

STATEMENT OF FIDUCIARY NET POSITION
DECEMBER 31, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Money Market	857,871
Cash	1,208,977
Total Cash and Equivalents	2,066,848
Receivables:	
Member Contributions	897
Employer Contributions	202,911
From Broker for Investments Sold	142,400
Investment Income	1,633
Total Receivable	347,841
Investments:	
Fixed Income	6,040,536
Equities	4,817,232
Alternative	1,335,248
Total Investments	12,193,016
Total Assets	14,607,705
<u>LIABILITIES</u>	
Payables:	
Accrued Expenses and Benefits	190,812
To Broker for Investments Purchased	1,305
Total Liabilities	192,117
NET POSITION RESTRICTED FOR PENSIONS	14,415,588

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED DECEMBER 31, 2018
Market Value Basis

ADDITIONS

Contributions:

Member	54,100	
Employer	778,113	
Total Contributions		832,213
Investment Income:		
Net Increase in Fair Value of Investments	(796,254)	
Interest & Dividends	70,240	
Less Investment Expense ¹	(123,952)	
Net Investment Income		(849,966)
Total Additions		(17,753)

DEDUCTIONS

Distributions to Members:

Benefit Payments	599,566	
Lump Sum DROP Distributions	1,771,964	
Refunds of Member Contributions	0	
Total Distributions		2,371,530
Administrative Expense		282,942
Total Deductions		2,654,472
Net Increase in Net Position		(2,672,225)

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	17,087,813
End of the Year	14,415,588

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

NOTES TO THE FINANCIAL STATEMENTS
(For the Year Ended December 31, 2018)

Plan Description

Plan Administration

This plan was effective February 26, 2000 and was most recently amended effective February 28, 2001.

The plan is a single employer defined benefit pension plan, established and amended by the City of Baton Rouge, Louisiana and Parish of East Baton Rouge acting through its Board of Trustees.

Eligible police employees who are active members or in the Deferred Retirement Option Plan (DROP) of the City of Baton Rouge and Parish of East Baton Rouge (CPERS) on February 26, 2000 who elected to transfer into the Municipal Police Employees' Retirement System of Louisiana (MPERS) are automatically included in the Police Guarantee Trust (PGT).

Plan Membership as of January 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	200
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	3
Active Plan Members	137
	340

Benefits Provided

The Plan provides retirement and drop benefits.

Retirement Benefits:

Members are paid the full accrued benefit until the MPERS benefit amount is greater than the CPERS benefit amount.

DROP Benefits:

Members enter into PGT DROP with payments credited to the PGT DROP account until the later of two years or eligibility for MPERS DROP. Investment returns for MPERS and PGT DROP Accounts are credited to the PGT DROP Account.

Detail of Plan Provisions:

More detail on the plan provisions for the CPERS and MPERS benefits can be found in the most recent January 1 Actuarial Valuation Reports.

Contributions

Member Contributions: Based on current member contribution rate under CPERS, applied to member's compensation not covered by MPERS. Member contributions are "picked up" by the City.

Employer Contributions: Balance of actuarially required contribution less

Investments

Investment Policy:

The following was the Board's adopted asset allocation policy as of December 31, 2018:

Asset Class	Target Allocation
Domestic Equity	32.5%
International Equity	22.5%
Domestic Bonds	25.0%
International Bonds	5.0%
Real Estate	5.0%
Alternative Assets	10.0%
Total	100.0%

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Concentrations:

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

Rate of Return:

For the year ended December 31, 2018, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was -5.25 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Deferred Retirement Option Program

The DROP balance as December 31, 2018 is \$28,152,666.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on December 31, 2018 were as follows:

Total Pension Liability	\$ 44,356,111
Plan Fiduciary Net Position	\$ (14,415,588)
Sponsor's Net Pension Liability	<u>\$ 29,940,523</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	32.50%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2018 updated to December 31, 2018 using the following actuarial assumptions:

Inflation	2.75%
Salary Increases	Age based
Discount Rate	4.77%
Investment Rate of Return	5.75%

Mortality Rates: RP-2000 Combined Healthy Mortality with a Blue Collar Adjustment, Projected to 2019 using Scale BB.

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.0326%	0.0180%
30	0.0686%	0.0277%
40	0.1295%	0.0829%
50	1.2278%	0.1854%
60	0.7237%	0.4089%
70	2.0079%	1.4815%

Disabled Lives: RP-2000 Disabled Mortality, projected to 2019 using Scale BB.

The other significant assumptions are based upon the most recent experience study dated October 14, 2014 performed by the prior actuary, Nyhart.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2018, the inflation rate assumption of the investment advisor was 2.50%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic rates real rates of return for each major asset class included in the Pension Plan's target asset allocation as of December 31, 2018 are summarized in the following table:

<u>Asset Class</u>	<u>Long Term Expected Real Rate of Return</u>
Domestic Equity	7.50%
International Equity	8.50%
Domestic Bonds	2.50%
International Bonds	3.50%
Real Estate	4.50%
Alternative Assets	6.00%

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Years

	<u>12/31/2015¹</u>	<u>12/31/2014¹</u>
Total Pension Liability		
Service Cost	454,961	437,310
Interest	2,338,200	2,565,879
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	1,721,888	-
Changes of assumptions	(979,283)	340,742
Benefit Payments, including Refunds of Employee Contributions	<u>(1,853,004)</u>	<u>(1,679,506)</u>
Net Change in Total Pension Liability	1,682,762	1,664,425
Total Pension Liability - Beginning	<u>36,278,585</u>	<u>34,614,160</u>
Total Pension Liability - Ending (a)	<u>\$ 37,961,347</u>	<u>\$ 36,278,585</u>
Plan Fiduciary Net Position		
Contributions - Employer	951,261	763,873
Contributions - Employee	99,365	90,774
Net Investment Income	(403,640)	796,414
Benefit Payments, including Refunds of Employee Contributions	(1,853,004)	(1,679,506)
Administrative Expense	<u>(313,560)</u>	<u>(333,744)</u>
Net Change in Plan Fiduciary Net Position	(1,519,578)	(362,189)
Plan Fiduciary Net Position - Beginning	20,085,182	20,447,371
Plan Fiduciary Net Position - Ending (b)	<u>\$ 18,565,604</u>	<u>\$ 20,085,182</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 19,395,743</u>	<u>\$ 16,193,403</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	48.91%	55.36%
Covered Payroll	\$ 14,066,159	\$ 14,282,440
Net Pension Liability as a percentage of Covered Payroll	137.89%	113.38%

Notes to Schedule:

¹ The 2014 and 2015 results were provided by the prior actuary, Nyhart.

SCHEDULE OF CONTRIBUTIONS
Last 10 Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
12/31/2018	\$ 2,455,093	\$ 778,113	\$ 1,676,980	\$ 9,206,458	8.45%
12/31/2017	\$ 3,795,014	\$ 641,699	\$ 3,153,315	\$ 11,748,200	5.46%
12/31/2016	\$ 2,752,642	\$ 581,006	\$ 2,171,636	\$ 13,271,888	4.38%
12/31/2015 ¹	\$ 3,029,216	\$ 951,261	\$ 2,077,955	\$ 14,066,159	6.76%
12/31/2014 ¹	\$ 2,646,547	\$ 763,873	\$ 1,882,674	\$ 14,282,440	5.35%
12/31/2013 ¹	\$ 2,679,589	\$ 696,918	\$ 1,982,671	\$ 15,428,420	4.52%
12/31/2012 ¹	\$ 2,225,478	\$ 238,628	\$ 1,986,850	\$ 15,966,923	1.49%
12/31/2011 ¹	\$ 1,977,834	\$ 202,695	\$ 1,775,139	\$ 17,315,930	1.17%
12/31/2010 ¹	\$ 1,634,905	\$ 250,114	\$ 1,384,791	\$ 18,836,479	1.33%
12/31/2009 ¹	\$ 479,630	\$ 149,179	\$ 330,451	\$ 20,084,707	0.74%

¹ Results were provided by the prior actuary, Nyhart.

Notes to Schedule

Valuation Date: 01/01/2017
Actuarially Determined contribution rates are calculated as of January 1, two years prior of the following year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Mortality Rates: RP-2000 Combined Healthy Mortality with a Blue Collar Adjustment, Projected to 2019 using Scale BB.

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.0326%	0.0180%
30	0.0686%	0.0277%
40	0.1295%	0.0829%
50	0.2278%	0.1854%
60	0.7237%	0.4089%
70	2.0079%	1.4815%

Disabled Lives:
RP-2000 Disabled Mortality projected to 2019 using Scale BB.

Interest Rate: 7.25% per year, compounded annually, net of investment expenses.

Inflation: 2.75% per year.

Salary Increases: Inflation, plus

<u>Age</u>	<u>%</u>
30	4.00%
35	2.00%
40	2.00%
45	1.00%
50	0.00%
55	0.00%

MPERS COLA: 2.00% compounded annually.

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Retirement Rates:

Before 25 Years of Creditable Service	<u>Age</u>	<u>Retirement</u>
	55-60	10%
	61-63	20%
	64	25%
	65+	100%

After 25 Years of Creditable Service	<u>Service</u>	<u>Retirement</u>
	25	20%
	26	30%
	27	40%
	28+	100%

Termination Rates:	<u>Age</u>	<u>Turnover</u>
	20	7.9%
	25	7.7%
	30	7.2%
	35	6.3%
	40	5.2%
	45	4.0%
	50	2.6%
	55	0.9%
	60	0.1%

The turnover rates are modified as follows, based on years of employment:

<u>Years of Service</u>	<u>Adjustment</u>
0-1	110%
2	85%
3	45%
4-10	45%
11-15	25%
16+	15%

Disability Rates:	<u>Age</u>	<u>Disability</u>
	20	0.06%
	25	0.06%
	30	0.06%
	35	0.07%
	40	0.11%
	45	0.22%
	50	0.46%
	55	1.02%
	60	3.20%
	61	3.55%
	62	4.00%
	63	4.50%
	64	4.10%
	65	1.95%

It is assumed that 75% of Police Officer disablements are service related.

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Assumed Converted Leave Transfers to Retirement System:	1.50 years.
Percent Married:	80% of Members are assumed to be married with husbands 3 years older than wives.
Actuarial Cost Method:	Entry Age Normal.
Contribution Interest Adjustment:	The following load is applied for determination of the Sponsor Contribution: Interest – A full year, based on the current 7.25% assumption.
Asset Valuation Method:	Expected Value Method. 20% of investment gains or losses are recognized annually.
Ancillary Benefits:	MPERS ancillary benefits (turnover, disability, death) are assumed to be greater than CPERS ancillary benefits.
Interest on Future MPERS DROP Accounts:	7.25%, compounded annually for three years, payable at DROP exit.
Withdrawal of Employee Contributions:	100% of employees who terminate other than for retirement, death, or disability, are assumed to withdraw their contributions.

SCHEDULE OF INVESTMENT RETURNS
Last 10 Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
12/31/2018	-5.25%
12/31/2017	10.59%
12/31/2016	5.59%
12/31/2015	N/A
12/31/2014	N/A

NOTES TO THE FINANCIAL STATEMENTS
(For the Year Ended December 31, 2018)

General Information about the Pension Plan

Plan Description

This plan was effective February 26, 2000 and was most recently amended effective February 28, 2001.

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Plan Membership as of January 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	200
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	3
Active Plan Members	137
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Benefits Provided

The Plan provides retirement and drop benefits.

Retirement Benefits:

Members are paid the full accrued benefit until the MPERS benefit amount is greater than the CPERS benefit amount.

DROP Benefits:

Members enter into PGT DROP with payments credited to the PGT DROP account until the later of two years or eligibility for MPERS DROP. Investment returns for MPERS and PGT DROP Accounts are credited to the PGT DROP Account.

Detail of Plan Provisions:

More detail on the plan provisions for the CPERS and MPERS benefits can be found in the most recent January 1 Actuarial Valuation Reports.

Contributions

Member Contributions: Based on current member contribution rate under CPERS, applied to member's compensation not covered by MPERS. Member contributions are "picked up" by the City.

Employer Contributions: Balance of actuarially required contribution less member contributions, as determined above.

Net Pension Liability

The measurement date is December 31, 2018.

The measurement period for the pension expense was January 1, 2018 to December 31, 2018.

The reporting period is January 1, 2018 through December 31, 2018.

The Sponsor's Net Pension Liability was measured as of December 31, 2018.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2018 updated to December 31, 2018 using the following actuarial assumptions:

Inflation	2.75%
Salary Increases	Age based
Discount Rate	4.77%
Investment Rate of Return	5.75%

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Mortality Rates: RP-2000 Combined Healthy Mortality with a Blue Collar Adjustment, Projected to 2019 using Scale BB.

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.0326%	0.0180%
30	0.0686%	0.0277%
40	0.1295%	0.0829%
50	1.2278%	0.1854%
60	0.7237%	0.4089%
70	2.0079%	1.4815%

The other significant assumptions are based upon the most recent experience study dated October 14, 2014 performed by the prior actuary, Nyhart.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2018, the inflation rate assumption of the investment advisor was 2.50%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic rates real rates of return for each major asset class included in the Pension Plan's target asset allocation as of December 31, 2018 are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long Term Expected Real Rate of Return</u>
Domestic Equity	32.5%	7.50%
International Equity	22.5%	8.50%
Domestic Bonds	25.0%	2.50%
International Bonds	5.0%	3.50%
Real Estate	5.0%	4.50%
<u>Alternative Assets</u>	<u>10.0%</u>	<u>6.00%</u>
<u>Total</u>	<u>100.0%</u>	

Discount Rate:

The projection of cash flows used to determine the Discount Rate assumed that current Plan Member and Sponsor contributions will be made at the current contribution rate. Future Member's contributions in excess of their normal cost were also included. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to provide future benefit payments for 11 years. These payments were discounted using a discount rate of 5.75%. Future benefits payments beyond 11 years were discounted using a high quality municipal bond rate of 4.10%. The high quality municipal bond rate was based on the week closest to, but not later than, the measurement date of the Bond Buyer 20-Bond Index as published by the Bond Buyer. The single equivalent discount rate was 4.77%.

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension	Plan Fiduciary	Net Pension
	Liability	Net Position	Liability
	(a)	(b)	(a)-(b)
Balances as of December 31, 2017	\$ 41,869,859	\$ 17,087,813	\$ 24,782,046
Changes for a Year:			
Service Cost	459,750	-	459,750
Interest	2,098,336	-	2,098,336
Differences between Expected and Actual Experience	2,147,899	-	2,147,899
Changes of assumptions	151,797	-	151,797
Changes of benefit terms	-	-	-
Contributions - Employer	-	778,113	(778,113)
Contributions - Employee	-	54,100	(54,100)
Net Investment Income	-	(849,966)	849,966
Benefit Payments, including Refunds of Employee Contributions	(2,371,530)	(2,371,530)	-
Administrative Expense	-	(282,942)	282,942
Net Changes	2,486,252	(2,672,225)	5,158,477
Balances as of December 31, 2018	\$ 44,356,111	\$ 14,415,588	\$ 29,940,523

Sensitivity of the Net Pension Liability to changes in the Discount Rate.

	Current Discount		
	1% Decrease	Rate	1% Increase
	3.77%	4.77%	5.77%
Sponsor's Net Pension Liability	\$ 30,171,762	\$ 29,940,523	\$ 29,727,559

Pension Plan Fiduciary Net Position.

Detailed information about the pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

**PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED
INFLOWS OF RESOURCES RELATED TO PENSIONS**

For the year ended December 31, 2018, the Sponsor will recognize a Pension Expense of \$5,137,463.

On December 31, 2018, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	1,073,950	-
Changes of assumptions	75,899	-
Net difference between Projected and Actual Earnings on Pension Plan investments	1,258,582	-
Total	\$ 2,408,431	\$ -

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended December 31:				
2019		\$	1,692,443	
2020		\$	206,840	
2021		\$	174,153	
2022		\$	334,995	
2023		\$	-	
Thereafter		\$	-	

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Years

	12/31/2018	12/31/2017	12/31/2016
Total Pension Liability			
Service Cost	459,750	467,379	477,571
Interest	2,098,336	2,281,368	2,423,493
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	2,147,899	163,883	2,243,050
Changes of assumptions	151,797	287,842	555,501
Benefit Payments, including Refunds of Employee Contributions	(2,371,530)	(2,340,178)	(2,651,397)
Net Change in Total Pension Liability	2,486,252	860,294	3,048,218
Total Pension Liability - Beginning	41,869,859	41,009,565	37,961,347
Total Pension Liability - Ending (a)	<u>\$ 44,356,111</u>	<u>\$ 41,869,859</u>	<u>\$ 41,009,565</u>
Plan Fiduciary Net Position			
Contributions - Employer	778,113	641,699	581,006
Contributions - Employee	54,100	70,460	63,856
Net Investment Income	(849,966)	1,727,482	974,590
Benefit Payments, including Refunds of Employee Contributions	(2,371,530)	(2,340,178)	(2,651,397)
Administrative Expense	(282,942)	(275,799)	(269,510)
Net Change in Plan Fiduciary Net Position	(2,672,225)	(176,336)	(1,301,455)
Plan Fiduciary Net Position - Beginning	17,087,813	17,264,149	18,565,604
Plan Fiduciary Net Position - Ending (b)	<u>\$ 14,415,588</u>	<u>\$ 17,087,813</u>	<u>\$ 17,264,149</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 29,940,523</u>	<u>\$ 24,782,046</u>	<u>\$ 23,745,416</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	32.50%	40.81%	42.10%
Covered Payroll	\$ 9,206,458	\$ 11,748,200	\$ 13,271,888
Net Pension Liability as a percentage of Covered Payroll	325.21%	210.94%	178.92%

Notes to Schedule:*Changes of assumptions:*

For purposes of determining the GASB discount rate at the 12/31/2018 measurement date, a depletion date projection as of that date have been performed. The results of this projection showed a single discount rate of 4.77%.

The discount rate was lowered from 5.10% to 4.77%.

Additionally, the assumed investment rate of return was lowered from 7.25% to 5.75%, net of investment related expenses.

For purposes of determining the GASB discount rate at the 12/31/2017 measurement date, a depletion date projection as of that date have been performed. The results of this projection showed a single discount rate of 5.10%.

The discount rate was lowered from 5.66% to 5.10%.

For purposes of determining the GASB discount rate at the 12/31/2016 measurement date, a depletion date projection as of that date have been performed. The results of this projection showed a single discount rate of 5.66%.

The discount rate was lowered from 6.53% to 5.66%.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Years

	<u>12/31/2015 ¹</u>	<u>12/31/2014 ¹</u>
Total Pension Liability		
Service Cost	454,961	437,310
Interest	2,338,200	2,565,879
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	1,721,888	-
Changes of assumptions	(979,283)	340,742
Benefit Payments, including Refunds of Employee Contributions	<u>(1,853,004)</u>	<u>(1,679,506)</u>
Net Change in Total Pension Liability	1,682,762	1,664,425
Total Pension Liability - Beginning	<u>36,278,585</u>	<u>34,614,160</u>
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Administrative Expense	<u>(313,560)</u>	<u>(333,744)</u>
Net Change in Plan Fiduciary Net Position	(1,519,578)	(362,189)
Plan Fiduciary Net Position - Beginning	<u>20,085,182</u>	<u>20,447,371</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 18,565,604</u>	<u>\$ 20,085,182</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 19,395,743</u>	<u>\$ 16,193,403</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	48.91%	55.36%
Covered Payroll	\$ 14,066,159	\$ 14,282,440
Net Pension Liability as a percentage of Covered Payroll	137.89%	113.38%

Notes to Schedule:

¹ The 2014 and 2015 results were provided by the prior actuary, Nyhart.

SCHEDULE OF CONTRIBUTIONS
Last 10 Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
12/31/2018	\$ 2,455,093	\$ 778,113	\$ 1,676,980	\$ 9,206,458	8.45%
12/31/2017	\$ 3,795,014	\$ 641,699	\$ 3,153,315	\$ 11,748,200	5.46%
12/31/2016	\$ 2,752,642	\$ 581,006	\$ 2,171,636	\$ 13,271,888	4.38%
12/31/2015 ¹	\$ 3,029,216	\$ 951,261	\$ 2,077,955	\$ 14,066,159	6.76%
12/31/2014 ¹	\$ 2,646,547	\$ 763,873	\$ 1,882,674	\$ 14,282,440	5.35%
12/31/2013 ¹	\$ 2,679,589	\$ 696,918	\$ 1,982,671	\$ 15,428,420	4.52%
12/31/2012 ¹	\$ 2,225,478	\$ 238,628	\$ 1,986,850	\$ 15,966,923	1.49%
12/31/2011 ¹	\$ 1,977,834	\$ 202,695	\$ 1,775,139	\$ 17,315,930	1.17%
12/31/2010 ¹	\$ 1,634,905	\$ 250,114	\$ 1,384,791	\$ 18,836,479	1.33%
12/31/2009 ¹	\$ 479,630	\$ 149,179	\$ 330,451	\$ 20,084,707	0.74%

¹ Results were provided by the prior actuary, Nyhart.

Notes to Schedule

Methods and assumptions used to determine contribution rates:

Mortality Rates: RP-2000 Combined Healthy Mortality with a Blue Collar Adjustment, Projected to 2019 using Scale BB.

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.0326%	0.0180%
30	0.0686%	0.0277%
40	0.1295%	0.0829%
50	0.2278%	0.1854%
60	0.7237%	0.4089%
70	2.0079%	1.4815%

Disabled Lives:

RP-2000 Disabled Mortality projected to 2019 using Scale BB.

Interest Rate: 7.25% per year, compounded annually, net of investment expenses.

Inflation: 2.75% per year.

Salary Increases: Inflation, plus

<u>Age</u>	<u>%</u>
30	4.00%
35	2.00%
40	2.00%
45	1.00%
50	0.00%
55	0.00%

MPERS COLA: 2.00% compounded annually.

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Retirement Rates:

Before 25 Years of Creditable Service	<u>Age</u>	<u>Retirement</u>
	55-60	10%
	61-63	20%
	64	25%
	65+	100%

After 25 Years of Creditable Service	<u>Service</u>	<u>Retirement</u>
	25	20%
	26	30%
	27	40%
	28+	100%

Termination Rates:	<u>Age</u>	<u>Turnover</u>
	20	7.9%
	25	7.7%
	30	7.2%
	35	6.3%
	40	5.2%
	45	4.0%
	50	2.6%
	55	0.9%
	60	0.1%

The turnover rates are modified as follows, based on years of employment:

<u>Years of Service</u>	<u>Adjustment</u>
0-1	110%
2	85%
3	45%
4-10	45%
11-15	25%
16+	15%

Disability Rates:	<u>Age</u>	<u>Disability</u>
	20	0.06%
	25	0.06%
	30	0.06%
	35	0.07%
	40	0.11%
	45	0.22%
	50	0.46%
	55	1.02%
	60	3.20%
	61	3.55%
	62	4.00%
	63	4.50%
	64	4.10%
	65	1.95%

It is assumed that 75% of Police Officer disablements are service related.

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Assumed Converted Leave Transfers to Retirement System:	1.50 years.
Percent Married:	80% of Members are assumed to be married with husbands 3 years older than wives.
Actuarial Cost Method:	Entry Age Normal.
Contribution Interest Adjustment:	The following load is applied for determination of the Sponsor Contribution: Interest – A full year, based on the current 7.25% assumption.
Asset Valuation Method:	Expected Value Method. 20% of investment gains or losses are recognized annually.
Ancillary Benefits:	MPERS ancillary benefits (turnover, disability, death) are assumed to be greater than CPERS ancillary benefits.
Interest on Future MPERS DROP Accounts:	7.25%, compounded annually for three years, payable at DROP exit.
Withdrawal of Employee Contributions:	100% of employees who terminate other than for retirement, death, or disability, are assumed to withdraw their contributions.

COMPONENTS OF PENSION EXPENSE
YEAR ENDING DECEMBER 31, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Balances as of December 31, 2017	\$ 24,782,046	\$ 888,188	\$ 2,497,492	\$ -
Total Pension Liability Factors:				
Service Cost	459,750	-	-	459,750
Interest	2,098,336	-	-	2,098,336
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	2,147,899	-	2,147,899	-
Current year amortization of experience difference	-	-	(2,334,047)	2,334,047
Change in assumptions about future economic or demographic factors or other inputs	151,797	-	151,797	-
Current year amortization of change in assumptions	-	(244,820)	(404,986)	160,166
Benefit Payments, including Refunds of Employee Contributions	(2,371,530)	-	-	-
Net change	<u>2,486,252</u>	<u>(244,820)</u>	<u>(439,337)</u>	<u>5,052,299</u>
Plan Fiduciary Net Position:				
Contributions - Employer	778,113	-	-	-
Contributions - Employee	54,100	-	-	(54,100)
Projected Net Investment Income	825,011	-	-	(825,011)
Difference between projected and actual earnings on Pension Plan investments	(1,674,977)	-	1,674,977	-
Current year amortization	-	(160,842)	(842,175)	681,333
Benefit Payments, including Refunds of Employee Contributions	(2,371,530)	-	-	-
Administrative Expenses	(282,942)	-	-	282,942
Net change	<u>(2,672,225)</u>	<u>(160,842)</u>	<u>832,802</u>	<u>85,164</u>
Balances as of December 31, 2018	<u>\$ 29,940,523</u>	<u>\$ 482,526</u>	<u>\$ 2,890,957</u>	<u>\$ 5,137,463</u>

AMORTIZATION SCHEDULE - INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on Pension Plan Investments

Plan Year Ending	Differences Between Expected and Actual Earnings	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2014	\$ 693,691	5	\$ 138,739	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 1,678,767	5	\$ 335,753	\$ 335,755	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 163,431	5	\$ 32,686	\$ 32,686	\$ 32,687	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (804,209)	5	\$ (160,842)	\$ (160,842)	\$ (160,842)	\$ (160,842)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 1,674,977	5	\$ 334,997	\$ 334,995	\$ 334,995	\$ 334,995	\$ 334,995	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 681,333	\$ 542,594	\$ 206,840	\$ 174,153	\$ 334,995	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2015	\$ (979,283)	4	\$ (244,820)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 555,501	3	\$ 185,167	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 287,842	2	\$ 143,921	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 151,797	2	\$ 75,898	\$ 75,899	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 160,166	\$ 75,899	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ 1,721,888	4	\$ 430,472	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 2,243,050	3	\$ 747,684	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 163,883	2	\$ 81,942	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 2,147,899	2	\$ 1,073,949	\$ 1,073,950	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 2,334,047	\$ 1,073,950	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -