



The Initial Valuation For

Mapaville Fire Protection District

as of September 30, 2018



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November 13, 2018

Mapaville Fire Protection District
Mapaville, Missouri

Ladies and Gentlemen:

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

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

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

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

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

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

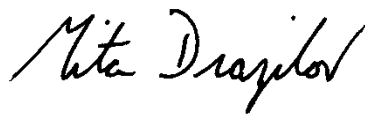
Please note that this entire report must be available as public information for at least 45 calendar days prior to the date final official action is taken by your governing body to join the System. You may wish to make notice of this report in the official minutes of the next meeting of your governing 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 September 30, 2018. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

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

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

Respectfully submitted,



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.

Mapaville Fire Protection District

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	Fire	0.40%	4.80%	0.60%	5.80%
L-3	Fire	0.60	6.70	0.70	8.00
LT-4(65)	Fire	0.60	6.90	0.60	8.10
LT-5(65)	Fire	0.70	8.30	0.70	9.70
L-7	Fire	0.70	8.60	0.80	10.10
LT-8(65)	Fire	0.70	9.70	0.80	11.20
L-12	Fire	0.80	10.50	0.90	12.20
LT-14(65)	Fire	0.80	11.10	0.90	12.80
L-6	Fire	0.90	12.50	1.00	14.40

* 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.

Mapaville Fire Protection District

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	Fire	0.50%	5.00%	0.60%	6.10%
L-3	Fire	0.60	7.00	0.70	8.30
LT-4(65)	Fire	0.60	7.20	0.60	8.40
LT-5(65)	Fire	0.70	8.70	0.70	10.10
L-7	Fire	0.70	9.10	0.80	10.60
LT-8(65)	Fire	0.80	10.10	0.80	11.70
L-12	Fire	0.80	11.10	0.90	12.80
LT-14(65)	Fire	0.90	11.50	0.90	13.30
L-6	Fire	1.00	13.00	1.00	15.00

* 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.

Mapaville Fire Protection District

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	Fire	0.50%	8.60%	0.60%	9.70%
L-3	Fire	0.60	10.50	0.70	11.80
LT-4(65)	Fire	0.60	10.70	0.60	11.90
LT-5(65)	Fire	0.70	12.10	0.70	13.50
L-7	Fire	0.70	12.50	0.80	14.00
LT-8(65)	Fire	0.80	13.50	0.80	15.10
L-12	Fire	0.80	14.40	0.90	16.10
LT-14(65)	Fire	0.90	14.90	0.90	16.70
L-6	Fire	1.00	16.30	1.00	18.30

* 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.

Mapaville Fire Protection District

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	Fire	0.50%	8.90%	0.60%	10.00%
L-3	Fire	0.60	10.90	0.70	12.20
LT-4(65)	Fire	0.60	11.10	0.60	12.30
LT-5(65)	Fire	0.70	12.50	0.70	13.90
L-7	Fire	0.80	12.90	0.80	14.50
LT-8(65)	Fire	0.80	14.00	0.80	15.60
L-12	Fire	0.90	14.90	0.90	16.70
LT-14(65)	Fire	0.90	15.40	0.90	17.20
L-6	Fire	1.00	16.90	1.00	18.90

* 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.

Mapaville Fire Protection District

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	Fire	0.40%	4.80%	0.60%	5.80%
L-3	Fire	0.60	6.70	0.70	8.00
LT-4(65)	Fire	0.60	6.90	0.60	8.10
LT-5(65)	Fire	0.70	8.30	0.70	9.70
L-7	Fire	0.70	8.60	0.80	10.10
LT-8(65)	Fire	0.70	9.70	0.80	11.20
L-12	Fire	0.80	10.50	0.90	12.20
LT-14(65)	Fire	0.80	11.10	0.90	12.80
L-6	Fire	0.90	12.50	1.00	14.40

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

* 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.

Mapaville Fire Protection District

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			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	Fire	0.50%	5.00%	0.60%	6.10%
L-3	Fire	0.60	7.00	0.70	8.30
LT-4(65)	Fire	0.60	7.20	0.60	8.40
LT-5(65)	Fire	0.70	8.70	0.70	10.10
L-7	Fire	0.70	9.10	0.80	10.60
LT-8(65)	Fire	0.80	10.10	0.80	11.70
L-12	Fire	0.80	11.10	0.90	12.80
LT-14(65)	Fire	0.90	11.50	0.90	13.30
L-6	Fire	1.00	13.00	1.00	15.00

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

* 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.

Mapaville Fire Protection District

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	Fire	0.50%	8.60%	0.60%	9.70%
L-3	Fire	0.60	10.50	0.70	11.80
LT-4(65)	Fire	0.60	10.70	0.60	11.90
LT-5(65)	Fire	0.70	12.10	0.70	13.50
L-7	Fire	0.70	12.50	0.80	14.00
LT-8(65)	Fire	0.80	13.50	0.80	15.10
L-12	Fire	0.80	14.40	0.90	16.10
LT-14(65)	Fire	0.90	14.90	0.90	16.70
L-6	Fire	1.00	16.30	1.00	18.30

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Mapaville Fire Protection District

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	Fire	0.50%	8.90%	0.60%	10.00%
L-3	Fire	0.60	10.90	0.70	12.20
LT-4(65)	Fire	0.60	11.10	0.60	12.30
LT-5(65)	Fire	0.70	12.50	0.70	13.90
L-7	Fire	0.80	12.90	0.80	14.50
LT-8(65)	Fire	0.80	14.00	0.80	15.60
L-12	Fire	0.90	14.90	0.90	16.70
LT-14(65)	Fire	0.90	15.40	0.90	17.20
L-6	Fire	1.00	16.90	1.00	18.90

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

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Mapaville Fire Protection District

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	Fire
L-1	\$ 5,589
L-3	7,709
LT-4(65)	7,805
LT-5(65)	9,347
L-7	9,732
LT-8(65)	10,792
L-12	11,756
LT-14(65)	12,334
L-6	13,876

3 Year FAS	
Benefit Program	Fire
L-1	\$ 5,878
L-3	7,998
LT-4(65)	8,094
LT-5(65)	9,732
L-7	10,214
LT-8(65)	11,274
L-12	12,334
LT-14(65)	12,816
L-6	14,454

Non-Contributory Plan

5 Year FAS	
Benefit Program	Fire
L-1	\$ 9,347
L-3	11,370
LT-4(65)	11,467
LT-5(65)	13,009
L-7	13,490
LT-8(65)	14,550
L-12	15,514
LT-14(65)	16,092
L-6	17,634

3 Year FAS	
Benefit Program	Fire
L-1	\$ 9,636
L-3	11,756
LT-4(65)	11,852
LT-5(65)	13,394
L-7	13,972
LT-8(65)	15,032
L-12	16,092
LT-14(65)	16,574
L-6	18,212

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.

Mapaville Fire Protection District

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	Fire
L-1	\$ 5,589
L-3	7,709
LT-4(65)	7,805
LT-5(65)	9,347
L-7	9,732
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LT-5(65)	13,394
L-7	13,972
LT-8(65)	15,032
L-12	16,092
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L-6	18,212

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.

Mapaville Fire Protection District

Employees and Payroll Included in the Valuation

	Fire
Number of Employees	3
Annual Payroll	\$ 96,360

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

APPENDIX I

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:

Mapaville Fire Protection District

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	Fire	\$ 7,400	\$ 7,720	\$ 8,205	\$ 8,519
L-3	Fire	9,442	9,794	10,259	10,656
LT-4(65)	Fire	9,641	10,038	10,438	10,830
LT-5(65)	Fire	11,099	11,548	11,948	12,388
L-7	Fire	11,487	11,914	12,334	12,761
LT-8(65)	Fire	12,613	13,060	13,434	13,929
L-12	Fire	13,536	14,016	14,385	14,905
LT-14(65)	Fire	14,090	14,599	14,975	15,468
L-6	Fire	15,576	16,152	16,432	17,006

Mapaville Fire Protection District

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	Fire	\$ 7,400	\$ 7,720	\$ 8,205	\$ 8,519
L-3	Fire	9,442	9,794	10,259	10,656
LT-4(65)	Fire	9,641	10,038	10,438	10,830
LT-5(65)	Fire	11,099	11,548	11,948	12,388
L-7	Fire	11,487	11,914	12,334	12,761
LT-8(65)	Fire	12,613	13,060	13,434	13,929
L-12	Fire	13,536	14,016	14,385	14,905
LT-14(65)	Fire	14,090	14,599	14,975	15,468
L-6	Fire	15,576	16,152	16,432	17,006

APPENDIX II

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

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

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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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.

² "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.

³ 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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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.

² "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.

³ 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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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.

² "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.

³ 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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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.

² "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.

³ 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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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.

² "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.

³ 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 ¹ to age 65)
1.00% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	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%

¹ "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.

² "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.

³ 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 FAS¹ to age 65) 1.25% of FAS¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	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%

¹ "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.

² "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.

³ 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 ¹ to age 65)
1.50% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	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%

¹ "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.

² "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.

³ 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 ¹ to age 65)
1.75% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	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%

¹ "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.

² "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.

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

APPENDIX V

AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

Mapaville Fire Protection District

September 30, 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									
20-24									
25-29									
30-34	2							2	\$ 64,240
35-39	1							1	\$ 32,120
40-44									
45-49									
50-54									
55-59									
60-64									
65-69									
70 & Over									
Totals	3							3	\$ 96,360

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

Age: 34.4 years.

Benefit Service: 1.0 years.

Annual Pay: \$32,120.



November 13, 2018 E-mail

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

Dear Bob:

Enclosed is the report of the September 30, 2018 Initial Actuarial Valuation of LAGERS benefits for the employees of

Mapaville Fire Protection District

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

November 13, 2018

Mapaville Fire Protection District
Mapaville, Missouri

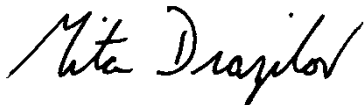
Ladies and Gentlemen:

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 September 30, 2018 Initial Valuation for the Mapaville Fire Protection District dated November 13, 2018.

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

Mapaville Fire Protection District - Fire

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	\$ 96,360	5.8%	\$5,589	\$ 7,400	8.0%	\$7,709	\$ 9,442	8.1%	\$7,805	\$ 9,641
2019	99,492	5.8	5,771	7,501	8.0	7,959	9,571	8.1	8,059	9,773
2020	102,725	5.8	5,958	7,596	8.0	8,218	9,692	8.1	8,321	9,896
2021	106,064	5.8	6,152	7,683	8.0	8,485	9,803	8.1	8,591	10,009
2022	109,511	5.8	6,352	7,761	8.0	8,761	9,903	8.1	8,870	10,111
2023	113,070	5.8	6,558	7,829	8.0	9,046	9,990	8.1	9,159	10,200
2024	116,745	5.8	6,771	7,886	8.0	9,340	10,063	8.1	9,456	10,274
2025	120,539	5.8	6,991	7,931	8.0	9,643	10,120	8.1	9,764	10,332
2026	124,457	5.8	7,219	7,962	8.0	9,957	10,159	8.1	10,081	10,372
2027	128,502	5.8	7,453	7,977	8.0	10,280	10,178	8.1	10,409	10,392

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	\$ 96,360	9.6%	\$9,251	\$ 11,099	10.1%	\$9,732	\$ 11,487	11.2%	\$10,792	\$ 12,613
2019	99,492	9.6	9,551	11,251	10.1	10,049	11,644	11.2	11,143	12,786
2020	102,725	9.6	9,862	11,393	10.1	10,375	11,791	11.2	11,505	12,947
2021	106,064	9.6	10,182	11,523	10.1	10,712	11,926	11.2	11,879	13,095
2022	109,511	9.6	10,513	11,640	10.1	11,061	12,047	11.2	12,265	13,228
2023	113,070	9.6	10,855	11,742	10.1	11,420	12,153	11.2	12,664	13,344
2024	116,745	9.6	11,208	11,828	10.1	11,791	12,242	11.2	13,075	13,441
2025	120,539	9.6	11,572	11,895	10.1	12,174	12,311	11.2	13,500	13,517
2026	124,457	9.6	11,948	11,941	10.1	12,570	12,359	11.2	13,939	13,569
2027	128,502	9.6	12,336	11,964	10.1	12,979	12,383	11.2	14,392	13,595

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	\$ 96,360	12.2%	\$11,756	\$ 13,536	12.8%	\$12,334	\$ 14,090	14.4%	\$13,876	\$ 15,576
2019	99,492	12.2	12,138	13,721	12.8	12,735	14,283	14.4	14,327	15,789
2020	102,725	12.2	12,532	13,894	12.8	13,149	14,463	14.4	14,792	15,988
2021	106,064	12.2	12,940	14,053	12.8	13,576	14,628	14.4	15,273	16,171
2022	109,511	12.2	13,360	14,196	12.8	14,017	14,777	14.4	15,770	16,335
2023	113,070	12.2	13,795	14,321	12.8	14,473	14,907	14.4	16,282	16,478
2024	116,745	12.2	14,243	14,425	12.8	14,943	15,016	14.4	16,811	16,598
2025	120,539	12.2	14,706	14,507	12.8	15,429	15,101	14.4	17,358	16,692
2026	124,457	12.2	15,184	14,563	12.8	15,930	15,159	14.4	17,922	16,757
2027	128,502	12.2	15,677	14,591	12.8	16,448	15,188	14.4	18,504	16,789

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 28th 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.

Mapaville Fire Protection District - Fire

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	\$ 96,360	6.1%	\$5,878	\$ 7,720	8.3%	\$7,998	\$ 9,794	8.4%	\$8,094	\$ 10,038
2019	99,492	6.1	6,069	7,826	8.3	8,258	9,928	8.4	8,357	10,176
2020	102,725	6.1	6,266	7,925	8.3	8,526	10,053	8.4	8,629	10,304
2021	106,064	6.1	6,470	8,016	8.3	8,803	10,168	8.4	8,909	10,422
2022	109,511	6.1	6,680	8,097	8.3	9,089	10,271	8.4	9,199	10,528
2023	113,070	6.1	6,897	8,168	8.3	9,385	10,361	8.4	9,498	10,620
2024	116,745	6.1	7,121	8,227	8.3	9,690	10,436	8.4	9,807	10,697
2025	120,539	6.1	7,353	8,273	8.3	10,005	10,495	8.4	10,125	10,757
2026	124,457	6.1	7,592	8,305	8.3	10,330	10,536	8.4	10,454	10,799
2027	128,502	6.1	7,839	8,321	8.3	10,666	10,556	8.4	10,794	10,820

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	\$ 96,360	10.1%	\$9,732	\$ 11,548	10.6%	\$10,214	\$ 11,914	11.7%	\$11,274	\$ 13,060
2019	99,492	10.1	10,049	11,706	10.6	10,546	12,077	11.7	11,641	13,239
2020	102,725	10.1	10,375	11,854	10.6	10,889	12,229	11.7	12,019	13,406
2021	106,064	10.1	10,712	11,990	10.6	11,243	12,369	11.7	12,409	13,559
2022	109,511	10.1	11,061	12,112	10.6	11,608	12,495	11.7	12,813	13,697
2023	113,070	10.1	11,420	12,218	10.6	11,985	12,605	11.7	13,229	13,817
2024	116,745	10.1	11,791	12,307	10.6	12,375	12,697	11.7	13,659	13,918
2025	120,539	10.1	12,174	12,377	10.6	12,777	12,769	11.7	14,103	13,997
2026	124,457	10.1	12,570	12,425	10.6	13,192	12,818	11.7	14,561	14,051
2027	128,502	10.1	12,979	12,449	10.6	13,621	12,842	11.7	15,035	14,078

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	\$ 96,360	12.8%	\$12,334	\$ 14,016	13.3%	\$12,816	\$ 14,599	15.0%	\$14,454	\$ 16,152
2019	99,492	12.8	12,735	14,208	13.3	13,232	14,799	15.0	14,924	16,373
2020	102,725	12.8	13,149	14,387	13.3	13,662	14,986	15.0	15,409	16,579
2021	106,064	12.8	13,576	14,551	13.3	14,107	15,157	15.0	15,910	16,769
2022	109,511	12.8	14,017	14,699	13.3	14,565	15,311	15.0	16,427	16,939
2023	113,070	12.8	14,473	14,828	13.3	15,038	15,445	15.0	16,961	17,088
2024	116,745	12.8	14,943	14,936	13.3	15,527	15,558	15.0	17,512	17,212
2025	120,539	12.8	15,429	15,020	13.3	16,032	15,646	15.0	18,081	17,309
2026	124,457	12.8	15,930	15,078	13.3	16,553	15,707	15.0	18,669	17,376
2027	128,502	12.8	16,448	15,107	13.3	17,091	15,737	15.0	19,275	17,409

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 28th 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.

Mapaville Fire Protection District - Fire

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	\$ 96,360	9.7%	\$9,347	\$ 8,205	11.8%	\$11,370	\$ 10,259	11.9%	\$11,467	\$ 10,438
2019	99,492	9.7	9,651	8,317	11.8	11,740	10,400	11.9	11,840	10,581
2020	102,725	9.7	9,964	8,422	11.8	12,122	10,531	11.9	12,224	10,714
2021	106,064	9.7	10,288	8,518	11.8	12,516	10,651	11.9	12,622	10,836
2022	109,511	9.7	10,623	8,605	11.8	12,922	10,759	11.9	13,032	10,946
2023	113,070	9.7	10,968	8,681	11.8	13,342	10,853	11.9	13,455	11,042
2024	116,745	9.7	11,324	8,744	11.8	13,776	10,932	11.9	13,893	11,122
2025	120,539	9.7	11,692	8,793	11.8	14,224	10,994	11.9	14,344	11,185
2026	124,457	9.7	12,072	8,827	11.8	14,686	11,037	11.9	14,810	11,228
2027	128,502	9.7	12,465	8,844	11.8	15,163	11,058	11.9	15,292	11,249

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	\$ 96,360	13.5%	\$13,009	\$ 11,948	14.0%	\$13,490	\$ 12,334	15.1%	\$14,550	\$ 13,434
2019	99,492	13.5	13,431	12,112	14.0	13,929	12,503	15.1	15,023	13,618
2020	102,725	13.5	13,868	12,265	14.0	14,382	12,661	15.1	15,511	13,790
2021	106,064	13.5	14,319	12,405	14.0	14,849	12,806	15.1	16,016	13,948
2022	109,511	13.5	14,784	12,531	14.0	15,332	12,936	15.1	16,536	14,090
2023	113,070	13.5	15,264	12,641	14.0	15,830	13,050	15.1	17,074	14,214
2024	116,745	13.5	15,761	12,733	14.0	16,344	13,145	15.1	17,628	14,318
2025	120,539	13.5	16,273	12,805	14.0	16,875	13,219	15.1	18,201	14,399
2026	124,457	13.5	16,802	12,855	14.0	17,424	13,270	15.1	18,793	14,455
2027	128,502	13.5	17,348	12,880	14.0	17,990	13,295	15.1	19,404	14,483

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	\$ 96,360	16.1%	\$15,514	\$ 14,385	16.7%	\$16,092	\$ 14,975	18.3%	\$17,634	\$ 16,432
2019	99,492	16.1	16,018	14,582	16.7	16,615	15,180	18.3	18,207	16,657
2020	102,725	16.1	16,539	14,766	16.7	17,155	15,371	18.3	18,799	16,867
2021	106,064	16.1	17,076	14,935	16.7	17,713	15,547	18.3	19,410	17,060
2022	109,511	16.1	17,631	15,087	16.7	18,288	15,705	18.3	20,041	17,233
2023	113,070	16.1	18,204	15,219	16.7	18,883	15,843	18.3	20,692	17,384
2024	116,745	16.1	18,796	15,330	16.7	19,496	15,958	18.3	21,364	17,511
2025	120,539	16.1	19,407	15,417	16.7	20,130	16,048	18.3	22,059	17,610
2026	124,457	16.1	20,038	15,477	16.7	20,784	16,110	18.3	22,776	17,678
2027	128,502	16.1	20,689	15,507	16.7	21,460	16,141	18.3	23,516	17,712

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 28th 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.

Mapaville Fire Protection District - Fire

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

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 96,360	10.0%	\$9,636	\$ 8,519	12.2%	\$11,756	\$ 10,656	12.3%	\$11,852	\$ 10,830
2019	99,492	10.0	9,949	8,636	12.2	12,138	10,802	12.3	12,238	10,978
2020	102,725	10.0	10,273	8,745	12.2	12,532	10,938	12.3	12,635	11,116
2021	106,064	10.0	10,606	8,845	12.2	12,940	11,063	12.3	13,046	11,243
2022	109,511	10.0	10,951	8,935	12.2	13,360	11,175	12.3	13,470	11,357
2023	113,070	10.0	11,307	9,013	12.2	13,795	11,273	12.3	13,908	11,457
2024	116,745	10.0	11,675	9,079	12.2	14,243	11,355	12.3	14,360	11,540
2025	120,539	10.0	12,054	9,130	12.2	14,706	11,419	12.3	14,826	11,605
2026	124,457	10.0	12,446	9,165	12.2	15,184	11,463	12.3	15,308	11,650
2027	128,502	10.0	12,850	9,183	12.2	15,677	11,485	12.3	15,806	11,672

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 96,360	13.9%	\$13,394	\$ 12,388	14.5%	\$13,972	\$ 12,761	15.6%	\$15,032	\$ 13,929
2019	99,492	13.9	13,829	12,558	14.5	14,426	12,936	15.6	15,521	14,120
2020	102,725	13.9	14,279	12,716	14.5	14,895	13,099	15.6	16,025	14,298
2021	106,064	13.9	14,743	12,861	14.5	15,379	13,249	15.6	16,546	14,461
2022	109,511	13.9	15,222	12,992	14.5	15,879	13,384	15.6	17,084	14,608
2023	113,070	13.9	15,717	13,106	14.5	16,395	13,502	15.6	17,639	14,736
2024	116,745	13.9	16,228	13,201	14.5	16,928	13,600	15.6	18,212	14,843
2025	120,539	13.9	16,755	13,276	14.5	17,478	13,677	15.6	18,804	14,927
2026	124,457	13.9	17,300	13,327	14.5	18,046	13,730	15.6	19,415	14,985
2027	128,502	13.9	17,862	13,352	14.5	18,633	13,756	15.6	20,046	15,014

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	\$ 96,360	16.7%	\$16,092	\$ 14,905	17.2%	\$16,574	\$ 15,468	18.9%	\$18,212	\$ 17,006
2019	99,492	16.7	16,615	15,109	17.2	17,113	15,680	18.9	18,804	17,239
2020	102,725	16.7	17,155	15,300	17.2	17,669	15,878	18.9	19,415	17,456
2021	106,064	16.7	17,713	15,475	17.2	18,243	16,060	18.9	20,046	17,656
2022	109,511	16.7	18,288	15,632	17.2	18,836	16,223	18.9	20,698	17,835
2023	113,070	16.7	18,883	15,769	17.2	19,448	16,365	18.9	21,370	17,992
2024	116,745	16.7	19,496	15,884	17.2	20,080	16,484	18.9	22,065	18,123
2025	120,539	16.7	20,130	15,974	17.2	20,733	16,577	18.9	22,782	18,225
2026	124,457	16.7	20,784	16,036	17.2	21,407	16,641	18.9	23,522	18,295
2027	128,502	16.7	21,460	16,067	17.2	22,102	16,673	18.9	24,287	18,330

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 28th 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.

Mapaville Fire Protection District - Fire

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	\$ 96,360	5.8%	\$5,589	\$ 7,400	8.0%	\$7,709	\$ 9,442	8.1%	\$7,805	\$ 9,641
2019	99,492	5.8	5,771	7,501	8.0	7,959	9,571	8.1	8,059	9,773
2020	102,725	5.8	5,958	7,596	8.0	8,218	9,692	8.1	8,321	9,896
2021	106,064	5.8	6,152	7,683	8.0	8,485	9,803	8.1	8,591	10,009
2022	109,511	5.8	6,352	7,761	8.0	8,761	9,903	8.1	8,870	10,111
2023	113,070	5.8	6,558	7,829	8.0	9,046	9,990	8.1	9,159	10,200
2024	116,745	5.8	6,771	7,886	8.0	9,340	10,063	8.1	9,456	10,274
2025	120,539	5.8	6,991	7,931	8.0	9,643	10,120	8.1	9,764	10,332
2026	124,457	5.8	7,219	7,962	8.0	9,957	10,159	8.1	10,081	10,372
2027	128,502	5.8	7,453	7,977	8.0	10,280	10,178	8.1	10,409	10,392

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	\$ 96,360	9.7%	\$9,347	\$ 11,099	10.1%	\$9,732	\$ 11,487	11.2%	\$10,792	\$ 12,613
2019	99,492	9.7	9,651	11,251	10.1	10,049	11,644	11.2	11,143	12,786
2020	102,725	9.7	9,964	11,393	10.1	10,375	11,791	11.2	11,505	12,947
2021	106,064	9.7	10,288	11,523	10.1	10,712	11,926	11.2	11,879	13,095
2022	109,511	9.7	10,623	11,640	10.1	11,061	12,047	11.2	12,265	13,228
2023	113,070	9.7	10,968	11,742	10.1	11,420	12,153	11.2	12,664	13,344
2024	116,745	9.7	11,324	11,828	10.1	11,791	12,242	11.2	13,075	13,441
2025	120,539	9.7	11,692	11,895	10.1	12,174	12,311	11.2	13,500	13,517
2026	124,457	9.7	12,072	11,941	10.1	12,570	12,359	11.2	13,939	13,569
2027	128,502	9.7	12,465	11,964	10.1	12,979	12,383	11.2	14,392	13,595

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	\$ 96,360	12.2%	\$11,756	\$ 13,536	12.8%	\$12,334	\$ 14,090	14.4%	\$13,876	\$ 15,576
2019	99,492	12.2	12,138	13,721	12.8	12,735	14,283	14.4	14,327	15,789
2020	102,725	12.2	12,532	13,894	12.8	13,149	14,463	14.4	14,792	15,988
2021	106,064	12.2	12,940	14,053	12.8	13,576	14,628	14.4	15,273	16,171
2022	109,511	12.2	13,360	14,196	12.8	14,017	14,777	14.4	15,770	16,335
2023	113,070	12.2	13,795	14,321	12.8	14,473	14,907	14.4	16,282	16,478
2024	116,745	12.2	14,243	14,425	12.8	14,943	15,016	14.4	16,811	16,598
2025	120,539	12.2	14,706	14,507	12.8	15,429	15,101	14.4	17,358	16,692
2026	124,457	12.2	15,184	14,563	12.8	15,930	15,159	14.4	17,922	16,757
2027	128,502	12.2	15,677	14,591	12.8	16,448	15,188	14.4	18,504	16,789

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 28th 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.

Mapaville Fire Protection District - Fire

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 96,360	6.1%	\$5,878	\$ 7,720	8.3%	\$7,998	\$ 9,794	8.4%	\$8,094	\$ 10,038
2019	99,492	6.1	6,069	7,826	8.3	8,258	9,928	8.4	8,357	10,176
2020	102,725	6.1	6,266	7,925	8.3	8,526	10,053	8.4	8,629	10,304
2021	106,064	6.1	6,470	8,016	8.3	8,803	10,168	8.4	8,909	10,422
2022	109,511	6.1	6,680	8,097	8.3	9,089	10,271	8.4	9,199	10,528
2023	113,070	6.1	6,897	8,168	8.3	9,385	10,361	8.4	9,498	10,620
2024	116,745	6.1	7,121	8,227	8.3	9,690	10,436	8.4	9,807	10,697
2025	120,539	6.1	7,353	8,273	8.3	10,005	10,495	8.4	10,125	10,757
2026	124,457	6.1	7,592	8,305	8.3	10,330	10,536	8.4	10,454	10,799
2027	128,502	6.1	7,839	8,321	8.3	10,666	10,556	8.4	10,794	10,820

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	\$ 96,360	10.1%	\$9,732	\$ 11,548	10.6%	\$10,214	\$ 11,914	11.7%	\$11,274	\$ 13,060
2019	99,492	10.1	10,049	11,706	10.6	10,546	12,077	11.7	11,641	13,239
2020	102,725	10.1	10,375	11,854	10.6	10,889	12,229	11.7	12,019	13,406
2021	106,064	10.1	10,712	11,990	10.6	11,243	12,369	11.7	12,409	13,559
2022	109,511	10.1	11,061	12,112	10.6	11,608	12,495	11.7	12,813	13,697
2023	113,070	10.1	11,420	12,218	10.6	11,985	12,605	11.7	13,229	13,817
2024	116,745	10.1	11,791	12,307	10.6	12,375	12,697	11.7	13,659	13,918
2025	120,539	10.1	12,174	12,377	10.6	12,777	12,769	11.7	14,103	13,997
2026	124,457	10.1	12,570	12,425	10.6	13,192	12,818	11.7	14,561	14,051
2027	128,502	10.1	12,979	12,449	10.6	13,621	12,842	11.7	15,035	14,078

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	\$ 96,360	12.8%	\$12,334	\$ 14,016	13.3%	\$12,816	\$ 14,599	15.0%	\$14,454	\$ 16,152
2019	99,492	12.8	12,735	14,208	13.3	13,232	14,799	15.0	14,924	16,373
2020	102,725	12.8	13,149	14,387	13.3	13,662	14,986	15.0	15,409	16,579
2021	106,064	12.8	13,576	14,551	13.3	14,107	15,157	15.0	15,910	16,769
2022	109,511	12.8	14,017	14,699	13.3	14,565	15,311	15.0	16,427	16,939
2023	113,070	12.8	14,473	14,828	13.3	15,038	15,445	15.0	16,961	17,088
2024	116,745	12.8	14,943	14,936	13.3	15,527	15,558	15.0	17,512	17,212
2025	120,539	12.8	15,429	15,020	13.3	16,032	15,646	15.0	18,081	17,309
2026	124,457	12.8	15,930	15,078	13.3	16,553	15,707	15.0	18,669	17,376
2027	128,502	12.8	16,448	15,107	13.3	17,091	15,737	15.0	19,275	17,409

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 28th 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.

Mapaville Fire Protection District - Fire

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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 96,360	9.7%	\$9,347	\$ 8,205	11.8%	\$11,370	\$ 10,259	11.9%	\$11,467	\$ 10,438
2019	99,492	9.7	9,651	8,317	11.8	11,740	10,400	11.9	11,840	10,581
2020	102,725	9.7	9,964	8,422	11.8	12,122	10,531	11.9	12,224	10,714
2021	106,064	9.7	10,288	8,518	11.8	12,516	10,651	11.9	12,622	10,836
2022	109,511	9.7	10,623	8,605	11.8	12,922	10,759	11.9	13,032	10,946
2023	113,070	9.7	10,968	8,681	11.8	13,342	10,853	11.9	13,455	11,042
2024	116,745	9.7	11,324	8,744	11.8	13,776	10,932	11.9	13,893	11,122
2025	120,539	9.7	11,692	8,793	11.8	14,224	10,994	11.9	14,344	11,185
2026	124,457	9.7	12,072	8,827	11.8	14,686	11,037	11.9	14,810	11,228
2027	128,502	9.7	12,465	8,844	11.8	15,163	11,058	11.9	15,292	11,249

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	\$ 96,360	13.5%	\$13,009	\$ 11,948	14.0%	\$13,490	\$ 12,138	15.1%	\$14,550	\$ 13,434
2019	99,492	13.5	13,431	12,112	14.0	13,929	12,304	15.1	15,023	13,618
2020	102,725	13.5	13,868	12,265	14.0	14,382	12,459	15.1	15,511	13,790
2021	106,064	13.5	14,319	12,405	14.0	14,849	12,601	15.1	16,016	13,948
2022	109,511	13.5	14,784	12,531	14.0	15,332	12,729	15.1	16,536	14,090
2023	113,070	13.5	15,264	12,641	14.0	15,830	12,841	15.1	17,074	14,214
2024	116,745	13.5	15,761	12,733	14.0	16,344	12,935	15.1	17,628	14,318
2025	120,539	13.5	16,273	12,805	14.0	16,875	13,008	15.1	18,201	14,399
2026	124,457	13.5	16,802	12,855	14.0	17,424	13,058	15.1	18,793	14,455
2027	128,502	13.5	17,348	12,880	14.0	17,990	13,083	15.1	19,404	14,483

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	\$ 96,360	16.1%	\$15,514	\$ 14,385	16.7%	\$16,092	\$ 14,975	18.3%	\$17,634	\$ 16,432
2019	99,492	16.1	16,018	14,582	16.7	16,615	15,180	18.3	18,207	16,657
2020	102,725	16.1	16,539	14,766	16.7	17,155	15,371	18.3	18,799	16,867
2021	106,064	16.1	17,076	14,935	16.7	17,713	15,547	18.3	19,410	17,060
2022	109,511	16.1	17,631	15,087	16.7	18,288	15,705	18.3	20,041	17,233
2023	113,070	16.1	18,204	15,219	16.7	18,883	15,843	18.3	20,692	17,384
2024	116,745	16.1	18,796	15,330	16.7	19,496	15,958	18.3	21,364	17,511
2025	120,539	16.1	19,407	15,417	16.7	20,130	16,048	18.3	22,059	17,610
2026	124,457	16.1	20,038	15,477	16.7	20,784	16,110	18.3	22,776	17,678
2027	128,502	16.1	20,689	15,507	16.7	21,460	16,141	18.3	23,516	17,712

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 28th 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.

Mapaville Fire Protection District - Fire

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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 96,360	10.0%	\$9,636	\$ 8,519	12.2%	\$11,756	\$ 10,656	12.3%	\$11,852	\$ 10,830
2019	99,492	10.0	9,949	8,636	12.2	12,138	10,802	12.3	12,238	10,978
2020	102,725	10.0	10,273	8,745	12.2	12,532	10,938	12.3	12,635	11,116
2021	106,064	10.0	10,606	8,845	12.2	12,940	11,063	12.3	13,046	11,243
2022	109,511	10.0	10,951	8,935	12.2	13,360	11,175	12.3	13,470	11,357
2023	113,070	10.0	11,307	9,013	12.2	13,795	11,273	12.3	13,908	11,457
2024	116,745	10.0	11,675	9,079	12.2	14,243	11,355	12.3	14,360	11,540
2025	120,539	10.0	12,054	9,130	12.2	14,706	11,419	12.3	14,826	11,605
2026	124,457	10.0	12,446	9,165	12.2	15,184	11,463	12.3	15,308	11,650
2027	128,502	10.0	12,850	9,183	12.2	15,677	11,485	12.3	15,806	11,672

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 96,360	13.9%	\$13,394	\$ 12,388	14.5%	\$13,972	\$ 12,761	15.6%	\$15,032	\$ 13,929
2019	99,492	13.9	13,829	12,558	14.5	14,426	12,936	15.6	15,521	14,120
2020	102,725	13.9	14,279	12,716	14.5	14,895	13,099	15.6	16,025	14,298
2021	106,064	13.9	14,743	12,861	14.5	15,379	13,249	15.6	16,546	14,461
2022	109,511	13.9	15,222	12,992	14.5	15,879	13,384	15.6	17,084	14,608
2023	113,070	13.9	15,717	13,106	14.5	16,395	13,502	15.6	17,639	14,736
2024	116,745	13.9	16,228	13,201	14.5	16,928	13,600	15.6	18,212	14,843
2025	120,539	13.9	16,755	13,276	14.5	17,478	13,677	15.6	18,804	14,927
2026	124,457	13.9	17,300	13,327	14.5	18,046	13,730	15.6	19,415	14,985
2027	128,502	13.9	17,862	13,352	14.5	18,633	13,756	15.6	20,046	15,014

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	\$ 96,360	16.7%	\$16,092	\$ 14,905	17.2%	\$16,574	\$ 15,468	18.9%	\$18,212	\$ 17,006
2019	99,492	16.7	16,615	15,109	17.2	17,113	15,680	18.9	18,804	17,239
2020	102,725	16.7	17,155	15,300	17.2	17,669	15,878	18.9	19,415	17,456
2021	106,064	16.7	17,713	15,475	17.2	18,243	16,060	18.9	20,046	17,656
2022	109,511	16.7	18,288	15,632	17.2	18,836	16,223	18.9	20,698	17,835
2023	113,070	16.7	18,883	15,769	17.2	19,448	16,365	18.9	21,370	17,992
2024	116,745	16.7	19,496	15,884	17.2	20,080	16,484	18.9	22,065	18,123
2025	120,539	16.7	20,130	15,974	17.2	20,733	16,577	18.9	22,782	18,225
2026	124,457	16.7	20,784	16,036	17.2	21,407	16,641	18.9	23,522	18,295
2027	128,502	16.7	21,460	16,067	17.2	22,102	16,673	18.9	24,287	18,330

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 28th 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.