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September 17, 2019

Spanish Lake Fire Protection District St. Loius, 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, 2019.

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 July 31, 2019. 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

Mita Drazilos



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.



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

Regular Retirement Eligibility

		Pe	rcents of Activ	e Member Pay	roll
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.20%	2.40%	0.20%	2.80%
	Fire	11.90	4.10	0.60	16.60
L-3	General	0.30	3.50	0.30	4.10
	Fire	14.90	5.80	0.70	21.40
LT-4(65)	General	0.20	2.90	0.20	3.30
	Fire	14.40	5.90	0.60	20.90
LT-5(65)	General	0.30	3.90	0.30	4.50
	Fire	16.80	7.10	0.70	24.60
L-7	General	0.40	4.70	0.30	5.40
	Fire	18.00	7.50	0.80	26.30
LT-8(65)	General	0.40	4.90	0.30	5.60
	Fire	19.20	8.40	0.80	28.40
L-12	General	0.50	6.00	0.40	6.90
	Fire	21.00	9.20	0.90	31.10
LT-14(65)	General	0.50	6.10	0.40	7.00
	Fire	21.60	9.70	0.90	32.20
L-6	General	0.50	7.30	0.50	8.30
	Fire	24.00	11.00	1.00	36.00



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

Regular Retirement Eligibility

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.20%	2.60%	0.20%	3.00%
	Fire	12.30	4.30	0.60	17.20
L-3	General	0.30	3.70	0.30	4.30
	Fire	15.50	6.00	0.70	22.20
LT-4(65)	General	0.30	3.10	0.20	3.60
	Fire	14.90	6.20	0.60	21.70
LT-5(65)	General	0.30	4.10	0.30	4.70
	Fire	17.40	7.50	0.70	25.60
L-7	General	0.40	5.00	0.30	5.70
	Fire	18.60	7.90	0.80	27.30
LT-8(65)	General	0.40	5.20	0.30	5.90
	Fire	19.80	8.80	0.80	29.40
L-12	General	0.50	6.30	0.40	7.20
	Fire	21.70	9.70	0.90	32.30
LT-14(65)	General	0.50	6.40	0.40	7.30
	Fire	22.30	10.10	0.90	33.30
L-6	General	0.60	7.60	0.50	8.70
	Fire	24.80	11.50	1.00	37.30



<u>Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)</u> (No member contributions)

Regular Retirement Eligibility

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.30%	6.00%	0.20%	6.50%
	Fire	12.00	7.90	0.60	20.50
L-3	General	0.40	7.20	0.30	7.90
	Fire	15.00	9.60	0.70	25.30
LT-4(65)	General	0.40	6.40	0.20	7.00
	Fire	14.40	9.70	0.60	24.70
LT-5(65)	General	0.40	7.60	0.30	8.30
	Fire	16.80	11.00	0.70	28.50
L-7	General	0.50	8.50	0.30	9.30
	Fire	18.00	11.40	0.80	30.20
LT-8(65)	General	0.50	8.70	0.30	9.50
	Fire	19.20	12.30	0.80	32.30
L-12	General	0.60	9.80	0.40	10.80
	Fire	21.00	13.10	0.90	35.00
LT-14(65)	General	0.60	9.90	0.40	10.90
	Fire	21.60	13.60	0.90	36.10
L-6	General	0.70	11.00	0.50	12.20
	Fire	24.00	14.90	1.00	39.90



<u>Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)</u> (No member contributions)

Regular Retirement Eligibility

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.40%	6.10%	0.20%	6.70%
	Fire	12.40	8.10	0.60	21.10
L-3	General	0.40	7.50	0.30	8.20
	Fire	15.50	9.90	0.70	26.10
LT-4(65)	General	0.40	6.60	0.20	7.20
	Fire	14.90	10.10	0.60	25.60
LT-5(65)	General	0.50	7.80	0.30	8.60
	Fire	17.40	11.40	0.70	29.50
L-7	General	0.50	8.80	0.30	9.60
	Fire	18.60	11.80	0.80	31.20
LT-8(65)	General	0.50	9.00	0.30	9.80
	Fire	19.80	12.70	0.80	33.30
L-12	General	0.60	10.10	0.40	11.10
	Fire	21.70	13.60	0.90	36.20
LT-14(65)	General	0.60	10.20	0.40	11.20
	Fire	22.30	14.00	0.90	37.20
L-6	General	0.70	11.40	0.50	12.60
	Fire	24.80	15.40	1.00	41.20



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

		Pe	rcents of Activ	e Member Pay	roll
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.20%	3.00%	0.20%	3.40%
	Fire	12.60	4.50	0.60	17.70
L-3	General	0.30	4.20	0.30	4.80
	Fire	15.80	6.40	0.70	22.90
LT-4(65)	General	0.30	4.20	0.20	4.70
	Fire	16.10	7.00	0.60	23.70
LT-5(65)	General	0.40	5.10	0.30	5.80
	Fire	18.40	8.20	0.70	27.30
L-7	General	0.40	5.60	0.30	6.30
	Fire	19.00	8.10	0.80	27.90
LT-8(65)	General	0.50	6.10	0.30	6.90
	Fire	20.70	9.50	0.80	31.00
L-12	General	0.50	7.00	0.40	7.90
	Fire	22.20	10.00	0.90	33.10
LT-14(65)	General	0.60	7.20	0.40	8.20
	Fire	23.10	10.60	0.90	34.60
L-6	General	0.60	8.40	0.50	9.50
	Fire	25.40	11.90	1.00	38.30

- # 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 for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.



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

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.30%	3.20%	0.20%	3.70%
	Fire	13.10	4.70	0.60	18.40
L-3	General	0.40	4.50	0.30	5.20
	Fire	16.40	6.60	0.70	23.70
LT-4(65)	General	0.30	4.40	0.20	4.90
	Fire	16.70	7.30	0.60	24.60
LT-5(65)	General	0.40	5.40	0.30	6.10
	Fire	19.10	8.60	0.70	28.40
L-7	General	0.50	5.90	0.30	6.70
	Fire	19.70	8.60	0.80	29.10
LT-8(65)	General	0.50	6.50	0.30	7.30
	Fire	21.50	9.80	0.80	32.10
L-12	General	0.60	7.30	0.40	8.30
	Fire	23.00	10.50	0.90	34.40
LT-14(65)	General	0.60	7.60	0.40	8.60
	Fire	23.90	11.00	0.90	35.80
L-6	General	0.60	8.90	0.50	10.00
	Fire	26.20	12.40	1.00	39.60

- # 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 for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.



<u>Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)</u> (No member contributions)

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.40%	6.50%	0.20%	7.10%
	Fire	12.70	8.30	0.60	21.60
L-3	General	0.50	7.90	0.30	8.70
	Fire	15.90	10.20	0.70	26.80
LT-4(65)	General	0.50	7.70	0.20	8.40
	Fire	16.10	10.80	0.60	27.50
LT-5(65)	General	0.50	8.80	0.30	9.60
	Fire	18.40	12.10	0.70	31.20
L-7	General	0.60	9.30	0.30	10.20
	Fire	19.00	12.00	0.80	31.80
LT-8(65)	General	0.60	9.90	0.30	10.80
	Fire	20.80	13.30	0.80	34.90
L-12	General	0.70	10.70	0.40	11.80
	Fire	22.20	13.90	0.90	37.00
LT-14(65)	General	0.70	11.00	0.40	12.10
	Fire	23.10	14.50	0.90	38.50
L-6	General	0.80	12.10	0.50	13.40
	Fire	25.40	15.80	1.00	42.20

- # 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 for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.



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

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.40%	6.70%	0.20%	7.30%
	Fire	13.10	8.60	0.60	22.30
L-3	General	0.50	8.20	0.30	9.00
	Fire	16.40	10.50	0.70	27.60
LT-4(65)	General	0.50	8.00	0.20	8.70
	Fire	16.70	11.20	0.60	28.50
LT-5(65)	General	0.60	9.10	0.30	10.00
	Fire	19.10	12.50	0.70	32.30
L-7	General	0.60	9.70	0.30	10.60
	Fire	19.70	12.50	0.80	33.00
LT-8(65)	General	0.60	10.30	0.30	11.20
	Fire	21.50	13.70	0.80	36.00
L-12	General	0.70	11.10	0.40	12.20
	Fire	23.00	14.40	0.90	38.30
LT-14(65)	General	0.70	11.40	0.40	12.50
	Fire	23.80	15.00	0.90	39.70
L-6	General	0.80	12.60	0.50	13.90
	Fire	26.20	16.30	1.00	43.50

- # The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.
- * Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.



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

3 Year FAS				
Benefit				
Program	General	Fire		
L-1	\$ 1,439	\$ 263,347		
L-3	2,063	339,902		
LT-4(65)	1,727	332,247		
LT-5(65)	2,255	391,959		
L-7	2,735	417,988		
LT-8(65)	2,831	450,140		
L-12	3,455	494,542		
LT-14(65)	3,503	509,853		
L-6	4,174	571,097		

Non-Contributory Plan

	3 Year FAS				
Benefit					
Program	General	Fire			
L-1	\$ 3,215	\$ 323,060			
L-3	3,935	399,614			
LT-4(65)	3,455	391,959			
LT-5(65)	4,126	451,672			
L-7	4,606	477,700			
LT-8(65)	4,702	509,853			
L-12	5,326	554,255			
LT-14(65)	5,374	569,565			
L-6	6,046	630,809			

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.



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

3 Year FAS				
Benefit				
Program	General	Fire		
L-1	\$ 1,775	\$ 281,721		
L-3	2,495	362,868		
LT-4(65)	2,351	376,648		
LT-5(65)	2,927	434,830		
L-7	3,215	445,547		
LT-8(65)	3,503	491,480		
L-12	3,983	526,695		
LT-14(65)	4,126	548,130		
L-6	4,798	606,312		

Non-Contributory Plan

3 Year FAS					
Benefit					
Program	General	Fire			
L-1	\$ 3,503	\$ 341,433			
L-3	4,318	422,581			
LT-4(65)	4,174	436,361			
LT-5(65)	4,798	494,542			
L-7	5,086	505,260			
LT-8(65)	5,374	551,192			
L-12	5,854	586,407			
LT-14(65)	5,998	607,843			
L-6	6,670	666,024			

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.



Employees and Payroll Included in the Valuation

	General	Fire
Number of Employees	1	17
Annual Payroll	\$ 47,982	\$ 1,531,090

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





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:

Spanish Lake Fire Protection District

Regular Retirement Eligibility

		Contri	butory	Non-Contributory		
Benefit	Employee	UAAL	UAAL	UAAL	UAAL	
Group	Group	(5 Year FAS)	(3 Year FAS)	(5 Year FAS)	(3 Year FAS)	
L-1	General	\$ 1,751	\$ 1,846	\$ 2,868	\$ 2,979	
	Fire	3,219,034	3,327,809	3,231,724	3,339,551	
L-3	General	2,492	2,646	3,593	3,731	
	Fire	4,032,145	4,167,923	4,039,654	4,174,386	
LT-4(65)	General	2,024	2,136	3,142	3,269	
	Fire	3,879,234	4,011,209	3,888,018	4,018,937	
LT-5(65)	General	2,688	2,856	3,799	3,944	
	Fire	4,527,356	4,680,487	4,531,851	4,683,884	
L-7	General	3,287	3,450	4,312	4,466	
	Fire	4,844,811	5,007,661	4,847,587	5,009,222	
LT-8(65)	General	3,423	3,590	4,454	4,610	
	Fire	5,174,950	5,349,365	5,175,718	5,348,919	
L-12	General	3,964	4,137	5,021	5,209	
	Fire	5,657,189	5,847,023	5,655,521	5,844,114	
LT-14(65)	General	4,023	4,207	5,095	5,276	
	Fire	5,822,259	6,017,866	5,819,615	6,013,957	
L-6	General	4,637	4,831	5,741	5,964	
	Fire	6,469,384	6,686,208	6,463,503	6,679,025	



Unfunded Actuarial Accrued Liability (UAAL)

		Contri	butory	Non-Contributory		
Benefit	Employee	UAAL	UAAL	UAAL	UAAL	
Group	Group	(5 Year FAS)	(3 Year FAS)	(5 Year FAS)	(3 Year FAS)	
L-1	General	\$ 2,076	\$ 2,183	\$ 3,197	\$ 3,320	
	Fire	3,409,149	3,526,569	3,421,244	3,537,925	
L-3	General	2,885	3,064	3,997	4,142	
	Fire	4,268,574	4,415,141	4,276,557	4,422,337	
LT-4(65)	General	2,747	2,881	3,865	4,005	
	Fire	4,344,463	4,495,236	4,351,710	4,501,582	
LT-5(65)	General	3,390	3,583	4,492	4,660	
	Fire	4,970,081	5,141,660	4,974,375	5,145,075	
L-7	General	3,765	3,944	4,789	4,976	
	Fire	5,127,581	5,303,485	5,131,860	5,306,779	
LT-8(65)	General	4,105	4,293	5,123	5,327	
	Fire	5,595,244	5,787,808	5,597,122	5,788,621	
L-12	General	4,523	4,706	5,599	5,810	
	Fire	5,986,437	6,191,501	5,987,151	6,191,266	
LT-14(65)	General	4,688	4,877	5,761	5,978	
	Fire	6,220,287	6,433,649	6,219,778	6,432,174	
L-6	General	5,272	5,488	6,392	6,640	
	Fire	6,845,093	7,079,365	6,842,541	7,075,762	





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.
- 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

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

Percent Increase in Individual's Pay

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



Schedule 2.

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

Early Retirement

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

Normal Retirement

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



Schedule 2. (Continued)

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

Retirement	General	Members		
Ages	Men	Women	Police	Fire
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		





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, 2019 (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:

LT-5(65) Benefit Program:

LT-8(65) Benefit Program:

1.00% for life, plus 1.00% to age 65

1.25% for life, plus 0.75% to age 65

LT-14(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.





BENEFIT ILLUSTRATIONS

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

Final	Estimated		Estimated	
Average	LAGERS	Social	Monthly	/ Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 930	\$1,455	97%
2,000	700	1,076	1,776	89%
2,500	875	1,223	2,098	84%
3,000	1,050	1,370	2,420	81%
3,500	1,225	1,516	2,741	78%
4,000	1,400	1,662	3,062	77%
25 Years of Service:				
\$1,500	\$ 375	\$ 930	\$1,305	87%
2,000	500	1,076	1,576	79%
2,500	625	1,223	1,848	74%
3,000	750	1,370	2,120	71%
3,500	875	1,516	2,391	68%
4,000	1,000	1,662	2,662	67%
15 Years of Service:				
\$1,500	\$225	\$ 930	\$1,155	77%
2,000	300	1,076	1,376	69%
2,500	375	1,223	1,598	64%
3,000	450	1,370	1,820	61%
3,500	525	1,516	2,041	58%
4,000	600	1,662	2,262	57%

[&]quot;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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Final		Estimated		Estimated		
Average	LAGERS	Social	Monthly	/ Total		
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS		
35 Years of Service:						
\$1,500	\$ 656	\$ 930	\$1,586	106%		
2,000	875	1,076	1,951	98%		
2,500	1,094	1,223	2,317	93%		
3,000	1,313	1,370	2,683	89%		
3,500	1,531	1,516	3,047	87%		
4,000	1,750	1,662	3,412	85%		
25 Years of Service:						
\$1,500	\$ 469	\$ 930	\$1,399	93%		
2,000	625	1,076	1,701	85%		
2,500	781	1,223	2,004	80%		
3,000	938	1,370	2,308	77%		
3,500	1,094	1,516	2,610	75%		
4,000	1,250	1,662	2,912	73%		
15 Years of Service:						
\$1,500	\$281	\$ 930	\$1,211	81%		
2,000	375	1,076	1,451	73%		
2,500	469	1,223	1,692	68%		
3,000	563	1,370	1,933	64%		
3,500	656	1,516	2,172	62%		
4,000	750	1,662	2,412	60%		

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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Final	Estimated		Estimated	
Average	LAGERS	Social	Monthly	/ Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 930	\$1,718	115%
2,000	1,050	1,076	2,126	106%
2,500	1,313	1,223	2,536	101%
3,000	1,575	1,370	2,945	98%
3,500	1,838	1,516	3,354	96%
4,000	2,100	1,662	3,762	94%
25 Years of Service:				
\$1,500	\$ 563	\$ 930	\$1,493	100%
2,000	750	1,076	1,826	91%
2,500	938	1,223	2,161	86%
3,000	1,125	1,370	2,495	83%
3,500	1,313	1,516	2,829	81%
4,000	1,500	1,662	3,162	79%
15 Years of Service:				
\$1,500	\$338	\$ 930	\$1,268	85%
2,000	450	1,076	1,526	76%
2,500	563	1,223	1,786	71%
3,000	675	1,370	2,045	68%
3,500	788	1,516	2,304	66%
4,000	900	1,662	2,562	64%

[&]quot;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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Final		Estimated	Estimated		
Average	LAGERS	Social	ial Monthly Total		
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS	
35 Years of Service:					
\$1,500	\$ 919	\$ 930	\$1,849	123%	
2,000	1,225	1,076	2,301	115%	
2,500	1,531	1,223	2,754	110%	
3,000	1,838	1,370	3,208	107%	
3,500	2,144	1,516	3,660	105%	
4,000	2,450	1,662	4,112	103%	
25 Years of Service:					
\$1,500	\$ 656	\$ 930	\$1,586	106%	
2,000	875	1,076	1,951	98%	
2,500	1,094	1,223	2,317	93%	
3,000	1,313	1,370	2,683	89%	
3,500	1,531	1,516	3,047	87%	
4,000	1,750	1,662	3,412	85%	
15 Years of Service:					
\$1,500	\$ 394	\$ 930	\$1,324	88%	
2,000	525	1,076	1,601	80%	
2,500	656	1,223	1,879	75%	
3,000	788	1,370	2,158	72%	
3,500	919	1,516	2,435	70%	
4,000	1,050	1,662	2,712	68%	

[&]quot;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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Final		Estimated	Estimated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 930	\$1,980	132%
2,000	1,400	1,076	2,476	124%
2,500	1,750	1,223	2,973	119%
3,000	2,100	1,370	3,470	116%
3,500	2,450	1,516	3,966	113%
4,000	2,800	1,662	4,462	112%
25 Years of Service:				
\$1,500	\$ 750	\$ 930	\$1,680	112%
2,000	1,000	1,076	2,076	104%
2,500	1,250	1,223	2,473	99%
3,000	1,500	1,370	2,870	96%
3,500	1,750	1,516	3,266	93%
4,000	2,000	1,662	3,662	92%
15 Years of Service:				
\$1,500	\$ 450	\$ 930	\$1,380	92%
2,000	600	1,076	1,676	84%
2,500	750	1,223	1,973	79%
3,000	900	1,370	2,270	76%
3,500	1,050	1,516	2,566	73%
4,000	1,200	1,662	2,862	72%

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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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	LAG	ERS	Estimated	Estim	nated	Pero	ent
Average	BENI	EFIT ³	Social	Month	ly Total	of F	AS
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65
35 Years of Service	2:						
\$1,500	\$1,050	\$ 525	\$ 930	\$1,050	\$1,455	70%	97%
2,000	1,400	700	1,076	1,400	1,776	70%	89%
2,500	1,750	875	1,223	1,750	2,098	70%	84%
3,000	2,100	1,050	1,370	2,100	2,420	70%	81%
3,500	2,450	1,225	1,516	2,450	2,741	70%	78%
4,000	2,800	1,400	1,662	2,800	3,062	70%	77%
25 Years of Service	e:						
\$1,500	\$ 750	\$ 375	\$ 930	\$ 750	\$1,305	50%	87%
2,000	1,000	500	1,076	1,000	1,576	50%	79%
2,500	1,250	625	1,223	1,250	1,848	50%	74%
3,000	1,500	750	1,370	1,500	2,120	50%	71%
3,500	1,750	875	1,516	1,750	2,391	50%	68%
4,000	2,000	1,000	1,662	2,000	2,662	50%	67%
15 Years of Service	e :						
\$1,500	\$ 450	\$225	\$ 930	\$ 450	\$1,155	30%	77%
2,000	600	300	1,076	600	1,376	30%	69%
2,500	750	375	1,223	750	1,598	30%	64%
3,000	900	450	1,370	900	1,820	30%	61%
3,500	1,050	525	1,516	1,050	2,041	30%	58%
4,000	1,200	600	1,662	1,200	2,262	30%	57%

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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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 ¹ to age 65)

1.25% of FAS ¹ at age 65)

Final	LAG	ERS	Estimated	Estim	nated	Perc	ent
Average	BENI	EFIT ³	Social	Month	y Total	of F	AS
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65
35 Years of Service	e:						
\$1,500	\$1,050	\$ 656	\$ 930	\$1,050	\$1,586	70%	106%
2,000	1,400	875	1,076	1,400	1,951	70%	98%
2,500	1,750	1,094	1,223	1,750	2,317	70%	93%
3,000	2,100	1,313	1,370	2,100	2,683	70%	89%
3,500	2,450	1,531	1,516	2,450	3,047	70%	87%
4,000	2,800	1,750	1,662	2,800	3,412	70%	85%
25 Years of Service	: :						
\$1,500	\$ 750	\$ 469	\$ 930	\$ 750	\$1,399	50%	93%
2,000	1,000	625	1,076	1,000	1,701	50%	85%
2,500	1,250	781	1,223	1,250	2,004	50%	80%
3,000	1,500	938	1,370	1,500	2,308	50%	77%
3,500	1,750	1,094	1,516	1,750	2,610	50%	75%
4,000	2,000	1,250	1,662	2,000	2,912	50%	73%
15 Years of Service	e :						
\$1,500	\$ 450	\$281	\$ 930	\$ 450	\$1,211	30%	81%
2,000	600	375	1,076	600	1,451	30%	73%
2,500	750	469	1,223	750	1,692	30%	68%
3,000	900	563	1,370	900	1,933	30%	64%
3,500	1,050	656	1,516	1,050	2,172	30%	62%
4,000	1,200	750	1,662	1,200	2,412	30%	60%
_							

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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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	LAG	LAGERS		Estim	nated	Percent		
Average	BEN	EFIT ³	Social	Month	ly Total	of F	AS	
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65	
35 Years of Service	e :							
\$1,500	\$1,050	\$ 788	\$ 930	\$1,050	\$1,718	70%	115%	
2,000	1,400	1,050	1,076	1,400	2,126	70%	106%	
2,500	1,750	1,313	1,223	1,750	2,536	70%	101%	
3,000	2,100	1,575	1,370	2,100	2,945	70%	98%	
3,500	2,450	1,838	1,516	2,450	3,354	70%	96%	
4,000	2,800	2,100	1,662	2,800	3,762	70%	94%	
25 Years of Service	2 :							
\$1,500	\$ 750	\$ 563	\$ 930	\$ 750	\$1,493	50%	100%	
2,000	1,000	750	1,076	1,000	1,826	50%	91%	
2,500	1,250	938	1,223	1,250	2,161	50%	86%	
3,000	1,500	1,125	1,370	1,500	2,495	50%	83%	
3,500	1,750	1,313	1,516	1,750	2,829	50%	81%	
4,000	2,000	1,500	1,662	2,000	3,162	50%	79%	
15 Years of Service	e:							
\$1,500	\$ 450	\$338	\$ 930	\$ 450	\$1,268	30%	85%	
2,000	600	450	1,076	600	1,526	30%	76%	
2,500	750	563	1,223	750	1,786	30%	71%	
3,000	900	675	1,370	900	2,045	30%	68%	
3,500	1,050	788	1,516	1,050	2,304	30%	66%	
4,000	1,200	900	1,662	1,200	2,562	30%	64%	

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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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	LAGERS		Estimated	Estimated		Percent		
Average	BENI	EFIT ³	Social	Monthl	y Total	of F	AS	
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65	
35 Years of Service	e:							
\$1,500	\$1,050	\$ 919	\$ 930	\$1,050	\$1,849	70%	123%	
2,000	1,400	1,225	1,076	1,400	2,301	70%	115%	
2,500	1,750	1,531	1,223	1,750	2,754	70%	110%	
3,000	2,100	1,838	1,370	2,100	3,208	70%	107%	
3,500	2,450	2,144	1,516	2,450	3,660	70%	105%	
4,000	2,800	2,450	1,662	2,800	4,112	70%	103%	
25 Years of Service	e:							
\$1,500	\$ 750	\$ 656	\$ 930	\$ 750	\$1,586	50%	106%	
2,000	1,000	875	1,076	1,000	1,951	50%	98%	
2,500	1,250	1,094	1,223	1,250	2,317	50%	93%	
3,000	1,500	1,313	1,370	1,500	2,683	50%	89%	
3,500	1,750	1,531	1,516	1,750	3,047	50%	87%	
4,000	2,000	1,750	1,662	2,000	3,412	50%	85%	
15 Years of Service	e:							
\$1,500	\$ 450	\$ 394	\$ 930	\$ 450	\$1,324	30%	88%	
2,000	600	525	1,076	600	1,601	30%	80%	
2,500	750	656	1,223	750	1,879	30%	75%	
3,000	900	788	1,370	900	2,158	30%	72%	
3,500	1,050	919	1,516	1,050	2,435	30%	70%	
4,000	1,200	1,050	1,662	1,200	2,712	30%	68%	

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.

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



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 2019 - it does not include any amounts which might be payable to an eligible spouse or children.



AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

July 31, 2019

By Attained Age and Years of Service

		Yea	ars of Se	rvice to \		Totals			
Attained									Valuation
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll
Under 20									
20-24									
25-29									
30-34	1							1	\$ 47,982
35-39									
40-44									
45-49									
50-54									
55-59									
60-64									
65-69									
70 & Over									
Totals	1							1	\$ 47,982

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

Age: 30.5 years.

Benefit Service: 1.3 years. Annual Pay: \$47,982.



July 31, 2019

By Attained Age and Years of Service

		Yea	ars of Se	rvice to \		Totals			
Attained									Valuation
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll
Under 20									
20-24	1							1	\$ 71,082
25-29	1							1	\$ 85,000
30-34	1							1	\$ 82,814
35-39	1	1						2	\$ 173,217
40-44				1				1	\$ 88,569
45-49				1	1			2	\$ 189,911
50-54			1			1	1	3	\$ 302,641
55-59							2	2	\$ 178,477
60-64					1	1	1	3	\$ 269,976
65-69							1	1	\$ 89,403
70 & Over									
Totals	4	1	1	2	2	2	5	17	\$ 1,531,090

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

Age: 47.8 years.

Benefit Service: 19.3 years.

Annual Pay: \$ 90,064.





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:

- 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.





September 17, 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 July 31, 2019 Initial Actuarial Valuation of LAGERS benefits for the employees of

Spanish Lake Fire Protection District

Sincerely,

Mita D. Drazilov, ASA, FCA, MAAA

Mita Drajilor

MDD:wp



September 17, 2019

Spanish Lake Fire Protection District St. Loius, 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 July 31, 2019 Initial Valuation for the Spanish Lake Fire Protection District dated September 17, 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, 2019.

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 Draylov Mita D. Drazilov, ASA, FCA, MAAA

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

Regular Retirement Eligibility

		L-1 Benefit Program			L-	3 Benefit Pro	gram	LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated Employer Contribution		Unfunded Actuarial	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial				Contribution		Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 47,982	2.8%	\$1,343	\$ 1,751	4.1%	\$1,967	\$ 2,492	3.3%	\$1,583	\$ 2,024
2020	49,541	2.8	1,387	1,775	4.1	2,031	2,526	3.3	1,635	2,052
2021	51,151	2.8	1,432	1,797	4.1	2,097	2,558	3.3	1,688	2,078
2022	52,813	2.8	1,479	1,818	4.1	2,165	2,587	3.3	1,743	2,102
2023	54,529	2.8	1,527	1,836	4.1	2,236	2,613	3.3	1,799	2,123
2024	56,301	2.8	1,576	1,852	4.1	2,308	2,636	3.3	1,858	2,142
2025	58,131	2.8	1,628	1,865	4.1	2,383	2,655	3.3	1,918	2,158
2026	60,020	2.8	1,681	1,876	4.1	2,461	2,670	3.3	1,981	2,170
2027	61,971	2.8	1,735	1,883	4.1	2,541	2,680	3.3	2,045	2,178
2028	63,985	2.8	1,792	1,887	4.1	2,623	2,685	3.3	2,112	2,182

		LT-5(65) Benefit Program			L	7 Benefit Pro	gram	LT-8(65) Benefit Program		
	Estimated		l Employer ibution	tion Actuarial Annual Accrued		Estimated Employer Contribution		Estimated Employer Contribution		Unfunded Actuarial
Valuation Year	Year Payroll	As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 47,982	4.5%	\$2,159	\$ 2,688	5.4%	\$2,591	\$ 3,287	5.6%	\$2,687	\$ 3,423
2020	49,541	4.5	2,229	2,725	5.4	2,675	3,332	5.6	2,774	3,470
2021	51,151	4.5	2,302	2,759	5.4	2,762	3,374	5.6	2,864	3,514
2022	52,813	4.5	2,377	2,791	5.4	2,852	3,413	5.6	2,958	3,554
2023	54,529	4.5	2,454	2,819	5.4	2,945	3,448	5.6	3,054	3,590
2024	56,301	4.5	2,534	2,844	5.4	3,040	3,478	5.6	3,153	3,622
2025	58,131	4.5	2,616	2,865	5.4	3,139	3,503	5.6	3,255	3,648
2026	60,020	4.5	2,701	2,881	5.4	3,241	3,523	5.6	3,361	3,669
2027	61,971	4.5	2,789	2,892	5.4	3,346	3,537	5.6	3,470	3,683
2028	63.985	4.5	2.879	2.898	5.4	3.455	3.544	5.6	3.583	3.690

		L-12 Benefit Program			LT-14	1(65) Benefit I	Program	L-6 Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contribution		Actuarial	Contr	Contribution	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 47,982	6.9%	\$3,311	\$ 3,964	7.0%	\$3,359	\$ 4,023	8.3%	\$3,983	\$ 4,637
2020	49,541	6.9	3,418	4,018	7.0	3,468	4,078	8.3	4,112	4,701
2021	51,151	6.9	3,529	4,069	7.0	3,581	4,129	8.3	4,246	4,760
2022	52,813	6.9	3,644	4,116	7.0	3,697	4,176	8.3	4,383	4,814
2023	54,529	6.9	3,763	4,158	7.0	3,817	4,218	8.3	4,526	4,863
2024	56,301	6.9	3,885	4,195	7.0	3,941	4,255	8.3	4,673	4,906
2025	58,131	6.9	4,011	4,226	7.0	4,069	4,286	8.3	4,825	4,942
2026	60,020	6.9	4,141	4,250	7.0	4,201	4,310	8.3	4,982	4,970
2027	61,971	6.9	4,276	4,266	7.0	4,338	4,327	8.3	5,144	4,989
2028	63,985	6.9	4,415	4,274	7.0	4,479	4,335	8.3	5,311	4,999

- 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.



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

Regular Retirement Eligibility

		L-1 Benefit Program			L-	3 Benefit Pro	gram	LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated Employer Contribution		Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial			Actuarial	Contri	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 47,982	3.0%	\$1,439	\$ 1,846	4.3%	\$2,063	\$ 2,646	3.6%	\$1,727	\$ 2,136
2020	49,541	3.0	1,486	1,871	4.3	2,130	2,682	3.6	1,783	2,165
2021	51,151	3.0	1,535	1,895	4.3	2,199	2,716	3.6	1,841	2,192
2022	52,813	3.0	1,584	1,917	4.3	2,271	2,747	3.6	1,901	2,217
2023	54,529	3.0	1,636	1,936	4.3	2,345	2,775	3.6	1,963	2,240
2024	56,301	3.0	1,689	1,953	4.3	2,421	2,799	3.6	2,027	2,260
2025	58,131	3.0	1,744	1,967	4.3	2,500	2,819	3.6	2,093	2,276
2026	60,020	3.0	1,801	1,978	4.3	2,581	2,835	3.6	2,161	2,289
2027	61,971	3.0	1,859	1,986	4.3	2,665	2,846	3.6	2,231	2,298
2028	63,985	3.0	1,920	1,990	4.3	2,751	2,851	3.6	2,303	2,302

		LT-5(65) Benefit Program			L	7 Benefit Pro	gram	LT-8(65) Benefit Program		
	Estimated	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
Valuation Year	Year Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 47,982	4.7%	\$2,255	\$ 2,856	5.7%	\$2,735	\$ 3,450	5.9%	\$2,831	\$ 3,590
2020	49,541	4.7	2,328	2,895	5.7	2,824	3,497	5.9	2,923	3,639
2021	51,151	4.7	2,404	2,932	5.7	2,916	3,541	5.9	3,018	3,685
2022	52,813	4.7	2,482	2,966	5.7	3,010	3,581	5.9	3,116	3,727
2023	54,529	4.7	2,563	2,996	5.7	3,108	3,617	5.9	3,217	3,765
2024	56,301	4.7	2,646	3,022	5.7	3,209	3,649	5.9	3,322	3,798
2025	58,131	4.7	2,732	3,044	5.7	3,313	3,676	5.9	3,430	3,826
2026	60,020	4.7	2,821	3,061	5.7	3,421	3,697	5.9	3,541	3,848
2027	61,971	4.7	2,913	3,073	5.7	3,532	3,711	5.9	3,656	3,863
2028	63.985	4.7	3.007	3.079	5.7	3.647	3.718	5.9	3.775	3.870

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program		
	Estimated		l Employer ibution	Unfunded Actuarial Accrued Liability		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 47,982	7.2%	\$3,455	\$ 4,137	7.3%	\$3,503	\$ 4,207	8.7%	\$4,174	\$ 4,831
2020	49,541	7.2	3,567	4,194	7.3	3,616	4,265	8.7	4,310	4,897
2021	51,151	7.2	3,683	4,247	7.3	3,734	4,319	8.7	4,450	4,959
2022	52,813	7.2	3,803	4,296	7.3	3,855	4,368	8.7	4,595	5,016
2023	54,529	7.2	3,926	4,340	7.3	3,981	4,412	8.7	4,744	5,067
2024	56,301	7.2	4,054	4,378	7.3	4,110	4,451	8.7	4,898	5,112
2025	58,131	7.2	4,185	4,410	7.3	4,244	4,483	8.7	5,057	5,149
2026	60,020	7.2	4,321	4,435	7.3	4,381	4,508	8.7	5,222	5,178
2027	61,971	7.2	4,462	4,452	7.3	4,524	4,525	8.7	5,391	5,198
2028	63,985	7.2	4,607	4,461	7.3	4,671	4,534	8.7	5,567	5,208

- 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.



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

(0% member contributions are additional)

Regular Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4(65) Benefit Program			
		Estimated	l Employer	Unfunded	Estimated	Employer	Unfunded	Estimated	l Employer	Unfunded	
	Estimated	Contri	ibution	Actuarial	Contribution		Actuarial	Contri	ibution	Actuarial	
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued	
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	
2019	\$ 47,982	6.5%	\$3,119	\$ 2,868	7.9%	\$3,791	\$ 3,593	7.0%	\$3,359	\$ 3,142	
2020	49,541	6.5	3,220	2,907	7.9	3,914	3,642	7.0	3,468	3,185	
2021	51,151	6.5	3,325	2,944	7.9	4,041	3,688	7.0	3,581	3,225	
2022	52,813	6.5	3,433	2,978	7.9	4,172	3,730	7.0	3,697	3,262	
2023	54,529	6.5	3,544	3,008	7.9	4,308	3,768	7.0	3,817	3,295	
2024	56,301	6.5	3,660	3,034	7.9	4,448	3,801	7.0	3,941	3,324	
2025	58,131	6.5	3,779	3,056	7.9	4,592	3,829	7.0	4,069	3,348	
2026	60,020	6.5	3,901	3,073	7.9	4,742	3,851	7.0	4,201	3,367	
2027	61,971	6.5	4,028	3,085	7.9	4,896	3,866	7.0	4,338	3,380	
2028	63,985	6.5	4,159	3,091	7.9	5,055	3,873	7.0	4,479	3,386	

		LT-5(65) Benefit Program			L-	7 Benefit Pro	gram	LT-8(65) Benefit Program		
	Estimated	Estimated Employer Contribution		Unfunded Actuarial		Estimated Employer Contribution		Estimated Employer Contribution		Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 47,982	8.3%	\$3,983	\$ 3,799	9.3%	\$4,462	\$ 4,312	9.5%	\$4,558	\$ 4,454
2020	49,541	8.3	4,112	3,851	9.3	4,607	4,371	9.5	4,706	4,515
2021	51,151	8.3	4,246	3,900	9.3	4,757	4,426	9.5	4,859	4,572
2022	52,813	8.3	4,383	3,945	9.3	4,912	4,477	9.5	5,017	4,624
2023	54,529	8.3	4,526	3,985	9.3	5,071	4,522	9.5	5,180	4,671
2024	56,301	8.3	4,673	4,020	9.3	5,236	4,562	9.5	5,349	4,712
2025	58,131	8.3	4,825	4,049	9.3	5,406	4,595	9.5	5,522	4,746
2026	60,020	8.3	4,982	4,072	9.3	5,582	4,621	9.5	5,702	4,773
2027	61,971	8.3	5,144	4,088	9.3	5,763	4,639	9.5	5,887	4,791
2028	63.985	8.3	5.311	4.096	9.3	5.951	4.648	9.5	6.079	4.800

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program			
	Estimated	imated Contribution		Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	
2019	\$ 47,982	10.8%	\$5,182	\$ 5,021	10.9%	\$5,230	\$ 5,095	12.2%	\$5,854	\$ 5,741	
2020	49,541	10.8	5,350	5,090	10.9	5,400	5,165	12.2	6,044	5,820	
2021	51,151	10.8	5,524	5,154	10.9	5,575	5,230	12.2	6,240	5,893	
2022	52,813	10.8	5,704	5,213	10.9	5,757	5,290	12.2	6,443	5,960	
2023	54,529	10.8	5,889	5,266	10.9	5,944	5,344	12.2	6,653	6,021	
2024	56,301	10.8	6,081	5,312	10.9	6,137	5,391	12.2	6,869	6,074	
2025	58,131	10.8	6,278	5,351	10.9	6,336	5,430	12.2	7,092	6,118	
2026	60,020	10.8	6,482	5,381	10.9	6,542	5,461	12.2	7,322	6,153	
2027	61,971	10.8	6,693	5,402	10.9	6,755	5,482	12.2	7,560	6,177	
2028	63,985	10.8	6,910	5,412	10.9	6,974	5,492	12.2	7,806	6,189	

- 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.



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

(0% member contributions are additional)

Regular Retirement Eligibility

	L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4(65) Benefit Program			
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	bution	Actuarial	Contri	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 47,982	6.7%	\$3,215	\$ 2,979	8.2%	\$3,935	\$ 3,731	7.2%	\$3,455	\$ 3,269
2020	49,541	6.7	3,319	3,020	8.2	4,062	3,782	7.2	3,567	3,314
2021	51,151	6.7	3,427	3,058	8.2	4,194	3,830	7.2	3,683	3,356
2022	52,813	6.7	3,538	3,093	8.2	4,331	3,874	7.2	3,803	3,394
2023	54,529	6.7	3,653	3,124	8.2	4,471	3,913	7.2	3,926	3,428
2024	56,301	6.7	3,772	3,151	8.2	4,617	3,947	7.2	4,054	3,458
2025	58,131	6.7	3,895	3,174	8.2	4,767	3,976	7.2	4,185	3,483
2026	60,020	6.7	4,021	3,192	8.2	4,922	3,998	7.2	4,321	3,503
2027	61,971	6.7	4,152	3,204	8.2	5,082	4,013	7.2	4,462	3,517
2028	63,985	6.7	4,287	3,210	8.2	5,247	4,021	7.2	4,607	3,524

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated		Estimated Employer Contribution			d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 47,982	8.6%	\$4,126	\$ 3,944	9.6%	\$4,606	\$ 4,466	9.8%	\$4,702	\$ 4,610
2020	49,541	8.6	4,261	3,998	9.6	4,756	4,527	9.8	4,855	4,673
2021	51,151	8.6	4,399	4,048	9.6	4,910	4,584	9.8	5,013	4,732
2022	52,813	8.6	4,542	4,094	9.6	5,070	4,636	9.8	5,176	4,786
2023	54,529	8.6	4,689	4,136	9.6	5,235	4,683	9.8	5,344	4,835
2024	56,301	8.6	4,842	4,172	9.6	5,405	4,724	9.8	5,517	4,877
2025	58,131	8.6	4,999	4,202	9.6	5,581	4,758	9.8	5,697	4,913
2026	60,020	8.6	5,162	4,226	9.6	5,762	4,785	9.8	5,882	4,941
2027	61,971	8.6	5,330	4,242	9.6	5,949	4,804	9.8	6,073	4,960
2028	63.985	8.6	5.503	4.250	9.6	6.143	4.813	9.8	6.271	4.969

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program			
	Estimated			Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		l Employer ibution	Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	
2019	\$ 47,982	11.1%	\$5,326	\$ 5,209	11.2%	\$5,374	\$ 5,276	12.6%	\$6,046	\$ 5,964	
2020	49,541	11.1	5,499	5,280	11.2	5,549	5,348	12.6	6,242	6,046	
2021	51,151	11.1	5,678	5,347	11.2	5,729	5,415	12.6	6,445	6,122	
2022	52,813	11.1	5,862	5,408	11.2	5,915	5,477	12.6	6,654	6,192	
2023	54,529	11.1	6,053	5,463	11.2	6,107	5,533	12.6	6,871	6,255	
2024	56,301	11.1	6,249	5,511	11.2	6,306	5,582	12.6	7,094	6,310	
2025	58,131	11.1	6,453	5,551	11.2	6,511	5,623	12.6	7,325	6,356	
2026	60,020	11.1	6,662	5,582	11.2	6,722	5,655	12.6	7,563	6,392	
2027	61,971	11.1	6,879	5,604	11.2	6,941	5,677	12.6	7,808	6,417	
2028	63,985	11.1	7,102	5,615	11.2	7,166	5,688	12.6	8,062	6,429	

- 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.



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

Rule of 80 Retirement Eligibility

	L-1 Benefit Program		gram	L-3 Benefit Program			LT-4(65) Benefit Program			
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	bution	Actuarial	Contri	bution	Actuarial	Contri	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 47,982	3.4%	\$1,631	\$ 2,076	4.8%	\$2,303	\$ 2,885	4.7%	\$2,255	\$ 2,747
2020	49,541	3.4	1,684	2,104	4.8	2,378	2,925	4.7	2,328	2,785
2021	51,151	3.4	1,739	2,131	4.8	2,455	2,962	4.7	2,404	2,820
2022	52,813	3.4	1,796	2,155	4.8	2,535	2,996	4.7	2,482	2,852
2023	54,529	3.4	1,854	2,177	4.8	2,617	3,026	4.7	2,563	2,881
2024	56,301	3.4	1,914	2,196	4.8	2,702	3,053	4.7	2,646	2,906
2025	58,131	3.4	1,976	2,212	4.8	2,790	3,075	4.7	2,732	2,927
2026	60,020	3.4	2,041	2,225	4.8	2,881	3,092	4.7	2,821	2,944
2027	61,971	3.4	2,107	2,234	4.8	2,975	3,104	4.7	2,913	2,955
2028	63,985	3.4	2,175	2,238	4.8	3,071	3,110	4.7	3,007	2,961

		LT-5(65) Benefit Program Estimated Employer Unfunded			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated		Estimated Employer Contribution			d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 47,982	5.8%	\$2,783	\$ 3,390	6.3%	\$3,023	\$ 3,765	6.9%	\$3,311	\$ 4,105
2020	49,541	5.8	2,873	3,436	6.3	3,121	3,817	6.9	3,418	4,161
2021	51,151	5.8	2,967	3,479	6.3	3,223	3,865	6.9	3,529	4,213
2022	52,813	5.8	3,063	3,519	6.3	3,327	3,909	6.9	3,644	4,261
2023	54,529	5.8	3,163	3,555	6.3	3,435	3,949	6.9	3,763	4,304
2024	56,301	5.8	3,265	3,586	6.3	3,547	3,984	6.9	3,885	4,342
2025	58,131	5.8	3,372	3,612	6.3	3,662	4,013	6.9	4,011	4,374
2026	60,020	5.8	3,481	3,632	6.3	3,781	4,036	6.9	4,141	4,399
2027	61,971	5.8	3,594	3,646	6.3	3,904	4,052	6.9	4,276	4,416
2028	63.985	5.8	3.711	3.653	6.3	4.031	4.060	6.9	4.415	4.424

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program			
			l Employer	Unfunded		d Employer	Unfunded		l Employer	Unfunded	
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2019	\$ 47,982	7.9%	\$3,791	\$ 4,523	8.2%	\$3,935	\$ 4,688	9.5%	\$4,558	\$ 5,272	
2020	49,541	7.9	3,914	4,585	8.2	4,062	4,752	9.5	4,706	5,344	
2021	51,151	7.9	4,041	4,643	8.2	4,194	4,812	9.5	4,859	5,411	
2022	52,813	7.9	4,172	4,696	8.2	4,331	4,867	9.5	5,017	5,473	
2023	54,529	7.9	4,308	4,744	8.2	4,471	4,916	9.5	5,180	5,529	
2024	56,301	7.9	4,448	4,786	8.2	4,617	4,959	9.5	5,349	5,578	
2025	58,131	7.9	4,592	4,821	8.2	4,767	4,995	9.5	5,522	5,619	
2026	60,020	7.9	4,742	4,848	8.2	4,922	5,023	9.5	5,702	5,651	
2027	61,971	7.9	4,896	4,867	8.2	5,082	5,042	9.5	5,887	5,673	
2028	63,985	7.9	5,055	4,876	8.2	5,247	5,052	9.5	6,079	5,684	

- 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.



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

Rule of 80 Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	bution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 47,982	3.7%	\$1,775	\$ 2,183	5.2%	\$2,495	\$ 3,064	4.9%	\$2,351	\$ 2,881
2020	49,541	3.7	1,833	2,213	5.2	2,576	3,106	4.9	2,428	2,920
2021	51,151	3.7	1,893	2,241	5.2	2,660	3,145	4.9	2,506	2,957
2022	52,813	3.7	1,954	2,267	5.2	2,746	3,181	4.9	2,588	2,991
2023	54,529	3.7	2,018	2,290	5.2	2,836	3,213	4.9	2,672	3,021
2024	56,301	3.7	2,083	2,310	5.2	2,928	3,241	4.9	2,759	3,048
2025	58,131	3.7	2,151	2,327	5.2	3,023	3,265	4.9	2,848	3,070
2026	60,020	3.7	2,221	2,340	5.2	3,121	3,283	4.9	2,941	3,087
2027	61,971	3.7	2,293	2,349	5.2	3,222	3,296	4.9	3,037	3,099
2028	63,985	3.7	2,367	2,353	5.2	3,327	3,302	4.9	3,135	3,105

		LT-5(65) Benefit Program Estimated Employer Unfunded			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated		Estimated Employer Contribution			l Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 47,982	6.1%	\$2,927	\$ 3,583	6.7%	\$3,215	\$ 3,944	7.3%	\$3,503	\$ 4,293
2020	49,541	6.1	3,022	3,632	6.7	3,319	3,998	7.3	3,616	4,352
2021	51,151	6.1	3,120	3,678	6.7	3,427	4,048	7.3	3,734	4,407
2022	52,813	6.1	3,222	3,720	6.7	3,538	4,094	7.3	3,855	4,457
2023	54,529	6.1	3,326	3,758	6.7	3,653	4,136	7.3	3,981	4,502
2024	56,301	6.1	3,434	3,791	6.7	3,772	4,172	7.3	4,110	4,542
2025	58,131	6.1	3,546	3,819	6.7	3,895	4,202	7.3	4,244	4,575
2026	60,020	6.1	3,661	3,841	6.7	4,021	4,226	7.3	4,381	4,601
2027	61,971	6.1	3,780	3,856	6.7	4,152	4,242	7.3	4,524	4,619
2028	63.985	6.1	3.903	3.863	6.7	4.287	4.250	7.3	4.671	4.628

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			
			l Employer	Unfunded		l Employer	Unfunded		l Employer	Unfunded	
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2019	\$ 47,982	8.3%	\$3,983	\$ 4,706	8.6%	\$4,126	\$ 4,877	10.0%	\$4,798	\$ 5,488	
2020	49,541	8.3	4,112	4,770	8.6	4,261	4,944	10.0	4,954	5,563	
2021	51,151	8.3	4,246	4,830	8.6	4,399	5,006	10.0	5,115	5,633	
2022	52,813	8.3	4,383	4,885	8.6	4,542	5,063	10.0	5,281	5,697	
2023	54,529	8.3	4,526	4,935	8.6	4,689	5,114	10.0	5,453	5,755	
2024	56,301	8.3	4,673	4,978	8.6	4,842	5,159	10.0	5,630	5,806	
2025	58,131	8.3	4,825	5,014	8.6	4,999	5,197	10.0	5,813	5,848	
2026	60,020	8.3	4,982	5,042	8.6	5,162	5,226	10.0	6,002	5,881	
2027	61,971	8.3	5,144	5,061	8.6	5,330	5,246	10.0	6,197	5,904	
2028	63,985	8.3	5,311	5,071	8.6	5,503	5,256	10.0	6,399	5,915	

- 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.
- 1) 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.



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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	bution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 47,982	7.1%	\$3,407	\$ 3,197	8.7%	\$4,174	\$ 3,997	8.4%	\$4,030	\$ 3,865
2020	49,541	7.1	3,517	3,241	8.7	4,310	4,052	8.4	4,161	3,918
2021	51,151	7.1	3,632	3,282	8.7	4,450	4,103	8.4	4,297	3,967
2022	52,813	7.1	3,750	3,320	8.7	4,595	4,150	8.4	4,436	4,012
2023	54,529	7.1	3,872	3,354	8.7	4,744	4,192	8.4	4,580	4,053
2024	56,301	7.1	3,997	3,383	8.7	4,898	4,229	8.4	4,729	4,089
2025	58,131	7.1	4,127	3,408	8.7	5,057	4,260	8.4	4,883	4,119
2026	60,020	7.1	4,261	3,427	8.7	5,222	4,284	8.4	5,042	4,142
2027	61,971	7.1	4,400	3,440	8.7	5,391	4,301	8.4	5,206	4,158
2028	63,985	7.1	4,543	3,447	8.7	5,567	4,309	8.4	5,375	4,166

		LT-5(65) Benefit Program Estimated Employer Unfunded			L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated		Estimated Employer Contribution			l Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	
2019	\$ 47,982	9.6%	\$4,606	\$ 4,492	10.2%	\$4,894	\$ 4,789	10.8%	\$5,182	\$ 5,123	
2020	49,541	9.6	4,756	4,554	10.2	5,053	4,855	10.8	5,350	5,193	
2021	51,151	9.6	4,910	4,611	10.2	5,217	4,916	10.8	5,524	5,258	
2022	52,813	9.6	5,070	4,664	10.2	5,387	4,972	10.8	5,704	5,318	
2023	54,529	9.6	5,235	4,711	10.2	5,562	5,023	10.8	5,889	5,372	
2024	56,301	9.6	5,405	4,752	10.2	5,743	5,067	10.8	6,081	5,419	
2025	58,131	9.6	5,581	4,787	10.2	5,929	5,104	10.8	6,278	5,458	
2026	60,020	9.6	5,762	4,814	10.2	6,122	5,133	10.8	6,482	5,489	
2027	61,971	9.6	5,949	4,833	10.2	6,321	5,153	10.8	6,693	5,510	
2028	63.985	9.6	6.143	4.842	10.2	6.526	5.163	10.8	6.910	5.521	

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program			
	Estimated		l Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		l Employer ibution	Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	
2019	\$ 47,982	11.8%	\$5,662	\$ 5,599	12.1%	\$5,806	\$ 5,761	13.4%	\$6,430	\$ 6,392	
2020	49,541	11.8	5,846	5,676	12.1	5,994	5,840	13.4	6,638	6,480	
2021	51,151	11.8	6,036	5,748	12.1	6,189	5,914	13.4	6,854	6,562	
2022	52,813	11.8	6,232	5,814	12.1	6,390	5,982	13.4	7,077	6,637	
2023	54,529	11.8	6,434	5,873	12.1	6,598	6,043	13.4	7,307	6,704	
2024	56,301	11.8	6,644	5,925	12.1	6,812	6,096	13.4	7,544	6,763	
2025	58,131	11.8	6,859	5,968	12.1	7,034	6,140	13.4	7,790	6,812	
2026	60,020	11.8	7,082	6,002	12.1	7,262	6,175	13.4	8,043	6,850	
2027	61,971	11.8	7,313	6,025	12.1	7,498	6,199	13.4	8,304	6,876	
2028	63,985	11.8	7,550	6,037	12.1	7,742	6,211	13.4	8,574	6,889	

- 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.



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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

	L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4(65) Benefit Program			
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	bution	Actuarial	Contri	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 47,982	7.3%	\$3,503	\$ 3,320	9.0%	\$4,318	\$ 4,142	8.7%	\$4,174	\$ 4,005
2020	49,541	7.3	3,616	3,365	9.0	4,459	4,199	8.7	4,310	4,060
2021	51,151	7.3	3,734	3,407	9.0	4,604	4,252	8.7	4,450	4,111
2022	52,813	7.3	3,855	3,446	9.0	4,753	4,301	8.7	4,595	4,158
2023	54,529	7.3	3,981	3,481	9.0	4,908	4,345	8.7	4,744	4,200
2024	56,301	7.3	4,110	3,512	9.0	5,067	4,383	8.7	4,898	4,237
2025	58,131	7.3	4,244	3,538	9.0	5,232	4,415	8.7	5,057	4,268
2026	60,020	7.3	4,381	3,558	9.0	5,402	4,440	8.7	5,222	4,292
2027	61,971	7.3	4,524	3,572	9.0	5,577	4,457	8.7	5,391	4,309
2028	63,985	7.3	4,671	3,579	9.0	5,759	4,466	8.7	5,567	4,317

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		l Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 47,982	10.0%	\$4,798	\$ 4,660	10.6%	\$5,086	\$ 4,976	11.2%	\$5,374	\$ 5,327
2020	49,541	10.0	4,954	4,724	10.6	5,251	5,044	11.2	5,549	5,400
2021	51,151	10.0	5,115	4,784	10.6	5,422	5,108	11.2	5,729	5,468
2022	52,813	10.0	5,281	4,839	10.6	5,598	5,166	11.2	5,915	5,531
2023	54,529	10.0	5,453	4,888	10.6	5,780	5,218	11.2	6,107	5,587
2024	56,301	10.0	5,630	4,931	10.6	5,968	5,264	11.2	6,306	5,636
2025	58,131	10.0	5,813	4,967	10.6	6,162	5,302	11.2	6,511	5,677
2026	60,020	10.0	6,002	4,995	10.6	6,362	5,332	11.2	6,722	5,709
2027	61,971	10.0	6,197	5,014	10.6	6,569	5,353	11.2	6,941	5,731
2028	63.985	10.0	6.399	5.024	10.6	6.782	5.363	11.2	7.166	5.742

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program			
	Estimated		l Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		l Employer ibution	Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	
2019	\$ 47,982	12.2%	\$5,854	\$ 5,810	12.5%	\$5,998	\$ 5,978	13.9%	\$6,670	\$ 6,640	
2020	49,541	12.2	6,044	5,890	12.5	6,193	6,060	13.9	6,886	6,731	
2021	51,151	12.2	6,240	5,964	12.5	6,394	6,136	13.9	7,110	6,816	
2022	52,813	12.2	6,443	6,032	12.5	6,602	6,206	13.9	7,341	6,894	
2023	54,529	12.2	6,653	6,093	12.5	6,816	6,269	13.9	7,580	6,964	
2024	56,301	12.2	6,869	6,147	12.5	7,038	6,324	13.9	7,826	7,025	
2025	58,131	12.2	7,092	6,192	12.5	7,266	6,370	13.9	8,080	7,076	
2026	60,020	12.2	7,322	6,227	12.5	7,503	6,406	13.9	8,343	7,116	
2027	61,971	12.2	7,560	6,251	12.5	7,746	6,431	13.9	8,614	7,144	
2028	63,985	12.2	7,806	6,263	12.5	7,998	6,443	13.9	8,894	7,158	

- 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.
- 1) 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.



Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 1,531,090	16.6%	\$254,161	\$ 3,219,034	21.4%	\$327,653	\$ 4,032,145	20.9%	\$319,998	\$ 3,879,234
2020	1,580,850	16.6	262,421	3,263,134	21.4	338,302	4,087,385	20.9	330,398	3,932,379
2021	1,632,228	16.6	270,950	3,304,280	21.4	349,297	4,138,924	20.9	341,136	3,981,964
2022	1,685,275	16.6	279,756	3,342,058	21.4	360,649	4,186,244	20.9	352,222	4,027,490
2023	1,740,046	16.6	288,848	3,376,016	21.4	372,370	4,228,780	20.9	363,670	4,068,413
2024	1,796,597	16.6	298,235	3,405,665	21.4	384,472	4,265,919	20.9	375,489	4,104,143
2025	1,854,986	16.6	307,928	3,430,473	21.4	396,967	4,296,993	20.9	387,692	4,134,039
2026	1,915,273	16.6	317,935	3,449,861	21.4	409,868	4,321,278	20.9	400,292	4,157,403
2027	1,977,519	16.6	328,268	3,463,202	21.4	423,189	4,337,989	20.9	413,301	4,173,480
2028	2,041,788	16.6	338,937	3,469,815	21.4	436,943	4,346,272	20.9	426,734	4,181,449

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated		Estimated Employer Unfunded Contribution Actuarial			d Employer ibution	Unfunded Actuarial		ated Employer Ontribution Annual II Dollars L 448,961 463,553 478,618 494,173	Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll		Accrued Liability	
2019	\$ 1,531,090	24.6%	\$376,648	\$ 4,527,356	26.3%	\$402,677	\$ 4,844,811	28.4%	\$434,830	\$ 5,174,950	
2020	1,580,850	24.6	388,889	4,589,380	26.3	415,764	4,911,184	28.4	448,961	5,245,846	
2021	1,632,228	24.6	401,528	4,647,249	26.3	429,276	4,973,111	28.4	463,553	5,311,993	
2022	1,685,275	24.6	414,578	4,700,381	26.3	443,227	5,029,968	28.4	478,618	5,372,725	
2023	1,740,046	24.6	428,051	4,748,141	26.3	457,632	5,081,077	28.4	494,173	5,427,317	
2024	1,796,597	24.6	441,963	4,789,841	26.3	472,505	5,125,701	28.4	510,234	5,474,982	
2025	1,854,986	24.6	456,327	4,824,732	26.3	487,861	5,163,038	28.4	526,816	5,514,864	
2026	1,915,273	24.6	471,157	4,852,000	26.3	503,717	5,192,218	28.4	543,938	5,546,032	
2027	1,977,519	24.6	486,470	4,870,763	26.3	520,087	5,212,297	28.4	561,615	5,567,479	
2028	2,041,788	24.6	502,280	4,880,064	26.3	536,990	5,222,250	28.4	579,868	5,578,110	

	L-:	12 Benefit Pro	ogram	LT-14	4(65) Benefit I	Program	L-6 Benefit Program			
	Estimated	Estimated Employer Contribution		Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		l Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 1,531,090	31.1%	\$476,169	\$ 5,657,189	32.2%	\$493,011	\$ 5,822,259	36.0%	\$551,192	\$ 6,469,384
2020	1,580,850	31.1	491,644	5,734,692	32.2	509,034	5,902,023	36.0	569,106	6,558,014
2021	1,632,228	31.1	507,623	5,807,003	32.2	525,577	5,976,444	36.0	587,602	6,640,706
2022	1,685,275	31.1	524,121	5,873,394	32.2	542,659	6,044,772	36.0	606,699	6,716,629
2023	1,740,046	31.1	541,154	5,933,073	32.2	560,295	6,106,192	36.0	626,417	6,784,876
2024	1,796,597	31.1	558,742	5,985,179	32.2	578,504	6,159,819	36.0	646,775	6,844,463
2025	1,854,986	31.1	576,901	6,028,777	32.2	597,305	6,204,689	36.0	667,795	6,894,320
2026	1,915,273	31.1	595,650	6,062,850	32.2	616,718	6,239,756	36.0	689,498	6,933,284
2027	1,977,519	31.1	615,008	6,086,295	32.2	636,761	6,263,885	36.0	711,907	6,960,095
2028	2,041,788	31.1	634,996	6,097,917	32.2	657,456	6,275,846	36.0	735,044	6,973,385

- 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.



Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	d Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 1,531,090	17.2%	\$263,347	\$ 3,327,809	22.2%	\$339,902	\$ 4,167,923	21.7%	\$332,247	\$ 4,011,209
2020	1,580,850	17.2	271,906	3,373,399	22.2	350,949	4,225,023	21.7	343,044	4,066,162
2021	1,632,228	17.2	280,743	3,415,935	22.2	362,355	4,278,298	21.7	354,193	4,117,434
2022	1,685,275	17.2	289,867	3,454,989	22.2	374,131	4,327,212	21.7	365,705	4,164,508
2023	1,740,046	17.2	299,288	3,490,095	22.2	386,290	4,371,180	21.7	377,590	4,206,823
2024	1,796,597	17.2	309,015	3,520,746	22.2	398,845	4,409,569	21.7	389,862	4,243,769
2025	1,854,986	17.2	319,058	3,546,392	22.2	411,807	4,441,690	21.7	402,532	4,274,682
2026	1,915,273	17.2	329,427	3,566,435	22.2	425,191	4,466,793	21.7	415,614	4,298,841
2027	1,977,519	17.2	340,133	3,580,227	22.2	439,009	4,484,066	21.7	429,122	4,315,465
2028	2,041,788	17.2	351,188	3,587,063	22.2	453,277	4,492,628	21.7	443,068	4,323,705

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	
2019	\$ 1,531,090	25.6%	\$391,959	\$ 4,680,487	27.3%	\$417,988	\$ 5,007,661	29.4%	\$450,140	\$ 5,349,365	
2020	1,580,850	25.6	404,698	4,744,609	27.3	431,572	5,076,265	29.4	464,770	5,422,650	
2021	1,632,228	25.6	417,850	4,804,436	27.3	445,598	5,140,273	29.4	479,875	5,491,026	
2022	1,685,275	25.6	431,430	4,859,365	27.3	460,080	5,199,041	29.4	495,471	5,553,805	
2023	1,740,046	25.6	445,452	4,908,741	27.3	475,033	5,251,868	29.4	511,574	5,610,237	
2024	1,796,597	25.6	459,929	4,951,851	27.3	490,471	5,297,992	29.4	528,200	5,659,508	
2025	1,854,986	25.6	474,876	4,987,922	27.3	506,411	5,336,584	29.4	545,366	5,700,734	
2026	1,915,273	25.6	490,310	5,016,112	27.3	522,870	5,366,745	29.4	563,090	5,732,953	
2027	1,977,519	25.6	506,245	5,035,510	27.3	539,863	5,387,498	29.4	581,391	5,755,123	
2028	2,041,788	25.6	522,698	5,045,125	27.3	557,408	5,397,785	29.4	600,286	5,766,112	

	L-:	L-12 Benefit Program			4(65) Benefit I	Program	L-6 Benefit Program			
	Estimated		l Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		l Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 1,531,090	32.3%	\$494,542	\$ 5,847,023	33.3%	\$509,853	\$ 6,017,866	37.3%	\$571,097	\$ 6,686,208
2020	1,580,850	32.3	510,615	5,927,126	33.3	526,423	6,100,310	37.3	589,657	6,777,808
2021	1,632,228	32.3	527,210	6,001,863	33.3	543,532	6,177,231	37.3	608,821	6,863,272
2022	1,685,275	32.3	544,344	6,070,482	33.3	561,197	6,247,855	37.3	628,608	6,941,739
2023	1,740,046	32.3	562,035	6,132,164	33.3	579,435	6,311,339	37.3	649,037	7,012,273
2024	1,796,597	32.3	580,301	6,186,019	33.3	598,267	6,366,767	37.3	670,131	7,073,857
2025	1,854,986	32.3	599,160	6,231,080	33.3	617,710	6,413,145	37.3	691,910	7,125,385
2026	1,915,273	32.3	618,633	6,266,296	33.3	637,786	6,449,390	37.3	714,397	7,165,655
2027	1,977,519	32.3	638,739	6,290,528	33.3	658,514	6,474,330	37.3	737,615	7,193,365
2028	2,041,788	32.3	659,498	6,302,540	33.3	679,915	6,486,693	37.3	761,587	7,207,101

- 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.
- 1) 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.



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

(0% member contributions are additional)

Regular Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	d Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 1,531,090	20.5%	\$313,873	\$ 3,231,724	25.3%	\$387,366	\$ 4,039,654	24.7%	\$378,179	\$ 3,888,018
2020	1,580,850	20.5	324,074	3,275,998	25.3	399,955	4,094,997	24.7	390,470	3,941,283
2021	1,632,228	20.5	334,607	3,317,306	25.3	412,954	4,146,632	24.7	403,160	3,990,980
2022	1,685,275	20.5	345,481	3,355,233	25.3	426,375	4,194,040	24.7	416,263	4,036,609
2023	1,740,046	20.5	356,709	3,389,325	25.3	440,232	4,236,655	24.7	429,791	4,077,625
2024	1,796,597	20.5	368,302	3,419,091	25.3	454,539	4,273,863	24.7	443,759	4,113,436
2025	1,854,986	20.5	380,272	3,443,997	25.3	469,311	4,304,995	24.7	458,182	4,143,400
2026	1,915,273	20.5	392,631	3,463,461	25.3	484,564	4,329,325	24.7	473,072	4,166,817
2027	1,977,519	20.5	405,391	3,476,854	25.3	500,312	4,346,067	24.7	488,447	4,182,930
2028	2,041,788	20.5	418,567	3,483,493	25.3	516,572	4,354,366	24.7	504,322	4,190,917

		LT-5	(65) Benefit P	rogram	L-	-7 Benefit Pro	gram	Program		
	Estimated		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 1,531,090	28.5%	\$436,361	\$ 4,531,851	30.2%	\$462,389	\$ 4,847,587	32.3%	\$494,542	\$ 5,175,718
2020	1,580,850	28.5	450,542	4,593,937	30.2	477,417	4,913,998	32.3	510,615	5,246,625
2021	1,632,228	28.5	465,185	4,651,864	30.2	492,933	4,975,960	32.3	527,210	5,312,782
2022	1,685,275	28.5	480,303	4,705,048	30.2	508,953	5,032,850	32.3	544,344	5,373,523
2023	1,740,046	28.5	495,913	4,752,856	30.2	525,494	5,083,988	32.3	562,035	5,428,123
2024	1,796,597	28.5	512,030	4,794,597	30.2	542,572	5,128,637	32.3	580,301	5,475,795
2025	1,854,986	28.5	528,671	4,829,522	30.2	560,206	5,165,996	32.3	599,160	5,515,683
2026	1,915,273	28.5	545,853	4,856,817	30.2	578,412	5,195,193	32.3	618,633	5,546,856
2027	1,977,519	28.5	563,593	4,875,599	30.2	597,211	5,215,283	32.3	638,739	5,568,306
2028	2.041.788	28.5	581.910	4.884.909	30.2	616.620	5.225.241	32.3	659.498	5.578.939

					LT-14(65) Benefit Program			L-6 Benefit Program		
		, .	Unfunded			Unfunded		, .	Unfunded	
Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial	
Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
\$ 1,531,090	35.0%	\$535,881	\$ 5,655,521	36.1%	\$552,723	\$ 5,819,615	39.9%	\$610,905	\$ 6,463,503	
1,580,850	35.0	553,298	5,733,001	36.1	570,687	5,899,343	39.9	630,759	6,552,052	
1,632,228	35.0	571,280	5,805,291	36.1	589,234	5,973,730	39.9	651,259	6,634,669	
1,685,275	35.0	589,846	5,871,663	36.1	608,384	6,042,027	39.9	672,425	6,710,523	
1,740,046	35.0	609,016	5,931,324	36.1	628,157	6,103,420	39.9	694,278	6,778,708	
1,796,597	35.0	628,809	5,983,415	36.1	648,572	6,157,022	39.9	716,842	6,838,241	
1,854,986	35.0	649,245	6,027,000	36.1	669,650	6,201,872	39.9	740,139	6,888,053	
1,915,273	35.0	670,346	6,061,063	36.1	691,414	6,236,923	39.9	764,194	6,926,982	
1,977,519	35.0	692,132	6,084,501	36.1	713,884	6,261,041	39.9	789,030	6,953,769	
2,041,788	35.0	714,626	6,096,119	36.1	737,085	6,272,996	39.9	814,673	6,967,047	
	Payroll \$ 1,531,090 1,580,850 1,632,228 1,685,275 1,740,046 1,796,597 1,854,986 1,915,273 1,977,519	Estimated Contr Projected Payroll \$1,531,090 35.0% 1,580,850 35.0 1,632,228 35.0 1,740,046 35.0 1,796,597 35.0 1,854,986 35.0 1,915,273 35.0 1,977,519 35.0	Estimated Estimated Contribution Projected Payroll As a % of Payroll Annual Dollars \$ 1,531,090 35.0% \$535,881 1,580,850 35.0 553,298 1,632,228 35.0 571,280 1,685,275 35.0 589,846 1,740,046 35.0 609,016 1,796,597 35.0 628,809 1,854,986 35.0 649,245 1,915,273 35.0 670,346 1,977,519 35.0 692,132	Estimated Projected Payroll Estimated Contribution Unfunded Actuarial Accrued Liability \$ 1,531,090 35.0% \$535,881 \$5,655,521 1,580,850 35.0 \$53,298 5,733,001 1,632,228 35.0 571,280 5,805,291 1,685,275 35.0 589,846 5,871,663 1,740,046 35.0 609,016 5,931,324 1,796,597 35.0 628,809 5,983,415 1,854,986 35.0 649,245 6,027,000 1,915,273 35.0 670,346 6,061,063 1,977,519 35.0 692,132 6,084,501	Estimated Employer Contribution Unfunded Actuarial Estimated Contribution Projected Payroll As a % of Payroll Annual Dollars Accrued Liability As a % of Payroll \$ 1,531,090 35.0% \$535,881 \$5,655,521 36.1% 1,580,850 35.0 553,298 5,733,001 36.1 1,632,228 35.0 571,280 5,805,291 36.1 1,685,275 35.0 589,846 5,871,663 36.1 1,740,046 35.0 609,016 5,931,324 36.1 1,796,597 35.0 628,809 5,983,415 36.1 1,854,986 35.0 649,245 6,027,000 36.1 1,915,273 35.0 670,346 6,061,063 36.1 1,977,519 35.0 692,132 6,084,501 36.1	Estimated Employer Contribution Unfunded Actuarial Actuarial Actuarial Actuarial Contribution Estimated Employer Contribution Projected Payroll As a % of Payroll Annual Dollars Dollars Hiability Payroll Payroll Payroll Dollars \$ 1,531,090 35.0% \$535,881 \$5,655,521 36.1% \$552,723 1,580,850 35.0 553,298 5,733,001 36.1 570,687 1,632,228 35.0 571,280 5,805,291 36.1 589,234 1,685,275 35.0 589,846 5,871,663 36.1 608,384 1,740,046 35.0 609,016 5,931,324 36.1 628,157 1,796,597 35.0 628,809 5,983,415 36.1 648,572 1,854,986 35.0 649,245 6,027,000 36.1 669,650 1,915,273 35.0 670,346 6,061,063 36.1 691,414 1,977,519 35.0 692,132 6,084,501 36.1 713,884	Estimated Contribution Unfunded Actuarial Contribution Estimated Employer Actuarial Contribution Unfunded Actuarial Contribution Actuarial Contribution Unfunded Actuarial Accrued As a % of Annual Accrued Dollars Unfunded Actuarial Accrued Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Liability Payroll Dollars Dollars Dollars Dollars Dollars Dollars Dollars Dollars Dollars Dollars <th colspa<="" td=""><td>Estimated Employer Contribution Unfunded As a % of Payroll Estimated Employer Actuarial Unfunded Contribution Estimated Employer Actuarial Unfunded Contribution Estimated Employer Actuarial Unfunded Contribution Estimated Accrued As a % of Payroll Annual Dollars Accrued As a % of Payroll Annual Dollars Accrued Liability Accrued Payroll As a % of Dollars Liability Payroll Dollars Liability Payroll Payr</td><td>Estimated Payroll Estimated Contribution Actuarial Accrued As a % of Payroll Annual Accrued As a % of Annual Payroll Estimated Employer Actuarial Accrued As a % of Payroll Annual Payroll Payroll Accrued Dollars Accrued Payroll As a % of Payroll Dollars Accrued Payroll Annual Payroll Dollars Accrued Payroll As a % of Payroll Dollars Accrued Payroll Dollars Annual Liability Payroll Dollars Payroll Dollars Payroll Payroll Dollars Accrued Payroll Dollars</td></th>	<td>Estimated Employer Contribution Unfunded As a % of Payroll Estimated Employer Actuarial Unfunded Contribution Estimated Employer Actuarial Unfunded Contribution Estimated Employer Actuarial Unfunded Contribution Estimated Accrued As a % of Payroll Annual Dollars Accrued As a % of Payroll Annual Dollars Accrued Liability Accrued Payroll As a % of Dollars Liability Payroll Dollars Liability Payroll Payr</td> <td>Estimated Payroll Estimated Contribution Actuarial Accrued As a % of Payroll Annual Accrued As a % of Annual Payroll Estimated Employer Actuarial Accrued As a % of Payroll Annual Payroll Payroll Accrued Dollars Accrued Payroll As a % of Payroll Dollars Accrued Payroll Annual Payroll Dollars Accrued Payroll As a % of Payroll Dollars Accrued Payroll Dollars Annual Liability Payroll Dollars Payroll Dollars Payroll Payroll Dollars Accrued Payroll Dollars</td>	Estimated Employer Contribution Unfunded As a % of Payroll Estimated Employer Actuarial Unfunded Contribution Estimated Employer Actuarial Unfunded Contribution Estimated Employer Actuarial Unfunded Contribution Estimated Accrued As a % of Payroll Annual Dollars Accrued As a % of Payroll Annual Dollars Accrued Liability Accrued Payroll As a % of Dollars Liability Payroll Dollars Liability Payroll Payr	Estimated Payroll Estimated Contribution Actuarial Accrued As a % of Payroll Annual Accrued As a % of Annual Payroll Estimated Employer Actuarial Accrued As a % of Payroll Annual Payroll Payroll Accrued Dollars Accrued Payroll As a % of Payroll Dollars Accrued Payroll Annual Payroll Dollars Accrued Payroll As a % of Payroll Dollars Accrued Payroll Dollars Annual Liability Payroll Dollars Payroll Dollars Payroll Payroll Dollars Accrued Payroll Dollars

- 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.



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

(0% member contributions are additional)

Regular Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 1,531,090	21.1%	\$323,060	\$ 3,339,551	26.1%	\$399,614	\$ 4,174,386	25.6%	\$391,959	\$ 4,018,937
2020	1,580,850	21.1	333,559	3,385,302	26.1	412,602	4,231,574	25.6	404,698	4,073,996
2021	1,632,228	21.1	344,400	3,427,989	26.1	426,012	4,284,931	25.6	417,850	4,125,367
2022	1,685,275	21.1	355,593	3,467,181	26.1	439,857	4,333,920	25.6	431,430	4,172,532
2023	1,740,046	21.1	367,150	3,502,411	26.1	454,152	4,377,957	25.6	445,452	4,214,929
2024	1,796,597	21.1	379,082	3,533,170	26.1	468,912	4,416,406	25.6	459,929	4,251,946
2025	1,854,986	21.1	391,402	3,558,907	26.1	484,151	4,448,577	25.6	474,876	4,282,919
2026	1,915,273	21.1	404,123	3,579,021	26.1	499,886	4,473,719	25.6	490,310	4,307,125
2027	1,977,519	21.1	417,257	3,592,861	26.1	516,132	4,491,019	25.6	506,245	4,323,781
2028	2,041,788	21.1	430,817	3,599,721	26.1	532,907	4,499,594	25.6	522,698	4,332,037

		LT-5(65) Benefit Program			L-7 Benefit Program Estimated Employer Unfunded			LT-8(65) Benefit Program			
Estimated		Estimated Employer Contribution		Unfunded Actuarial		Estimated Employer Contribution		Estimated Employer Contribution		Unfunded Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2019	\$ 1,531,090	29.5%	\$451,672	\$ 4,683,884	31.2%	\$477,700	\$ 5,009,222	33.3%	\$509,853	\$ 5,348,919	
2020	1,580,850	29.5	466,351	4,748,052	31.2	493,225	5,077,848	33.3	526,423	5,422,198	
2021	1,632,228	29.5	481,507	4,807,922	31.2	509,255	5,141,876	33.3	543,532	5,490,568	
2022	1,685,275	29.5	497,156	4,862,891	31.2	525,806	5,200,663	33.3	561,197	5,553,341	
2023	1,740,046	29.5	513,314	4,912,302	31.2	542,894	5,253,506	33.3	579,435	5,609,768	
2024	1,796,597	29.5	529,996	4,955,444	31.2	560,538	5,299,644	33.3	598,267	5,659,035	
2025	1,854,986	29.5	547,221	4,991,541	31.2	578,756	5,338,248	33.3	617,710	5,700,257	
2026	1,915,273	29.5	565,006	5,019,752	31.2	597,565	5,368,418	33.3	637,786	5,732,473	
2027	1,977,519	29.5	583,368	5,039,164	31.2	616,986	5,389,178	33.3	658,514	5,754,641	
2028	2,041,788	29.5	602,327	5,048,786	31.2	637,038	5,399,469	33.3	679,915	5,765,629	

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
	Estimated		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		l Employer ibution	Unfunded Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 1,531,090	36.2%	\$554,255	\$ 5,844,114	37.2%	\$569,565	\$ 6,013,957	41.2%	\$630,809	\$ 6,679,025
2020	1,580,850	36.2	572,268	5,924,177	37.2	588,076	6,096,347	41.2	651,310	6,770,527
2021	1,632,228	36.2	590,867	5,998,877	37.2	607,189	6,173,218	41.2	672,478	6,855,899
2022	1,685,275	36.2	610,070	6,067,462	37.2	626,922	6,243,796	41.2	694,333	6,934,282
2023	1,740,046	36.2	629,897	6,129,113	37.2	647,297	6,307,239	41.2	716,899	7,004,741
2024	1,796,597	36.2	650,368	6,182,941	37.2	668,334	6,362,631	41.2	740,198	7,066,259
2025	1,854,986	36.2	671,505	6,227,980	37.2	690,055	6,408,979	41.2	764,254	7,117,732
2026	1,915,273	36.2	693,329	6,263,179	37.2	712,482	6,445,200	41.2	789,092	7,157,959
2027	1,977,519	36.2	715,862	6,287,399	37.2	735,637	6,470,124	41.2	814,738	7,185,639
2028	2,041,788	36.2	739,127	6,299,405	37.2	759,545	6,482,479	41.2	841,217	7,199,360

- 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.



Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	d Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 1,531,090	17.7%	\$271,003	\$ 3,409,149	22.9%	\$350,620	\$ 4,268,574	23.7%	\$362,868	\$ 4,344,463
2020	1,580,850	17.7	279,810	3,455,854	22.9	362,015	4,327,053	23.7	374,661	4,403,981
2021	1,632,228	17.7	288,904	3,499,430	22.9	373,780	4,381,614	23.7	386,838	4,459,512
2022	1,685,275	17.7	298,294	3,539,439	22.9	385,928	4,431,709	23.7	399,410	4,510,497
2023	1,740,046	17.7	307,988	3,575,403	22.9	398,471	4,476,739	23.7	412,391	4,556,328
2024	1,796,597	17.7	317,998	3,606,803	22.9	411,421	4,516,055	23.7	425,793	4,596,343
2025	1,854,986	17.7	328,333	3,633,076	22.9	424,792	4,548,951	23.7	439,632	4,629,824
2026	1,915,273	17.7	339,003	3,653,609	22.9	438,598	4,574,660	23.7	453,920	4,655,990
2027	1,977,519	17.7	350,021	3,667,738	22.9	452,852	4,592,350	23.7	468,672	4,673,995
2028	2,041,788	17.7	361,396	3,674,741	22.9	467,569	4,601,119	23.7	483,904	4,682,920

		LT-5	(65) Benefit P	rogram	L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated	d Employer	Unfunded	Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 1,531,090	27.3%	\$417,988	\$ 4,970,081	27.9%	\$427,174	\$ 5,127,581	31.0%	\$474,638	\$ 5,595,244
2020	1,580,850	27.3	431,572	5,038,170	27.9	441,057	5,197,828	31.0	490,064	5,671,898
2021	1,632,228	27.3	445,598	5,101,698	27.9	455,392	5,263,369	31.0	505,991	5,743,417
2022	1,685,275	27.3	460,080	5,160,025	27.9	470,192	5,323,545	31.0	522,435	5,809,081
2023	1,740,046	27.3	475,033	5,212,456	27.9	485,473	5,377,637	31.0	539,414	5,868,107
2024	1,796,597	27.3	490,471	5,258,234	27.9	501,251	5,424,865	31.0	556,945	5,919,643
2025	1,854,986	27.3	506,411	5,296,537	27.9	517,541	5,464,382	31.0	575,046	5,962,764
2026	1,915,273	27.3	522,870	5,326,471	27.9	534,361	5,495,265	31.0	593,735	5,996,464
2027	1,977,519	27.3	539,863	5,347,069	27.9	551,728	5,516,515	31.0	613,031	6,019,653
2028	2.041.788	27.3	557.408	5.357.279	27.9	569.659	5.527.049	31.0	632.954	6.031.147

		L-12 Benefit Program			LT-1	4(65) Benefit I	Program	L-6 Benefit Program		
		Estimated	d Employer	Unfunded	Estimate	d Employer	Unfunded	Estimated	d Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contribution		Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 1,531,090	33.1%	\$506,791	\$ 5,986,437	34.6%	\$529,757	\$ 6,220,287	38.3%	\$586,407	\$ 6,845,093
2020	1,580,850	33.1	523,261	6,068,450	34.6	546,974	6,305,504	38.3	605,466	6,938,870
2021	1,632,228	33.1	540,267	6,144,969	34.6	564,751	6,385,012	38.3	625,143	7,026,365
2022	1,685,275	33.1	557,826	6,215,224	34.6	583,105	6,458,011	38.3	645,460	7,106,697
2023	1,740,046	33.1	575,955	6,278,376	34.6	602,056	6,523,630	38.3	666,438	7,178,908
2024	1,796,597	33.1	594,674	6,333,515	34.6	621,623	6,580,923	38.3	688,097	7,241,956
2025	1,854,986	33.1	614,000	6,379,650	34.6	641,825	6,628,861	38.3	710,460	7,294,709
2026	1,915,273	33.1	633,955	6,415,706	34.6	662,684	6,666,325	38.3	733,550	7,335,936
2027	1,977,519	33.1	654,559	6,440,516	34.6	684,222	6,692,104	38.3	757,390	7,364,304
2028	2,041,788	33.1	675,832	6,452,814	34.6	706,459	6,704,882	38.3	782,005	7,378,366

- 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.
- 1) 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.



Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 1,531,090	18.4%	\$281,721	\$ 3,526,569	23.7%	\$362,868	\$ 4,415,141	24.6%	\$376,648	\$ 4,495,236
2020	1,580,850	18.4	290,876	3,574,882	23.7	374,661	4,475,628	24.6	388,889	4,556,820
2021	1,632,228	18.4	300,330	3,619,959	23.7	386,838	4,532,063	24.6	401,528	4,614,279
2022	1,685,275	18.4	310,091	3,661,346	23.7	399,410	4,583,878	24.6	414,578	4,667,034
2023	1,740,046	18.4	320,168	3,698,549	23.7	412,391	4,630,454	24.6	428,051	4,714,455
2024	1,796,597	18.4	330,574	3,731,031	23.7	425,793	4,671,120	24.6	441,963	4,755,859
2025	1,854,986	18.4	341,317	3,758,209	23.7	439,632	4,705,146	24.6	456,327	4,790,502
2026	1,915,273	18.4	352,410	3,779,449	23.7	453,920	4,731,738	24.6	471,157	4,817,576
2027	1,977,519	18.4	363,863	3,794,064	23.7	468,672	4,750,036	24.6	486,470	4,836,206
2028	2,041,788	18.4	375,689	3,801,309	23.7	483,904	4,759,106	24.6	502,280	4,845,441

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated	d Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	d Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 1,531,090	28.4%	\$434,830	\$ 5,141,660	29.1%	\$445,547	\$ 5,303,485	32.1%	\$491,480	\$ 5,787,808
2020	1,580,850	28.4	448,961	5,212,100	29.1	460,027	5,376,142	32.1	507,453	5,867,100
2021	1,632,228	28.4	463,553	5,277,821	29.1	474,978	5,443,932	32.1	523,945	5,941,080
2022	1,685,275	28.4	478,618	5,338,162	29.1	490,415	5,506,172	32.1	540,973	6,009,004
2023	1,740,046	28.4	494,173	5,392,403	29.1	506,353	5,562,120	32.1	558 , 555	6,070,061
2024	1,796,597	28.4	510,234	5,439,761	29.1	522,810	5,610,968	32.1	576,708	6,123,370
2025	1,854,986	28.4	526,816	5,479,386	29.1	539,801	5,651,840	32.1	595,451	6,167,975
2026	1,915,273	28.4	543,938	5,510,354	29.1	557,344	5,683,782	32.1	614,803	6,202,834
2027	1,977,519	28.4	561,615	5,531,663	29.1	575,458	5,705,761	32.1	634,784	6,226,821
2028	2,041,788	28.4	579,868	5,542,226	29.1	594,160	5,716,656	32.1	655,414	6,238,711

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program			
			l Employer	Unfunded		d Employer	Unfunded		d Employer	Unfunded	
	Estimated		ibution	Actuarial		ibution	Actuarial		ibution	Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2019	\$ 1,531,090	34.4%	\$526,695	\$ 6,191,501	35.8%	\$548,130	\$ 6,433,649	39.6%	\$606,312	\$ 7,079,365	
2020	1,580,850	34.4	543,812	6,276,324	35.8	565,944	6,521,789	39.6	626,017	7,176,351	
2021	1,632,228	34.4	561,486	6,355,464	35.8	584,338	6,604,025	39.6	646,362	7,266,840	
2022	1,685,275	34.4	579,735	6,428,126	35.8	603,328	6,679,528	39.6	667,369	7,349,921	
2023	1,740,046	34.4	598,576	6,493,442	35.8	622,936	6,747,398	39.6	689,058	7,424,603	
2024	1,796,597	34.4	618,029	6,550,470	35.8	643,182	6,806,656	39.6	711,452	7,489,808	
2025	1,854,986	34.4	638,115	6,598,186	35.8	664,085	6,856,238	39.6	734,574	7,544,366	
2026	1,915,273	34.4	658,854	6,635,477	35.8	685,668	6,894,987	39.6	758,448	7,587,004	
2027	1,977,519	34.4	680,267	6,661,137	35.8	707,952	6,921,650	39.6	783,098	7,616,343	
2028	2,041,788	34.4	702,375	6,673,856	35.8	730,960	6,934,867	39.6	808,548	7,630,886	

- 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.



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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	d Employer Unitibution According 421,050 \$4 434,734 448,863 4463,451 478,513 494,064 510,121 4526,700 4543,818 446	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 1,531,090	21.6%	\$330,715	\$ 3,421,244	26.8%	\$410,332	\$ 4,276,557	27.5%	\$421,050	\$ 4,351,710
2020	1,580,850	21.6	341,464	3,468,115	26.8	423,668	4,335,145	27.5	434,734	4,411,328
2021	1,632,228	21.6	352,561	3,511,846	26.8	437,437	4,389,808	27.5	448,863	4,466,952
2022	1,685,275	21.6	364,019	3,551,997	26.8	451,654	4,439,996	27.5	463,451	4,518,022
2023	1,740,046	21.6	375,850	3,588,089	26.8	466,332	4,485,110	27.5	478,513	4,563,929
2024	1,796,597	21.6	388,065	3,619,601	26.8	481,488	4,524,500	27.5	494,064	4,604,011
2025	1,854,986	21.6	400,677	3,645,967	26.8	497,136	4,557,458	27.5	510,121	4,637,548
2026	1,915,273	21.6	413,699	3,666,573	26.8	513,293	4,583,215	27.5	526,700	4,663,758
2027	1,977,519	21.6	427,144	3,680,752	26.8	529,975	4,600,938	27.5	543,818	4,681,793
2028	2,041,788	21.6	441,026	3,687,780	26.8	547,199	4,609,723	27.5	561,492	4,690,733

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 1,531,090	31.2%	\$477,700	\$ 4,974,375	31.8%	\$486,887	\$ 5,124,251	34.9%	\$534,350	\$ 5,597,122
2020	1,580,850	31.2	493,225	5,042,523	31.8	502,710	5,194,452	34.9	551,717	5,673,802
2021	1,632,228	31.2	509,255	5,106,106	31.8	519,049	5,259,951	34.9	569,648	5,745,345
2022	1,685,275	31.2	525,806	5,164,484	31.8	535,917	5,320,088	34.9	588,161	5,811,031
2023	1,740,046	31.2	542,894	5,216,960	31.8	553,335	5,374,145	34.9	607,276	5,870,076
2024	1,796,597	31.2	560,538	5,262,777	31.8	571,318	5,421,343	34.9	627,012	5,921,629
2025	1,854,986	31.2	578,756	5,301,113	31.8	589,886	5,460,834	34.9	647,390	5,964,764
2026	1,915,273	31.2	597,565	5,331,073	31.8	609,057	5,491,697	34.9	668,430	5,998,475
2027	1,977,519	31.2	616,986	5,351,688	31.8	628,851	5,512,934	34.9	690,154	6,021,671
2028	2.041.788	31.2	637.038	5.361.907	31.8	649.289	5.523.461	34.9	712.584	6.033.169

	L-12 Benefit Program			ogram	LT-14	4(65) Benefit I	Program	L-6 Benefit Program			
	Estimated Employer Unfunded			Estimated Employer		Unfunded	Estimated Employer		Unfunded		
	Estimated	Contribution		Actuarial	Contribution		Actuarial	ctuarial Contribu		bution Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2019	\$ 1,531,090	37.0%	\$566,503	\$ 5,987,151	38.5%	\$589,470	\$ 6,219,778	42.2%	\$646,120	\$ 6,842,541	
2020	1,580,850	37.0	584,915	6,069,174	38.5	608,627	6,304,988	42.2	667,119	6,936,283	
2021	1,632,228	37.0	603,924	6,145,702	38.5	628,408	6,384,490	42.2	688,800	7,023,745	
2022	1,685,275	37.0	623,552	6,215,965	38.5	648,831	6,457,483	42.2	711,186	7,104,047	
2023	1,740,046	37.0	643,817	6,279,125	38.5	669,918	6,523,097	42.2	734,299	7,176,231	
2024	1,796,597	37.0	664,741	6,334,270	38.5	691,690	6,580,385	42.2	758,164	7,239,255	
2025	1,854,986	37.0	686,345	6,380,411	38.5	714,170	6,628,319	42.2	782,804	7,291,988	
2026	1,915,273	37.0	708,651	6,416,471	38.5	737,380	6,665,780	42.2	808,245	7,333,200	
2027	1,977,519	37.0	731,682	6,441,284	38.5	761,345	6,691,557	42.2	834,513	7,361,558	
2028	2,041,788	37.0	755,462	6,453,583	38.5	786,088	6,704,334	42.2	861,635	7,375,615	

- 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.
- 1) 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.



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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-1 Benefit Program			L-	3 Benefit Pro	gram	LT-4(65) Benefit Program		
		Estimated Employer Unfunde		Unfunded	Estimated Employer		Unfunded	Estimated Employer		Unfunded
	Estimated	Contribution		Actuarial	Contribution		Actuarial	Contribution		Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 1,531,090	22.3%	\$341,433	\$ 3,537,925	27.6%	\$422,581	\$ 4,422,337	28.5%	\$436,361	\$ 4,501,582
2020	1,580,850	22.3	352,530	3,586,394	27.6	436,315	4,482,922	28.5	450,542	4,563,253
2021	1,632,228	22.3	363,987	3,631,616	27.6	450,495	4,539,449	28.5	465,185	4,620,793
2022	1,685,275	22.3	375,816	3,673,136	27.6	465,136	4,591,348	28.5	480,303	4,673,622
2023	1,740,046	22.3	388,030	3,710,458	27.6	480,253	4,638,000	28.5	495,913	4,721,110
2024	1,796,597	22.3	400,641	3,743,045	27.6	495,861	4,678,733	28.5	512,030	4,762,572
2025	1,854,986	22.3	413,662	3,770,311	27.6	511,976	4,712,814	28.5	528,671	4,797,264
2026	1,915,273	22.3	427,106	3,791,620	27.6	528,615	4,739,449	28.5	545,853	4,824,377
2027	1,977,519	22.3	440,987	3,806,282	27.6	545,795	4,757,777	28.5	563,593	4,843,033
2028	2,041,788	22.3	455,319	3,813,550	27.6	563,533	4,766,862	28.5	581,910	4,852,281

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Unfunded		Unfunded	Estimated Employer		Unfunded	Estimated Employer		Unfunded
	Estimated	Contribution		Actuarial	Contribution		Actuarial	Contribution		Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 1,531,090	32.3%	\$494,542	\$ 5,145,075	33.0%	\$505,260	\$ 5,306,779	36.0%	\$551,192	\$ 5,788,621
2020	1,580,850	32.3	510,615	5,215,562	33.0	521,681	5,379,481	36.0	569,106	5,867,924
2021	1,632,228	32.3	527,210	5,281,327	33.0	538,635	5,447,313	36.0	587,602	5,941,915
2022	1,685,275	32.3	544,344	5,341,708	33.0	556,141	5,509,592	36.0	606,699	6,009,849
2023	1,740,046	32.3	562,035	5,395,985	33.0	574,215	5,565,574	36.0	626,417	6,070,915
2024	1,796,597	32.3	580,301	5,443,374	33.0	592,877	5,614,453	36.0	646,775	6,124,232
2025	1,854,986	32.3	599,160	5,483,025	33.0	612,145	5,655,351	36.0	667,795	6,168,843
2026	1,915,273	32.3	618,633	5,514,013	33.0	632,040	5,687,313	36.0	689,498	6,203,707
2027	1,977,519	32.3	638,739	5,535,336	33.0	652,581	5,709,306	36.0	711,907	6,227,697
2028	2,041,788	32.3	659,498	5,545,906	33.0	673,790	5,720,208	36.0	735,044	6,239,589

		L-12 Benefit Program			LT-1	4(65) Benefit I	Program	L-6 Benefit Program		
	Estimated Employer Estimated Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2019	\$ 1,531,090	38.3%	\$586,407	\$ 6,191,266	39.7%	\$607,843	\$ 6,432,174	43.5%	\$666,024	\$ 7,075,762
2020	1,580,850	38.3	605,466	6,276,085	39.7	627,597	6,520,294	43.5	687,670	7,172,699
2021	1,632,228	38.3	625,143	6,355,222	39.7	647,995	6,602,511	43.5	710,019	7,263,142
2022	1,685,275	38.3	645,460	6,427,881	39.7	669,054	6,677,997	43.5	733,095	7,346,181
2023	1,740,046	38.3	666,438	6,493,194	39.7	690,798	6,745,852	43.5	756,920	7,420,825
2024	1,796,597	38.3	688,097	6,550,220	39.7	713,249	6,805,096	43.5	781,520	7,485,997
2025	1,854,986	38.3	710,460	6,597,934	39.7	736,429	6,854,667	43.5	806,919	7,540,528
2026	1,915,273	38.3	733,550	6,635,223	39.7	760,363	6,893,407	43.5	833,144	7,583,145
2027	1,977,519	38.3	757,390	6,660,882	39.7	785,075	6,920,064	43.5	860,221	7,612,469
2028	2,041,788	38.3	782,005	6,673,601	39.7	810,590	6,933,278	43.5	888,178	7,627,005

- 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.

