

City of Pompano Beach Police & Firefighters' Retirement Plan

October 1, 2017
Actuarial Valuation Report

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At the request of the plan sponsor, this report summarizes the Police and Firefighters' Retirement System for the City of Pompano Beach as of October 1, 2017. The purpose of this report is to communicate the following results of the valuation:

- Determine Funded Status; and
- Determine Actuarial Contribution for the fiscal year October 1, 2018 through September 30, 2019

This report has been prepared in accordance with the laws and accounting standards indicated above and their applicable regulations. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the employer. Asset information has been provided to us by the trustee. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- · changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period) and;
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



With respect to reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, meet the requirements of Section 112.664 (1), Florida Statutes, and Rule 60T-1.0035, Florida Administrative Code.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart

David D. Harris, ASA, EA Enrolled Actuary No. 17-5609

February 20, 2018

Date

Copies of this Report are to be furnished to the Division of Retirement within 60 days of receipt from the actuary at the following addresses:

Benefits Administrator Municipal Police Officers' & Firefighters' Trust Funds Division of Retirement Post Office Box 3010 Tallahassee, FL 32315-3010

David D. Harris

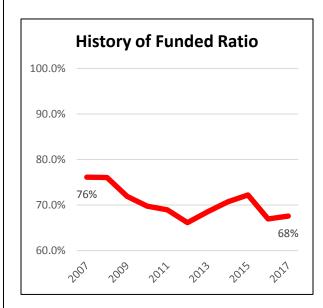
Mr. Keith Brinkman
Bureau & Chief
Local Retirement Systems
Division of Retirement
Department of Management Services
P. O. Box 9000
Tallahassee, FL 32315-9000



Summary Results

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

	October 1, 2016	October 1, 2017
Funded Status Measures		
Accrued Liability	\$318,200,086	\$325,074,421
Actuarial Value of Assets	\$213,099,980	\$219,680,159
Unfunded Accrued Liability	\$105,100,106	\$105,394,262
Funded Percentage (AVA)	67%	68%
Funded percentage (MVA)	65%	67%
Cost Measures		
Recommended Contribution	\$10,734,952	\$11,001,636
Recommended Contribution (as a percentage of payroll)	77.9%	75.3%
Asset Performance		
Market Value of Assets	\$205,991,445	\$218,512,322
Actuarial Value of Assets	\$213,099,980	219,680,159
Actuarial Value/Market Value	103.5%	100.5%
Member Information		
Active Members	162	170
Terminated Vested Members	4	4
Retirees, Beneficiaries, and Disabled Members	364	366
DROP Participants	35_	33
Total	565	573
Expected Payroll	\$13,527,197	\$14,353,623





Changes Since Prior Valuation and Key Notes

There have been no changes to the plan provisions since the last valuation.

The Police State Premium Tax Revenues are being reserved in the Trust based on proposed ordinances for allocation to a share plan. The balance of these premiums as of September 30, 2017 is \$314,032.

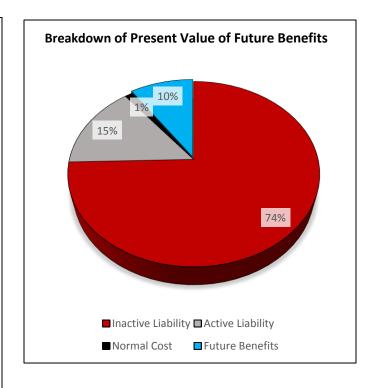


Present Value of Future Benefits

The Present Value of Future Benefits represents the discounted value of all future benefits expected to be payable to current members, considering future service and compensation not yet earned.

October 1, 2017

Present Value of Future Benefits	
Active members	
Retirement	\$83,673,586
Disability	6,268,345
Death	4,918,178
Termination	1,411,318
Return of contributions	284,011
Total active	\$96,555,438
Inactive members	
Retired members	\$233,870,244
Beneficiaries	10,672,078
Disableds	21,720,911
Terminated vested members	2,202,420
Total inactive	\$268,465,653
Total	\$365,021,091
Present value of future payrolls	\$134,259,066



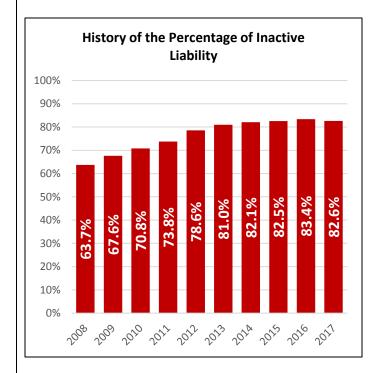


Accrued Liability

The Accrued Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions. It is not a long-term snapshot of the liabilities.

October 1, 2017

Accrued Liabilities	
Active members	
Retirement	\$52,711,981
Disability	2,026,233
Death	1,237,519
Termination	597,906
Refund of contributions	35,129
Total Active	\$56,608,768
Inactive members	
Retired members	\$233,870,244
Beneficiaries	10,672,078
Disableds	21,720,911
Terminated vested members	2,202,420
Total Inactive	\$268,465,653
Total	\$325,074,421
Normal Cost	\$4,342,954

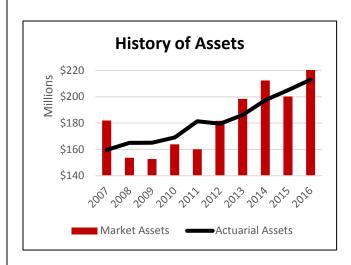




Asset Information

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

	October 1, 2017
Market Value Reconciliation	
Market value of assets, beginning of prior year	\$223,871,513
Employer contributions (incl. discounted accrued items)	8,142,644
Member contributions	1,632,948
Non-employer contributing entity	2,336,040
Investment income	25,251,829
Investment expenses	(1,458,812)
Benefit payments	(21,308,109)
Administrative expenses	(530,291)
Other expenses	0
Market value of asset, beginning of current year	\$237,937,762
Return on Market Value	10.88%
Reserve assets	\$720,647
DROP account	\$18,704,793
Market value of assets available for pension benefits	\$218,512,322
Actuarial value of plan assets	
Value at beginning of current year	\$219,680,159





Asset Information (continued)

Plan Assets are used to develop funded percentages and contribution requirements.

	October 1, 2017
 Expected actuarial value of assets (a) Actuarial value of assets, beginning of prior year (b) Contributions (c) Benefit payments (d) Expenses (e) Expected return (f) Expected actuarial value of assets, beginning of current year 	\$230,980,048 12,111,632 (21,308,109) (530,291) 16,965,345 \$238,218,625
2. Market value of assets, beginning of current year	\$237,937,762
3. Actual return on market value	\$23,793,017
4. Amount subject to phase in [(3)-(1e)]	\$6,827,672
 5. Phase in of asset gain/(loss) (a) Current year (20% x \$6,827,672) (b) First prior year (20% x (\$127,551)) (c) Second prior year (20% x (\$19,874,699) (d) Third prior year (20% x \$6,982,137) (e) Fourth prior year (20% x \$10,627,316) (f) Total phase-in 	\$1,365,534 (25,510) (3,974,940) 1,396,427 2,125,463 \$886,974
6. Preliminary actuarial value of assets, beginning of current year [(1f)+(5f)]	\$239,105,599
7. 80% Market value of assets	\$190,350,210
8. 120% Market value of assets	\$285,525,314
9. Adjusted actuarial value of assets	\$239,105,599
10. Reserved Assets	(\$19,425,440)
11. Final actuarial value of assets [(9+10)]	\$219,680,159
12. Return on actuarial value of assets	7.91%



Reconciliation of Gain/Loss

	October 1, 2017
Liability (gain)/loss	
Actuarial liability, beginning of prior year	\$318,200,086
Normal cost	4,117,315
Benefit payments	(21,308,109)
Interest	23,389,196
1-year lag adjustment	(1,420,139)
Expected actuarial liability, beginning of current year	\$322,978,349
Assumption change	\$0
Actual actuarial liability	\$325,074,421
Liability (gain)/loss	\$2,096,072
Asset (gain)/loss	
Actuarial value of assets, beginning of prior year	\$213,099,980
Contributions	12,111,632
Benefit payments and expenses	(21,838,400)
Investment return	15,624,339
Expected actuarial value of assets, beginning of current year	\$218,997,551
Actual actuarial value of assets, beginning of current year (before accumulated reserve adjustment)	\$219,680,159
Asset (gain)/loss	(\$682,608)
Total (gain)/loss	\$1,413,464

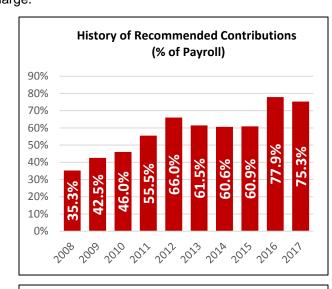


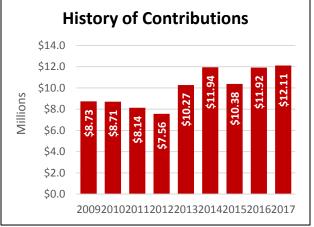
Development of Recommended Contribution

The minimum recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws. The recommended contribution is composed of the normal cost, administrative expenses, plus an amortization charge.

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Funded Position	
Entry age accrued liability	\$325,074,421
2. Actuarial value of assets	219,680,159
3. Unfunded actuarial accrued liability (UAAL)	\$105,394,262
Employer Contributions	
 Normal Cost (a) Total normal cost (b) Expected participant contributions (c) Net normal cost 	\$4,342,954 1,724,928 \$2,618,026
2. Administrative expenses	567,376
3. Amortization of UAAL	8,552,786
4. Applicable interest	880,364
5. Total required contribution	\$12,618,552
6. Expected non-employer contributions	1,813,371
7. Total recommended contribution	\$10,805,181
As a percentage of expected payroll	75,28%
8. Recommended contributions to be paid on 12/31/2018	\$11,001,636





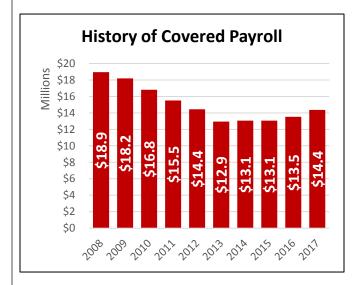


Demographic Information

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

October 1, 2017

Participant Counts	<u>Police</u>	<u>Fire</u>	<u>Total</u>
Active Participants	4	166	170
Retired Participants	186	116	302
Beneficiaries	21	11	32
Disabled Participants	17	15	32
Terminated Vested Participants	1	3	4
DROP Participants	5	28	33
Total Participants	234	339	573
Active Participant Demographics			
Average Age			38.79
Average Service			10.65
Average Compensation			\$84,433
Covered Payroll			\$14,353,623





Demographic Information (already updated by AZ)

	October 1, 2017
Retiree Statistics	
Average Age	64.36
Average Monthly Benefit	\$4,452
Beneficiary Statistics	
Average Age	71.4
Average Monthly Benefit	\$2,713
Disabled Participants Statistics	
Average Age	58.89
Average Monthly Benefit	\$4,699
Terminated Participants Statistics	
Average Age	41.92
Average Monthly Benefit	\$3,736
DROP Participants Statistics	
Average Age	54.36
Average Monthly Benefit	\$5,606



Participant Reconciliation (already updated by AZ)

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	DROP	Totals
Prior Year	162	4	32	299	33	35	565
Active							
To Terminated Vested	0	0	0	0	0	0	0
To Disabled	0	0	0	0	0	0	0
To Retired	0	0	0	0	0	0	0
To DROP	(4)	0	0	0	0	4	0
To Death	0	0	0	0	0	0	0
To Lump Sum	(2)	0	0	0	0	0	(2)
Terminated Vested							
To Retired	0	0	0	0	0	0	0
Retired							
To Forfeiture	0	0	0	(1)	0	0	(1)
To Death	0	0	0	(2)	0	0	(2)
Survivor							
To End of Certain Period	0	0	0	0	(1)	0	(1)
DROP							
To Retired	0	0	0	6	0	(6)	0
Additions	14	0	0	0	0	0	14
Departures	0	0	0	0	0	0	(0)
Current Year	170	4	32	302	32	33	573



Active Participant Schedule

Active participant information grouped based on age and service.

					Years o	f Service						
Age Group	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total	Average Pay
Under 25	5										5	59,261
25 to 29	6	6	5								17	64,120
30 to 34	2	18	12	8							40	74,258
35 to 39	1	4	5	15	6						31	86,755
40 to 44		2	1	15	15	2					35	92,664
45 to 49		1		9	13	4					27	95,931
50 to 54		1		4	3	2					10	99,954
55 to 59				1	4						5	94,925
60 to 64												
65 to 69												
70 & up												
Total	14	32	23	52	41	8					170	84,433



Plan Status

Plan established under the Code of Ordinances for the City of Pompano Beach, Florida, Sections 34.045-34.073 and was most recently amended under Ordinance No. 2017-30, passed and adopted on February 28, 2017. The Plan is also governed by certain provisions of Chapters 175 and 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

Eligibility for Participation

- (1) All Police Officers and Dispatchers who were participants of the prior Employees' Pension Plan and
- (2) Police Officers and Dispatchers who elected to remain in the Plan prior to the takeover of the police department by the Broward Sheriff's Office on 8/1/99.
- (3) All Firefighters who were participants in the prior Employees' Pension Plan; and
- (4) All regular, full time Firefighters (20 hours per week and 5 months per year) from age 18, upon date of employment.

Benefits

Normal Retirement

Eligibility A member hired before May 27, 2014 may retire on the first day of the month coincident with or next following the earlier of:

(1) age 47 with 20 years of Continuous Service, or(2) age 55 with 10 years of Continuous Service.

A Firefighter member hired on or after May 27, 2014 may retire on the first day of the month coincident with or next following

the earlier of:

(1) age 50 with 20 years of Continuous Service, or(2) age 55 with 10 years of Continuous Service.

Police Benefit: 3.0% of Average Monthly Earnings (AME) multiplied by years of Continuous Service up to a maximum of 25 years, plus 2.0% of

AME multiplied by years of Continuous Service in excess of 37.5.

Firefighter Benefit: 3.0% of AME multiplied by the first 10 years Continuous Service, plus 4.0% of AME multiplied by the next 10 years, plus

2.0% of AME multiplied by the next 5 years with a maximum benefit equal to 80% of AME; plus 2% of AME multiplied by

each year of service in excess of 40.

Normal Form of Benefit 10 Years Certain and Life; other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1.

An additional annual increase of up to 1% is payable if certain conditions are met



Early Retirement

Eligibility A member may elect to retire earlier than the Normal Retirement Eligibility upon the completion of 20 years of Continuous

Service or the attainment of age 50 with 10 years of Continuous Service.

Benefit The member's accrued Normal Retirement Benefit based upon the member's AME and Continuous Service as of the date of

termination. Benefit is actuarially reduced for each year by which the Early Retirement date precedes the member's Normal

Retirement date. The Early Retirement reduction is 3% per year if early retirement occurs after age 50.

Normal Form of Benefit 10 Years Certain and Life; other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An

additional annual increase of up to 1% is payable if certain conditions are met.

Late Retirement

Eligibility Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.

Benefit Accrued Benefit

Normal Form of Benefit 10 Years Certain and Life; other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1.

An additional annual increase of up to 1% is payable if certain conditions are met.



Ordinary Death before Retirement

Eligibility

Any member with 1 or more years of Continuous Service who dies while employed by the City is eligible for survivor benefits.

Benefit

- (A) For members with less than 1 year of Continuous Service, no survivor benefits are payable.
- (B) For members with 1 year, but less than 5 years, of Continuous Service, the designated beneficiary will be paid a \$5,000 lump sum.
- (C) For members with 5 years, but less than 10 years, of Continuous Service:
 - (1) \$5,000 lump sum paid to the member's designated beneficiary; plus
 - (2) Member's spouse will receive 65% of member's accrued pension as of the date of death subject to a minimum of 20% of AME; plus
 - (3) Each unmarried child under age 18 (22 if full-time student) will receive 7 ½% of member's Earnings. If there is no spouse, benefits increase to 15% of member's Earnings per child.

Maximum benefit to spouse and children is 50% of earnings.

(D) For members with 10 or more years of Continuous Service, the designated beneficiary can elect to receive benefits described under subsection (C) above or the member's accrued benefit as of the date of death. Benefits are payable at the member's Normal or Early Retirement date and will be reduced for Early Retirement, when applicable.

Normal Form of Benefit

Spouse's benefits are paid until death or remarriage; children's benefits are paid until the earlier of age 18 (22 if full-time student), marriage or death.

COLA

Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.



Accidental Death before Retirement

Eligibility

Any member who dies as a direct result of an occurrence arising in the performance of service for the City is eligible for survivor benefits.

Benefit

- (1) \$5,000 lump sum paid to the member's designated beneficiary; plus
- (2) Member's spouse will receive 75% of member's Earnings; plus
- (3) Each unmarried child under age 18 (22 if full-time student) will receive 7 ½% of member's Earnings. If there is no spouse, benefits increase to 15% per child.

Maximum benefit to spouse and children is 90% of earnings; if no spouse, maximum for children is 50% of Earnings.

Normal Form of Benefit Spouse's benefits are paid until death or remarriage; children's benefits are paid until the earlier of age 18 (22 if full-time student),

marriage or death.

COLA Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1.

An additional annual increase of up to 1% is payable if certain conditions are met.

Termination Benefit

Eligibility A member has earned a non-forfeitable right to Plan benefits after the completion of 10 years of Credited Service (See vesting table

below).

Years of % of Normal
Credited Service Retirement Benefits
Less Than 10 0%

Benefit The member's accrued Normal Retirement Benefit as of the date of termination. Benefit begins on the member's Normal

100%

Retirement date. Alternatively, members may elect to receive an actuarially reduced Early Retirement Benefit.

Normal Form of Benefit 10 Years Certain and Life thereafter; other options are also available.

10 or more

COLA Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1.

An additional annual increase of up to 1% is payable if certain conditions are met.

Plan members with less than 10 years of Credited Service will receive a refund of accumulated contributions with interest



Ordinary Disability Benefit

Eligibility Any member who becomes totally and permanently disabled and unable to perform regular duties or any other duties available in

the Department from an act occurring in the performance of duty for the City is eligible for a disability benefit.

Benefit 75% of rate of Earnings in effect on the date of disability (for Firefighters, not to be less than the accrued benefit).

Normal Form of Benefit Benefits begin on the first day of the month following the date the Board approves the disability and are payable until death or

recovery from disability. If the member dies before receiving payments for 10 years, the member's designated beneficiary will

receive the same monthly benefit for the remainder of the 10 year period. Other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An

additional annual increase of up to 1% is payable if certain conditions are met.

Accidental Disability Benefit

Eligibility Any active member with 10 or more years of Continuous Service who becomes totally and permanently disabled and unable to

perform regular duties or any other duties available in the Department from an act not directly caused by the performance of duty for

the City is eligible for a disability benefit.

Benefit 3.0% of AME multiplied by years of Continuous Service subject to a maximum of 60% of the rate of Earnings on the date of

disability, plus 2.0% of AME multiplied by years of Continuous Service in excess of 25. Disability benefit is guaranteed to be no less

than 25% of AME.

Normal Form of Benefit Benefits begin on the first day of the month following the date the Board approves the disability and are payable until death or

recovery from disability. If the member dies before receiving payments for 10 years, the member's designated beneficiary will

receive the same monthly benefit for the remainder of the 10 year period. Other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An

additional annual increase of up to 1% is payable if certain conditions are met.



Compensation

Earnable Compensation

Police Officers: Basic compensation and regular longevity pay, increased for temporary upgrade pay. Also includes up to 25 hours per year of overtime pay. Firefighters: Basic compensation and regular longevity pay, increased for temporary upgrade pay.

Average Monthly Earnings (AME)

For members hired before May 27, 2014:

The average of Earnings during the highest 3 years preceding termination; not including lump sum payments of unused leave For members hired after May 27, 2014:

The average of Earnings during the highest 5 years preceding termination; not including lump sum payments of unused leave

Continuous Service

For Vesting and Benefit Accrual, total number of years and completed months from date of employment to date of termination or retirement No service is credited for any periods of employment for which a member received a refund of contributions.

Employee Contributions

Police: 8.6% of Earnings, paid by BSO.

Firefighters: 11.6% of Earnings "picked up" by the City, reduced to 0.5% after 25 years of service and reaching maximum benefit of 80%,

reverting back to 11.6% if member does not enter DROP.



DROP

Eligibility

Plan members hired before May 27, 2014 are eligible for the DROP on the first day of the month coincident with or next following the earlier of:

- (1) age 47 with 20 years of Continuous Service, or
- (2) age 55 with 10 years of Continuous Service.

Plan members hired after May 27, 2014 are eligible for DROP on the first day of the month coincident with or next following the earlier of:

- (1) age 50 with 20 years of Continuous Service, or
- (2) age 55 with 10 years of Continuous Service.

Members who meet eligibility must submit a written election to participate in the DROP.

Benefit

The member's Credited Service and AME are frozen upon entry into the DROP. The monthly retirement benefit as described under Normal Retirement is calculated based upon the frozen Credited Service and AME.

In addition, the members accumulated sick and annual leave pay will be paid in 5 equal annual installments on the member's DROP participation anniversary dates.

Maximum Period

60 months (police) & 96 months (firefighters)

Interest Credited

The member's DROP account is credited or debited quarterly at a rate equal to one of the following elected by the member:

- (1) the actual net rate of investment return realized by the Plan for that quarter, or
- (2) a rate set quarterly by the Board of Trustees, or
- (3) the actual net rate of investment return realized by a separate investment account made available by the Board of Trustees but the investment proportions designated by the member.

Normal Form of Benefit

The member's DROP account is paid out under one of the following options as elected by the member:

- (1) a full single lump sum payment, or
- (2) annual installments in amounts as requested by the member by June 30th of each year, or
- (3) equal monthly installments as requested by the member by June 30th of each year, or
- (4) a single lump sum of the remaining balance after any annual or monthly installments have been made under options (2) or (3) above.

COLA

Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An additional increase of up to 1% is payable if certain conditions are met. For Firefighters, if participant leaves the DROP after five years, the COLA begins when participant leaves the DROP.



Payment Forms

Normal Form: 10 Years Certain and Life Annuity

Optional Forms: Single Life Annuity

Joint and 100% Contingent Survivor Annuity
Joint and 75% Contingent Survivor Annuity
Joint and 66 2/3% Contingent Survivor Annuity
Joint and 50% Contingent Survivor Annuity

Any Board-approved, actuarially equivalent benefit

Plan Provisions Not Included

We are not aware of any plan provisions not included in the valuation.

Adjustments Made for Subsequent Events

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results.

Changes Since Prior Report

None



Cost Method

Individual Entry Age Normal Cost Method; Closed Group; All new bases are to be amortized over 30 years from the date established using a level dollar for police and a level percent of pay for firefighters.

Asset Valuation Method

20% Phase-In Method: Actuarial value of assets is equal to expected value phase in the difference between the expected investment earnings and actual investment earnings at the rate of 20% per year. The result cannot be greater than 120% of market value or less than 80% of market value.

Interest Rates

7.5%, compounded annually, net of investment expenses. Nyhart's professional judgment is that the rate is reasonable and has no significant bias.

Annual Pay Increases

2.5%, compounded annually for inflation plus a seniority/merit scale using the following representative rates:

Years of Service	Merit and Seniority
1	8.5%
2	7.5%
3	7.0%
4	6.0%
5	4.5%
6	4.5%
7	3.5%
8-20	1.5%
21 and Higher	0.5%

Expense and/or Contingency Loading

One year term cost method; average of prior two years' expenses

Mortality Rates

Healthy Florida Retirement System special risk mortality projected with scale BB generationally.

Disabled Florida Retirement System disabled mortality projected with scale BB generationally.



Retirement Rates

If eligible for Retirement, the following decrements apply, based on service.

After First Eligibility		
for Normal Retirement	Police %	Fire %
0	80	35
1	50	30
2	75	30
3	100	30
4		30
5+		100

Disability Rates

Specimen rates for all groups are shown below:

Sample	% Becoming Disabled
Ages	Within Next Year
25	0.15%
30	0.18
35	0.23
40	0.30
45	0.51
50	1.00
55	1.59

Type of Disability or Death:

Workers' Compensation Offsets

Withdrawal Rates

Withdrawal of Employee Contributions

Marital Status and Ages

State Contributions

Changes Since Prior Report

75% of disabilities and deaths are assumed to be service-related

Current offsets are assumed to continue.

Decreasing rates from 1 to 10 years of service, then 0.5% thereafter.

It is assumed that employees withdraw their contribution balances upon employment termination, if not vested. If vested, employees are assumed to not withdraw contributions, with monthly benefit deferred to age 52.

100% of employees are assumed to be married. Females are assumed to be 3 years younger than males

Assumed to be the same as in the prior year

None



The actuarial report also shows the necessary items required for plan reporting and the any state requirements.

- ✓ Reconciliation of unfunded actuarial liability
- ✓ Statement of changes on value of assets
- ✓ Distribution Assets
- ✓ Schedule of amortizations
- ✓ Florida State requirements

Corporative Summary of Principal Valuation Results

Separation for Police & Fire

Comparison of payroll growth, salary increases and investment returns

Requirements under Florida Statute 112.664 and F.A.C. 60T – 1.0035

Reserve account for benefit improvements under 99-1 and SB 172



Reconciliation of Unfunded Actuarial Liability

	October 1, 2017
1. Unfunded Actuarial Accrued Liability beginning of prior year	\$105,100,106
2. Normal Cost	4,117,315
3. Expenses	530,291
4. Employer Contributions	(8,142,644)
5. Employee Contributions	(1,632,948)
6. Non-Employer Contributions	(2,336,040)
7. Interest	7,764,857
8. 1-year lag adjustment	(1,420,139)
9. Expected Unfunded Actuarial Accrued Liability, beginning of current year	\$103,980,798
10. Accumulated Reserve Adjustment	\$0
11. Liability changes due to:	
(a) Amendments	\$0
(b) Assumptions	0
(c) Funding Methods	0
(d) (Gain)/Loss	1,413,464
(e) Total	\$1,413,464
12. Unfunded Actuarial Liability beginning of current year	\$105,394,262



Statement of Changes on Value of Assets	September 30, 2016	September 30, 2017
Additions		
Contributions:		
Employer	\$8,154,934	\$8,142,644
Member	1,492,330	1,632,948
Nonemployer contributing entity	2,273,774	2,336,040
Total contributions	\$11,921,038	\$12,111,632
Investment income		
Net increase in fair value of investments	\$13,050,965	\$20,455,847
Interest and dividends	4,609,209	4,720,167
Less investment expense, other than from securities lending	(1,426,195)	(1,458,812)
Net income other than from securities lending	\$16,233,979	\$23,717,202
Securities lending income	\$0	\$0
Less securities lending expense	0	0
Net income from securities lending	\$0	\$0
Net investment income	\$16,233,979	\$23,717,202
Other	10,775	75,815
Total additions	\$28,165,792	\$35,904,649
Deductions		
Benefit payments, including refunds of member contributions	\$22,946,120	\$21,308,109
Administrative expense	604,460	530,291
Other	0	0
Total deductions	\$23,550,580	\$21,838,400
Net increase in market value	\$4,615,212	\$14,066,249
Market Value as of		
Beginning of year	219,256,301	223,871,513
End of year	\$223,871,513	\$237,937,762



Distribution of Assets	September 30, 2016	September 30, 2017
Cash and deposits	\$1,574,470	\$1,676,004
Securities lending cash collateral	0	0
Total cash	\$1,574,470	\$1,676,004
Receivables:		
Contributions	\$0	\$0
Due from broker for investments sold	583,208	306,497
Investment income	348,107	357,733
Other	304,286	434,567
Total receivables	\$1,235,601	\$1,098,797
Investments:		
Equity	\$118,890,349	\$129,981,739
Fixed Income	48,647,891	49,737,225
Real Estate	3,027,796	3,261,263
Hedge Funds & Private Equity	44,239,676	47,293,478
Short Term Investments	7,696,123	6,376,998
Total investments	\$222,501,835	\$236,650,703
Sub-total	\$225,311,906	\$239,425,504
Payables:		
Investment management fees	\$247,925	\$399,402
Due to broker for investments purchased	1,192,468	1,088,340
Collateral payable for securities lending	0	0
Other	0	0
Total liabilities	\$1,440,393	\$1,487,742
Total	\$223,871,513	\$237,937,762



Schedule of Amortizations - Police

					October 1, 2017
			Total	\$58,533,725	\$5,088,583
Date Established	<u>Description</u>	Original Amount	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/1988	Actuarial Loss (Gain)	260,282	1	25,345	25,345
10/1/1989	Actuarial Loss (Gain)	67,725	2	12,317	6,381
10/1/1990	Actuarial Loss (Gain)	(173,266)	3	(49,773)	(17,804)
10/1/1991	Assumption Change	(4,082)	4	(1,562)	(434)
10/1/1991	Actuarial Loss (Gain)	(298,306)	4	(114,138)	(31,700)
10/1/1992	Assumption Change	(3,250)	5	(1,468)	(338)
10/1/1992	Actuarial Loss (Gain)	(721,063)	5	(325,793)	(74,907)
10/1/1993	Assumption Change	(53,335)	6	(27,726)	(5,495)
10/1/1993	Actuarial Loss (Gain)	(301,531)	6	(156,744)	(31,064)
10/1/1994	Assumption Change	768,410	7	406,084	71,320
10/1/1994	Actuarial Loss (Gain)	422,754	7	223,412	39,237
10/1/1995	Assumption Change	(311,136)	8	(203,504)	(32,320)
10/1/1995	Actuarial Loss (Gain)	(271,042)	8	(177,278)	(28,155)
10/1/1996	Assumption Change	(374,561)	9	(274,172)	(39,982)
10/1/1996	Actuarial Loss (Gain)	(276,460)	9	(202,362)	(29,510)
10/1/1997	Assumption Change	1,345,971	10	1,053,044	142,710
10/1/1997	Actuarial Loss (Gain)	(3,074,778)	10	(2,682,412)	(363,525)
10/1/1998	Plan Amendment	(337,295)	11	(303,855)	(38,638)



Schedule of Amortizations - Police

October '	1,	20	17
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Date Established	<u>Description</u>	<u>Original Amount</u>	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/1998	Actuarial Loss (Gain)	(3,155,507)	11	(2,842,655)	(361,473)
10/1/1999	Actuarial Loss (Gain)	(2,565,536)	12	(2,376,477)	(285,791)
10/1/2000	Assumption Change	(18,775,480)	13	(17,130,579)	(1,961,080)
10/1/2000	Plan Amendment	11,651,128	13	10,630,386	1,216,949
10/1/2000	Actuarial Loss (Gain)	3,153,187	13	2,876,941	329,347
10/1/2001	Variable COLA	484,615	14	451,660	49,492
10/1/2001	Plan Amendment	377,521	14	351,848	38,555
10/1/2001	Actuarial Loss (Gain)	5,917,320	14	5,514,905	604,318
10/1/2002	Actuarial Loss (Gain)	13,547,635	15	13,744,873	1,448,482
10/1/2003	Actuarial Loss (Gain)	8,453,577	16	7,666,682	780,156
10/1/2004	Actuarial Loss (Gain)	7,733,735	17	6,862,703	676,695
10/1/2005	Plan Amendment	528,766	18	388,941	37,276
10/1/2005	Actuarial Loss (Gain)	1,811,918	18	1,598,161	153,169
10/1/2006	Actuarial Loss (Gain)	(2,245,390)	19	(2,006,933)	(187,459)
10/1/2007	Actuarial Loss (Gain)	(3,930,059)	20	(3,599,758)	(328,473)
10/1/2008	Assumption Change	(2,460,748)	21	(2,330,497)	(208,182)
10/1/2008	Actuarial Loss (Gain)	4,312,669	21	4,084,393	364,857
10/1/2009	Assumption Change	2,211,808	22	2,119,173	185,673
10/1/2009	Actuarial Loss (Gain)	4,953,816	22	4,746,342	415,854
10/1/2010	Assumption Change	2,351,731	23	2,244,734	193,225
10/1/2010	Actuarial Loss (Gain)	4,329,632	23	4,132,647	355,735



Schedule of Amortizations - Police

October 1, 2017

Date Established	<u>Description</u>	Original Amount	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/2011	Assumption Change	2,628,245	24	2,441,145	206,759
10/1/2011	Actuarial Loss (Gain)	2,882,428	24	2,677,235	226,756
10/1/2012	Valuation Software	(955,577)	25	(900,172)	(75,121)
10/1/2012	Assumption Change	2,734,348	25	2,575,805	214,956
10/1/2012	Actuarial Loss (Gain)	7,401,751	25	6,972,583	581,875
10/1/2013	Assumption Change	(2,014,446)	26	(1,922,941)	(158,307)
10/1/2013	Actuarial Loss (Gain)	1,279,029	26	1,220,932	100,513
10/1/2014	Actuarial Loss (Gain)	(1,640,207)	27	(1,585,363)	(128,897)
10/1/2015	Actuarial Loss (Gain)	(532,193)	28	(521,513)	(41,918)
10/1/2016	Actuarial Loss (Gain)	(1,637,449)	29	(1,621,613)	(128,972)
10/1/2016	Assumption Changes	14,723,929	29	14,581,530	1,159,715
10/1/2017	Actuarial Loss (Gain)	289,192	30	289,192	22,778



Schedule of Amortizations - Fire

					October 1, 2017	
			Total	\$46,860,537	\$3,464,203	
Date Established	Description	Original Amount	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>	
10/1/1988	Actuarial Loss (Gain)	206,898	1	18,265	18,265	
10/1/1989	Actuarial Loss (Gain)	53,834	2	9,087	4,646	
10/1/1990	Actuarial Loss (Gain)	(137,729)	3	(37,483)	(13,063)	
10/1/1991	Assumption Change	(3,244)	4	(1,198)	(320)	
10/1/1991	Actuarial Loss (Gain)	(237,123)	4	(87,546)	(23,392)	
10/1/1992	Assumption Change	(2,583)	5	(1,144)	(250)	
10/1/1992	Actuarial Loss (Gain)	(573,171)	5	(254,050)	(55,503)	
10/1/1993	Assumption Change	(42,396)	6	(21,945)	(4,083)	
10/1/1993	Actuarial Loss (Gain)	(239,687)	6	(124,074)	(23,084)	
10/1/1994	Assumption Change	610,808	7	325,893	53,099	
10/1/1994	Actuarial Loss (Gain)	336,046	7	179,291	29,212	
10/1/1995	Assumption Change	(247,322)	8	(165,393)	(24,088)	
10/1/1995	Actuarial Loss (Gain)	(215,450)	8	(144,080)	(20,984)	
10/1/1996	Assumption Change	(297,737)	9	(225,457)	(29,811)	
10/1/1996	Actuarial Loss (Gain)	(219,757)	9	(166,408)	(22,003)	
10/1/1997	Assumption Change	1,069,910	10	875,425	106,386	
10/1/1997	Actuarial Loss (Gain)	(2,444,135)	10	(2,229,963)	(270,997)	
10/1/1998	Plan Amendment	(268,116)	11	(255,189)	(28,786)	



Schedule of Amortizations - Fire

October	1,	2017

				5	
Date Established	<u>Description</u>	Original Amount	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/1998	Actuarial Loss (Gain)	(2,508,306)	11	(2,387,384)	(269,300)
10/1/1999	Plan Amendment	114,009	12	112,652	11,891
10/1/1999	Actuarial Loss (Gain)	(2,039,340)	12	(2,015,026)	(212,703)
10/1/2000	Assumption Change	(13,798,204)	13	(13,364,532)	(1,329,166)
10/1/2000	Plan Amendment	8,646,272	13	8,374,523	832,886
10/1/2000	Actuarial Loss (Gain)	676,828	13	655,557	65,198
10/1/2000	Plan Amendment	299,541	13	290,130	28,855
10/1/2001	Actuarial Loss (Gain)	7,539,001	14	7,428,254	700,083
10/1/2002	Actuarial Loss (Gain)	9,466,755	15	12,069,735	1,083,294
10/1/2003	Actuarial Loss (Gain)	7,616,087	16	8,973,099	770,263
10/1/2004	Actuarial Loss (Gain)	6,692,396	17	7,680,174	632,912
10/1/2005	Plan Amendment	4,413,733	18	4,981,305	395,390
10/1/2005	Actuarial Loss (Gain)	2,591,529	18	2,924,773	232,153
10/1/2006	Actuarial Loss (Gain)	(2,040,207)	19	(2,284,464)	(175,165)
10/1/2007	Actuarial Loss (Gain)	(868,128)	20	(973,884)	(72,324)
10/1/2008	Assumption Change	(2,812,893)	21	(3,150,042)	(227,103)
10/1/2008	Actuarial Loss (Gain)	3,519,341	21	3,941,166	284,139
10/1/2009	Assumption Change	2,293,100	22	2,549,859	178,841
10/1/2009	Plan Amendment	23,114	22	25,703	1,803
10/1/2009	Actuarial Loss (Gain)	3,014,143	22	3,351,638	235,076
10/1/2010	Assumption Change	2,377,230	23	2,604,310	178,040



Schedule of Amortizations - Fire

October	1.	2017
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Date Established	<u>Description</u>	Original Amount	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/2010	Actuarial Loss (Gain)	(904,732)	23	(991,155)	(67,759)
10/1/2011	Actuarial Loss (Gain)	(1,874,268)	24	(1,986,425)	(132,593)
10/1/2011	Assumption Change	2,629,741	24	2,787,107	186,039
10/1/2012	Valuation Software	(2,713,381)	25	(2,847,156)	(185,853)
10/1/2012	Assumption Change	2,714,228	25	2,848,045	185,911
10/1/2012	Actuarial Loss (Gain)	1,168,034	25	1,225,621	80,005
10/1/2013	Assumption Change	(3,541,424)	26	(3,675,752)	(234,986)
10/1/2013	Actuarial Loss (Gain)	(1,830,796)	26	(1,900,241)	(121,480)
10/1/2014	Actuarial Loss (Gain)	(1,597,600)	27	(1,645,679)	(103,169)
10/1/2014	Plan Amendment	589	27	607	38
10/1/2015	Actuarial Loss (Gain)	(1,680,516)	28	(1,715,935)	(105,619)
10/1/2016	Actuarial Loss (Gain)	(228,270)	29	(230,782)	(13,963)
10/1/2016	Assumption Changes	14,229,829	29	14,386,433	870,397
10/1/2007	Actuarial Loss (Gain)	1,124,272	30	1,124,272	66,928



Comparative Summary Of Principal Valuation Results	40/4/0047	40/4/0040
	10/1/2017 7.50%	10/1/2016 7.50%
De distant Dete		
Participant Data Active members	170	162
Total annual payroll	\$14,353,623	\$13,527,197
Members in DROP	33	35
Total annualized benefit	\$2,220,099	\$2,339,561
Retired members and beneficiaries	334	332
Total annualized benefit	\$17,176,415	\$16,625,454
Disabled members receiving benefits	32	32
Total annualized benefit	\$1,804,368	\$1,773,657
Terminated vested members	4	4
Total annualized benefit	\$179,326	\$179,326
Assets		
Actuarial value of assets	\$219,680,159	\$213,099,980
Market value of assets	\$218,512,322	\$205,991,445



	10/1/2017	10/1/2016
	7.50%	7.50%
Liabilities, present value of all future expected benefit payments		
Active members		
Retirement benefits	\$83,673,586	\$78,439,297
Vesting benefits	1,411,318	1,331,035
Disability benefits	6,268,345	5,952,696
Death benefits	4,918,178	4,656,874
Return of contribution	284,011	227,789
Total	\$96,555,438	\$90,607,691
Terminated vested members	\$2,202,420	\$2,042,788
Retired members and beneficiaries	\$244,542,322	\$241,672,526
Disabled members	\$21,720,911	\$21,641,128
Total	\$365,021,091	\$355,964,133
Liabilities due and unpaid	\$0	\$0
Actuarial accrued liability	\$325,074,421	\$318,200,086
Unfunded actuarial accrued liability	\$105,394,262	\$105,100,106



Comparative Summary Of Principal Valuation Results (continued)		
	10/1/2017	10/1/2016
	7.50%	7.50%
Actuarial present value of accrued benefits		
Statement of actuarial present value of all accrued benefits		
Vested accrued benefits		
Inactive members and beneficiaries	\$268,465,654	\$265,356,442
Active members	40,528,046	36,678,559
Total value of all vested accrued benefits	\$308,993,700	\$302,035,001
Non-vested accrued benefits	5,915,026	5,934,233
Total actuarial present value of all accrued benefits	\$314,908,726	\$307,969,234
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)		
Actuarial present value of accrued benefits, beginning of year	\$307,969,234	\$272,877,387
Increase (decrease) during year		
Benefits accumulated	\$5,468,196	\$6,887,209
Plan amendment	0	0
Changes in actuarial assumptions	0	29,662,111
Interest	22,329,645	19,687,213
Benefits paid	(20,858,349)	(21,144,686)
Other changes	0	0
Net increase (decrease)	\$6,939,492	\$35,091,847
Actuarial present value of accrued benefits, end of year	\$314,908,726	\$307,969,234



	10/1/2017 7.50%	10/1/2016 7.50%
Pension cost		-
Normal Cost	\$4,342,954	\$4,117,315
Member contributions	\$1,724,928	\$1,616,669
Expected plan sponsor contribution	\$11,001,636	\$10,734,952
As % of payroll	75.28%	77.94%
Member Contributions as % of payroll	12.01%	11.95%
Past contributions	9/30/2017	9/30/2016
Required plan sponsor contribution	\$9,956,015	\$10,033,048
Required member contribution	\$1,632,948	\$1,492,330
Actual contributions made by:		
Plan's sponsor	\$9,956,015	\$10,033,048
Members	\$1,632,948	\$1,492,330
Other	\$0	\$0
Net actuarial gain (loss) (if applicable)	(\$1,413,464)	\$1,865,719
Other disclosures (where applicable)		
Present value of active member		
Future salaries at attained age	\$134,256,066	\$125,729,164
Future contributions at attained age	\$13,905,021	\$12,995,653



Hypothetical City Contribution Requirement for 2018/2019 Fiscal Year			
	Police	Fire	Total
Unfunded actuarial accrued liability	\$58,533,725	\$46,860,537	\$105,394,262
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$3,346,983	\$80,326,603	\$83,673,586
Vesting benefits	25,461	1,385,857	1,411,318
Disability benefits	84,346	6,183,999	6,268,345
Death benefits	37,713	4,880,465	4,918,178
Return of contribution	0	284,011	284,011
Total	\$3,494,503	\$93,060,935	\$96,555,438
Terminated vested members	\$985,314	\$1,217,106	\$2,202,420
Retired members and beneficiaries	\$140,613,077	\$103,929,245	\$244,542,322
Disabled members	\$10,886,503	\$10,834,408	\$21,720,911
Total	\$155,979,397	\$209,041,694	\$365,021,091
Entry age reserve			
Active	\$3,051,975	\$53,556,793	\$56,608,768
Inactive	152,484,894	115,980,759	268,465,653
Total	\$155,536,869	\$169,537,552	\$325,074,421
Accumulated Employee Contributions	\$610,243	\$15,907,841	\$16,518,084
Present Value of Future Salaries	\$1,520,280	\$132,738,786	\$134,259,066
Present Value of Future Member Contributions	\$96,454	\$13,808,567	\$13,905,021
Annual Inactive Benefits	\$11,804,041	\$9,576,167	\$21,380,208
Valuation Payroll	\$407,824	\$13,945,799	\$14,353,623
ASC 960 Information			
Present Value of Vested Benefits	\$154,644,287	\$154,349,413	\$308,993,700
Present Value of Accrued Benefits	\$155,281,929	\$159,626,996	\$314,908,726



Hypothetical City Contribution Requirement for 2018/2019 Fiscal Year

Police 102,197,564	Fire 128,782,484	Total 230,980,048
35,080 0 3,833,342 1,108,194	1,597,868 4,309,302 0 1,227,846	1,632,948 4,309,302 3,833,342 2,336,040
		12,111,632 17,852,319
11,281,983 0 232,009	9,824,391 201,735 298,282	21,106,374 201,735 530,291 21,838,400
103,470,801	135,634,798	239,105,599
6,153,625 0 314,032 97,003,144 96,487,468	12,551,168 406,615 0 122,677,015 122,024,854	18,704,793 406,615 314,032 219,680,159 218,512,322
	102,197,564 35,080 0 3,833,342 1,108,194 4,976,616 7,810,613 11,281,983 0 232,009 11,513,992 103,470,801 6,153,625 0 314,032	102,197,564 128,782,484 35,080 1,597,868 0 4,309,302 3,833,342 0 1,108,194 1,227,846 4,976,616 7,135,016 7,810,613 10,041,706 11,281,983 9,824,391 0 201,735 232,009 298,282 11,513,992 10,324,408 103,470,801 135,634,798 6,153,625 12,551,168 0 406,615 314,032 0 97,003,144 122,677,015



¹Allocated based on Return of Actuarial Value of Assets

²Allocated based on Net Earnings Recognized

³Allocation based on Adjusted Actuarial Value as of 10/1/2017

Hypothetical City Contribution Requirement for 2018/2019 Fiscal Year

	Police	Fire	Total
Employer Contributions			
Normal Cost	\$120,411	\$4,222,543	\$4,342,954
Expected Member Contributions	(42,473)	(1,682,455)	(1,724,928)
Net Normal Cost	\$77,938	\$2,540,088	\$2,618,026
Administrative expense ¹	250,465	316,911	567,379
Amortization of UAAL	5,088,583	3,464,203	8,552,786
Applicable Interest	406,274	474,090	880,364
Total Recommended Contribution	\$5,823,260	\$6,795,292	\$12,618,552
Expected Non-Employer Contributions	(992,141)	(821,230)	(1,813,371)
Total Recommended Contribution	\$4,831,119	\$5,974,062	\$10,805,181
As a percentage of payroll	1184.61%	42.84%	75.28%
Hypothetical Total			\$10,805,181
Total Recommended Contribution (paid in Lump Sum)	\$4,918,956	\$6,082,680	\$11,001,636
Total Recommended Contribution (paid in Quarterly Installments)	\$5,053,465	\$6,249,011	\$11,302,476



¹Allocated based on Net Earnings Recognized

September 30, 2017

Historical Salary Increases and Asset Performance

Year Ending	Payroll Growth	Salary Growth	Expected Salary Growth	Asset Return (Market)	Asset Return (Actuarial)	Asset Return (Expected)
9/30/2017	6.11%	4.43%	5.41%	10.88%	7.91%	7.50%
9/30/2016	3.56%	6.06%	5.27%	7.63%	8.54%	7.50%
9/30/2015	(0.03%)	4.84%	5.41%	(1.71%)	7.46%	7.50%
9/30/2014	0.90%	5.50%	5.20%	10.00%	9.60%	7.50%
9/30/2013	(9.00%)	1.40%	7.00%	13.70%	8.00%	7.70%
9/30/2012	(7.00%)	1.60%	6.90%	16.80%	2.80%	7.90%
9/30/2011	(7.70%)	(1.50%)	6.40%	1.70%	1.20%	8.10%
9/30/2010	(7.60%)	5.00%	6.50%	10.40%	5.60%	8.30%
9/30/2009	(4.00%)	3.00%	7.00%	1.80%	2.30%	8.50%
9/30/2008	(1.40%)	7.40%	7.00%	(14.30%)	3.60%	8.50%
9/30/2007	2.80%	6.20%	6.00%	12.80%	10.00%	8.50%
Averages						
3-year				5.46%	7.97%	
5-year				7.97%	8.30%	
10-year				5.32%	5.66%	
20-year				5.82%	5.44%	
41-year				8.35%	7.50%	
Amortization of	Unfunded Actuarial Ac	crued Liability				
					UAAL	Amortization
10/1/2017					\$105,394,262	\$8,552,786
10/1/2018					\$104,104,591	\$8,603,942
10/1/2019					\$102,663,194	\$8,690,023
10/1/2020					\$101,021,152	\$8,821,910
10/1/2046					\$169,764	\$169,764



				October 1, 20
	Valuation	- 200 bp ²	Funding Rate ²	+ 200 bp ²
	7.50%	5.50%	7.50%	9.50%
Total pension liability				
Service Cost	\$4,117,315	\$4,117,315	\$4,117,315	\$4,117,315
Interest	24,421,412	24,421,412	24,421,412	24,421,412
Benefit changes	0	0	0	0
Difference between expected and actual experience	3,702,653	3,702,653	3,702,653	3,702,653
Changes in assumptions	0	38,995,946	690,378	(31,103,348)
Benefit payments	(21,106,374)	(21,106,374)	(21,106,374)	(21,106,374)
Contribution refunds	(201,735)	(201,735)	(201,735)	(201,735)
Net change in pension liability	\$10,933,271	\$49,929,217	\$11,623,649	(\$20,170,077)
Total pension liability, beginning of year	\$332,155,565	\$332,155,565	\$332,155,565	\$332,155,565
Total pension liability, end of year	\$343,088,836	\$382,084,782	\$343,779,214	\$311,985,488
lan fiduciary net position				
Contributions - Employer	\$8,142,644	\$8,142,644	\$8,142,644	\$8,142,644
Contributions - State	1,632,948	1,632,948	1,632,948	1,632,948
Contributions - Member	2,336,040	2,336,040	2,336,040	2,336,040
Net investment income	23,717,202	23,717,202	23,717,202	23,717,202
Benefit payments	(21,106,374)	(21,106,374)	(21,106,374)	(21,106,374)
Contribution refunds	(201,735)	(201,735)	(201,735)	(201,735)
Administrative expense	(530,291)	(530,291)	(530,291)	(530,291)
Other	75,815	75,815	75,815	75,815
Net change in plan fiduciary net position	\$14,066,249	\$14,066,249	\$14,066,249	\$14,066,249
Plan fiduciary net position, beginning of year	\$223,871,513	\$223,871,513	\$223,871,513	\$223,871,513
Plan fiduciary net position, end of year	\$237,937,762	\$237,937,762	\$237,937,762	\$237,937,762
et pension liability/(asset)	\$105,151,074	\$144,147,020	\$105,841,452	\$74,047,726
unded ratio	69.35%	62.27%	69.21%	76.27%
ears that Assets support expected benefit				
ayments	14	12	14	17
stimated city contribution				
Annual dollar value	\$10,805,182	\$12,060,967	\$10,805,182	\$9,421,309
Percentage of payroll	75.28%	84.03%	75.28%	65.64%
naludas DDOD assats and lightilities				

¹Includes DROP assets and liabilities



²Based on valuation assumption with the following changes -interest rate (as noted)

October 1, 2017

Sustainment of Expected Benefit Payments

Mortality	Valuation
Interest	7.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$237,937,762	\$16,364,122	\$40,226,160 ¹
2	214,075,724	15,245,075	22,014,087
3	207,306,712	14,725,163	22,346,392
4	199,685,483	14,126,249	23,088,394
5	190,723,338	13,429,167	23,765,196
6	180,387,309	12,626,341	24,515,373
7	168,498,277	11,709,016	25,211,921
8	154,995,372	10,666,939	26,009,245
9	139,653,066	9,483,847	26,889,659
10	122,247,254	8,150,643	27,643,778
11	102,754,119	6,663,261	28,333,490
12	81,083,890	5,013,206	29,006,662
13	57,090,434	3,188,691	29,685,785
14	30,593,340	1,180,529	30,252,827
15	1,521,042		30,737,418



¹Benefit payments include the DROP Balance at 9/30/2017

October 1, 2017

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational Interest 5.50%

<u>Year</u> 1	Market Value of Assets \$237,937,762	Investment Return \$11,995,164	Benefit Payments \$40,226,160 ¹
2	209,706,766	10,936,587	22,014,087
3	198,629,266	10,318,309	22,346,392
4	186,601,183	9,636,632	23,088,394
5	173,149,421	8,878,423	23,765,196
6	158,262,648	8,039,296	24,515,373
7	141,786,571	7,114,213	25,211,921
8	123,688,863	6,097,206	26,009,245
9	103,776,824	4,978,157	26,889,659
10	81,865,322	3,752,564	27,643,778
11	57,974,108	2,419,834	28,333,490
12	32,060,452	976,318	29,006,662
13	4,030,108		29,685,785



¹Benefit payments include the DROP balance at 9/30/2017

October 1, 2017

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational Interest 7.50%

Market Value of Assets	Investment Return	Benefit Payments
		\$40,226,160 ¹
214,075,724	15,245,075	22,014,087
207,306,712	14,725,163	22,346,392
199,685,483	14,126,249	23,088,394
190,723,338	13,429,167	23,765,196
180,387,309	12,626,341	24,515,373
168,498,277	11,709,016	25,211,921
154,995,372	10,666,939	26,009,245
139,653,066	9,483,847	26,889,659
122,247,254	8,150,643	27,643,778
102,754,119	6,663,261	28,333,490
81,083,890	5,013,206	29,006,662
57,090,434	3,188,691	29,685,785
30,593,340	1,180,529	30,252,827
1,521,042		30,737,418
	\$237,937,762 214,075,724 207,306,712 199,685,483 190,723,338 180,387,309 168,498,277 154,995,372 139,653,066 122,247,254 102,754,119 81,083,890 57,090,434 30,593,340	\$237,937,762 \$16,364,122 214,075,724 15,245,075 207,306,712 14,725,163 199,685,483 14,126,249 190,723,338 13,429,167 180,387,309 12,626,341 168,498,277 11,709,016 154,995,372 10,666,939 139,653,066 9,483,847 122,247,254 8,150,643 102,754,119 6,663,261 81,083,890 5,013,206 57,090,434 3,188,691 30,593,340 1,180,529



¹Benefit payments include the DROP balance at 9/30/2017

October 1, 2017

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational Interest 9.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$237,937,762	\$20,736,689	\$40,226,160 ¹
2	218,448,291	19,730,639	22,014,087
3	216,164,843	19,498,285	22,346,392
4	213,316,736	19,193,269	23,088,394
5	209,421,611	18,791,814	23,765,196
6	204,448,229	18,284,517	24,515,373
7	198,217,373	17,660,251	25,211,921
8	190,665,703	16,905,828	26,009,245
9	181,562,286	16,000,133	26,889,659
10	170,672,760	14,930,620	27,643,778
11	157,959,602	13,690,851	28,333,490
12	143,316,963	12,268,550	29,006,662
13	126,578,851	10,646,903	29,685,785
14	107,539,969	8,811,886	30,252,827
15	86,099,028	6,752,501	30,737,418
16	62,114,111	4,456,964	31,102,956
17	35,468,119	1,906,787	31,508,106
18	5,866,800		31,962,261



¹Benefit payments include the DROP balance at 9/30/2017

Reserve Account For Future Benefit Improvements Under F.L. 99-1

1. Adjusted Base Amount at 10/1/2017

	Year		Ch. 185	Ch. 175	Suppl.	Total
	Established	Description	<u>Police</u>	<u>Fire</u>	<u>Fire</u>	<u>Fire</u>
			-\$-	-\$-	-\$-	-\$-
		Adjusted Base Amount as of 10/1/10	798,463	704,031	28,723	732,754
	2012	Ordinances 2012-30/31	0	88,476	0	88,476
		Adjusted Base Amount	798,463	792,507	28,723	821,230
2.	Reserve Acco	ount for 2016/2017				
			Ch. 185			Total
			<u>Police</u>			<u>Fire</u>
			-\$-			-\$-
	(a)	Reserve Account at September 30, 2016	197,979			395,660
	(b)	Share Plan Allocation Paid Out	0			(395,660)
	(c)	Share Plan Allocation for Reserve	116,053			406,615
	(d)	Reserve Account at September 30, 2017 (a + b + c)	314,032			406,615
	(e)	City Contribution Receivable for State Premium Sho	rtfall			
	i.	Premium Tax Distribution for 2016	1,108,194			1,227,845
	ii.	Adjusted Base Amount	876,088			821,230
	iii.	Shortfall of State Premium Tax Distribution	0			0
			Ch. 185			
3.	Allocation of	Accumulated Reserve Account under SB 172	<u>Police</u>			<u>Total</u>
			-\$-			-\$-
	(a)	Amount allocated to contribution	(116,398)			0
	(b)	Amount allocated to Member Plan	0			0
	(c)	Total	(116,053)			0
	(d)	Final Reserve Account at September 30, 2017	314,032			406,615
	(e)	Amount to be allocated to Member Plan	314,032			406,615

