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October 19, 2018

Mehlville Fire Protection District St. Louis, Missouri

Ladies and Gentlemen:

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

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

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

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

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

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of this report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2018.

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

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

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

In accordance with LAGERS Board policy, the employer contribution rates established by this valuation report are valid for purposes of joining the System for a two year period from the date of this valuation which was August 31, 2018. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

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

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

Respectfully submitted,

Mita D. Drazilov, ASA, FCA, MAAA

Mita Drazilor



## 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)

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.80%	3.40%	0.20%	4.40%
	Fire	0.90	4.30	0.60	5.80
L-3	General	1.10	4.80	0.30	6.20
	Fire	1.20	6.00	0.70	7.90
LT-4(65)	General	0.80	4.20	0.20	5.20
	Fire	1.10	6.20	0.60	7.90
LT-5(65)	General	1.10	5.40	0.30	6.80
	Fire	1.40	7.40	0.70	9.50
L-7	General	1.30	6.30	0.30	7.90
	Fire	1.50	7.70	0.80	10.00
LT-8(65)	General	1.30	6.60	0.30	8.20
	Fire	1.60	8.70	0.80	11.10
L-12	General	1.60	7.70	0.40	9.70
	Fire	1.70	9.50	0.90	12.10
LT-14(65)	General	1.60	7.90	0.40	9.90
	Fire	1.80	10.00	0.90	12.70
L-6	General	1.80	9.10	0.50	11.40
	Fire	2.00	11.30	1.00	14.30

<sup>\*</sup> Prior service credit was given for vesting purposes only.



## 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	0.80%	3.60%	0.20%	4.60%
	Fire	1.00	4.50	0.60	6.10
L-3	General	1.10	5.10	0.30	6.50
	Fire	1.20	6.40	0.70	8.30
LT-4(65)	General	0.90	4.40	0.20	5.50
	Fire	1.20	6.40	0.60	8.20
LT-5(65)	General	1.10	5.70	0.30	7.10
	Fire	1.40	7.80	0.70	9.90
L-7	General	1.40	6.60	0.30	8.30
	Fire	1.50	8.10	0.80	10.40
LT-8(65)	General	1.40	6.90	0.30	8.60
	Fire	1.60	9.10	0.80	11.50
L-12	General	1.60	8.00	0.40	10.00
	Fire	1.80	10.00	0.90	12.70
LT-14(65)	General	1.60	8.20	0.40	10.20
	Fire	1.80	10.50	0.90	13.20
L-6	General	1.90	9.50	0.50	11.90
	Fire	2.00	11.90	1.00	14.90

<sup>\*</sup> Prior service credit was given for vesting purposes only.



## <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	0.90%	6.90%	0.20%	8.00%
	Fire	1.00	8.10	0.60	9.70
L-3	General	1.20	8.40	0.30	9.90
	Fire	1.20	9.90	0.70	11.80
LT-4(65)	General	1.00	7.60	0.20	8.80
	Fire	1.20	10.00	0.60	11.80
LT-5(65)	General	1.20	9.00	0.30	10.50
	Fire	1.40	11.30	0.70	13.40
L-7	General	1.40	9.90	0.30	11.60
	Fire	1.50	11.60	0.80	13.90
LT-8(65)	General	1.40	10.30	0.30	12.00
	Fire	1.60	12.60	0.80	15.00
L-12	General	1.70	11.40	0.40	13.50
	Fire	1.70	13.40	0.90	16.00
LT-14(65)	General	1.70	11.60	0.40	13.70
	Fire	1.80	13.90	0.90	16.60
L-6	General	1.90	12.90	0.50	15.30
	Fire	2.00	15.20	1.00	18.20

<sup>\*</sup> Prior service credit was given for vesting purposes only.



## <u>Employer Contribution Rates (Non-Contributory Plan - 3 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	1.00%	7.10%	0.20%	8.30%
	Fire	1.00	8.30	0.60	9.90
L-3	General	1.20	8.70	0.30	10.20
	Fire	1.30	10.20	0.70	12.20
LT-4(65)	General	1.00	7.90	0.20	9.10
	Fire	1.20	10.30	0.60	12.10
LT-5(65)	General	1.20	9.20	0.30	10.70
	Fire	1.40	11.70	0.70	13.80
L-7	General	1.50	10.20	0.30	12.00
	Fire	1.50	12.00	0.80	14.30
LT-8(65)	General	1.50	10.60	0.30	12.40
	Fire	1.60	13.00	0.80	15.40
L-12	General	1.70	11.80	0.40	13.90
	Fire	1.80	13.90	0.90	16.60
LT-14(65)	General	1.70	12.00	0.40	14.10
	Fire	1.80	14.40	0.90	17.10
L-6	General	2.00	13.30	0.50	15.80
	Fire	2.00	15.80	1.00	18.80

<sup>\*</sup> Prior service credit was given for vesting purposes only.



## Employer Contribution Rates (Contributory Plan - 5 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	0.70%	3.80%	0.20%	4.70%
	Fire	0.90	4.60	0.60	6.10
L-3	General	0.90	5.30	0.30	6.50
	Fire	1.20	6.30	0.70	8.20
LT-4(65)	General	0.70	4.90	0.20	5.80
	Fire	1.20	6.80	0.60	8.60
LT-5(65)	General	0.90	6.10	0.30	7.30
	Fire	1.40	8.10	0.70	10.20
L-7	General	1.10	6.80	0.30	8.20
	Fire	1.40	8.20	0.80	10.40
LT-8(65)	General	1.10	7.40	0.30	8.80
	Fire	1.50	9.50	0.80	11.80
L-12	General	1.30	8.30	0.40	10.00
	Fire	1.70	10.10	0.90	12.70
LT-14(65)	General	1.30	8.60	0.40	10.30
	Fire	1.70	10.60	0.90	13.20
L-6	General	1.60	9.80	0.50	11.90
	Fire	1.90	11.90	1.00	14.80

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



## 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	0.70%	4.00%	0.20%	4.90%
	Fire	0.90	4.80	0.60	6.30
L-3	General	0.90	5.50	0.30	6.70
	Fire	1.20	6.70	0.70	8.60
LT-4(65)	General	0.70	5.10	0.20	6.00
	Fire	1.20	7.20	0.60	9.00
LT-5(65)	General	0.90	6.40	0.30	7.60
	Fire	1.40	8.50	0.70	10.60
L-7	General	1.20	7.10	0.30	8.60
	Fire	1.50	8.60	0.80	10.90
LT-8(65)	General	1.20	7.70	0.30	9.20
	Fire	1.60	9.80	0.80	12.20
L-12	General	1.40	8.70	0.40	10.50
	Fire	1.70	10.50	0.90	13.10
LT-14(65)	General	1.40	9.00	0.40	10.80
	Fire	1.80	11.10	0.90	13.80
L-6	General	1.60	10.30	0.50	12.40
	Fire	2.00	12.50	1.00	15.50

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



## <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	0.80%	7.30%	0.20%	8.30%
	Fire	1.00	8.40	0.60	10.00
L-3	General	1.00	8.80	0.30	10.10
	Fire	1.20	10.20	0.70	12.10
LT-4(65)	General	0.80	8.40	0.20	9.40
	Fire	1.20	10.70	0.60	12.50
LT-5(65)	General	1.00	9.70	0.30	11.00
	Fire	1.40	12.00	0.70	14.10
L-7	General	1.20	10.40	0.30	11.90
	Fire	1.40	12.10	0.80	14.30
LT-8(65)	General	1.20	11.00	0.30	12.50
	Fire	1.60	13.30	0.80	15.70
L-12	General	1.40	12.00	0.40	13.80
	Fire	1.70	14.00	0.90	16.60
LT-14(65)	General	1.40	12.30	0.40	14.10
	Fire	1.70	14.50	0.90	17.10
L-6	General	1.60	13.60	0.50	15.70
	Fire	1.90	15.80	1.00	18.70

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



## <u>Employer Contribution Rates (Non-Contributory Plan - 3 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	0.80%	7.50%	0.20%	8.50%
	Fire	1.00	8.60	0.60	10.20
L-3	General	1.10	9.10	0.30	10.50
	Fire	1.20	10.60	0.70	12.50
LT-4(65)	General	0.90	8.60	0.20	9.70
	Fire	1.30	11.00	0.60	12.90
LT-5(65)	General	1.10	10.00	0.30	11.40
	Fire	1.40	12.40	0.70	14.50
L-7	General	1.30	10.80	0.30	12.40
	Fire	1.50	12.50	0.80	14.80
LT-8(65)	General	1.30	11.30	0.30	12.90
	Fire	1.60	13.70	0.80	16.10
L-12	General	1.50	12.40	0.40	14.30
	Fire	1.70	14.40	0.90	17.00
LT-14(65)	General	1.50	12.70	0.40	14.60
	Fire	1.80	15.00	0.90	17.70
L-6	General	1.70	14.10	0.50	16.30
	Fire	2.00	16.40	1.00	19.40

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



## **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	\$ 25,362	\$ 677,750			
L-3	35,837	922,185			
LT-4(65)	30,324	911,074			
LT-5(65)	39,145	1,099,956			
L-7	45,761	1,155,509			
LT-8(65)	47,415	1,277,726			
L-12	55,134	1,411,054			
LT-14(65)	56,237	1,466,607			
L-6	65,610	1,655,489			

#### **Non-Contributory Plan**

	3 Year FAS	
Benefit		
Program	General	Fire
L-1	\$ 45,761	\$ 1,099,956
L-3	56,237	1,355,501
LT-4(65)	50,172	1,344,390
LT-5(65)	58,993	1,533,271
L-7	66,161	1,588,825
LT-8(65)	68,366	1,711,042
L-12	76,636	1,844,370
LT-14(65)	77,739	1,899,923
L-6	87,112	2,088,805

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	\$ 27,016	\$ 699,972			
L-3	36,940	955,517			
LT-4(65)	33,080	999,960			
LT-5(65)	41,902	1,177,730			
L-7	47,415	1,211,062			
LT-8(65)	50,723	1,355,501			
L-12	57,891	1,455,497			
LT-14(65)	59,545	1,533,271			
L-6	68,366	1,722,153			

#### **Non-Contributory Plan**

3 Year FAS					
Benefit					
Program	General	Fire			
L-1	\$ 46,864	\$ 1,133,288			
L-3	57,891	1,388,833			
LT-4(65)	53,480	1,433,276			
LT-5(65)	62,853	1,611,046			
L-7	68,366	1,644,378			
LT-8(65)	71,123	1,788,817			
L-12	78,842	1,888,813			
LT-14(65)	80,496	1,966,587			
L-6	89,869	2,155,469			

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	9	128
Annual Payroll	\$ 551,341	\$ 11,110,663

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:

#### **Mehlville Fire Protection District**

		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	\$ 77,884	\$ 81,033	\$ 92,010	\$ 94,867	
	Fire	1,819,154	1,884,828	1,931,469	1,989,083	
L-3	General	102,468	106,419	115,041	118,590	
	Fire	2,340,103	2,420,313	2,414,482	2,486,315	
LT-4(65)	General	79,975	83,200	94,083	97,010	
	Fire	2,225,191	2,304,851	2,335,142	2,406,468	
LT-5(65)	General	104,054	108,031	116,585	120,215	
	Fire	2,644,747	2,735,323	2,717,130	2,799,388	
L-7	General	127,047	131,765	138,021	142,279	
	Fire	2,855,482	2,950,035	2,897,432	2,983,576	
LT-8(65)	General	128,082	132,813	139,067	143,373	
	Fire	3,058,534	3,159,949	3,099,184	3,192,247	
L-12	General	151,560	157,052	161,034	166,028	
	Fire	3,367,420	3,477,476	3,380,264	3,480,908	
LT-14(65)	General	152,100	157,578	161,555	166,567	
	Fire	3,468,898	3,582,503	3,481,134	3,585,308	
L-6	General	176,041	182,238	184,037	189,770	
	Fire	3,878,315	4,003,621	3,863,121	3,978,231	



### **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	\$ 66,946	\$ 69,670	\$ 79,883	\$ 82,374	
	Fire	1,753,616	1,818,686	1,862,075	1,919,806	
L-3	General	88,185	91,564	99,841	102,954	
	Fire	2,252,797	2,332,253	2,327,633	2,399,717	
LT-4(65)	General	67,800	70,558	80,728	83,229	
	Fire	2,310,623	2,395,269	2,416,275	2,493,544	
LT-5(65)	General	88,835	92,232	100,472	103,602	
	Fire	2,670,637	2,764,725	2,743,286	2,830,021	
L-7	General	109,414	113,449	119,820	123,530	
	Fire	2,746,690	2,840,585	2,793,188	2,879,682	
LT-8(65)	General	109,821	113,883	120,231	123,968	
	Fire	3,025,166	3,128,834	3,070,236	3,166,452	
L-12	General	130,556	135,289	139,777	144,149	
	Fire	3,237,524	3,346,694	3,258,722	3,359,662	
LT-14(65)	General	130,783	135,519	139,984	144,368	
	Fire	3,376,854	3,490,898	3,397,276	3,503,105	
L-6	General	151,699	157,060	159,741	164,742	
	Fire	3,727,427	3,851,759	3,724,239	3,839,667	





**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	F	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	<b>General &amp; Police</b>	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 66	25 25	25 25	60 61	10 10	15 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	<b>General Members</b>		
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

# Benefits and Conditions Evaluated and/or Considered as of February 28, 2018 (Section references are to RSMo)

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

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

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

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

L-1 Benefit Program: 1.00% for life L-3 Benefit Program: 1.25% for life L-7 Benefit Program: 1.50% for life L-12 Benefit Program: 1.75% for life L-6 Benefit Program: 2.00% for life

LT-4(65) Benefit Program:

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

<sup>&</sup>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.

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



<sup>&</sup>quot;Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Final	Estimated		Estimated		
Average	LAGERS	Social	Monthly	y Total	
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS	
35 Years of Service:					
\$1,500	\$ 656	\$ 889	\$1,545	103%	
2,000	875	1,032	1,907	95%	
2,500	1,094	1,175	2,269	91%	
3,000	1,313	1,318	2,631	88%	
3,500	1,531	1,462	2,993	86%	
4,000	1,750	1,604	3,354	84%	
25 Years of Service:					
\$1,500	\$ 469	\$ 889	\$1,358	91%	
2,000	625	1,032	1,657	83%	
2,500	781	1,175	1,956	78%	
3,000	938	1,318	2,256	75%	
3,500	1,094	1,462	2,556	73%	
4,000	1,250	1,604	2,854	71%	
15 Years of Service:					
\$1,500	\$281	\$ 889	\$1,170	78%	
2,000	375	1,032	1,407	70%	
2,500	469	1,175	1,644	66%	
3,000	563	1,318	1,881	63%	
3,500	656	1,462	2,118	61%	
4,000	750	1,604	2,354	59%	

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

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



<sup>&</sup>lt;sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Final	Estimated		Estimated		
Average	LAGERS	Social	Monthly	/ Total	
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS	
35 Years of Service:					
\$1,500	\$ 788	\$ 889	\$1,677	112%	
2,000	1,050	1,032	2,082	104%	
2,500	1,313	1,175	2,488	100%	
3,000	1,575	1,318	2,893	96%	
3,500	1,838	1,462	3,300	94%	
4,000	2,100	1,604	3,704	93%	
25 Years of Service:					
\$1,500	\$ 563	\$ 889	\$1,452	97%	
2,000	750	1,032	1,782	89%	
2,500	938	1,175	2,113	85%	
3,000	1,125	1,318	2,443	81%	
3,500	1,313	1,462	2,775	79%	
4,000	1,500	1,604	3,104	78%	
15 Years of Service:					
\$1,500	\$338	\$ 889	\$1,227	82%	
2,000	450	1,032	1,482	74%	
2,500	563	1,175	1,738	70%	
3,000	675	1,318	1,993	66%	
3,500	788	1,462	2,250	64%	
4,000	900	1,604	2,504	63%	

<sup>&</sup>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.

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



<sup>&</sup>lt;sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Final	Estimated		Estimated		
Average	LAGERS	Social	<b>Monthly Total</b>		
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS	
35 Years of Service:					
\$1,500	\$ 919	\$ 889	\$1,808	121%	
2,000	1,225	1,032	2,257	113%	
2,500	1,531	1,175	2,706	108%	
3,000	1,838	1,318	3,156	105%	
3,500	2,144	1,462	3,606	103%	
4,000	2,450	1,604	4,054	101%	
25 Years of Service:					
\$1,500	\$ 656	\$ 889	\$1,545	103%	
2,000	875	1,032	1,907	95%	
2,500	1,094	1,175	2,269	91%	
3,000	1,313	1,318	2,631	88%	
3,500	1,531	1,462	2,993	86%	
4,000	1,750	1,604	3,354	84%	
15 Years of Service:					
\$1,500	\$ 394	\$ 889	\$1,283	86%	
2,000	525	1,032	1,557	78%	
2,500	656	1,175	1,831	73%	
3,000	788	1,318	2,106	70%	
3,500	919	1,462	2,381	68%	
4,000	1,050	1,604	2,654	66%	

<sup>&</sup>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¢.



<sup>&</sup>lt;sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Final		Estimated	Estimated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 889	\$1,939	129%
2,000	1,400	1,032	2,432	122%
2,500	1,750	1,175	2,925	117%
3,000	2,100	1,318	3,418	114%
3,500	2,450	1,462	3,912	112%
4,000	2,800	1,604	4,404	110%
25 Years of Service:				
\$1,500	\$ 750	\$ 889	\$1,639	109%
2,000	1,000	1,032	2,032	102%
2,500	1,250	1,175	2,425	97%
3,000	1,500	1,318	2,818	94%
3,500	1,750	1,462	3,212	92%
4,000	2,000	1,604	3,604	90%
15 Years of Service:				
\$1,500	\$ 450	\$ 889	\$1,339	89%
2,000	600	1,032	1,632	82%
2,500	750	1,175	1,925	77%
3,000	900	1,318	2,218	74%
3,500	1,050	1,462	2,512	72%
4,000	1,200	1,604	2,804	70%

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

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



<sup>&</sup>lt;sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

#### **Missouri LAGERS**

# Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

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

1.00% of FAS <sup>1</sup> at age 65)

Final	LAG	ERS	Estimated	Estim	nated	Perc	ent
Average	BENEFIT <sup>3</sup>		Social	<b>Monthly Total</b>		of FAS	
Salary (FAS) <sup>1</sup>	To 65	At 65	Security <sup>2</sup>	To 65	At 65	To 65	At 65
35 Years of Service	e:						
\$1,500	\$1,050	\$ 525	\$ 889	\$1,050	\$1,414	70%	94%
2,000	1,400	700	1,032	1,400	1,732	70%	87%
2,500	1,750	875	1,175	1,750	2,050	70%	82%
3,000	2,100	1,050	1,318	2,100	2,368	70%	79%
3,500	2,450	1,225	1,462	2,450	2,687	70%	77%
4,000	2,800	1,400	1,604	2,800	3,004	70%	75%
25 Years of Service	<b>e</b> :						
\$1,500	\$ 750	\$ 375	\$ 889	\$ 750	\$1,264	50%	84%
2,000	1,000	500	1,032	1,000	1,532	50%	77%
2,500	1,250	625	1,175	1,250	1,800	50%	72%
3,000	1,500	750	1,318	1,500	2,068	50%	69%
3,500	1,750	875	1,462	1,750	2,337	50%	67%
4,000	2,000	1,000	1,604	2,000	2,604	50%	65%
15 Years of Service	e:						
\$1,500	\$ 450	\$225	\$ 889	\$ 450	\$1,114	30%	74%
2,000	600	300	1,032	600	1,332	30%	67%
2,500	750	375	1,175	750	1,550	30%	62%
3,000	900	450	1,318	900	1,768	30%	59%
3,500	1,050	525	1,462	1,050	1,987	30%	57%
4,000	1,200	600	1,604	1,200	2,204	30%	55%
4							

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

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



<sup>&</sup>lt;sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

#### **Missouri LAGERS**

# Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

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

1.25% of FAS <sup>1</sup> at age 65)

Final	LAG	ERS	Estimated	Estim	ated	Perc	ent
Average	BENEFIT <sup>3</sup>		Social	Social Monthly Total		of FAS	
Salary (FAS) <sup>1</sup>	To 65	At 65	Security <sup>2</sup>	To 65	At 65	To 65	At 65
35 Years of Service	e:						
\$1,500	\$1,050	\$ 656	\$ 889	\$1,050	\$1,545	70%	103%
2,000	1,400	875	1,032	1,400	1,907	70%	95%
2,500	1,750	1,094	1,175	1,750	2,269	70%	91%
3,000	2,100	1,313	1,318	2,100	2,631	70%	88%
3,500	2,450	1,531	1,462	2,450	2,993	70%	86%
4,000	2,800	1,750	1,604	2,800	3,354	70%	84%
25 Years of Service	e:						
\$1,500	\$ 750	\$ 469	\$ 889	\$ 750	\$1,358	50%	91%
2,000	1,000	625	1,032	1,000	1,657	50%	83%
2,500	1,250	781	1,175	1,250	1,956	50%	78%
3,000	1,500	938	1,318	1,500	2,256	50%	75%
3,500	1,750	1,094	1,462	1,750	2,556	50%	73%
4,000	2,000	1,250	1,604	2,000	2,854	50%	71%
15 Years of Service	e:						
\$1,500	\$ 450	\$281	\$ 889	\$ 450	\$1,170	30%	78%
2,000	600	375	1,032	600	1,407	30%	70%
2,500	750	469	1,175	750	1,644	30%	66%
3,000	900	563	1,318	900	1,881	30%	63%
3,500	1,050	656	1,462	1,050	2,118	30%	61%
4,000	1,200	750	1,604	1,200	2,354	30%	59%

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

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



<sup>&</sup>lt;sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

# **Missouri LAGERS**

# Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

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

1.50% of FAS <sup>1</sup> at age 65)

Final LAG		ERS	Estimated	Estim	nated	Percent		
Average	BENI	EFIT <sup>3</sup>	Social	Month	ly Total	of F	AS	
Salary (FAS) <sup>1</sup>	To 65	At 65	Security <sup>2</sup>	To 65	At 65	To 65	At 65	
35 Years of Service	<b>:</b> :							
\$1,500	\$1,050	\$ 788	\$ 889	\$1,050	\$1,677	70%	112%	
2,000	1,400	1,050	1,032	1,400	2,082	70%	104%	
2,500	1,750	1,313	1,175	1,750	2,488	70%	100%	
3,000	2,100	1,575	1,318	2,100	2,893	70%	96%	
3,500	2,450	1,838	1,462	2,450	3,300	70%	94%	
4,000	2,800	2,100	1,604	2,800	3,704	70%	93%	
25 Years of Service	2:							
\$1,500	\$ 750	\$ 563	\$ 889	\$ 750	\$1,452	50%	97%	
2,000	1,000	750	1,032	1,000	1,782	50%	89%	
2,500	1,250	938	1,175	1,250	2,113	50%	85%	
3,000	1,500	1,125	1,318	1,500	2,443	50%	81%	
3,500	1,750	1,313	1,462	1,750	2,775	50%	79%	
4,000	2,000	1,500	1,604	2,000	3,104	50%	78%	
15 Years of Service	2:							
\$1,500	\$ 450	\$338	\$ 889	\$ 450	\$1,227	30%	82%	
2,000	600	450	1,032	600	1,482	30%	74%	
2,500	750	563	1,175	750	1,738	30%	70%	
3,000	900	675	1,318	900	1,993	30%	66%	
3,500	1,050	788	1,462	1,050	2,250	30%	64%	
4,000	1,200	900	1,604	1,200	2,504	30%	63%	

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

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



<sup>&</sup>lt;sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

### **Missouri LAGERS**

# Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

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

1.75% of FAS <sup>1</sup> at age 65)

Final	LAGERS		Estimated	Estimated		Percent		
Average	BENI	EFIT <sup>3</sup>	Social	Month	y Total	of F	AS	
Salary (FAS) <sup>1</sup>	To 65	At 65	Security <sup>2</sup>	To 65	At 65	To 65	At 65	
35 Years of Service	2:							
\$1,500	\$1,050	\$ 919	\$ 889	\$1,050	\$1,808	70%	121%	
2,000	1,400	1,225	1,032	1,400	2,257	70%	113%	
2,500	1,750	1,531	1,175	1,750	2,706	70%	108%	
3,000	2,100	1,838	1,318	2,100	3,156	70%	105%	
3,500	2,450	2,144	1,462	2,450	3,606	70%	103%	
4,000	2,800	2,450	1,604	2,800	4,054	70%	101%	
25 Years of Service	e:							
\$1,500	\$ 750	\$ 656	\$ 889	\$ 750	\$1,545	50%	103%	
2,000	1,000	875	1,032	1,000	1,907	50%	95%	
2,500	1,250	1,094	1,175	1,250	2,269	50%	91%	
3,000	1,500	1,313	1,318	1,500	2,631	50%	88%	
3,500	1,750	1,531	1,462	1,750	2,993	50%	86%	
4,000	2,000	1,750	1,604	2,000	3,354	50%	84%	
15 Years of Service	e:							
\$1,500	\$ 450	\$ 394	\$ 889	\$ 450	\$1,283	30%	86%	
2,000	600	525	1,032	600	1,557	30%	78%	
2,500	750	656	1,175	750	1,831	30%	73%	
3,000	900	788	1,318	900	2,106	30%	70%	
3,500	1,050	919	1,462	1,050	2,381	30%	68%	
4,000	1,200	1,050	1,604	1,200	2,654	30%	66%	

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

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



<sup>&</sup>lt;sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.



AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

## August 31, 2018

# By Attained Age and Years of Service

		Year	s of Ser	vice to '	Valuatio	n Date		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	\$ 60,399	
35-39										
40-44										
45-49	1	1						2	\$ 143,407	
50-54										
55-59	2						1	3	\$ 151,319	
60-64				1	1		1	3	\$ 196,216	
65-69										
70 & Over										
Totals	4	1		1	1		2	9	\$ 551,341	

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

Age: 54.1 years.

Benefit Service: 0.0 years. Annual Pay: \$ 61,260.



# August 31, 2018

# By Attained Age and Years of Service

		Yea	ars of Se	rvice to \	/aluatio	n Date			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	\$ 71,980
25-29	6	1						7	\$ 482,059
30-34	14	5	1					20	\$ 1,499,333
35-39	6	10	4					20	\$ 1,636,476
40-44	2	7	3	2				14	\$ 1,212,259
45-49	1	2	6	5	6			20	\$ 1,859,687
50-54			2	2	10	4	1	19	\$ 1,825,918
55-59				1	2	6	3	12	\$ 1,159,085
60-64					2	1	8	11	\$ 993,512
65-69			1				3	4	\$ 370,354
70 & Over									
Totals	30	25	17	10	20	11	15	128	\$ 11,110,663

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

Age: 45.0 years.

Benefit Service: 0.0 years. Annual Pay: \$86,802.





October 19, 2018 E-mail

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

Dear Bob:

Enclosed is the report of the August 31, 2018 Initial Actuarial Valuation of LAGERS benefits for the employees of

Mehlville Fire Protection District

Sincerely,

Mita D. Drazilov, ASA, FCA, MAAA

Mita Drazilor

MDD:wp



October 19, 2018

Mehlville Fire Protection District St.Louis, 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 August 31, 2018 Initial Valuation for the Mehlville Fire Protection District dated October 19, 2018.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of the Initial Valuation Report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2018.

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

Respectfully submitted,

Mita D. Drazilov, ASA, FCA, MAAA

### <u>Employer Contribution Rates (Contributory Plan - 5 Year FAS)</u>

(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	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contribution		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
2018	\$ 551,341	4.4%	\$24,259	\$ 77,884	6.2%	\$34,183	\$ 102,468	5.2%	\$28,670	\$ 79,975
2019	569,259	4.4	25,047	78,951	6.2	35,294	103,872	5.2	29,601	81,071
2020	587,760	4.4	25,861	79,947	6.2	36,441	105,182	5.2	30,564	82,093
2021	606,862	4.4	26,702	80,861	6.2	37,625	106,385	5.2	31,557	83,032
2022	626,585	4.4	27,570	81,683	6.2	38,848	107,466	5.2	32,582	83,876
2023	646,949	4.4	28,466	82,400	6.2	40,111	108,410	5.2	33,641	84,613
2024	667,975	4.4	29,391	83,000	6.2	41,414	109,200	5.2	34,735	85,229
2025	689,684	4.4	30,346	83,469	6.2	42,760	109,817	5.2	35,864	85,711
2026	712,099	4.4	31,332	83,792	6.2	44,150	110,242	5.2	37,029	86,042
2027	735,242	4.4	32,351	83,952	6.2	45,585	110,453	5.2	38,233	86,206

			LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated	Estimated Employer  Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	
Valuation Projected Year Payroll	As a % of Payroll	Annual Dollars	As a % of Payroll		Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability		
2018	\$ 551,341	6.8%	\$37,491	\$ 104,054	7.9%	\$43,556	\$ 127,047	8.2%	\$45,210	\$ 128,082	
2019	569,259	6.8	38,710	105,480	7.9	44,971	128,788	8.2	46,679	129,837	
2020	587,760	6.8	39,968	106,810	7.9	46,433	130,412	8.2	48,196	131,474	
2021	606,862	6.8	41,267	108,031	7.9	47,942	131,903	8.2	49,763	132,977	
2022	626,585	6.8	42,608	109,129	7.9	49,500	133,243	8.2	51,380	134,328	
2023	646,949	6.8	43,993	110,087	7.9	51,109	134,413	8.2	53,050	135,508	
2024	667,975	6.8	45,422	110,889	7.9	52,770	135,392	8.2	54,774	136,495	
2025	689,684	6.8	46,899	111,516	7.9	54,485	136,157	8.2	56,554	137,266	
2026	712,099	6.8	48,423	111,947	7.9	56,256	136,684	8.2	58,392	137,797	
2027	735.242	6.8	49.996	112.161	7.9	58.084	136.945	8.2	60.290	138.060	

			L-12 Benefit Program			1(65) Benefit F	Program	L-6 Benefit Program		
	Fatiment and		l Employer	Unfunded		l Employer	Unfunded Actuarial		l Employer	Unfunded
	Estimated		ibution	Actuarial		ibution			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
2018	\$ 551,341	9.7%	\$53,480	\$ 151,560	9.9%	\$54,583	\$ 152,100	11.4%	\$62,853	\$ 176,041
2019	569,259	9.7	55,218	153,636	9.9	56,357	154,184	11.4	64,896	178,453
2020	587,760	9.7	57,013	155,573	9.9	58,188	156,128	11.4	67,005	180,703
2021	606,862	9.7	58,866	157,352	9.9	60,079	157,913	11.4	69,182	182,769
2022	626,585	9.7	60,779	158,951	9.9	62,032	159,518	11.4	71,431	184,626
2023	646,949	9.7	62,754	160,347	9.9	64,048	160,919	11.4	73,752	186,247
2024	667,975	9.7	64,794	161,515	9.9	66,130	162,091	11.4	76,149	187,604
2025	689,684	9.7	66,899	162,428	9.9	68,279	163,007	11.4	78,624	188,664
2026	712,099	9.7	69,074	163,056	9.9	70,498	163,637	11.4	81,179	189,394
2027	735,242	9.7	71,318	163,367	9.9	72,789	163,949	11.4	83,818	189,756

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



# <u>Employer Contribution Rates (Contributory Plan - 3 Year FAS)</u>

(4% member contributions are additional)

#### Regular Retirement Eligibility

		L-1 Benefit Program			L-	L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	
	Estimated	Contri	Contribution		Contribution		Actuarial	Contribution		Actuarial	
Valuation	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	
2018	\$ 551,341	4.6%	\$25,362	\$ 81,033	6.5%	\$35,837	\$ 106,419	5.5%	\$30,324	\$ 83,200	
2019	569,259	4.6	26,186	82,143	6.5	37,002	107,877	5.5	31,309	84,340	
2020	587,760	4.6	27,037	83,179	6.5	38,204	109,237	5.5	32,327	85,403	
2021	606,862	4.6	27,916	84,130	6.5	39,446	110,486	5.5	33,377	86,379	
2022	626,585	4.6	28,823	84,985	6.5	40,728	111,609	5.5	34,462	87,257	
2023	646,949	4.6	29,760	85,731	6.5	42,052	112,589	5.5	35,582	88,023	
2024	667,975	4.6	30,727	86,355	6.5	43,418	113,409	5.5	36,739	88,664	
2025	689,684	4.6	31,725	86,843	6.5	44,829	114,050	5.5	37,933	89,165	
2026	712,099	4.6	32,757	87,179	6.5	46,286	114,491	5.5	39,165	89,510	
2027	735,242	4.6	33,821	87,345	6.5	47,791	114,710	5.5	40,438	89,681	

	Estimated		LT-5(65) Benefit Program			7 Benefit Pro	gram	LT-8(65) Benefit Program		
			Estimated Employer Contribution			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
2018	\$ 551,341	7.1%	\$39,145	\$ 108,031	8.3%	\$45,761	\$ 131,765	8.6%	\$47,415	\$ 132,813
2019	569,259	7.1	40,417	109,511	8.3	47,248	133,570	8.6	48,956	134,633
2020	587,760	7.1	41,731	110,892	8.3	48,784	135,254	8.6	50,547	136,331
2021	606,862	7.1	43,087	112,160	8.3	50,370	136,800	8.6	52,190	137,890
2022	626,585	7.1	44,488	113,300	8.3	52,007	138,190	8.6	53,886	139,291
2023	646,949	7.1	45,933	114,295	8.3	53,697	139,404	8.6	55,638	140,514
2024	667,975	7.1	47,426	115,128	8.3	55,442	140,419	8.6	57,446	141,538
2025	689,684	7.1	48,968	115,779	8.3	57,244	141,213	8.6	59,313	142,338
2026	712,099	7.1	50,559	116,227	8.3	59,104	141,759	8.6	61,241	142,888
2027	735.242	7.1	52.202	116.449	8.3	61.025	142.030	8.6	63.231	143.161

		L-12 Benefit Program			LT-14	1(65) Benefit F	Program	L-6 Benefit Program		
	Fatimata d		l Employer	Unfunded		l Employer	Unfunded		l 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
2018	\$ 551,341	10.0%	\$55,134	\$ 157,052	10.2%	\$56,237	\$ 157,578	11.9%	\$65,610	\$ 182,238
2019	569,259	10.0	56,926	159,204	10.2	58,064	159,737	11.9	67,742	184,735
2020	587,760	10.0	58,776	161,211	10.2	59,952	161,751	11.9	69,943	187,064
2021	606,862	10.0	60,686	163,054	10.2	61,900	163,600	11.9	72,217	189,203
2022	626,585	10.0	62,659	164,711	10.2	63,912	165,262	11.9	74,564	191,125
2023	646,949	10.0	64,695	166,158	10.2	65,989	166,713	11.9	76,987	192,804
2024	667,975	10.0	66,798	167,368	10.2	68,133	167,927	11.9	79,489	194,208
2025	689,684	10.0	68,968	168,314	10.2	70,348	168,876	11.9	82,072	195,306
2026	712,099	10.0	71,210	168,965	10.2	72,634	169,529	11.9	84,740	196,061
2027	735,242	10.0	73,524	169,288	10.2	74,995	169,853	11.9	87,494	196,435

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



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

(0% 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		Unfunded	Estimated	l Employer	Unfunded	
	Estimated	Contri	Contribution		Contribution		Actuarial	Contri	Contribution		
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	
2018	\$ 551,341	8.0%	\$44,107	\$ 92,010	9.9%	\$54,583	\$ 115,041	8.8%	\$48,518	\$ 94,083	
2019	569,259	8.0	45,541	93,271	9.9	56,357	116,617	8.8	50,095	95,372	
2020	587,760	8.0	47,021	94,447	9.9	58,188	118,087	8.8	51,723	96,575	
2021	606,862	8.0	48,549	95,527	9.9	60,079	119,437	8.8	53,404	97,679	
2022	626,585	8.0	50,127	96,498	9.9	62,032	120,651	8.8	55,139	98,672	
2023	646,949	8.0	51,756	97,345	9.9	64,048	121,711	8.8	56,932	99,539	
2024	667,975	8.0	53,438	98,054	9.9	66,130	122,598	8.8	58,782	100,264	
2025	689,684	8.0	55,175	98,608	9.9	68,279	123,291	8.8	60,692	100,831	
2026	712,099	8.0	56,968	98,989	9.9	70,498	123,768	8.8	62,665	101,221	
2027	735,242	8.0	58,819	99,178	9.9	72,789	124,004	8.8	64,701	101,414	

		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	
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
2018	\$ 551,341	10.5%	\$57,891	\$ 116,585	11.6%	\$63,956	\$ 138,021	12.0%	\$66,161	\$ 139,067
2019	569,259	10.5	59,772	118,182	11.6	66,034	139,912	12.0	68,311	140,972
2020	587,760	10.5	61,715	119,672	11.6	68,180	141,676	12.0	70,531	142,750
2021	606,862	10.5	63,721	121,040	11.6	70,396	143,296	12.0	72,823	144,382
2022	626,585	10.5	65,791	122,270	11.6	72,684	144,752	12.0	75,190	145,849
2023	646,949	10.5	67,930	123,344	11.6	75,046	146,023	12.0	77,634	147,130
2024	667,975	10.5	70,137	124,242	11.6	77,485	147,087	12.0	80,157	148,202
2025	689,684	10.5	72,417	124,944	11.6	80,003	147,918	12.0	82,762	149,040
2026	712,099	10.5	74,770	125,427	11.6	82,603	148,490	12.0	85,452	149,616
2027	735.242	10.5	77.200	125.666	11.6	85.288	148.774	12.0	88.229	149.902

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program		
			l Employer	Unfunded		d Employer	Unfunded			Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	d Employer ibution Actu Annual September 2001 Ac	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
2018	\$ 551,341	13.5%	\$74,431	\$ 161,034	13.7%	\$75,534	\$ 161,555	15.3%	\$84,355	\$ 184,037
2019	569,259	13.5	76,850	163,240	13.7	77,988	163,768	15.3	87,097	186,558
2020	587,760	13.5	79,348	165,298	13.7	80,523	165,833	15.3	89,927	188,910
2021	606,862	13.5	81,926	167,188	13.7	83,140	167,729	15.3	92,850	191,070
2022	626,585	13.5	84,589	168,887	13.7	85,842	169,433	15.3	95,868	193,011
2023	646,949	13.5	87,338	170,370	13.7	88,632	170,921	15.3	98,983	194,706
2024	667,975	13.5	90,177	171,611	13.7	91,513	172,166	15.3	102,200	196,124
2025	689,684	13.5	93,107	172,581	13.7	94,487	173,139	15.3	105,522	197,232
2026	712,099	13.5	96,133	173,248	13.7	97,558	173,809	15.3	108,951	197,995
2027	735,242	13.5	99,258	173,579	13.7	100,728	174,141	15.3	112,492	198,373

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



#### 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	Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	bution	Actuarial	Contri	ribution Ac Annual Ac Dollars Li	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
2018	\$ 551,341	8.3%	\$45,761	\$ 94,867	10.2%	\$56,237	\$ 118,590	9.1%	\$50,172	\$ 97,010
2019	569,259	8.3	47,248	96,167	10.2	58,064	120,215	9.1	51,803	98,339
2020	587,760	8.3	48,784	97,380	10.2	59,952	121,731	9.1	53,486	99,579
2021	606,862	8.3	50,370	98,493	10.2	61,900	123,123	9.1	55,224	100,717
2022	626,585	8.3	52,007	99,494	10.2	63,912	124,374	9.1	57,019	101,740
2023	646,949	8.3	53,697	100,368	10.2	65,989	125,466	9.1	58,872	102,634
2024	667,975	8.3	55,442	101,099	10.2	68,133	126,380	9.1	60,786	103,382
2025	689,684	8.3	57,244	101,670	10.2	70,348	127,094	9.1	62,761	103,966
2026	712,099	8.3	59,104	102,063	10.2	72,634	127,585	9.1	64,801	104,368
2027	735,242	8.3	61,025	102,258	10.2	74,995	127,829	9.1	66,907	104,567

		LT-5(65) Benefit Program			L-	7 Benefit Pro	gram	LT-8(65) Benefit Program		
			l Employer	Unfunded		d Employer	Unfunded	Estimated Employer Contribution		Unfunded Actuarial
	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
2018	\$ 551,341	10.7%	\$58,993	\$ 120,215	12.0%	\$66,161	\$ 142,279	12.4%	\$68,366	\$ 143,373
2019	569,259	10.7	60,911	121,862	12.0	68,311	144,228	12.4	70,588	145,337
2020	587,760	10.7	62,890	123,399	12.0	70,531	146,047	12.4	72,882	147,170
2021	606,862	10.7	64,934	124,810	12.0	72,823	147,717	12.4	75,251	148,853
2022	626,585	10.7	67,045	126,078	12.0	75,190	149,218	12.4	77,697	150,365
2023	646,949	10.7	69,224	127,185	12.0	77,634	150,528	12.4	80,222	151,686
2024	667,975	10.7	71,473	128,111	12.0	80,157	151,624	12.4	82,829	152,791
2025	689,684	10.7	73,796	128,835	12.0	82,762	152,481	12.4	85,521	153,655
2026	712,099	10.7	76,195	129,333	12.0	85,452	153,071	12.4	88,300	154,249
2027	735 242	10.7	78 671	129 580	12.0	88 229	153 363	12 4	91 170	154 544

		L-12 Benefit Program  Estimated Employer Unfunded			LT-14	4(65) Benefit I	Program	L-6 Benefit Program		
	Estimated		ted Contribution			l Employer ibution	Unfunded Actuarial		d Employer ibution Actual Annual September Sep	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
2018	\$ 551,341	13.9%	\$76,636	\$ 166,028	14.1%	\$77,739	\$ 166,567	15.8%	\$87,112	\$ 189,770
2019	569,259	13.9	79,127	168,303	14.1	80,266	168,849	15.8	89,943	192,370
2020	587,760	13.9	81,699	170,425	14.1	82,874	170,978	15.8	92,866	194,796
2021	606,862	13.9	84,354	172,373	14.1	85,568	172,933	15.8	95,884	197,023
2022	626,585	13.9	87,095	174,124	14.1	88,348	174,690	15.8	99,000	199,025
2023	646,949	13.9	89,926	175,653	14.1	91,220	176,224	15.8	102,218	200,773
2024	667,975	13.9	92,849	176,933	14.1	94,184	177,508	15.8	105,540	202,235
2025	689,684	13.9	95,866	177,933	14.1	97,245	178,511	15.8	108,970	203,378
2026	712,099	13.9	98,982	178,621	14.1	100,406	179,201	15.8	112,512	204,164
2027	735,242	13.9	102,199	178,962	14.1	103,669	179,543	15.8	116,168	204,554

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



# Employer Contribution Rates (Contributory Plan - 5 Year FAS) (4% 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	Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	bution	Actuarial	Contri	bution	Actuarial	Contri	d Employer   Unfun	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
2018	\$ 551,341	4.7%	\$25,913	\$ 66,946	6.5%	\$35,837	\$ 88,185	5.8%	\$31,978	\$ 67,800
2019	569,259	4.7	26,755	67,863	6.5	37,002	89,393	5.8	33,017	68,729
2020	587,760	4.7	27,625	68,719	6.5	38,204	90,520	5.8	34,090	69,596
2021	606,862	4.7	28,523	69,505	6.5	39,446	91,555	5.8	35,198	70,392
2022	626,585	4.7	29,449	70,211	6.5	40,728	92,485	5.8	36,342	71,107
2023	646,949	4.7	30,407	70,828	6.5	42,052	93,297	5.8	37,523	71,731
2024	667,975	4.7	31,395	71,344	6.5	43,418	93,977	5.8	38,743	72,254
2025	689,684	4.7	32,415	71,747	6.5	44,829	94,508	5.8	40,002	72,662
2026	712,099	4.7	33,469	72,024	6.5	46,286	94,873	5.8	41,302	72,943
2027	735,242	4.7	34,556	72,162	6.5	47,791	95,054	5.8	42,644	73,082

		LT-5	(65) Benefit P	rogram	L-7 Benefit Program			LT-8(65) Benefit Program			
	Faktor ak a d		d Employer	Unfunded		d Employer	Unfunded	Estimated Employer Contribution		Unfunded Actuarial	
	Estimated		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	
2018	\$ 551,341	7.3%	\$40,248	\$ 88,835	8.2%	\$45,210	\$ 109,414	8.8%	\$48,518	\$ 109,821	
2019	569,259	7.3	41,556	90,052	8.2	46,679	110,913	8.8	50,095	111,326	
2020	587,760	7.3	42,906	91,187	8.2	48,196	112,312	8.8	51,723	112,730	
2021	606,862	7.3	44,301	92,230	8.2	49,763	113,596	8.8	53,404	114,019	
2022	626,585	7.3	45,741	93,167	8.2	51,380	114,750	8.8	55,139	115,178	
2023	646,949	7.3	47,227	93,985	8.2	53,050	115,758	8.8	56,932	116,190	
2024	667,975	7.3	48,762	94,670	8.2	54,774	116,601	8.8	58,782	117,036	
2025	689,684	7.3	50,347	95,205	8.2	56,554	117,260	8.8	60,692	117,697	
2026	712,099	7.3	51,983	95,573	8.2	58,392	117,713	8.8	62,665	118,152	
2027	735 242	73	53 673	95 755	8.2	60 290	117 938	8.8	64 701	118 378	

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program		
	Estimated					l Employer ibution	Unfunded Actuarial		d Employer ribution Ac Annual Dollars Li	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
2018	\$ 551,341	10.0%	\$55,134	\$ 130,556	10.3%	\$56,788	\$ 130,783	11.9%	\$65,610	\$ 151,699
2019	569,259	10.0	56,926	132,345	10.3	58,634	132,575	11.9	67,742	153,777
2020	587,760	10.0	58,776	134,014	10.3	60,539	134,247	11.9	69,943	155,716
2021	606,862	10.0	60,686	135,546	10.3	62,507	135,782	11.9	72,217	157,496
2022	626,585	10.0	62,659	136,923	10.3	64,538	137,162	11.9	74,564	159,096
2023	646,949	10.0	64,695	138,126	10.3	66,636	138,367	11.9	76,987	160,493
2024	667,975	10.0	66,798	139,132	10.3	68,801	139,375	11.9	79,489	161,662
2025	689,684	10.0	68,968	139,918	10.3	71,037	140,163	11.9	82,072	162,576
2026	712,099	10.0	71,210	140,459	10.3	73,346	140,705	11.9	84,740	163,205
2027	735,242	10.0	73,524	140,727	10.3	75,730	140,974	11.9	87,494	163,517

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



# <u>Employer Contribution Rates (Contributory Plan - 3 Year FAS)</u>

(4% 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	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
2018	\$ 551,341	4.9%	\$27,016	\$ 69,670	6.7%	\$36,940	\$ 91,564	6.0%	\$33,080	\$ 70,558
2019	569,259	4.9	27,894	70,624	6.7	38,140	92,818	6.0	34,156	71,525
2020	587,760	4.9	28,800	71,515	6.7	39,380	93,988	6.0	35,266	72,427
2021	606,862	4.9	29,736	72,333	6.7	40,660	95,063	6.0	36,412	73,255
2022	626,585	4.9	30,703	73,068	6.7	41,981	96,029	6.0	37,595	73,999
2023	646,949	4.9	31,701	73,710	6.7	43,346	96,872	6.0	38,817	74,649
2024	667,975	4.9	32,731	74,247	6.7	44,754	97,578	6.0	40,079	75,193
2025	689,684	4.9	33,795	74,667	6.7	46,209	98,129	6.0	41,381	75,618
2026	712,099	4.9	34,893	74,956	6.7	47,711	98,508	6.0	42,726	75,910
2027	735,242	4.9	36,027	75,099	6.7	49,261	98,696	6.0	44,115	76,055

		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
2018	\$ 551,341	7.6%	\$41,902	\$ 92,232	8.6%	\$47,415	\$ 113,449	9.2%	\$50,723	\$ 113,883
2019	569,259	7.6	43,264	93,496	8.6	48,956	115,003	9.2	52,372	115,443
2020	587,760	7.6	44,670	94,675	8.6	50,547	116,453	9.2	54,074	116,899
2021	606,862	7.6	46,122	95,757	8.6	52,190	117,784	9.2	55,831	118,235
2022	626,585	7.6	47,620	96,730	8.6	53,886	118,981	9.2	57,646	119,436
2023	646,949	7.6	49,168	97,580	8.6	55,638	120,026	9.2	59,519	120,485
2024	667,975	7.6	50,766	98,291	8.6	57,446	120,900	9.2	61,454	121,363
2025	689,684	7.6	52,416	98,847	8.6	59,313	121,583	9.2	63,451	122,049
2026	712,099	7.6	54,120	99,229	8.6	61,241	122,053	9.2	65,513	122,521
2027	735.242	7.6	55.878	99.418	8.6	63.231	122.286	9.2	67.642	122.755

		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
2018	\$ 551,341	10.5%	\$57,891	\$ 135,289	10.8%	\$59,545	\$ 135,519	12.4%	\$68,366	\$ 157,060
2019	569,259	10.5	59,772	137,142	10.8	61,480	137,376	12.4	70,588	159,212
2020	587,760	10.5	61,715	138,871	10.8	63,478	139,108	12.4	72,882	161,220
2021	606,862	10.5	63,721	140,459	10.8	65,541	140,698	12.4	75,251	163,063
2022	626,585	10.5	65,791	141,886	10.8	67,671	142,128	12.4	77,697	164,720
2023	646,949	10.5	67,930	143,132	10.8	69,870	143,376	12.4	80,222	166,167
2024	667,975	10.5	70,137	144,175	10.8	72,141	144,420	12.4	82,829	167,377
2025	689,684	10.5	72,417	144,990	10.8	74,486	145,236	12.4	85,521	168,323
2026	712,099	10.5	74,770	145,551	10.8	76,907	145,798	12.4	88,300	168,974
2027	735,242	10.5	77,200	145,829	10.8	79,406	146,076	12.4	91,170	169,297

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



#### 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 Pro	gram	LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	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
2018	\$ 551,341	8.3%	\$45,761	\$ 79,883	10.1%	\$55,685	\$ 99,841	9.4%	\$51,826	\$ 80,728
2019	569,259	8.3	47,248	80,977	10.1	57,495	101,209	9.4	53,510	81,834
2020	587,760	8.3	48,784	81,998	10.1	59,364	102,485	9.4	55,249	82,866
2021	606,862	8.3	50,370	82,935	10.1	61,293	103,657	9.4	57,045	83,813
2022	626,585	8.3	52,007	83,778	10.1	63,285	104,710	9.4	58,899	84,665
2023	646,949	8.3	53,697	84,514	10.1	65,342	105,630	9.4	60,813	85,409
2024	667,975	8.3	55,442	85,130	10.1	67,465	106,399	9.4	62,790	86,031
2025	689,684	8.3	57,244	85,611	10.1	69,658	107,000	9.4	64,830	86,517
2026	712,099	8.3	59,104	85,942	10.1	71,922	107,414	9.4	66,937	86,852
2027	735,242	8.3	61,025	86,106	10.1	74,259	107,619	9.4	69,113	87,018

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated		nated Employer Unfunded Contribution 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
2018	\$ 551,341	11.0%	\$60,647	\$ 100,472	11.9%	\$65,610	\$ 119,820	12.5%	\$68,918	\$ 120,231
2019	569,259	11.0	62,618	101,848	11.9	67,742	121,462	12.5	71,157	121,878
2020	587,760	11.0	64,654	103,132	11.9	69,943	122,994	12.5	73,470	123,415
2021	606,862	11.0	66,755	104,311	11.9	72,217	124,400	12.5	75,858	124,826
2022	626,585	11.0	68,924	105,371	11.9	74,564	125,664	12.5	78,323	126,094
2023	646,949	11.0	71,164	106,296	11.9	76,987	126,768	12.5	80,869	127,201
2024	667,975	11.0	73,477	107,070	11.9	79,489	127,691	12.5	83,497	128,128
2025	689,684	11.0	75,865	107,675	11.9	82,072	128,413	12.5	86,211	128,852
2026	712,099	11.0	78,331	108,091	11.9	84,740	128,910	12.5	89,012	129,350
2027	735.242	11.0	80.877	108.297	11.9	87.494	129.156	12.5	91.905	129.597

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program		
	Estimated		l Employer ibution	Unfunded Actuarial		l 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
2018	\$ 551,341	13.8%	\$76,085	\$ 139,777	14.1%	\$77,739	\$ 139,984	15.7%	\$86,561	\$ 159,741
2019	569,259	13.8	78,558	141,692	14.1	80,266	141,902	15.7	89,374	161,929
2020	587,760	13.8	81,111	143,479	14.1	82,874	143,691	15.7	92,278	163,971
2021	606,862	13.8	83,747	145,119	14.1	85,568	145,334	15.7	95,277	165,846
2022	626,585	13.8	86,469	146,594	14.1	88,348	146,811	15.7	98,374	167,531
2023	646,949	13.8	89,279	147,881	14.1	91,220	148,100	15.7	101,571	169,002
2024	667,975	13.8	92,181	148,958	14.1	94,184	149,179	15.7	104,872	170,233
2025	689,684	13.8	95,176	149,800	14.1	97,245	150,022	15.7	108,280	171,195
2026	712,099	13.8	98,270	150,379	14.1	100,406	150,602	15.7	111,800	171,857
2027	735,242	13.8	101,463	150,666	14.1	103,669	150,890	15.7	115,433	172,185

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



#### 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 Program			LT-4(65) Benefit Program			
		Estimated	l Employer	Unfunded	Estimated	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	
2018	\$ 551,341	8.5%	\$46,864	\$ 82,374	10.5%	\$57,891	\$ 102,954	9.7%	\$53,480	\$ 83,229	
2019	569,259	8.5	48,387	83,503	10.5	59,772	104,364	9.7	55,218	84,369	
2020	587,760	8.5	49,960	84,556	10.5	61,715	105,680	9.7	57,013	85,433	
2021	606,862	8.5	51,583	85,523	10.5	63,721	106,888	9.7	58,866	86,410	
2022	626,585	8.5	53,260	86,392	10.5	65,791	107,974	9.7	60,779	87,288	
2023	646,949	8.5	54,991	87,151	10.5	67,930	108,922	9.7	62,754	88,055	
2024	667,975	8.5	56,778	87,786	10.5	70,137	109,715	9.7	64,794	88,696	
2025	689,684	8.5	58,623	88,282	10.5	72,417	110,335	9.7	66,899	89,197	
2026	712,099	8.5	60,528	88,623	10.5	74,770	110,762	9.7	69,074	89,542	
2027	735,242	8.5	62,496	88,792	10.5	77,200	110,973	9.7	71,318	89,713	

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated		d Employer ibution	Unfunded Actuarial		Estimated Employer Contribution			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	
2018	\$ 551,341	11.4%	\$62,853	\$ 103,602	12.4%	\$68,366	\$ 123,530	12.9%	\$71,123	\$ 123,968	
2019	569,259	11.4	64,896	105,021	12.4	70,588	125,222	12.9	73,434	125,666	
2020	587,760	11.4	67,005	106,345	12.4	72,882	126,801	12.9	75,821	127,251	
2021	606,862	11.4	69,182	107,561	12.4	75,251	128,251	12.9	78,285	128,706	
2022	626,585	11.4	71,431	108,654	12.4	77,697	129,554	12.9	80,829	130,014	
2023	646,949	11.4	73,752	109,608	12.4	80,222	130,692	12.9	83,456	131,156	
2024	667,975	11.4	76,149	110,406	12.4	82,829	131,644	12.9	86,169	132,111	
2025	689,684	11.4	78,624	111,030	12.4	85,521	132,388	12.9	88,969	132,858	
2026	712,099	11.4	81,179	111,459	12.4	88,300	132,900	12.9	91,861	133,372	
2027	735.242	11.4	83.818	111.672	12.4	91.170	133.154	12.9	94.846	133.627	

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
	Estimated		l Employer	Unfunded		d Employer	Unfunded		l Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ribution  Annual  Dollars  \$89,869  92,789  95,805  98,919	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
2018	\$ 551,341	14.3%	\$78,842	\$ 144,149	14.6%	\$80,496	\$ 144,368	16.3%	\$89,869	\$ 164,742
2019	569,259	14.3	81,404	146,124	14.6	83,112	146,346	16.3	92,789	166,999
2020	587,760	14.3	84,050	147,967	14.6	85,813	148,191	16.3	95,805	169,105
2021	606,862	14.3	86,781	149,659	14.6	88,602	149,885	16.3	98,919	171,038
2022	626,585	14.3	89,602	151,180	14.6	91,481	151,408	16.3	102,133	172,776
2023	646,949	14.3	92,514	152,508	14.6	94,455	152,738	16.3	105,453	174,293
2024	667,975	14.3	95,520	153,619	14.6	97,524	153,851	16.3	108,880	175,563
2025	689,684	14.3	98,625	154,487	14.6	100,694	154,721	16.3	112,418	176,555
2026	712,099	14.3	101,830	155,084	14.6	103,966	155,319	16.3	116,072	177,238
2027	735,242	14.3	105,140	155,380	14.6	107,345	155,616	16.3	119,844	177,576

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



#### 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	d Employer	Unfunded	Estimate	d 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
2018	\$ 11,110,663	5.8%	\$644,418	\$ 1,819,154	7.9%	\$877,742	\$ 2,340,103	7.9%	\$877,742	\$ 2,225,191
2019	11,471,759	5.8	665,362	1,844,076	7.9	906,269	2,372,162	7.9	906,269	2,255,676
2020	11,844,591	5.8	686,986	1,867,329	7.9	935,723	2,402,073	7.9	935,723	2,284,119
2021	12,229,540	5.8	709,313	1,888,678	7.9	966,134	2,429,536	7.9	966,134	2,310,233
2022	12,627,000	5.8	732,366	1,907,869	7.9	997,533	2,454,222	7.9	997,533	2,333,707
2023	13,037,378	5.8	756,168	1,924,625	7.9	1,029,953	2,475,776	7.9	1,029,953	2,354,202
2024	13,461,093	5.8	780,743	1,938,645	7.9	1,063,426	2,493,810	7.9	1,063,426	2,371,351
2025	13,898,579	5.8	806,118	1,949,602	7.9	1,097,988	2,507,904	7.9	1,097,988	2,384,753
2026	14,350,283	5.8	832,316	1,957,141	7.9	1,133,672	2,517,602	7.9	1,133,672	2,393,975
2027	14,816,667	5.8	859,367	1,960,878	7.9	1,170,517	2,522,409	7.9	1,170,517	2,398,546

		LT-5(65) Benefit Program				L-7 Benefit Pro	gram	LT-8(65) Benefit Program			
	Estimated		ed Employer ribution	Unfunded Actuarial		ed Employer ribution	Unfunded Actuarial		d Employer ribution	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	
2018	\$ 11,110,663	9.5%	\$1,055,513	\$ 2,644,747	10.0%	\$1,111,066	\$ 2,855,482	11.1%	\$1,233,284	\$ 3,058,534	
2019	11,471,759	9.5	1,089,817	2,680,980	10.0	1,147,176	2,894,602	11.1	1,273,365	3,100,435	
2020	11,844,591	9.5	1,125,236	2,714,785	10.0	1,184,459	2,931,101	11.1	1,314,750	3,139,530	
2021	12,229,540	9.5	1,161,806	2,745,823	10.0	1,222,954	2,964,612	11.1	1,357,479	3,175,424	
2022	12,627,000	9.5	1,199,565	2,773,723	10.0	1,262,700	2,994,735	11.1	1,401,597	3,207,689	
2023	13,037,378	9.5	1,238,551	2,798,083	10.0	1,303,738	3,021,036	11.1	1,447,149	3,235,860	
2024	13,461,093	9.5	1,278,804	2,818,465	10.0	1,346,109	3,043,042	11.1	1,494,181	3,259,431	
2025	13,898,579	9.5	1,320,365	2,834,394	10.0	1,389,858	3,060,240	11.1	1,542,742	3,277,852	
2026	14,350,283	9.5	1,363,277	2,845,355	10.0	1,435,028	3,072,074	11.1	1,592,881	3,290,528	
2027	14.816.667	9.5	1.407.583	2.850.788	10.0	1.481.667	3.077.940	11.1	1.644.650	3.296.811	

		L	-12 Benefit Pro	ogram	LT-1	.4(65) Benefit I	Program		6 Benefit Pro	gram	
	Estimated Valuation - Projected		Estimated Employer Contribution			d Employer ribution	Unfunded Actuarial	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	
2018	\$ 11,110,663	12.1%	\$1,344,390	\$ 3,367,420	12.7%	\$1,411,054	\$ 3,468,898	14.3%	\$1,588,825	\$ 3,878,315	
2019	11,471,759	12.1	1,388,083	3,413,553	12.7	1,456,913	3,516,421	14.3	1,640,462	3,931,447	
2020	11,844,591	12.1	1,433,196	3,456,596	12.7	1,504,263	3,560,761	14.3	1,693,777	3,981,020	
2021	12,229,540	12.1	1,479,774	3,496,115	12.7	1,553,152	3,601,471	14.3	1,748,824	4,026,535	
2022	12,627,000	12.1	1,527,867	3,531,639	12.7	1,603,629	3,638,065	14.3	1,805,661	4,067,448	
2023	13,037,378	12.1	1,577,523	3,562,655	12.7	1,655,747	3,670,016	14.3	1,864,345	4,103,170	
2024	13,461,093	12.1	1,628,792	3,588,607	12.7	1,709,559	3,696,750	14.3	1,924,936	4,133,059	
2025	13,898,579	12.1	1,681,728	3,608,889	12.7	1,765,120	3,717,643	14.3	1,987,497	4,156,418	
2026	14,350,283	12.1	1,736,384	3,622,845	12.7	1,822,486	3,732,019	14.3	2,052,090	4,172,491	
2027	14,816,667	12.1	1,792,817	3,629,763	12.7	1,881,717	3,739,145	14.3	2,118,783	4,180,458	

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



#### 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	Estimate	d 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
2018	\$ 11,110,663	6.1%	\$677,750	\$ 1,884,828	8.3%	\$922,185	\$ 2,420,313	8.2%	\$911,074	\$ 2,304,851
2019	11,471,759	6.1	699,777	1,910,650	8.3	952,156	2,453,471	8.2	940,684	2,336,427
2020	11,844,591	6.1	722,520	1,934,742	8.3	983,101	2,484,408	8.2	971,256	2,365,888
2021	12,229,540	6.1	746,002	1,956,862	8.3	1,015,052	2,512,812	8.2	1,002,822	2,392,937
2022	12,627,000	6.1	770,247	1,976,746	8.3	1,048,041	2,538,344	8.2	1,035,414	2,417,251
2023	13,037,378	6.1	795,280	1,994,106	8.3	1,082,102	2,560,637	8.2	1,069,065	2,438,480
2024	13,461,093	6.1	821,127	2,008,632	8.3	1,117,271	2,579,290	8.2	1,103,810	2,456,243
2025	13,898,579	6.1	847,813	2,019,984	8.3	1,153,582	2,593,867	8.2	1,139,683	2,470,125
2026	14,350,283	6.1	875,367	2,027,795	8.3	1,191,073	2,603,898	8.2	1,176,723	2,479,677
2027	14,816,667	6.1	903,817	2,031,667	8.3	1,229,783	2,608,870	8.2	1,214,967	2,484,412

		LT-5(65) Benefit Program				L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated		d Employer ribution	Unfunded Actuarial		ed Employer ribution	Unfunded Actuarial		d Employer ribution	Unfunded Actuarial		
Valuation Year		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability		
2018	\$ 11,110,663	9.9%	\$1,099,956	\$ 2,735,323	10.4%	\$1,155,509	\$ 2,950,035	11.5%	\$1,277,726	\$ 3,159,949		
2019	11,471,759	9.9	1,135,704	2,772,797	10.4	1,193,063	2,990,450	11.5	1,319,252	3,203,240		
2020	11,844,591	9.9	1,172,615	2,807,760	10.4	1,231,837	3,028,158	11.5	1,362,128	3,243,631		
2021	12,229,540	9.9	1,210,724	2,839,861	10.4	1,271,872	3,062,779	11.5	1,406,397	3,280,715		
2022	12,627,000	9.9	1,250,073	2,868,717	10.4	1,313,208	3,093,900	11.5	1,452,105	3,314,050		
2023	13,037,378	9.9	1,290,700	2,893,911	10.4	1,355,887	3,121,072	11.5	1,499,298	3,343,155		
2024	13,461,093	9.9	1,332,648	2,914,991	10.4	1,399,954	3,143,807	11.5	1,548,026	3,367,508		
2025	13,898,579	9.9	1,375,959	2,931,466	10.4	1,445,452	3,161,575	11.5	1,598,337	3,386,540		
2026	14,350,283	9.9	1,420,678	2,942,802	10.4	1,492,429	3,173,801	11.5	1,650,283	3,399,636		
2027	14.816.667	9.9	1.466.850	2.948.421	10.4	1.540.933	3.179.861	11.5	1.703.917	3.406.128		

		L	-12 Benefit Pro	ogram	LT-1	L4(65) Benefit I	Program		6 Benefit Pro	gram
	Estimated Valuation - Projected		Estimated Employer Contribution		Unfunded Estimat Actuarial Con		Unfunded Actuarial	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
2018	\$ 11,110,663	12.7%	\$1,411,054	\$ 3,477,476	13.2%	\$1,466,607	\$ 3,582,503	14.9%	\$1,655,489	\$ 4,003,621
2019	11,471,759	12.7	1,456,913	3,525,117	13.2	1,514,272	3,631,583	14.9	1,709,292	4,058,470
2020	11,844,591	12.7	1,504,263	3,569,566	13.2	1,563,486	3,677,375	14.9	1,764,844	4,109,645
2021	12,229,540	12.7	1,553,152	3,610,377	13.2	1,614,299	3,719,418	14.9	1,822,201	4,156,630
2022	12,627,000	12.7	1,603,629	3,647,062	13.2	1,666,764	3,757,211	14.9	1,881,423	4,198,865
2023	13,037,378	12.7	1,655,747	3,679,092	13.2	1,720,934	3,790,208	14.9	1,942,569	4,235,741
2024	13,461,093	12.7	1,709,559	3,705,892	13.2	1,776,864	3,817,817	14.9	2,005,703	4,266,596
2025	13,898,579	12.7	1,765,120	3,726,836	13.2	1,834,612	3,839,394	14.9	2,070,888	4,290,709
2026	14,350,283	12.7	1,822,486	3,741,248	13.2	1,894,237	3,854,241	14.9	2,138,192	4,307,301
2027	14,816,667	12.7	1,881,717	3,748,392	13.2	1,955,800	3,861,601	14.9	2,207,683	4,315,526

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



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

(0% member contributions are additional)

#### Regular Retirement Eligibility

			1 Benefit Pro	gram		3 Benefit Pro	gram	LT-	4(65) Benefit P	rogram
		Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded
	Estimated	Cont	ribution	Actuarial	Cont	ribution	Actuarial	Cont	ribution	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
2018	\$ 11,110,663	9.7%	\$1,077,734	\$ 1,931,469	11.8%	\$1,311,058	\$ 2,414,482	11.8%	\$1,311,058	\$ 2,335,142
2019	11,471,759	9.7	1,112,761	1,957,930	11.8	1,353,668	2,447,560	11.8	1,353,668	2,367,133
2020	11,844,591	9.7	1,148,925	1,982,618	11.8	1,397,662	2,478,422	11.8	1,397,662	2,396,981
2021	12,229,540	9.7	1,186,265	2,005,285	11.8	1,443,086	2,506,758	11.8	1,443,086	2,424,386
2022	12,627,000	9.7	1,224,819	2,025,661	11.8	1,489,986	2,532,229	11.8	1,489,986	2,449,020
2023	13,037,378	9.7	1,264,626	2,043,451	11.8	1,538,411	2,554,468	11.8	1,538,411	2,470,528
2024	13,461,093	9.7	1,305,726	2,058,336	11.8	1,588,409	2,573,076	11.8	1,588,409	2,488,524
2025	13,898,579	9.7	1,348,162	2,069,969	11.8	1,640,032	2,587,618	11.8	1,640,032	2,502,588
2026	14,350,283	9.7	1,391,977	2,077,974	11.8	1,693,333	2,597,624	11.8	1,693,333	2,512,266
2027	14,816,667	9.7	1,437,217	2,081,942	11.8	1,748,367	2,602,584	11.8	1,748,367	2,517,063

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated		ed Employer ribution	Unfunded Actuarial		ed Employer ribution	Unfunded Actuarial		d Employer ribution	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	
2018	\$ 11,110,663	13.4%	\$1,488,829	\$ 2,717,130	13.9%	\$1,544,382	\$ 2,897,432	15.0%	\$1,666,599	\$ 3,099,184	
2019	11,471,759	13.4	1,537,216	2,754,354	13.9	1,594,575	2,937,126	15.0	1,720,764	3,141,642	
2020	11,844,591	13.4	1,587,175	2,789,085	13.9	1,646,398	2,974,161	15.0	1,776,689	3,181,256	
2021	12,229,540	13.4	1,638,758	2,820,972	13.9	1,699,906	3,008,164	15.0	1,834,431	3,217,627	
2022	12,627,000	13.4	1,692,018	2,849,636	13.9	1,755,153	3,038,730	15.0	1,894,050	3,250,321	
2023	13,037,378	13.4	1,747,009	2,874,663	13.9	1,812,196	3,065,417	15.0	1,955,607	3,278,866	
2024	13,461,093	13.4	1,803,786	2,895,603	13.9	1,871,092	3,087,747	15.0	2,019,164	3,302,750	
2025	13,898,579	13.4	1,862,410	2,911,968	13.9	1,931,902	3,105,198	15.0	2,084,787	3,321,416	
2026	14,350,283	13.4	1,922,938	2,923,229	13.9	1,994,689	3,117,206	15.0	2,152,542	3,334,260	
2027	14,816,667	13.4	1,985,433	2,928,811	13.9	2,059,517	3,123,158	15.0	2,222,500	3,340,627	

		L	-12 Benefit Pro	ogram	LT-1	L4(65) Benefit I	Program		6 Benefit Pro	gram
			d Employer	Unfunded		ed Employer	Unfunded		d Employer	Unfunded
	Estimated	Cont	ribution	Actuarial	Contribution		Actuarial	Cont	ribution	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
2018	\$ 11,110,663	16.0%	\$1,777,706	\$ 3,380,264	16.6%	\$1,844,370	\$ 3,481,134	18.2%	\$2,022,141	\$ 3,863,121
2019	11,471,759	16.0	1,835,481	3,426,573	16.6	1,904,312	3,528,825	18.2	2,087,860	3,916,045
2020	11,844,591	16.0	1,895,135	3,469,780	16.6	1,966,202	3,573,321	18.2	2,155,716	3,965,424
2021	12,229,540	16.0	1,956,726	3,509,450	16.6	2,030,104	3,614,175	18.2	2,225,776	4,010,760
2022	12,627,000	16.0	2,020,320	3,545,109	16.6	2,096,082	3,650,898	18.2	2,298,114	4,051,513
2023	13,037,378	16.0	2,085,980	3,576,243	16.6	2,164,205	3,682,961	18.2	2,372,803	4,087,095
2024	13,461,093	16.0	2,153,775	3,602,294	16.6	2,234,541	3,709,789	18.2	2,449,919	4,116,867
2025	13,898,579	16.0	2,223,773	3,622,653	16.6	2,307,164	3,730,756	18.2	2,529,541	4,140,134
2026	14,350,283	16.0	2,296,045	3,636,662	16.6	2,382,147	3,745,183	18.2	2,611,752	4,156,144
2027	14,816,667	16.0	2,370,667	3,643,606	16.6	2,459,567	3,752,334	18.2	2,696,633	4,164,080

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



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

(0% member contributions are additional)

#### Regular Retirement Eligibility

			1 Benefit Pro				ogram LT-4(65) Ben		4(65) Benefit P	efit Program	
		Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded	
	Estimated	Estimated Contribution		Actuarial	Cont	ribution	Actuarial	Cont	ribution	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	
2018	\$ 11,110,663	9.9%	\$1,099,956	\$ 1,989,083	12.2%	\$1,355,501	\$ 2,486,315	12.1%	\$1,344,390	\$ 2,406,468	
2019	11,471,759	9.9	1,135,704	2,016,333	12.2	1,399,555	2,520,377	12.1	1,388,083	2,439,436	
2020	11,844,591	9.9	1,172,615	2,041,758	12.2	1,445,040	2,552,157	12.1	1,433,196	2,470,196	
2021	12,229,540	9.9	1,210,724	2,065,101	12.2	1,492,004	2,581,336	12.1	1,479,774	2,498,438	
2022	12,627,000	9.9	1,250,073	2,086,084	12.2	1,540,494	2,607,565	12.1	1,527,867	2,523,824	
2023	13,037,378	9.9	1,290,700	2,104,405	12.2	1,590,560	2,630,466	12.1	1,577,523	2,545,989	
2024	13,461,093	9.9	1,332,648	2,119,734	12.2	1,642,253	2,649,627	12.1	1,628,792	2,564,535	
2025	13,898,579	9.9	1,375,959	2,131,714	12.2	1,695,627	2,664,602	12.1	1,681,728	2,579,029	
2026	14,350,283	9.9	1,420,678	2,139,957	12.2	1,750,735	2,674,906	12.1	1,736,384	2,589,002	
2027	14,816,667	9.9	1,466,850	2,144,043	12.2	1,807,633	2,680,014	12.1	1,792,817	2,593,946	

		LT-	5(65) Benefit P	rogram		L-7 Benefit Pro	gram	LT-	8(65) Benefit P	rogram
	Estimated		ed Employer ribution	Unfunded Actuarial		d Employer ribution	Unfunded Actuarial		d Employer ribution	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
2018	\$ 11,110,663	13.8%	\$1,533,271	\$ 2,799,388	14.3%	\$1,588,825	\$ 2,983,576	15.4%	\$1,711,042	\$ 3,192,247
2019	11,471,759	13.8	1,583,103	2,837,739	14.3	1,640,462	3,024,451	15.4	1,766,651	3,235,980
2020	11,844,591	13.8	1,634,554	2,873,521	14.3	1,693,777	3,062,587	15.4	1,824,067	3,276,784
2021	12,229,540	13.8	1,687,677	2,906,374	14.3	1,748,824	3,097,601	15.4	1,883,349	3,314,247
2022	12,627,000	13.8	1,742,526	2,935,905	14.3	1,805,661	3,129,075	15.4	1,944,558	3,347,923
2023	13,037,378	13.8	1,799,158	2,961,689	14.3	1,864,345	3,156,556	15.4	2,007,756	3,377,326
2024	13,461,093	13.8	1,857,631	2,983,263	14.3	1,924,936	3,179,549	15.4	2,073,008	3,401,928
2025	13,898,579	13.8	1,918,004	3,000,123	14.3	1,987,497	3,197,519	15.4	2,140,381	3,421,155
2026	14,350,283	13.8	1,980,339	3,011,725	14.3	2,052,090	3,209,884	15.4	2,209,944	3,434,385
2027	14,816,667	13.8	2,044,700	3,017,476	14.3	2,118,783	3,216,013	15.4	2,281,767	3,440,943

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			
	Estimated		d Employer ribution	Unfunded Actuarial		d Employer ribution	Unfunded Actuarial		d Employer ribution	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	
2018	\$ 11,110,663	16.6%	\$1,844,370	\$ 3,480,908	17.1%	\$1,899,923	\$ 3,585,308	18.8%	\$2,088,805	\$ 3,978,231	
2019	11,471,759	16.6	1,904,312	3,528,596	17.1	1,961,671	3,634,426	18.8	2,156,691	4,032,732	
2020	11,844,591	16.6	1,966,202	3,573,089	17.1	2,025,425	3,680,254	18.8	2,226,783	4,083,582	
2021	12,229,540	16.6	2,030,104	3,613,940	17.1	2,091,251	3,722,330	18.8	2,299,154	4,130,269	
2022	12,627,000	16.6	2,096,082	3,650,661	17.1	2,159,217	3,760,152	18.8	2,373,876	4,172,236	
2023	13,037,378	16.6	2,164,205	3,682,722	17.1	2,229,392	3,793,175	18.8	2,451,027	4,208,878	
2024	13,461,093	16.6	2,234,541	3,709,548	17.1	2,301,847	3,820,806	18.8	2,530,685	4,239,537	
2025	13,898,579	16.6	2,307,164	3,730,513	17.1	2,376,657	3,842,400	18.8	2,612,933	4,263,497	
2026	14,350,283	16.6	2,382,147	3,744,939	17.1	2,453,898	3,857,259	18.8	2,697,853	4,279,984	
2027	14,816,667	16.6	2,459,567	3,752,090	17.1	2,533,650	3,864,624	18.8	2,785,533	4,288,157	

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



#### 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	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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 11,110,663	6.1%	\$677,750	\$ 1,753,616	8.2%	\$911,074	\$ 2,252,797	8.6%	\$955,517	\$ 2,310,623
2019	11,471,759	6.1	699,777	1,777,640	8.2	940,684	2,283,660	8.6	986,571	2,342,278
2020	11,844,591	6.1	722,520	1,800,055	8.2	971,256	2,312,456	8.6	1,018,635	2,371,813
2021	12,229,540	6.1	746,002	1,820,635	8.2	1,002,822	2,338,894	8.6	1,051,740	2,398,930
2022	12,627,000	6.1	770,247	1,839,134	8.2	1,035,414	2,362,659	8.6	1,085,922	2,423,305
2023	13,037,378	6.1	795,280	1,855,286	8.2	1,069,065	2,383,409	8.6	1,121,215	2,444,587
2024	13,461,093	6.1	821,127	1,868,801	8.2	1,103,810	2,400,771	8.6	1,157,654	2,462,394
2025	13,898,579	6.1	847,813	1,879,363	8.2	1,139,683	2,414,339	8.6	1,195,278	2,476,311
2026	14,350,283	6.1	875,367	1,886,631	8.2	1,176,723	2,423,675	8.6	1,234,124	2,485,887
2027	14,816,667	6.1	903,817	1,890,233	8.2	1,214,967	2,428,303	8.6	1,274,233	2,490,634

		LT-	5(65) Benefit P	rogram	ı	L-7 Benefit Pro	gram	LT-	8(65) Benefit P	rogram
		Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded
	Estimated	Cont	ribution	Actuarial	Cont	ribution	Actuarial	Cont	ribution	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
2018	\$ 11,110,663	10.2%	\$1,133,288	\$ 2,670,637	10.4%	\$1,155,509	\$ 2,746,690	11.8%	\$1,311,058	\$ 3,025,166
2019	11,471,759	10.2	1,170,119	2,707,224	10.4	1,193,063	2,784,319	11.8	1,353,668	3,066,610
2020	11,844,591	10.2	1,208,148	2,741,360	10.4	1,231,837	2,819,428	11.8	1,397,662	3,105,278
2021	12,229,540	10.2	1,247,413	2,772,702	10.4	1,271,872	2,851,662	11.8	1,443,086	3,140,780
2022	12,627,000	10.2	1,287,954	2,800,875	10.4	1,313,208	2,880,637	11.8	1,489,986	3,172,693
2023	13,037,378	10.2	1,329,813	2,825,473	10.4	1,355,887	2,905,936	11.8	1,538,411	3,200,557
2024	13,461,093	10.2	1,373,031	2,846,055	10.4	1,399,954	2,927,104	11.8	1,588,409	3,223,871
2025	13,898,579	10.2	1,417,655	2,862,140	10.4	1,445,452	2,943,647	11.8	1,640,032	3,242,091
2026	14,350,283	10.2	1,463,729	2,873,208	10.4	1,492,429	2,955,030	11.8	1,693,333	3,254,628
2027	14.816.667	10.2	1.511.300	2.878.694	10.4	1.540.933	2.960.673	11.8	1.748.367	3.260.843

		L	-12 Benefit Pro	gram	LT-1	.4(65) Benefit I	Program		6 Benefit Pro	gram	
	Estimated Valuation Projected		Estimated Employer Contribution			d Employer ribution	Unfunded Actuarial	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	
2018	\$ 11,110,663	12.7%	\$1,411,054	\$ 3,237,524	13.2%	\$1,466,607	\$ 3,376,854	14.8%	\$1,644,378	\$ 3,727,427	
2019	11,471,759	12.7	1,456,913	3,281,878	13.2	1,514,272	3,423,116	14.8	1,697,820	3,778,492	
2020	11,844,591	12.7	1,504,263	3,323,260	13.2	1,563,486	3,466,279	14.8	1,752,999	3,826,136	
2021	12,229,540	12.7	1,553,152	3,361,255	13.2	1,614,299	3,505,909	14.8	1,809,972	3,869,880	
2022	12,627,000	12.7	1,603,629	3,395,408	13.2	1,666,764	3,541,532	14.8	1,868,796	3,909,202	
2023	13,037,378	12.7	1,655,747	3,425,228	13.2	1,720,934	3,572,635	14.8	1,929,532	3,943,534	
2024	13,461,093	12.7	1,709,559	3,450,179	13.2	1,776,864	3,598,659	14.8	1,992,242	3,972,260	
2025	13,898,579	12.7	1,765,120	3,469,678	13.2	1,834,612	3,618,997	14.8	2,056,990	3,994,710	
2026	14,350,283	12.7	1,822,486	3,483,095	13.2	1,894,237	3,632,992	14.8	2,123,842	4,010,158	
2027	14,816,667	12.7	1,881,717	3,489,746	13.2	1,955,800	3,639,929	14.8	2,192,867	4,017,815	

- 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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.



#### 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	d Employer	Unfunded
	Estimated	Contri	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
2018	\$ 11,110,663	6.3%	\$699,972	\$ 1,818,686	8.6%	\$955,517	\$ 2,332,253	9.0%	\$999,960	\$ 2,395,269
2019	11,471,759	6.3	722,721	1,843,602	8.6	986,571	2,364,205	9.0	1,032,458	2,428,084
2020	11,844,591	6.3	746,209	1,866,849	8.6	1,018,635	2,394,016	9.0	1,066,013	2,458,701
2021	12,229,540	6.3	770,461	1,888,193	8.6	1,051,740	2,421,387	9.0	1,100,659	2,486,811
2022	12,627,000	6.3	795,501	1,907,379	8.6	1,085,922	2,445,990	9.0	1,136,430	2,512,079
2023	13,037,378	6.3	821,355	1,924,130	8.6	1,121,215	2,467,472	9.0	1,173,364	2,534,141
2024	13,461,093	6.3	848,049	1,938,146	8.6	1,157,654	2,485,446	9.0	1,211,498	2,552,601
2025	13,898,579	6.3	875,610	1,949,100	8.6	1,195,278	2,499,493	9.0	1,250,872	2,567,027
2026	14,350,283	6.3	904,068	1,956,637	8.6	1,234,124	2,509,159	9.0	1,291,525	2,576,954
2027	14,816,667	6.3	933,450	1,960,373	8.6	1,274,233	2,513,950	9.0	1,333,500	2,581,875

		LT-	5(65) Benefit P	rogram	l	L-7 Benefit Pro	gram	LT-	8(65) Benefit P	rogram
	Estimated		d Employer ribution	Unfunded Actuarial		ed Employer ribution	Unfunded Actuarial		d Employer ribution	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
2018	\$ 11,110,663	10.6%	\$1,177,730	\$ 2,764,725	10.9%	\$1,211,062	\$ 2,840,585	12.2%	\$1,355,501	\$ 3,128,834
2019	11,471,759	10.6	1,216,006	2,802,601	10.9	1,250,422	2,879,501	12.2	1,399,555	3,171,699
2020	11,844,591	10.6	1,255,527	2,837,940	10.9	1,291,060	2,915,810	12.2	1,445,040	3,211,692
2021	12,229,540	10.6	1,296,331	2,870,386	10.9	1,333,020	2,949,146	12.2	1,492,004	3,248,411
2022	12,627,000	10.6	1,338,462	2,899,552	10.9	1,376,343	2,979,112	12.2	1,540,494	3,281,418
2023	13,037,378	10.6	1,381,962	2,925,017	10.9	1,421,074	3,005,276	12.2	1,590,560	3,310,237
2024	13,461,093	10.6	1,426,876	2,946,324	10.9	1,467,259	3,027,167	12.2	1,642,253	3,334,350
2025	13,898,579	10.6	1,473,249	2,962,976	10.9	1,514,945	3,044,276	12.2	1,695,627	3,353,195
2026	14,350,283	10.6	1,521,130	2,974,434	10.9	1,564,181	3,056,048	12.2	1,750,735	3,366,162
2027	14,816,667	10.6	1,570,567	2,980,114	10.9	1,615,017	3,061,883	12.2	1,807,633	3,372,590

		L	-12 Benefit Pro	ogram	LT-1	.4(65) Benefit I	Program		6 Benefit Pro	gram
		Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded
	Estimated	Cont	ribution	Actuarial	Cont	ribution	Actuarial	Cont	ribution	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
2018	\$ 11,110,663	13.1%	\$1,455,497	\$ 3,346,694	13.8%	\$1,533,271	\$ 3,490,898	15.5%	\$1,722,153	\$ 3,851,759
2019	11,471,759	13.1	1,502,800	3,392,543	13.8	1,583,103	3,538,723	15.5	1,778,123	3,904,528
2020	11,844,591	13.1	1,551,641	3,435,321	13.8	1,634,554	3,583,344	15.5	1,835,912	3,953,762
2021	12,229,540	13.1	1,602,070	3,474,597	13.8	1,687,677	3,624,312	15.5	1,895,579	3,998,965
2022	12,627,000	13.1	1,654,137	3,509,902	13.8	1,742,526	3,661,138	15.5	1,957,185	4,039,598
2023	13,037,378	13.1	1,707,897	3,540,727	13.8	1,799,158	3,693,291	15.5	2,020,794	4,075,075
2024	13,461,093	13.1	1,763,403	3,566,519	13.8	1,857,631	3,720,194	15.5	2,086,469	4,104,759
2025	13,898,579	13.1	1,820,714	3,586,676	13.8	1,918,004	3,741,219	15.5	2,154,280	4,127,958
2026	14,350,283	13.1	1,879,887	3,600,546	13.8	1,980,339	3,755,686	15.5	2,224,294	4,143,921
2027	14,816,667	13.1	1,940,983	3,607,421	13.8	2,044,700	3,762,857	15.5	2,296,583	4,151,834

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



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

(0% member contributions are additional)

#### Rule of 80 Retirement Eligibility

		L	1 Benefit Pro	gram		3 Benefit Pro	gram	LT-4	4(65) Benefit P	rogram
		Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded	Estimate	d Employer	Unfunded
	Estimated	Cont	ribution	Actuarial	Cont	ribution	Actuarial	Cont	ribution	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
2018	\$ 11,110,663	10.0%	\$1,111,066	\$ 1,862,075	12.1%	\$1,344,390	\$ 2,327,633	12.5%	\$1,388,833	\$ 2,416,275
2019	11,471,759	10.0	1,147,176	1,887,585	12.1	1,388,083	2,359,521	12.5	1,433,970	2,449,378
2020	11,844,591	10.0	1,184,459	1,911,386	12.1	1,433,196	2,389,273	12.5	1,480,574	2,480,263
2021	12,229,540	10.0	1,222,954	1,933,239	12.1	1,479,774	2,416,589	12.5	1,528,693	2,508,620
2022	12,627,000	10.0	1,262,700	1,952,882	12.1	1,527,867	2,441,144	12.5	1,578,375	2,534,110
2023	13,037,378	10.0	1,303,738	1,970,033	12.1	1,577,523	2,462,583	12.5	1,629,672	2,556,365
2024	13,461,093	10.0	1,346,109	1,984,383	12.1	1,628,792	2,480,521	12.5	1,682,637	2,574,986
2025	13,898,579	10.0	1,389,858	1,995,598	12.1	1,681,728	2,494,540	12.5	1,737,322	2,589,539
2026	14,350,283	10.0	1,435,028	2,003,315	12.1	1,736,384	2,504,186	12.5	1,793,785	2,599,553
2027	14,816,667	10.0	1,481,667	2,007,140	12.1	1,792,817	2,508,968	12.5	1,852,083	2,604,517

		LT-	5(65) Benefit P	rogram		L-7 Benefit Pro	gram	LT-	8(65) Benefit P	rogram
	Estimated		d Employer ribution	Unfunded Actuarial		ed Employer ribution	Unfunded Actuarial		d Employer ribution	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
2018	\$ 11,110,663	14.1%	\$1,566,603	\$ 2,743,286	14.3%	\$1,588,825	\$ 2,806,241	15.7%	\$1,744,374	\$ 3,070,236
2019	11,471,759	14.1	1,617,518	2,780,869	14.3	1,640,462	2,844,686	15.7	1,801,066	3,112,298
2020	11,844,591	14.1	1,670,087	2,815,934	14.3	1,693,777	2,880,556	15.7	1,859,601	3,151,542
2021	12,229,540	14.1	1,724,365	2,848,128	14.3	1,748,824	2,913,489	15.7	1,920,038	3,187,573
2022	12,627,000	14.1	1,780,407	2,877,068	14.3	1,805,661	2,943,093	15.7	1,982,439	3,219,962
2023	13,037,378	14.1	1,838,270	2,902,335	14.3	1,864,345	2,968,940	15.7	2,046,868	3,248,241
2024	13,461,093	14.1	1,898,014	2,923,477	14.3	1,924,936	2,990,567	15.7	2,113,392	3,271,902
2025	13,898,579	14.1	1,959,700	2,940,000	14.3	1,987,497	3,007,469	15.7	2,182,077	3,290,394
2026	14,350,283	14.1	2,023,390	2,951,369	14.3	2,052,090	3,019,099	15.7	2,252,994	3,303,118
2027	14,816,667	14.1	2,089,150	2,957,005	14.3	2,118,783	3,024,864	15.7	2,326,217	3,309,425

		L-12 Benefit Program			LT-1	L4(65) Benefit I	Program	L-6 Benefit Program		
Estimated Emplo		d Employer	Unfunded	Estimated Employer		Unfunded	Estimated Employer		Unfunded	
	Estimated	Cont	ribution	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
2018	\$ 11,110,663	16.6%	\$1,844,370	\$ 3,258,722	17.1%	\$1,899,923	\$ 3,397,276	18.7%	\$2,077,694	\$ 3,724,239
2019	11,471,759	16.6	1,904,312	3,303,366	17.1	1,961,671	3,443,818	18.7	2,145,219	3,775,261
2020	11,844,591	16.6	1,966,202	3,345,019	17.1	2,025,425	3,487,242	18.7	2,214,939	3,822,865
2021	12,229,540	16.6	2,030,104	3,383,262	17.1	2,091,251	3,527,111	18.7	2,286,924	3,866,572
2022	12,627,000	16.6	2,096,082	3,417,639	17.1	2,159,217	3,562,950	18.7	2,361,249	3,905,860
2023	13,037,378	16.6	2,164,205	3,447,654	17.1	2,229,392	3,594,241	18.7	2,437,990	3,940,163
2024	13,461,093	16.6	2,234,541	3,472,768	17.1	2,301,847	3,620,423	18.7	2,517,224	3,968,864
2025	13,898,579	16.6	2,307,164	3,492,395	17.1	2,376,657	3,640,884	18.7	2,599,034	3,991,295
2026	14,350,283	16.6	2,382,147	3,505,900	17.1	2,453,898	3,654,963	18.7	2,683,503	4,006,730
2027	14,816,667	16.6	2,459,567	3,512,594	17.1	2,533,650	3,661,942	18.7	2,770,717	4,014,381

- 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.
- Differences between the date of the initial valuation and the actuarial valuation date of February 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.



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

(0% member contributions are additional)

#### Rule of 80 Retirement Eligibility

		1 Benefit Pro	gram		3 Benefit Pro	gram	LT-4	1(65) Benefit P	rogram	
Estimated	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	
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	
\$ 11,110,663	10.2%	\$1,133,288	\$ 1,919,806	12.5%	\$1,388,833	\$ 2,399,717	12.9%	\$1,433,276	\$ 2,493,544	
11,471,759	10.2	1,170,119	1,946,107	12.5	1,433,970	2,432,593	12.9	1,479,857	2,527,705	
11,844,591	10.2	1,208,148	1,970,646	12.5	1,480,574	2,463,266	12.9	1,527,952	2,559,578	
12,229,540	10.2	1,247,413	1,993,176	12.5	1,528,693	2,491,428	12.9	1,577,611	2,588,841	
12,627,000	10.2	1,287,954	2,013,428	12.5	1,578,375	2,516,743	12.9	1,628,883	2,615,146	
13,037,378	10.2	1,329,813	2,031,111	12.5	1,629,672	2,538,846	12.9	1,681,822	2,638,113	
13,461,093	10.2	1,373,031	2,045,906	12.5	1,682,637	2,557,340	12.9	1,736,481	2,657,330	
13,898,579	10.2	1,417,655	2,057,469	12.5	1,737,322	2,571,793	12.9	1,792,917	2,672,348	
14,350,283	10.2	1,463,729	2,065,425	12.5	1,793,785	2,581,738	12.9	1,851,187	2,682,682	
14,816,667	10.2	1,511,300	2,069,369	12.5	1,852,083	2,586,668	12.9	1,911,350	2,687,805	
	Projected Payroll \$ 11,110,663 11,471,759 11,844,591 12,229,540 12,627,000 13,037,378 13,461,093 13,898,579 14,350,283	Estimated Projected Payroll \$11,110,663 10.2% 11,471,759 10.2 12,229,540 10.2 12,627,000 10.2 13,037,378 10.2 13,461,093 10.2 13,898,579 10.2 14,350,283 10.2	Estimated Estimated Projected Payroll         Estimated Employer Contribution           Payroll         As a % of Payroll         Annual Dollars           \$ 11,110,663         10.2%         \$1,133,288           11,471,759         10.2         1,170,119           11,844,591         10.2         1,208,148           12,229,540         10.2         1,247,413           12,627,000         10.2         1,287,954           13,037,378         10.2         1,329,813           13,461,093         10.2         1,373,031           13,898,579         10.2         1,417,655           14,350,283         10.2         1,463,729	Estimated Projected Payroll         Control Payroll         Actuarial Accrued Dollars         Actuarial Accrued Liability           \$ 11,110,663         10.2%         \$1,133,288         \$1,919,806           11,471,759         10.2         1,70,119         1,946,107           11,844,591         10.2         1,208,148         1,970,646           12,229,540         10.2         1,247,413         1,993,176           12,627,000         10.2         1,287,954         2,013,428           13,037,378         10.2         1,329,813         2,031,111           13,461,093         10.2         1,373,031         2,045,906           13,898,579         10.2         1,417,655         2,057,469           14,350,283         10.2         1,463,729         2,065,425	Estimated Estimated Contribution         Light of Payroll         Unfunded Actuarial Actuarial Actuarial Accrued Payroll         Payroll Payroll Dollars Liability of Payroll           \$ 11,110,663         10.2%         \$1,133,288         \$1,919,806         12.5%           11,471,759         10.2         1,170,119         1,946,107         12.5           11,844,591         10.2         1,208,148         1,970,646         12.5           12,229,540         10.2         1,247,413         1,993,176         12.5           12,627,000         10.2         1,287,954         2,013,428         12.5           13,037,378         10.2         1,329,813         2,031,111         12.5           13,461,093         10.2         1,373,031         2,045,906         12.5           13,898,579         10.2         1,417,655         2,057,469         12.5           14,350,283         10.2         1,463,729         2,065,425         12.5	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Estimated Contibution         Unfunded Actuarial	Estimated Estimated Contribution         Estimated Contribution         Actuarial Actuarial Contribution         Estimated Employer Actuarial Contribution         Unfunded Actuarial Contribution         Actuarial Actuarial Contribution         Actuarial	Estimated Projected Payroll         As a % Annual Payroll         Liability (Poptos)         Estimated (Poptos)         Information (Poptos)         Info	

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimate	ed Employer	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
2018	\$ 11,110,663	14.5%	\$1,611,046	\$ 2,830,021	14.8%	\$1,644,378	\$ 2,879,682	16.1%	\$1,788,817	\$ 3,166,452
2019	11,471,759	14.5	1,663,405	2,868,792	14.8	1,697,820	2,919,133	16.1	1,846,953	3,209,832
2020	11,844,591	14.5	1,717,466	2,904,966	14.8	1,752,999	2,955,941	16.1	1,906,979	3,250,306
2021	12,229,540	14.5	1,773,283	2,938,178	14.8	1,809,972	2,989,736	16.1	1,968,956	3,287,467
2022	12,627,000	14.5	1,830,915	2,968,033	14.8	1,868,796	3,020,114	16.1	2,032,947	3,320,871
2023	13,037,378	14.5	1,890,420	2,994,099	14.8	1,929,532	3,046,638	16.1	2,099,018	3,350,036
2024	13,461,093	14.5	1,951,858	3,015,909	14.8	1,992,242	3,068,831	16.1	2,167,236	3,374,439
2025	13,898,579	14.5	2,015,294	3,032,954	14.8	2,056,990	3,086,175	16.1	2,237,671	3,393,510
2026	14,350,283	14.5	2,080,791	3,044,683	14.8	2,123,842	3,098,109	16.1	2,310,396	3,406,633
2027	14,816,667	14.5	2,148,417	3,050,497	14.8	2,192,867	3,104,025	16.1	2,385,483	3,413,138

	Estimated	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
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
2018	\$ 11,110,663	17.0%	\$1,888,813	\$ 3,359,662	17.7%	\$1,966,587	\$ 3,503,105	19.4%	\$2,155,469	\$ 3,839,667
2019	11,471,759	17.0	1,950,199	3,405,689	17.7	2,030,501	3,551,097	19.4	2,225,521	3,892,270
2020	11,844,591	17.0	2,013,580	3,448,633	17.7	2,096,493	3,595,874	19.4	2,297,851	3,941,349
2021	12,229,540	17.0	2,079,022	3,488,061	17.7	2,164,629	3,636,985	19.4	2,372,531	3,986,410
2022	12,627,000	17.0	2,146,590	3,523,503	17.7	2,234,979	3,673,940	19.4	2,449,638	4,026,916
2023	13,037,378	17.0	2,216,354	3,554,448	17.7	2,307,616	3,706,206	19.4	2,529,251	4,062,282
2024	13,461,093	17.0	2,288,386	3,580,340	17.7	2,382,613	3,733,203	19.4	2,611,452	4,091,873
2025	13,898,579	17.0	2,362,758	3,600,575	17.7	2,460,048	3,754,302	19.4	2,696,324	4,114,999
2026	14,350,283	17.0	2,439,548	3,614,499	17.7	2,540,000	3,768,820	19.4	2,783,955	4,130,912
2027	14,816,667	17.0	2,518,833	3,621,401	17.7	2,622,550	3,776,016	19.4	2,874,433	4,138,800

- 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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

