



The Initial Valuation For
Bates County
as of July 31, 2020



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October 28, 2020

Bates County
Butler, Missouri

Ladies and Gentlemen:

Submitted in this report are the results of the actuarial valuation prepared to determine the employer contribution rates required to support, for your employees, the benefits provided by the Missouri Local Government Employees Retirement System (LAGERS). This report contains the information needed to comply with Missouri State disclosure requirements regarding the adoption of LAGERS benefits by a political subdivision (Sections 105.660 - 106.685 RSMo). This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

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

The contribution requirement for benefits likely to accrue as a result of the future service of your employees is described on pages 4 thru 7 as the normal cost rate and the casualty rate. 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 7 as the prior service cost rate. 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 rate 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 normal cost rate, casualty rate, and prior service cost rate (the total employer contribution rate as shown on pages 4 thru 7). These contributions are mandatory after official action has been taken to join the System.

The total annual dollar costs shown on pages 8 and 9 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, 2020.

The computed contributions required for LAGERS participation will permit the System to continue to operate in accordance with the actuarial principles of level cost financing and the State law which governs LAGERS. This valuation assumed the ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our expertise and not performed. Summary provisions of the law as well as benefit illustrations can be found in Appendices III and IV.

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

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

In accordance with LAGERS Board policy, the employer contribution rates established by this valuation report are valid for purposes of joining the System for a two year period from the date of this valuation which was July 31, 2020. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

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

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

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

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

The signing actuary is independent of the plan sponsor.

Respectfully submitted,



Mita D. Drazilov, ASA, FCA, MAAA



Alternate Plan Provisions Affecting Employer Contribution Rates

The law governing LAGERS provides for a member contribution rate of either 0%, 2%, 4% or 6%, with benefits based on either a 5 year or 3 year Final Average Salary (FAS).

Member Contribution Rate - 0% Plan. Under the 0% 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.

Member Contribution Rate - 2%, 4% or 6% Plan. Under any plan other than 0%, each covered member contributes a percentage 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.

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 144 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.

Bates County

Employer Contribution Rates 5 Year FAS - Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll						
		Normal Cost Rate	Casualty Rate	Prior Service Cost Rate *	Total Employer Contribution Rate Based Upon the Following Member Contribution Rates			
					0%	2%	4%	6%
L-1	General	6.40%	0.20%	0.90%	7.50%	5.60%	3.70%	1.80%
	Police	7.30	0.40	1.10	8.80	6.90	5.00	3.10
L-3	General	7.80	0.30	1.10	9.20	7.30	5.40	3.50
	Police	8.90	0.50	1.40	10.80	8.90	7.00	5.10
LT-4(65)	General	7.00	0.20	1.00	8.20	6.30	4.40	2.50
	Police	8.70	0.40	1.40	10.50	8.60	6.70	4.80
LT-5(65)	General	8.30	0.30	1.20	9.80	7.90	6.00	4.10
	Police	9.90	0.50	1.60	12.00	10.10	8.20	6.30
L-7	General	9.20	0.30	1.40	10.90	9.00	7.10	5.20
	Police	10.50	0.60	1.70	12.80	10.90	9.00	7.10
LT-8(65)	General	9.50	0.30	1.40	11.20	9.30	7.40	5.50
	Police	11.20	0.60	1.80	13.60	11.70	9.80	7.90
L-12	General	10.60	0.40	1.60	12.60	10.70	8.80	6.90
	Police	12.10	0.70	2.00	14.80	12.90	11.00	9.10
LT-14(65)	General	10.70	0.40	1.60	12.70	10.80	8.90	7.00
	Police	12.40	0.70	2.10	15.20	13.30	11.40	9.50
L-6	General	11.90	0.50	1.80	14.20	12.30	10.40	8.50
	Police	13.70	0.80	2.30	16.80	14.90	13.00	11.10

* Prior service was given or vesting purposes only.

The total employer contribution rate for each member contribution rate option shown above includes the prior service cost rate, casualty rate and corresponding normal cost rate. The prior service cost rate is the cost associated with paying off the unfunded actuarial accrued liability (past service). The normal cost rate plus the casualty rate is the cost of members' service being rendered each year (future service). For purposes of this initial valuation, the total employer contribution rate for the 0% member contribution rate plan is decreased by 1.9%, 3.8% and 5.7% for the 2%, 4% and 6% member contribution rate plans, respectively.

Bates County

Employer Contribution Rates 3 Year FAS - Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll						
		Normal Cost Rate	Casualty Rate	Prior Service Cost Rate *	Total Employer Contribution Rate Based Upon the Following Member Contribution Rates			
					0%	2%	4%	6%
L-1	General	6.60%	0.20%	0.90%	7.70%	5.80%	3.90%	2.00%
	Police	7.50	0.40	1.20	9.10	7.20	5.30	3.40
L-3	General	8.10	0.30	1.20	9.60	7.70	5.80	3.90
	Police	9.20	0.50	1.50	11.20	9.30	7.40	5.50
LT-4(65)	General	7.20	0.20	1.00	8.40	6.50	4.60	2.70
	Police	9.00	0.40	1.50	10.90	9.00	7.10	5.20
LT-5(65)	General	8.50	0.30	1.20	10.00	8.10	6.20	4.30
	Police	10.20	0.50	1.70	12.40	10.50	8.60	6.70
L-7	General	9.50	0.30	1.40	11.20	9.30	7.40	5.50
	Police	10.80	0.60	1.70	13.10	11.20	9.30	7.40
LT-8(65)	General	9.80	0.30	1.40	11.50	9.60	7.70	5.80
	Police	11.50	0.60	1.90	14.00	12.10	10.20	8.30
L-12	General	10.90	0.40	1.60	12.90	11.00	9.10	7.20
	Police	12.50	0.70	2.00	15.20	13.30	11.40	9.50
LT-14(65)	General	11.10	0.40	1.60	13.10	11.20	9.30	7.40
	Police	12.80	0.70	2.10	15.60	13.70	11.80	9.90
L-6	General	12.30	0.50	1.90	14.70	12.80	10.90	9.00
	Police	14.10	0.80	2.30	17.20	15.30	13.40	11.50

* Prior service was given or vesting purposes only.

The total employer contribution rate for each member contribution rate option shown above includes the prior service cost rate, casualty rate and corresponding normal cost rate. The prior service cost rate is the cost associated with paying off the unfunded actuarial accrued liability (past service). The normal cost rate plus the casualty rate is the cost of members' service being rendered each year (future service). For purposes of this initial valuation, the total employer contribution rate for the 0% member contribution rate plan is decreased by 1.9%, 3.8% and 5.7% for the 2%, 4% and 6% member contribution rate plans, respectively.

Bates County

Employer Contribution Rates 5 Year FAS - Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll						
		Normal Cost Rate	Casualty Rate	Prior Service Cost Rate *	Total Employer Contribution Rate Based Upon the Following Member Contribution Rates			
					0%	2%	4%	6%
L-1	General	6.80%	0.20%	0.90%	7.90%	6.00%	4.10%	2.20%
	Police	7.40	0.40	1.20	9.00	7.10	5.20	3.30
L-3	General	8.30	0.30	1.10	9.70	7.80	5.90	4.00
	Police	9.10	0.50	1.50	11.10	9.20	7.30	5.40
LT-4(65)	General	7.90	0.20	1.10	9.20	7.30	5.40	3.50
	Police	9.00	0.40	1.60	11.00	9.10	7.20	5.30
LT-5(65)	General	9.10	0.30	1.30	10.70	8.80	6.90	5.00
	Police	10.30	0.50	1.80	12.60	10.70	8.80	6.90
L-7	General	9.80	0.30	1.40	11.50	9.60	7.70	5.80
	Police	10.70	0.60	1.70	13.00	11.10	9.20	7.30
LT-8(65)	General	10.30	0.30	1.40	12.00	10.10	8.20	6.30
	Police	11.50	0.60	1.90	14.00	12.10	10.20	8.30
L-12	General	11.30	0.40	1.60	13.30	11.40	9.50	7.60
	Police	12.30	0.70	2.00	15.00	13.10	11.20	9.30
LT-14(65)	General	11.60	0.40	1.60	13.60	11.70	9.80	7.90
	Police	12.70	0.70	2.10	15.50	13.60	11.70	9.80
L-6	General	12.80	0.50	1.80	15.10	13.20	11.30	9.40
	Police	14.00	0.80	2.30	17.10	15.20	13.30	11.40

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 was given or vesting purposes only.

The total employer contribution rate for each member contribution rate option shown above includes the prior service cost rate, casualty rate and corresponding normal cost rate. The prior service cost rate is the cost associated with paying off the unfunded actuarial accrued liability (past service). The normal cost rate plus the casualty rate is the cost of members' service being rendered each year (future service). For purposes of this initial valuation, the total employer contribution rate for the 0% member contribution rate plan is decreased by 1.9%, 3.8% and 5.7% for the 2%, 4% and 6% member contribution rate plans, respectively.

Bates County

Employer Contribution Rates 3 Year FAS - Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll						
		Normal Cost Rate	Casualty Rate	Prior Service Cost Rate *	Total Employer Contribution Rate Based Upon the Following Member Contribution Rates			
					0%	2%	4%	6%
L-1	General	7.00%	0.20%	0.90%	8.10%	6.20%	4.30%	2.40%
	Police	7.70	0.40	1.20	9.30	7.40	5.50	3.60
L-3	General	8.60	0.30	1.20	10.10	8.20	6.30	4.40
	Police	9.40	0.50	1.50	11.40	9.50	7.60	5.70
LT-4(65)	General	8.20	0.20	1.10	9.50	7.60	5.70	3.80
	Police	9.30	0.40	1.60	11.30	9.40	7.50	5.60
LT-5(65)	General	9.40	0.30	1.30	11.00	9.10	7.20	5.30
	Police	10.60	0.50	1.80	12.90	11.00	9.10	7.20
L-7	General	10.10	0.30	1.40	11.80	9.90	8.00	6.10
	Police	11.10	0.60	1.80	13.50	11.60	9.70	7.80
LT-8(65)	General	10.70	0.30	1.50	12.50	10.60	8.70	6.80
	Police	11.90	0.60	2.00	14.50	12.60	10.70	8.80
L-12	General	11.70	0.40	1.60	13.70	11.80	9.90	8.00
	Police	12.80	0.70	2.10	15.60	13.70	11.80	9.90
LT-14(65)	General	11.90	0.40	1.70	14.00	12.10	10.20	8.30
	Police	13.20	0.70	2.20	16.10	14.20	12.30	10.40
L-6	General	13.20	0.50	1.90	15.60	13.70	11.80	9.90
	Police	14.40	0.80	2.40	17.60	15.70	13.80	11.90

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

* Prior service was given or vesting purposes only.

The total employer contribution rate for each member contribution rate option shown above includes the prior service cost rate, casualty rate and corresponding normal cost rate. The prior service cost rate is the cost associated with paying off the unfunded actuarial accrued liability (past service). The normal cost rate plus the casualty rate is the cost of members' service being rendered each year (future service). For purposes of this initial valuation, the total employer contribution rate for the 0% member contribution rate plan is decreased by 1.9%, 3.8% and 5.7% for the 2%, 4% and 6% member contribution rate plans, respectively.

Bates County

Employer Contribution Dollars General

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:

Regular Retirement Eligibility

5 Year FAS				
Benefit Program	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 161,446	\$ 120,547	\$ 79,647	\$ 38,747
L-3	198,041	157,141	116,241	75,342
LT-4(65)	176,515	135,615	94,715	53,815
LT-5(65)	210,957	170,057	129,157	88,257
L-7	234,635	193,736	152,836	111,936
LT-8(65)	241,093	200,193	159,294	118,394
L-12	271,230	230,330	189,430	148,531
LT-14(65)	273,382	232,483	191,583	150,683
L-6	305,672	264,772	223,872	182,973

3 Year FAS				
Benefit Program	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 165,752	\$ 124,852	\$ 83,952	\$ 43,052
L-3	206,651	165,752	124,852	83,952
LT-4(65)	180,820	139,920	99,020	58,121
LT-5(65)	215,262	174,362	133,462	92,563
L-7	241,093	200,193	159,294	118,394
LT-8(65)	247,551	206,651	165,752	124,852
L-12	277,688	236,788	195,888	154,988
LT-14(65)	281,993	241,093	200,193	159,294
L-6	316,435	275,535	234,635	193,736

Rule of 80 Retirement Eligibility

5 Year FAS				
Benefit Program	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 170,057	\$ 129,157	\$ 88,257	\$ 47,358
L-3	208,804	167,904	127,004	86,105
LT-4(65)	198,041	157,141	116,241	75,342
LT-5(65)	230,330	189,430	148,531	107,631
L-7	247,551	206,651	165,752	124,852
LT-8(65)	258,314	217,414	176,515	135,615
L-12	286,298	245,398	204,499	163,599
LT-14(65)	292,756	251,856	210,957	170,057
L-6	325,045	284,146	243,246	202,346

3 Year FAS				
Benefit Program	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 174,362	\$ 133,462	\$ 92,563	\$ 51,663
L-3	217,414	176,515	135,615	94,715
LT-4(65)	204,499	163,599	122,699	81,799
LT-5(65)	236,788	195,888	154,988	114,089
L-7	254,009	213,109	172,209	131,310
LT-8(65)	269,077	228,178	187,278	146,378
L-12	294,909	254,009	213,109	172,209
LT-14(65)	301,367	260,467	219,567	178,667
L-6	335,808	294,909	254,009	213,109

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.

Bates County

Employer Contribution Dollars Police

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:

Regular Retirement Eligibility

5 Year FAS				
Benefit Program	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 70,243	\$ 55,077	\$ 39,911	\$ 24,745
L-3	86,208	71,041	55,875	40,709
LT-4(65)	83,813	68,647	53,481	38,315
LT-5(65)	95,786	80,620	65,454	50,288
L-7	102,172	87,006	71,840	56,674
LT-8(65)	108,558	93,392	78,225	63,059
L-12	118,136	102,970	87,804	72,638
LT-14(65)	121,329	106,163	90,997	75,831
L-6	134,101	118,935	103,768	88,602

3 Year FAS				
Benefit Program	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 72,638	\$ 57,472	\$ 42,306	\$ 27,139
L-3	89,401	74,234	59,068	43,902
LT-4(65)	87,006	71,840	56,674	41,507
LT-5(65)	98,979	83,813	68,647	53,481
L-7	104,567	89,401	74,234	59,068
LT-8(65)	111,751	96,584	81,418	66,252
L-12	121,329	106,163	90,997	75,831
LT-14(65)	124,522	109,356	94,190	79,024
L-6	137,294	122,128	106,961	91,795

Rule of 80 Retirement Eligibility

5 Year FAS				
Benefit Program	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 71,840	\$ 56,674	\$ 41,507	\$ 26,341
L-3	88,602	73,436	58,270	43,104
LT-4(65)	87,804	72,638	57,472	42,306
LT-5(65)	100,576	85,409	70,243	55,077
L-7	103,768	88,602	73,436	58,270
LT-8(65)	111,751	96,584	81,418	66,252
L-12	119,733	104,567	89,401	74,234
LT-14(65)	123,724	108,558	93,392	78,225
L-6	136,495	121,329	106,163	90,997

3 Year FAS				
Benefit Program	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 74,234	\$ 59,068	\$ 43,902	\$ 28,736
L-3	90,997	75,831	60,665	45,498
LT-4(65)	90,199	75,033	59,866	44,700
LT-5(65)	102,970	87,804	72,638	57,472
L-7	107,760	92,593	77,427	62,261
LT-8(65)	115,742	100,576	85,409	70,243
L-12	124,522	109,356	94,190	79,024
LT-14(65)	128,513	113,347	98,181	83,015
L-6	140,487	125,320	110,154	94,988

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.

Bates County

Employees and Payroll Included in the Valuation

	General	Police
Number of Employees	58	20
Annual Payroll	\$ 2,152,618	\$ 798,219

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 7 as the "Prior Service Cost Rate" 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:

Bates County

Regular Retirement Eligibility

Benefit Group	Employee Group	Member Contribution Rate - 0%	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 342,242	\$ 352,860
	Police	158,604	163,773
L-3	General	427,641	441,059
	Police	198,164	204,678
LT-4(65)	General	365,152	376,649
	Police	202,717	209,538
LT-5(65)	General	444,940	458,990
	Police	231,289	238,994
L-7	General	513,134	529,341
	Police	237,768	245,704
LT-8(65)	General	524,663	541,215
	Police	259,861	268,567
L-12	General	598,700	617,580
	Police	277,391	286,574
LT-14(65)	General	604,433	623,478
	Police	288,442	298,069
L-6	General	684,255	705,766
	Police	317,074	327,538

Bates County

Unfunded Actuarial Accrued Liability (UAAL)

Rule of 80 Retirement Eligibility

Benefit Group	Employee Group	Member Contribution Rate - 0%	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 343,334	\$ 354,614
	Police	163,489	168,942
L-3	General	429,217	443,151
	Police	204,319	211,167
LT-4(65)	General	409,911	423,626
	Police	219,422	226,948
LT-5(65)	General	479,166	494,919
	Police	246,323	254,676
L-7	General	515,016	531,871
	Police	245,163	253,417
LT-8(65)	General	548,256	566,388
	Police	273,150	282,432
L-12	General	600,798	620,536
	Police	285,983	295,617
LT-14(65)	General	617,424	637,778
	Police	299,976	310,159
L-6	General	686,599	709,122
	Police	326,899	337,917

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 7.25% investment return rate translates to an assumed real rate of return over price inflation of 4.75% and over wage inflation of 4.00%. Adopted 2011 and 2016.
2. The healthy retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The disabled retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The pre-retirement mortality tables used were the RP-2014 employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. For both the post-retirement and pre-retirement tables, the base year for males was then established to be 2017. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to the above described tables. Adopted 2016.
3. The probabilities of withdrawal and disability from service, together with individual pay increase assumptions, are shown in Schedule 1. Adopted 2016.
4. The probabilities of retirement with an age and service allowance are shown in Schedule 2. Adopted 2016.
5. Post-retirement cost of living allowances are assumed to be 2.50% per year. Adopted 2016.
6. Total active member payroll is assumed to increase 3.25% 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.
9. This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Schedule 1.

Separations From Active Employment (Not Including Death-In-Service) Before Age & Service Retirement and Individual Pay Increase Assumptions

		Percent of Active Members Separating Within Next Year							
Sample Ages	Years of Service	General Members				Police/Public Safety		Fire	
		Men		Women		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

Sample Ages	Percent Increase in Individual's Pay During Next Year		
	General	Police/Public Safety	Fire
	25	6.55%	6.55%
30	5.75	5.75	6.05
35	5.25	5.25	5.15
40	4.75	4.75	4.45
45	4.25	4.25	4.15
50	3.85	3.85	3.85
55	3.65	3.65	3.65
60	3.55	3.55	3.25
65	3.25	3.25	3.25

Schedule 2.

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

Early Retirement

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

Normal Retirement

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

Schedule 2. (Continued)

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

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

APPENDIX III

SUMMARY OF LAGERS PROVISIONS

Missouri Local Government Employees Retirement System

Brief Summary of LAGERS

Benefits and Conditions Evaluated and/or Considered as of February 29, 2020

(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, public safety 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, public safety 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 a percent of compensation beginning after completion of sufficient employment for 6 months of credited service. The law governing LAGERS has a provision for the adoption of a 2%, 4% or 6% member contribution rate.

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 0% plan in which the full cost of LAGERS participation is paid by the employer. Adoption of the 0% plan may be done at the time of membership or a later date; however, a change in the member contribution rate may not be made more frequently than every 2 years. Under the 0% plan there is no individual account maintained for each employee and no refund of contributions if an employee terminates before being eligible for a benefit.

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

APPENDIX IV

BENEFIT ILLUSTRATIONS

Missouri LAGERS

Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary (L-1 Benefit Program is Years of Credited Service times: 1.00% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 948	\$1,473	98%
2,000	700	1,095	1,795	90%
2,500	875	1,242	2,117	85%
3,000	1,050	1,388	2,438	81%
3,500	1,225	1,535	2,760	79%
4,000	1,400	1,682	3,082	77%
25 Years of Service:				
\$1,500	\$ 375	\$ 948	\$1,323	88%
2,000	500	1,095	1,595	80%
2,500	625	1,242	1,867	75%
3,000	750	1,388	2,138	71%
3,500	875	1,535	2,410	69%
4,000	1,000	1,682	2,682	67%
15 Years of Service:				
\$1,500	\$225	\$ 948	\$1,173	78%
2,000	300	1,095	1,395	70%
2,500	375	1,242	1,617	65%
3,000	450	1,388	1,838	61%
3,500	525	1,535	2,060	59%
4,000	600	1,682	2,282	57%

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

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-3 Benefit Program is Years of Credited Service
times: 1.25% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 948	\$1,604	107%
2,000	875	1,095	1,970	99%
2,500	1,094	1,242	2,336	93%
3,000	1,313	1,388	2,701	90%
3,500	1,531	1,535	3,066	88%
4,000	1,750	1,682	3,432	86%
25 Years of Service:				
\$1,500	\$ 469	\$ 948	\$1,417	94%
2,000	625	1,095	1,720	86%
2,500	781	1,242	2,023	81%
3,000	938	1,388	2,326	78%
3,500	1,094	1,535	2,629	75%
4,000	1,250	1,682	2,932	73%
15 Years of Service:				
\$1,500	\$281	\$ 948	\$1,229	82%
2,000	375	1,095	1,470	74%
2,500	469	1,242	1,711	68%
3,000	563	1,388	1,951	65%
3,500	656	1,535	2,191	63%
4,000	750	1,682	2,432	61%

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS

Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary (L-7 Benefit Program is Years of Credited Service times: 1.50% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 948	\$1,736	116%
2,000	1,050	1,095	2,145	107%
2,500	1,313	1,242	2,555	102%
3,000	1,575	1,388	2,963	99%
3,500	1,838	1,535	3,373	96%
4,000	2,100	1,682	3,782	95%
25 Years of Service:				
\$1,500	\$ 563	\$ 948	\$1,511	101%
2,000	750	1,095	1,845	92%
2,500	938	1,242	2,180	87%
3,000	1,125	1,388	2,513	84%
3,500	1,313	1,535	2,848	81%
4,000	1,500	1,682	3,182	80%
15 Years of Service:				
\$1,500	\$338	\$ 948	\$1,286	86%
2,000	450	1,095	1,545	77%
2,500	563	1,242	1,805	72%
3,000	675	1,388	2,063	69%
3,500	788	1,535	2,323	66%
4,000	900	1,682	2,582	65%

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-12 Benefit Program is Years of Credited Service
times: 1.75% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 948	\$1,867	124%
2,000	1,225	1,095	2,320	116%
2,500	1,531	1,242	2,773	111%
3,000	1,838	1,388	3,226	108%
3,500	2,144	1,535	3,679	105%
4,000	2,450	1,682	4,132	103%
25 Years of Service:				
\$1,500	\$ 656	\$ 948	\$1,604	107%
2,000	875	1,095	1,970	99%
2,500	1,094	1,242	2,336	93%
3,000	1,313	1,388	2,701	90%
3,500	1,531	1,535	3,066	88%
4,000	1,750	1,682	3,432	86%
15 Years of Service:				
\$1,500	\$ 394	\$ 948	\$1,342	89%
2,000	525	1,095	1,620	81%
2,500	656	1,242	1,898	76%
3,000	788	1,388	2,176	73%
3,500	919	1,535	2,454	70%
4,000	1,050	1,682	2,732	68%

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

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS

Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary (L-6 Benefit Program is Years of Credited Service times: 2.00% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 948	\$1,998	133%
2,000	1,400	1,095	2,495	125%
2,500	1,750	1,242	2,992	120%
3,000	2,100	1,388	3,488	116%
3,500	2,450	1,535	3,985	114%
4,000	2,800	1,682	4,482	112%
25 Years of Service:				
\$1,500	\$ 750	\$ 948	\$1,698	113%
2,000	1,000	1,095	2,095	105%
2,500	1,250	1,242	2,492	100%
3,000	1,500	1,388	2,888	96%
3,500	1,750	1,535	3,285	94%
4,000	2,000	1,682	3,682	92%
15 Years of Service:				
\$1,500	\$ 450	\$ 948	\$1,398	93%
2,000	600	1,095	1,695	85%
2,500	750	1,242	1,992	80%
3,000	900	1,388	2,288	76%
3,500	1,050	1,535	2,585	74%
4,000	1,200	1,682	2,882	72%

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

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-4(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS ¹ to age 65)
1.00% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 525	\$ 948	\$1,050	\$1,473	70%	98%
2,000	1,400	700	1,095	1,400	1,795	70%	90%
2,500	1,750	875	1,242	1,750	2,117	70%	85%
3,000	2,100	1,050	1,388	2,100	2,438	70%	81%
3,500	2,450	1,225	1,535	2,450	2,760	70%	79%
4,000	2,800	1,400	1,682	2,800	3,082	70%	77%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 948	\$ 750	\$1,323	50%	88%
2,000	1,000	500	1,095	1,000	1,595	50%	80%
2,500	1,250	625	1,242	1,250	1,867	50%	75%
3,000	1,500	750	1,388	1,500	2,138	50%	71%
3,500	1,750	875	1,535	1,750	2,410	50%	69%
4,000	2,000	1,000	1,682	2,000	2,682	50%	67%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 948	\$ 450	\$1,173	30%	78%
2,000	600	300	1,095	600	1,395	30%	70%
2,500	750	375	1,242	750	1,617	30%	65%
3,000	900	450	1,388	900	1,838	30%	61%
3,500	1,050	525	1,535	1,050	2,060	30%	59%
4,000	1,200	600	1,682	1,200	2,282	30%	57%

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

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS

Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary (LT-5(65) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 65) 1.25% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 656	\$ 948	\$1,050	\$1,604	70%	107%
2,000	1,400	875	1,095	1,400	1,970	70%	99%
2,500	1,750	1,094	1,242	1,750	2,336	70%	93%
3,000	2,100	1,313	1,388	2,100	2,701	70%	90%
3,500	2,450	1,531	1,535	2,450	3,066	70%	88%
4,000	2,800	1,750	1,682	2,800	3,432	70%	86%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 948	\$ 750	\$1,417	50%	94%
2,000	1,000	625	1,095	1,000	1,720	50%	86%
2,500	1,250	781	1,242	1,250	2,023	50%	81%
3,000	1,500	938	1,388	1,500	2,326	50%	78%
3,500	1,750	1,094	1,535	1,750	2,629	50%	75%
4,000	2,000	1,250	1,682	2,000	2,932	50%	73%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 948	\$ 450	\$1,229	30%	82%
2,000	600	375	1,095	600	1,470	30%	74%
2,500	750	469	1,242	750	1,711	30%	68%
3,000	900	563	1,388	900	1,951	30%	65%
3,500	1,050	656	1,535	1,050	2,191	30%	63%
4,000	1,200	750	1,682	1,200	2,432	30%	61%

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-8(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS ¹ to age 65)
1.50% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 788	\$ 948	\$1,050	\$1,736	70%	116%
2,000	1,400	1,050	1,095	1,400	2,145	70%	107%
2,500	1,750	1,313	1,242	1,750	2,555	70%	102%
3,000	2,100	1,575	1,388	2,100	2,963	70%	99%
3,500	2,450	1,838	1,535	2,450	3,373	70%	96%
4,000	2,800	2,100	1,682	2,800	3,782	70%	95%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 948	\$ 750	\$1,511	50%	101%
2,000	1,000	750	1,095	1,000	1,845	50%	92%
2,500	1,250	938	1,242	1,250	2,180	50%	87%
3,000	1,500	1,125	1,388	1,500	2,513	50%	84%
3,500	1,750	1,313	1,535	1,750	2,848	50%	81%
4,000	2,000	1,500	1,682	2,000	3,182	50%	80%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 948	\$ 450	\$1,286	30%	86%
2,000	600	450	1,095	600	1,545	30%	77%
2,500	750	563	1,242	750	1,805	30%	72%
3,000	900	675	1,388	900	2,063	30%	69%
3,500	1,050	788	1,535	1,050	2,323	30%	66%
4,000	1,200	900	1,682	1,200	2,582	30%	65%

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-14(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS ¹ to age 65)
1.75% of FAS ¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 919	\$ 948	\$1,050	\$1,867	70%	124%
2,000	1,400	1,225	1,095	1,400	2,320	70%	116%
2,500	1,750	1,531	1,242	1,750	2,773	70%	111%
3,000	2,100	1,838	1,388	2,100	3,226	70%	108%
3,500	2,450	2,144	1,535	2,450	3,679	70%	105%
4,000	2,800	2,450	1,682	2,800	4,132	70%	103%
25 Years of Service:							
\$1,500	\$ 750	\$ 656	\$ 948	\$ 750	\$1,604	50%	107%
2,000	1,000	875	1,095	1,000	1,970	50%	99%
2,500	1,250	1,094	1,242	1,250	2,336	50%	93%
3,000	1,500	1,313	1,388	1,500	2,701	50%	90%
3,500	1,750	1,531	1,535	1,750	3,066	50%	88%
4,000	2,000	1,750	1,682	2,000	3,432	50%	86%
15 Years of Service:							
\$1,500	\$ 450	\$ 394	\$ 948	\$ 450	\$1,342	30%	89%
2,000	600	525	1,095	600	1,620	30%	81%
2,500	750	656	1,242	750	1,898	30%	76%
3,000	900	788	1,388	900	2,176	30%	73%
3,500	1,050	919	1,535	1,050	2,454	30%	70%
4,000	1,200	1,050	1,682	1,200	2,732	30%	68%

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

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 2020 - it does not include any amounts which might be payable to an eligible spouse or children.

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

APPENDIX V

AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

Bates County - General

July 31, 2020

By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	1							1	\$ 29,993
20-24	2							2	\$ 58,072
25-29	4							4	\$ 115,457
30-34	8		1					9	\$ 263,578
35-39	5		1	1				7	\$ 208,403
40-44	1	1	2	1	1			6	\$ 215,769
45-49	3			1		1		5	\$ 201,454
50-54	3				1			4	\$ 124,582
55-59	1						1	2	\$ 163,439
60-64	3		2	3	1	1	1	11	\$ 448,182
65-69		1		1	1	1		4	\$ 202,409
70 & Over	1	1					1	3	\$ 121,280
Totals	32	3	6	7	4	3	3	58	\$ 2,152,618

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

Age: 46.7 years.

Benefit Service: 0.0 years.

Annual Pay: \$37,114.

Bates County - Police

July 31, 2020

By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20									
20-24									
25-29									
30-34	2	5						7	\$ 260,747
35-39	1	2	3					6	\$ 232,812
40-44	1		1					2	\$ 75,982
45-49			1					1	\$ 72,762
50-54	3							3	\$ 118,892
55-59									
60-64									
65-69			1					1	\$ 37,024
70 & Over									
Totals	7	7	6					20	\$ 798,219

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

Age: 39.4 years.

Benefit Service: 0.0 years.

Annual Pay: \$39,911.

APPENDIX VI

RISK COMMENTARY

Risk Commentary

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

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

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

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

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

The computed contribution rates shown on pages 4 thru 7 may be considered as a minimum contribution rate for the selected benefit provisions that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risk Commentary (Concluded)

PLAN MATURITY MEASURES

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

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

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

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

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

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

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

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

DURATION OF ACTUARIAL ACCRUED LIABILITY

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

ADDITIONAL RISK ASSESSMENT

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



October 28, 2020 E-mail

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

Dear Bob:

Enclosed is the report of the July 31, 2020 Initial Actuarial Valuation of LAGERS benefits for the employees of

Bates County

Sincerely,

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

Mita D. Drazilov, ASA, FCA, MAAA

MDD:wp



October 28, 2020

Bates County
Butler, Missouri

Ladies and Gentlemen:

This report contains projections needed to comply with Missouri state disclosure requirements (Section 105.660 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision. This report is intended to be a supplement to the July 31, 2020 Initial Valuation for the Bates County dated October 28, 2020.

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, 2020. The unfunded actuarial accrued liability shown for each member contribution rate option is based on the 0% member contribution rate plan.

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,

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

Mita D. Drazilov, ASA, FCA, MAAA

Bates County - General

Employer Contribution Rates (0% Member Contribution Rate, 5 Year FAS)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	7.5%	\$161,446	\$ 342,242	9.2%	\$198,041	\$ 427,641	8.2%	\$176,515	\$ 365,152
2021	2,222,578	7.5	166,693	346,931	9.2	204,477	433,500	8.2	182,251	370,155
2022	2,294,812	7.5	172,111	351,306	9.2	211,123	438,966	8.2	188,175	374,822
2023	2,369,393	7.5	177,704	355,322	9.2	217,984	443,985	8.2	194,290	379,107
2024	2,446,398	7.5	183,480	358,932	9.2	225,069	448,496	8.2	200,605	382,959
2025	2,525,906	7.5	189,443	362,084	9.2	232,383	452,435	8.2	207,124	386,322
2026	2,607,998	7.5	195,600	364,722	9.2	239,936	455,731	8.2	213,856	389,136
2027	2,692,758	7.5	201,957	366,783	9.2	247,734	458,307	8.2	220,806	391,335
2028	2,780,273	7.5	208,520	368,201	9.2	255,785	460,079	8.2	227,982	392,848
2029	2,870,632	7.5	215,297	368,904	9.2	264,098	460,958	8.2	235,392	393,598

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	9.8%	\$210,957	\$ 444,940	10.9%	\$234,635	\$ 513,134	11.2%	\$241,093	\$ 524,663
2021	2,222,578	9.8	217,813	451,036	10.9	242,261	520,164	11.2	248,929	531,851
2022	2,294,812	9.8	224,892	456,723	10.9	250,135	526,723	11.2	257,019	538,557
2023	2,369,393	9.8	232,201	461,945	10.9	258,264	532,745	11.2	265,372	544,714
2024	2,446,398	9.8	239,747	466,639	10.9	266,657	538,158	11.2	273,997	550,249
2025	2,525,906	9.8	247,539	470,737	10.9	275,324	542,884	11.2	282,901	555,081
2026	2,607,998	9.8	255,584	474,166	10.9	284,272	546,839	11.2	292,096	559,124
2027	2,692,758	9.8	263,890	476,846	10.9	293,511	549,930	11.2	301,589	562,284
2028	2,780,273	9.8	272,467	478,690	10.9	303,050	552,057	11.2	311,391	564,458
2029	2,870,632	9.8	281,322	479,604	10.9	312,899	553,111	11.2	321,511	565,536

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	12.6%	\$271,230	\$ 598,700	12.7%	\$273,382	\$ 604,433	14.2%	\$305,672	\$ 684,255
2021	2,222,578	12.6	280,045	606,902	12.7	282,267	612,714	14.2	315,606	693,629
2022	2,294,812	12.6	289,146	614,555	12.7	291,441	620,440	14.2	325,863	702,375
2023	2,369,393	12.6	298,544	621,581	12.7	300,913	627,533	14.2	336,454	710,405
2024	2,446,398	12.6	308,246	627,897	12.7	310,693	633,909	14.2	347,389	717,623
2025	2,525,906	12.6	318,264	633,411	12.7	320,790	639,476	14.2	358,679	723,925
2026	2,607,998	12.6	328,608	638,025	12.7	331,216	644,134	14.2	370,336	729,198
2027	2,692,758	12.6	339,288	641,631	12.7	341,980	647,774	14.2	382,372	733,319
2028	2,780,273	12.6	350,314	644,112	12.7	353,095	650,279	14.2	394,799	736,155
2029	2,870,632	12.6	361,700	645,342	12.7	364,570	651,521	14.2	407,630	737,561

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (2% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	5.6%	\$120,547	\$ 342,242	7.3%	\$157,141	\$ 427,641	6.3%	\$135,615	\$ 365,152
2021	2,222,578	5.6	124,464	346,931	7.3	162,248	433,500	6.3	140,022	370,155
2022	2,294,812	5.6	128,509	351,306	7.3	167,521	438,966	6.3	144,573	374,822
2023	2,369,393	5.6	132,686	355,322	7.3	172,966	443,985	6.3	149,272	379,107
2024	2,446,398	5.6	136,998	358,932	7.3	178,587	448,496	6.3	154,123	382,959
2025	2,525,906	5.6	141,451	362,084	7.3	184,391	452,435	6.3	159,132	386,322
2026	2,607,998	5.6	146,048	364,722	7.3	190,384	455,731	6.3	164,304	389,136
2027	2,692,758	5.6	150,794	366,783	7.3	196,571	458,307	6.3	169,644	391,335
2028	2,780,273	5.6	155,695	368,201	7.3	202,960	460,079	6.3	175,157	392,848
2029	2,870,632	5.6	160,755	368,904	7.3	209,556	460,958	6.3	180,850	393,598

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	7.9%	\$170,057	\$ 444,940	9.0%	\$193,736	\$ 513,134	9.3%	\$200,193	\$ 524,663
2021	2,222,578	7.9	175,584	451,036	9.0	200,032	520,164	9.3	206,700	531,851
2022	2,294,812	7.9	181,290	456,723	9.0	206,533	526,723	9.3	213,418	538,557
2023	2,369,393	7.9	187,182	461,945	9.0	213,245	532,745	9.3	220,354	544,714
2024	2,446,398	7.9	193,265	466,639	9.0	220,176	538,158	9.3	227,515	550,249
2025	2,525,906	7.9	199,547	470,737	9.0	227,332	542,884	9.3	234,909	555,081
2026	2,607,998	7.9	206,032	474,166	9.0	234,720	546,839	9.3	242,544	559,124
2027	2,692,758	7.9	212,728	476,846	9.0	242,348	549,930	9.3	250,426	562,284
2028	2,780,273	7.9	219,642	478,690	9.0	250,225	552,057	9.3	258,565	564,458
2029	2,870,632	7.9	226,780	479,604	9.0	258,357	553,111	9.3	266,969	565,536

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	10.7%	\$230,330	\$ 598,700	10.8%	\$232,483	\$ 604,433	12.3%	\$264,772	\$ 684,255
2021	2,222,578	10.7	237,816	606,902	10.8	240,038	612,714	12.3	273,377	693,629
2022	2,294,812	10.7	245,545	614,555	10.8	247,840	620,440	12.3	282,262	702,375
2023	2,369,393	10.7	253,525	621,581	10.8	255,894	627,533	12.3	291,435	710,405
2024	2,446,398	10.7	261,765	627,897	10.8	264,211	633,909	12.3	300,907	717,623
2025	2,525,906	10.7	270,272	633,411	10.8	272,798	639,476	12.3	310,686	723,925
2026	2,607,998	10.7	279,056	638,025	10.8	281,664	644,134	12.3	320,784	729,198
2027	2,692,758	10.7	288,125	641,631	10.8	290,818	647,774	12.3	331,209	733,319
2028	2,780,273	10.7	297,489	644,112	10.8	300,269	650,279	12.3	341,974	736,155
2029	2,870,632	10.7	307,158	645,342	10.8	310,028	651,521	12.3	353,088	737,561

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (4% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	3.7%	\$79,647	\$ 342,242	5.4%	\$116,241	\$ 427,641	4.4%	\$94,715	\$ 365,152
2021	2,222,578	3.7	82,235	346,931	5.4	120,019	433,500	4.4	97,793	370,155
2022	2,294,812	3.7	84,908	351,306	5.4	123,920	438,966	4.4	100,972	374,822
2023	2,369,393	3.7	87,668	355,322	5.4	127,947	443,985	4.4	104,253	379,107
2024	2,446,398	3.7	90,517	358,932	5.4	132,105	448,496	4.4	107,642	382,959
2025	2,525,906	3.7	93,459	362,084	5.4	136,399	452,435	4.4	111,140	386,322
2026	2,607,998	3.7	96,496	364,722	5.4	140,832	455,731	4.4	114,752	389,136
2027	2,692,758	3.7	99,632	366,783	5.4	145,409	458,307	4.4	118,481	391,335
2028	2,780,273	3.7	102,870	368,201	5.4	150,135	460,079	4.4	122,332	392,848
2029	2,870,632	3.7	106,213	368,904	5.4	155,014	460,958	4.4	126,308	393,598

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	6.0%	\$129,157	\$ 444,940	7.1%	\$152,836	\$ 513,134	7.4%	\$159,294	\$ 524,663
2021	2,222,578	6.0	133,355	451,036	7.1	157,803	520,164	7.4	164,471	531,851
2022	2,294,812	6.0	137,689	456,723	7.1	162,932	526,723	7.4	169,816	538,557
2023	2,369,393	6.0	142,164	461,945	7.1	168,227	532,745	7.4	175,335	544,714
2024	2,446,398	6.0	146,784	466,639	7.1	173,694	538,158	7.4	181,033	550,249
2025	2,525,906	6.0	151,554	470,737	7.1	179,339	542,884	7.4	186,917	555,081
2026	2,607,998	6.0	156,480	474,166	7.1	185,168	546,839	7.4	192,992	559,124
2027	2,692,758	6.0	161,565	476,846	7.1	191,186	549,930	7.4	199,264	562,284
2028	2,780,273	6.0	166,816	478,690	7.1	197,399	552,057	7.4	205,740	564,458
2029	2,870,632	6.0	172,238	479,604	7.1	203,815	553,111	7.4	212,427	565,536

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	8.8%	\$189,430	\$ 598,700	8.9%	\$191,583	\$ 604,433	10.4%	\$223,872	\$ 684,255
2021	2,222,578	8.8	195,587	606,902	8.9	197,809	612,714	10.4	231,148	693,629
2022	2,294,812	8.8	201,943	614,555	8.9	204,238	620,440	10.4	238,660	702,375
2023	2,369,393	8.8	208,507	621,581	8.9	210,876	627,533	10.4	246,417	710,405
2024	2,446,398	8.8	215,283	627,897	8.9	217,729	633,909	10.4	254,425	717,623
2025	2,525,906	8.8	222,280	633,411	8.9	224,806	639,476	10.4	262,694	723,925
2026	2,607,998	8.8	229,504	638,025	8.9	232,112	644,134	10.4	271,232	729,198
2027	2,692,758	8.8	236,963	641,631	8.9	239,655	647,774	10.4	280,047	733,319
2028	2,780,273	8.8	244,664	644,112	8.9	247,444	650,279	10.4	289,148	736,155
2029	2,870,632	8.8	252,616	645,342	8.9	255,486	651,521	10.4	298,546	737,561

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (6% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	1.8%	\$38,747	\$ 342,242	3.5%	\$75,342	\$ 427,641	2.5%	\$53,815	\$ 365,152
2021	2,222,578	1.8	40,006	346,931	3.5	77,790	433,500	2.5	55,564	370,155
2022	2,294,812	1.8	41,307	351,306	3.5	80,318	438,966	2.5	57,370	374,822
2023	2,369,393	1.8	42,649	355,322	3.5	82,929	443,985	2.5	59,235	379,107
2024	2,446,398	1.8	44,035	358,932	3.5	85,624	448,496	2.5	61,160	382,959
2025	2,525,906	1.8	45,466	362,084	3.5	88,407	452,435	2.5	63,148	386,322
2026	2,607,998	1.8	46,944	364,722	3.5	91,280	455,731	2.5	65,200	389,136
2027	2,692,758	1.8	48,470	366,783	3.5	94,247	458,307	2.5	67,319	391,335
2028	2,780,273	1.8	50,045	368,201	3.5	97,310	460,079	2.5	69,507	392,848
2029	2,870,632	1.8	51,671	368,904	3.5	100,472	460,958	2.5	71,766	393,598

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	4.1%	\$88,257	\$ 444,940	5.2%	\$111,936	\$ 513,134	5.5%	\$118,394	\$ 524,663
2021	2,222,578	4.1	91,126	451,036	5.2	115,574	520,164	5.5	122,242	531,851
2022	2,294,812	4.1	94,087	456,723	5.2	119,330	526,723	5.5	126,215	538,557
2023	2,369,393	4.1	97,145	461,945	5.2	123,208	532,745	5.5	130,317	544,714
2024	2,446,398	4.1	100,302	466,639	5.2	127,213	538,158	5.5	134,552	550,249
2025	2,525,906	4.1	103,562	470,737	5.2	131,347	542,884	5.5	138,925	555,081
2026	2,607,998	4.1	106,928	474,166	5.2	135,616	546,839	5.5	143,440	559,124
2027	2,692,758	4.1	110,403	476,846	5.2	140,023	549,930	5.5	148,102	562,284
2028	2,780,273	4.1	113,991	478,690	5.2	144,574	552,057	5.5	152,915	564,458
2029	2,870,632	4.1	117,696	479,604	5.2	149,273	553,111	5.5	157,885	565,536

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	6.9%	\$148,531	\$ 598,700	7.0%	\$150,683	\$ 604,433	8.5%	\$182,973	\$ 684,255
2021	2,222,578	6.9	153,358	606,902	7.0	155,580	612,714	8.5	188,919	693,629
2022	2,294,812	6.9	158,342	614,555	7.0	160,637	620,440	8.5	195,059	702,375
2023	2,369,393	6.9	163,488	621,581	7.0	165,858	627,533	8.5	201,398	710,405
2024	2,446,398	6.9	168,801	627,897	7.0	171,248	633,909	8.5	207,944	717,623
2025	2,525,906	6.9	174,288	633,411	7.0	176,813	639,476	8.5	214,702	723,925
2026	2,607,998	6.9	179,952	638,025	7.0	182,560	644,134	8.5	221,680	729,198
2027	2,692,758	6.9	185,800	641,631	7.0	188,493	647,774	8.5	228,884	733,319
2028	2,780,273	6.9	191,839	644,112	7.0	194,619	650,279	8.5	236,323	736,155
2029	2,870,632	6.9	198,074	645,342	7.0	200,944	651,521	8.5	244,004	737,561

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (0% Member Contribution Rate, 3 Year FAS)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	7.7%	\$165,752	\$ 352,860	9.6%	\$206,651	\$ 441,059	8.4%	\$180,820	\$ 376,649
2021	2,222,578	7.7	171,139	357,694	9.6	213,367	447,101	8.4	186,697	381,809
2022	2,294,812	7.7	176,701	362,204	9.6	220,302	452,739	8.4	192,764	386,623
2023	2,369,393	7.7	182,443	366,345	9.6	227,462	457,915	8.4	199,029	391,043
2024	2,446,398	7.7	188,373	370,067	9.6	234,854	462,568	8.4	205,497	395,016
2025	2,525,906	7.7	194,495	373,317	9.6	242,487	466,630	8.4	212,176	398,485
2026	2,607,998	7.7	200,816	376,036	9.6	250,368	470,029	8.4	219,072	401,388
2027	2,692,758	7.7	207,342	378,161	9.6	258,505	472,685	8.4	226,192	403,657
2028	2,780,273	7.7	214,081	379,623	9.6	266,906	474,513	8.4	233,543	405,218
2029	2,870,632	7.7	221,039	380,348	9.6	275,581	475,419	8.4	241,133	405,992

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	10.0%	\$215,262	\$ 458,990	11.2%	\$241,093	\$ 529,341	11.5%	\$247,551	\$ 541,215
2021	2,222,578	10.0	222,258	465,278	11.2	248,929	536,593	11.5	255,596	548,630
2022	2,294,812	10.0	229,481	471,145	11.2	257,019	543,359	11.5	263,903	555,548
2023	2,369,393	10.0	236,939	476,532	11.2	265,372	549,571	11.5	272,480	561,900
2024	2,446,398	10.0	244,640	481,374	11.2	273,997	555,155	11.5	281,336	567,609
2025	2,525,906	10.0	252,591	485,602	11.2	282,901	560,031	11.5	290,479	572,594
2026	2,607,998	10.0	260,800	489,139	11.2	292,096	564,110	11.5	299,920	576,765
2027	2,692,758	10.0	269,276	491,903	11.2	301,589	567,298	11.5	309,667	580,025
2028	2,780,273	10.0	278,027	493,805	11.2	311,391	569,492	11.5	319,731	582,268
2029	2,870,632	10.0	287,063	494,748	11.2	321,511	570,579	11.5	330,123	583,380

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	12.9%	\$277,688	\$ 617,580	13.1%	\$281,993	\$ 623,478	14.7%	\$316,435	\$ 705,766
2021	2,222,578	12.9	286,713	626,041	13.1	291,158	632,020	14.7	326,719	715,435
2022	2,294,812	12.9	296,031	633,935	13.1	300,620	639,989	14.7	337,337	724,456
2023	2,369,393	12.9	305,652	641,183	13.1	310,390	647,306	14.7	348,301	732,739
2024	2,446,398	12.9	315,585	647,698	13.1	320,478	653,883	14.7	359,621	740,184
2025	2,525,906	12.9	325,842	653,386	13.1	330,894	659,626	14.7	371,308	746,685
2026	2,607,998	12.9	336,432	658,145	13.1	341,648	664,431	14.7	383,376	752,124
2027	2,692,758	12.9	347,366	661,865	13.1	352,751	668,186	14.7	395,835	756,375
2028	2,780,273	12.9	358,655	664,424	13.1	364,216	670,770	14.7	408,700	759,300
2029	2,870,632	12.9	370,312	665,693	13.1	376,053	672,051	14.7	421,983	760,750

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (2% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	5.8%	\$124,852	\$ 352,860	7.7%	\$165,752	\$ 441,059	6.5%	\$139,920	\$ 376,649
2021	2,222,578	5.8	128,910	357,694	7.7	171,139	447,101	6.5	144,468	381,809
2022	2,294,812	5.8	133,099	362,204	7.7	176,701	452,739	6.5	149,163	386,623
2023	2,369,393	5.8	137,425	366,345	7.7	182,443	457,915	6.5	154,011	391,043
2024	2,446,398	5.8	141,891	370,067	7.7	188,373	462,568	6.5	159,016	395,016
2025	2,525,906	5.8	146,503	373,317	7.7	194,495	466,630	6.5	164,184	398,485
2026	2,607,998	5.8	151,264	376,036	7.7	200,816	470,029	6.5	169,520	401,388
2027	2,692,758	5.8	156,180	378,161	7.7	207,342	472,685	6.5	175,029	403,657
2028	2,780,273	5.8	161,256	379,623	7.7	214,081	474,513	6.5	180,718	405,218
2029	2,870,632	5.8	166,497	380,348	7.7	221,039	475,419	6.5	186,591	405,992

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	8.1%	\$174,362	\$ 458,990	9.3%	\$200,193	\$ 529,341	9.6%	\$206,651	\$ 541,215
2021	2,222,578	8.1	180,029	465,278	9.3	206,700	536,593	9.6	213,367	548,630
2022	2,294,812	8.1	185,880	471,145	9.3	213,418	543,359	9.6	220,302	555,548
2023	2,369,393	8.1	191,921	476,532	9.3	220,354	549,571	9.6	227,462	561,900
2024	2,446,398	8.1	198,158	481,374	9.3	227,515	555,155	9.6	234,854	567,609
2025	2,525,906	8.1	204,598	485,602	9.3	234,909	560,031	9.6	242,487	572,594
2026	2,607,998	8.1	211,248	489,139	9.3	242,544	564,110	9.6	250,368	576,765
2027	2,692,758	8.1	218,113	491,903	9.3	250,426	567,298	9.6	258,505	580,025
2028	2,780,273	8.1	225,202	493,805	9.3	258,565	569,492	9.6	266,906	582,268
2029	2,870,632	8.1	232,521	494,748	9.3	266,969	570,579	9.6	275,581	583,380

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	11.0%	\$236,788	\$ 617,580	11.2%	\$241,093	\$ 623,478	12.8%	\$275,535	\$ 705,766
2021	2,222,578	11.0	244,484	626,041	11.2	248,929	632,020	12.8	284,490	715,435
2022	2,294,812	11.0	252,429	633,935	11.2	257,019	639,989	12.8	293,736	724,456
2023	2,369,393	11.0	260,633	641,183	11.2	265,372	647,306	12.8	303,282	732,739
2024	2,446,398	11.0	269,104	647,698	11.2	273,997	653,883	12.8	313,139	740,184
2025	2,525,906	11.0	277,850	653,386	11.2	282,901	659,626	12.8	323,316	746,685
2026	2,607,998	11.0	286,880	658,145	11.2	292,096	664,431	12.8	333,824	752,124
2027	2,692,758	11.0	296,203	661,865	11.2	301,589	668,186	12.8	344,673	756,375
2028	2,780,273	11.0	305,830	664,424	11.2	311,391	670,770	12.8	355,875	759,300
2029	2,870,632	11.0	315,770	665,693	11.2	321,511	672,051	12.8	367,441	760,750

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (4% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	3.9%	\$83,952	\$ 352,860	5.8%	\$124,852	\$ 441,059	4.6%	\$99,020	\$ 376,649
2021	2,222,578	3.9	86,681	357,694	5.8	128,910	447,101	4.6	102,239	381,809
2022	2,294,812	3.9	89,498	362,204	5.8	133,099	452,739	4.6	105,561	386,623
2023	2,369,393	3.9	92,406	366,345	5.8	137,425	457,915	4.6	108,992	391,043
2024	2,446,398	3.9	95,410	370,067	5.8	141,891	462,568	4.6	112,534	395,016
2025	2,525,906	3.9	98,510	373,317	5.8	146,503	466,630	4.6	116,192	398,485
2026	2,607,998	3.9	101,712	376,036	5.8	151,264	470,029	4.6	119,968	401,388
2027	2,692,758	3.9	105,018	378,161	5.8	156,180	472,685	4.6	123,867	403,657
2028	2,780,273	3.9	108,431	379,623	5.8	161,256	474,513	4.6	127,893	405,218
2029	2,870,632	3.9	111,955	380,348	5.8	166,497	475,419	4.6	132,049	405,992

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	6.2%	\$133,462	\$ 458,990	7.4%	\$159,294	\$ 529,341	7.7%	\$165,752	\$ 541,215
2021	2,222,578	6.2	137,800	465,278	7.4	164,471	536,593	7.7	171,139	548,630
2022	2,294,812	6.2	142,278	471,145	7.4	169,816	543,359	7.7	176,701	555,548
2023	2,369,393	6.2	146,902	476,532	7.4	175,335	549,571	7.7	182,443	561,900
2024	2,446,398	6.2	151,677	481,374	7.4	181,033	555,155	7.7	188,373	567,609
2025	2,525,906	6.2	156,606	485,602	7.4	186,917	560,031	7.7	194,495	572,594
2026	2,607,998	6.2	161,696	489,139	7.4	192,992	564,110	7.7	200,816	576,765
2027	2,692,758	6.2	166,951	491,903	7.4	199,264	567,298	7.7	207,342	580,025
2028	2,780,273	6.2	172,377	493,805	7.4	205,740	569,492	7.7	214,081	582,268
2029	2,870,632	6.2	177,979	494,748	7.4	212,427	570,579	7.7	221,039	583,380

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	9.1%	\$195,888	\$ 617,580	9.3%	\$200,193	\$ 623,478	10.9%	\$234,635	\$ 705,766
2021	2,222,578	9.1	202,255	626,041	9.3	206,700	632,020	10.9	242,261	715,435
2022	2,294,812	9.1	208,828	633,935	9.3	213,418	639,989	10.9	250,135	724,456
2023	2,369,393	9.1	215,615	641,183	9.3	220,354	647,306	10.9	258,264	732,739
2024	2,446,398	9.1	222,622	647,698	9.3	227,515	653,883	10.9	266,657	740,184
2025	2,525,906	9.1	229,857	653,386	9.3	234,909	659,626	10.9	275,324	746,685
2026	2,607,998	9.1	237,328	658,145	9.3	242,544	664,431	10.9	284,272	752,124
2027	2,692,758	9.1	245,041	661,865	9.3	250,426	668,186	10.9	293,511	756,375
2028	2,780,273	9.1	253,005	664,424	9.3	258,565	670,770	10.9	303,050	759,300
2029	2,870,632	9.1	261,228	665,693	9.3	266,969	672,051	10.9	312,899	760,750

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (6% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 2,152,618	2.0%	\$43,052	\$ 352,860	3.9%	\$83,952	\$ 441,059	2.7%	\$58,121	\$ 376,649
2021	2,222,578	2.0	44,452	357,694	3.9	86,681	447,101	2.7	60,010	381,809
2022	2,294,812	2.0	45,896	362,204	3.9	89,498	452,739	2.7	61,960	386,623
2023	2,369,393	2.0	47,388	366,345	3.9	92,406	457,915	2.7	63,974	391,043
2024	2,446,398	2.0	48,928	370,067	3.9	95,410	462,568	2.7	66,053	395,016
2025	2,525,906	2.0	50,518	373,317	3.9	98,510	466,630	2.7	68,199	398,485
2026	2,607,998	2.0	52,160	376,036	3.9	101,712	470,029	2.7	70,416	401,388
2027	2,692,758	2.0	53,855	378,161	3.9	105,018	472,685	2.7	72,704	403,657
2028	2,780,273	2.0	55,605	379,623	3.9	108,431	474,513	2.7	75,067	405,218
2029	2,870,632	2.0	57,413	380,348	3.9	111,955	475,419	2.7	77,507	405,992

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 2,152,618	4.3%	\$92,563	\$ 458,990	5.5%	\$118,394	\$ 529,341	5.8%	\$124,852	\$ 541,215
2021	2,222,578	4.3	95,571	465,278	5.5	122,242	536,593	5.8	128,910	548,630
2022	2,294,812	4.3	98,677	471,145	5.5	126,215	543,359	5.8	133,099	555,548
2023	2,369,393	4.3	101,884	476,532	5.5	130,317	549,571	5.8	137,425	561,900
2024	2,446,398	4.3	105,195	481,374	5.5	134,552	555,155	5.8	141,891	567,609
2025	2,525,906	4.3	108,614	485,602	5.5	138,925	560,031	5.8	146,503	572,594
2026	2,607,998	4.3	112,144	489,139	5.5	143,440	564,110	5.8	151,264	576,765
2027	2,692,758	4.3	115,789	491,903	5.5	148,102	567,298	5.8	156,180	580,025
2028	2,780,273	4.3	119,552	493,805	5.5	152,915	569,492	5.8	161,256	582,268
2029	2,870,632	4.3	123,437	494,748	5.5	157,885	570,579	5.8	166,497	583,380

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 2,152,618	7.2%	\$154,988	\$ 617,580	7.4%	\$159,294	\$ 623,478	9.0%	\$193,736	\$ 705,766
2021	2,222,578	7.2	160,026	626,041	7.4	164,471	632,020	9.0	200,032	715,435
2022	2,294,812	7.2	165,226	633,935	7.4	169,816	639,989	9.0	206,533	724,456
2023	2,369,393	7.2	170,596	641,183	7.4	175,335	647,306	9.0	213,245	732,739
2024	2,446,398	7.2	176,141	647,698	7.4	181,033	653,883	9.0	220,176	740,184
2025	2,525,906	7.2	181,865	653,386	7.4	186,917	659,626	9.0	227,332	746,685
2026	2,607,998	7.2	187,776	658,145	7.4	192,992	664,431	9.0	234,720	752,124
2027	2,692,758	7.2	193,879	661,865	7.4	199,264	668,186	9.0	242,348	756,375
2028	2,780,273	7.2	200,180	664,424	7.4	205,740	670,770	9.0	250,225	759,300
2029	2,870,632	7.2	206,686	665,693	7.4	212,427	672,051	9.0	258,357	760,750

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (0% Member Contribution Rate, 5 Year FAS)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	7.9%	\$170,057	\$ 343,334	9.7%	\$208,804	\$ 429,217	9.2%	\$198,041	\$ 409,911
2021	2,222,578	7.9	175,584	348,038	9.7	215,590	435,097	9.2	204,477	415,527
2022	2,294,812	7.9	181,290	352,427	9.7	222,597	440,583	9.2	211,123	420,767
2023	2,369,393	7.9	187,182	356,456	9.7	229,831	445,620	9.2	217,984	425,578
2024	2,446,398	7.9	193,265	360,078	9.7	237,301	450,148	9.2	225,069	429,902
2025	2,525,906	7.9	199,547	363,240	9.7	245,013	454,101	9.2	232,383	433,678
2026	2,607,998	7.9	206,032	365,886	9.7	252,976	457,409	9.2	239,936	436,837
2027	2,692,758	7.9	212,728	367,954	9.7	261,198	459,994	9.2	247,734	439,306
2028	2,780,273	7.9	219,642	369,377	9.7	269,686	461,773	9.2	255,785	441,005
2029	2,870,632	7.9	226,780	370,082	9.7	278,451	462,655	9.2	264,098	441,847

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	10.7%	\$230,330	\$ 479,166	11.5%	\$247,551	\$ 515,016	12.0%	\$258,314	\$ 548,256
2021	2,222,578	10.7	237,816	485,731	11.5	255,596	522,072	12.0	266,709	555,767
2022	2,294,812	10.7	245,545	491,856	11.5	263,903	528,655	12.0	275,377	562,775
2023	2,369,393	10.7	253,525	497,479	11.5	272,480	534,699	12.0	284,327	569,209
2024	2,446,398	10.7	261,765	502,534	11.5	281,336	540,132	12.0	293,568	574,993
2025	2,525,906	10.7	270,272	506,947	11.5	290,479	544,876	12.0	303,109	580,043
2026	2,607,998	10.7	279,056	510,640	11.5	299,920	548,845	12.0	312,960	584,268
2027	2,692,758	10.7	288,125	513,526	11.5	309,667	551,947	12.0	323,131	587,570
2028	2,780,273	10.7	297,489	515,512	11.5	319,731	554,081	12.0	333,633	589,842
2029	2,870,632	10.7	307,158	516,496	11.5	330,123	555,139	12.0	344,476	590,968

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	13.3%	\$286,298	\$ 600,798	13.6%	\$292,756	\$ 617,424	15.1%	\$325,045	\$ 686,599
2021	2,222,578	13.3	295,603	609,029	13.6	302,271	625,883	15.1	335,609	696,005
2022	2,294,812	13.3	305,210	616,708	13.6	312,094	633,775	15.1	346,517	704,781
2023	2,369,393	13.3	315,129	623,759	13.6	322,237	641,021	15.1	357,778	712,839
2024	2,446,398	13.3	325,371	630,097	13.6	332,710	647,534	15.1	369,406	720,082
2025	2,525,906	13.3	335,945	635,631	13.6	343,523	653,221	15.1	381,412	726,406
2026	2,607,998	13.3	346,864	640,261	13.6	354,688	657,979	15.1	393,808	731,697
2027	2,692,758	13.3	358,137	643,880	13.6	366,215	661,698	15.1	406,606	735,832
2028	2,780,273	13.3	369,776	646,370	13.6	378,117	664,257	15.1	419,821	738,677
2029	2,870,632	13.3	381,794	647,604	13.6	390,406	665,525	15.1	433,465	740,087

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (2% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	6.0%	\$129,157	\$ 343,334	7.8%	\$167,904	\$ 429,217	7.3%	\$157,141	\$ 409,911
2021	2,222,578	6.0	133,355	348,038	7.8	173,361	435,097	7.3	162,248	415,527
2022	2,294,812	6.0	137,689	352,427	7.8	178,995	440,583	7.3	167,521	420,767
2023	2,369,393	6.0	142,164	356,456	7.8	184,813	445,620	7.3	172,966	425,578
2024	2,446,398	6.0	146,784	360,078	7.8	190,819	450,148	7.3	178,587	429,902
2025	2,525,906	6.0	151,554	363,240	7.8	197,021	454,101	7.3	184,391	433,678
2026	2,607,998	6.0	156,480	365,886	7.8	203,424	457,409	7.3	190,384	436,837
2027	2,692,758	6.0	161,565	367,954	7.8	210,035	459,994	7.3	196,571	439,306
2028	2,780,273	6.0	166,816	369,377	7.8	216,861	461,773	7.3	202,960	441,005
2029	2,870,632	6.0	172,238	370,082	7.8	223,909	462,655	7.3	209,556	441,847

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	8.8%	\$189,430	\$ 479,166	9.6%	\$206,651	\$ 515,016	10.1%	\$217,414	\$ 548,256
2021	2,222,578	8.8	195,587	485,731	9.6	213,367	522,072	10.1	224,480	555,767
2022	2,294,812	8.8	201,943	491,856	9.6	220,302	528,655	10.1	231,776	562,775
2023	2,369,393	8.8	208,507	497,479	9.6	227,462	534,699	10.1	239,309	569,209
2024	2,446,398	8.8	215,283	502,534	9.6	234,854	540,132	10.1	247,086	574,993
2025	2,525,906	8.8	222,280	506,947	9.6	242,487	544,876	10.1	255,117	580,043
2026	2,607,998	8.8	229,504	510,640	9.6	250,368	548,845	10.1	263,408	584,268
2027	2,692,758	8.8	236,963	513,526	9.6	258,505	551,947	10.1	271,969	587,570
2028	2,780,273	8.8	244,664	515,512	9.6	266,906	554,081	10.1	280,808	589,842
2029	2,870,632	8.8	252,616	516,496	9.6	275,581	555,139	10.1	289,934	590,968

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	11.4%	\$245,398	\$ 600,798	11.7%	\$251,856	\$ 617,424	13.2%	\$284,146	\$ 686,599
2021	2,222,578	11.4	253,374	609,029	11.7	260,042	625,883	13.2	293,380	696,005
2022	2,294,812	11.4	261,609	616,708	11.7	268,493	633,775	13.2	302,915	704,781
2023	2,369,393	11.4	270,111	623,759	11.7	277,219	641,021	13.2	312,760	712,839
2024	2,446,398	11.4	278,889	630,097	11.7	286,229	647,534	13.2	322,925	720,082
2025	2,525,906	11.4	287,953	635,631	11.7	295,531	653,221	13.2	333,420	726,406
2026	2,607,998	11.4	297,312	640,261	11.7	305,136	657,979	13.2	344,256	731,697
2027	2,692,758	11.4	306,974	643,880	11.7	315,053	661,698	13.2	355,444	735,832
2028	2,780,273	11.4	316,951	646,370	11.7	325,292	664,257	13.2	366,996	738,677
2029	2,870,632	11.4	327,252	647,604	11.7	335,864	665,525	13.2	378,923	740,087

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (4% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	4.1%	\$88,257	\$ 343,334	5.9%	\$127,004	\$ 429,217	5.4%	\$116,241	\$ 409,911
2021	2,222,578	4.1	91,126	348,038	5.9	131,132	435,097	5.4	120,019	415,527
2022	2,294,812	4.1	94,087	352,427	5.9	135,394	440,583	5.4	123,920	420,767
2023	2,369,393	4.1	97,145	356,456	5.9	139,794	445,620	5.4	127,947	425,578
2024	2,446,398	4.1	100,302	360,078	5.9	144,337	450,148	5.4	132,105	429,902
2025	2,525,906	4.1	103,562	363,240	5.9	149,028	454,101	5.4	136,399	433,678
2026	2,607,998	4.1	106,928	365,886	5.9	153,872	457,409	5.4	140,832	436,837
2027	2,692,758	4.1	110,403	367,954	5.9	158,873	459,994	5.4	145,409	439,306
2028	2,780,273	4.1	113,991	369,377	5.9	164,036	461,773	5.4	150,135	441,005
2029	2,870,632	4.1	117,696	370,082	5.9	169,367	462,655	5.4	155,014	441,847

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	6.9%	\$148,531	\$ 479,166	7.7%	\$165,752	\$ 515,016	8.2%	\$176,515	\$ 548,256
2021	2,222,578	6.9	153,358	485,731	7.7	171,139	522,072	8.2	182,251	555,767
2022	2,294,812	6.9	158,342	491,856	7.7	176,701	528,655	8.2	188,175	562,775
2023	2,369,393	6.9	163,488	497,479	7.7	182,443	534,699	8.2	194,290	569,209
2024	2,446,398	6.9	168,801	502,534	7.7	188,373	540,132	8.2	200,605	574,993
2025	2,525,906	6.9	174,288	506,947	7.7	194,495	544,876	8.2	207,124	580,043
2026	2,607,998	6.9	179,952	510,640	7.7	200,816	548,845	8.2	213,856	584,268
2027	2,692,758	6.9	185,800	513,526	7.7	207,342	551,947	8.2	220,806	587,570
2028	2,780,273	6.9	191,839	515,512	7.7	214,081	554,081	8.2	227,982	589,842
2029	2,870,632	6.9	198,074	516,496	7.7	221,039	555,139	8.2	235,392	590,968

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	9.5%	\$204,499	\$ 600,798	9.8%	\$210,957	\$ 617,424	11.3%	\$243,246	\$ 686,599
2021	2,222,578	9.5	211,145	609,029	9.8	217,813	625,883	11.3	251,151	696,005
2022	2,294,812	9.5	218,007	616,708	9.8	224,892	633,775	11.3	259,314	704,781
2023	2,369,393	9.5	225,092	623,759	9.8	232,201	641,021	11.3	267,741	712,839
2024	2,446,398	9.5	232,408	630,097	9.8	239,747	647,534	11.3	276,443	720,082
2025	2,525,906	9.5	239,961	635,631	9.8	247,539	653,221	11.3	285,427	726,406
2026	2,607,998	9.5	247,760	640,261	9.8	255,584	657,979	11.3	294,704	731,697
2027	2,692,758	9.5	255,812	643,880	9.8	263,890	661,698	11.3	304,282	735,832
2028	2,780,273	9.5	264,126	646,370	9.8	272,467	664,257	11.3	314,171	738,677
2029	2,870,632	9.5	272,710	647,604	9.8	281,322	665,525	11.3	324,381	740,087

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (6% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	2.2%	\$47,358	\$ 343,334	4.0%	\$86,105	\$ 429,217	3.5%	\$75,342	\$ 409,911
2021	2,222,578	2.2	48,897	348,038	4.0	88,903	435,097	3.5	77,790	415,527
2022	2,294,812	2.2	50,486	352,427	4.0	91,792	440,583	3.5	80,318	420,767
2023	2,369,393	2.2	52,127	356,456	4.0	94,776	445,620	3.5	82,929	425,578
2024	2,446,398	2.2	53,821	360,078	4.0	97,856	450,148	3.5	85,624	429,902
2025	2,525,906	2.2	55,570	363,240	4.0	101,036	454,101	3.5	88,407	433,678
2026	2,607,998	2.2	57,376	365,886	4.0	104,320	457,409	3.5	91,280	436,837
2027	2,692,758	2.2	59,241	367,954	4.0	107,710	459,994	3.5	94,247	439,306
2028	2,780,273	2.2	61,166	369,377	4.0	111,211	461,773	3.5	97,310	441,005
2029	2,870,632	2.2	63,154	370,082	4.0	114,825	462,655	3.5	100,472	441,847

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	5.0%	\$107,631	\$ 479,166	5.8%	\$124,852	\$ 515,016	6.3%	\$135,615	\$ 548,256
2021	2,222,578	5.0	111,129	485,731	5.8	128,910	522,072	6.3	140,022	555,767
2022	2,294,812	5.0	114,741	491,856	5.8	133,099	528,655	6.3	144,573	562,775
2023	2,369,393	5.0	118,470	497,479	5.8	137,425	534,699	6.3	149,272	569,209
2024	2,446,398	5.0	122,320	502,534	5.8	141,891	540,132	6.3	154,123	574,993
2025	2,525,906	5.0	126,295	506,947	5.8	146,503	544,876	6.3	159,132	580,043
2026	2,607,998	5.0	130,400	510,640	5.8	151,264	548,845	6.3	164,304	584,268
2027	2,692,758	5.0	134,638	513,526	5.8	156,180	551,947	6.3	169,644	587,570
2028	2,780,273	5.0	139,014	515,512	5.8	161,256	554,081	6.3	175,157	589,842
2029	2,870,632	5.0	143,532	516,496	5.8	166,497	555,139	6.3	180,850	590,968

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	7.6%	\$163,599	\$ 600,798	7.9%	\$170,057	\$ 617,424	9.4%	\$202,346	\$ 686,599
2021	2,222,578	7.6	168,916	609,029	7.9	175,584	625,883	9.4	208,922	696,005
2022	2,294,812	7.6	174,406	616,708	7.9	181,290	633,775	9.4	215,712	704,781
2023	2,369,393	7.6	180,074	623,759	7.9	187,182	641,021	9.4	222,723	712,839
2024	2,446,398	7.6	185,926	630,097	7.9	193,265	647,534	9.4	229,961	720,082
2025	2,525,906	7.6	191,969	635,631	7.9	199,547	653,221	9.4	237,435	726,406
2026	2,607,998	7.6	198,208	640,261	7.9	206,032	657,979	9.4	245,152	731,697
2027	2,692,758	7.6	204,650	643,880	7.9	212,728	661,698	9.4	253,119	735,832
2028	2,780,273	7.6	211,301	646,370	7.9	219,642	664,257	9.4	261,346	738,677
2029	2,870,632	7.6	218,168	647,604	7.9	226,780	665,525	9.4	269,839	740,087

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (0% Member Contribution Rate, 3 Year FAS)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	8.1%	\$174,362	\$ 354,614	10.1%	\$217,414	\$ 443,151	9.5%	\$204,499	\$ 423,626
2021	2,222,578	8.1	180,029	359,472	10.1	224,480	449,222	9.5	211,145	429,430
2022	2,294,812	8.1	185,880	364,005	10.1	231,776	454,886	9.5	218,007	434,845
2023	2,369,393	8.1	191,921	368,167	10.1	239,309	460,087	9.5	225,092	439,817
2024	2,446,398	8.1	198,158	371,908	10.1	247,086	464,762	9.5	232,408	444,286
2025	2,525,906	8.1	204,598	375,174	10.1	255,117	468,844	9.5	239,961	448,188
2026	2,607,998	8.1	211,248	377,907	10.1	263,408	472,259	9.5	247,760	451,453
2027	2,692,758	8.1	218,113	380,043	10.1	271,969	474,928	9.5	255,812	454,004
2028	2,780,273	8.1	225,202	381,513	10.1	280,808	476,765	9.5	264,126	455,760
2029	2,870,632	8.1	232,521	382,241	10.1	289,934	477,675	9.5	272,710	456,630

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	11.0%	\$236,788	\$ 494,919	11.8%	\$254,009	\$ 531,871	12.5%	\$269,077	\$ 566,388
2021	2,222,578	11.0	244,484	501,699	11.8	262,264	539,158	12.5	277,822	574,147
2022	2,294,812	11.0	252,429	508,025	11.8	270,788	545,956	12.5	286,852	581,387
2023	2,369,393	11.0	260,633	513,833	11.8	279,588	552,198	12.5	296,174	588,034
2024	2,446,398	11.0	269,104	519,054	11.8	288,675	557,809	12.5	305,800	594,009
2025	2,525,906	11.0	277,850	523,613	11.8	298,057	562,708	12.5	315,738	599,226
2026	2,607,998	11.0	286,880	527,427	11.8	307,744	566,807	12.5	326,000	603,591
2027	2,692,758	11.0	296,203	530,408	11.8	317,745	570,010	12.5	336,595	607,002
2028	2,780,273	11.0	305,830	532,459	11.8	328,072	572,214	12.5	347,534	609,349
2029	2,870,632	11.0	315,770	533,476	11.8	338,735	573,307	12.5	358,829	610,513

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	13.7%	\$294,909	\$ 620,536	14.0%	\$301,367	\$ 637,778	15.6%	\$335,808	\$ 709,122
2021	2,222,578	13.7	304,493	629,037	14.0	311,161	646,515	15.6	346,722	718,837
2022	2,294,812	13.7	314,389	636,969	14.0	321,274	654,667	15.6	357,991	727,901
2023	2,369,393	13.7	324,607	644,251	14.0	331,715	662,152	15.6	369,625	736,223
2024	2,446,398	13.7	335,157	650,797	14.0	342,496	668,880	15.6	381,638	743,704
2025	2,525,906	13.7	346,049	656,513	14.0	353,627	674,754	15.6	394,041	750,235
2026	2,607,998	13.7	357,296	661,295	14.0	365,120	679,669	15.6	406,848	755,700
2027	2,692,758	13.7	368,908	665,032	14.0	376,986	683,510	15.6	420,070	759,971
2028	2,780,273	13.7	380,897	667,604	14.0	389,238	686,153	15.6	433,723	762,910
2029	2,870,632	13.7	393,277	668,879	14.0	401,888	687,463	15.6	447,819	764,367

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (2% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	6.2%	\$133,462	\$ 354,614	8.2%	\$176,515	\$ 443,151	7.6%	\$163,599	\$ 423,626
2021	2,222,578	6.2	137,800	359,472	8.2	182,251	449,222	7.6	168,916	429,430
2022	2,294,812	6.2	142,278	364,005	8.2	188,175	454,886	7.6	174,406	434,845
2023	2,369,393	6.2	146,902	368,167	8.2	194,290	460,087	7.6	180,074	439,817
2024	2,446,398	6.2	151,677	371,908	8.2	200,605	464,762	7.6	185,926	444,286
2025	2,525,906	6.2	156,606	375,174	8.2	207,124	468,844	7.6	191,969	448,188
2026	2,607,998	6.2	161,696	377,907	8.2	213,856	472,259	7.6	198,208	451,453
2027	2,692,758	6.2	166,951	380,043	8.2	220,806	474,928	7.6	204,650	454,004
2028	2,780,273	6.2	172,377	381,513	8.2	227,982	476,765	7.6	211,301	455,760
2029	2,870,632	6.2	177,979	382,241	8.2	235,392	477,675	7.6	218,168	456,630

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	9.1%	\$195,888	\$ 494,919	9.9%	\$213,109	\$ 531,871	10.6%	\$228,178	\$ 566,388
2021	2,222,578	9.1	202,255	501,699	9.9	220,035	539,158	10.6	235,593	574,147
2022	2,294,812	9.1	208,828	508,025	9.9	227,186	545,956	10.6	243,250	581,387
2023	2,369,393	9.1	215,615	513,833	9.9	234,570	552,198	10.6	251,156	588,034
2024	2,446,398	9.1	222,622	519,054	9.9	242,193	557,809	10.6	259,318	594,009
2025	2,525,906	9.1	229,857	523,613	9.9	250,065	562,708	10.6	267,746	599,226
2026	2,607,998	9.1	237,328	527,427	9.9	258,192	566,807	10.6	276,448	603,591
2027	2,692,758	9.1	245,041	530,408	9.9	266,583	570,010	10.6	285,432	607,002
2028	2,780,273	9.1	253,005	532,459	9.9	275,247	572,214	10.6	294,709	609,349
2029	2,870,632	9.1	261,228	533,476	9.9	284,193	573,307	10.6	304,287	610,513

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	11.8%	\$254,009	\$ 620,536	12.1%	\$260,467	\$ 637,778	13.7%	\$294,909	\$ 709,122
2021	2,222,578	11.8	262,264	629,037	12.1	268,932	646,515	13.7	304,493	718,837
2022	2,294,812	11.8	270,788	636,969	12.1	277,672	654,667	13.7	314,389	727,901
2023	2,369,393	11.8	279,588	644,251	12.1	286,697	662,152	13.7	324,607	736,223
2024	2,446,398	11.8	288,675	650,797	12.1	296,014	668,880	13.7	335,157	743,704
2025	2,525,906	11.8	298,057	656,513	12.1	305,635	674,754	13.7	346,049	750,235
2026	2,607,998	11.8	307,744	661,295	12.1	315,568	679,669	13.7	357,296	755,700
2027	2,692,758	11.8	317,745	665,032	12.1	325,824	683,510	13.7	368,908	759,971
2028	2,780,273	11.8	328,072	667,604	12.1	336,413	686,153	13.7	380,897	762,910
2029	2,870,632	11.8	338,735	668,879	12.1	347,346	687,463	13.7	393,277	764,367

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (4% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	4.3%	\$92,563	\$ 354,614	6.3%	\$135,615	\$ 443,151	5.7%	\$122,699	\$ 423,626
2021	2,222,578	4.3	95,571	359,472	6.3	140,022	449,222	5.7	126,687	429,430
2022	2,294,812	4.3	98,677	364,005	6.3	144,573	454,886	5.7	130,804	434,845
2023	2,369,393	4.3	101,884	368,167	6.3	149,272	460,087	5.7	135,055	439,817
2024	2,446,398	4.3	105,195	371,908	6.3	154,123	464,762	5.7	139,445	444,286
2025	2,525,906	4.3	108,614	375,174	6.3	159,132	468,844	5.7	143,977	448,188
2026	2,607,998	4.3	112,144	377,907	6.3	164,304	472,259	5.7	148,656	451,453
2027	2,692,758	4.3	115,789	380,043	6.3	169,644	474,928	5.7	153,487	454,004
2028	2,780,273	4.3	119,552	381,513	6.3	175,157	476,765	5.7	158,476	455,760
2029	2,870,632	4.3	123,437	382,241	6.3	180,850	477,675	5.7	163,626	456,630

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	7.2%	\$154,988	\$ 494,919	8.0%	\$172,209	\$ 531,871	8.7%	\$187,278	\$ 566,388
2021	2,222,578	7.2	160,026	501,699	8.0	177,806	539,158	8.7	193,364	574,147
2022	2,294,812	7.2	165,226	508,025	8.0	183,585	545,956	8.7	199,649	581,387
2023	2,369,393	7.2	170,596	513,833	8.0	189,551	552,198	8.7	206,137	588,034
2024	2,446,398	7.2	176,141	519,054	8.0	195,712	557,809	8.7	212,837	594,009
2025	2,525,906	7.2	181,865	523,613	8.0	202,072	562,708	8.7	219,754	599,226
2026	2,607,998	7.2	187,776	527,427	8.0	208,640	566,807	8.7	226,896	603,591
2027	2,692,758	7.2	193,879	530,408	8.0	215,421	570,010	8.7	234,270	607,002
2028	2,780,273	7.2	200,180	532,459	8.0	222,422	572,214	8.7	241,884	609,349
2029	2,870,632	7.2	206,686	533,476	8.0	229,651	573,307	8.7	249,745	610,513

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	9.9%	\$213,109	\$ 620,536	10.2%	\$219,567	\$ 637,778	11.8%	\$254,009	\$ 709,122
2021	2,222,578	9.9	220,035	629,037	10.2	226,703	646,515	11.8	262,264	718,837
2022	2,294,812	9.9	227,186	636,969	10.2	234,071	654,667	11.8	270,788	727,901
2023	2,369,393	9.9	234,570	644,251	10.2	241,678	662,152	11.8	279,588	736,223
2024	2,446,398	9.9	242,193	650,797	10.2	249,533	668,880	11.8	288,675	743,704
2025	2,525,906	9.9	250,065	656,513	10.2	257,642	674,754	11.8	298,057	750,235
2026	2,607,998	9.9	258,192	661,295	10.2	266,016	679,669	11.8	307,744	755,700
2027	2,692,758	9.9	266,583	665,032	10.2	274,661	683,510	11.8	317,745	759,971
2028	2,780,273	9.9	275,247	667,604	10.2	283,588	686,153	11.8	328,072	762,910
2029	2,870,632	9.9	284,193	668,879	10.2	292,804	687,463	11.8	338,735	764,367

Notes regarding the above projections:

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



Bates County - General

Employer Contribution Rates (6% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	2.4%	\$51,663	\$ 354,614	4.4%	\$94,715	\$ 443,151	3.8%	\$81,799	\$ 423,626
2021	2,222,578	2.4	53,342	359,472	4.4	97,793	449,222	3.8	84,458	429,430
2022	2,294,812	2.4	55,075	364,005	4.4	100,972	454,886	3.8	87,203	434,845
2023	2,369,393	2.4	56,865	368,167	4.4	104,253	460,087	3.8	90,037	439,817
2024	2,446,398	2.4	58,714	371,908	4.4	107,642	464,762	3.8	92,963	444,286
2025	2,525,906	2.4	60,622	375,174	4.4	111,140	468,844	3.8	95,984	448,188
2026	2,607,998	2.4	62,592	377,907	4.4	114,752	472,259	3.8	99,104	451,453
2027	2,692,758	2.4	64,626	380,043	4.4	118,481	474,928	3.8	102,325	454,004
2028	2,780,273	2.4	66,727	381,513	4.4	122,332	476,765	3.8	105,650	455,760
2029	2,870,632	2.4	68,895	382,241	4.4	126,308	477,675	3.8	109,084	456,630

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	5.3%	\$114,089	\$ 494,919	6.1%	\$131,310	\$ 531,871	6.8%	\$146,378	\$ 566,388
2021	2,222,578	5.3	117,797	501,699	6.1	135,577	539,158	6.8	151,135	574,147
2022	2,294,812	5.3	121,625	508,025	6.1	139,984	545,956	6.8	156,047	581,387
2023	2,369,393	5.3	125,578	513,833	6.1	144,533	552,198	6.8	161,119	588,034
2024	2,446,398	5.3	129,659	519,054	6.1	149,230	557,809	6.8	166,355	594,009
2025	2,525,906	5.3	133,873	523,613	6.1	154,080	562,708	6.8	171,762	599,226
2026	2,607,998	5.3	138,224	527,427	6.1	159,088	566,807	6.8	177,344	603,591
2027	2,692,758	5.3	142,716	530,408	6.1	164,258	570,010	6.8	183,108	607,002
2028	2,780,273	5.3	147,354	532,459	6.1	169,597	572,214	6.8	189,059	609,349
2029	2,870,632	5.3	152,143	533,476	6.1	175,109	573,307	6.8	195,203	610,513

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 2,152,618	8.0%	\$172,209	\$ 620,536	8.3%	\$178,667	\$ 637,778	9.9%	\$213,109	\$ 709,122
2021	2,222,578	8.0	177,806	629,037	8.3	184,474	646,515	9.9	220,035	718,837
2022	2,294,812	8.0	183,585	636,969	8.3	190,469	654,667	9.9	227,186	727,901
2023	2,369,393	8.0	189,551	644,251	8.3	196,660	662,152	9.9	234,570	736,223
2024	2,446,398	8.0	195,712	650,797	8.3	203,051	668,880	9.9	242,193	743,704
2025	2,525,906	8.0	202,072	656,513	8.3	209,650	674,754	9.9	250,065	750,235
2026	2,607,998	8.0	208,640	661,295	8.3	216,464	679,669	9.9	258,192	755,700
2027	2,692,758	8.0	215,421	665,032	8.3	223,499	683,510	9.9	266,583	759,971
2028	2,780,273	8.0	222,422	667,604	8.3	230,763	686,153	9.9	275,247	762,910
2029	2,870,632	8.0	229,651	668,879	8.3	238,262	687,463	9.9	284,193	764,367

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (0% Member Contribution Rate, 5 Year FAS)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 798,219	8.8%	\$70,243	\$ 158,604	10.8%	\$86,208	\$ 198,164	10.5%	\$83,813	\$ 202,717
2021	824,161	8.8	72,526	160,777	10.8	89,009	200,879	10.5	86,537	205,494
2022	850,946	8.8	74,883	162,804	10.8	91,902	203,412	10.5	89,349	208,085
2023	878,602	8.8	77,317	164,665	10.8	94,889	205,738	10.5	92,253	210,464
2024	907,157	8.8	79,830	166,338	10.8	97,973	207,828	10.5	95,251	212,603
2025	936,640	8.8	82,424	167,799	10.8	101,157	209,653	10.5	98,347	214,470
2026	967,081	8.8	85,103	169,021	10.8	104,445	211,180	10.5	101,544	216,032
2027	998,511	8.8	87,869	169,976	10.8	107,839	212,374	10.5	104,844	217,253
2028	1,030,963	8.8	90,725	170,633	10.8	111,344	213,195	10.5	108,251	218,093
2029	1,064,469	8.8	93,673	170,959	10.8	114,963	213,602	10.5	111,769	218,509

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 798,219	12.0%	\$95,786	\$ 231,289	12.8%	\$102,172	\$ 237,768	13.6%	\$108,558	\$ 259,861
2021	824,161	12.0	98,899	234,458	12.8	105,493	241,025	13.6	112,086	263,421
2022	850,946	12.0	102,114	237,414	12.8	108,921	244,064	13.6	115,729	266,743
2023	878,602	12.0	105,432	240,128	12.8	112,461	246,854	13.6	119,490	269,793
2024	907,157	12.0	108,859	242,568	12.8	116,116	249,362	13.6	123,373	272,534
2025	936,640	12.0	112,397	244,698	12.8	119,890	251,552	13.6	127,383	274,927
2026	967,081	12.0	116,050	246,480	12.8	123,786	253,384	13.6	131,523	276,930
2027	998,511	12.0	119,821	247,873	12.8	127,809	254,816	13.6	135,797	278,495
2028	1,030,963	12.0	123,716	248,832	12.8	131,963	255,801	13.6	140,211	279,572
2029	1,064,469	12.0	127,736	249,307	12.8	136,252	256,289	13.6	144,768	280,106

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 798,219	14.8%	\$118,136	\$ 277,391	15.2%	\$121,329	\$ 288,442	16.8%	\$134,101	\$ 317,074
2021	824,161	14.8	121,976	281,191	15.2	125,272	292,394	16.8	138,459	321,418
2022	850,946	14.8	125,940	284,737	15.2	129,344	296,081	16.8	142,959	325,471
2023	878,602	14.8	130,033	287,992	15.2	133,548	299,466	16.8	147,605	329,192
2024	907,157	14.8	134,259	290,918	15.2	137,888	302,509	16.8	152,402	332,537
2025	936,640	14.8	138,623	293,473	15.2	142,369	305,166	16.8	157,356	335,457
2026	967,081	14.8	143,128	295,611	15.2	146,996	307,389	16.8	162,470	337,901
2027	998,511	14.8	147,780	297,282	15.2	151,774	309,126	16.8	167,750	339,811
2028	1,030,963	14.8	152,583	298,432	15.2	156,706	310,321	16.8	173,202	341,125
2029	1,064,469	14.8	157,541	299,002	15.2	161,799	310,914	16.8	178,831	341,776

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (2% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	6.9%	\$55,077	\$ 158,604	8.9%	\$71,041	\$ 198,164	8.6%	\$68,647	\$ 202,717
2021	824,161	6.9	56,867	160,777	8.9	73,350	200,879	8.6	70,878	205,494
2022	850,946	6.9	58,715	162,804	8.9	75,734	203,412	8.6	73,181	208,085
2023	878,602	6.9	60,624	164,665	8.9	78,196	205,738	8.6	75,560	210,464
2024	907,157	6.9	62,594	166,338	8.9	80,737	207,828	8.6	78,016	212,603
2025	936,640	6.9	64,628	167,799	8.9	83,361	209,653	8.6	80,551	214,470
2026	967,081	6.9	66,729	169,021	8.9	86,070	211,180	8.6	83,169	216,032
2027	998,511	6.9	68,897	169,976	8.9	88,867	212,374	8.6	85,872	217,253
2028	1,030,963	6.9	71,136	170,633	8.9	91,756	213,195	8.6	88,663	218,093
2029	1,064,469	6.9	73,448	170,959	8.9	94,738	213,602	8.6	91,544	218,509

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	10.1%	\$80,620	\$ 231,289	10.9%	\$87,006	\$ 237,768	11.7%	\$93,392	\$ 259,861
2021	824,161	10.1	83,240	234,458	10.9	89,834	241,025	11.7	96,427	263,421
2022	850,946	10.1	85,946	237,414	10.9	92,753	244,064	11.7	99,561	266,743
2023	878,602	10.1	88,739	240,128	10.9	95,768	246,854	11.7	102,796	269,793
2024	907,157	10.1	91,623	242,568	10.9	98,880	249,362	11.7	106,137	272,534
2025	936,640	10.1	94,601	244,698	10.9	102,094	251,552	11.7	109,587	274,927
2026	967,081	10.1	97,675	246,480	10.9	105,412	253,384	11.7	113,148	276,930
2027	998,511	10.1	100,850	247,873	10.9	108,838	254,816	11.7	116,826	278,495
2028	1,030,963	10.1	104,127	248,832	10.9	112,375	255,801	11.7	120,623	279,572
2029	1,064,469	10.1	107,511	249,307	10.9	116,027	256,289	11.7	124,543	280,106

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	12.9%	\$102,970	\$ 277,391	13.3%	\$106,163	\$ 288,442	14.9%	\$118,935	\$ 317,074
2021	824,161	12.9	106,317	281,191	13.3	109,613	292,394	14.9	122,800	321,418
2022	850,946	12.9	109,772	284,737	13.3	113,176	296,081	14.9	126,791	325,471
2023	878,602	12.9	113,340	287,992	13.3	116,854	299,466	14.9	130,912	329,192
2024	907,157	12.9	117,023	290,918	13.3	120,652	302,509	14.9	135,166	332,537
2025	936,640	12.9	120,827	293,473	13.3	124,573	305,166	14.9	139,559	335,457
2026	967,081	12.9	124,753	295,611	13.3	128,622	307,389	14.9	144,095	337,901
2027	998,511	12.9	128,808	297,282	13.3	132,802	309,126	14.9	148,778	339,811
2028	1,030,963	12.9	132,994	298,432	13.3	137,118	310,321	14.9	153,613	341,125
2029	1,064,469	12.9	137,317	299,002	13.3	141,574	310,914	14.9	158,606	341,776

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (4% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	5.0%	\$39,911	\$ 158,604	7.0%	\$55,875	\$ 198,164	6.7%	\$53,481	\$ 202,717
2021	824,161	5.0	41,208	160,777	7.0	57,691	200,879	6.7	55,219	205,494
2022	850,946	5.0	42,547	162,804	7.0	59,566	203,412	6.7	57,013	208,085
2023	878,602	5.0	43,930	164,665	7.0	61,502	205,738	6.7	58,866	210,464
2024	907,157	5.0	45,358	166,338	7.0	63,501	207,828	6.7	60,780	212,603
2025	936,640	5.0	46,832	167,799	7.0	65,565	209,653	6.7	62,755	214,470
2026	967,081	5.0	48,354	169,021	7.0	67,696	211,180	6.7	64,794	216,032
2027	998,511	5.0	49,926	169,976	7.0	69,896	212,374	6.7	66,900	217,253
2028	1,030,963	5.0	51,548	170,633	7.0	72,167	213,195	6.7	69,075	218,093
2029	1,064,469	5.0	53,223	170,959	7.0	74,513	213,602	6.7	71,319	218,509

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	8.2%	\$65,454	\$ 231,289	9.0%	\$71,840	\$ 237,768	9.8%	\$78,225	\$ 259,861
2021	824,161	8.2	67,581	234,458	9.0	74,174	241,025	9.8	80,768	263,421
2022	850,946	8.2	69,778	237,414	9.0	76,585	244,064	9.8	83,393	266,743
2023	878,602	8.2	72,045	240,128	9.0	79,074	246,854	9.8	86,103	269,793
2024	907,157	8.2	74,387	242,568	9.0	81,644	249,362	9.8	88,901	272,534
2025	936,640	8.2	76,804	244,698	9.0	84,298	251,552	9.8	91,791	274,927
2026	967,081	8.2	79,301	246,480	9.0	87,037	253,384	9.8	94,774	276,930
2027	998,511	8.2	81,878	247,873	9.0	89,866	254,816	9.8	97,854	278,495
2028	1,030,963	8.2	84,539	248,832	9.0	92,787	255,801	9.8	101,034	279,572
2029	1,064,469	8.2	87,286	249,307	9.0	95,802	256,289	9.8	104,318	280,106

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	11.0%	\$87,804	\$ 277,391	11.4%	\$90,997	\$ 288,442	13.0%	\$103,768	\$ 317,074
2021	824,161	11.0	90,658	281,191	11.4	93,954	292,394	13.0	107,141	321,418
2022	850,946	11.0	93,604	284,737	11.4	97,008	296,081	13.0	110,623	325,471
2023	878,602	11.0	96,646	287,992	11.4	100,161	299,466	13.0	114,218	329,192
2024	907,157	11.0	99,787	290,918	11.4	103,416	302,509	13.0	117,930	332,537
2025	936,640	11.0	103,030	293,473	11.4	106,777	305,166	13.0	121,763	335,457
2026	967,081	11.0	106,379	295,611	11.4	110,247	307,389	13.0	125,721	337,901
2027	998,511	11.0	109,836	297,282	11.4	113,830	309,126	13.0	129,806	339,811
2028	1,030,963	11.0	113,406	298,432	11.4	117,530	310,321	13.0	134,025	341,125
2029	1,064,469	11.0	117,092	299,002	11.4	121,349	310,914	13.0	138,381	341,776

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (6% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	3.1%	\$24,745	\$ 158,604	5.1%	\$40,709	\$ 198,164	4.8%	\$38,315	\$ 202,717
2021	824,161	3.1	25,549	160,777	5.1	42,032	200,879	4.8	39,560	205,494
2022	850,946	3.1	26,379	162,804	5.1	43,398	203,412	4.8	40,845	208,085
2023	878,602	3.1	27,237	164,665	5.1	44,809	205,738	4.8	42,173	210,464
2024	907,157	3.1	28,122	166,338	5.1	46,265	207,828	4.8	43,544	212,603
2025	936,640	3.1	29,036	167,799	5.1	47,769	209,653	4.8	44,959	214,470
2026	967,081	3.1	29,980	169,021	5.1	49,321	211,180	4.8	46,420	216,032
2027	998,511	3.1	30,954	169,976	5.1	50,924	212,374	4.8	47,929	217,253
2028	1,030,963	3.1	31,960	170,633	5.1	52,579	213,195	4.8	49,486	218,093
2029	1,064,469	3.1	32,999	170,959	5.1	54,288	213,602	4.8	51,095	218,509

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	6.3%	\$50,288	\$ 231,289	7.1%	\$56,674	\$ 237,768	7.9%	\$63,059	\$ 259,861
2021	824,161	6.3	51,922	234,458	7.1	58,515	241,025	7.9	65,109	263,421
2022	850,946	6.3	53,610	237,414	7.1	60,417	244,064	7.9	67,225	266,743
2023	878,602	6.3	55,352	240,128	7.1	62,381	246,854	7.9	69,410	269,793
2024	907,157	6.3	57,151	242,568	7.1	64,408	249,362	7.9	71,665	272,534
2025	936,640	6.3	59,008	244,698	7.1	66,501	251,552	7.9	73,995	274,927
2026	967,081	6.3	60,926	246,480	7.1	68,663	253,384	7.9	76,399	276,930
2027	998,511	6.3	62,906	247,873	7.1	70,894	254,816	7.9	78,882	278,495
2028	1,030,963	6.3	64,951	248,832	7.1	73,198	255,801	7.9	81,446	279,572
2029	1,064,469	6.3	67,062	249,307	7.1	75,577	256,289	7.9	84,093	280,106

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	9.1%	\$72,638	\$ 277,391	9.5%	\$75,831	\$ 288,442	11.1%	\$88,602	\$ 317,074
2021	824,161	9.1	74,999	281,191	9.5	78,295	292,394	11.1	91,482	321,418
2022	850,946	9.1	77,436	284,737	9.5	80,840	296,081	11.1	94,455	325,471
2023	878,602	9.1	79,953	287,992	9.5	83,467	299,466	11.1	97,525	329,192
2024	907,157	9.1	82,551	290,918	9.5	86,180	302,509	11.1	100,694	332,537
2025	936,640	9.1	85,234	293,473	9.5	88,981	305,166	11.1	103,967	335,457
2026	967,081	9.1	88,004	295,611	9.5	91,873	307,389	11.1	107,346	337,901
2027	998,511	9.1	90,865	297,282	9.5	94,859	309,126	11.1	110,835	339,811
2028	1,030,963	9.1	93,818	298,432	9.5	97,941	310,321	11.1	114,437	341,125
2029	1,064,469	9.1	96,867	299,002	9.5	101,125	310,914	11.1	118,156	341,776

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (0% Member Contribution Rate, 3 Year FAS)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	9.1%	\$72,638	\$ 163,773	11.2%	\$89,401	\$ 204,678	10.9%	\$87,006	\$ 209,538
2021	824,161	9.1	74,999	166,017	11.2	92,306	207,482	10.9	89,834	212,409
2022	850,946	9.1	77,436	168,110	11.2	95,306	210,098	10.9	92,753	215,087
2023	878,602	9.1	79,953	170,032	11.2	98,403	212,500	10.9	95,768	217,546
2024	907,157	9.1	82,551	171,760	11.2	101,602	214,659	10.9	98,880	219,756
2025	936,640	9.1	85,234	173,268	11.2	104,904	216,544	10.9	102,094	221,686
2026	967,081	9.1	88,004	174,530	11.2	108,313	218,121	10.9	105,412	223,301
2027	998,511	9.1	90,865	175,516	11.2	111,833	219,354	10.9	108,838	224,563
2028	1,030,963	9.1	93,818	176,195	11.2	115,468	220,202	10.9	112,375	225,431
2029	1,064,469	9.1	96,867	176,531	11.2	119,221	220,622	10.9	116,027	225,861

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	12.4%	\$98,979	\$ 238,994	13.1%	\$104,567	\$ 245,704	14.0%	\$111,751	\$ 268,567
2021	824,161	12.4	102,196	242,268	13.1	107,965	249,070	14.0	115,383	272,246
2022	850,946	12.4	105,517	245,323	13.1	111,474	252,211	14.0	119,132	275,679
2023	878,602	12.4	108,947	248,128	13.1	115,097	255,095	14.0	123,004	278,831
2024	907,157	12.4	112,487	250,649	13.1	118,838	257,687	14.0	127,002	281,664
2025	936,640	12.4	116,143	252,850	13.1	122,700	259,950	14.0	131,130	284,138
2026	967,081	12.4	119,918	254,692	13.1	126,688	261,844	14.0	135,391	286,208
2027	998,511	12.4	123,815	256,131	13.1	130,805	263,324	14.0	139,792	287,826
2028	1,030,963	12.4	127,839	257,121	13.1	135,056	264,342	14.0	144,335	288,939
2029	1,064,469	12.4	131,994	257,612	13.1	139,445	264,847	14.0	149,026	289,491

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	15.2%	\$121,329	\$ 286,574	15.6%	\$124,522	\$ 298,069	17.2%	\$137,294	\$ 327,538
2021	824,161	15.2	125,272	290,500	15.6	128,569	302,152	17.2	141,756	332,025
2022	850,946	15.2	129,344	294,163	15.6	132,748	305,962	17.2	146,363	336,212
2023	878,602	15.2	133,548	297,526	15.6	137,062	309,460	17.2	151,120	340,056
2024	907,157	15.2	137,888	300,549	15.6	141,516	312,604	17.2	156,031	343,511
2025	936,640	15.2	142,369	303,189	15.6	146,116	315,349	17.2	161,102	346,528
2026	967,081	15.2	146,996	305,398	15.6	150,865	317,646	17.2	166,338	349,052
2027	998,511	15.2	151,774	307,124	15.6	155,768	319,441	17.2	171,744	351,025
2028	1,030,963	15.2	156,706	308,312	15.6	160,830	320,676	17.2	177,326	352,382
2029	1,064,469	15.2	161,799	308,901	15.6	166,057	321,288	17.2	183,089	353,055

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (2% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	7.2%	\$57,472	\$ 163,773	9.3%	\$74,234	\$ 204,678	9.0%	\$71,840	\$ 209,538
2021	824,161	7.2	59,340	166,017	9.3	76,647	207,482	9.0	74,174	212,409
2022	850,946	7.2	61,268	168,110	9.3	79,138	210,098	9.0	76,585	215,087
2023	878,602	7.2	63,259	170,032	9.3	81,710	212,500	9.0	79,074	217,546
2024	907,157	7.2	65,315	171,760	9.3	84,366	214,659	9.0	81,644	219,756
2025	936,640	7.2	67,438	173,268	9.3	87,108	216,544	9.0	84,298	221,686
2026	967,081	7.2	69,630	174,530	9.3	89,939	218,121	9.0	87,037	223,301
2027	998,511	7.2	71,893	175,516	9.3	92,862	219,354	9.0	89,866	224,563
2028	1,030,963	7.2	74,229	176,195	9.3	95,880	220,202	9.0	92,787	225,431
2029	1,064,469	7.2	76,642	176,531	9.3	98,996	220,622	9.0	95,802	225,861

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	10.5%	\$83,813	\$ 238,994	11.2%	\$89,401	\$ 245,704	12.1%	\$96,584	\$ 268,567
2021	824,161	10.5	86,537	242,268	11.2	92,306	249,070	12.1	99,723	272,246
2022	850,946	10.5	89,349	245,323	11.2	95,306	252,211	12.1	102,964	275,679
2023	878,602	10.5	92,253	248,128	11.2	98,403	255,095	12.1	106,311	278,831
2024	907,157	10.5	95,251	250,649	11.2	101,602	257,687	12.1	109,766	281,664
2025	936,640	10.5	98,347	252,850	11.2	104,904	259,950	12.1	113,333	284,138
2026	967,081	10.5	101,544	254,692	11.2	108,313	261,844	12.1	117,017	286,208
2027	998,511	10.5	104,844	256,131	11.2	111,833	263,324	12.1	120,820	287,826
2028	1,030,963	10.5	108,251	257,121	11.2	115,468	264,342	12.1	124,747	288,939
2029	1,064,469	10.5	111,769	257,612	11.2	119,221	264,847	12.1	128,801	289,491

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	13.3%	\$106,163	\$ 286,574	13.7%	\$109,356	\$ 298,069	15.3%	\$122,128	\$ 327,538
2021	824,161	13.3	109,613	290,500	13.7	112,910	302,152	15.3	126,097	332,025
2022	850,946	13.3	113,176	294,163	13.7	116,580	305,962	15.3	130,195	336,212
2023	878,602	13.3	116,854	297,526	13.7	120,368	309,460	15.3	134,426	340,056
2024	907,157	13.3	120,652	300,549	13.7	124,281	312,604	15.3	138,795	343,511
2025	936,640	13.3	124,573	303,189	13.7	128,320	315,349	15.3	143,306	346,528
2026	967,081	13.3	128,622	305,398	13.7	132,490	317,646	15.3	147,963	349,052
2027	998,511	13.3	132,802	307,124	13.7	136,796	319,441	15.3	152,772	351,025
2028	1,030,963	13.3	137,118	308,312	13.7	141,242	320,676	15.3	157,737	352,382
2029	1,064,469	13.3	141,574	308,901	13.7	145,832	321,288	15.3	162,864	353,055

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (4% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	5.3%	\$42,306	\$ 163,773	7.4%	\$59,068	\$ 204,678	7.1%	\$56,674	\$ 209,538
2021	824,161	5.3	43,681	166,017	7.4	60,988	207,482	7.1	58,515	212,409
2022	850,946	5.3	45,100	168,110	7.4	62,970	210,098	7.1	60,417	215,087
2023	878,602	5.3	46,566	170,032	7.4	65,017	212,500	7.1	62,381	217,546
2024	907,157	5.3	48,079	171,760	7.4	67,130	214,659	7.1	64,408	219,756
2025	936,640	5.3	49,642	173,268	7.4	69,311	216,544	7.1	66,501	221,686
2026	967,081	5.3	51,255	174,530	7.4	71,564	218,121	7.1	68,663	223,301
2027	998,511	5.3	52,921	175,516	7.4	73,890	219,354	7.1	70,894	224,563
2028	1,030,963	5.3	54,641	176,195	7.4	76,291	220,202	7.1	73,198	225,431
2029	1,064,469	5.3	56,417	176,531	7.4	78,771	220,622	7.1	75,577	225,861

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	8.6%	\$68,647	\$ 238,994	9.3%	\$74,234	\$ 245,704	10.2%	\$81,418	\$ 268,567
2021	824,161	8.6	70,878	242,268	9.3	76,647	249,070	10.2	84,064	272,246
2022	850,946	8.6	73,181	245,323	9.3	79,138	252,211	10.2	86,796	275,679
2023	878,602	8.6	75,560	248,128	9.3	81,710	255,095	10.2	89,617	278,831
2024	907,157	8.6	78,016	250,649	9.3	84,366	257,687	10.2	92,530	281,664
2025	936,640	8.6	80,551	252,850	9.3	87,108	259,950	10.2	95,537	284,138
2026	967,081	8.6	83,169	254,692	9.3	89,939	261,844	10.2	98,642	286,208
2027	998,511	8.6	85,872	256,131	9.3	92,862	263,324	10.2	101,848	287,826
2028	1,030,963	8.6	88,663	257,121	9.3	95,880	264,342	10.2	105,158	288,939
2029	1,064,469	8.6	91,544	257,612	9.3	98,996	264,847	10.2	108,576	289,491

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	11.4%	\$90,997	\$ 286,574	11.8%	\$94,190	\$ 298,069	13.4%	\$106,961	\$ 327,538
2021	824,161	11.4	93,954	290,500	11.8	97,251	302,152	13.4	110,438	332,025
2022	850,946	11.4	97,008	294,163	11.8	100,412	305,962	13.4	114,027	336,212
2023	878,602	11.4	100,161	297,526	11.8	103,675	309,460	13.4	117,733	340,056
2024	907,157	11.4	103,416	300,549	11.8	107,045	312,604	13.4	121,559	343,511
2025	936,640	11.4	106,777	303,189	11.8	110,524	315,349	13.4	125,510	346,528
2026	967,081	11.4	110,247	305,398	11.8	114,116	317,646	13.4	129,589	349,052
2027	998,511	11.4	113,830	307,124	11.8	117,824	319,441	13.4	133,800	351,025
2028	1,030,963	11.4	117,530	308,312	11.8	121,654	320,676	13.4	138,149	352,382
2029	1,064,469	11.4	121,349	308,901	11.8	125,607	321,288	13.4	142,639	353,055

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (6% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	3.4%	\$27,139	\$ 163,773	5.5%	\$43,902	\$ 204,678	5.2%	\$41,507	\$ 209,538
2021	824,161	3.4	28,021	166,017	5.5	45,329	207,482	5.2	42,856	212,409
2022	850,946	3.4	28,932	168,110	5.5	46,802	210,098	5.2	44,249	215,087
2023	878,602	3.4	29,872	170,032	5.5	48,323	212,500	5.2	45,687	217,546
2024	907,157	3.4	30,843	171,760	5.5	49,894	214,659	5.2	47,172	219,756
2025	936,640	3.4	31,846	173,268	5.5	51,515	216,544	5.2	48,705	221,686
2026	967,081	3.4	32,881	174,530	5.5	53,189	218,121	5.2	50,288	223,301
2027	998,511	3.4	33,949	175,516	5.5	54,918	219,354	5.2	51,923	224,563
2028	1,030,963	3.4	35,053	176,195	5.5	56,703	220,202	5.2	53,610	225,431
2029	1,064,469	3.4	36,192	176,531	5.5	58,546	220,622	5.2	55,352	225,861

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	6.7%	\$53,481	\$ 238,994	7.4%	\$59,068	\$ 245,704	8.3%	\$66,252	\$ 268,567
2021	824,161	6.7	55,219	242,268	7.4	60,988	249,070	8.3	68,405	272,246
2022	850,946	6.7	57,013	245,323	7.4	62,970	252,211	8.3	70,629	275,679
2023	878,602	6.7	58,866	248,128	7.4	65,017	255,095	8.3	72,924	278,831
2024	907,157	6.7	60,780	250,649	7.4	67,130	257,687	8.3	75,294	281,664
2025	936,640	6.7	62,755	252,850	7.4	69,311	259,950	8.3	77,741	284,138
2026	967,081	6.7	64,794	254,692	7.4	71,564	261,844	8.3	80,268	286,208
2027	998,511	6.7	66,900	256,131	7.4	73,890	263,324	8.3	82,876	287,826
2028	1,030,963	6.7	69,075	257,121	7.4	76,291	264,342	8.3	85,570	288,939
2029	1,064,469	6.7	71,319	257,612	7.4	78,771	264,847	8.3	88,351	289,491

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	9.5%	\$75,831	\$ 286,574	9.9%	\$79,024	\$ 298,069	11.5%	\$91,795	\$ 327,538
2021	824,161	9.5	78,295	290,500	9.9	81,592	302,152	11.5	94,779	332,025
2022	850,946	9.5	80,840	294,163	9.9	84,244	305,962	11.5	97,859	336,212
2023	878,602	9.5	83,467	297,526	9.9	86,982	309,460	11.5	101,039	340,056
2024	907,157	9.5	86,180	300,549	9.9	89,809	312,604	11.5	104,323	343,511
2025	936,640	9.5	88,981	303,189	9.9	92,727	315,349	11.5	107,714	346,528
2026	967,081	9.5	91,873	305,398	9.9	95,741	317,646	11.5	111,214	349,052
2027	998,511	9.5	94,859	307,124	9.9	98,853	319,441	11.5	114,829	351,025
2028	1,030,963	9.5	97,941	308,312	9.9	102,065	320,676	11.5	118,561	352,382
2029	1,064,469	9.5	101,125	308,901	9.9	105,382	321,288	11.5	122,414	353,055

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (0% Member Contribution Rate, 5 Year FAS)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	9.0%	\$71,840	\$ 163,489	11.1%	\$88,602	\$ 204,319	11.0%	\$87,804	\$ 219,422
2021	824,161	9.0	74,174	165,729	11.1	91,482	207,118	11.0	90,658	222,428
2022	850,946	9.0	76,585	167,819	11.1	94,455	209,730	11.0	93,604	225,233
2023	878,602	9.0	79,074	169,738	11.1	97,525	212,128	11.0	96,646	227,808
2024	907,157	9.0	81,644	171,463	11.1	100,694	214,283	11.0	99,787	230,123
2025	936,640	9.0	84,298	172,969	11.1	103,967	216,165	11.0	103,030	232,144
2026	967,081	9.0	87,037	174,229	11.1	107,346	217,740	11.0	106,379	233,835
2027	998,511	9.0	89,866	175,214	11.1	110,835	218,971	11.0	109,836	235,157
2028	1,030,963	9.0	92,787	175,892	11.1	114,437	219,818	11.0	113,406	236,066
2029	1,064,469	9.0	95,802	176,228	11.1	118,156	220,238	11.0	117,092	236,517

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	12.6%	\$100,576	\$ 246,323	13.0%	\$103,768	\$ 245,163	14.0%	\$111,751	\$ 273,150
2021	824,161	12.6	103,844	249,698	13.0	107,141	248,522	14.0	115,383	276,892
2022	850,946	12.6	107,219	252,847	13.0	110,623	251,656	14.0	119,132	280,383
2023	878,602	12.6	110,704	255,738	13.0	114,218	254,533	14.0	123,004	283,589
2024	907,157	12.6	114,302	258,337	13.0	117,930	257,119	14.0	127,002	286,471
2025	936,640	12.6	118,017	260,606	13.0	121,763	259,377	14.0	131,130	288,987
2026	967,081	12.6	121,852	262,504	13.0	125,721	261,266	14.0	135,391	291,092
2027	998,511	12.6	125,812	263,988	13.0	129,806	262,743	14.0	139,792	292,737
2028	1,030,963	12.6	129,901	265,009	13.0	134,025	263,759	14.0	144,335	293,869
2029	1,064,469	12.6	134,123	265,515	13.0	138,381	264,263	14.0	149,026	294,430

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	15.0%	\$119,733	\$ 285,983	15.5%	\$123,724	\$ 299,976	17.1%	\$136,495	\$ 326,899
2021	824,161	15.0	123,624	289,901	15.5	127,745	304,086	17.1	140,932	331,377
2022	850,946	15.0	127,642	293,556	15.5	131,897	307,920	17.1	145,512	335,555
2023	878,602	15.0	131,790	296,912	15.5	136,183	311,440	17.1	150,241	339,391
2024	907,157	15.0	136,074	299,929	15.5	140,609	314,605	17.1	155,124	342,840
2025	936,640	15.0	140,496	302,563	15.5	145,179	317,368	17.1	160,165	345,851
2026	967,081	15.0	145,062	304,767	15.5	149,898	319,680	17.1	165,371	348,370
2027	998,511	15.0	149,777	306,489	15.5	154,769	321,487	17.1	170,745	350,339
2028	1,030,963	15.0	154,644	307,674	15.5	159,799	322,730	17.1	176,295	351,694
2029	1,064,469	15.0	159,670	308,261	15.5	164,993	323,346	17.1	182,024	352,366

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (2% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	7.1%	\$56,674	\$ 163,489	9.2%	\$73,436	\$ 204,319	9.1%	\$72,638	\$ 219,422
2021	824,161	7.1	58,515	165,729	9.2	75,823	207,118	9.1	74,999	222,428
2022	850,946	7.1	60,417	167,819	9.2	78,287	209,730	9.1	77,436	225,233
2023	878,602	7.1	62,381	169,738	9.2	80,831	212,128	9.1	79,953	227,808
2024	907,157	7.1	64,408	171,463	9.2	83,458	214,283	9.1	82,551	230,123
2025	936,640	7.1	66,501	172,969	9.2	86,171	216,165	9.1	85,234	232,144
2026	967,081	7.1	68,663	174,229	9.2	88,971	217,740	9.1	88,004	233,835
2027	998,511	7.1	70,894	175,214	9.2	91,863	218,971	9.1	90,865	235,157
2028	1,030,963	7.1	73,198	175,892	9.2	94,849	219,818	9.1	93,818	236,066
2029	1,064,469	7.1	75,577	176,228	9.2	97,931	220,238	9.1	96,867	236,517

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	10.7%	\$85,409	\$ 246,323	11.1%	\$88,602	\$ 245,163	12.1%	\$96,584	\$ 273,150
2021	824,161	10.7	88,185	249,698	11.1	91,482	248,522	12.1	99,723	276,892
2022	850,946	10.7	91,051	252,847	11.1	94,455	251,656	12.1	102,964	280,383
2023	878,602	10.7	94,010	255,738	11.1	97,525	254,533	12.1	106,311	283,589
2024	907,157	10.7	97,066	258,337	11.1	100,694	257,119	12.1	109,766	286,471
2025	936,640	10.7	100,220	260,606	11.1	103,967	259,377	12.1	113,333	288,987
2026	967,081	10.7	103,478	262,504	11.1	107,346	261,266	12.1	117,017	291,092
2027	998,511	10.7	106,841	263,988	11.1	110,835	262,743	12.1	120,820	292,737
2028	1,030,963	10.7	110,313	265,009	11.1	114,437	263,759	12.1	124,747	293,869
2029	1,064,469	10.7	113,898	265,515	11.1	118,156	264,263	12.1	128,801	294,430

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	13.1%	\$104,567	\$ 285,983	13.6%	\$108,558	\$ 299,976	15.2%	\$121,329	\$ 326,899
2021	824,161	13.1	107,965	289,901	13.6	112,086	304,086	15.2	125,272	331,377
2022	850,946	13.1	111,474	293,556	13.6	115,729	307,920	15.2	129,344	335,555
2023	878,602	13.1	115,097	296,912	13.6	119,490	311,440	15.2	133,548	339,391
2024	907,157	13.1	118,838	299,929	13.6	123,373	314,605	15.2	137,888	342,840
2025	936,640	13.1	122,700	302,563	13.6	127,383	317,368	15.2	142,369	345,851
2026	967,081	13.1	126,688	304,767	13.6	131,523	319,680	15.2	146,996	348,370
2027	998,511	13.1	130,805	306,489	13.6	135,797	321,487	15.2	151,774	350,339
2028	1,030,963	13.1	135,056	307,674	13.6	140,211	322,730	15.2	156,706	351,694
2029	1,064,469	13.1	139,445	308,261	13.6	144,768	323,346	15.2	161,799	352,366

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (4% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	5.2%	\$41,507	\$ 163,489	7.3%	\$58,270	\$ 204,319	7.2%	\$57,472	\$ 219,422
2021	824,161	5.2	42,856	165,729	7.3	60,164	207,118	7.2	59,340	222,428
2022	850,946	5.2	44,249	167,819	7.3	62,119	209,730	7.2	61,268	225,233
2023	878,602	5.2	45,687	169,738	7.3	64,138	212,128	7.2	63,259	227,808
2024	907,157	5.2	47,172	171,463	7.3	66,222	214,283	7.2	65,315	230,123
2025	936,640	5.2	48,705	172,969	7.3	68,375	216,165	7.2	67,438	232,144
2026	967,081	5.2	50,288	174,229	7.3	70,597	217,740	7.2	69,630	233,835
2027	998,511	5.2	51,923	175,214	7.3	72,891	218,971	7.2	71,893	235,157
2028	1,030,963	5.2	53,610	175,892	7.3	75,260	219,818	7.2	74,229	236,066
2029	1,064,469	5.2	55,352	176,228	7.3	77,706	220,238	7.2	76,642	236,517

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	8.8%	\$70,243	\$ 246,323	9.2%	\$73,436	\$ 245,163	10.2%	\$81,418	\$ 273,150
2021	824,161	8.8	72,526	249,698	9.2	75,823	248,522	10.2	84,064	276,892
2022	850,946	8.8	74,883	252,847	9.2	78,287	251,656	10.2	86,796	280,383
2023	878,602	8.8	77,317	255,738	9.2	80,831	254,533	10.2	89,617	283,589
2024	907,157	8.8	79,830	258,337	9.2	83,458	257,119	10.2	92,530	286,471
2025	936,640	8.8	82,424	260,606	9.2	86,171	259,377	10.2	95,537	288,987
2026	967,081	8.8	85,103	262,504	9.2	88,971	261,266	10.2	98,642	291,092
2027	998,511	8.8	87,869	263,988	9.2	91,863	262,743	10.2	101,848	292,737
2028	1,030,963	8.8	90,725	265,009	9.2	94,849	263,759	10.2	105,158	293,869
2029	1,064,469	8.8	93,673	265,515	9.2	97,931	264,263	10.2	108,576	294,430

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	11.2%	\$89,401	\$ 285,983	11.7%	\$93,392	\$ 299,976	13.3%	\$106,163	\$ 326,899
2021	824,161	11.2	92,306	289,901	11.7	96,427	304,086	13.3	109,613	331,377
2022	850,946	11.2	95,306	293,556	11.7	99,561	307,920	13.3	113,176	335,555
2023	878,602	11.2	98,403	296,912	11.7	102,796	311,440	13.3	116,854	339,391
2024	907,157	11.2	101,602	299,929	11.7	106,137	314,605	13.3	120,652	342,840
2025	936,640	11.2	104,904	302,563	11.7	109,587	317,368	13.3	124,573	345,851
2026	967,081	11.2	108,313	304,767	11.7	113,148	319,680	13.3	128,622	348,370
2027	998,511	11.2	111,833	306,489	11.7	116,826	321,487	13.3	132,802	350,339
2028	1,030,963	11.2	115,468	307,674	11.7	120,623	322,730	13.3	137,118	351,694
2029	1,064,469	11.2	119,221	308,261	11.7	124,543	323,346	13.3	141,574	352,366

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (6% Member Contribution Rate, 5 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	3.3%	\$26,341	\$ 163,489	5.4%	\$43,104	\$ 204,319	5.3%	\$42,306	\$ 219,422
2021	824,161	3.3	27,197	165,729	5.4	44,505	207,118	5.3	43,681	222,428
2022	850,946	3.3	28,081	167,819	5.4	45,951	209,730	5.3	45,100	225,233
2023	878,602	3.3	28,994	169,738	5.4	47,445	212,128	5.3	46,566	227,808
2024	907,157	3.3	29,936	171,463	5.4	48,986	214,283	5.3	48,079	230,123
2025	936,640	3.3	30,909	172,969	5.4	50,579	216,165	5.3	49,642	232,144
2026	967,081	3.3	31,914	174,229	5.4	52,222	217,740	5.3	51,255	233,835
2027	998,511	3.3	32,951	175,214	5.4	53,920	218,971	5.3	52,921	235,157
2028	1,030,963	3.3	34,022	175,892	5.4	55,672	219,818	5.3	54,641	236,066
2029	1,064,469	3.3	35,127	176,228	5.4	57,481	220,238	5.3	56,417	236,517

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	6.9%	\$55,077	\$ 246,323	7.3%	\$58,270	\$ 245,163	8.3%	\$66,252	\$ 273,150
2021	824,161	6.9	56,867	249,698	7.3	60,164	248,522	8.3	68,405	276,892
2022	850,946	6.9	58,715	252,847	7.3	62,119	251,656	8.3	70,629	280,383
2023	878,602	6.9	60,624	255,738	7.3	64,138	254,533	8.3	72,924	283,589
2024	907,157	6.9	62,594	258,337	7.3	66,222	257,119	8.3	75,294	286,471
2025	936,640	6.9	64,628	260,606	7.3	68,375	259,377	8.3	77,741	288,987
2026	967,081	6.9	66,729	262,504	7.3	70,597	261,266	8.3	80,268	291,092
2027	998,511	6.9	68,897	263,988	7.3	72,891	262,743	8.3	82,876	292,737
2028	1,030,963	6.9	71,136	265,009	7.3	75,260	263,759	8.3	85,570	293,869
2029	1,064,469	6.9	73,448	265,515	7.3	77,706	264,263	8.3	88,351	294,430

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	9.3%	\$74,234	\$ 285,983	9.8%	\$78,225	\$ 299,976	11.4%	\$90,997	\$ 326,899
2021	824,161	9.3	76,647	289,901	9.8	80,768	304,086	11.4	93,954	331,377
2022	850,946	9.3	79,138	293,556	9.8	83,393	307,920	11.4	97,008	335,555
2023	878,602	9.3	81,710	296,912	9.8	86,103	311,440	11.4	100,161	339,391
2024	907,157	9.3	84,366	299,929	9.8	88,901	314,605	11.4	103,416	342,840
2025	936,640	9.3	87,108	302,563	9.8	91,791	317,368	11.4	106,777	345,851
2026	967,081	9.3	89,939	304,767	9.8	94,774	319,680	11.4	110,247	348,370
2027	998,511	9.3	92,862	306,489	9.8	97,854	321,487	11.4	113,830	350,339
2028	1,030,963	9.3	95,880	307,674	9.8	101,034	322,730	11.4	117,530	351,694
2029	1,064,469	9.3	98,996	308,261	9.8	104,318	323,346	11.4	121,349	352,366

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (0% Member Contribution Rate, 3 Year FAS)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	9.3%	\$74,234	\$ 168,942	11.4%	\$90,997	\$ 211,167	11.3%	\$90,199	\$ 226,948
2021	824,161	9.3	76,647	171,256	11.4	93,954	214,060	11.3	93,130	230,057
2022	850,946	9.3	79,138	173,415	11.4	97,008	216,759	11.3	96,157	232,958
2023	878,602	9.3	81,710	175,398	11.4	100,161	219,237	11.3	99,282	235,621
2024	907,157	9.3	84,366	177,180	11.4	103,416	221,465	11.3	102,509	238,015
2025	936,640	9.3	87,108	178,736	11.4	106,777	223,410	11.3	105,840	240,105
2026	967,081	9.3	89,939	180,038	11.4	110,247	225,037	11.3	109,280	241,854
2027	998,511	9.3	92,862	181,056	11.4	113,830	226,309	11.3	112,832	243,221
2028	1,030,963	9.3	95,880	181,756	11.4	117,530	227,184	11.3	116,499	244,162
2029	1,064,469	9.3	98,996	182,103	11.4	121,349	227,618	11.3	120,285	244,628

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	12.9%	\$102,970	\$ 254,676	13.5%	\$107,760	\$ 253,417	14.5%	\$115,742	\$ 282,432
2021	824,161	12.9	106,317	258,165	13.5	111,262	256,889	14.5	119,503	286,301
2022	850,946	12.9	109,772	261,420	13.5	114,878	260,128	14.5	123,387	289,911
2023	878,602	12.9	113,340	264,409	13.5	118,611	263,102	14.5	127,397	293,226
2024	907,157	12.9	117,023	267,096	13.5	122,466	265,775	14.5	131,538	296,205
2025	936,640	12.9	120,827	269,442	13.5	126,446	268,109	14.5	135,813	298,806
2026	967,081	12.9	124,753	271,405	13.5	130,556	270,062	14.5	140,227	300,983
2027	998,511	12.9	128,808	272,939	13.5	134,799	271,588	14.5	144,784	302,684
2028	1,030,963	12.9	132,994	273,994	13.5	139,180	272,638	14.5	149,490	303,854
2029	1,064,469	12.9	137,317	274,517	13.5	143,703	273,159	14.5	154,348	304,434

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	15.6%	\$124,522	\$ 295,617	16.1%	\$128,513	\$ 310,159	17.6%	\$140,487	\$ 337,917
2021	824,161	15.6	128,569	299,667	16.1	132,690	314,408	17.6	145,052	342,546
2022	850,946	15.6	132,748	303,446	16.1	137,002	318,372	17.6	149,766	346,865
2023	878,602	15.6	137,062	306,915	16.1	141,455	322,012	17.6	154,634	350,831
2024	907,157	15.6	141,516	310,034	16.1	146,052	325,284	17.6	159,660	354,396
2025	936,640	15.6	146,116	312,757	16.1	150,799	328,141	17.6	164,849	357,508
2026	967,081	15.6	150,865	315,035	16.1	155,700	330,531	17.6	170,206	360,112
2027	998,511	15.6	155,768	316,815	16.1	160,760	332,399	17.6	175,738	362,147
2028	1,030,963	15.6	160,830	318,040	16.1	165,985	333,684	17.6	181,449	363,547
2029	1,064,469	15.6	166,057	318,647	16.1	171,380	334,321	17.6	187,347	364,241

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (2% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	7.4%	\$59,068	\$ 168,942	9.5%	\$75,831	\$ 211,167	9.4%	\$75,033	\$ 226,948
2021	824,161	7.4	60,988	171,256	9.5	78,295	214,060	9.4	77,471	230,057
2022	850,946	7.4	62,970	173,415	9.5	80,840	216,759	9.4	79,989	232,958
2023	878,602	7.4	65,017	175,398	9.5	83,467	219,237	9.4	82,589	235,621
2024	907,157	7.4	67,130	177,180	9.5	86,180	221,465	9.4	85,273	238,015
2025	936,640	7.4	69,311	178,736	9.5	88,981	223,410	9.4	88,044	240,105
2026	967,081	7.4	71,564	180,038	9.5	91,873	225,037	9.4	90,906	241,854
2027	998,511	7.4	73,890	181,056	9.5	94,859	226,309	9.4	93,860	243,221
2028	1,030,963	7.4	76,291	181,756	9.5	97,941	227,184	9.4	96,911	244,162
2029	1,064,469	7.4	78,771	182,103	9.5	101,125	227,618	9.4	100,060	244,628

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	11.0%	\$87,804	\$ 254,676	11.6%	\$92,593	\$ 253,417	12.6%	\$100,576	\$ 282,432
2021	824,161	11.0	90,658	258,165	11.6	95,603	256,889	12.6	103,844	286,301
2022	850,946	11.0	93,604	261,420	11.6	98,710	260,128	12.6	107,219	289,911
2023	878,602	11.0	96,646	264,409	11.6	101,918	263,102	12.6	110,704	293,226
2024	907,157	11.0	99,787	267,096	11.6	105,230	265,775	12.6	114,302	296,205
2025	936,640	11.0	103,030	269,442	11.6	108,650	268,109	12.6	118,017	298,806
2026	967,081	11.0	106,379	271,405	11.6	112,181	270,062	12.6	121,852	300,983
2027	998,511	11.0	109,836	272,939	11.6	115,827	271,588	12.6	125,812	302,684
2028	1,030,963	11.0	113,406	273,994	11.6	119,592	272,638	12.6	129,901	303,854
2029	1,064,469	11.0	117,092	274,517	11.6	123,478	273,159	12.6	134,123	304,434

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	13.7%	\$109,356	\$ 295,617	14.2%	\$113,347	\$ 310,159	15.7%	\$125,320	\$ 337,917
2021	824,161	13.7	112,910	299,667	14.2	117,031	314,408	15.7	129,393	342,546
2022	850,946	13.7	116,580	303,446	14.2	120,834	318,372	15.7	133,599	346,865
2023	878,602	13.7	120,368	306,915	14.2	124,761	322,012	15.7	137,941	350,831
2024	907,157	13.7	124,281	310,034	14.2	128,816	325,284	15.7	142,424	354,396
2025	936,640	13.7	128,320	312,757	14.2	133,003	328,141	15.7	147,052	357,508
2026	967,081	13.7	132,490	315,035	14.2	137,326	330,531	15.7	151,832	360,112
2027	998,511	13.7	136,796	316,815	14.2	141,789	332,399	15.7	156,766	362,147
2028	1,030,963	13.7	141,242	318,040	14.2	146,397	333,684	15.7	161,861	363,547
2029	1,064,469	13.7	145,832	318,647	14.2	151,155	334,321	15.7	167,122	364,241

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (4% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	5.5%	\$43,902	\$ 168,942	7.6%	\$60,665	\$ 211,167	7.5%	\$59,866	\$ 226,948
2021	824,161	5.5	45,329	171,256	7.6	62,636	214,060	7.5	61,812	230,057
2022	850,946	5.5	46,802	173,415	7.6	64,672	216,759	7.5	63,821	232,958
2023	878,602	5.5	48,323	175,398	7.6	66,774	219,237	7.5	65,895	235,621
2024	907,157	5.5	49,894	177,180	7.6	68,944	221,465	7.5	68,037	238,015
2025	936,640	5.5	51,515	178,736	7.6	71,185	223,410	7.5	70,248	240,105
2026	967,081	5.5	53,189	180,038	7.6	73,498	225,037	7.5	72,531	241,854
2027	998,511	5.5	54,918	181,056	7.6	75,887	226,309	7.5	74,888	243,221
2028	1,030,963	5.5	56,703	181,756	7.6	78,353	227,184	7.5	77,322	244,162
2029	1,064,469	5.5	58,546	182,103	7.6	80,900	227,618	7.5	79,835	244,628

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	9.1%	\$72,638	\$ 254,676	9.7%	\$77,427	\$ 253,417	10.7%	\$85,409	\$ 282,432
2021	824,161	9.1	74,999	258,165	9.7	79,944	256,889	10.7	88,185	286,301
2022	850,946	9.1	77,436	261,420	9.7	82,542	260,128	10.7	91,051	289,911
2023	878,602	9.1	79,953	264,409	9.7	85,224	263,102	10.7	94,010	293,226
2024	907,157	9.1	82,551	267,096	9.7	87,994	265,775	10.7	97,066	296,205
2025	936,640	9.1	85,234	269,442	9.7	90,854	268,109	10.7	100,220	298,806
2026	967,081	9.1	88,004	271,405	9.7	93,807	270,062	10.7	103,478	300,983
2027	998,511	9.1	90,865	272,939	9.7	96,856	271,588	10.7	106,841	302,684
2028	1,030,963	9.1	93,818	273,994	9.7	100,003	272,638	10.7	110,313	303,854
2029	1,064,469	9.1	96,867	274,517	9.7	103,253	273,159	10.7	113,898	304,434

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	11.8%	\$94,190	\$ 295,617	12.3%	\$98,181	\$ 310,159	13.8%	\$110,154	\$ 337,917
2021	824,161	11.8	97,251	299,667	12.3	101,372	314,408	13.8	113,734	342,546
2022	850,946	11.8	100,412	303,446	12.3	104,666	318,372	13.8	117,431	346,865
2023	878,602	11.8	103,675	306,915	12.3	108,068	322,012	13.8	121,247	350,831
2024	907,157	11.8	107,045	310,034	12.3	111,580	325,284	13.8	125,188	354,396
2025	936,640	11.8	110,524	312,757	12.3	115,207	328,141	13.8	129,256	357,508
2026	967,081	11.8	114,116	315,035	12.3	118,951	330,531	13.8	133,457	360,112
2027	998,511	11.8	117,824	316,815	12.3	122,817	332,399	13.8	137,795	362,147
2028	1,030,963	11.8	121,654	318,040	12.3	126,808	333,684	13.8	142,273	363,547
2029	1,064,469	11.8	125,607	318,647	12.3	130,930	334,321	13.8	146,897	364,241

Notes regarding the above projections:

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



Bates County - Police

Employer Contribution Rates (6% Member Contribution Rate, 3 Year FAS)

(Member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	3.6%	\$28,736	\$ 168,942	5.7%	\$45,498	\$ 211,167	5.6%	\$44,700	\$ 226,948
2021	824,161	3.6	29,670	171,256	5.7	46,977	214,060	5.6	46,153	230,057
2022	850,946	3.6	30,634	173,415	5.7	48,504	216,759	5.6	47,653	232,958
2023	878,602	3.6	31,630	175,398	5.7	50,080	219,237	5.6	49,202	235,621
2024	907,157	3.6	32,658	177,180	5.7	51,708	221,465	5.6	50,801	238,015
2025	936,640	3.6	33,719	178,736	5.7	53,388	223,410	5.6	52,452	240,105
2026	967,081	3.6	34,815	180,038	5.7	55,124	225,037	5.6	54,157	241,854
2027	998,511	3.6	35,946	181,056	5.7	56,915	226,309	5.6	55,917	243,221
2028	1,030,963	3.6	37,115	181,756	5.7	58,765	227,184	5.6	57,734	244,162
2029	1,064,469	3.6	38,321	182,103	5.7	60,675	227,618	5.6	59,610	244,628

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	7.2%	\$57,472	\$ 254,676	7.8%	\$62,261	\$ 253,417	8.8%	\$70,243	\$ 282,432
2021	824,161	7.2	59,340	258,165	7.8	64,285	256,889	8.8	72,526	286,301
2022	850,946	7.2	61,268	261,420	7.8	66,374	260,128	8.8	74,883	289,911
2023	878,602	7.2	63,259	264,409	7.8	68,531	263,102	8.8	77,317	293,226
2024	907,157	7.2	65,315	267,096	7.8	70,758	265,775	8.8	79,830	296,205
2025	936,640	7.2	67,438	269,442	7.8	73,058	268,109	8.8	82,424	298,806
2026	967,081	7.2	69,630	271,405	7.8	75,432	270,062	8.8	85,103	300,983
2027	998,511	7.2	71,893	272,939	7.8	77,884	271,588	8.8	87,869	302,684
2028	1,030,963	7.2	74,229	273,994	7.8	80,415	272,638	8.8	90,725	303,854
2029	1,064,469	7.2	76,642	274,517	7.8	83,029	273,159	8.8	93,673	304,434

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 798,219	9.9%	\$79,024	\$ 295,617	10.4%	\$83,015	\$ 310,159	11.9%	\$94,988	\$ 337,917
2021	824,161	9.9	81,592	299,667	10.4	85,713	314,408	11.9	98,075	342,546
2022	850,946	9.9	84,244	303,446	10.4	88,498	318,372	11.9	101,263	346,865
2023	878,602	9.9	86,982	306,915	10.4	91,375	322,012	11.9	104,554	350,831
2024	907,157	9.9	89,809	310,034	10.4	94,344	325,284	11.9	107,952	354,396
2025	936,640	9.9	92,727	312,757	10.4	97,411	328,141	11.9	111,460	357,508
2026	967,081	9.9	95,741	315,035	10.4	100,576	330,531	11.9	115,083	360,112
2027	998,511	9.9	98,853	316,815	10.4	103,845	332,399	11.9	118,823	362,147
2028	1,030,963	9.9	102,065	318,040	10.4	107,220	333,684	11.9	122,685	363,547
2029	1,064,469	9.9	105,382	318,647	10.4	110,705	334,321	11.9	126,672	364,241

Notes regarding the above projections:

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

