer normal cost.

Active member payroll was assumed to increase 3.0% a year for the purpose of determining the level percent of payroll amortization payment.



Section Five:
Valuation Data



Asset Summary

As of June 30, 2018 the market value of assets was reported to be \$206,639,692. The funding value of assets (smoothed market value) was computed to be \$205,007,419.

Funding Value of Assets

	06/30/2017	06/30/2018
A. Funding Value Beginning of Year	\$206,343,809	\$206,293,124
B. Market Value Beginning of Year	192,115,760	201,782,196
C. Non-Investment Net Cash Flow	(12,813,247)	(14,226,909)
D. Total Return on Investments	22,479,683	19,084,405
E. Market Value End of Year	201,782,196	206,639,692
F. Phase-in Factor	25%	25%
G. Projected Investment Income	15,994,975	15,436,424
H. Investment Income in Excess of Projected	6,484,708	3,647,981
I. Method Change	0	0
J1. Current Year: 025 x H.	1,621,177	911,995
J2. First Prior Year	(4,346,041)	1,621,177
J3. Second Prior Year	(682,351)	(4,346,041)
J4. Third Prior Year	174,802	(682,351)
J5. Total Phased-In Amount	(3,232,413)	(2,495,220)
K. Gross Funding Value End of Year: A+C+G+J5	206,293,124	205,007,419
L. Difference Between Market and Funding Value	(4,510,928)	1,632,274
M. Recognized Yield	6.38%	6.50%

Participant Summary

Retirees and Beneficiaries Included in the Valuation

There were 387 retirees and beneficiaries included in the valuation, with annual pensions totaling \$20,321,634. Included in this total are 27 alternate payees receiving benefits totaling \$471,473 and 8 DROP/EROP members with benefits totaling \$630,664.

There were 5 age and service retirements from DROP/EROPS with pensions totaling \$1,144,654; 4 new retirees and 7 new EROPS.

Pensions Being Paid Historical Schedule

Valuation Date	No.	Annual Pensions	Average Pension	Discounted Value of Pensions	
				Total	Average
12/31/2001	194	\$8,024,912	\$41,366	\$89,789,658	\$462,833
12/31/2002	199	8,200,739	41,210	90,778,242	456,172
12/31/2003	213	8,912,650	41,843	98,996,571	464,773
12/31/2004	223	9,508,625	42,640	100,539,756	450,851
12/31/2005	227	9,674,813	42,620	99,019,946	436,211
12/31/2006	240	10,555,809	43,983	101,679,683	423,665
12/31/2007	247	11,073,395	44,701	108,230,658	438,181
12/31/2008	281	13,298,914	47,327	141,906,051	505,004
12/31/2009	284	13,536,440	47,664	143,970,958	506,940
12/31/2010	292	14,045,546	48,101	147,975,238	506,765
12/31/2011	330	16,729,248	50,695	177,723,136	538,555
12/31/2012	364	19,238,111	52,854	205,949,202	565,795
12/31/2013	369	19,518,876	52,897	206,717,743	560,211
12/31/2014	373	19,575,629	52,481	205,020,992	549,654
06/30/2015	374	19,569,594	52,325	203,282,688	543,537
06/30/2016	378	19,572,072	51,778	205,071,744	542,518
06/30/2017	378	19,648,401	51,980	208,533,935	551,677
06/30/2018	387	20,321,634	52,510	212,906,519	550,146

Retired Members and Survivors
Retired Members and Survivors
(Including Alternate Payees)

Data as of June 30, 2018
By Attained Age of Recipient

Attained Age	No.	Annual Pensions
30-34	1	\$32,925
40-44	2	29,886
45-49	19	1,363,150
50-54	56	3,556,646
55-59	49	3,143,088
60-64	69	4,267,303
65-69	60	2,945,054
70-74	64	2,672,569
75-79	45	1,605,155
80-84	20	655,898
85-89	2	<u>49,960</u>
Total	387	\$20,321,634

**Active Members - June 30, 2018
Age and Service Distribution**

Attained Age	Service						No.	Payroll
	0-4	5-9	10-14	15-19	20-24	25-29		
20-24	14						14	\$745,367
25-29	36						36	2,221,394
30-34	29	3	8				40	2,993,218
35-39	9	5	16	7			37	3,455,932
40-44	5	1	9	20	6		41	4,145,184
45-49	2		2	13	38	1	56	6,193,469
50-54			1	1	10	1	13	1,434,682
55-59					3		3	359,763
Totals	95	9	36	41	57	2	240	\$21,549,009

Group Averages:

Age: 38.6 years
 Service: 11.6 years
 Annual Pay: \$89,788

Active Members – Three-Year Summary

	06/30/2018	06/30/2017	06/30/2016
Active Members	240	220	210
Valuation Payroll	\$21,549,009	\$19,788,423	\$19,321,315
Average Compensation	\$89,788	\$89,947	\$92,006
Average Age (yrs.)	38.6	39.8	39.5
Average Service (yrs.)	11.6	12.8	12.7