



The Initial Valuation For  
**City of Pineville**  
as of February 28, 2018



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March 14, 2018

City of Pineville  
Pineville, Missouri

Ladies and Gentlemen:

Submitted in this report are the results of the actuarial valuation prepared to determine the employer contribution rates required to support, for your employees, the benefits provided by the Missouri Local Government Employees Retirement System (LAGERS). This report contains the information needed to comply with Missouri state disclosure requirements regarding the adoption of LAGERS benefits by a political subdivision (Sections 105.660 - 106.685 RSMo).

The contribution requirement for benefits likely to accrue as a result of the future service of your employees is described on pages 4 thru 11 as the current cost plus the disability cost. This contribution rate, expressed as a percent of active employee payroll, will depend on the benefit program adopted.

The contribution requirement to pay for benefits likely to result from service rendered by your employees before you join LAGERS is described on pages 4 thru 11 as the prior service cost. The value established for prior service is called the unfunded actuarial accrued liability (these amounts are further described in Appendix I). The prior service cost is the rate of contribution designed to pay for the unfunded actuarial accrued liability over a period of not more than 30 years.

Section 70.730 of the Revised Statutes of Missouri requires participating employers to contribute the current cost, disability cost, and prior service cost (the total employer cost as shown on pages 4 thru 11). These contributions are mandatory after official action has been taken to join the System.

The total annual dollar costs shown on pages 12 and 13 represent the dollar cost of each benefit program for a one year period based on the payroll reported for this actuarial valuation. In budgeting amounts for LAGERS contributions you should consider any changes in payroll which have been made since data was submitted for the valuation and any changes anticipated to be made before the end of the period for which you are preparing the budget.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of this report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2017.

The computed contributions required for LAGERS participation will permit the System to continue to operate in accordance with the actuarial principles of level cost financing and the state law which governs LAGERS. Summary provisions of the law as well as benefit illustrations can be found in Appendices III and IV.

Projections needed to comply with Missouri state disclosure requirements (Section 105.665 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision are available upon request from LAGERS.

Please note that this entire report must be available as public information for at least 45 calendar days prior to the date final official action is taken by your governing body to join the System. You may wish to make notice of this report in the official minutes of the next meeting of your governing body. This action would not be binding on your subdivision, yet would establish the beginning date of the 45 day waiting period.

In accordance with LAGERS Board policy, the employer contribution rates established by this valuation report are valid for purposes of joining the System for a two year period from the date of this valuation which was February 28, 2018. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

If you have any questions concerning this report or LAGERS in general, please contact the LAGERS office in Jefferson City.

Mita Drazilov is a member of the American Academy of Actuaries and meets the Qualification Standards of the Academy of Actuaries to render the actuarial opinions herein.

Respectfully submitted,

A handwritten signature in black ink that reads "Mita Drazilov". The signature is fluid and cursive, with the first name "Mita" and last name "Drazilov" clearly distinguishable.

Mita D. Drazilov, ASA, FCA, MAAA



## Alternate Plan Provisions Affecting Employer Contribution Rates

The law governing LAGERS provides for either a contributory plan or a non-contributory plan, with benefits based on either a 5 year or 3 year Final Average Salary (FAS).

**Contributory Plan.** Under the contributory plan, each covered member contributes 4% of compensation to LAGERS. If an employee terminates before being eligible for an immediate benefit, the member's contributions, plus any interest credited to the member's individual account, are refunded upon request.

**Non-Contributory Plan.** Under the non-contributory plan, there is no individual employee contribution to the plan, no individual account maintained for each employee, and no refund paid to employees who terminate before being eligible for a benefit.

The law further provides for nine different benefit programs (benefit formula factors) and allows an employer to elect "rule of 80" eligibility for benefits. Under the rule of 80, employees are eligible for unreduced benefits at the earlier of (i) attainment of their minimum service retirement age or (ii) such time as their years of age plus years of LAGERS credited service equals 80.

In total this allows for 72 different combinations of benefit plans, giving employers considerable latitude in designing the retirement program which they feel best suits their particular situation.

The applicable combinations of these items may be changed from time to time, however, there are limitations on the frequency of changes. A more detailed description of plan provisions may be found in Appendix III of this report.

## City of Pineville

### Employer Contribution Rates (Contributory Plan - 5 Year FAS) (4% member contributions are additional)

#### Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.60%	3.00%	0.20%	3.80%
	Police	0.50	4.00	0.40	4.90
L-3	General	0.80	4.30	0.30	5.40
	Police	0.60	5.50	0.50	6.60
LT-4(65)	General	0.70	3.70	0.20	4.60
	Police	0.60	5.60	0.40	6.60
LT-5(65)	General	0.90	4.80	0.30	6.00
	Police	0.70	6.70	0.50	7.90
L-7	General	1.10	5.60	0.30	7.00
	Police	0.80	7.10	0.60	8.50
LT-8(65)	General	1.10	6.00	0.30	7.40
	Police	0.90	7.90	0.60	9.40
L-12	General	1.30	6.90	0.40	8.60
	Police	1.00	8.70	0.70	10.40
LT-14(65)	General	1.30	7.20	0.40	8.90
	Police	1.00	9.10	0.70	10.80
L-6	General	1.50	8.40	0.50	10.40
	Police	1.10	10.40	0.80	12.30

\* Prior service credit was given for vesting purposes only.

## City of Pineville

### Employer Contribution Rates (Contributory Plan - 3 Year FAS) (4% member contributions are additional)

#### Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.70%	3.20%	0.20%	4.10%
	Police	0.50	4.20	0.40	5.10
L-3	General	0.90	4.50	0.30	5.70
	Police	0.70	5.80	0.50	7.00
LT-4(65)	General	0.80	3.90	0.20	4.90
	Police	0.60	5.80	0.40	6.80
LT-5(65)	General	1.00	5.10	0.30	6.40
	Police	0.80	7.10	0.50	8.40
L-7	General	1.10	5.90	0.30	7.30
	Police	0.80	7.40	0.60	8.80
LT-8(65)	General	1.20	6.30	0.30	7.80
	Police	0.90	8.30	0.60	9.80
L-12	General	1.40	7.30	0.40	9.10
	Police	1.00	9.10	0.70	10.80
LT-14(65)	General	1.40	7.50	0.40	9.30
	Police	1.00	9.50	0.70	11.20
L-6	General	1.60	8.70	0.50	10.80
	Police	1.20	10.70	0.80	12.70

\* Prior service credit was given for vesting purposes only.

# City of Pineville

## Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS) (No member contributions)

### Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.90%	6.50%	0.20%	7.60%
	Police	0.60	7.50	0.40	8.50
L-3	General	1.10	7.80	0.30	9.20
	Police	0.80	9.10	0.50	10.40
LT-4(65)	General	1.00	7.20	0.20	8.40
	Police	0.70	9.10	0.40	10.20
LT-5(65)	General	1.20	8.40	0.30	9.90
	Police	0.90	10.30	0.50	11.70
L-7	General	1.30	9.20	0.30	10.80
	Police	0.90	10.80	0.60	12.30
LT-8(65)	General	1.40	9.60	0.30	11.30
	Police	1.00	11.60	0.60	13.20
L-12	General	1.50	10.60	0.40	12.50
	Police	1.10	12.40	0.70	14.20
LT-14(65)	General	1.60	10.80	0.40	12.80
	Police	1.10	12.80	0.70	14.60
L-6	General	1.80	12.00	0.50	14.30
	Police	1.30	14.10	0.80	16.20

\* Prior service credit was given for vesting purposes only.



# City of Pineville

## Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS) (No member contributions)

### Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.90%	6.70%	0.20%	7.80%
	Police	0.60	7.70	0.40	8.70
L-3	General	1.10	8.10	0.30	9.50
	Police	0.80	9.40	0.50	10.70
LT-4(65)	General	1.00	7.40	0.20	8.60
	Police	0.80	9.40	0.40	10.60
LT-5(65)	General	1.20	8.60	0.30	10.10
	Police	0.90	10.70	0.50	12.10
L-7	General	1.40	9.50	0.30	11.20
	Police	1.00	11.10	0.60	12.70
LT-8(65)	General	1.40	9.90	0.30	11.60
	Police	1.00	12.00	0.60	13.60
L-12	General	1.60	11.00	0.40	13.00
	Police	1.10	12.80	0.70	14.60
LT-14(65)	General	1.60	11.20	0.40	13.20
	Police	1.20	13.20	0.70	15.10
L-6	General	1.80	12.40	0.50	14.70
	Police	1.30	14.50	0.80	16.60

\* Prior service credit was given for vesting purposes only.

# City of Pineville

## **Employer Contribution Rates (Contributory Plan - 5 Year FAS)** **(4% member contributions are additional)**

### **Rule of 80 Retirement Eligibility#**

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.70%	3.30%	0.20%	4.20%
	Police	0.50	4.10	0.40	5.00
L-3	General	1.00	4.70	0.30	6.00
	Police	0.70	5.70	0.50	6.90
LT-4(65)	General	1.00	4.40	0.20	5.60
	Police	0.60	6.20	0.40	7.20
LT-5(65)	General	1.20	5.50	0.30	7.00
	Police	0.70	7.00	0.50	8.20
L-7	General	1.20	6.10	0.30	7.60
	Police	0.80	7.30	0.60	8.70
LT-8(65)	General	1.30	6.70	0.30	8.30
	Police	0.90	8.20	0.60	9.70
L-12	General	1.40	7.60	0.40	9.40
	Police	1.00	8.90	0.70	10.60
LT-14(65)	General	1.50	7.80	0.40	9.70
	Police	1.00	9.40	0.70	11.10
L-6	General	1.70	9.00	0.50	11.20
	Police	1.10	10.60	0.80	12.50

# The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.

\* Prior service credit was given for vesting purposes only.

# City of Pineville

## **Employer Contribution Rates (Contributory Plan - 3 Year FAS)** **(4% member contributions are additional)**

### **Rule of 80 Retirement Eligibility#**

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.70%	3.50%	0.20%	4.40%
	Police	0.50	4.30	0.40	5.20
L-3	General	1.00	5.00	0.30	6.30
	Police	0.70	6.00	0.50	7.20
LT-4(65)	General	1.00	4.70	0.20	5.90
	Police	0.60	6.20	0.40	7.20
LT-5(65)	General	1.20	5.80	0.30	7.30
	Police	0.80	7.40	0.50	8.70
L-7	General	1.20	6.40	0.30	7.90
	Police	0.80	7.60	0.60	9.00
LT-8(65)	General	1.40	7.00	0.30	8.70
	Police	0.90	8.60	0.60	10.10
L-12	General	1.50	7.90	0.40	9.80
	Police	1.00	9.30	0.70	11.00
LT-14(65)	General	1.60	8.20	0.40	10.20
	Police	1.00	9.80	0.70	11.50
L-6	General	1.80	9.40	0.50	11.70
	Police	1.20	11.00	0.80	13.00

# The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.

\* Prior service credit was given for vesting purposes only.

# City of Pineville

## Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS) (No member contributions)

### Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.00%	6.80%	0.20%	8.00%
	Police	0.60	7.60	0.40	8.60
L-3	General	1.20	8.30	0.30	9.80
	Police	0.80	9.30	0.50	10.60
LT-4(65)	General	1.20	7.90	0.20	9.30
	Police	0.70	9.40	0.40	10.50
LT-5(65)	General	1.40	9.10	0.30	10.80
	Police	0.90	10.60	0.50	12.00
L-7	General	1.40	9.70	0.30	11.40
	Police	0.90	11.00	0.60	12.50
LT-8(65)	General	1.60	10.30	0.30	12.20
	Police	1.00	11.90	0.60	13.50
L-12	General	1.70	11.20	0.40	13.30
	Police	1.10	12.60	0.70	14.40
LT-14(65)	General	1.70	11.50	0.40	13.60
	Police	1.10	13.10	0.70	14.90
L-6	General	1.90	12.70	0.50	15.10
	Police	1.30	14.30	0.80	16.40

# The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.

\* Prior service credit was given for vesting purposes only.

# City of Pineville

## **Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)** **(No member contributions)**

### **Rule of 80 Retirement Eligibility#**

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.00%	7.00%	0.20%	8.20%
	Police	0.70	7.90	0.40	9.00
L-3	General	1.20	8.50	0.30	10.00
	Police	0.80	9.60	0.50	10.90
LT-4(65)	General	1.30	8.10	0.20	9.60
	Police	0.80	9.70	0.40	10.90
LT-5(65)	General	1.40	9.40	0.30	11.10
	Police	0.90	11.00	0.50	12.40
L-7	General	1.50	10.00	0.30	11.80
	Police	1.00	11.30	0.60	12.90
LT-8(65)	General	1.60	10.60	0.30	12.50
	Police	1.00	12.30	0.60	13.90
L-12	General	1.70	11.60	0.40	13.70
	Police	1.10	13.10	0.70	14.90
LT-14(65)	General	1.80	11.80	0.40	14.00
	Police	1.20	13.50	0.70	15.40
L-6	General	2.00	13.10	0.50	15.60
	Police	1.30	14.80	0.80	16.90

# The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.

\* Prior service credit was given for vesting purposes only.

# City of Pineville

## **Employer Contribution Dollars** **Regular Retirement Eligibility**

Employer contributions are payable monthly, and each month's actual dollar contribution will be the contribution percent multiplied by the payroll during the month. If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation, the approximate employer dollar contribution for the year would be as follows:

### **Contributory Plan**

<b>5 Year FAS</b>		
<b>Benefit Program</b>	<b>General</b>	<b>Police</b>
L-1	\$ 9,229	\$ 7,772
L-3	13,114	10,469
LT-4(65)	11,172	10,469
LT-5(65)	14,572	12,531
L-7	17,000	13,482
LT-8(65)	17,972	14,910
L-12	20,886	16,496
LT-14(65)	21,615	17,130
L-6	25,258	19,510

<b>3 Year FAS</b>		
<b>Benefit Program</b>	<b>General</b>	<b>Police</b>
L-1	\$ 9,957	\$ 8,089
L-3	13,843	11,103
LT-4(65)	11,900	10,786
LT-5(65)	15,543	13,324
L-7	17,729	13,958
LT-8(65)	18,943	15,544
L-12	22,100	17,130
LT-14(65)	22,586	17,765
L-6	26,229	20,144

### **Non-Contributory Plan**

<b>5 Year FAS</b>		
<b>Benefit Program</b>	<b>General</b>	<b>Police</b>
L-1	\$ 18,457	\$ 13,482
L-3	22,343	16,496
LT-4(65)	20,400	16,179
LT-5(65)	24,043	18,558
L-7	26,229	19,510
LT-8(65)	27,443	20,937
L-12	30,358	22,523
LT-14(65)	31,086	23,158
L-6	34,729	25,696

<b>3 Year FAS</b>		
<b>Benefit Program</b>	<b>General</b>	<b>Police</b>
L-1	\$ 18,943	\$ 13,800
L-3	23,072	16,972
LT-4(65)	20,886	16,813
LT-5(65)	24,529	19,192
L-7	27,200	20,144
LT-8(65)	28,172	21,572
L-12	31,572	23,158
LT-14(65)	32,058	23,951
L-6	35,701	26,330

PLEASE NOTE THAT THE ABOVE INFORMATION IS BASED ON THE PERSONNEL AND PAYROLL DATA SUBMITTED FOR THE ACTUARIAL VALUATION. IN BUDGETING AMOUNTS FOR LAGERS CONTRIBUTIONS YOU SHOULD CONSIDER ANY CHANGES WHICH HAVE BEEN MADE SINCE DATA WAS SUBMITTED FOR THE VALUATION AND ANY CHANGES ANTICIPATED TO BE MADE BEFORE THE END OF THE PERIOD FOR WHICH YOU ARE PREPARING THE BUDGET.

# City of Pineville

## **Employer Contribution Dollars** **Rule of 80 Retirement Eligibility**

Employer contributions are payable monthly, and each month's actual dollar contribution will be the contribution percent multiplied by the payroll during the month. If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation, the approximate employer dollar contribution for the year would be as follows:

### **Contributory Plan**

<b>5 Year FAS</b>		
<b>Benefit Program</b>	<b>General</b>	<b>Police</b>
L-1	\$ 10,200	\$ 7,931
L-3	14,572	10,944
LT-4(65)	13,600	11,420
LT-5(65)	17,000	13,006
L-7	18,457	13,800
LT-8(65)	20,157	15,386
L-12	22,829	16,813
LT-14(65)	23,557	17,606
L-6	27,200	19,827

<b>3 Year FAS</b>		
<b>Benefit Program</b>	<b>General</b>	<b>Police</b>
L-1	\$ 10,686	\$ 8,248
L-3	15,300	11,420
LT-4(65)	14,329	11,420
LT-5(65)	17,729	13,800
L-7	19,186	14,275
LT-8(65)	21,129	16,020
L-12	23,800	17,448
LT-14(65)	24,772	18,241
L-6	28,415	20,620

### **Non-Contributory Plan**

<b>5 Year FAS</b>		
<b>Benefit Program</b>	<b>General</b>	<b>Police</b>
L-1	\$ 19,429	\$ 13,641
L-3	23,800	16,813
LT-4(65)	22,586	16,655
LT-5(65)	26,229	19,034
L-7	27,686	19,827
LT-8(65)	29,629	21,413
L-12	32,300	22,841
LT-14(65)	33,029	23,634
L-6	36,672	26,013

<b>3 Year FAS</b>		
<b>Benefit Program</b>	<b>General</b>	<b>Police</b>
L-1	\$ 19,915	\$ 14,275
L-3	24,286	17,289
LT-4(65)	23,315	17,289
LT-5(65)	26,958	19,668
L-7	28,658	20,461
LT-8(65)	30,358	22,048
L-12	33,272	23,634
LT-14(65)	34,001	24,427
L-6	37,886	26,806

PLEASE NOTE THAT THE ABOVE INFORMATION IS BASED ON THE PERSONNEL AND PAYROLL DATA SUBMITTED FOR THE ACTUARIAL VALUATION. IN BUDGETING AMOUNTS FOR LAGERS CONTRIBUTIONS YOU SHOULD CONSIDER ANY CHANGES WHICH HAVE BEEN MADE SINCE DATA WAS SUBMITTED FOR THE VALUATION AND ANY CHANGES ANTICIPATED TO BE MADE BEFORE THE END OF THE PERIOD FOR WHICH YOU ARE PREPARING THE BUDGET.

## City of Pineville

### **Employees and Payroll Included in the Valuation**

	General	Police
Number of Employees	8	5
Annual Payroll	\$ 242,861	\$ 158,615

Information regarding the age and service characteristics of the employees is contained in Appendix V.



## APPENDIX I

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### UNFUNDED ACTUARIAL ACCRUED LIABILITY

## Unfunded Actuarial Accrued Liability (UAAL)

If the decision is made to join LAGERS the governing body also must decide how much credit to grant employees for their service before the membership date. The options are to cover 25%, 50%, 75% or 100% of prior service. The granting of prior service credit results in the establishment of an actuarial accrued liability. Because your political subdivision will not have established an asset balance with the System as of the membership date, the value established for prior service is an unfunded actuarial accrued liability.

The policy of the LAGERS Board of Trustees provides that unfunded liabilities are to be paid for by level percent of payroll contributions over a period of 30 years. The contribution rates shown on pages 4 through 11 as the "Prior Service Cost" are designed to pay for the applicable unfunded actuarial accrued liability. This procedure will allow your political subdivision to retire the unfunded actuarial accrued liability in an orderly fashion over a period of years without the need for an immediate large payment upon joining the System.

Should the governing body elect to grant credit for 100% of the employees' prior service, the unfunded actuarial accrued liability as of the date of this valuation would be as follows:

### City of Pineville

#### Regular Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 26,558	\$ 27,894	\$ 37,637	\$ 38,851
	Police	13,615	14,229	17,516	18,123
L-3	General	36,280	37,892	47,038	48,583
	Police	18,132	18,903	21,937	22,670
LT-4(65)	General	31,801	33,301	42,844	44,227
	Police	16,439	17,148	20,341	21,047
LT-5(65)	General	40,198	41,988	50,932	52,593
	Police	20,254	21,087	24,053	24,856
L-7	General	45,935	47,868	56,450	58,306
	Police	22,660	23,583	26,305	27,186
LT-8(65)	General	48,532	50,557	59,015	61,014
	Police	24,066	25,047	27,703	28,650
L-12	General	55,509	57,769	65,854	67,987
	Police	27,134	28,242	30,710	31,732
LT-14(65)	General	56,828	59,147	67,124	69,352
	Police	27,848	28,979	31,395	32,458
L-6	General	65,071	67,722	75,214	77,744
	Police	31,653	32,925	35,074	36,261

# City of Pineville

## Unfunded Actuarial Accrued Liability (UAAL)

### Rule of 80 Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 30,359	\$ 31,822	\$ 41,004	\$ 42,448
	Police	13,682	14,338	17,585	18,218
L-3	General	40,862	42,670	51,254	53,035
	Police	18,207	19,004	22,018	22,768
LT-4(65)	General	41,692	43,575	52,261	54,136
	Police	16,639	17,383	20,548	21,264
LT-5(65)	General	49,353	51,479	59,712	61,800
	Police	20,435	21,291	24,233	25,056
L-7	General	51,282	53,471	61,500	63,639
	Police	22,778	23,708	26,397	27,302
LT-8(65)	General	56,931	59,327	67,129	69,473
	Police	24,252	25,239	27,879	28,821
L-12	General	61,656	64,165	71,756	74,202
	Police	27,278	28,386	30,830	31,864
LT-14(65)	General	64,486	67,119	74,563	77,136
	Police	28,018	29,143	31,552	32,635
L-6	General	72,016	74,948	82,005	84,810
	Police	31,807	33,069	35,241	36,409

## **APPENDIX II**

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### **SUMMARY OF FINANCIAL ASSUMPTIONS**

# Summary of Assumptions Used in Actuarial Valuations

## Assumptions Adopted by Board of Trustees After Consulting With Actuary

1. The investment return rate used in making the valuations was 7.25% per year, net of investment expenses, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. The price inflation rate used in making the valuations was 2.50% and the wage inflation rate used in making the valuations was 3.25%. The investment return rate translates to an assumed real rate of return over price inflation of 4.75% and over wage inflation of 4.00%. Adopted 2011 and 2016.
2. The healthy retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The disabled retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The pre-retirement mortality tables used were the RP-2014 employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. For both the post-retirement and pre-retirement tables, the base year for males was then established to be 2017. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to the above described tables. Adopted 2016.
3. The probabilities of withdrawal and disability from service, together with individual pay increase assumptions, are shown in Schedule 1. Adopted 2016.
4. The probabilities of retirement with an age and service allowance are shown in Schedule 2. Adopted 2016.
5. Post-retirement cost of living allowances are assumed to be 2.50% per year. Adopted 2016.
6. Total active member payroll is assumed to increase a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. In effect, this assumes no change in the number of active members per employer. Adopted 2016.
7. An individual entry-age actuarial cost method of valuation was used in determining age and service allowance actuarial liabilities and normal cost. Adopted 1986.
8. The data about persons now covered was furnished by the political subdivision. Although examined for general reasonableness, the data was not audited by us.

## Schedule 1.

### Separations From Active Employment (Not Including Death-In-Service) Before Age & Service Retirement and Individual Pay Increase Assumptions

		Percent of Active Members Separating Within Next Year							
Sample Ages	Years of Service	General Members				Police		Fire	
		Men		Women		Disability	Withdrawal	Disability	Withdrawal
		Disability	Withdrawal	Disability	Withdrawal				
All	0		19.00%		22.00%		18.00%		10.00%
	1		17.00		20.00		17.00		8.00
	2		15.00		17.00		16.00		7.00
	3		13.00		14.00		13.00		6.00
	4		11.00		13.00		12.00		6.00
25	5 & Over	0.09%	7.30	0.02%	10.80	0.10%	9.80	0.06%	5.00
30		0.12	6.50	0.03	8.90	0.11	7.80	0.10	4.00
35		0.15	5.00	0.06	7.40	0.16	6.10	0.23	2.80
40		0.21	3.70	0.10	5.70	0.22	4.40	0.35	2.20
45		0.30	3.00	0.16	4.20	0.34	3.20	0.56	1.80
50		0.44	2.40	0.24	3.30	0.53	1.80	0.85	1.00
55		0.68	1.80	0.34	2.50	0.88	1.00	1.31	0.50
60		1.02	1.00	0.48	1.20		0.00		0.00
65			0.00		0.00		0.00		0.00

Sample Ages	Percent Increase in Individual's Pay During Next Year	
	General & Police	
	Fire	
25	6.55%	7.15%
30	5.75	6.05
35	5.25	5.15
40	4.75	4.45
45	4.25	4.15
50	3.85	3.85
55	3.65	3.65
60	3.55	3.25
65	3.25	3.25

## Schedule 2.

### Percent of Eligible Active Members Retiring Within Next Year Without Rule of 80 Eligibility

#### Early Retirement

Retirement	General Members		Retirement		
Ages	Men	Women	Ages	Police	Fire
55	3.00%	3.00%	50	2.50%	2.50%
56	3.00%	3.00%	51	2.50%	2.50%
57	3.00%	3.00%	52	2.50%	2.50%
58	3.00%	3.00%	53	2.50%	2.50%
59	3.00%	3.00%	54	2.50%	2.50%

#### Normal Retirement

Retirement	General Members		Retirement		
Ages	Men	Women	Ages	Police	Fire
60	10%	10%	55	10%	13%
61	10	10	56	10	13
62	25	15	57	10	13
63	20	15	58	10	13
64	20	15	59	10	13
65	25	25	60	10	15
66	25	25	61	10	15
67	20	25	62	25	20
68	20	25	63	20	20
69	20	20	64	20	20
70	100	100	65	100	100

## Schedule 2. (Continued)

### Percent of Eligible Active Members Retiring Within Next Year With Rule of 80 Eligibility

Retirement Ages	General Members		Police	Fire
	Men	Women		
50	15%	15%	25%	25%
51	15	15	25	20
52	15	15	15	20
53	15	15	15	20
54	15	15	15	20
55	15	15	15	20
56	15	15	15	20
57	15	15	15	25
58	15	15	15	25
59	15	15	15	25
60	15	15	15	35
61	15	15	25	35
62	30	15	30	45
63	30	15	30	45
64	30	20	30	45
65	30	25	100	100
66	30	25		
67	30	25		
68	30	25		
69	30	25		
70	100	100		



## APPENDIX III

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### SUMMARY OF LAGERS PROVISIONS

# Missouri Local Government Employees Retirement System

## Brief Summary of LAGERS

### Benefits and Conditions Evaluated and/or Considered as of February 28, 2017

#### (Section references are to RSMo)

**Voluntary Retirement.** Sections 70.645 & 70.600. A member may retire with an age & service allowance after both (i) completing 5 years of credited service, and (ii) attaining the minimum service retirement age.

The minimum service retirement age is age 60 for a general employee and age 55 for a police or fire employee. Optionally, employers may also elect to provide for unreduced benefits for employees whose combination of years of age and years of service equals 80 or more.

**Final Average Salary.** Section 70.600. The average of a member's monthly compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) of credited service producing the highest monthly average, which period is contained within the 120 consecutive months of credited service immediately preceding retirement.

**Age & Service Allowance.** Section 70.655. The allowance, payable monthly for life, equals a specified percent of a member's final average salary multiplied by the number of years of credited service. Each employer elects the percent applicable to its members, from the following programs:

L-1 Benefit Program:	1.00% for life
L-3 Benefit Program:	1.25% for life
L-7 Benefit Program:	1.50% for life
L-12 Benefit Program:	1.75% for life
L-6 Benefit Program:	2.00% for life
LT-4(65) Benefit Program:	1.00% for life, plus 1.00% to age 65
LT-5(65) Benefit Program:	1.25% for life, plus 0.75% to age 65
LT-8(65) Benefit Program:	1.50% for life, plus 0.50% to age 65
LT-14(65) Benefit Program:	1.75% for life, plus 0.25% to age 65

The only LT benefit programs available for adoption after August 1, 1994 are the LT(65) programs.

Benefit programs L-9 and LT-10(65) are unavailable for adoption after August 1, 2005.

Benefit program L-11, available only to groups not covered by social security, provides for 2.5% for life.

Subsequent to joining the System the governing body can elect to change benefit programs for the employees, but not more often than once every 2 years.

**Early Allowance.** Section 70.670. A member may retire with an early allowance after both (i) completing 5 years of credited service, and (ii) attaining age 55 if a general employee or age 50 if a police or fire employee.

The early allowance amount, payable monthly for life, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of early retirement, but reduced to reflect the fact that the age when payments begin is younger than the minimum service retirement age. The amount of the reduction is  $\frac{1}{2}$  of 1% (.005) for each month the age at retirement is younger than the minimum service retirement age.

**Deferred Allowance.** Section 70.675. If a member leaves LAGERS-covered employment (i) before attaining the early retirement age, and (ii) after completing 5 years of credited service, the member becomes eligible for a deferred allowance; provided the former member lives to the minimum service retirement age and does not withdraw the accumulated contributions.

The deferred allowance amount, payable monthly for life from the minimum service retirement age, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of leaving LAGERS coverage.

Deferred allowances are also payable any time after reaching the early retirement age, with the reduction for early retirement noted on the previous page.

**Non-Duty Disability Allowance.** Section 70.680. A member with 5 or more years of credited service who becomes totally and permanently disabled from other than duty-connected causes becomes eligible to receive a non-duty disability allowance computed in the same manner as an age & service allowance, based upon the service & earnings record to time of disability.

**Duty Disability Allowance.** Section 70.680. A member regardless of credited service who becomes totally and permanently disabled from duty-connected causes becomes eligible to receive a duty disability allowance computed in the same manner as an age & service allowance, based upon the earnings record to time of disability but based upon the years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

**Death-in-Service.** Section 70.661. Upon the death of a member who had completed 5 years of credited service, the eligible surviving dependents receive the following benefits:

- (a) The surviving spouse receives an allowance equal to the Option A allowance (joint and 75% survivor benefit) computed based upon the deceased members' service & earnings record to time of death.
- (b) When no spouse benefit is payable, the dependent children under age 18 (age 23 if they are full time students) each receive an equal share of 60% of an age & service allowance computed based upon the deceased member's service & earnings record to time of death.
- (c) If the death is determined to be duty related, the 5 year service requirement is waived and the benefit is based on years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

**Benefit Changes After Retirement.** Section 70.655. For retirements effective after September 28, 1975, there is an annual redetermination of monthly benefit amount, beginning the October first following 12 months of retirement. As of each October first the amount of each eligible benefit is redetermined as follows:

- (a) Subject to the maximum in (b), the redetermined amount is the amount other-wise payable multiplied by: 100% plus up to 4%, as determined by the LAGERS Board of Trustees, for each full year of retirement.
- (b) The redetermined amount may not exceed the amount otherwise payable multiplied by the ratio of the Consumer Price Index for the immediately preceding month of June to the Consumer Price Index for the month of June immediately preceding retirement.

**Member Contributions.** Sections 70.690 & 70.705. Each member contributes 4% of compensation beginning after completion of sufficient employment for 6 months of credited service.

If a member leaves LAGERS-covered employment before an allowance is payable, the accumulated contributions are refunded to the member. If the member dies, his accumulated contributions are refunded to a designated beneficiary.

The law governing LAGERS also has a provision for the adoption of a non-contributory plan in which the full cost of LAGERS participation is paid by the employer. Adoption of the non-contributory provisions may be done at the time of membership or a later date; however, a change from contributory to non-contributory or vice-versa may not be made more frequently than every 2 years. Under the non-contributory provisions there is no individual account maintained for each employee and no refund of contributions if an employee terminates before being eligible for a benefit.

**Employer Contributions.** Section 70.730. Each employer contributes the remainder amounts necessary to finance the employees' participation in LAGERS. Contributions to LAGERS are determined based upon level-percent-of-payroll principles, so that contribution rates do not have to increase over decades of time.

# APPENDIX IV

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## BENEFIT ILLUSTRATIONS

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(L-1 Benefit Program is Years of Credited Service  
times: 1.00% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 875	\$1,400	93%
2,000	700	1,016	1,716	86%
2,500	875	1,157	2,032	81%
3,000	1,050	1,297	2,347	78%
3,500	1,225	1,438	2,663	76%
4,000	1,400	1,579	2,979	74%
25 Years of Service:				
\$1,500	\$ 375	\$ 875	\$1,250	83%
2,000	500	1,016	1,516	76%
2,500	625	1,157	1,782	71%
3,000	750	1,297	2,047	68%
3,500	875	1,438	2,313	66%
4,000	1,000	1,579	2,579	64%
15 Years of Service:				
\$1,500	\$225	\$ 875	\$1,100	73%
2,000	300	1,016	1,316	66%
2,500	375	1,157	1,532	61%
3,000	450	1,297	1,747	58%
3,500	525	1,438	1,963	56%
4,000	600	1,579	2,179	54%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(L-3 Benefit Program is Years of Credited Service  
times: 1.25% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 875	\$1,531	102%
2,000	875	1,016	1,891	95%
2,500	1,094	1,157	2,251	90%
3,000	1,313	1,297	2,610	87%
3,500	1,531	1,438	2,969	85%
4,000	1,750	1,579	3,329	83%
25 Years of Service:				
\$1,500	\$ 469	\$ 875	\$1,344	90%
2,000	625	1,016	1,641	82%
2,500	781	1,157	1,938	78%
3,000	938	1,297	2,235	75%
3,500	1,094	1,438	2,532	72%
4,000	1,250	1,579	2,829	71%
15 Years of Service:				
\$1,500	\$281	\$ 875	\$1,156	77%
2,000	375	1,016	1,391	70%
2,500	469	1,157	1,626	65%
3,000	563	1,297	1,860	62%
3,500	656	1,438	2,094	60%
4,000	750	1,579	2,329	58%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(L-7 Benefit Program is Years of Credited Service  
times: 1.50% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 875	\$1,663	111%
2,000	1,050	1,016	2,066	103%
2,500	1,313	1,157	2,470	99%
3,000	1,575	1,297	2,872	96%
3,500	1,838	1,438	3,276	94%
4,000	2,100	1,579	3,679	92%
25 Years of Service:				
\$1,500	\$ 563	\$ 875	\$1,438	96%
2,000	750	1,016	1,766	88%
2,500	938	1,157	2,095	84%
3,000	1,125	1,297	2,422	81%
3,500	1,313	1,438	2,751	79%
4,000	1,500	1,579	3,079	77%
15 Years of Service:				
\$1,500	\$338	\$ 875	\$1,213	81%
2,000	450	1,016	1,466	73%
2,500	563	1,157	1,720	69%
3,000	675	1,297	1,972	66%
3,500	788	1,438	2,226	64%
4,000	900	1,579	2,479	62%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.



# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(L-12 Benefit Program is Years of Credited Service  
times: 1.75% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 875	\$1,794	120%
2,000	1,225	1,016	2,241	112%
2,500	1,531	1,157	2,688	108%
3,000	1,838	1,297	3,135	105%
3,500	2,144	1,438	3,582	102%
4,000	2,450	1,579	4,029	101%
25 Years of Service:				
\$1,500	\$ 656	\$ 875	\$1,531	102%
2,000	875	1,016	1,891	95%
2,500	1,094	1,157	2,251	90%
3,000	1,313	1,297	2,610	87%
3,500	1,531	1,438	2,969	85%
4,000	1,750	1,579	3,329	83%
15 Years of Service:				
\$1,500	\$ 394	\$ 875	\$1,269	85%
2,000	525	1,016	1,541	77%
2,500	656	1,157	1,813	73%
3,000	788	1,297	2,085	70%
3,500	919	1,438	2,357	67%
4,000	1,050	1,579	2,629	66%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(L-6 Benefit Program is Years of Credited Service  
times: 2.00% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 875	\$1,925	128%
2,000	1,400	1,016	2,416	121%
2,500	1,750	1,157	2,907	116%
3,000	2,100	1,297	3,397	113%
3,500	2,450	1,438	3,888	111%
4,000	2,800	1,579	4,379	109%
25 Years of Service:				
\$1,500	\$ 750	\$ 875	\$1,625	108%
2,000	1,000	1,016	2,016	101%
2,500	1,250	1,157	2,407	96%
3,000	1,500	1,297	2,797	93%
3,500	1,750	1,438	3,188	91%
4,000	2,000	1,579	3,579	89%
15 Years of Service:				
\$1,500	\$ 450	\$ 875	\$1,325	88%
2,000	600	1,016	1,616	81%
2,500	750	1,157	1,907	76%
3,000	900	1,297	2,197	73%
3,500	1,050	1,438	2,488	71%
4,000	1,200	1,579	2,779	69%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(LT-4(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS <sup>1</sup> to age 65)  
1.00% of FAS <sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 525	\$ 875	\$1,050	\$1,400	70%	93%
2,000	1,400	700	1,016	1,400	1,716	70%	86%
2,500	1,750	875	1,157	1,750	2,032	70%	81%
3,000	2,100	1,050	1,297	2,100	2,347	70%	78%
3,500	2,450	1,225	1,438	2,450	2,663	70%	76%
4,000	2,800	1,400	1,579	2,800	2,979	70%	74%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 875	\$ 750	\$1,250	50%	83%
2,000	1,000	500	1,016	1,000	1,516	50%	76%
2,500	1,250	625	1,157	1,250	1,782	50%	71%
3,000	1,500	750	1,297	1,500	2,047	50%	68%
3,500	1,750	875	1,438	1,750	2,313	50%	66%
4,000	2,000	1,000	1,579	2,000	2,579	50%	64%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 875	\$ 450	\$1,100	30%	73%
2,000	600	300	1,016	600	1,316	30%	66%
2,500	750	375	1,157	750	1,532	30%	61%
3,000	900	450	1,297	900	1,747	30%	58%
3,500	1,050	525	1,438	1,050	1,963	30%	56%
4,000	1,200	600	1,579	1,200	2,179	30%	54%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(LT-5(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS <sup>1</sup> to age 65)  
1.25% of FAS <sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 656	\$ 875	\$1,050	\$1,531	70%	102%
2,000	1,400	875	1,016	1,400	1,891	70%	95%
2,500	1,750	1,094	1,157	1,750	2,251	70%	90%
3,000	2,100	1,313	1,297	2,100	2,610	70%	87%
3,500	2,450	1,531	1,438	2,450	2,969	70%	85%
4,000	2,800	1,750	1,579	2,800	3,329	70%	83%

25 Years of Service:

\$1,500	\$ 750	\$ 469	\$ 875	\$ 750	\$1,344	50%	90%
2,000	1,000	625	1,016	1,000	1,641	50%	82%
2,500	1,250	781	1,157	1,250	1,938	50%	78%
3,000	1,500	938	1,297	1,500	2,235	50%	75%
3,500	1,750	1,094	1,438	1,750	2,532	50%	72%
4,000	2,000	1,250	1,579	2,000	2,829	50%	71%

15 Years of Service:

\$1,500	\$ 450	\$281	\$ 875	\$ 450	\$1,156	30%	77%
2,000	600	375	1,016	600	1,391	30%	70%
2,500	750	469	1,157	750	1,626	30%	65%
3,000	900	563	1,297	900	1,860	30%	62%
3,500	1,050	656	1,438	1,050	2,094	30%	60%
4,000	1,200	750	1,579	1,200	2,329	30%	58%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(LT-8(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS <sup>1</sup> to age 65)  
1.50% of FAS <sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 788	\$ 875	\$1,050	\$1,663	70%	111%
2,000	1,400	1,050	1,016	1,400	2,066	70%	103%
2,500	1,750	1,313	1,157	1,750	2,470	70%	99%
3,000	2,100	1,575	1,297	2,100	2,872	70%	96%
3,500	2,450	1,838	1,438	2,450	3,276	70%	94%
4,000	2,800	2,100	1,579	2,800	3,679	70%	92%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 875	\$ 750	\$1,438	50%	96%
2,000	1,000	750	1,016	1,000	1,766	50%	88%
2,500	1,250	938	1,157	1,250	2,095	50%	84%
3,000	1,500	1,125	1,297	1,500	2,422	50%	81%
3,500	1,750	1,313	1,438	1,750	2,751	50%	79%
4,000	2,000	1,500	1,579	2,000	3,079	50%	77%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 875	\$ 450	\$1,213	30%	81%
2,000	600	450	1,016	600	1,466	30%	73%
2,500	750	563	1,157	750	1,720	30%	69%
3,000	900	675	1,297	900	1,972	30%	66%
3,500	1,050	788	1,438	1,050	2,226	30%	64%
4,000	1,200	900	1,579	1,200	2,479	30%	62%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(LT-14(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS <sup>1</sup> to age 65)  
1.75% of FAS <sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 919	\$ 875	\$1,050	\$1,794	70%	120%
2,000	1,400	1,225	1,016	1,400	2,241	70%	112%
2,500	1,750	1,531	1,157	1,750	2,688	70%	108%
3,000	2,100	1,838	1,297	2,100	3,135	70%	105%
3,500	2,450	2,144	1,438	2,450	3,582	70%	102%
4,000	2,800	2,450	1,579	2,800	4,029	70%	101%

25 Years of Service:

\$1,500	\$ 750	\$ 656	\$ 875	\$ 750	\$1,531	50%	102%
2,000	1,000	875	1,016	1,000	1,891	50%	95%
2,500	1,250	1,094	1,157	1,250	2,251	50%	90%
3,000	1,500	1,313	1,297	1,500	2,610	50%	87%
3,500	1,750	1,531	1,438	1,750	2,969	50%	85%
4,000	2,000	1,750	1,579	2,000	3,329	50%	83%

15 Years of Service:

\$1,500	\$ 450	\$ 394	\$ 875	\$ 450	\$1,269	30%	85%
2,000	600	525	1,016	600	1,541	30%	77%
2,500	750	656	1,157	750	1,813	30%	73%
3,000	900	788	1,297	900	2,085	30%	70%
3,500	1,050	919	1,438	1,050	2,357	30%	67%
4,000	1,200	1,050	1,579	1,200	2,629	30%	66%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

## **APPENDIX V**

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### **AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES**

# City of Pineville - General

February 28, 2018

## By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
<b>Under 20</b>									
20-24									
25-29	1							1	\$ 21,320
30-34			1					1	\$ 34,674
35-39	2							2	\$ 45,760
40-44	2							2	\$ 81,078
45-49	1	1						2	\$ 60,029
50-54									
55-59									
60-64									
65-69									
<b>70 &amp; Over</b>									
<b>Totals</b>	<b>6</b>	<b>1</b>	<b>1</b>					<b>8</b>	<b>\$ 242,861</b>

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

Age: 38.5 years.

Benefit Service: 0.0 years.

Annual Pay: \$ 30,358.



## City of Pineville - Police

February 28, 2018

### By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
<b>Under 20</b>									
20-24	1							1	\$ 27,040
25-29	1							1	\$ 27,040
30-34									
35-39									
40-44	1							1	\$ 40,804
45-49		1						1	\$ 30,680
50-54									
55-59									
60-64			1					1	\$ 33,051
65-69									
<b>70 &amp; Over</b>									
<b>Totals</b>	<b>3</b>	<b>1</b>	<b>1</b>					<b>5</b>	<b>\$ 158,615</b>

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

Age: 40.1 years.

Benefit Service: 0.0 years.

Annual Pay: \$ 31,723.



March 14, 2018 E-mail

Mr. Robert Wilson, Executive Secretary  
Missouri Local Government  
Employees Retirement System  
P.O. Box 1665  
Jefferson City, Missouri 65102

Dear Bob:

Enclosed is the report of the February 28, 2018 Initial Actuarial Valuation of LAGERS benefits for the employees of

City of Pineville

Sincerely,

A handwritten signature in black ink that reads "Mita Drazilov".

Mita D. Drazilov, ASA, FCA, MAAA

MDD:wp

March 14, 2018

City of Pineville  
Pineville, Missouri

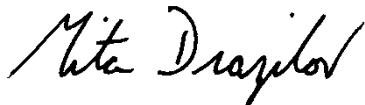
Ladies and Gentlemen:

This report contains projections needed to comply with Missouri state disclosure requirements (Section 105.660 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision. This report is intended to be a supplement to the February 28, 2018 Initial Valuation for the City of Pineville dated March 14, 2018.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of the Initial Valuation Report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2017.

Mita Drazilov is a member of the American Academy of Actuaries and meets the Qualification Standards of the Academy of Actuaries to render the actuarial opinions herein.

Respectfully submitted,



Mita D. Drazilov, ASA, FCA, MAAA

# City of Pineville - General

## Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 242,861	3.8%	\$9,229	\$ 26,558	5.4%	\$13,114	\$ 36,280	4.6%	\$11,172	\$ 31,801
2019	250,754	3.8	9,529	26,922	5.4	13,541	36,777	4.6	11,535	32,237
2020	258,904	3.8	9,838	27,261	5.4	13,981	37,241	4.6	11,910	32,643
2021	267,318	3.8	10,158	27,573	5.4	14,435	37,667	4.6	12,297	33,016
2022	276,006	3.8	10,488	27,853	5.4	14,904	38,050	4.6	12,696	33,351
2023	284,976	3.8	10,829	28,098	5.4	15,389	38,384	4.6	13,109	33,644
2024	294,238	3.8	11,181	28,303	5.4	15,889	38,664	4.6	13,535	33,889
2025	303,801	3.8	11,544	28,463	5.4	16,405	38,883	4.6	13,975	34,081
2026	313,675	3.8	11,920	28,573	5.4	16,938	39,033	4.6	14,429	34,213
2027	323,869	3.8	12,307	28,628	5.4	17,489	39,108	4.6	14,898	34,278

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 242,861	6.0%	\$14,572	\$ 40,198	7.0%	\$17,000	\$ 45,935	7.4%	\$17,972	\$ 48,532
2019	250,754	6.0	15,045	40,749	7.0	17,553	46,564	7.4	18,556	49,197
2020	258,904	6.0	15,534	41,263	7.0	18,123	47,151	7.4	19,159	49,817
2021	267,318	6.0	16,039	41,735	7.0	18,712	47,690	7.4	19,782	50,387
2022	276,006	6.0	16,560	42,159	7.0	19,320	48,175	7.4	20,424	50,899
2023	284,976	6.0	17,099	42,529	7.0	19,948	48,598	7.4	21,088	51,346
2024	294,238	6.0	17,654	42,839	7.0	20,597	48,952	7.4	21,774	51,720
2025	303,801	6.0	18,228	43,081	7.0	21,266	49,229	7.4	22,481	52,012
2026	313,675	6.0	18,821	43,248	7.0	21,957	49,419	7.4	23,212	52,213
2027	323,869	6.0	19,432	43,331	7.0	22,671	49,513	7.4	23,966	52,313

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 242,861	8.6%	\$20,886	\$ 55,509	8.9%	\$21,615	\$ 56,828	10.4%	\$25,258	\$ 65,071
2019	250,754	8.6	21,565	56,269	8.9	22,317	57,607	10.4	26,078	65,962
2020	258,904	8.6	22,266	56,979	8.9	23,042	58,333	10.4	26,926	66,794
2021	267,318	8.6	22,989	57,630	8.9	23,791	59,000	10.4	27,801	67,558
2022	276,006	8.6	23,737	58,216	8.9	24,565	59,599	10.4	28,705	68,244
2023	284,976	8.6	24,508	58,727	8.9	25,363	60,122	10.4	29,638	68,843
2024	294,238	8.6	25,304	59,155	8.9	26,187	60,560	10.4	30,601	69,344
2025	303,801	8.6	26,127	59,489	8.9	27,038	60,902	10.4	31,595	69,736
2026	313,675	8.6	26,976	59,719	8.9	27,917	61,138	10.4	32,622	70,006
2027	323,869	8.6	27,853	59,833	8.9	28,824	61,255	10.4	33,682	70,140

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - General

## Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 242,861	4.1%	\$9,957	\$ 27,894	5.7%	\$13,843	\$ 37,892	4.9%	\$11,900	\$ 33,301
2019	250,754	4.1	10,281	28,276	5.7	14,293	38,411	4.9	12,287	33,757
2020	258,904	4.1	10,615	28,633	5.7	14,758	38,895	4.9	12,686	34,183
2021	267,318	4.1	10,960	28,960	5.7	15,237	39,340	4.9	13,099	34,574
2022	276,006	4.1	11,316	29,254	5.7	15,732	39,740	4.9	13,524	34,925
2023	284,976	4.1	11,684	29,511	5.7	16,244	40,089	4.9	13,964	35,232
2024	294,238	4.1	12,064	29,726	5.7	16,772	40,381	4.9	14,418	35,489
2025	303,801	4.1	12,456	29,894	5.7	17,317	40,609	4.9	14,886	35,690
2026	313,675	4.1	12,861	30,010	5.7	17,879	40,766	4.9	15,370	35,828
2027	323,869	4.1	13,279	30,067	5.7	18,461	40,844	4.9	15,870	35,896

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 242,861	6.4%	\$15,543	\$ 41,988	7.3%	\$17,729	\$ 47,868	7.8%	\$18,943	\$ 50,557
2019	250,754	6.4	16,048	42,563	7.3	18,305	48,524	7.8	19,559	51,250
2020	258,904	6.4	16,570	43,100	7.3	18,900	49,136	7.8	20,195	51,896
2021	267,318	6.4	17,108	43,593	7.3	19,514	49,698	7.8	20,851	52,489
2022	276,006	6.4	17,664	44,036	7.3	20,148	50,203	7.8	21,528	53,022
2023	284,976	6.4	18,238	44,423	7.3	20,803	50,644	7.8	22,228	53,488
2024	294,238	6.4	18,831	44,747	7.3	21,479	51,013	7.8	22,951	53,878
2025	303,801	6.4	19,443	45,000	7.3	22,177	51,301	7.8	23,696	54,183
2026	313,675	6.4	20,075	45,174	7.3	22,898	51,499	7.8	24,467	54,393
2027	323,869	6.4	20,728	45,260	7.3	23,642	51,597	7.8	25,262	54,497

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 242,861	9.1%	\$22,100	\$ 57,769	9.3%	\$22,586	\$ 59,147	10.8%	\$26,229	\$ 67,722
2019	250,754	9.1	22,819	58,560	9.3	23,320	59,957	10.8	27,081	68,650
2020	258,904	9.1	23,560	59,298	9.3	24,078	60,713	10.8	27,962	69,516
2021	267,318	9.1	24,326	59,976	9.3	24,861	61,407	10.8	28,870	70,311
2022	276,006	9.1	25,117	60,585	9.3	25,669	62,031	10.8	29,809	71,025
2023	284,976	9.1	25,933	61,117	9.3	26,503	62,576	10.8	30,777	71,649
2024	294,238	9.1	26,776	61,562	9.3	27,364	63,032	10.8	31,778	72,171
2025	303,801	9.1	27,646	61,910	9.3	28,253	63,388	10.8	32,811	72,579
2026	313,675	9.1	28,544	62,149	9.3	29,172	63,633	10.8	33,877	72,860
2027	323,869	9.1	29,472	62,268	9.3	30,120	63,755	10.8	34,978	72,999

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - General

## Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 242,861	7.6%	\$18,457	\$ 37,637	9.2%	\$22,343	\$ 47,038	8.4%	\$20,400	\$ 42,844
2019	250,754	7.6	19,057	38,153	9.2	23,069	47,682	8.4	21,063	43,431
2020	258,904	7.6	19,677	38,634	9.2	23,819	48,283	8.4	21,748	43,979
2021	267,318	7.6	20,316	39,076	9.2	24,593	48,835	8.4	22,455	44,482
2022	276,006	7.6	20,976	39,473	9.2	25,393	49,331	8.4	23,185	44,934
2023	284,976	7.6	21,658	39,820	9.2	26,218	49,764	8.4	23,938	45,329
2024	294,238	7.6	22,362	40,110	9.2	27,070	50,126	8.4	24,716	45,659
2025	303,801	7.6	23,089	40,337	9.2	27,950	50,409	8.4	25,519	45,917
2026	313,675	7.6	23,839	40,493	9.2	28,858	50,604	8.4	26,349	46,095
2027	323,869	7.6	24,614	40,570	9.2	29,796	50,701	8.4	27,205	46,183

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	9.9%	\$24,043	\$ 50,932	10.8%	\$26,229	\$ 56,450	11.3%	\$27,443	\$ 59,015
2019	250,754	9.9	24,825	51,630	10.8	27,081	57,223	11.3	28,335	59,823
2020	258,904	9.9	25,631	52,281	10.8	27,962	57,945	11.3	29,256	60,577
2021	267,318	9.9	26,464	52,879	10.8	28,870	58,607	11.3	30,207	61,270
2022	276,006	9.9	27,325	53,416	10.8	29,809	59,203	11.3	31,189	61,893
2023	284,976	9.9	28,213	53,885	10.8	30,777	59,723	11.3	32,202	62,437
2024	294,238	9.9	29,130	54,278	10.8	31,778	60,158	11.3	33,249	62,892
2025	303,801	9.9	30,076	54,585	10.8	32,811	60,498	11.3	34,330	63,247
2026	313,675	9.9	31,054	54,796	10.8	33,877	60,732	11.3	35,445	63,492
2027	323,869	9.9	32,063	54,901	10.8	34,978	60,848	11.3	36,597	63,613

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	12.5%	\$30,358	\$ 65,854	12.8%	\$31,086	\$ 67,124	14.3%	\$34,729	\$ 75,214
2019	250,754	12.5	31,344	66,756	12.8	32,097	68,044	14.3	35,858	76,244
2020	258,904	12.5	32,363	67,598	12.8	33,140	68,902	14.3	37,023	77,205
2021	267,318	12.5	33,415	68,371	12.8	34,217	69,690	14.3	38,226	78,088
2022	276,006	12.5	34,501	69,066	12.8	35,329	70,398	14.3	39,469	78,881
2023	284,976	12.5	35,622	69,673	12.8	36,477	71,016	14.3	40,752	79,574
2024	294,238	12.5	36,780	70,181	12.8	37,662	71,533	14.3	42,076	80,154
2025	303,801	12.5	37,975	70,578	12.8	38,887	71,937	14.3	43,444	80,607
2026	313,675	12.5	39,209	70,851	12.8	40,150	72,215	14.3	44,856	80,919
2027	323,869	12.5	40,484	70,986	12.8	41,455	72,353	14.3	46,313	81,074

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - General

## Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 242,861	7.8%	\$18,943	\$ 38,851	9.5%	\$23,072	\$ 48,583	8.6%	\$20,886	\$ 44,227
2019	250,754	7.8	19,559	39,383	9.5	23,822	49,249	8.6	21,565	44,833
2020	258,904	7.8	20,195	39,880	9.5	24,596	49,870	8.6	22,266	45,398
2021	267,318	7.8	20,851	40,336	9.5	25,395	50,440	8.6	22,989	45,917
2022	276,006	7.8	21,528	40,746	9.5	26,221	50,953	8.6	23,737	46,384
2023	284,976	7.8	22,228	41,104	9.5	27,073	51,400	8.6	24,508	46,791
2024	294,238	7.8	22,951	41,403	9.5	27,953	51,774	8.6	25,304	47,132
2025	303,801	7.8	23,696	41,637	9.5	28,861	52,067	8.6	26,127	47,398
2026	313,675	7.8	24,467	41,798	9.5	29,799	52,268	8.6	26,976	47,581
2027	323,869	7.8	25,262	41,878	9.5	30,768	52,368	8.6	27,853	47,672

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	10.1%	\$24,529	\$ 52,593	11.2%	\$27,200	\$ 58,306	11.6%	\$28,172	\$ 61,014
2019	250,754	10.1	25,326	53,314	11.2	28,084	59,105	11.6	29,087	61,850
2020	258,904	10.1	26,149	53,986	11.2	28,997	59,850	11.6	30,033	62,630
2021	267,318	10.1	26,999	54,603	11.2	29,940	60,534	11.6	31,009	63,346
2022	276,006	10.1	27,877	55,158	11.2	30,913	61,149	11.6	32,017	63,990
2023	284,976	10.1	28,783	55,642	11.2	31,917	61,686	11.6	33,057	64,552
2024	294,238	10.1	29,718	56,047	11.2	32,955	62,135	11.6	34,132	65,022
2025	303,801	10.1	30,684	56,364	11.2	34,026	62,486	11.6	35,241	65,389
2026	313,675	10.1	31,681	56,582	11.2	35,132	62,728	11.6	36,386	65,642
2027	323,869	10.1	32,711	56,690	11.2	36,273	62,848	11.6	37,569	65,767

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	13.0%	\$31,572	\$ 67,987	13.2%	\$32,058	\$ 69,352	14.7%	\$35,701	\$ 77,744
2019	250,754	13.0	32,598	68,918	13.2	33,100	70,302	14.7	36,861	78,809
2020	258,904	13.0	33,658	69,787	13.2	34,175	71,188	14.7	38,059	79,803
2021	267,318	13.0	34,751	70,585	13.2	35,286	72,002	14.7	39,296	80,715
2022	276,006	13.0	35,881	71,302	13.2	36,433	72,734	14.7	40,573	81,535
2023	284,976	13.0	37,047	71,928	13.2	37,617	73,373	14.7	41,891	82,251
2024	294,238	13.0	38,251	72,452	13.2	38,839	73,907	14.7	43,253	82,850
2025	303,801	13.0	39,494	72,861	13.2	40,102	74,325	14.7	44,659	83,318
2026	313,675	13.0	40,778	73,143	13.2	41,405	74,612	14.7	46,110	83,640
2027	323,869	13.0	42,103	73,283	13.2	42,751	74,754	14.7	47,609	83,800

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - General

## Employer Contribution Rates (Contributory Plan - 5 Year FAS) (4% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 242,861	4.2%	\$10,200	\$ 30,359	6.0%	\$14,572	\$ 40,862	5.6%	\$13,600	\$ 41,692
2019	250,754	4.2	10,532	30,775	6.0	15,045	41,422	5.6	14,042	42,263
2020	258,904	4.2	10,874	31,163	6.0	15,534	41,944	5.6	14,499	42,796
2021	267,318	4.2	11,227	31,519	6.0	16,039	42,424	5.6	14,970	43,285
2022	276,006	4.2	11,592	31,839	6.0	16,560	42,855	5.6	15,456	43,725
2023	284,976	4.2	11,969	32,119	6.0	17,099	43,231	5.6	15,959	44,109
2024	294,238	4.2	12,358	32,353	6.0	17,654	43,546	5.6	16,477	44,430
2025	303,801	4.2	12,760	32,536	6.0	18,228	43,792	5.6	17,013	44,681
2026	313,675	4.2	13,174	32,662	6.0	18,821	43,961	5.6	17,566	44,854
2027	323,869	4.2	13,602	32,724	6.0	19,432	44,045	5.6	18,137	44,940

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	7.0%	\$17,000	\$ 49,353	7.6%	\$18,457	\$ 51,282	8.3%	\$20,157	\$ 56,931
2019	250,754	7.0	17,553	50,029	7.6	19,057	51,985	8.3	20,813	57,711
2020	258,904	7.0	18,123	50,660	7.6	19,677	52,640	8.3	21,489	58,439
2021	267,318	7.0	18,712	51,239	7.6	20,316	53,242	8.3	22,187	59,107
2022	276,006	7.0	19,320	51,760	7.6	20,976	53,783	8.3	22,908	59,708
2023	284,976	7.0	19,948	52,215	7.6	21,658	54,255	8.3	23,653	60,232
2024	294,238	7.0	20,597	52,595	7.6	22,362	54,650	8.3	24,422	60,671
2025	303,801	7.0	21,266	52,892	7.6	23,089	54,959	8.3	25,215	61,014
2026	313,675	7.0	21,957	53,097	7.6	23,839	55,172	8.3	26,035	61,250
2027	323,869	7.0	22,671	53,198	7.6	24,614	55,277	8.3	26,881	61,367

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	9.4%	\$22,829	\$ 61,656	9.7%	\$23,557	\$ 64,486	11.2%	\$27,200	\$ 72,016
2019	250,754	9.4	23,571	62,501	9.7	24,323	65,369	11.2	28,084	73,003
2020	258,904	9.4	24,337	63,289	9.7	25,114	66,193	11.2	28,997	73,924
2021	267,318	9.4	25,128	64,013	9.7	25,930	66,950	11.2	29,940	74,769
2022	276,006	9.4	25,945	64,663	9.7	26,773	67,630	11.2	30,913	75,529
2023	284,976	9.4	26,788	65,231	9.7	27,643	68,224	11.2	31,917	76,192
2024	294,238	9.4	27,658	65,706	9.7	28,541	68,721	11.2	32,955	76,747
2025	303,801	9.4	28,557	66,077	9.7	29,469	69,109	11.2	34,026	77,181
2026	313,675	9.4	29,485	66,333	9.7	30,426	69,376	11.2	35,132	77,479
2027	323,869	9.4	30,444	66,460	9.7	31,415	69,508	11.2	36,273	77,627

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.



# City of Pineville - General

## Employer Contribution Rates (Contributory Plan - 3 Year FAS) (4% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 242,861	4.4%	\$10,686	\$ 31,822	6.3%	\$15,300	\$ 42,670	5.9%	\$14,329	\$ 43,575
2019	250,754	4.4	11,033	32,258	6.3	15,798	43,255	5.9	14,794	44,172
2020	258,904	4.4	11,392	32,665	6.3	16,311	43,800	5.9	15,275	44,729
2021	267,318	4.4	11,762	33,038	6.3	16,841	44,301	5.9	15,772	45,240
2022	276,006	4.4	12,144	33,374	6.3	17,388	44,751	5.9	16,284	45,700
2023	284,976	4.4	12,539	33,667	6.3	17,953	45,144	5.9	16,814	46,101
2024	294,238	4.4	12,946	33,912	6.3	18,537	45,473	5.9	17,360	46,437
2025	303,801	4.4	13,367	34,104	6.3	19,139	45,730	5.9	17,924	46,699
2026	313,675	4.4	13,802	34,236	6.3	19,762	45,907	5.9	18,507	46,880
2027	323,869	4.4	14,250	34,301	6.3	20,404	45,995	5.9	19,108	46,970

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	7.3%	\$17,729	\$ 51,479	7.9%	\$19,186	\$ 53,471	8.7%	\$21,129	\$ 59,327
2019	250,754	7.3	18,305	52,184	7.9	19,810	54,204	8.7	21,816	60,140
2020	258,904	7.3	18,900	52,842	7.9	20,453	54,887	8.7	22,525	60,898
2021	267,318	7.3	19,514	53,446	7.9	21,118	55,515	8.7	23,257	61,594
2022	276,006	7.3	20,148	53,989	7.9	21,804	56,079	8.7	24,013	62,220
2023	284,976	7.3	20,803	54,463	7.9	22,513	56,572	8.7	24,793	62,766
2024	294,238	7.3	21,479	54,860	7.9	23,245	56,984	8.7	25,599	63,223
2025	303,801	7.3	22,177	55,170	7.9	24,000	57,306	8.7	26,431	63,580
2026	313,675	7.3	22,898	55,383	7.9	24,780	57,528	8.7	27,290	63,826
2027	323,869	7.3	23,642	55,489	7.9	25,586	57,638	8.7	28,177	63,948

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	9.8%	\$23,800	\$ 64,165	10.2%	\$24,772	\$ 67,119	11.7%	\$28,415	\$ 74,948
2019	250,754	9.8	24,574	65,044	10.2	25,577	68,039	11.7	29,338	75,975
2020	258,904	9.8	25,373	65,864	10.2	26,408	68,897	11.7	30,292	76,933
2021	267,318	9.8	26,197	66,617	10.2	27,266	69,685	11.7	31,276	77,813
2022	276,006	9.8	27,049	67,294	10.2	28,153	70,393	11.7	32,293	78,604
2023	284,976	9.8	27,928	67,885	10.2	29,068	71,011	11.7	33,342	79,294
2024	294,238	9.8	28,835	68,379	10.2	30,012	71,528	11.7	34,426	79,872
2025	303,801	9.8	29,772	68,765	10.2	30,988	71,932	11.7	35,545	80,323
2026	313,675	9.8	30,740	69,031	10.2	31,995	72,210	11.7	36,700	80,634
2027	323,869	9.8	31,739	69,163	10.2	33,035	72,348	11.7	37,893	80,788

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - General

## Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS) (0% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 242,861	8.0%	\$19,429	\$ 41,004	9.8%	\$23,800	\$ 51,254	9.3%	\$22,586	\$ 52,261
2019	250,754	8.0	20,060	41,566	9.8	24,574	51,956	9.3	23,320	52,977
2020	258,904	8.0	20,712	42,090	9.8	25,373	52,611	9.3	24,078	53,645
2021	267,318	8.0	21,385	42,571	9.8	26,197	53,212	9.3	24,861	54,258
2022	276,006	8.0	22,080	43,004	9.8	27,049	53,753	9.3	25,669	54,809
2023	284,976	8.0	22,798	43,382	9.8	27,928	54,225	9.3	26,503	55,290
2024	294,238	8.0	23,539	43,698	9.8	28,835	54,620	9.3	27,364	55,693
2025	303,801	8.0	24,304	43,945	9.8	29,772	54,929	9.3	28,253	56,008
2026	313,675	8.0	25,094	44,115	9.8	30,740	55,141	9.3	29,172	56,225
2027	323,869	8.0	25,910	44,199	9.8	31,739	55,246	9.3	30,120	56,332

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	10.8%	\$26,229	\$ 59,712	11.4%	\$27,686	\$ 61,500	12.2%	\$29,629	\$ 67,129
2019	250,754	10.8	27,081	60,530	11.4	28,586	62,343	12.2	30,592	68,049
2020	258,904	10.8	27,962	61,293	11.4	29,515	63,129	12.2	31,586	68,907
2021	267,318	10.8	28,870	61,994	11.4	30,474	63,851	12.2	32,613	69,695
2022	276,006	10.8	29,809	62,624	11.4	31,465	64,500	12.2	33,673	70,403
2023	284,976	10.8	30,777	63,174	11.4	32,487	65,066	12.2	34,767	71,021
2024	294,238	10.8	31,778	63,634	11.4	33,543	65,540	12.2	35,897	71,538
2025	303,801	10.8	32,811	63,994	11.4	34,633	65,910	12.2	37,064	71,942
2026	313,675	10.8	33,877	64,241	11.4	35,759	66,165	12.2	38,268	72,220
2027	323,869	10.8	34,978	64,364	11.4	36,921	66,291	12.2	39,512	72,358

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	13.3%	\$32,300	\$ 71,756	13.6%	\$33,029	\$ 74,563	15.1%	\$36,672	\$ 82,005
2019	250,754	13.3	33,350	72,739	13.6	34,103	75,585	15.1	37,864	83,128
2020	258,904	13.3	34,434	73,656	13.6	35,211	76,538	15.1	39,095	84,176
2021	267,318	13.3	35,553	74,498	13.6	36,355	77,413	15.1	40,365	85,138
2022	276,006	13.3	36,709	75,255	13.6	37,537	78,200	15.1	41,677	86,003
2023	284,976	13.3	37,902	75,916	13.6	38,757	78,887	15.1	43,031	86,758
2024	294,238	13.3	39,134	76,469	13.6	40,016	79,462	15.1	44,430	87,390
2025	303,801	13.3	40,406	76,901	13.6	41,317	79,911	15.1	45,874	87,884
2026	313,675	13.3	41,719	77,198	13.6	42,660	80,220	15.1	47,365	88,224
2027	323,869	13.3	43,075	77,345	13.6	44,046	80,373	15.1	48,904	88,392

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - General

## Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 242,861	8.2%	\$19,915	\$ 42,448	10.0%	\$24,286	\$ 53,035	9.6%	\$23,315	\$ 54,136
2019	250,754	8.2	20,562	43,030	10.0	25,075	53,762	9.6	24,072	54,878
2020	258,904	8.2	21,230	43,573	10.0	25,890	54,440	9.6	24,855	55,570
2021	267,318	8.2	21,920	44,071	10.0	26,732	55,062	9.6	25,663	56,205
2022	276,006	8.2	22,632	44,519	10.0	27,601	55,621	9.6	26,497	56,776
2023	284,976	8.2	23,368	44,910	10.0	28,498	56,109	9.6	27,358	57,275
2024	294,238	8.2	24,128	45,237	10.0	29,424	56,518	9.6	28,247	57,692
2025	303,801	8.2	24,912	45,493	10.0	30,380	56,837	9.6	29,165	58,018
2026	313,675	8.2	25,721	45,669	10.0	31,368	57,057	9.6	30,113	58,242
2027	323,869	8.2	26,557	45,756	10.0	32,387	57,166	9.6	31,091	58,353

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	11.1%	\$26,958	\$ 61,800	11.8%	\$28,658	\$ 63,639	12.5%	\$30,358	\$ 69,473
2019	250,754	11.1	27,834	62,647	11.8	29,589	64,511	12.5	31,344	70,425
2020	258,904	11.1	28,738	63,437	11.8	30,551	65,324	12.5	32,363	71,313
2021	267,318	11.1	29,672	64,162	11.8	31,544	66,071	12.5	33,415	72,128
2022	276,006	11.1	30,637	64,814	11.8	32,569	66,742	12.5	34,501	72,861
2023	284,976	11.1	31,632	65,383	11.8	33,627	67,328	12.5	35,622	73,501
2024	294,238	11.1	32,660	65,859	11.8	34,720	67,818	12.5	36,780	74,036
2025	303,801	11.1	33,722	66,231	11.8	35,849	68,201	12.5	37,975	74,454
2026	313,675	11.1	34,818	66,487	11.8	37,014	68,465	12.5	39,209	74,742
2027	323,869	11.1	35,949	66,614	11.8	38,217	68,596	12.5	40,484	74,885

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 242,861	13.7%	\$33,272	\$ 74,202	14.0%	\$34,001	\$ 77,136	15.6%	\$37,886	\$ 84,810
2019	250,754	13.7	34,353	75,219	14.0	35,106	78,193	15.6	39,118	85,972
2020	258,904	13.7	35,470	76,167	14.0	36,247	79,179	15.6	40,389	87,056
2021	267,318	13.7	36,623	77,038	14.0	37,425	80,084	15.6	41,702	88,051
2022	276,006	13.7	37,813	77,821	14.0	38,641	80,898	15.6	43,057	88,946
2023	284,976	13.7	39,042	78,504	14.0	39,897	81,608	15.6	44,456	89,727
2024	294,238	13.7	40,311	79,076	14.0	41,193	82,202	15.6	45,901	90,381
2025	303,801	13.7	41,621	79,523	14.0	42,532	82,667	15.6	47,393	90,892
2026	313,675	13.7	42,973	79,831	14.0	43,915	82,987	15.6	48,933	91,243
2027	323,869	13.7	44,370	79,983	14.0	45,342	83,145	15.6	50,524	91,417

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - Police

## Employer Contribution Rates (Contributory Plan - 5 Year FAS) (4% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	4.9%	\$7,772	\$ 13,615	6.6%	\$10,469	\$ 18,132	6.6%	\$10,469	\$ 16,439
2019	163,770	4.9	8,025	13,802	6.6	10,809	18,380	6.6	10,809	16,664
2020	169,093	4.9	8,286	13,976	6.6	11,160	18,612	6.6	11,160	16,874
2021	174,589	4.9	8,555	14,136	6.6	11,523	18,825	6.6	11,523	17,067
2022	180,263	4.9	8,833	14,280	6.6	11,897	19,016	6.6	11,897	17,240
2023	186,122	4.9	9,120	14,405	6.6	12,284	19,183	6.6	12,284	17,391
2024	192,171	4.9	9,416	14,510	6.6	12,683	19,323	6.6	12,683	17,518
2025	198,417	4.9	9,722	14,592	6.6	13,096	19,432	6.6	13,096	17,617
2026	204,866	4.9	10,038	14,648	6.6	13,521	19,507	6.6	13,521	17,685
2027	211,524	4.9	10,365	14,676	6.6	13,961	19,544	6.6	13,961	17,719

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	7.9%	\$12,531	\$ 20,254	8.5%	\$13,482	\$ 22,660	9.4%	\$14,910	\$ 24,066
2019	163,770	7.9	12,938	20,531	8.5	13,920	22,970	9.4	15,394	24,396
2020	169,093	7.9	13,358	20,790	8.5	14,373	23,260	9.4	15,895	24,704
2021	174,589	7.9	13,793	21,028	8.5	14,840	23,526	9.4	16,411	24,986
2022	180,263	7.9	14,241	21,242	8.5	15,322	23,765	9.4	16,945	25,240
2023	186,122	7.9	14,704	21,429	8.5	15,820	23,974	9.4	17,495	25,462
2024	192,171	7.9	15,182	21,585	8.5	16,335	24,149	9.4	18,064	25,647
2025	198,417	7.9	15,675	21,707	8.5	16,865	24,285	9.4	18,651	25,792
2026	204,866	7.9	16,184	21,791	8.5	17,414	24,379	9.4	19,257	25,892
2027	211,524	7.9	16,710	21,833	8.5	17,980	24,426	9.4	19,883	25,941

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	10.4%	\$16,496	\$ 27,134	10.8%	\$17,130	\$ 27,848	12.3%	\$19,510	\$ 31,653
2019	163,770	10.4	17,032	27,506	10.8	17,687	28,230	12.3	20,144	32,087
2020	169,093	10.4	17,586	27,853	10.8	18,262	28,586	12.3	20,798	32,492
2021	174,589	10.4	18,157	28,171	10.8	18,856	28,913	12.3	21,474	32,863
2022	180,263	10.4	18,747	28,457	10.8	19,468	29,207	12.3	22,172	33,197
2023	186,122	10.4	19,357	28,707	10.8	20,101	29,464	12.3	22,893	33,489
2024	192,171	10.4	19,986	28,916	10.8	20,754	29,679	12.3	23,637	33,733
2025	198,417	10.4	20,635	29,079	10.8	21,429	29,847	12.3	24,405	33,924
2026	204,866	10.4	21,306	29,191	10.8	22,126	29,962	12.3	25,199	34,055
2027	211,524	10.4	21,998	29,247	10.8	22,845	30,019	12.3	26,017	34,120

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - Police

## Employer Contribution Rates (Contributory Plan - 3 Year FAS) (4% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 158,615	5.1%	\$8,089	\$ 14,229	7.0%	\$11,103	\$ 18,903	6.8%	\$10,786	\$ 17,148
2019	163,770	5.1	8,352	14,424	7.0	11,464	19,162	6.8	11,136	17,383
2020	169,093	5.1	8,624	14,606	7.0	11,837	19,404	6.8	11,498	17,602
2021	174,589	5.1	8,904	14,773	7.0	12,221	19,626	6.8	11,872	17,803
2022	180,263	5.1	9,193	14,923	7.0	12,618	19,825	6.8	12,258	17,984
2023	186,122	5.1	9,492	15,054	7.0	13,029	19,999	6.8	12,656	18,142
2024	192,171	5.1	9,801	15,164	7.0	13,452	20,145	6.8	13,068	18,274
2025	198,417	5.1	10,119	15,250	7.0	13,889	20,259	6.8	13,492	18,377
2026	204,866	5.1	10,448	15,309	7.0	14,341	20,337	6.8	13,931	18,448
2027	211,524	5.1	10,788	15,338	7.0	14,807	20,376	6.8	14,384	18,483

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 158,615	8.4%	\$13,324	\$ 21,087	8.8%	\$13,958	\$ 23,583	9.8%	\$15,544	\$ 25,047
2019	163,770	8.4	13,757	21,376	8.8	14,412	23,906	9.8	16,049	25,390
2020	169,093	8.4	14,204	21,646	8.8	14,880	24,207	9.8	16,571	25,710
2021	174,589	8.4	14,665	21,893	8.8	15,364	24,484	9.8	17,110	26,004
2022	180,263	8.4	15,142	22,115	8.8	15,863	24,733	9.8	17,666	26,268
2023	186,122	8.4	15,634	22,309	8.8	16,379	24,950	9.8	18,240	26,499
2024	192,171	8.4	16,142	22,472	8.8	16,911	25,132	9.8	18,833	26,692
2025	198,417	8.4	16,667	22,599	8.8	17,461	25,274	9.8	19,445	26,843
2026	204,866	8.4	17,209	22,686	8.8	18,028	25,372	9.8	20,077	26,947
2027	211,524	8.4	17,768	22,729	8.8	18,614	25,420	9.8	20,729	26,998

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 158,615	10.8%	\$17,130	\$ 28,242	11.2%	\$17,765	\$ 28,979	12.7%	\$20,144	\$ 32,925
2019	163,770	10.8	17,687	28,629	11.2	18,342	29,376	12.7	20,799	33,376
2020	169,093	10.8	18,262	28,990	11.2	18,938	29,746	12.7	21,475	33,797
2021	174,589	10.8	18,856	29,321	11.2	19,554	30,086	12.7	22,173	34,183
2022	180,263	10.8	19,468	29,619	11.2	20,189	30,392	12.7	22,893	34,530
2023	186,122	10.8	20,101	29,879	11.2	20,846	30,659	12.7	23,637	34,833
2024	192,171	10.8	20,754	30,097	11.2	21,523	30,882	12.7	24,406	35,087
2025	198,417	10.8	21,429	30,267	11.2	22,223	31,057	12.7	25,199	35,285
2026	204,866	10.8	22,126	30,384	11.2	22,945	31,177	12.7	26,018	35,421
2027	211,524	10.8	22,845	30,442	11.2	23,691	31,237	12.7	26,864	35,489

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - Police

## Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	8.5%	\$13,482	\$ 17,516	10.4%	\$16,496	\$ 21,937	10.2%	\$16,179	\$ 20,341
2019	163,770	8.5	13,920	17,756	10.4	17,032	22,238	10.2	16,705	20,620
2020	169,093	8.5	14,373	17,980	10.4	17,586	22,518	10.2	17,247	20,880
2021	174,589	8.5	14,840	18,186	10.4	18,157	22,775	10.2	17,808	21,119
2022	180,263	8.5	15,322	18,371	10.4	18,747	23,006	10.2	18,387	21,334
2023	186,122	8.5	15,820	18,532	10.4	19,357	23,208	10.2	18,984	21,521
2024	192,171	8.5	16,335	18,667	10.4	19,986	23,377	10.2	19,601	21,678
2025	198,417	8.5	16,865	18,772	10.4	20,635	23,509	10.2	20,239	21,801
2026	204,866	8.5	17,414	18,845	10.4	21,306	23,600	10.2	20,896	21,885
2027	211,524	8.5	17,980	18,881	10.4	21,998	23,645	10.2	21,575	21,927

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	11.7%	\$18,558	\$ 24,053	12.3%	\$19,510	\$ 26,305	13.2%	\$20,937	\$ 27,703
2019	163,770	11.7	19,161	24,383	12.3	20,144	26,665	13.2	21,618	28,083
2020	169,093	11.7	19,784	24,690	12.3	20,798	27,001	13.2	22,320	28,437
2021	174,589	11.7	20,427	24,972	12.3	21,474	27,310	13.2	23,046	28,762
2022	180,263	11.7	21,091	25,226	12.3	22,172	27,587	13.2	23,795	29,054
2023	186,122	11.7	21,776	25,448	12.3	22,893	27,829	13.2	24,568	29,309
2024	192,171	11.7	22,484	25,633	12.3	23,637	28,032	13.2	25,367	29,522
2025	198,417	11.7	23,215	25,778	12.3	24,405	28,190	13.2	26,191	29,689
2026	204,866	11.7	23,969	25,878	12.3	25,199	28,299	13.2	27,042	29,804
2027	211,524	11.7	24,748	25,927	12.3	26,017	28,353	13.2	27,921	29,861

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	14.2%	\$22,523	\$ 30,710	14.6%	\$23,158	\$ 31,395	16.2%	\$25,696	\$ 35,074
2019	163,770	14.2	23,255	31,131	14.6	23,910	31,825	16.2	26,531	35,555
2020	169,093	14.2	24,011	31,524	14.6	24,688	32,226	16.2	27,393	36,003
2021	174,589	14.2	24,792	31,884	14.6	25,490	32,594	16.2	28,283	36,415
2022	180,263	14.2	25,597	32,208	14.6	26,318	32,925	16.2	29,203	36,785
2023	186,122	14.2	26,429	32,491	14.6	27,174	33,214	16.2	30,152	37,108
2024	192,171	14.2	27,288	32,728	14.6	28,057	33,456	16.2	31,132	37,378
2025	198,417	14.2	28,175	32,913	14.6	28,969	33,645	16.2	32,144	37,589
2026	204,866	14.2	29,091	33,040	14.6	29,910	33,775	16.2	33,188	37,734
2027	211,524	14.2	30,036	33,103	14.6	30,883	33,839	16.2	34,267	37,806

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - Police

## Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 158,615	8.7%	\$13,800	\$ 18,123	10.7%	\$16,972	\$ 22,670	10.6%	\$16,813	\$ 21,047
2019	163,770	8.7	14,248	18,371	10.7	17,523	22,981	10.6	17,360	21,335
2020	169,093	8.7	14,711	18,603	10.7	18,093	23,271	10.6	17,924	21,604
2021	174,589	8.7	15,189	18,816	10.7	18,681	23,537	10.6	18,506	21,851
2022	180,263	8.7	15,683	19,007	10.7	19,288	23,776	10.6	19,108	22,073
2023	186,122	8.7	16,193	19,174	10.7	19,915	23,985	10.6	19,729	22,267
2024	192,171	8.7	16,719	19,314	10.7	20,562	24,160	10.6	20,370	22,429
2025	198,417	8.7	17,262	19,423	10.7	21,231	24,297	10.6	21,032	22,556
2026	204,866	8.7	17,823	19,498	10.7	21,921	24,391	10.6	21,716	22,643
2027	211,524	8.7	18,403	19,535	10.7	22,633	24,438	10.6	22,422	22,686

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 158,615	12.1%	\$19,192	\$ 24,856	12.7%	\$20,144	\$ 27,186	13.6%	\$21,572	\$ 28,650
2019	163,770	12.1	19,816	25,197	12.7	20,799	27,558	13.6	22,273	29,043
2020	169,093	12.1	20,460	25,515	12.7	21,475	27,905	13.6	22,997	29,409
2021	174,589	12.1	21,125	25,807	12.7	22,173	28,224	13.6	23,744	29,745
2022	180,263	12.1	21,812	26,069	12.7	22,893	28,511	13.6	24,516	30,047
2023	186,122	12.1	22,521	26,298	12.7	23,637	28,761	13.6	25,313	30,311
2024	192,171	12.1	23,253	26,490	12.7	24,406	28,971	13.6	26,135	30,532
2025	198,417	12.1	24,008	26,640	12.7	25,199	29,135	13.6	26,985	30,705
2026	204,866	12.1	24,789	26,743	12.7	26,018	29,248	13.6	27,862	30,824
2027	211,524	12.1	25,594	26,794	12.7	26,864	29,304	13.6	28,767	30,883

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 158,615	14.6%	\$23,158	\$ 31,732	15.1%	\$23,951	\$ 32,458	16.6%	\$26,330	\$ 36,261
2019	163,770	14.6	23,910	32,167	15.1	24,729	32,903	16.6	27,186	36,758
2020	169,093	14.6	24,688	32,573	15.1	25,533	33,318	16.6	28,069	37,221
2021	174,589	14.6	25,490	32,945	15.1	26,363	33,699	16.6	28,982	37,647
2022	180,263	14.6	26,318	33,280	15.1	27,220	34,041	16.6	29,924	38,030
2023	186,122	14.6	27,174	33,572	15.1	28,104	34,340	16.6	30,896	38,364
2024	192,171	14.6	28,057	33,817	15.1	29,018	34,590	16.6	31,900	38,643
2025	198,417	14.6	28,969	34,008	15.1	29,961	34,785	16.6	32,937	38,861
2026	204,866	14.6	29,910	34,140	15.1	30,935	34,920	16.6	34,008	39,011
2027	211,524	14.6	30,883	34,205	15.1	31,940	34,987	16.6	35,113	39,085

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.



# City of Pineville - Police

## Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 158,615	5.0%	\$7,931	\$ 13,682	6.9%	\$10,944	\$ 18,207	6.9%	\$10,944	\$ 16,639
2019	163,770	5.0	8,189	13,869	6.9	11,300	18,456	6.9	11,300	16,867
2020	169,093	5.0	8,455	14,044	6.9	11,667	18,689	6.9	11,667	17,080
2021	174,589	5.0	8,729	14,205	6.9	12,047	18,903	6.9	12,047	17,275
2022	180,263	5.0	9,013	14,349	6.9	12,438	19,095	6.9	12,438	17,451
2023	186,122	5.0	9,306	14,475	6.9	12,842	19,263	6.9	12,842	17,604
2024	192,171	5.0	9,609	14,580	6.9	13,260	19,403	6.9	13,260	17,732
2025	198,417	5.0	9,921	14,662	6.9	13,691	19,513	6.9	13,691	17,832
2026	204,866	5.0	10,243	14,719	6.9	14,136	19,588	6.9	14,136	17,901
2027	211,524	5.0	10,576	14,747	6.9	14,595	19,625	6.9	14,595	17,935

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 158,615	8.2%	\$13,006	\$ 20,435	8.7%	\$13,800	\$ 22,778	9.7%	\$15,386	\$ 24,252
2019	163,770	8.2	13,429	20,715	8.7	14,248	23,090	9.7	15,886	24,584
2020	169,093	8.2	13,866	20,976	8.7	14,711	23,381	9.7	16,402	24,894
2021	174,589	8.2	14,316	21,216	8.7	15,189	23,648	9.7	16,935	25,179
2022	180,263	8.2	14,782	21,432	8.7	15,683	23,888	9.7	17,486	25,435
2023	186,122	8.2	15,262	21,620	8.7	16,193	24,098	9.7	18,054	25,658
2024	192,171	8.2	15,758	21,777	8.7	16,719	24,274	9.7	18,641	25,845
2025	198,417	8.2	16,270	21,900	8.7	17,262	24,411	9.7	19,246	25,991
2026	204,866	8.2	16,799	21,985	8.7	17,823	24,505	9.7	19,872	26,092
2027	211,524	8.2	17,345	22,027	8.7	18,403	24,552	9.7	20,518	26,142

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 158,615	10.6%	\$16,813	\$ 27,278	11.1%	\$17,606	\$ 28,018	12.5%	\$19,827	\$ 31,807
2019	163,770	10.6	17,360	27,652	11.1	18,178	28,402	12.5	20,471	32,243
2020	169,093	10.6	17,924	28,001	11.1	18,769	28,760	12.5	21,137	32,650
2021	174,589	10.6	18,506	28,321	11.1	19,379	29,089	12.5	21,824	33,023
2022	180,263	10.6	19,108	28,609	11.1	20,009	29,385	12.5	22,533	33,359
2023	186,122	10.6	19,729	28,860	11.1	20,660	29,643	12.5	23,265	33,652
2024	192,171	10.6	20,370	29,070	11.1	21,331	29,859	12.5	24,021	33,897
2025	198,417	10.6	21,032	29,234	11.1	22,024	30,028	12.5	24,802	34,089
2026	204,866	10.6	21,716	29,347	11.1	22,740	30,144	12.5	25,608	34,221
2027	211,524	10.6	22,422	29,403	11.1	23,479	30,202	12.5	26,441	34,286

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.



# City of Pineville - Police

## Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	5.2%	\$8,248	\$ 14,338	7.2%	\$11,420	\$ 19,004	7.2%	\$11,420	\$ 17,383
2019	163,770	5.2	8,516	14,534	7.2	11,791	19,264	7.2	11,791	17,621
2020	169,093	5.2	8,793	14,717	7.2	12,175	19,507	7.2	12,175	17,843
2021	174,589	5.2	9,079	14,885	7.2	12,570	19,730	7.2	12,570	18,047
2022	180,263	5.2	9,374	15,036	7.2	12,979	19,930	7.2	12,979	18,230
2023	186,122	5.2	9,678	15,168	7.2	13,401	20,105	7.2	13,401	18,390
2024	192,171	5.2	9,993	15,278	7.2	13,836	20,251	7.2	13,836	18,524
2025	198,417	5.2	10,318	15,364	7.2	14,286	20,365	7.2	14,286	18,629
2026	204,866	5.2	10,653	15,423	7.2	14,750	20,444	7.2	14,750	18,701
2027	211,524	5.2	10,999	15,452	7.2	15,230	20,483	7.2	15,230	18,737

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	8.7%	\$13,800	\$ 21,291	9.0%	\$14,275	\$ 23,708	10.1%	\$16,020	\$ 25,239
2019	163,770	8.7	14,248	21,583	9.0	14,739	24,033	10.1	16,541	25,585
2020	169,093	8.7	14,711	21,855	9.0	15,218	24,336	10.1	17,078	25,908
2021	174,589	8.7	15,189	22,105	9.0	15,713	24,614	10.1	17,633	26,204
2022	180,263	8.7	15,683	22,330	9.0	16,224	24,864	10.1	18,207	26,470
2023	186,122	8.7	16,193	22,526	9.0	16,751	25,082	10.1	18,798	26,702
2024	192,171	8.7	16,719	22,690	9.0	17,295	25,265	10.1	19,409	26,897
2025	198,417	8.7	17,262	22,818	9.0	17,858	25,408	10.1	20,040	27,049
2026	204,866	8.7	17,823	22,906	9.0	18,438	25,506	10.1	20,691	27,154
2027	211,524	8.7	18,403	22,950	9.0	19,037	25,555	10.1	21,364	27,206

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	11.0%	\$17,448	\$ 28,386	11.5%	\$18,241	\$ 29,143	13.0%	\$20,620	\$ 33,069
2019	163,770	11.0	18,015	28,775	11.5	18,834	29,542	13.0	21,290	33,522
2020	169,093	11.0	18,600	29,138	11.5	19,446	29,915	13.0	21,982	33,945
2021	174,589	11.0	19,205	29,471	11.5	20,078	30,257	13.0	22,697	34,333
2022	180,263	11.0	19,829	29,770	11.5	20,730	30,564	13.0	23,434	34,682
2023	186,122	11.0	20,473	30,031	11.5	21,404	30,832	13.0	24,196	34,987
2024	192,171	11.0	21,139	30,250	11.5	22,100	31,057	13.0	24,982	35,242
2025	198,417	11.0	21,826	30,421	11.5	22,818	31,233	13.0	25,794	35,441
2026	204,866	11.0	22,535	30,539	11.5	23,560	31,354	13.0	26,633	35,578
2027	211,524	11.0	23,268	30,597	11.5	24,325	31,414	13.0	27,498	35,646

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# City of Pineville - Police

## Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	8.6%	\$13,641	\$ 17,585	10.6%	\$16,813	\$ 22,018	10.5%	\$16,655	\$ 20,548
2019	163,770	8.6	14,084	17,826	10.6	17,360	22,320	10.5	17,196	20,830
2020	169,093	8.6	14,542	18,051	10.6	17,924	22,601	10.5	17,755	21,093
2021	174,589	8.6	15,015	18,257	10.6	18,506	22,859	10.5	18,332	21,334
2022	180,263	8.6	15,503	18,443	10.6	19,108	23,091	10.5	18,928	21,551
2023	186,122	8.6	16,006	18,605	10.6	19,729	23,294	10.5	19,543	21,740
2024	192,171	8.6	16,527	18,741	10.6	20,370	23,464	10.5	20,178	21,898
2025	198,417	8.6	17,064	18,847	10.6	21,032	23,597	10.5	20,834	22,022
2026	204,866	8.6	17,618	18,920	10.6	21,716	23,688	10.5	21,511	22,107
2027	211,524	8.6	18,191	18,956	10.6	22,422	23,733	10.5	22,210	22,149

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	12.0%	\$19,034	\$ 24,233	12.5%	\$19,827	\$ 26,314	13.5%	\$21,413	\$ 27,879
2019	163,770	12.0	19,652	24,565	12.5	20,471	26,674	13.5	22,109	28,261
2020	169,093	12.0	20,291	24,875	12.5	21,137	27,010	13.5	22,828	28,617
2021	174,589	12.0	20,951	25,159	12.5	21,824	27,319	13.5	23,570	28,944
2022	180,263	12.0	21,632	25,415	12.5	22,533	27,597	13.5	24,336	29,238
2023	186,122	12.0	22,335	25,638	12.5	23,265	27,839	13.5	25,126	29,495
2024	192,171	12.0	23,061	25,825	12.5	24,021	28,042	13.5	25,943	29,710
2025	198,417	12.0	23,810	25,971	12.5	24,802	28,200	13.5	26,786	29,878
2026	204,866	12.0	24,584	26,071	12.5	25,608	28,309	13.5	27,657	29,994
2027	211,524	12.0	25,383	26,121	12.5	26,441	28,363	13.5	28,556	30,051

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 158,615	14.4%	\$22,841	\$ 30,830	14.9%	\$23,634	\$ 31,552	16.4%	\$26,013	\$ 35,241
2019	163,770	14.4	23,583	31,252	14.9	24,402	31,984	16.4	26,858	35,724
2020	169,093	14.4	24,349	31,646	14.9	25,195	32,387	16.4	27,731	36,174
2021	174,589	14.4	25,141	32,008	14.9	26,014	32,757	16.4	28,633	36,588
2022	180,263	14.4	25,958	32,333	14.9	26,859	33,090	16.4	29,563	36,960
2023	186,122	14.4	26,802	32,617	14.9	27,732	33,381	16.4	30,524	37,285
2024	192,171	14.4	27,673	32,855	14.9	28,633	33,624	16.4	31,516	37,557
2025	198,417	14.4	28,572	33,041	14.9	29,564	33,814	16.4	32,540	37,769
2026	204,866	14.4	29,501	33,169	14.9	30,525	33,945	16.4	33,598	37,915
2027	211,524	14.4	30,459	33,232	14.9	31,517	34,010	16.4	34,690	37,987

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
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