



The Initial Valuation For  
**Pike County 911**  
as of December 31, 2018



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January 10, 2019

Pike County 911  
Bowling Green, 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). This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

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

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, 2018.

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. This valuation assumed the ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our expertise and not performed. 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 December 31, 2018. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

This report includes risk commentary in Appendix VI, but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

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

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the political subdivision as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the actuarial standards of practice issued by the Actuarial Standards Board, and with applicable statutes.

Mita D. 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 contained herein.

The signing actuary is independent of the plan sponsor.

Respectfully submitted,



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.

# Pike County 911

## 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	0.50%	3.40%	0.20%	4.10%
L-3	General	0.70	4.80	0.30	5.80
LT-4(65)	General	0.60	4.10	0.20	4.90
LT-5(65)	General	0.80	5.30	0.30	6.40
L-7	General	0.90	6.10	0.30	7.30
LT-8(65)	General	1.00	6.50	0.30	7.80
L-12	General	1.10	7.50	0.40	9.00
LT-14(65)	General	1.10	7.70	0.40	9.20
L-6	General	1.30	8.90	0.50	10.70

\* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

# Pike County 911

## 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	0.60%	3.60%	0.20%	4.40%
L-3	General	0.80	5.00	0.30	6.10
LT-4(65)	General	0.70	4.30	0.20	5.20
LT-5(65)	General	0.80	5.60	0.30	6.70
L-7	General	1.00	6.40	0.30	7.70
LT-8(65)	General	1.00	6.80	0.30	8.10
L-12	General	1.10	7.90	0.40	9.40
LT-14(65)	General	1.20	8.00	0.40	9.60
L-6	General	1.30	9.40	0.50	11.20

\* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

# Pike County 911

## 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	0.70%	6.80%	0.20%	7.70%
L-3	General	0.90	8.30	0.30	9.50
LT-4(65)	General	0.80	7.50	0.20	8.50
LT-5(65)	General	0.90	8.80	0.30	10.00
L-7	General	1.10	9.70	0.30	11.10
LT-8(65)	General	1.10	10.10	0.30	11.50
L-12	General	1.20	11.20	0.40	12.80
LT-14(65)	General	1.20	11.40	0.40	13.00
L-6	General	1.40	12.70	0.50	14.60

\* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



# Pike County 911

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

### Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	General	0.70%	7.00%	0.20%	7.90%
L-3	General	0.90	8.50	0.30	9.70
LT-4(65)	General	0.80	7.80	0.20	8.80
LT-5(65)	General	1.00	9.10	0.30	10.40
L-7	General	1.10	10.10	0.30	11.50
LT-8(65)	General	1.10	10.40	0.30	11.80
L-12	General	1.30	11.60	0.40	13.30
LT-14(65)	General	1.30	11.80	0.40	13.50
L-6	General	1.50	13.10	0.50	15.10

\* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

# Pike County 911

## 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	0.50%	3.70%	0.20%	4.40%
L-3	General	0.70	5.10	0.30	6.10
LT-4(65)	General	0.60	4.70	0.20	5.50
LT-5(65)	General	0.80	5.90	0.30	7.00
L-7	General	0.90	6.60	0.30	7.80
LT-8(65)	General	1.00	7.10	0.30	8.40
L-12	General	1.10	8.00	0.40	9.50
LT-14(65)	General	1.10	8.30	0.40	9.80
L-6	General	1.30	9.50	0.50	11.30

# 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.

\* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

# Pike County 911

## 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	0.60%	3.90%	0.20%	4.70%
L-3	General	0.80	5.40	0.30	6.50
LT-4(65)	General	0.70	5.00	0.20	5.90
LT-5(65)	General	0.80	6.20	0.30	7.30
L-7	General	1.00	6.90	0.30	8.20
LT-8(65)	General	1.00	7.40	0.30	8.70
L-12	General	1.10	8.40	0.40	9.90
LT-14(65)	General	1.20	8.70	0.40	10.30
L-6	General	1.30	10.00	0.50	11.80

# 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.

\* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

# Pike County 911

## 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	0.70%	7.10%	0.20%	8.00%
L-3	General	0.90	8.60	0.30	9.80
LT-4(65)	General	0.80	8.10	0.20	9.10
LT-5(65)	General	0.90	9.40	0.30	10.60
L-7	General	1.10	10.10	0.30	11.50
LT-8(65)	General	1.10	10.70	0.30	12.10
L-12	General	1.20	11.70	0.40	13.30
LT-14(65)	General	1.20	12.00	0.40	13.60
L-6	General	1.40	13.20	0.50	15.10

# 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.

\* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

# Pike County 911

## 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	0.70%	7.30%	0.20%	8.20%
L-3	General	0.90	8.90	0.30	10.10
LT-4(65)	General	0.80	8.40	0.20	9.40
LT-5(65)	General	1.00	9.70	0.30	11.00
L-7	General	1.10	10.50	0.30	11.90
LT-8(65)	General	1.10	11.00	0.30	12.40
L-12	General	1.30	12.10	0.40	13.80
LT-14(65)	General	1.30	12.40	0.40	14.10
L-6	General	1.50	13.70	0.50	15.70

# 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.

\* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

# Pike County 911

## 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

5 Year FAS	
Benefit Program	General
L-1	\$ 5,867
L-3	8,300
LT-4(65)	7,012
LT-5(65)	9,159
L-7	10,447
LT-8(65)	11,162
L-12	12,879
LT-14(65)	13,166
L-6	15,312

3 Year FAS	
Benefit Program	General
L-1	\$ 6,297
L-3	8,729
LT-4(65)	7,441
LT-5(65)	9,588
L-7	11,019
LT-8(65)	11,591
L-12	13,452
LT-14(65)	13,738
L-6	16,028

### Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 11,019
L-3	13,595
LT-4(65)	12,164
LT-5(65)	14,310
L-7	15,885
LT-8(65)	16,457
L-12	18,317
LT-14(65)	18,604
L-6	20,893

3 Year FAS	
Benefit Program	General
L-1	\$ 11,305
L-3	13,881
LT-4(65)	12,593
LT-5(65)	14,883
L-7	16,457
LT-8(65)	16,886
L-12	19,033
LT-14(65)	19,319
L-6	21,609

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.

# Pike County 911

## 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

5 Year FAS	
Benefit Program	General
L-1	\$ 6,297
L-3	8,729
LT-4(65)	7,871
LT-5(65)	10,017
L-7	11,162
LT-8(65)	12,021
L-12	13,595
LT-14(65)	14,024
L-6	16,171

3 Year FAS	
Benefit Program	General
L-1	\$ 6,726
L-3	9,302
LT-4(65)	8,443
LT-5(65)	10,447
L-7	11,735
LT-8(65)	12,450
L-12	14,167
LT-14(65)	14,740
L-6	16,886

### Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 11,448
L-3	14,024
LT-4(65)	13,022
LT-5(65)	15,169
L-7	16,457
LT-8(65)	17,316
L-12	19,033
LT-14(65)	19,462
L-6	21,609

3 Year FAS	
Benefit Program	General
L-1	\$ 11,735
L-3	14,454
LT-4(65)	13,452
LT-5(65)	15,741
L-7	17,029
LT-8(65)	17,745
L-12	19,748
LT-14(65)	20,178
L-6	22,467

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.

# Pike County 911

## Employees and Payroll Included in the Valuation

	General
Number of Employees	6
Annual Payroll	\$ 143,104

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:

### Pike County 911

#### 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	\$ 13,719	\$ 14,336	\$ 17,730	\$ 18,303
L-3	General	18,380	19,142	22,114	22,851
LT-4(65)	General	15,808	16,474	19,797	20,438
LT-5(65)	General	19,942	20,762	23,659	24,444
L-7	General	23,015	23,965	26,551	27,431
LT-8(65)	General	24,052	25,030	27,564	28,513
L-12	General	27,678	28,773	30,978	32,017
LT-14(65)	General	28,199	29,287	31,488	32,534
L-6	General	32,326	33,595	35,396	36,574

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## 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	\$ 13,707	\$ 14,320	\$ 17,714	\$ 18,290
L-3	General	18,368	19,142	22,111	22,849
LT-4(65)	General	15,801	16,471	19,781	20,426
LT-5(65)	General	19,925	20,751	23,656	24,439
L-7	General	23,010	23,957	26,537	27,435
LT-8(65)	General	24,049	25,030	27,569	28,511
L-12	General	27,668	28,777	30,974	32,026
LT-14(65)	General	28,199	29,300	31,495	32,546
L-6	General	32,317	33,586	35,395	36,576

## **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
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 Ages	General Members		Retirement Ages	Police	Fire
	Men	Women			
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 Ages	General Members		Retirement Ages	Police	Fire
	Men	Women			
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, 2018

#### (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 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	\$ 889	\$1,414	94%
2,000	700	1,032	1,732	87%
2,500	875	1,175	2,050	82%
3,000	1,050	1,318	2,368	79%
3,500	1,225	1,462	2,687	77%
4,000	1,400	1,604	3,004	75%
25 Years of Service:				
\$1,500	\$ 375	\$ 889	\$1,264	84%
2,000	500	1,032	1,532	77%
2,500	625	1,175	1,800	72%
3,000	750	1,318	2,068	69%
3,500	875	1,462	2,337	67%
4,000	1,000	1,604	2,604	65%
15 Years of Service:				
\$1,500	\$225	\$ 889	\$1,114	74%
2,000	300	1,032	1,332	67%
2,500	375	1,175	1,550	62%
3,000	450	1,318	1,768	59%
3,500	525	1,462	1,987	57%
4,000	600	1,604	2,204	55%

<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 2018 - 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	\$ 889	\$1,545	103%
2,000	875	1,032	1,907	95%
2,500	1,094	1,175	2,269	91%
3,000	1,313	1,318	2,631	88%
3,500	1,531	1,462	2,993	86%
4,000	1,750	1,604	3,354	84%
25 Years of Service:				
\$1,500	\$ 469	\$ 889	\$1,358	91%
2,000	625	1,032	1,657	83%
2,500	781	1,175	1,956	78%
3,000	938	1,318	2,256	75%
3,500	1,094	1,462	2,556	73%
4,000	1,250	1,604	2,854	71%
15 Years of Service:				
\$1,500	\$281	\$ 889	\$1,170	78%
2,000	375	1,032	1,407	70%
2,500	469	1,175	1,644	66%
3,000	563	1,318	1,881	63%
3,500	656	1,462	2,118	61%
4,000	750	1,604	2,354	59%

<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 2018 - 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	\$ 889	\$1,677	112%
2,000	1,050	1,032	2,082	104%
2,500	1,313	1,175	2,488	100%
3,000	1,575	1,318	2,893	96%
3,500	1,838	1,462	3,300	94%
4,000	2,100	1,604	3,704	93%
25 Years of Service:				
\$1,500	\$ 563	\$ 889	\$1,452	97%
2,000	750	1,032	1,782	89%
2,500	938	1,175	2,113	85%
3,000	1,125	1,318	2,443	81%
3,500	1,313	1,462	2,775	79%
4,000	1,500	1,604	3,104	78%
15 Years of Service:				
\$1,500	\$338	\$ 889	\$1,227	82%
2,000	450	1,032	1,482	74%
2,500	563	1,175	1,738	70%
3,000	675	1,318	1,993	66%
3,500	788	1,462	2,250	64%
4,000	900	1,604	2,504	63%

<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 2018 - 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	\$ 889	\$1,808	121%
2,000	1,225	1,032	2,257	113%
2,500	1,531	1,175	2,706	108%
3,000	1,838	1,318	3,156	105%
3,500	2,144	1,462	3,606	103%
4,000	2,450	1,604	4,054	101%
25 Years of Service:				
\$1,500	\$ 656	\$ 889	\$1,545	103%
2,000	875	1,032	1,907	95%
2,500	1,094	1,175	2,269	91%
3,000	1,313	1,318	2,631	88%
3,500	1,531	1,462	2,993	86%
4,000	1,750	1,604	3,354	84%
15 Years of Service:				
\$1,500	\$ 394	\$ 889	\$1,283	86%
2,000	525	1,032	1,557	78%
2,500	656	1,175	1,831	73%
3,000	788	1,318	2,106	70%
3,500	919	1,462	2,381	68%
4,000	1,050	1,604	2,654	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 2018 - 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	\$ 889	\$1,939	129%
2,000	1,400	1,032	2,432	122%
2,500	1,750	1,175	2,925	117%
3,000	2,100	1,318	3,418	114%
3,500	2,450	1,462	3,912	112%
4,000	2,800	1,604	4,404	110%
25 Years of Service:				
\$1,500	\$ 750	\$ 889	\$1,639	109%
2,000	1,000	1,032	2,032	102%
2,500	1,250	1,175	2,425	97%
3,000	1,500	1,318	2,818	94%
3,500	1,750	1,462	3,212	92%
4,000	2,000	1,604	3,604	90%
15 Years of Service:				
\$1,500	\$ 450	\$ 889	\$1,339	89%
2,000	600	1,032	1,632	82%
2,500	750	1,175	1,925	77%
3,000	900	1,318	2,218	74%
3,500	1,050	1,462	2,512	72%
4,000	1,200	1,604	2,804	70%

<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 2018 - 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	\$ 889	\$1,050	\$1,414	70%	94%
2,000	1,400	700	1,032	1,400	1,732	70%	87%
2,500	1,750	875	1,175	1,750	2,050	70%	82%
3,000	2,100	1,050	1,318	2,100	2,368	70%	79%
3,500	2,450	1,225	1,462	2,450	2,687	70%	77%
4,000	2,800	1,400	1,604	2,800	3,004	70%	75%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 889	\$ 750	\$1,264	50%	84%
2,000	1,000	500	1,032	1,000	1,532	50%	77%
2,500	1,250	625	1,175	1,250	1,800	50%	72%
3,000	1,500	750	1,318	1,500	2,068	50%	69%
3,500	1,750	875	1,462	1,750	2,337	50%	67%
4,000	2,000	1,000	1,604	2,000	2,604	50%	65%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 889	\$ 450	\$1,114	30%	74%
2,000	600	300	1,032	600	1,332	30%	67%
2,500	750	375	1,175	750	1,550	30%	62%
3,000	900	450	1,318	900	1,768	30%	59%
3,500	1,050	525	1,462	1,050	1,987	30%	57%
4,000	1,200	600	1,604	1,200	2,204	30%	55%

<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 2018 - 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	\$ 889	\$1,050	\$1,545	70%	103%
2,000	1,400	875	1,032	1,400	1,907	70%	95%
2,500	1,750	1,094	1,175	1,750	2,269	70%	91%
3,000	2,100	1,313	1,318	2,100	2,631	70%	88%
3,500	2,450	1,531	1,462	2,450	2,993	70%	86%
4,000	2,800	1,750	1,604	2,800	3,354	70%	84%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 889	\$ 750	\$1,358	50%	91%
2,000	1,000	625	1,032	1,000	1,657	50%	83%
2,500	1,250	781	1,175	1,250	1,956	50%	78%
3,000	1,500	938	1,318	1,500	2,256	50%	75%
3,500	1,750	1,094	1,462	1,750	2,556	50%	73%
4,000	2,000	1,250	1,604	2,000	2,854	50%	71%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 889	\$ 450	\$1,170	30%	78%
2,000	600	375	1,032	600	1,407	30%	70%
2,500	750	469	1,175	750	1,644	30%	66%
3,000	900	563	1,318	900	1,881	30%	63%
3,500	1,050	656	1,462	1,050	2,118	30%	61%
4,000	1,200	750	1,604	1,200	2,354	30%	59%

<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 2018 - 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	\$ 889	\$1,050	\$1,677	70%	112%
2,000	1,400	1,050	1,032	1,400	2,082	70%	104%
2,500	1,750	1,313	1,175	1,750	2,488	70%	100%
3,000	2,100	1,575	1,318	2,100	2,893	70%	96%
3,500	2,450	1,838	1,462	2,450	3,300	70%	94%
4,000	2,800	2,100	1,604	2,800	3,704	70%	93%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 889	\$ 750	\$1,452	50%	97%
2,000	1,000	750	1,032	1,000	1,782	50%	89%
2,500	1,250	938	1,175	1,250	2,113	50%	85%
3,000	1,500	1,125	1,318	1,500	2,443	50%	81%
3,500	1,750	1,313	1,462	1,750	2,775	50%	79%
4,000	2,000	1,500	1,604	2,000	3,104	50%	78%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 889	\$ 450	\$1,227	30%	82%
2,000	600	450	1,032	600	1,482	30%	74%
2,500	750	563	1,175	750	1,738	30%	70%
3,000	900	675	1,318	900	1,993	30%	66%
3,500	1,050	788	1,462	1,050	2,250	30%	64%
4,000	1,200	900	1,604	1,200	2,504	30%	63%

<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 2018 - 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	\$ 889	\$1,050	\$1,808	70%	121%
2,000	1,400	1,225	1,032	1,400	2,257	70%	113%
2,500	1,750	1,531	1,175	1,750	2,706	70%	108%
3,000	2,100	1,838	1,318	2,100	3,156	70%	105%
3,500	2,450	2,144	1,462	2,450	3,606	70%	103%
4,000	2,800	2,450	1,604	2,800	4,054	70%	101%
25 Years of Service:							
\$1,500	\$ 750	\$ 656	\$ 889	\$ 750	\$1,545	50%	103%
2,000	1,000	875	1,032	1,000	1,907	50%	95%
2,500	1,250	1,094	1,175	1,250	2,269	50%	91%
3,000	1,500	1,313	1,318	1,500	2,631	50%	88%
3,500	1,750	1,531	1,462	1,750	2,993	50%	86%
4,000	2,000	1,750	1,604	2,000	3,354	50%	84%
15 Years of Service:							
\$1,500	\$ 450	\$ 394	\$ 889	\$ 450	\$1,283	30%	86%
2,000	600	525	1,032	600	1,557	30%	78%
2,500	750	656	1,175	750	1,831	30%	73%
3,000	900	788	1,318	900	2,106	30%	70%
3,500	1,050	919	1,462	1,050	2,381	30%	68%
4,000	1,200	1,050	1,604	1,200	2,654	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 2018 - 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**

# Pike County 911

December 31, 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
Under 20	1							1	\$ 22,880
20-24	1							1	\$ 22,880
25-29									
30-34									
35-39									
40-44									
45-49	1	2						3	\$ 74,464
50-54									
55-59	1							1	\$ 22,880
60-64									
65-69									
70 & Over									
<b>Totals</b>	<b>4</b>	<b>2</b>						<b>6</b>	<b>\$ 143,104</b>

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

Age: 41.0 years.

Benefit Service: 0.0 years.

Annual Pay: \$23,851.



## **APPENDIX VI**

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### **RISK COMMENTARY**

# Risk Commentary

The determination of the accrued liability and the actuarially determined contribution (i.e., total employer contribution rate) requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch Risk** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability, contributions and contribution rates differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rates shown on pages 4 thru 11 may be considered as a minimum contribution rate for the selected benefit provisions that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

# Risk Commentary (Concluded)

## PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures are described below.

### **RATIO OF MARKET VALUE OF ASSETS TO PAYROLL**

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### **RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL**

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

### **RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS**

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

### **DURATION OF ACTUARIAL ACCRUED LIABILITY**

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

## ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.



January 10, 2019 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 December 31, 2018 Initial Actuarial Valuation of LAGERS benefits for the employees of

Pike County 911

Sincerely,

A handwritten signature in black ink that reads "Mita Drazilov". The signature is written in a cursive, flowing style.

Mita D. Drazilov, ASA, FCA, MAAA

MDD:wp

January 10, 2019

Pike County 911  
Bowling Green, Missouri

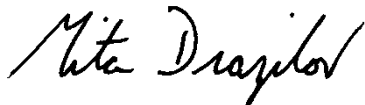
Ladies and Gentlemen:

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 December 31, 2018 Initial Valuation for the Pike County 911 dated January 10, 2019.

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, 2018.

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

# Pike County 911 - 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	\$ 143,104	4.1%	\$5,867	\$ 13,719	5.8%	\$8,300	\$ 18,380	4.9%	\$7,012	\$ 15,808
2019	147,755	4.1	6,058	13,907	5.8	8,570	18,632	4.9	7,240	16,025
2020	152,557	4.1	6,255	14,082	5.8	8,848	18,867	4.9	7,475	16,227
2021	157,515	4.1	6,458	14,243	5.8	9,136	19,083	4.9	7,718	16,413
2022	162,634	4.1	6,668	14,388	5.8	9,433	19,277	4.9	7,969	16,580
2023	167,920	4.1	6,885	14,514	5.8	9,739	19,446	4.9	8,228	16,726
2024	173,377	4.1	7,108	14,620	5.8	10,056	19,588	4.9	8,495	16,848
2025	179,012	4.1	7,339	14,703	5.8	10,383	19,699	4.9	8,772	16,943
2026	184,830	4.1	7,578	14,760	5.8	10,720	19,775	4.9	9,057	17,009
2027	190,837	4.1	7,824	14,788	5.8	11,069	19,813	4.9	9,351	17,041

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	\$ 143,104	6.4%	\$9,159	\$ 19,942	7.3%	\$10,447	\$ 23,015	7.8%	\$11,162	\$ 24,052
2019	147,755	6.4	9,456	20,215	7.3	10,786	23,330	7.8	11,525	24,382
2020	152,557	6.4	9,764	20,470	7.3	11,137	23,624	7.8	11,899	24,689
2021	157,515	6.4	10,081	20,704	7.3	11,499	23,894	7.8	12,286	24,971
2022	162,634	6.4	10,409	20,914	7.3	11,872	24,137	7.8	12,685	25,225
2023	167,920	6.4	10,747	21,098	7.3	12,258	24,349	7.8	13,098	25,447
2024	173,377	6.4	11,096	21,252	7.3	12,657	24,526	7.8	13,523	25,632
2025	179,012	6.4	11,457	21,372	7.3	13,068	24,665	7.8	13,963	25,777
2026	184,830	6.4	11,829	21,455	7.3	13,493	24,760	7.8	14,417	25,877
2027	190,837	6.4	12,214	21,496	7.3	13,931	24,807	7.8	14,885	25,926

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	\$ 143,104	9.0%	\$12,879	\$ 27,678	9.2%	\$13,166	\$ 28,199	10.7%	\$15,312	\$ 32,326
2019	147,755	9.0	13,298	28,057	9.2	13,593	28,585	10.7	15,810	32,769
2020	152,557	9.0	13,730	28,411	9.2	14,035	28,945	10.7	16,324	33,182
2021	157,515	9.0	14,176	28,736	9.2	14,491	29,276	10.7	16,854	33,561
2022	162,634	9.0	14,637	29,028	9.2	14,962	29,573	10.7	17,402	33,902
2023	167,920	9.0	15,113	29,283	9.2	15,449	29,833	10.7	17,967	34,200
2024	173,377	9.0	15,604	29,496	9.2	15,951	30,050	10.7	18,551	34,449
2025	179,012	9.0	16,111	29,663	9.2	16,469	30,220	10.7	19,154	34,644
2026	184,830	9.0	16,635	29,778	9.2	17,004	30,337	10.7	19,777	34,778
2027	190,837	9.0	17,175	29,835	9.2	17,557	30,395	10.7	20,420	34,844

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.

# Pike County 911 - 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 Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	4.4%	\$6,297	\$ 14,336	6.1%	\$8,729	\$ 19,142	5.2%	\$7,441	\$ 16,474
2019	147,755	4.4	6,501	14,532	6.1	9,013	19,404	5.2	7,683	16,700
2020	152,557	4.4	6,713	14,715	6.1	9,306	19,649	5.2	7,933	16,911
2021	157,515	4.4	6,931	14,883	6.1	9,608	19,874	5.2	8,191	17,104
2022	162,634	4.4	7,156	15,034	6.1	9,921	20,076	5.2	8,457	17,278
2023	167,920	4.4	7,388	15,166	6.1	10,243	20,252	5.2	8,732	17,430
2024	173,377	4.4	7,629	15,276	6.1	10,576	20,400	5.2	9,016	17,557
2025	179,012	4.4	7,877	15,362	6.1	10,920	20,515	5.2	9,309	17,656
2026	184,830	4.4	8,133	15,421	6.1	11,275	20,594	5.2	9,611	17,724
2027	190,837	4.4	8,397	15,450	6.1	11,641	20,633	5.2	9,924	17,758

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	6.7%	\$9,588	\$ 20,762	7.7%	\$11,019	\$ 23,965	8.1%	\$11,591	\$ 25,030
2019	147,755	6.7	9,900	21,046	7.7	11,377	24,293	8.1	11,968	25,373
2020	152,557	6.7	10,221	21,311	7.7	11,747	24,599	8.1	12,357	25,693
2021	157,515	6.7	10,554	21,555	7.7	12,129	24,880	8.1	12,759	25,987
2022	162,634	6.7	10,896	21,774	7.7	12,523	25,133	8.1	13,173	26,251
2023	167,920	6.7	11,251	21,965	7.7	12,930	25,354	8.1	13,602	26,482
2024	173,377	6.7	11,616	22,125	7.7	13,350	25,539	8.1	14,044	26,675
2025	179,012	6.7	11,994	22,250	7.7	13,784	25,683	8.1	14,500	26,826
2026	184,830	6.7	12,384	22,336	7.7	14,232	25,782	8.1	14,971	26,930
2027	190,837	6.7	12,786	22,379	7.7	14,694	25,831	8.1	15,458	26,981

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	9.4%	\$13,452	\$ 28,773	9.6%	\$13,738	\$ 29,287	11.2%	\$16,028	\$ 33,595
2019	147,755	9.4	13,889	29,167	9.6	14,184	29,688	11.2	16,549	34,055
2020	152,557	9.4	14,340	29,535	9.6	14,645	30,062	11.2	17,086	34,484
2021	157,515	9.4	14,806	29,873	9.6	15,121	30,406	11.2	17,642	34,878
2022	162,634	9.4	15,288	30,177	9.6	15,613	30,715	11.2	18,215	35,232
2023	167,920	9.4	15,784	30,442	9.6	16,120	30,985	11.2	18,807	35,541
2024	173,377	9.4	16,297	30,664	9.6	16,644	31,211	11.2	19,418	35,800
2025	179,012	9.4	16,827	30,837	9.6	17,185	31,387	11.2	20,049	36,002
2026	184,830	9.4	17,374	30,956	9.6	17,744	31,508	11.2	20,701	36,141
2027	190,837	9.4	17,939	31,015	9.6	18,320	31,568	11.2	21,374	36,210

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.

# Pike County 911 - 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 % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 143,104	7.7%	\$11,019	\$ 17,730	9.5%	\$13,595	\$ 22,114	8.5%	\$12,164	\$ 19,797
2019	147,755	7.7	11,377	17,973	9.5	14,037	22,417	8.5	12,559	20,068
2020	152,557	7.7	11,747	18,200	9.5	14,493	22,700	8.5	12,967	20,321
2021	157,515	7.7	12,129	18,408	9.5	14,964	22,960	8.5	13,389	20,553
2022	162,634	7.7	12,523	18,595	9.5	15,450	23,193	8.5	13,824	20,762
2023	167,920	7.7	12,930	18,758	9.5	15,952	23,397	8.5	14,273	20,944
2024	173,377	7.7	13,350	18,895	9.5	16,471	23,567	8.5	14,737	21,097
2025	179,012	7.7	13,784	19,002	9.5	17,006	23,700	8.5	15,216	21,216
2026	184,830	7.7	14,232	19,075	9.5	17,559	23,792	8.5	15,711	21,298
2027	190,837	7.7	14,694	19,111	9.5	18,130	23,837	8.5	16,221	21,339

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	\$ 143,104	10.0%	\$14,310	\$ 23,659	11.1%	\$15,885	\$ 26,551	11.5%	\$16,457	\$ 27,564
2019	147,755	10.0	14,776	23,983	11.1	16,401	26,915	11.5	16,992	27,942
2020	152,557	10.0	15,256	24,285	11.1	16,934	27,254	11.5	17,544	28,294
2021	157,515	10.0	15,752	24,563	11.1	17,484	27,566	11.5	18,114	28,617
2022	162,634	10.0	16,263	24,813	11.1	18,052	27,846	11.5	18,703	28,908
2023	167,920	10.0	16,792	25,031	11.1	18,639	28,091	11.5	19,311	29,162
2024	173,377	10.0	17,338	25,213	11.1	19,245	28,296	11.5	19,938	29,374
2025	179,012	10.0	17,901	25,355	11.1	19,870	28,456	11.5	20,586	29,540
2026	184,830	10.0	18,483	25,453	11.1	20,516	28,566	11.5	21,255	29,654
2027	190,837	10.0	19,084	25,502	11.1	21,183	28,621	11.5	21,946	29,711

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	\$ 143,104	12.8%	\$18,317	\$ 30,978	13.0%	\$18,604	\$ 31,488	14.6%	\$20,893	\$ 35,396
2019	147,755	12.8	18,913	31,402	13.0	19,208	31,919	14.6	21,572	35,881
2020	152,557	12.8	19,527	31,798	13.0	19,832	32,321	14.6	22,273	36,333
2021	157,515	12.8	20,162	32,162	13.0	20,477	32,691	14.6	22,997	36,748
2022	162,634	12.8	20,817	32,489	13.0	21,142	33,023	14.6	23,745	37,121
2023	167,920	12.8	21,494	32,774	13.0	21,830	33,313	14.6	24,516	37,447
2024	173,377	12.8	22,192	33,013	13.0	22,539	33,556	14.6	25,313	37,720
2025	179,012	12.8	22,914	33,200	13.0	23,272	33,746	14.6	26,136	37,933
2026	184,830	12.8	23,658	33,328	13.0	24,028	33,876	14.6	26,985	38,080
2027	190,837	12.8	24,427	33,392	13.0	24,809	33,941	14.6	27,862	38,153

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.



# Pike County 911 - 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 Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	7.9%	\$11,305	\$ 18,303	9.7%	\$13,881	\$ 22,851	8.8%	\$12,593	\$ 20,438
2019	147,755	7.9	11,673	18,554	9.7	14,332	23,164	8.8	13,002	20,718
2020	152,557	7.9	12,052	18,788	9.7	14,798	23,456	8.8	13,425	20,979
2021	157,515	7.9	12,444	19,003	9.7	15,279	23,724	8.8	13,861	21,219
2022	162,634	7.9	12,848	19,196	9.7	15,775	23,965	8.8	14,312	21,435
2023	167,920	7.9	13,266	19,365	9.7	16,288	24,175	8.8	14,777	21,623
2024	173,377	7.9	13,697	19,506	9.7	16,818	24,351	8.8	15,257	21,781
2025	179,012	7.9	14,142	19,616	9.7	17,364	24,489	8.8	15,753	21,904
2026	184,830	7.9	14,602	19,692	9.7	17,929	24,584	8.8	16,265	21,989
2027	190,837	7.9	15,076	19,730	9.7	18,511	24,631	8.8	16,794	22,031

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	10.4%	\$14,883	\$ 24,444	11.5%	\$16,457	\$ 27,431	11.8%	\$16,886	\$ 28,513
2019	147,755	10.4	15,367	24,779	11.5	16,992	27,807	11.8	17,435	28,904
2020	152,557	10.4	15,866	25,091	11.5	17,544	28,158	11.8	18,002	29,268
2021	157,515	10.4	16,382	25,378	11.5	18,114	28,480	11.8	18,587	29,603
2022	162,634	10.4	16,914	25,636	11.5	18,703	28,769	11.8	19,191	29,904
2023	167,920	10.4	17,464	25,861	11.5	19,311	29,022	11.8	19,815	30,167
2024	173,377	10.4	18,031	26,049	11.5	19,938	29,233	11.8	20,458	30,387
2025	179,012	10.4	18,617	26,196	11.5	20,586	29,398	11.8	21,123	30,559
2026	184,830	10.4	19,222	26,297	11.5	21,255	29,512	11.8	21,810	30,677
2027	190,837	10.4	19,847	26,347	11.5	21,946	29,568	11.8	22,519	30,736

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	13.3%	\$19,033	\$ 32,017	13.5%	\$19,319	\$ 32,534	15.1%	\$21,609	\$ 36,574
2019	147,755	13.3	19,651	32,456	13.5	19,947	32,980	15.1	22,311	37,075
2020	152,557	13.3	20,290	32,865	13.5	20,595	33,396	15.1	23,036	37,542
2021	157,515	13.3	20,949	33,241	13.5	21,265	33,778	15.1	23,785	37,971
2022	162,634	13.3	21,630	33,579	13.5	21,956	34,121	15.1	24,558	38,357
2023	167,920	13.3	22,333	33,874	13.5	22,669	34,421	15.1	25,356	38,694
2024	173,377	13.3	23,059	34,121	13.5	23,406	34,672	15.1	26,180	38,976
2025	179,012	13.3	23,809	34,314	13.5	24,167	34,868	15.1	27,031	39,196
2026	184,830	13.3	24,582	34,447	13.5	24,952	35,003	15.1	27,909	39,348
2027	190,837	13.3	25,381	34,513	13.5	25,763	35,070	15.1	28,816	39,423

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.

# Pike County 911 - 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 % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 143,104	4.4%	\$6,297	\$ 13,707	6.1%	\$8,729	\$ 18,368	5.5%	\$7,871	\$ 15,801
2019	147,755	4.4	6,501	13,895	6.1	9,013	18,620	5.5	8,127	16,017
2020	152,557	4.4	6,713	14,070	6.1	9,306	18,855	5.5	8,391	16,219
2021	157,515	4.4	6,931	14,231	6.1	9,608	19,071	5.5	8,663	16,404
2022	162,634	4.4	7,156	14,376	6.1	9,921	19,265	5.5	8,945	16,571
2023	167,920	4.4	7,388	14,502	6.1	10,243	19,434	5.5	9,236	16,717
2024	173,377	4.4	7,629	14,608	6.1	10,576	19,576	5.5	9,536	16,839
2025	179,012	4.4	7,877	14,691	6.1	10,920	19,687	5.5	9,846	16,934
2026	184,830	4.4	8,133	14,748	6.1	11,275	19,763	5.5	10,166	16,999
2027	190,837	4.4	8,397	14,776	6.1	11,641	19,801	5.5	10,496	17,031

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	\$ 143,104	7.0%	\$10,017	\$ 19,925	7.8%	\$11,162	\$ 23,010	8.4%	\$12,021	\$ 24,049
2019	147,755	7.0	10,343	20,198	7.8	11,525	23,325	8.4	12,411	24,378
2020	152,557	7.0	10,679	20,453	7.8	11,899	23,619	8.4	12,815	24,685
2021	157,515	7.0	11,026	20,687	7.8	12,286	23,889	8.4	13,231	24,967
2022	162,634	7.0	11,384	20,897	7.8	12,685	24,132	8.4	13,661	25,221
2023	167,920	7.0	11,754	21,081	7.8	13,098	24,344	8.4	14,105	25,442
2024	173,377	7.0	12,136	21,235	7.8	13,523	24,521	8.4	14,564	25,627
2025	179,012	7.0	12,531	21,355	7.8	13,963	24,660	8.4	15,037	25,772
2026	184,830	7.0	12,938	21,438	7.8	14,417	24,755	8.4	15,526	25,872
2027	190,837	7.0	13,359	21,479	7.8	14,885	24,802	8.4	16,030	25,921

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	\$ 143,104	9.5%	\$13,595	\$ 27,668	9.8%	\$14,024	\$ 28,199	11.3%	\$16,171	\$ 32,317
2019	147,755	9.5	14,037	28,047	9.8	14,480	28,585	11.3	16,696	32,760
2020	152,557	9.5	14,493	28,401	9.8	14,951	28,945	11.3	17,239	33,173
2021	157,515	9.5	14,964	28,726	9.8	15,436	29,276	11.3	17,799	33,552
2022	162,634	9.5	15,450	29,018	9.8	15,938	29,573	11.3	18,378	33,893
2023	167,920	9.5	15,952	29,273	9.8	16,456	29,833	11.3	18,975	34,191
2024	173,377	9.5	16,471	29,486	9.8	16,991	30,050	11.3	19,592	34,440
2025	179,012	9.5	17,006	29,653	9.8	17,543	30,220	11.3	20,228	34,635
2026	184,830	9.5	17,559	29,768	9.8	18,113	30,337	11.3	20,886	34,769
2027	190,837	9.5	18,130	29,825	9.8	18,702	30,395	11.3	21,565	34,835

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.

# Pike County 911 - 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 Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	4.7%	\$6,726	\$ 14,320	6.5%	\$9,302	\$ 19,142	5.9%	\$8,443	\$ 16,471
2019	147,755	4.7	6,944	14,516	6.5	9,604	19,404	5.9	8,718	16,697
2020	152,557	4.7	7,170	14,699	6.5	9,916	19,649	5.9	9,001	16,908
2021	157,515	4.7	7,403	14,867	6.5	10,238	19,874	5.9	9,293	17,101
2022	162,634	4.7	7,644	15,018	6.5	10,571	20,076	5.9	9,595	17,275
2023	167,920	4.7	7,892	15,150	6.5	10,915	20,252	5.9	9,907	17,427
2024	173,377	4.7	8,149	15,260	6.5	11,270	20,400	5.9	10,229	17,554
2025	179,012	4.7	8,414	15,346	6.5	11,636	20,515	5.9	10,562	17,653
2026	184,830	4.7	8,687	15,405	6.5	12,014	20,594	5.9	10,905	17,721
2027	190,837	4.7	8,969	15,434	6.5	12,404	20,633	5.9	11,259	17,755

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	7.3%	\$10,447	\$ 20,751	8.2%	\$11,735	\$ 23,957	8.7%	\$12,450	\$ 25,030
2019	147,755	7.3	10,786	21,035	8.2	12,116	24,285	8.7	12,855	25,373
2020	152,557	7.3	11,137	21,300	8.2	12,510	24,591	8.7	13,272	25,693
2021	157,515	7.3	11,499	21,544	8.2	12,916	24,872	8.7	13,704	25,987
2022	162,634	7.3	11,872	21,763	8.2	13,336	25,125	8.7	14,149	26,251
2023	167,920	7.3	12,258	21,954	8.2	13,769	25,346	8.7	14,609	26,482
2024	173,377	7.3	12,657	22,114	8.2	14,217	25,531	8.7	15,084	26,675
2025	179,012	7.3	13,068	22,239	8.2	14,679	25,675	8.7	15,574	26,826
2026	184,830	7.3	13,493	22,325	8.2	15,156	25,774	8.7	16,080	26,930
2027	190,837	7.3	13,931	22,368	8.2	15,649	25,823	8.7	16,603	26,981

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	9.9%	\$14,167	\$ 28,777	10.3%	\$14,740	\$ 29,300	11.8%	\$16,886	\$ 33,586
2019	147,755	9.9	14,628	29,171	10.3	15,219	29,701	11.8	17,435	34,046
2020	152,557	9.9	15,103	29,539	10.3	15,713	30,076	11.8	18,002	34,475
2021	157,515	9.9	15,594	29,877	10.3	16,224	30,420	11.8	18,587	34,869
2022	162,634	9.9	16,101	30,181	10.3	16,751	30,729	11.8	19,191	35,223
2023	167,920	9.9	16,624	30,446	10.3	17,296	30,999	11.8	19,815	35,532
2024	173,377	9.9	17,164	30,668	10.3	17,858	31,225	11.8	20,458	35,791
2025	179,012	9.9	17,722	30,841	10.3	18,438	31,401	11.8	21,123	35,993
2026	184,830	9.9	18,298	30,960	10.3	19,037	31,522	11.8	21,810	36,132
2027	190,837	9.9	18,893	31,019	10.3	19,656	31,582	11.8	22,519	36,201

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.

# Pike County 911 - 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 Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	8.0%	\$11,448	\$ 17,714	9.8%	\$14,024	\$ 22,111	9.1%	\$13,022	\$ 19,781
2019	147,755	8.0	11,820	17,957	9.8	14,480	22,414	9.1	13,446	20,052
2020	152,557	8.0	12,205	18,183	9.8	14,951	22,697	9.1	13,883	20,305
2021	157,515	8.0	12,601	18,391	9.8	15,436	22,956	9.1	14,334	20,537
2022	162,634	8.0	13,011	18,578	9.8	15,938	23,189	9.1	14,800	20,746
2023	167,920	8.0	13,434	18,741	9.8	16,456	23,393	9.1	15,281	20,928
2024	173,377	8.0	13,870	18,878	9.8	16,991	23,563	9.1	15,777	21,080
2025	179,012	8.0	14,321	18,985	9.8	17,543	23,696	9.1	16,290	21,199
2026	184,830	8.0	14,786	19,058	9.8	18,113	23,788	9.1	16,820	21,281
2027	190,837	8.0	15,267	19,094	9.8	18,702	23,833	9.1	17,366	21,322

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	10.6%	\$15,169	\$ 23,656	11.5%	\$16,457	\$ 26,537	12.1%	\$17,316	\$ 27,569
2019	147,755	10.6	15,662	23,980	11.5	16,992	26,901	12.1	17,878	27,947
2020	152,557	10.6	16,171	24,282	11.5	17,544	27,240	12.1	18,459	28,299
2021	157,515	10.6	16,697	24,560	11.5	18,114	27,551	12.1	19,059	28,623
2022	162,634	10.6	17,239	24,810	11.5	18,703	27,831	12.1	19,679	28,914
2023	167,920	10.6	17,800	25,028	11.5	19,311	28,075	12.1	20,318	29,168
2024	173,377	10.6	18,378	25,210	11.5	19,938	28,280	12.1	20,979	29,380
2025	179,012	10.6	18,975	25,352	11.5	20,586	28,440	12.1	21,660	29,546
2026	184,830	10.6	19,592	25,450	11.5	21,255	28,550	12.1	22,364	29,660
2027	190,837	10.6	20,229	25,499	11.5	21,946	28,605	12.1	23,091	29,717

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	13.3%	\$19,033	\$ 30,974	13.6%	\$19,462	\$ 31,495	15.1%	\$21,609	\$ 35,395
2019	147,755	13.3	19,651	31,398	13.6	20,095	31,926	15.1	22,311	35,880
2020	152,557	13.3	20,290	31,794	13.6	20,748	32,329	15.1	23,036	36,332
2021	157,515	13.3	20,949	32,157	13.6	21,422	32,699	15.1	23,785	36,747
2022	162,634	13.3	21,630	32,484	13.6	22,118	33,031	15.1	24,558	37,120
2023	167,920	13.3	22,333	32,769	13.6	22,837	33,321	15.1	25,356	37,446
2024	173,377	13.3	23,059	33,008	13.6	23,579	33,564	15.1	26,180	37,719
2025	179,012	13.3	23,809	33,195	13.6	24,346	33,754	15.1	27,031	37,932
2026	184,830	13.3	24,582	33,323	13.6	25,137	33,885	15.1	27,909	38,079
2027	190,837	13.3	25,381	33,387	13.6	25,954	33,950	15.1	28,816	38,152

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.

# Pike County 911 - 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 Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	8.2%	\$11,735	\$ 18,290	10.1%	\$14,454	\$ 22,849	9.4%	\$13,452	\$ 20,426
2019	147,755	8.2	12,116	18,541	10.1	14,923	23,162	9.4	13,889	20,706
2020	152,557	8.2	12,510	18,775	10.1	15,408	23,454	9.4	14,340	20,967
2021	157,515	8.2	12,916	18,990	10.1	15,909	23,722	9.4	14,806	21,207
2022	162,634	8.2	13,336	19,183	10.1	16,426	23,963	9.4	15,288	21,422
2023	167,920	8.2	13,769	19,351	10.1	16,960	24,173	9.4	15,784	21,610
2024	173,377	8.2	14,217	19,492	10.1	17,511	24,349	9.4	16,297	21,767
2025	179,012	8.2	14,679	19,602	10.1	18,080	24,487	9.4	16,827	21,890
2026	184,830	8.2	15,156	19,678	10.1	18,668	24,582	9.4	17,374	21,975
2027	190,837	8.2	15,649	19,716	10.1	19,275	24,629	9.4	17,939	22,017

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	11.0%	\$15,741	\$ 24,439	11.9%	\$17,029	\$ 27,435	12.4%	\$17,745	\$ 28,511
2019	147,755	11.0	16,253	24,774	11.9	17,583	27,811	12.4	18,322	28,902
2020	152,557	11.0	16,781	25,086	11.9	18,154	28,162	12.4	18,917	29,266
2021	157,515	11.0	17,327	25,373	11.9	18,744	28,484	12.4	19,532	29,601
2022	162,634	11.0	17,890	25,631	11.9	19,353	28,773	12.4	20,167	29,902
2023	167,920	11.0	18,471	25,856	11.9	19,982	29,026	12.4	20,822	30,165
2024	173,377	11.0	19,071	26,044	11.9	20,632	29,237	12.4	21,499	30,385
2025	179,012	11.0	19,691	26,191	11.9	21,302	29,402	12.4	22,197	30,557
2026	184,830	11.0	20,331	26,292	11.9	21,995	29,516	12.4	22,919	30,675
2027	190,837	11.0	20,992	26,342	11.9	22,710	29,572	12.4	23,664	30,734

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 143,104	13.8%	\$19,748	\$ 32,026	14.1%	\$20,178	\$ 32,546	15.7%	\$22,467	\$ 36,576
2019	147,755	13.8	20,390	32,465	14.1	20,833	32,992	15.7	23,198	37,077
2020	152,557	13.8	21,053	32,874	14.1	21,511	33,408	15.7	23,951	37,545
2021	157,515	13.8	21,737	33,250	14.1	22,210	33,790	15.7	24,730	37,974
2022	162,634	13.8	22,443	33,588	14.1	22,931	34,133	15.7	25,534	38,360
2023	167,920	13.8	23,173	33,883	14.1	23,677	34,433	15.7	26,363	38,697
2024	173,377	13.8	23,926	34,130	14.1	24,446	34,684	15.7	27,220	38,979
2025	179,012	13.8	24,704	34,323	14.1	25,241	34,880	15.7	28,105	39,199
2026	184,830	13.8	25,507	34,456	14.1	26,061	35,015	15.7	29,018	39,351
2027	190,837	13.8	26,336	34,522	14.1	26,908	35,082	15.7	29,961	39,426

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.
- 1) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.