

THE INITIAL ACTUARIAL VALUATION FOR MCDONALD COUNTY 911 AS OF MAY 31, 2017

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July 26, 2017

McDonald County 911 Pineville, Missouri

Ladies and Gentlemen:

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

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

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

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

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

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of this report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 29, 2016.

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 May 31, 2017. 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 opinion herein.

Respectfully submitted,

Mita Dravilor

Mita D. Drazilov, ASA, MAAA

Alternate Plan Provisions Affecting Employer Contribution Rates

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

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

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

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

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

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

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	2.70%	2.90%	0.20%	5.80%	
L-3	General	3.40	4.30	0.30	8.00	
LT-4(65)	General	3.10	3.50	0.20	6.80	
LT-5(65)	General	3.70	4.80	0.30	8.80	
L-7	General	4.20	5.60	0.30	10.10	
LT-8(65)	General	4.40	5.90	0.30	10.60	
L-12	General	4.90	7.10	0.40	12.40	
LT-14(65)	General	5.00	7.20	0.40	12.60	
L-6	General	5.70	8.40	0.50	14.60	

Regular Retirement Eligibility

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	2.80%	3.10%	0.20%	6.10%	
L-3	General	3.60	4.50	0.30	8.40	
LT-4(65)	General	3.20	3.70	0.20	7.10	
LT-5(65)	General	3.90	5.00	0.30	9.20	
L-7	General	4.30	6.00	0.30	10.60	
LT-8(65)	General	4.50	6.30	0.30	11.10	
L-12	General	5.10	7.40	0.40	12.90	
LT-14(65)	General	5.20	7.60	0.40	13.20	
L-6	General	5.90	8.80	0.50	15.20	

Regular Retirement Eligibility

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

		Percents of Active Member Payroll				
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate	
L-1	General	3.10%	6.40%	0.20%	9.70%	
L-3	General	3.90	7.70	0.30	11.90	
LT-4(65)	General	3.50	7.00	0.20	10.70	
LT-5(65)	General	4.20	8.20	0.30	12.70	
L-7	General	4.60	9.10	0.30	14.00	
LT-8(65)	General	4.80	9.40	0.30	14.50	
L-12	General	5.40	10.50	0.40	16.30	
LT-14(65)	General	5.50	10.60	0.40	16.50	
L-6	General	6.20	11.80	0.50	18.50	

Regular Retirement Eligibility

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

		Percents of Active Member Payroll				
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate	
L-1	General	3.20%	6.60%	0.20%	10.00%	
L-3	General	4.00	8.00	0.30	12.30	
LT-4(65)	General	3.60	7.20	0.20	11.00	
LT-5(65)	General	4.30	8.50	0.30	13.10	
L-7	General	4.80	9.40	0.30	14.50	
LT-8(65)	General	5.00	9.70	0.30	15.00	
L-12	General	5.60	10.80	0.40	16.80	
LT-14(65)	General	5.70	11.00	0.40	17.10	
L-6	General	6.40	12.20	0.50	19.10	

Regular Retirement Eligibility

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	3.00%	3.40%	0.20%	6.60%	
L-3	General	3.90	4.80	0.30	9.00	
LT-4(65)	General	3.90	4.60	0.20	8.70	
LT-5(65)	General	4.50	5.70	0.30	10.50	
L-7	General	4.70	6.30	0.30	11.30	
LT-8(65)	General	5.10	7.00	0.30	12.40	
L-12	General	5.60	7.80	0.40	13.80	
LT-14(65)	General	5.80	8.10	0.40	14.30	
L-6	General	6.40	9.30	0.50	16.20	

Rule of 80 Retirement Eligibility#

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.

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

		Percents of Active Member Payroll				
Benefit	Employee	Prior Service	Current	Disability	Total Employer Contribution	
Program	Groups	Cost *	Cost	Cost	Rate	
L-1	General	3.20%	3.60%	0.20%	7.00%	
L-3	General	4.00	5.10	0.30	9.40	
LT-4(65)	General	4.00	4.80	0.20	9.00	
LT-5(65)	General	4.70	6.00	0.30	11.00	
L-7	General	4.90	6.60	0.30	11.80	
LT-8(65)	General	5.30	7.30	0.30	12.90	
L-12	General	5.80	8.10	0.40	14.30	
LT-14(65)	General	6.00	8.40	0.40	14.80	
L-6	General	6.60	9.80	0.50	16.90	

Rule of 80 Retirement Eligibility#

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.

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

		Percents of Active Member Payroll				
					Total	
		Prior		D	Employer	
Benefit	Employee	Service	Current	Disability	Contribution	
Program	Groups	Cost *	Cost	Cost	Rate	
L-1	General	3.40%	6.80%	0.20%	10.40%	
L-3	General	4.30	8.30	0.30	12.90	
LT-4(65)	General	4.20	8.00	0.20	12.40	
LT-5(65)	General	4.90	9.20	0.30	14.40	
L-7	General	5.10	9.80	0.30	15.20	
LT-8(65)	General	5.60	10.40	0.30	16.30	
L-12	General	6.00	11.30	0.40	17.70	
LT-14(65)	General	6.20	11.60	0.40	18.20	
L-6	General	6.90	12.70	0.50	20.10	

Rule of 80 Retirement Eligibility#

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.

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

		Percents of Active Member Payroll				
		Prior			Total Employor	
Benefit Program	Employee Groups	Service Cost *	Current Cost	Disability Cost	Employer Contribution Rate	
L-1	General	3.60%	7.00%	0.20%	10.80%	
L-3	General	4.40	8.60	0.30	13.30	
LT-4(65)	General	4.40	8.30	0.20	12.90	
LT-5(65)	General	5.10	9.50	0.30	14.90	
L-7	General	5.30	10.10	0.30	15.70	
LT-8(65)	General	5.80	10.70	0.30	16.80	
L-12	General	6.20	11.60	0.40	18.20	
LT-14(65)	General	6.40	11.90	0.40	18.70	
L-6	General	7.10	13.20	0.50	20.80	

Rule of 80 Retirement Eligibility#

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.

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. <u>If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation</u>, the approximate employer dollar contribution for the year would be as follows:

5 Year FAS				
Benefit				
Program	General			
L-1	\$ 30,279			
L-3	41,764			
LT-4(65)	35,499			
LT-5(65)	45,940			
L-7	52,727			
LT-8(65)	55,337			
L-12	64,734			
LT-14(65)	65,778			
L-6	76,219			

Contributory Plan

3 Yea	3 Year FAS				
Benefit					
Program	General				
L-1	\$ 31,845				
L-3	43,852				
LT-4(65)	37,066				
LT-5(65)	48,029				
L-7	55,337				
LT-8(65)	57,948				
L-12	67,344				
LT-14(65)	68,911				
L-6	79,352				

Non-Contributory Plan

5 Year	r FAS	3 Year FAS	
Benefit		Benefit	
Program	General	Program	General
L-1	\$ 50,639	L-1	\$ 52,205
L-3	62,124	L-3	64,212
LT-4(65)	55,859	LT-4(65)	57,425
LT-5(65)	66,300	LT-5(65)	68,389
L-7	73,087	L-7	75,697
LT-8(65)	75,697	LT-8(65)	78,307
L-12	85,094	L-12	87,704
LT-14(65)	86,138	LT-14(65)	89,271
L-6	96,579	L-6	99,712

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. <u>If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation</u>, the approximate employer dollar contribution for the year would be as follows:

5 Year FAS			
Benefit			
Program	General		
L-1	\$ 34,455		
L-3	46,984		
LT-4(65)	45,418		
LT-5(65)	54,815		
L-7	58,992		
LT-8(65)	64,734		
L-12	72,043		
LT-14(65)	74,653		
L-6	84,572		

Contributory Plan

3 Year FAS				
Benefit				
Program	General			
L-1	\$ 36,543			
L-3	49,073			
LT-4(65)	46,984			
LT-5(65)	57,425			
L-7	61,602			
LT-8(65)	67,344			
L-12	74,653			
LT-14(65)	77,263			
L-6	88,226			

Non-Contributory Plan

5 Year	r FAS	3 Year FAS	
Benefit		Benefit	
Program	General	Program	General
L-1	\$ 54,293	L-1	\$ 56,381
L-3	67,344	L-3	69,433
LT-4(65)	64,734	LT-4(65)	67,344
LT-5(65)	75,175	LT-5(65)	77,785
L-7	79,352	L-7	81,962
LT-8(65)	85,094	LT-8(65)	87,704
L-12	92,403	L-12	95,013
LT-14(65)	95,013	LT-14(65)	97,623
L-6	104,932	L-6	108,586

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
Number of Employees	16
Annual Payroll	\$ 522,050

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

APPENDIX I

UNFUNDED ACTUARIAL ACCRUED LIABILITY

UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)

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

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

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

McDonald County 911

Regular Retirement Eligibility

		Contri	butory	Non-Cor	tributory
Benefit Group	Employee Group	UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 247,357	\$ 256,964	\$ 284,028	\$ 293,980
L-3	General	316,376	328,348	355,070	367,466
LT-4(65)	General	283,400	294,254	319,848	331,043
LT-5(65)	General	343,397	356,316	381,917	395,291
L-7	General	385,216	399,634	426,065	440,959
LT-8(65)	General	403,210	418,287	443,981	459,466
L-12	General	454,050	470,850	497,057	514,461
LT-14(65)	General	463,039	480,175	506,001	523,744
L-6	General	522,692	541,764	568,040	587,926

UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)

		Contributory		Non-Cor	tributory
Benefit Group	Employee Group	UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 280,171	\$ 291,163	\$ 315,464	\$ 326,725
L-3	General	357,103	370,698	394,332	408,391
LT-4(65)	General	355,680	369,412	390,676	404,667
LT-5(65)	General	413,742	429,360	450,753	466,855
L-7	General	433,835	450,184	473,201	490,058
LT-8(65)	General	471,597	489,298	510,828	529,039
L-12	General	510,528	529,653	552,048	571,752
LT-14(65)	General	529,412	549,216	570,853	591,224
L-6	General	587,111	608,813	630,937	653,453

Rule of 80 Retirement Eligibility

APPENDIX II

SUMMARY OF FINANCIAL ASSUMPTIONS

Summary of Assumptions Used in Actuarial Valuations Assumptions Adopted by Board of Trustees After Consulting With Actuary

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

Schedule 1.

		F Se	Percent Increase in Individual's Pay				
Sample	Years of	General	Members	_		During Next Year	
Ages	Service	Men	Women	Police	Fire	Excluding Fire	
All	0	19.00%	22.00%	18.00%	10.00%		
7 111	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	7.30	10.80	9.80	5.00	6.6%	
30		6.50	8.90	7.80	4.00	5.8	
35		5.00	7.40	6.10	2.80	5.3	
40		3.70	5.70	4.40	2.20	4.8	
45		3.00	4.20	3.20	1.80	4.3	
50		2.40	3.30	1.80	1.00	3.9	
55		1.80	2.50	1.00	0.50	3.7	
60		1.00	1.20	0.00	0.00	3.6	
65		0.00	0.00	0.00	0.00	3.3	

Withdrawal From Active Employment Before Age & Service Retirement and Individual Pay Increase Assumptions

Percent Increase in Individual's Pay Sample During Next Year					
Ages	Fire				
25	7.2%				
30	6.1				
35	5.2				
40	4.5				
45	4.2				
50	3.9				
55	3.7				
60	3.3				
65	3.3				

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

Schedule 2. (Continued)

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

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

APPENDIX III

SUMMARY OF LAGERS PROVISIONS

Missouri LocAl Government Employees Retirement System Brief Summary of LAGERS Benefits and Conditions Evaluated and/or Considered as of February 29, 2016 (Section references are to RSMo)

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

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

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

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

L-1 Benefit Program: 1.	00% for life
L-3 Benefit Program: 1.	25% for life
L-7 Benefit Program: 1.	50% for life
L-12 Benefit Program: 1.	75% for life
L-6 Benefit Program: 2.	00% for life
LT-4(65) Benefit Program:	1.00% for life, plus 1.00% to age 65
LT-5(65) Benefit Program:	1.25% for life, plus 0.75% to age 65
LT-8(65) Benefit Program:	1.50% for life, plus 0.50% to age 65
LT-14(65) Benefit Program	1.75% for life, plus 0.25% to age 65

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

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

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

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

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

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

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

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

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

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

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

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

(a) The surviving spouse receives an allowance equal to the Option A allowance (joint and 75% survivor benefit) computed based upon the deceased members' service & earnings record to time of death.

(b) When no spouse benefit is payable, the dependent children under age 18 (age 23 if they are full time students) each receive an equal share of 60% of an age & service allowance computed based upon the deceased member's service & earnings record to time of death.

(c) If the death is determined to be duty related, the 5 year service requirement is waived and the benefit is based on years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

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

(a) Subject to the maximum in (b), the redetermined amount is the amount other-wise payable multiplied by: 100% plus up to 4%, as determined by the LAGERS Board of Trustees, for each full year of retirement.

(b) The redetermined amount may not exceed the amount otherwise payable multiplied by the ratio of the Consumer Price Index for the immediately preceding month of June to the Consumer Price Index for the month of June immediately preceding retirement.

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

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

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

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

APPENDIX IV

BENEFIT ILLUSTRATIONS

(L-1 Benefit Program is Years of Credited Service

Final		Estimated	Estir	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Servic	ce:			
\$1,500	\$ 525	\$ 882	\$1,407	94%
2,000	700	1,028	1,728	86%
2,500	875	1,174	2,049	82%
3,000	1,050	1,320	2,370	79%
3,500	1,225	1,465	2,690	77%
4,000	1,400	1,611	3,011	75%
25 Years of Servic	ce:			
\$1,500	\$ 375	\$ 882	\$1,257	84%
2,000	500	1,028	1,528	76%
2,500	625	1,174	1,799	72%
3,000	750	1,320	2,070	69%
3,500	875	1,465	2,340	67%
4,000	1,000	1,611	2,611	65%
15 Years of Servic	ce:			
\$1,500	\$225	\$ 882	\$1,107	74%
2,000	300	1,028	1,328	66%
2,500	375	1,174	1,549	62%
3,000	450	1,320	1,770	59%
3,500	525	1,465	1,990	57%
4,000	600	1,611	2,211	55%

times: 1.00% of FAS 1)

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - 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

Final		Estimated	Estin	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service	e:			
\$1,500	\$ 656	\$ 882	\$1,538	103%
2,000	875	1,028	1,903	95%
2,500	1,094	1,174	2,268	91%
3,000	1,313	1,320	2,633	88%
3,500	1,531	1,465	2,996	86%
4,000	1,750	1,611	3,361	84%
25 Years of Service	e:			
\$1,500	\$ 469	\$ 882	\$1,351	90%
2,000	625	1,028	1,653	83%
2,500	781	1,174	1,955	78%
3,000	938	1,320	2,258	75%
3,500	1,094	1,465	2,559	73%
4,000	1,250	1,611	2,861	72%
15 Years of Service	e:			
\$1,500	\$281	\$ 882	\$1,163	78%
2,000	375	1,028	1,403	70%
2,500	469	1,174	1,643	66%
3,000	563	1,320	1,883	63%
3,500	656	1,465	2,121	61%
4,000	750	1,611	2,361	59%

times: 1.25% of FAS 1)

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - 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

Final	LACEDS	Estimated Social		nated
Average	LAGERS			ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Servic	ce:			
\$1,500	\$ 788	\$ 882	\$1,670	111%
2,000	1,050	1,028	2,078	104%
2,500	1,313	1,174	2,487	99%
3,000	1,575	1,320	2,895	97%
3,500	1,838	1,465	3,303	94%
4,000	2,100	1,611	3,711	93%
25 Years of Servic	ce:			
\$1,500	\$ 563	\$ 882	\$1,445	96%
2,000	750	1,028	1,778	89%
2,500	938	1,174	2,112	84%
3,000	1,125	1,320	2,445	82%
3,500	1,313	1,465	2,778	79%
4,000	1,500	1,611	3,111	78%
15 Years of Servic	ce:			
\$1,500	\$338	\$ 882	\$1,220	81%
2,000	450	1,028	1,478	74%
2,500	563	1,174	1,737	69%
3,000	675	1,320	1,995	67%
3,500	788	1,465	2,253	64%
4,000	900	1,611	2,511	63%

times: 1.50% of FAS 1)

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - 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

Final		Estimated	Estin	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Servic	ce:			
\$1,500	\$ 919	\$ 882	\$1,801	120%
2,000	1,225	1,028	2,253	113%
2,500	1,531	1,174	2,705	108%
3,000	1,838	1,320	3,158	105%
3,500	2,144	1,465	3,609	103%
4,000	2,450	1,611	4,061	102%
25 Years of Servic	ce:			
\$1,500	\$ 656	\$ 882	\$1,538	103%
2,000	875	1,028	1,903	95%
2,500	1,094	1,174	2,268	91%
3,000	1,313	1,320	2,633	88%
3,500	1,531	1,465	2,996	86%
4,000	1,750	1,611	3,361	84%
15 Years of Servic	ce:			
\$1,500	\$ 394	\$ 882	\$1,276	85%
2,000	525	1,028	1,553	78%
2,500	656	1,174	1,830	73%
3,000	788	1,320	2,108	70%
3,500	919	1,465	2,384	68%
4,000	1,050	1,611	2,661	67%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - 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

Final	Final Estimated			nated ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Servic	ce:			
\$1,500	\$1,050	\$ 882	\$1,932	129%
2,000	1,400	1,028	2,428	121%
2,500	1,750	1,174	2,924	117%
3,000	2,100	1,320	3,420	114%
3,500	2,450	1,465	3,915	112%
4,000	2,800	1,611	4,411	110%
25 Years of Servic	ce:			
\$1,500	\$ 750	\$ 882	\$1,632	109%
2,000	1,000	1,028	2,028	101%
2,500	1,250	1,174	2,424	97%
3,000	1,500	1,320	2,820	94%
3,500	1,750	1,465	3,215	92%
4,000	2,000	1,611	3,611	90%
15 Years of Servic	ce:			
\$1,500	\$ 450	\$ 882	\$1,332	89%
2,000	600	1,028	1,628	81%
2,500	750	1,174	1,924	77%
3,000	900	1,320	2,220	74%
3,500	1,050	1,465	2,515	72%
4,000	1,200	1,611	2,811	70%

times: 2.00% of FAS 1)

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

(LT-4(65) Benefit Program is Years of Credited Service

times: 2.00% of FAS¹ to age 65)

1.00% of FAS¹ at age 65)

		LAGERS Estimated		Esti	mated	Per	cent
Average	BEN	EFIT ³	Social	Month	ıly Total	of I	FAS
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65
35 Years of Servi	ice:						
\$1,500	\$1,050	\$ 525	\$ 882	\$1,050	\$1,407	70%	94%
2,000	1,400	700	1,028	1,400	1,728	70%	86%
2,500	1,750	875	1,174	1,750	2,049	70%	82%
3,000	2,100	1,050	1,320	2,100	2,370	70%	79%
3,500	2,450	1,225	1,465	2,450	2,690	70%	77%
4,000	2,800	1,400	1,611	2,800	3,011	70%	75%
25 Years of Servi	ice:						
\$1,500	\$ 750	\$ 375	\$ 882	\$ 750	\$1,257	50%	84%
2,000	1,000	500	1,028	1,000	1,528	50%	76%
2,500	1,250	625	1,174	1,250	1,799	50%	72%
3,000	1,500	750	1,320	1,500	2,070	50%	69%
3,500	1,750	875	1,465	1,750	2,340	50%	67%
4,000	2,000	1,000	1,611	2,000	2,611	50%	65%
15 Years of Servi	ice:						
\$1,500	\$ 450	\$225	\$ 882	\$ 450	\$1,107	30%	74%
2,000	600	300	1,028	600	1,328	30%	66%
2,500	750	375	1,174	750	1,549	30%	62%
3,000	900	450	1,320	900	1,770	30%	59%
3,500	1,050	525	1,465	1,050	1,990	30%	57%
4,000	1,200	600	1,611	1,200	2,211	30%	55%

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

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

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

(LT-5(65) Benefit Program is Years of Credited Service

times: 2.00% of FAS¹ to age 65)

1.25% of FAS ¹ at age 65)

		Final	LAGERS Estim			mated		cent
Average	BEN	EFIT ³	Social	Month	ıly Total	of l	FAS	
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65	
35 Years of Servi	ice:							
\$1,500	\$1,050	\$ 656	\$ 882	\$1,050	\$1,538	70%	103%	
2,000	1,400	875	1,028	1,400	1,903	70%	95%	
2,500	1,750	1,094	1,174	1,750	2,268	70%	91%	
3,000	2,100	1,313	1,320	2,100	2,633	70%	88%	
3,500	2,450	1,531	1,465	2,450	2,996	70%	86%	
4,000	2,800	1,750	1,611	2,800	3,361	70%	84%	
25 Years of Servi	ice:							
\$1,500	\$ 750	\$ 469	\$ 882	\$ 750	\$1,351	50%	90%	
2,000	1,000	625	1,028	1,000	1,653	50%	83%	
2,500	1,250	781	1,174	1,250	1,955	50%	78%	
3,000	1,500	938	1,320	1,500	2,258	50%	75%	
3,500	1,750	1,094	1,465	1,750	2,559	50%	73%	
4,000	2,000	1,250	1,611	2,000	2,861	50%	72%	
15 Years of Servi	ice:							
\$1,500	\$ 450	\$281	\$ 882	\$ 450	\$1,163	30%	78%	
2,000	600	375	1,028	600	1,403	30%	70%	
2,500	750	469	1,174	750	1,643	30%	66%	
3,000	900	563	1,320	900	1,883	30%	63%	
3,500	1,050	656	1,465	1,050	2,121	30%	61%	
4,000	1,200	750	1,611	1,200	2,361	30%	59%	

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

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

(LT-8(65) Benefit Program is Years of Credited Service

times: 2.00% of FAS¹ to age 65)

1.50% of FAS¹ at age 65)

Final	LAC	LAGERS		Esti	mated	Percent		
Average	BEN	EFIT ³	Social	Montl	ıly Total	of l	FAS	
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65	
35 Years of Serv	ice:							
\$1,500	\$1,050	\$ 788	\$ 882	\$1,050	\$1,670	70%	111%	
2,000	1,400	1,050	1,028	1,400	2,078	70%	104%	
2,500	1,750	1,313	1,174	1,750	2,487	70%	99%	
3,000	2,100	1,575	1,320	2,100	2,895	70%	97%	
3,500	2,450	1,838	1,465	2,450	3,303	70%	94%	
4,000	2,800	2,100	1,611	2,800	3,711	70%	93%	
25 Years of Serv	ice:							
\$1,500	\$ 750	\$ 563	\$ 882	\$ 750	\$1,445	50%	96%	
2,000	1,000	750	1,028	1,000	1,778	50%	89%	
2,500	1,250	938	1,174	1,250	2,112	50%	84%	
3,000	1,500	1,125	1,320	1,500	2,445	50%	82%	
3,500	1,750	1,313	1,465	1,750	2,778	50%	79%	
4,000	2,000	1,500	1,611	2,000	3,111	50%	78%	
15 Years of Serv	ice:							
\$1,500	\$ 450	\$338	\$ 882	\$ 450	\$1,220	30%	81%	
2,000	600	450	1,028	600	1,478	30%	74%	
2,500	750	563	1,174	750	1,737	30%	69%	
3,000	900	675	1,320	900	1,995	30%	67%	
3,500	1,050	788	1,465	1,050	2,253	30%	64%	
4,000	1,200	900	1,611	1,200	2,511	30%	63%	

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

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

(LT-14(65) Benefit Program is Years of Credited Service

times: 2.00% of FAS¹ to age 65)

1.75% of FAS 1 at age 65)

Final Average	LAGERS BENEFIT ³		Estimated		mated	Percent of FAS		
e			Social		nly Total			
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65	
35 Years of Servi	ce:							
\$1,500	\$1,050	\$ 919	\$ 882	\$1,050	\$1,801	70%	120%	
2,000	1,400	1,225	1,028	1,400	2,253	70%	113%	
2,500	1,750	1,531	1,174	1,750	2,705	70%	108%	
3,000	2,100	1,838	1,320	2,100	3,158	70%	105%	
3,500	2,450	2,144	1,465	2,450	3,609	70%	103%	
4,000	2,800	2,450	1,611	2,800	4,061	70%	102%	
25 Years of Servi	ce:							
\$1,500	\$ 750	\$ 656	\$ 882	\$ 750	\$1,538	50%	103%	
2,000	1,000	875	1,028	1,000	1,903	50%	95%	
2,500	1,250	1,094	1,174	1,250	2,268	50%	91%	
3,000	1,500	1,313	1,320	1,500	2,633	50%	88%	
3,500	1,750	1,531	1,465	1,750	2,996	50%	86%	
4,000	2,000	1,750	1,611	2,000	3,361	50%	84%	
15 Years of Servi	ce:							
\$1,500	\$ 450	\$ 394	\$ 882	\$ 450	\$1,276	30%	85%	
2,000	600	525	1,028	600	1,553	30%	78%	
2,500	750	656	1,174	750	1,830	30%	73%	
3,000	900	788	1,320	900	2,108	30%	70%	
3,500	1,050	919	1,465	1,050	2,384	30%	68%	
4,000	1,200	1,050	1,611	1,200	2,661	30%	67%	

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

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

APPENDIX V

AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

McDonald County 911

May 31, 2017

By Attained Age and Years of Service

		Year	s of Sei	rvice to			Totals		
Attained									Valuation
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll
Under 20									
20-24	1							1	\$ 29,782
25-29	2	2						4	\$ 128,187
30-34									
35-39	2	1						3	\$ 94,590
40-44			1					1	\$ 36,290
45-49	1			1				2	\$ 91,067
50-54		2						2	\$ 60,893
55-59	2	1						3	\$ 81,241
60-64									
65-69									
70 & Over									
Totals	8	6	1	1				16	\$ 522,050

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

Age: 40.2 years. Benefit Service: 5.6 years. Annual Pay: \$32,628.



One Towne Square Suite 800 Southfield, MI 48076-3723 248.799.9000 phone 248.799.9020 fax www.gabrielroeder.com

July 26, 2017 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 May 31, 2017 Initial Actuarial Valuation of LAGERS benefits for the employees of

McDonald County 911

Sincerely,

Mite Draylov Mita D. Drazilov

MDD:adh



One Towne Square Suite 800 Southfield, MI 48076-3723

July 26, 2017

McDonald County 911 Pineville, Missouri

Ladies and Gentlemen:

This report contains projections needed to comply with Missouri state disclosure requirements (Section 105.660 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision. This report is intended to be a supplement to the May 31, 2017 Initial Valuation for the McDonald County 911 dated July 26, 2017.

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 29, 2016.

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 opinion herein.

Respectfully submitted,

The Drawlo

Mita D. Drazilov, ASA, MAAA

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

		L-1 Benefit Program			L-3	8 Benefit Prog	gram	LT-4(65) Benefit Program			
	Estimated	Estimated Employer Contribution		Unfunded Actuarial	1.7		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	
Valuation Year	Projected Pavroll	As a % of Pavroll	Annual Dollars	Accrued Liability	As a % of Pavroll	Annual Dollars	Accrued Liability	As a % of Pavroll	Annual Dollars	Accrued Liability	
2017	\$ 522,050	5.8%	\$30,279	\$ 247,357	8.0%	\$41,764	\$ 316,376	6.8%	\$35,499	\$ 283,400	
2018	539,017	5.8	31,263	250,746	8.0	43,121	320,710	6.8	36,653	287,283	
2019	556,535	5.8	32,279	253,908	8.0	44,523	324,754	6.8	37,844	290,905	
2020	574,622	5.8	33,328	256,811	8.0	45,970	328,467	6.8	39,074	294,231	
2021	593,297	5.8	34,411	259,420	8.0	47,464	331,805	6.8	40,344	297,221	
2022	612,579	5.8	35,530	261,698	8.0	49,006	334,719	6.8	41,655	299,831	
2023	632,488	5.8	36,684	263,604	8.0	50,599	337,157	6.8	43,009	302,015	
2024	653,044	5.8	37,877	265,094	8.0	52,244	339,063	6.8	44,407	303,722	
2025	674,268	5.8	39,108	266,119	8.0	53,941	340,374	6.8	45,850	304,897	
2026	696,182	5.8	40,379	266,627	8.0	55,695	341,024	6.8	47,340	305,479	

		LT-5(65) Benefit Program			L-7	Benefit Prog	gram	LT-8(65) Benefit Program			
Estimated		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial		Employer	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	
2017	\$ 522,050	8.8%	\$45,940	\$ 343,397	10.1%	\$52,727	\$ 385,216	10.6%	\$55,337	\$ 403,210	
2018	539,017	8.8	47,433	348,101	10.1	54,441	390,493	10.6	57,136	408,734	
2019	556,535	8.8	48,975	352,490	10.1	56,210	395,417	10.6	58,993	413,888	
2020	574,622	8.8	50,567	356,520	10.1	58,037	399,938	10.6	60,910	418,620	
2021	593,297	8.8	52,210	360,143	10.1	59,923	404,002	10.6	62,889	422,874	
2022	612,579	8.8	53,907	363,306	10.1	61,870	407,550	10.6	64,933	426,588	
2023	632,488	8.8	55,659	365,952	10.1	63,881	410,519	10.6	67,044	429,695	
2024	653,044	8.8	57,468	368,020	10.1	65,957	412,839	10.6	69,223	432,123	
2025	674,268	8.8	59,336	369,443	10.1	68,101	414,435	10.6	71,472	433,794	
2026	696,182	8.8	61,264	370,148	10.1	70,314	415,226	10.6	73,795	434,622	

		L-12 Benefit Program			LT-14(65) Benefit F	Program	L-6 Benefit Program			
		Estimated	Estimated Employer Unfunded		Estimated Employer		Unfunded	Estimated	Employer	Unfunded	
	Estimated	Contri	Contribution		Contri	bution	Actuarial	Contri	bution	Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2017	\$ 522,050	12.4%	\$64,734	\$ 454,050	12.6%	\$65,778	\$ 463,039	14.6%	\$76,219	\$ 522,692	
2018	539,017	12.4	66,838	460,270	12.6	67,916	469,383	14.6	78,696	529,853	
2019	556,535	12.4	69,010	466,074	12.6	70,123	475,302	14.6	81,254	536,534	
2020	574,622	12.4	71,253	471,403	12.6	72,402	480,736	14.6	83,895	542,668	
2021	593,297	12.4	73,569	476,193	12.6	74,755	485,621	14.6	86,621	548,182	
2022	612,579	12.4	75,960	480,375	12.6	77,185	489,886	14.6	89,437	552,996	
2023	632,488	12.4	78,429	483,874	12.6	79,693	493,454	14.6	92,343	557,024	
2024	653,044	12.4	80,977	486,609	12.6	82,284	496,243	14.6	95,344	560,172	
2025	674,268	12.4	83,609	488,491	12.6	84,958	498,162	14.6	98,443	562,338	
2026	696,182	12.4	86,327	489,424	12.6	87,719	499,113	14.6	101,643	563,412	
Mater area											

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

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

		L-1 Benefit Program			L-3	Benefit Prog	gram	LT-4(65) Benefit Program		
	Estimated	Estimated Employer Contribution		1 0		Estimated Employer Contribution		Estimated Employer Contribution		Unfunded Actuarial
Valuation Year	Projected Pavroll	As a % of Pavroll	Annual Dollars	Accrued Liability	As a % of Pavroll	Annual Dollars	Accrued Liability	As a % of Pavroll	Annual Dollars	Accrued Liability
2017	\$ 522,050	<u>6.1%</u>	\$31,845	\$ 256.964	<u>01 Fayron</u> 8.4%	\$43,852	\$ 328,348	<u>01 Fayron</u> 7.1%	\$37,066	\$ 294.254
2017	\$39.017	6.1	32,880	260,484	8.4	45.277	332.846	7.1	38.270	298,285
2019	556,535	6.1	33,949	263,769	8.4	46,749	337,043	7.1	39,514	302,046
2020	574,622	6.1	35,052	266,785	8.4	48,268	340,896	7.1	40,798	305,499
2021	593,297	6.1	36,191	269,496	8.4	49,837	344,360	7.1	42,124	308,603
2022	612,579	6.1	37,367	271,863	8.4	51,457	347,384	7.1	43,493	311,313
2023	632,488	6.1	38,582	273,843	8.4	53,129	349,914	7.1	44,907	313,581
2024	653,044	6.1	39,836	275,391	8.4	54,856	351,892	7.1	46,366	315,353
2025	674,268	6.1	41,130	276,456	8.4	56,639	353,253	7.1	47,873	316,572
2026	696,182	6.1	42,467	276,984	8.4	58,479	353,928	7.1	49,429	317,176

	LT-5(65) Benefit				L-7	Benefit Prog	gram	LT-8(65) Benefit Program			
Estimated		Estimated Employer Contribution		Unfunded Actuarial		Employer bution	Unfunded Actuarial		Employer bution	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	
2017	\$ 522,050	9.2%	\$48,029	\$ 356,316	10.6%	\$55,337	\$ 399,634	11.1%	\$57,948	\$ 418,287	
2018	539,017	9.2	49,590	361,197	10.6	57,136	405,109	11.1	59,831	424,017	
2019	556,535	9.2	51,201	365,751	10.6	58,993	410,217	11.1	61,775	429,364	
2020	574,622	9.2	52,865	369,933	10.6	60,910	414,907	11.1	63,783	434,273	
2021	593,297	9.2	54,583	373,692	10.6	62,889	419,123	11.1	65,856	438,686	
2022	612,579	9.2	56,357	376,974	10.6	64,933	422,804	11.1	67,996	442,539	
2023	632,488	9.2	58,189	379,720	10.6	67,044	425,884	11.1	70,206	445,763	
2024	653,044	9.2	60,080	381,866	10.6	69,223	428,291	11.1	72,488	448,282	
2025	674,268	9.2	62,033	383,343	10.6	71,472	429,947	11.1	74,844	450,016	
2026	696,182	9.2	64,049	384,075	10.6	73,795	430,768	11.1	77,276	450,875	

		L-12 Benefit Program			LT-14((65) Benefit H	Program	L-6 Benefit Program			
			Employer	Unfunded		l Employer	Unfunded		Employer	Unfunded	
	Estimated	Contri	Contribution		Contri	ibution	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	
2017	\$ 522,050	12.9%	\$67,344	\$ 470,850	13.2%	\$68,911	\$480,175	15.2%	\$79,352	\$ 541,764	
2018	539,017	12.9	69,533	477,301	13.2	71,150	486,753	15.2	81,931	549,186	
2019	556,535	12.9	71,793	483,319	13.2	73,463	492,891	15.2	84,593	556,111	
2020	574,622	12.9	74,126	488,845	13.2	75,850	498,526	15.2	87,343	562,469	
2021	593,297	12.9	76,535	493,812	13.2	78,315	503,591	15.2	90,181	568,184	
2022	612,579	12.9	79,023	498,149	13.2	80,860	508,014	15.2	93,112	573,174	
2023	632,488	12.9	81,591	501,778	13.2	83,488	511,715	15.2	96,138	577,349	
2024	653,044	12.9	84,243	504,614	13.2	86,202	514,607	15.2	99,263	580,612	
2025	674,268	12.9	86,981	506,565	13.2	89,003	516,597	15.2	102,489	582,857	
2026	696,182	12.9	89,807	507,532	13.2	91,896	517,583	15.2	105,820	583,970	
NT /	1 .1 1	• ,•									

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

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

(0% member contributions are additional)

Regular Retirement Eligibility

		L-1 Benefit Program			L-3	Benefit Prog	gram	LT-4(65) Benefit Program			
Estimated		Estimated Employer Contribution		Unfunded Actuarial		l Employer ibution	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	
2017	\$ 522,050	9.7%	\$50,639	\$ 284,028	11.9%	\$62,124	\$ 355,070	10.7%	\$55,859	\$ 319,848	
2018	539,017	9.7	52,285	287,919	11.9	64,143	359,934	10.7	57,675	324,230	
2019	556,535	9.7	53,984	291,549	11.9	66,228	364,473	10.7	59,549	328,318	
2020	574,622	9.7	55,738	294,882	11.9	68,380	368,640	10.7	61,485	332,072	
2021	593,297	9.7	57,550	297,878	11.9	70,602	372,386	10.7	63,483	335,446	
2022	612,579	9.7	59,420	300,494	11.9	72,897	375,656	10.7	65,546	338,392	
2023	632,488	9.7	61,351	302,683	11.9	75,266	378,392	10.7	67,676	340,857	
2024	653,044	9.7	63,345	304,394	11.9	77,712	380,531	10.7	69,876	342,783	
2025	674,268	9.7	65,404	305,571	11.9	80,238	382,003	10.7	72,147	344,109	
2026	696,182	9.7	67,530	306,154	11.9	82,846	382,732	10.7	74,491	344,766	

		LT-5(65) Benefit Program			L-7	Benefit Prog	gram	LT-8(65) Benefit Program			
	Estimated	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2017	\$ 522,050	12.7%	\$66,300	\$ 381,917	14.0%	\$73,087	\$ 426,065	14.5%	\$75,697	\$ 443,981	
2018	539,017	12.7	68,455	387,149	14.0	75,462	431,902	14.5	78,157	450,063	
2019	556,535	12.7	70,680	392,031	14.0	77,915	437,348	14.5	80,698	455,738	
2020	574,622	12.7	72,977	396,513	14.0	80,447	442,348	14.5	83,320	460,948	
2021	593,297	12.7	75,349	400,542	14.0	83,062	446,843	14.5	86,028	465,632	
2022	612,579	12.7	77,798	404,060	14.0	85,761	450,767	14.5	88,824	469,721	
2023	632,488	12.7	80,326	407,003	14.0	88,548	454,051	14.5	91,711	473,143	
2024	653,044	12.7	82,937	409,303	14.0	91,426	456,617	14.5	94,691	475,817	
2025	674,268	12.7	85,632	410,886	14.0	94,398	458,383	14.5	97,769	477,657	
2026	696,182	12.7	88,415	411,671	14.0	97,465	459,258	14.5	100,946	478,569	

		L-12 Benefit Program			LT-14((65) Benefit H	rogram	L-6 Benefit Program			
		Estimated Employer Unfunded		Estimated Employer		Unfunded	Unfunded Estimated Em		mployer Unfunded		
	Estimated	Contri	Contribution		Contri	bution	Actuarial	Contri	bution	Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2017	\$ 522,050	16.3%	\$85,094	\$ 497,057	16.5%	\$86,138	\$ 506,001	18.5%	\$96,579	\$ 568,040	
2018	539,017	16.3	87,860	503,867	16.5	88,938	512,933	18.5	99,718	575,822	
2019	556,535	16.3	90,715	510,220	16.5	91,828	519,401	18.5	102,959	583,083	
2020	574,622	16.3	93,663	516,053	16.5	94,813	525,339	18.5	106,305	589,749	
2021	593,297	16.3	96,707	521,297	16.5	97,894	530,677	18.5	109,760	595,741	
2022	612,579	16.3	99,850	525,875	16.5	101,076	535,338	18.5	113,327	600,973	
2023	632,488	16.3	103,096	529,706	16.5	104,361	539,238	18.5	117,010	605,351	
2024	653,044	16.3	106,446	532,700	16.5	107,752	542,286	18.5	120,813	608,772	
2025	674,268	16.3	109,906	534,760	16.5	111,254	544,383	18.5	124,740	611,126	
2026	696,182	16.3	113,478	535,781	16.5	114,870	545,422	18.5	128,794	612,293	
NT	1										

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

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

(0% member contributions are additional)

Regular Retirement Eligibility

		L-1	Benefit Prog	gram	L-3	Benefit Prog	ram LT-4(65) Benefit		65) Benefit P	Program	
	Estimated	Estimated Employer Contribution		Unfunded Actuarial		Estimated Employer Contribution		Estimated Employer Contribution		Unfunded Actuarial	
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Actuarial Accrued	As a %	Annual	Accrued	
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	
2017	\$ 522,050	10.0%	\$52,205	\$ 293,980	12.3%	\$64,212	\$ 367,466	11.0%	\$57,425	\$ 331,043	
2018	539,017	10.0	53,902	298,007	12.3	66,299	372,500	11.0	59,292	335,578	
2019	556,535	10.0	55,654	301,765	12.3	68,454	377,197	11.0	61,219	339,809	
2020	574,622	10.0	57,462	305,215	12.3	70,679	381,509	11.0	63,208	343,694	
2021	593,297	10.0	59,330	308,316	12.3	72,976	385,385	11.0	65,263	347,186	
2022	612,579	10.0	61,258	311,024	12.3	75,347	388,770	11.0	67,384	350,235	
2023	632,488	10.0	63,249	313,290	12.3	77,796	391,602	11.0	69,574	352,786	
2024	653,044	10.0	65,304	315,061	12.3	80,324	393,815	11.0	71,835	354,780	
2025	674,268	10.0	67,427	316,279	12.3	82,935	395,338	11.0	74,169	356,152	
2026	696,182	10.0	69,618	316,883	12.3	85,630	396,093	11.0	76,580	356,832	

		LT-5(65) Benefit Program Estimated Employer Unfunded			L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated		Estimated Employer Contribution		Estimated Contri	1 0	Unfunded Actuarial		Employer	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	
2017	\$ 522,050	13.1%	\$68,389	\$ 395,291	14.5%	\$75,697	\$ 440,959	15.0%	\$78,307	\$ 459,466	
2018	539,017	13.1	70,611	400,706	14.5	78,157	447,000	15.0	80,853	465,761	
2019	556,535	13.1	72,906	405,759	14.5	80,698	452,636	15.0	83,480	471,634	
2020	574,622	13.1	75,275	410,398	14.5	83,320	457,811	15.0	86,193	477,026	
2021	593,297	13.1	77,722	414,568	14.5	86,028	462,463	15.0	88,995	481,873	
2022	612,579	13.1	80,248	418,209	14.5	88,824	466,525	15.0	91,887	486,105	
2023	632,488	13.1	82,856	421,255	14.5	91,711	469,923	15.0	94,873	489,646	
2024	653,044	13.1	85,549	423,636	14.5	94,691	472,579	15.0	97,957	492,413	
2025	674,268	13.1	88,329	425,274	14.5	97,769	474,406	15.0	101,140	494,317	
2026	696,182	13.1	91,200	426,086	14.5	100,946	475,312	15.0	104,427	495,261	

		L-12 Benefit Program LT-14(65) Benefit			Program L-6 Benefit Program			gram			
		Estimated Employer Unfunded		Unfunded	Estimated	Employer	Unfunded	d Estimated Employe		· Unfunded	
	Estimated	Contribution		Actuarial	Contri	bution	Actuarial	Contri	bution	Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2017	\$ 522,050	16.8%	\$87,704	\$ 514,461	17.1%	\$89,271	\$ 523,744	19.1%	\$99,712	\$ 587,926	
2018	539,017	16.8	90,555	521,509	17.1	92,172	530,919	19.1	102,952	595,980	
2019	556,535	16.8	93,498	528,085	17.1	95,167	537,614	19.1	106,298	603,495	
2020	574,622	16.8	96,536	534,123	17.1	98,260	543,761	19.1	109,753	610,395	
2021	593,297	16.8	99,674	539,550	17.1	101,454	549,286	19.1	113,320	616,597	
2022	612,579	16.8	102,913	544,289	17.1	104,751	554,110	19.1	117,003	622,012	
2023	632,488	16.8	106,258	548,254	17.1	108,155	558,146	19.1	120,805	626,543	
2024	653,044	16.8	109,711	551,353	17.1	111,671	561,300	19.1	124,731	630,084	
2025	674,268	16.8	113,277	553,485	17.1	115,300	563,471	19.1	128,785	632,521	
2026	696,182	16.8	116,959	554,542	17.1	119,047	564,547	19.1	132,971	633,729	
Mater area											

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

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-1	Benefit Prog	gram	L-3	Benefit Prog	gram	LT-4(65) Benefit Program				
	Estimated	Estimated Employer Contribution		1.0				l Employer ibution	Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
Valuation Year	Projected Pavroll	As a % of Pavroll	Annual Dollars	Accrued Liability	As a % of Pavroll	Annual Dollars	Accrued Liability	As a % of Pavroll	Annual Dollars	Accrued Liability		
2017	\$ 522,050	6.6%	\$34,455	\$ 280,171	9.0%	\$46,984	\$ 357,103	8.7%	\$45,418	\$ 355,680		
2018	539,017	6.6	35,575	284,009	9.0	48,512	361,995	8.7	46,894	360,553		
2019	556,535	6.6	36,731	287,590	9.0	50,088	366,560	8.7	48,419	365,099		
2020	574,622	6.6	37,925	290,878	9.0	51,716	370,751	8.7	49,992	369,273		
2021	593,297	6.6	39,158	293,834	9.0	53,397	374,518	8.7	51,617	373,025		
2022	612,579	6.6	40,430	296,415	9.0	55,132	377,807	8.7	53,294	376,301		
2023	632,488	6.6	41,744	298,574	9.0	56,924	380,559	8.7	55,026	379,042		
2024	653,044	6.6	43,101	300,261	9.0	58,774	382,710	8.7	56,815	381,184		
2025	674,268	6.6	44,502	301,422	9.0	60,684	384,190	8.7	58,661	382,658		
2026	696,182	6.6	45,948	301,998	9.0	62,656	384,924	8.7	60,568	383,389		

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated En		ated Employer Unfunded ontribution Actuarial		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2017	\$ 522,050	10.5%	\$54,815	\$ 413,742	11.3%	\$58,992	\$ 433,835	12.4%	\$64,734	\$ 471,597
2018	539,017	10.5	56,597	419,410	11.3	60,909	439,778	12.4	66,838	478,058
2019	556,535	10.5	58,436	424,698	11.3	62,888	445,323	12.4	69,010	484,086
2020	574,622	10.5	60,335	429,554	11.3	64,932	450,414	12.4	71,253	489,621
2021	593,297	10.5	62,296	433,919	11.3	67,043	454,991	12.4	73,569	494,596
2022	612,579	10.5	64,321	437,730	11.3	69,221	458,987	12.4	75,960	498,940
2023	632,488	10.5	66,411	440,919	11.3	71,471	462,330	12.4	78,429	502,574
2024	653,044	10.5	68,570	443,411	11.3	73,794	464,943	12.4	80,977	505,414
2025	674,268	10.5	70,798	445,126	11.3	76,192	466,741	12.4	83,609	507,368
2026	696,182	10.5	73,099	445,976	11.3	78,669	467,632	12.4	86,327	508,337

		L-12 Benefit Program			LT-14((65) Benefit H	Program	L-6 Benefit Program			
		Estimated	Employer	Unfunded	Estimated	Employer	Unfunded	Unfunded Estimated		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	
2017	\$ 522,050	13.8%	\$72,043	\$ 510,528	14.3%	\$74,653	\$ 529,412	16.2%	\$84,572	\$ 587,111	
2018	539,017	13.8	74,384	517,522	14.3	77,079	536,665	16.2	87,321	595,154	
2019	556,535	13.8	76,802	524,048	14.3	79,585	543,432	16.2	90,159	602,659	
2020	574,622	13.8	79,298	530,039	14.3	82,171	549,645	16.2	93,089	609,549	
2021	593,297	13.8	81,875	535,425	14.3	84,841	555,230	16.2	96,114	615,743	
2022	612,579	13.8	84,536	540,127	14.3	87,599	560,106	16.2	99,238	621,151	
2023	632,488	13.8	87,283	544,061	14.3	90,446	564,186	16.2	102,463	625,676	
2024	653,044	13.8	90,120	547,136	14.3	93,385	567,375	16.2	105,793	629,212	
2025	674,268	13.8	93,049	549,252	14.3	96,420	569,569	16.2	109,231	631,645	
2026	696,182	13.8	96,073	550,301	14.3	99,554	570,657	16.2	112,781	632,851	
Mater area											

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

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-1	Benefit Prog	gram	L-3	Benefit Prog	ram LT-4(65) Benefi		65) Benefit P	t Program	
	Estimated	Estimated Employer Contribution		1 0		Estimated Employer Contribution		Estimated Employer Contribution		Unfunded 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	
2017	\$ 522,050	7.0%	\$36,543	\$ 291,163	9.4%	\$49,073	\$ 370,698	9.0%	\$46,984	\$ 369,412	
2018	539,017	7.0	37,731	295,152	9.4	50,668	375,777	9.0	48,512	374,473	
2019	556,535	7.0	38,957	298,874	9.4	52,314	380,515	9.0	50,088	379,195	
2020	574,622	7.0	40,224	302,291	9.4	54,014	384,865	9.0	51,716	383,530	
2021	593,297	7.0	41,531	305,363	9.4	55,770	388,776	9.0	53,397	387,427	
2022	612,579	7.0	42,881	308,045	9.4	57,582	392,190	9.0	55,132	390,830	
2023	632,488	7.0	44,274	310,289	9.4	59,454	395,047	9.0	56,924	393,677	
2024	653,044	7.0	45,713	312,043	9.4	61,386	397,280	9.0	58,774	395,902	
2025	674,268	7.0	47,199	313,250	9.4	63,381	398,816	9.0	60,684	397,433	
2026	696,182	7.0	48,733	313,848	9.4	65,441	399,578	9.0	62,656	398,192	

		LT-5(rogram	L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2017	\$ 522,050	11.0%	\$57,425	\$ 429,360	11.8%	\$61,602	\$450,184	12.9%	\$67,344	\$ 489,298
2018	539,017	11.0	59,292	435,242	11.8	63,604	456,351	12.9	69,533	496,001
2019	556,535	11.0	61,219	440,730	11.8	65,671	462,105	12.9	71,793	502,255
2020	574,622	11.0	63,208	445,769	11.8	67,805	467,388	12.9	74,126	507,997
2021	593,297	11.0	65,263	450,298	11.8	70,009	472,137	12.9	76,535	513,159
2022	612,579	11.0	67,384	454,253	11.8	72,284	476,283	12.9	79,023	517,666
2023	632,488	11.0	69,574	457,562	11.8	74,634	479,752	12.9	81,591	521,437
2024	653,044	11.0	71,835	460,148	11.8	77,059	482,463	12.9	84,243	524,384
2025	674,268	11.0	74,169	461,927	11.8	79,564	484,329	12.9	86,981	526,412
2026	696,182	11.0	76,580	462,809	11.8	82,149	485,254	12.9	89,807	527,417

		L-12 Benefit Program			LT-14	-14(65) Benefit Program		L-6 Benefit Program		
		1.7		Unfunded	Estimated	l Employer	Unfunded	Estimated Employer		Unfunded
	Estimated	Contribution		Actuarial	Contri	ibution	Actuarial	Contri	bution	Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2017	\$ 522,050	14.3%	\$74,653	\$ 529,653	14.8%	\$77,263	\$ 549,216	16.9%	\$88,226	\$ 608,813
2018	539,017	14.3	77,079	536,909	14.8	79,775	556,740	16.9	91,094	617,154
2019	556,535	14.3	79,585	543,679	14.8	82,367	563,760	16.9	94,054	624,936
2020	574,622	14.3	82,171	549,895	14.8	85,044	570,205	16.9	97,111	632,081
2021	593,297	14.3	84,841	555,482	14.8	87,808	575,999	16.9	100,267	638,504
2022	612,579	14.3	87,599	560,360	14.8	90,662	581,058	16.9	103,526	644,112
2023	632,488	14.3	90,446	564,442	14.8	93,608	585,291	16.9	106,890	648,804
2024	653,044	14.3	93,385	567,632	14.8	96,651	588,599	16.9	110,364	652,471
2025	674,268	14.3	96,420	569,827	14.8	99,792	590,875	16.9	113,951	654,994
2026	696,182	14.3	99,554	570,915	14.8	103,035	592,003	16.9	117,655	656,245
Mater area										

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

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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-1	Benefit Prog	gram	L-3	Benefit Prog	gram	LT-4(65) Benefit Program			
	Estimated	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	
Valuation Year	Projected Pavroll	As a % of Pavroll	Annual Dollars	Accrued Liability	As a % of Pavroll	Annual Dollars	Accrued Liability	As a % of Pavroll	Annual Dollars	Accrued Liability	
2017	\$ 522,050	10.4%	\$54,293	\$ 315.464	12.9%	\$67,344	\$ 394,332	12.4%	\$64,734	\$ 390.676	
2018	539,017	10.4	56,058	319,786	12.9	69,533	399,734	12.4	66,838	396,028	
2019	556,535	10.4	57,880	323,818	12.9	71,793	404,774	12.4	69,010	401,022	
2020	574,622	10.4	59,761	327,520	12.9	74,126	409,402	12.4	71,253	405,607	
2021	593,297	10.4	61,703	330,848	12.9	76,535	413,562	12.4	73,569	409,728	
2022	612,579	10.4	63,708	333,754	12.9	79,023	417,194	12.4	75,960	413,326	
2023	632,488	10.4	65,779	336,185	12.9	81,591	420,233	12.4	78,429	416,337	
2024	653,044	10.4	67,917	338,085	12.9	84,243	422,608	12.4	80,977	418,690	
2025	674,268	10.4	70,124	339,392	12.9	86,981	424,242	12.4	83,609	420,309	
2026	696,182	10.4	72,403	340,040	12.9	89,807	425,052	12.4	86,327	421,112	

		LT-5(65) Benefit Program Estimated Employer Unfunde			L-7 Benefit Program			LT-8(65) Benefit Program			
		Estimated	Estimated Employer		Estimated Employer		Unfunded	Estimated	Employer	Unfunded	
	Estimated	Contri	bution	Actuarial	Contri	bution	Actuarial	Contri	bution	Actuarial	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued	
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability	
2017	\$ 522,050	14.4%	\$75,175	\$ 450,753	15.2%	\$79,352	\$ 473,201	16.3%	\$85,094	\$ 510,828	
2018	539,017	14.4	77,618	456,928	15.2	81,931	479,684	16.3	87,860	517,826	
2019	556,535	14.4	80,141	462,690	15.2	84,593	485,733	16.3	90,715	524,355	
2020	574,622	14.4	82,746	467,980	15.2	87,343	491,286	16.3	93,663	530,350	
2021	593,297	14.4	85,435	472,735	15.2	90,181	496,278	16.3	96,707	535,739	
2022	612,579	14.4	88,211	476,887	15.2	93,112	500,636	16.3	99,850	540,444	
2023	632,488	14.4	91,078	480,361	15.2	96,138	504,283	16.3	103,096	544,381	
2024	653,044	14.4	94,038	483,076	15.2	99,263	507,133	16.3	106,446	547,458	
2025	674,268	14.4	97,095	484,944	15.2	102,489	509,094	16.3	109,906	549,575	
2026	696,182	14.4	100,250	485,870	15.2	105,820	510,066	16.3	113,478	550,624	

		L-12 Benefit Program			LT-14(65) Benefit H	rogram	L-6 Benefit Program		
		I J		Unfunded	Estimated	Employer	Unfunded	Estimated Employer		Unfunded
	Estimated	Contri	Contribution		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
2017	\$ 522,050	17.7%	\$92,403	\$ 552,048	18.2%	\$95,013	\$ 570,853	20.1%	\$104,932	\$ 630,937
2018	539,017	17.7	95,406	559,611	18.2	98,101	578,674	20.1	108,342	639,581
2019	556,535	17.7	98,507	566,667	18.2	101,289	585,971	20.1	111,864	647,646
2020	574,622	17.7	101,708	573,146	18.2	104,581	592,670	20.1	115,499	655,050
2021	593,297	17.7	105,014	578,970	18.2	107,980	598,692	20.1	119,253	661,706
2022	612,579	17.7	108,426	584,055	18.2	111,489	603,950	20.1	123,128	667,517
2023	632,488	17.7	111,950	588,309	18.2	115,113	608,349	20.1	127,130	672,379
2024	653,044	17.7	115,589	591,634	18.2	118,854	611,787	20.1	131,262	676,179
2025	674,268	17.7	119,345	593,922	18.2	122,717	614,153	20.1	135,528	678,794
2026	696,182	17.7	123,224	595,056	18.2	126,705	615,326	20.1	139,933	680,090
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- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
	Estimated	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded 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
2017	\$ 522,050	10.8%	\$56,381	\$ 326,725	13.3%	\$69,433	\$ 408,391	12.9%	\$67,344	\$ 404,667
2018	539,017	10.8	58,214	331,201	13.3	71,689	413,986	12.9	69,533	410,211
2019	556,535	10.8	60,106	335,377	13.3	74,019	419,206	12.9	71,793	415,384
2020	574,622	10.8	62,059	339,211	13.3	76,425	423,999	12.9	74,126	420,133
2021	593,297	10.8	64,076	342,658	13.3	78,909	428,307	12.9	76,535	424,402
2022	612,579	10.8	66,159	345,667	13.3	81,473	432,069	12.9	79,023	428,129
2023	632,488	10.8	68,309	348,185	13.3	84,121	435,216	12.9	81,591	431,248
2024	653,044	10.8	70,529	350,153	13.3	86,855	437,676	12.9	84,243	433,685
2025	674,268	10.8	72,821	351,507	13.3	89,678	439,369	12.9	86,981	435,362
2026	696,182	10.8	75,188	352,178	13.3	92,592	440,208	12.9	89,807	436,193

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer		Unfunded	Estimated Employer				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
2017	\$ 522,050	14.9%	\$77,785	\$ 466,855	15.7%	\$81,962	\$ 490,058	16.8%	\$87,704	\$ 529,039
2018	539,017	14.9	80,314	473,251	15.7	84,626	496,772	16.8	90,555	536,287
2019	556,535	14.9	82,924	479,218	15.7	87,376	503,036	16.8	93,498	543,049
2020	574,622	14.9	85,619	484,697	15.7	90,216	508,787	16.8	96,536	549,258
2021	593,297	14.9	88,401	489,622	15.7	93,148	513,957	16.8	99,674	554,839
2022	612,579	14.9	91,274	493,922	15.7	96,175	518,471	16.8	102,913	559,712
2023	632,488	14.9	94,241	497,520	15.7	99,301	522,248	16.8	106,258	563,789
2024	653,044	14.9	97,304	500,332	15.7	102,528	525,200	16.8	109,711	566,975
2025	674,268	14.9	100,466	502,267	15.7	105,860	527,231	16.8	113,277	569,168
2026	696,182	14.9	103,731	503,226	15.7	109,301	528,238	16.8	116,959	570,255

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated 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
2017	\$ 522,050	18.2%	\$95,013	\$ 571,752	18.7%	\$97,623	\$ 591,224	20.8%	\$108,586	\$ 653,453
2018	539,017	18.2	98,101	579,585	18.7	100,796	599,324	20.8	112,116	662,405
2019	556,535	18.2	101,289	586,893	18.7	104,072	606,881	20.8	115,759	670,758
2020	574,622	18.2	104,581	593,603	18.7	107,454	613,819	20.8	119,521	678,427
2021	593,297	18.2	107,980	599,635	18.7	110,947	620,056	20.8	123,406	685,320
2022	612,579	18.2	111,489	604,901	18.7	114,552	625,502	20.8	127,416	691,339
2023	632,488	18.2	115,113	609,307	18.7	118,275	630,058	20.8	131,558	696,375
2024	653,044	18.2	118,854	612,751	18.7	122,119	633,619	20.8	135,833	700,311
2025	674,268	18.2	122,717	615,121	18.7	126,088	636,069	20.8	140,248	703,019
2026	696,182	18.2	126,705	616,296	18.7	130,186	637,284	20.8	144,806	704,361
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- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.