



The Initial Valuation For
Kirkwood Public Library
as of December 31, 2021



Table of Contents

	Page
Actuary's Certification Letter	1
Alternate Plans Available	3
Employer Contribution Rates	
Regular Eligibility:	
5-Year Final Average Salary	4
3-Year Final Average Salary	5
Rule of 80 Eligibility:	
5-Year Final Average Salary	6
3-Year Final Average Salary	7
Employer Contribution Dollars	8
Appendix I	
Unfunded Actuarial Accrued Liability	10
Appendix II	
Summary of Financial Assumptions	12
Appendix III	
Summary of LAGERS Provisions	16
Appendix IV	
Benefit Illustrations.....	19
Appendix V	
Age and Service Characteristics of Employees	28
Appendix VI	
Risk Commentary.....	29



February 14, 2022

Kirkwood Public Library
Kirkwood, 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 - 105.685 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 28, 2021.

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 December 31, 2021. 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.

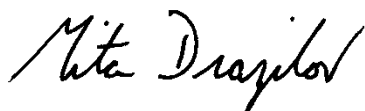
If you have any questions concerning this report or LAGERS in general, please contact the LAGERS office in Jefferson City.

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,
Gabriel, Roeder, Smith & Company



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.

Kirkwood Public Library

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	6.60%	0.20%	1.10%	7.90%	6.00%	4.10%	2.20%
L-3	General	8.00	0.30	1.30	9.60	7.70	5.80	3.90
LT-4(65)	General	7.20	0.20	1.20	8.60	6.70	4.80	2.90
LT-5(65)	General	8.40	0.30	1.40	10.10	8.20	6.30	4.40
L-7	General	9.40	0.30	1.60	11.30	9.40	7.50	5.60
LT-8(65)	General	9.70	0.30	1.70	11.70	9.80	7.90	6.00
L-12	General	10.80	0.40	1.90	13.10	11.20	9.30	7.40
LT-14(65)	General	11.00	0.40	1.90	13.30	11.40	9.50	7.60
L-6	General	12.30	0.50	2.10	14.90	13.00	11.10	9.20

* Prior service given for 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.

Kirkwood Public Library

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	6.80%	0.20%	1.10%	8.10%	6.20%	4.30%	2.40%
L-3	General	8.20	0.30	1.40	9.90	8.00	6.10	4.20
LT-4(65)	General	7.40	0.20	1.20	8.80	6.90	5.00	3.10
LT-5(65)	General	8.70	0.30	1.50	10.50	8.60	6.70	4.80
L-7	General	9.70	0.30	1.60	11.60	9.70	7.80	5.90
LT-8(65)	General	10.00	0.30	1.70	12.00	10.10	8.20	6.30
L-12	General	11.20	0.40	1.90	13.50	11.60	9.70	7.80
LT-14(65)	General	11.30	0.40	1.90	13.60	11.70	9.80	7.90
L-6	General	12.60	0.50	2.20	15.30	13.40	11.50	9.60

* Prior service given for 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.

Kirkwood Public Library

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	6.90%	0.20%	1.20%	8.30%	6.40%	4.50%	2.60%
L-3	General	8.40	0.30	1.40	10.10	8.20	6.30	4.40
LT-4(65)	General	8.00	0.20	1.40	9.60	7.70	5.80	3.90
LT-5(65)	General	9.20	0.30	1.60	11.10	9.20	7.30	5.40
L-7	General	9.90	0.30	1.70	11.90	10.00	8.10	6.20
LT-8(65)	General	10.40	0.30	1.90	12.60	10.70	8.80	6.90
L-12	General	11.40	0.40	2.00	13.80	11.90	10.00	8.10
LT-14(65)	General	11.70	0.40	2.10	14.20	12.30	10.40	8.50
L-6	General	12.90	0.50	2.30	15.70	13.80	11.90	10.00

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

* Prior service given for 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.

Kirkwood Public Library

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	7.10%	0.20%	1.20%	8.50%	6.60%	4.70%	2.80%
L-3	General	8.70	0.30	1.50	10.50	8.60	6.70	4.80
LT-4(65)	General	8.20	0.20	1.50	9.90	8.00	6.10	4.20
LT-5(65)	General	9.50	0.30	1.70	11.50	9.60	7.70	5.80
L-7	General	10.20	0.30	1.80	12.30	10.40	8.50	6.60
LT-8(65)	General	10.80	0.30	1.90	13.00	11.10	9.20	7.30
L-12	General	11.80	0.40	2.10	14.30	12.40	10.50	8.60
LT-14(65)	General	12.10	0.40	2.20	14.70	12.80	10.90	9.00
L-6	General	13.30	0.50	2.40	16.20	14.30	12.40	10.50

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

* Prior service given for 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.

Kirkwood Public Library

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

Benefit Program	5 Year FAS			
	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 53,511	\$ 40,642	\$ 27,772	\$ 14,902
L-3	65,027	52,157	39,287	26,417
LT-4(65)	58,253	45,383	32,513	19,643
LT-5(65)	68,413	55,544	42,674	29,804
L-7	76,542	63,672	50,802	37,932
LT-8(65)	79,251	66,381	53,511	40,642
L-12	88,734	75,864	62,995	50,125
LT-14(65)	90,089	77,219	64,349	51,479
L-6	100,927	88,057	75,187	62,317

Benefit Program	3 Year FAS			
	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 54,866	\$ 41,996	\$ 29,127	\$ 16,257
L-3	67,059	54,189	41,319	28,449
LT-4(65)	59,608	46,738	33,868	20,998
LT-5(65)	71,123	58,253	45,383	32,513
L-7	78,574	65,704	52,834	39,964
LT-8(65)	81,283	68,413	55,544	42,674
L-12	91,444	78,574	65,704	52,834
LT-14(65)	92,121	79,251	66,381	53,511
L-6	103,636	90,766	77,896	65,027

Rule of 80 Retirement Eligibility

Benefit Program	5 Year FAS			
	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 56,221	\$ 43,351	\$ 30,481	\$ 17,611
L-3	68,413	55,544	42,674	29,804
LT-4(65)	65,027	52,157	39,287	26,417
LT-5(65)	75,187	62,317	49,447	36,577
L-7	80,606	67,736	54,866	41,996
LT-8(65)	85,347	72,478	59,608	46,738
L-12	93,476	80,606	67,736	54,866
LT-14(65)	96,185	83,315	70,446	57,576
L-6	106,346	93,476	80,606	67,736

Benefit Program	3 Year FAS			
	Member Contribution Rate			
	0%	2%	4%	6%
L-1	\$ 57,576	\$ 44,706	\$ 31,836	\$ 18,966
L-3	71,123	58,253	45,383	32,513
LT-4(65)	67,059	54,189	41,319	28,449
LT-5(65)	77,896	65,027	52,157	39,287
L-7	83,315	70,446	57,576	44,706
LT-8(65)	88,057	75,187	62,317	49,447
L-12	96,863	83,993	71,123	58,253
LT-14(65)	99,572	86,702	73,832	60,962
L-6	109,732	96,863	83,993	71,123

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.

Kirkwood Public Library

Employees and Payroll Included in the Valuation

	General
Number of Employees	13
Annual Payroll	\$ 677,361

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:

Kirkwood Public Library

Regular Retirement Eligibility

Benefit Group	Employee Group	Member Contribution Rate - 0%	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 123,297	\$ 127,156
L-3	General	154,134	158,948
LT-4(65)	General	136,331	140,606
LT-5(65)	General	163,911	169,049
L-7	General	184,946	190,757
LT-8(65)	General	191,479	197,515
L-12	General	215,817	222,543
LT-14(65)	General	219,063	225,879
L-6	General	246,682	254,267

Kirkwood Public Library

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	\$ 133,589	\$ 137,977
L-3	General	166,980	172,422
LT-4(65)	General	165,555	171,116
LT-5(65)	General	191,000	197,278
L-7	General	200,384	206,930
LT-8(65)	General	216,376	223,505
L-12	General	233,811	241,394
LT-14(65)	General	241,810	249,677
L-6	General	267,177	275,895

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 7.00% 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 2.25% and the wage inflation rate used in making the valuations was 2.75%. The 7.00% investment return rate translates to an assumed real rate of return over price inflation of 4.75% and over wage inflation of 4.25%. Adopted 2021.
2. The healthy retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were 115% of the PubG-2010 Retiree Mortality Table for males and females. The disabled retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were 115% of the PubNS-2010 Disabled Retiree Mortality Table for males and females. The pre-retirement mortality tables used were 75% of the PubG-2010 Employee Mortality Table for males and females of General groups and 75% of the PubS-2010 Employee Mortality Table for males and females of Police, Fire and Public Safety groups. Mortality rates for a particular calendar year are determined by applying the MP-2020 mortality improvement scale to the above described tables. Adopted 2021.
3. The probabilities of withdrawal and disability from service, together with individual pay increase assumptions, are shown in Schedule 1. Adopted 2021.
4. The probabilities of retirement with an age and service allowance are shown in Schedule 2. Adopted 2021.
5. Post-retirement cost of living allowances are assumed to be 2.00% per year. Adopted 2021.
6. Total active member payroll is assumed to increase 2.75% 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 2021.
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 and has no material limitations or known weaknesses. 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/Public Safety Members				Police		Fire	
		Men		Women		Disability	Withdrawal	Disability	Withdrawal
		Disability	Withdrawal	Disability	Withdrawal				
All	0		20.00%		23.00%			18.00%	12.00%
	1		18.00		21.00			17.00	10.00
	2		16.00		18.00			16.00	8.00
	3		13.00		15.00			14.00	8.00
	4		12.00		13.00			13.00	7.00
25	5 & Over	0.07%	8.80	0.02%	12.40	0.10%	10.80	0.07%	6.00
30		0.10	7.10	0.03	10.20	0.11	8.50	0.11	4.50
35		0.13	5.60	0.06	7.80	0.16	6.30	0.25	3.20
40		0.18	4.10	0.09	5.80	0.22	4.60	0.39	2.40
45		0.25	3.10	0.15	4.40	0.34	3.40	0.62	1.90
50		0.37	2.40	0.22	3.50	0.53	2.10	0.95	1.30
55		0.57	1.70	0.32	2.50	0.88	1.10	1.46	0.70
60		0.86	1.10	0.45	1.40		0.00		0.00
65			0.00		0.00		0.00		0.00

Percent Increase in Individual's Pay During Next Year			
Sample Ages	General/ Public Safety	Police	Fire
25	6.75%	6.55%	7.15%
30	5.95	5.75	6.05
35	5.35	5.25	5.15
40	4.85	4.75	4.45
45	4.25	4.25	4.05
50	3.85	3.85	3.85
55	3.65	3.65	3.45

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%	2.25%
56	3.00%	3.00%	51	2.50%	2.25%
57	3.00%	3.00%	52	3.00%	2.25%
58	3.00%	3.00%	53	3.00%	2.25%
59	3.00%	3.00%	54	3.50%	2.25%

Normal Retirement

Retirement Ages	General Members		Retirement Ages	Police/ Public Safety	Fire
	Men	Women			
60	10%	10%	55	11%	13%
61	10	10	56	11	13
62	25	15	57	11	13
63	20	15	58	11	13
64	20	15	59	11	13
65	25	25	60	11	15
66	25	30	61	11	20
67	20	25	62	22	20
68	20	25	63	18	20
69	20	20	64	18	20
70	100	100	65	100	100

Schedule 2. (Concluded)

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	20%	15%	25%	25%
51	20	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	25	15	20	45
63	25	15	20	45
64	25	20	20	45
65	30	25	100	100
66	30	25		
67	20	25		
68	20	25		
69	20	25		
70	100	100		

APPENDIX III

SUMMARY OF LAGERS PROVISIONS

Missouri Local Government Employees Retirement System

Brief Summary of LAGERS

Benefits and Conditions Evaluated and/or Considered as of February 28, 2021

(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 $\frac{1}{2}$ 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		Estimated	Estimated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 916	\$1,441	96%
2,000	700	1,055	1,755	88%
2,500	875	1,192	2,067	83%
3,000	1,050	1,330	2,380	79%
3,500	1,225	1,469	2,694	77%
4,000	1,400	1,605	3,005	75%
25 Years of Service:				
\$1,500	\$ 375	\$ 916	\$1,291	86%
2,000	500	1,055	1,555	78%
2,500	625	1,192	1,817	73%
3,000	750	1,330	2,080	69%
3,500	875	1,469	2,344	67%
4,000	1,000	1,605	2,605	65%
15 Years of Service:				
\$1,500	\$225	\$ 916	\$1,141	76%
2,000	300	1,055	1,355	68%
2,500	375	1,192	1,567	63%
3,000	450	1,330	1,780	59%
3,500	525	1,469	1,994	57%
4,000	600	1,605	2,205	55%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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		Estimated	Estimated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 916	\$1,572	105%
2,000	875	1,055	1,930	97%
2,500	1,094	1,192	2,286	91%
3,000	1,313	1,330	2,643	88%
3,500	1,531	1,469	3,000	86%
4,000	1,750	1,605	3,355	84%
25 Years of Service:				
\$1,500	\$ 469	\$ 916	\$1,385	92%
2,000	625	1,055	1,680	84%
2,500	781	1,192	1,973	79%
3,000	938	1,330	2,268	76%
3,500	1,094	1,469	2,563	73%
4,000	1,250	1,605	2,855	71%
15 Years of Service:				
\$1,500	\$281	\$ 916	\$1,197	80%
2,000	375	1,055	1,430	72%
2,500	469	1,192	1,661	66%
3,000	563	1,330	1,893	63%
3,500	656	1,469	2,125	61%
4,000	750	1,605	2,355	59%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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		Estimated	Estimated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 916	\$1,704	114%
2,000	1,050	1,055	2,105	105%
2,500	1,313	1,192	2,505	100%
3,000	1,575	1,330	2,905	97%
3,500	1,838	1,469	3,307	94%
4,000	2,100	1,605	3,705	93%
25 Years of Service:				
\$1,500	\$ 563	\$ 916	\$1,479	99%
2,000	750	1,055	1,805	90%
2,500	938	1,192	2,130	85%
3,000	1,125	1,330	2,455	82%
3,500	1,313	1,469	2,782	79%
4,000	1,500	1,605	3,105	78%
15 Years of Service:				
\$1,500	\$338	\$ 916	\$1,254	84%
2,000	450	1,055	1,505	75%
2,500	563	1,192	1,755	70%
3,000	675	1,330	2,005	67%
3,500	788	1,469	2,257	64%
4,000	900	1,605	2,505	63%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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		Estimated	Estimated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 916	\$1,835	122%
2,000	1,225	1,055	2,280	114%
2,500	1,531	1,192	2,723	109%
3,000	1,838	1,330	3,168	106%
3,500	2,144	1,469	3,613	103%
4,000	2,450	1,605	4,055	101%
25 Years of Service:				
\$1,500	\$ 656	\$ 916	\$1,572	105%
2,000	875	1,055	1,930	97%
2,500	1,094	1,192	2,286	91%
3,000	1,313	1,330	2,643	88%
3,500	1,531	1,469	3,000	86%
4,000	1,750	1,605	3,355	84%
15 Years of Service:				
\$1,500	\$ 394	\$ 916	\$1,310	87%
2,000	525	1,055	1,580	79%
2,500	656	1,192	1,848	74%
3,000	788	1,330	2,118	71%
3,500	919	1,469	2,388	68%
4,000	1,050	1,605	2,655	66%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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		Estimated	Estimated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS

35 Years of Service:

\$1,500	\$1,050	\$ 916	\$1,966	131%
2,000	1,400	1,055	2,455	123%
2,500	1,750	1,192	2,942	118%
3,000	2,100	1,330	3,430	114%
3,500	2,450	1,469	3,919	112%
4,000	2,800	1,605	4,405	110%

25 Years of Service:

\$1,500	\$ 750	\$ 916	\$1,666	111%
2,000	1,000	1,055	2,055	103%
2,500	1,250	1,192	2,442	98%
3,000	1,500	1,330	2,830	94%
3,500	1,750	1,469	3,219	92%
4,000	2,000	1,605	3,605	90%

15 Years of Service:

\$1,500	\$ 450	\$ 916	\$1,366	91%
2,000	600	1,055	1,655	83%
2,500	750	1,192	1,942	78%
3,000	900	1,330	2,230	74%
3,500	1,050	1,469	2,519	72%
4,000	1,200	1,605	2,805	70%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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		Estimated Social Security ²	Estimated		Percent	
	BENEFIT ³			Monthly Total		of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 525	\$ 916	\$1,050	\$1,441	70%	96%
2,000	1,400	700	1,055	1,400	1,755	70%	88%
2,500	1,750	875	1,192	1,750	2,067	70%	83%
3,000	2,100	1,050	1,330	2,100	2,380	70%	79%
3,500	2,450	1,225	1,469	2,450	2,694	70%	77%
4,000	2,800	1,400	1,605	2,800	3,005	70%	75%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 916	\$ 750	\$1,291	50%	86%
2,000	1,000	500	1,055	1,000	1,555	50%	78%
2,500	1,250	625	1,192	1,250	1,817	50%	73%
3,000	1,500	750	1,330	1,500	2,080	50%	69%
3,500	1,750	875	1,469	1,750	2,344	50%	67%
4,000	2,000	1,000	1,605	2,000	2,605	50%	65%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 916	\$ 450	\$1,141	30%	76%
2,000	600	300	1,055	600	1,355	30%	68%
2,500	750	375	1,192	750	1,567	30%	63%
3,000	900	450	1,330	900	1,780	30%	59%
3,500	1,050	525	1,469	1,050	1,994	30%	57%
4,000	1,200	600	1,605	1,200	2,205	30%	55%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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	\$ 916	\$1,050	\$1,572	70%	105%
2,000	1,400	875	1,055	1,400	1,930	70%	97%
2,500	1,750	1,094	1,192	1,750	2,286	70%	91%
3,000	2,100	1,313	1,330	2,100	2,643	70%	88%
3,500	2,450	1,531	1,469	2,450	3,000	70%	86%
4,000	2,800	1,750	1,605	2,800	3,355	70%	84%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 916	\$ 750	\$1,385	50%	92%
2,000	1,000	625	1,055	1,000	1,680	50%	84%
2,500	1,250	781	1,192	1,250	1,973	50%	79%
3,000	1,500	938	1,330	1,500	2,268	50%	76%
3,500	1,750	1,094	1,469	1,750	2,563	50%	73%
4,000	2,000	1,250	1,605	2,000	2,855	50%	71%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 916	\$ 450	\$1,197	30%	80%
2,000	600	375	1,055	600	1,430	30%	72%
2,500	750	469	1,192	750	1,661	30%	66%
3,000	900	563	1,330	900	1,893	30%	63%
3,500	1,050	656	1,469	1,050	2,125	30%	61%
4,000	1,200	750	1,605	1,200	2,355	30%	59%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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	\$ 916	\$1,050	\$1,704	70%	114%
2,000	1,400	1,050	1,055	1,400	2,105	70%	105%
2,500	1,750	1,313	1,192	1,750	2,505	70%	100%
3,000	2,100	1,575	1,330	2,100	2,905	70%	97%
3,500	2,450	1,838	1,469	2,450	3,307	70%	94%
4,000	2,800	2,100	1,605	2,800	3,705	70%	93%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 916	\$ 750	\$1,479	50%	99%
2,000	1,000	750	1,055	1,000	1,805	50%	90%
2,500	1,250	938	1,192	1,250	2,130	50%	85%
3,000	1,500	1,125	1,330	1,500	2,455	50%	82%
3,500	1,750	1,313	1,469	1,750	2,782	50%	79%
4,000	2,000	1,500	1,605	2,000	3,105	50%	78%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 916	\$ 450	\$1,254	30%	84%
2,000	600	450	1,055	600	1,505	30%	75%
2,500	750	563	1,192	750	1,755	30%	70%
3,000	900	675	1,330	900	2,005	30%	67%
3,500	1,050	788	1,469	1,050	2,257	30%	64%
4,000	1,200	900	1,605	1,200	2,505	30%	63%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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	\$ 916	\$1,050	\$1,835	70%	122%
2,000	1,400	1,225	1,055	1,400	2,280	70%	114%
2,500	1,750	1,531	1,192	1,750	2,723	70%	109%
3,000	2,100	1,838	1,330	2,100	3,168	70%	106%
3,500	2,450	2,144	1,469	2,450	3,613	70%	103%
4,000	2,800	2,450	1,605	2,800	4,055	70%	101%
25 Years of Service:							
\$1,500	\$ 750	\$ 656	\$ 916	\$ 750	\$1,572	50%	105%
2,000	1,000	875	1,055	1,000	1,930	50%	97%
2,500	1,250	1,094	1,192	1,250	2,286	50%	91%
3,000	1,500	1,313	1,330	1,500	2,643	50%	88%
3,500	1,750	1,531	1,469	1,750	3,000	50%	86%
4,000	2,000	1,750	1,605	2,000	3,355	50%	84%
15 Years of Service:							
\$1,500	\$ 450	\$ 394	\$ 916	\$ 450	\$1,310	30%	87%
2,000	600	525	1,055	600	1,580	30%	79%
2,500	750	656	1,192	750	1,848	30%	74%
3,000	900	788	1,330	900	2,118	30%	71%
3,500	1,050	919	1,469	1,050	2,388	30%	68%
4,000	1,200	1,050	1,605	1,200	2,655	30%	66%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2021 - 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

Kirkwood Public Library - General

December 31, 2021

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	1							1	\$ 45,249
30-34	1	1						2	\$ 86,007
35-39	1	4						5	\$ 273,711
40-44	1							1	\$ 32,661
45-49									
50-54			1					1	\$ 80,427
55-59	2							2	\$ 114,382
60-64									
65-69				1				1	\$ 44,924
70 & Over									
Totals	6	5	1	1				13	\$ 677,361

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

Age: 42.7 years.

Benefit Service: 0.0 years.

Annual Pay: \$52,105.

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.



February 14, 2022 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 December 31, 2021 Initial Actuarial Valuation of LAGERS benefits for the employees of

Kirkwood Public Library

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



February 14, 2022

Kirkwood Public Library
Kirkwood, Missouri

Ladies and Gentlemen:

This report contains 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. This report is intended to be a supplement to the December 31, 2021 Initial Valuation for the Kirkwood Public Library dated February 14, 2022.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of the Initial Valuation Report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2021. 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,
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "Mita Drazilov". The signature is fluid and cursive, with the first name "Mita" and last name "Drazilov" clearly distinguishable.

Mita D. Drazilov, ASA, FCA, MAAA

Kirkwood Public Library - 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
2021	\$ 677,361	7.9%	\$53,511	\$ 123,297	9.6%	\$65,027	\$ 154,134	8.6%	\$58,253	\$ 136,331
2022	695,988	7.9	54,983	124,480	9.6	66,815	155,613	8.6	59,855	137,639
2023	715,128	7.9	56,495	125,541	9.6	68,652	156,939	8.6	61,501	138,812
2024	734,794	7.9	58,049	126,466	9.6	70,540	158,095	8.6	63,192	139,834
2025	755,001	7.9	59,645	127,239	9.6	72,480	159,061	8.6	64,930	140,689
2026	775,764	7.9	61,285	127,844	9.6	74,473	159,817	8.6	66,716	141,358
2027	797,098	7.9	62,971	128,263	9.6	76,521	160,341	8.6	68,550	141,821
2028	819,018	7.9	64,702	128,477	9.6	78,626	160,608	8.6	70,436	142,057
2029	841,541	7.9	66,482	128,465	9.6	80,788	160,593	8.6	72,373	142,043
2030	864,683	7.9	68,310	128,204	9.6	83,010	160,267	8.6	74,363	141,755

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
2021	\$ 677,361	10.1%	\$68,413	\$ 163,911	11.3%	\$76,542	\$ 184,946	11.7%	\$79,251	\$ 191,479
2022	695,988	10.1	70,295	165,483	11.3	78,647	186,720	11.7	81,431	193,316
2023	715,128	10.1	72,228	166,893	11.3	80,809	188,311	11.7	83,670	194,963
2024	734,794	10.1	74,214	168,122	11.3	83,032	189,698	11.7	85,971	196,399
2025	755,001	10.1	76,255	169,150	11.3	85,315	190,857	11.7	88,335	197,599
2026	775,764	10.1	78,352	169,954	11.3	87,661	191,764	11.7	90,764	198,538
2027	797,098	10.1	80,507	170,511	11.3	90,072	192,392	11.7	93,260	199,189
2028	819,018	10.1	82,721	170,795	11.3	92,549	192,713	11.7	95,825	199,521
2029	841,541	10.1	84,996	170,779	11.3	95,094	192,694	11.7	98,460	199,502
2030	864,683	10.1	87,333	170,432	11.3	97,709	192,303	11.7	101,168	199,097

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
2021	\$ 677,361	13.1%	\$88,734	\$ 215,817	13.3%	\$90,089	\$ 219,063	14.9%	\$100,927	\$ 246,682
2022	695,988	13.1	91,174	217,887	13.3	92,566	221,164	14.9	103,702	249,048
2023	715,128	13.1	93,682	219,744	13.3	95,112	223,049	14.9	106,554	251,170
2024	734,794	13.1	96,258	221,362	13.3	97,728	224,692	14.9	109,484	253,020
2025	755,001	13.1	98,905	222,715	13.3	100,415	226,065	14.9	112,495	254,567
2026	775,764	13.1	101,625	223,774	13.3	103,177	227,140	14.9	115,589	255,777
2027	797,098	13.1	104,420	224,507	13.3	106,014	227,884	14.9	118,768	256,615
2028	819,018	13.1	107,291	224,881	13.3	108,929	228,264	14.9	122,034	257,043
2029	841,541	13.1	110,242	224,859	13.3	111,925	228,242	14.9	125,390	257,018
2030	864,683	13.1	113,273	224,402	13.3	115,003	227,778	14.9	128,838	256,496

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	6.0%	\$40,642	\$ 123,297	7.7%	\$52,157	\$ 154,134	6.7%	\$45,383	\$ 136,331
2022	695,988	6.0	41,759	124,480	7.7	53,591	155,613	6.7	46,631	137,639
2023	715,128	6.0	42,908	125,541	7.7	55,065	156,939	6.7	47,914	138,812
2024	734,794	6.0	44,088	126,466	7.7	56,579	158,095	6.7	49,231	139,834
2025	755,001	6.0	45,300	127,239	7.7	58,135	159,061	6.7	50,585	140,689
2026	775,764	6.0	46,546	127,844	7.7	59,734	159,817	6.7	51,976	141,358
2027	797,098	6.0	47,826	128,263	7.7	61,377	160,341	6.7	53,406	141,821
2028	819,018	6.0	49,141	128,477	7.7	63,064	160,608	6.7	54,874	142,057
2029	841,541	6.0	50,492	128,465	7.7	64,799	160,593	6.7	56,383	142,043
2030	864,683	6.0	51,881	128,204	7.7	66,581	160,267	6.7	57,934	141,755

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
2021	\$ 677,361	8.2%	\$55,544	\$ 163,911	9.4%	\$63,672	\$ 184,946	9.8%	\$66,381	\$ 191,479
2022	695,988	8.2	57,071	165,483	9.4	65,423	186,720	9.8	68,207	193,316
2023	715,128	8.2	58,640	166,893	9.4	67,222	188,311	9.8	70,083	194,963
2024	734,794	8.2	60,253	168,122	9.4	69,071	189,698	9.8	72,010	196,399
2025	755,001	8.2	61,910	169,150	9.4	70,970	190,857	9.8	73,990	197,599
2026	775,764	8.2	63,613	169,954	9.4	72,922	191,764	9.8	76,025	198,538
2027	797,098	8.2	65,362	170,511	9.4	74,927	192,392	9.8	78,116	199,189
2028	819,018	8.2	67,159	170,795	9.4	76,988	192,713	9.8	80,264	199,521
2029	841,541	8.2	69,006	170,779	9.4	79,105	192,694	9.8	82,471	199,502
2030	864,683	8.2	70,904	170,432	9.4	81,280	192,303	9.8	84,739	199,097

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
2021	\$ 677,361	11.2%	\$75,864	\$ 215,817	11.4%	\$77,219	\$ 219,063	13.0%	\$88,057	\$ 246,682
2022	695,988	11.2	77,951	217,887	11.4	79,343	221,164	13.0	90,478	249,048
2023	715,128	11.2	80,094	219,744	11.4	81,525	223,049	13.0	92,967	251,170
2024	734,794	11.2	82,297	221,362	11.4	83,767	224,692	13.0	95,523	253,020
2025	755,001	11.2	84,560	222,715	11.4	86,070	226,065	13.0	98,150	254,567
2026	775,764	11.2	86,886	223,774	11.4	88,437	227,140	13.0	100,849	255,777
2027	797,098	11.2	89,275	224,507	11.4	90,869	227,884	13.0	103,623	256,615
2028	819,018	11.2	91,730	224,881	11.4	93,368	228,264	13.0	106,472	257,043
2029	841,541	11.2	94,253	224,859	11.4	95,936	228,242	13.0	109,400	257,018
2030	864,683	11.2	96,844	224,402	11.4	98,574	227,778	13.0	112,409	256,496

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	4.1%	\$27,772	\$ 123,297	5.8%	\$39,287	\$ 154,134	4.8%	\$32,513	\$ 136,331
2022	695,988	4.1	28,536	124,480	5.8	40,367	155,613	4.8	33,407	137,639
2023	715,128	4.1	29,320	125,541	5.8	41,477	156,939	4.8	34,326	138,812
2024	734,794	4.1	30,127	126,466	5.8	42,618	158,095	4.8	35,270	139,834
2025	755,001	4.1	30,955	127,239	5.8	43,790	159,061	4.8	36,240	140,689
2026	775,764	4.1	31,806	127,844	5.8	44,994	159,817	4.8	37,237	141,358
2027	797,098	4.1	32,681	128,263	5.8	46,232	160,341	4.8	38,261	141,821
2028	819,018	4.1	33,580	128,477	5.8	47,503	160,608	4.8	39,313	142,057
2029	841,541	4.1	34,503	128,465	5.8	48,809	160,593	4.8	40,394	142,043
2030	864,683	4.1	35,452	128,204	5.8	50,152	160,267	4.8	41,505	141,755

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
2021	\$ 677,361	6.3%	\$42,674	\$ 163,911	7.5%	\$50,802	\$ 184,946	7.9%	\$53,511	\$ 191,479
2022	695,988	6.3	43,847	165,483	7.5	52,199	186,720	7.9	54,983	193,316
2023	715,128	6.3	45,053	166,893	7.5	53,635	188,311	7.9	56,495	194,963
2024	734,794	6.3	46,292	168,122	7.5	55,110	189,698	7.9	58,049	196,399
2025	755,001	6.3	47,565	169,150	7.5	56,625	190,857	7.9	59,645	197,599
2026	775,764	6.3	48,873	169,954	7.5	58,182	191,764	7.9	61,285	198,538
2027	797,098	6.3	50,217	170,511	7.5	59,782	192,392	7.9	62,971	199,189
2028	819,018	6.3	51,598	170,795	7.5	61,426	192,713	7.9	64,702	199,521
2029	841,541	6.3	53,017	170,779	7.5	63,116	192,694	7.9	66,482	199,502
2030	864,683	6.3	54,475	170,432	7.5	64,851	192,303	7.9	68,310	199,097

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
2021	\$ 677,361	9.3%	\$62,995	\$ 215,817	9.5%	\$64,349	\$ 219,063	11.1%	\$75,187	\$ 246,682
2022	695,988	9.3	64,727	217,887	9.5	66,119	221,164	11.1	77,255	249,048
2023	715,128	9.3	66,507	219,744	9.5	67,937	223,049	11.1	79,379	251,170
2024	734,794	9.3	68,336	221,362	9.5	69,805	224,692	11.1	81,562	253,020
2025	755,001	9.3	70,215	222,715	9.5	71,725	226,065	11.1	83,805	254,567
2026	775,764	9.3	72,146	223,774	9.5	73,698	227,140	11.1	86,110	255,777
2027	797,098	9.3	74,130	224,507	9.5	75,724	227,884	11.1	88,478	256,615
2028	819,018	9.3	76,169	224,881	9.5	77,807	228,264	11.1	90,911	257,043
2029	841,541	9.3	78,263	224,859	9.5	79,946	228,242	11.1	93,411	257,018
2030	864,683	9.3	80,416	224,402	9.5	82,145	227,778	11.1	95,980	256,496

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	2.2%	\$14,902	\$ 123,297	3.9%	\$26,417	\$ 154,134	2.9%	\$19,643	\$ 136,331
2022	695,988	2.2	15,312	124,480	3.9	27,144	155,613	2.9	20,184	137,639
2023	715,128	2.2	15,733	125,541	3.9	27,890	156,939	2.9	20,739	138,812
2024	734,794	2.2	16,165	126,466	3.9	28,657	158,095	2.9	21,309	139,834
2025	755,001	2.2	16,610	127,239	3.9	29,445	159,061	2.9	21,895	140,689
2026	775,764	2.2	17,067	127,844	3.9	30,255	159,817	2.9	22,497	141,358
2027	797,098	2.2	17,536	128,263	3.9	31,087	160,341	2.9	23,116	141,821
2028	819,018	2.2	18,018	128,477	3.9	31,942	160,608	2.9	23,752	142,057
2029	841,541	2.2	18,514	128,465	3.9	32,820	160,593	2.9	24,405	142,043
2030	864,683	2.2	19,023	128,204	3.9	33,723	160,267	2.9	25,076	141,755

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
2021	\$ 677,361	4.4%	\$29,804	\$ 163,911	5.6%	\$37,932	\$ 184,946	6.0%	\$40,642	\$ 191,479
2022	695,988	4.4	30,623	165,483	5.6	38,975	186,720	6.0	41,759	193,316
2023	715,128	4.4	31,466	166,893	5.6	40,047	188,311	6.0	42,908	194,963
2024	734,794	4.4	32,331	168,122	5.6	41,148	189,698	6.0	44,088	196,399
2025	755,001	4.4	33,220	169,150	5.6	42,280	190,857	6.0	45,300	197,599
2026	775,764	4.4	34,134	169,954	5.6	43,443	191,764	6.0	46,546	198,538
2027	797,098	4.4	35,072	170,511	5.6	44,637	192,392	6.0	47,826	199,189
2028	819,018	4.4	36,037	170,795	5.6	45,865	192,713	6.0	49,141	199,521
2029	841,541	4.4	37,028	170,779	5.6	47,126	192,694	6.0	50,492	199,502
2030	864,683	4.4	38,046	170,432	5.6	48,422	192,303	6.0	51,881	199,097

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
2021	\$ 677,361	7.4%	\$50,125	\$ 215,817	7.6%	\$51,479	\$ 219,063	9.2%	\$62,317	\$ 246,682
2022	695,988	7.4	51,503	217,887	7.6	52,895	221,164	9.2	64,031	249,048
2023	715,128	7.4	52,919	219,744	7.6	54,350	223,049	9.2	65,792	251,170
2024	734,794	7.4	54,375	221,362	7.6	55,844	224,692	9.2	67,601	253,020
2025	755,001	7.4	55,870	222,715	7.6	57,380	226,065	9.2	69,460	254,567
2026	775,764	7.4	57,407	223,774	7.6	58,958	227,140	9.2	71,370	255,777
2027	797,098	7.4	58,985	224,507	7.6	60,579	227,884	9.2	73,333	256,615
2028	819,018	7.4	60,607	224,881	7.6	62,245	228,264	9.2	75,350	257,043
2029	841,541	7.4	62,274	224,859	7.6	63,957	228,242	9.2	77,422	257,018
2030	864,683	7.4	63,987	224,402	7.6	65,716	227,778	9.2	79,551	256,496

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	8.1%	\$54,866	\$ 127,156	9.9%	\$67,059	\$ 158,948	8.8%	\$59,608	\$ 140,606
2022	695,988	8.1	56,375	128,376	9.9	68,903	160,473	8.8	61,247	141,955
2023	715,128	8.1	57,925	129,470	9.9	70,798	161,840	8.8	62,931	143,165
2024	734,794	8.1	59,518	130,423	9.9	72,745	163,032	8.8	64,662	144,219
2025	755,001	8.1	61,155	131,220	9.9	74,745	164,028	8.8	66,440	145,101
2026	775,764	8.1	62,837	131,844	9.9	76,801	164,808	8.8	68,267	145,791
2027	797,098	8.1	64,565	132,276	9.9	78,913	165,348	8.8	70,145	146,269
2028	819,018	8.1	66,340	132,496	9.9	81,083	165,623	8.8	72,074	146,513
2029	841,541	8.1	68,165	132,483	9.9	83,313	165,607	8.8	74,056	146,499
2030	864,683	8.1	70,039	132,214	9.9	85,604	165,271	8.8	76,092	146,201

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
2021	\$ 677,361	10.5%	\$71,123	\$ 169,049	11.6%	\$78,574	\$ 190,757	12.0%	\$81,283	\$ 197,515
2022	695,988	10.5	73,079	170,671	11.6	80,735	192,587	12.0	83,519	199,410
2023	715,128	10.5	75,088	172,125	11.6	82,955	194,228	12.0	85,815	201,109
2024	734,794	10.5	77,153	173,393	11.6	85,236	195,658	12.0	88,175	202,590
2025	755,001	10.5	79,275	174,453	11.6	87,580	196,854	12.0	90,600	203,828
2026	775,764	10.5	81,455	175,282	11.6	89,989	197,790	12.0	93,092	204,797
2027	797,098	10.5	83,695	175,856	11.6	92,463	198,438	12.0	95,652	205,468
2028	819,018	10.5	85,997	176,149	11.6	95,006	198,769	12.0	98,282	205,810
2029	841,541	10.5	88,362	176,132	11.6	97,619	198,750	12.0	100,985	205,790
2030	864,683	10.5	90,792	175,774	11.6	100,303	198,346	12.0	103,762	205,372

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
2021	\$ 677,361	13.5%	\$91,444	\$ 222,543	13.6%	\$92,121	\$ 225,879	15.3%	\$103,636	\$ 254,267
2022	695,988	13.5	93,958	224,678	13.6	94,654	228,046	15.3	106,486	256,706
2023	715,128	13.5	96,542	226,593	13.6	97,257	229,989	15.3	109,415	258,893
2024	734,794	13.5	99,197	228,262	13.6	99,932	231,683	15.3	112,423	260,800
2025	755,001	13.5	101,925	229,657	13.6	102,680	233,099	15.3	115,515	262,394
2026	775,764	13.5	104,728	230,749	13.6	105,504	234,207	15.3	118,692	263,641
2027	797,098	13.5	107,608	231,505	13.6	108,405	234,975	15.3	121,956	264,505
2028	819,018	13.5	110,567	231,891	13.6	111,386	235,367	15.3	125,310	264,946
2029	841,541	13.5	113,608	231,869	13.6	114,450	235,344	15.3	128,756	264,921
2030	864,683	13.5	116,732	231,398	13.6	117,597	234,866	15.3	132,296	264,383

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	6.2%	\$41,996	\$ 127,156	8.0%	\$54,189	\$ 158,948	6.9%	\$46,738	\$ 140,606
2022	695,988	6.2	43,151	128,376	8.0	55,679	160,473	6.9	48,023	141,955
2023	715,128	6.2	44,338	129,470	8.0	57,210	161,840	6.9	49,344	143,165
2024	734,794	6.2	45,557	130,423	8.0	58,784	163,032	6.9	50,701	144,219
2025	755,001	6.2	46,810	131,220	8.0	60,400	164,028	6.9	52,095	145,101
2026	775,764	6.2	48,097	131,844	8.0	62,061	164,808	6.9	53,528	145,791
2027	797,098	6.2	49,420	132,276	8.0	63,768	165,348	6.9	55,000	146,269
2028	819,018	6.2	50,779	132,496	8.0	65,521	165,623	6.9	56,512	146,513
2029	841,541	6.2	52,176	132,483	8.0	67,323	165,607	6.9	58,066	146,499
2030	864,683	6.2	53,610	132,214	8.0	69,175	165,271	6.9	59,663	146,201

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
2021	\$ 677,361	8.6%	\$58,253	\$ 169,049	9.7%	\$65,704	\$ 190,757	10.1%	\$68,413	\$ 197,515
2022	695,988	8.6	59,855	170,671	9.7	67,511	192,587	10.1	70,295	199,410
2023	715,128	8.6	61,501	172,125	9.7	69,367	194,228	10.1	72,228	201,109
2024	734,794	8.6	63,192	173,393	9.7	71,275	195,658	10.1	74,214	202,590
2025	755,001	8.6	64,930	174,453	9.7	73,235	196,854	10.1	76,255	203,828
2026	775,764	8.6	66,716	175,282	9.7	75,249	197,790	10.1	78,352	204,797
2027	797,098	8.6	68,550	175,856	9.7	77,319	198,438	10.1	80,507	205,468
2028	819,018	8.6	70,436	176,149	9.7	79,445	198,769	10.1	82,721	205,810
2029	841,541	8.6	72,373	176,132	9.7	81,629	198,750	10.1	84,996	205,790
2030	864,683	8.6	74,363	175,774	9.7	83,874	198,346	10.1	87,333	205,372

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
2021	\$ 677,361	11.6%	\$78,574	\$ 222,543	11.7%	\$79,251	\$ 225,879	13.4%	\$90,766	\$ 254,267
2022	695,988	11.6	80,735	224,678	11.7	81,431	228,046	13.4	93,262	256,706
2023	715,128	11.6	82,955	226,593	11.7	83,670	229,989	13.4	95,827	258,893
2024	734,794	11.6	85,236	228,262	11.7	85,971	231,683	13.4	98,462	260,800
2025	755,001	11.6	87,580	229,657	11.7	88,335	233,099	13.4	101,170	262,394
2026	775,764	11.6	89,989	230,749	11.7	90,764	234,207	13.4	103,952	263,641
2027	797,098	11.6	92,463	231,505	11.7	93,260	234,975	13.4	106,811	264,505
2028	819,018	11.6	95,006	231,891	11.7	95,825	235,367	13.4	109,748	264,946
2029	841,541	11.6	97,619	231,869	11.7	98,460	235,344	13.4	112,766	264,921
2030	864,683	11.6	100,303	231,398	11.7	101,168	234,866	13.4	115,868	264,383

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	4.3%	\$29,127	\$ 127,156	6.1%	\$41,319	\$ 158,948	5.0%	\$33,868	\$ 140,606
2022	695,988	4.3	29,927	128,376	6.1	42,455	160,473	5.0	34,799	141,955
2023	715,128	4.3	30,751	129,470	6.1	43,623	161,840	5.0	35,756	143,165
2024	734,794	4.3	31,596	130,423	6.1	44,822	163,032	5.0	36,740	144,219
2025	755,001	4.3	32,465	131,220	6.1	46,055	164,028	5.0	37,750	145,101
2026	775,764	4.3	33,358	131,844	6.1	47,322	164,808	5.0	38,788	145,791
2027	797,098	4.3	34,275	132,276	6.1	48,623	165,348	5.0	39,855	146,269
2028	819,018	4.3	35,218	132,496	6.1	49,960	165,623	5.0	40,951	146,513
2029	841,541	4.3	36,186	132,483	6.1	51,334	165,607	5.0	42,077	146,499
2030	864,683	4.3	37,181	132,214	6.1	52,746	165,271	5.0	43,234	146,201

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
2021	\$ 677,361	6.7%	\$45,383	\$ 169,049	7.8%	\$52,834	\$ 190,757	8.2%	\$55,544	\$ 197,515
2022	695,988	6.7	46,631	170,671	7.8	54,287	192,587	8.2	57,071	199,410
2023	715,128	6.7	47,914	172,125	7.8	55,780	194,228	8.2	58,640	201,109
2024	734,794	6.7	49,231	173,393	7.8	57,314	195,658	8.2	60,253	202,590
2025	755,001	6.7	50,585	174,453	7.8	58,890	196,854	8.2	61,910	203,828
2026	775,764	6.7	51,976	175,282	7.8	60,510	197,790	8.2	63,613	204,797
2027	797,098	6.7	53,406	175,856	7.8	62,174	198,438	8.2	65,362	205,468
2028	819,018	6.7	54,874	176,149	7.8	63,883	198,769	8.2	67,159	205,810
2029	841,541	6.7	56,383	176,132	7.8	65,640	198,750	8.2	69,006	205,790
2030	864,683	6.7	57,934	175,774	7.8	67,445	198,346	8.2	70,904	205,372

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
2021	\$ 677,361	9.7%	\$65,704	\$ 222,543	9.8%	\$66,381	\$ 225,879	11.5%	\$77,896	\$ 254,267
2022	695,988	9.7	67,511	224,678	9.8	68,207	228,046	11.5	80,039	256,706
2023	715,128	9.7	69,367	226,593	9.8	70,083	229,989	11.5	82,240	258,893
2024	734,794	9.7	71,275	228,262	9.8	72,010	231,683	11.5	84,501	260,800
2025	755,001	9.7	73,235	229,657	9.8	73,990	233,099	11.5	86,825	262,394
2026	775,764	9.7	75,249	230,749	9.8	76,025	234,207	11.5	89,213	263,641
2027	797,098	9.7	77,319	231,505	9.8	78,116	234,975	11.5	91,666	264,505
2028	819,018	9.7	79,445	231,891	9.8	80,264	235,367	11.5	94,187	264,946
2029	841,541	9.7	81,629	231,869	9.8	82,471	235,344	11.5	96,777	264,921
2030	864,683	9.7	83,874	231,398	9.8	84,739	234,866	11.5	99,439	264,383

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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	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
2021	\$ 677,361	2.4%	\$16,257	\$ 127,156	4.2%	\$28,449	\$ 158,948	3.1%	\$20,998	\$ 140,606
2022	695,988	2.4	16,704	128,376	4.2	29,231	160,473	3.1	21,576	141,955
2023	715,128	2.4	17,163	129,470	4.2	30,035	161,840	3.1	22,169	143,165
2024	734,794	2.4	17,635	130,423	4.2	30,861	163,032	3.1	22,779	144,219
2025	755,001	2.4	18,120	131,220	4.2	31,710	164,028	3.1	23,405	145,101
2026	775,764	2.4	18,618	131,844	4.2	32,582	164,808	3.1	24,049	145,791
2027	797,098	2.4	19,130	132,276	4.2	33,478	165,348	3.1	24,710	146,269
2028	819,018	2.4	19,656	132,496	4.2	34,399	165,623	3.1	25,390	146,513
2029	841,541	2.4	20,197	132,483	4.2	35,345	165,607	3.1	26,088	146,499
2030	864,683	2.4	20,752	132,214	4.2	36,317	165,271	3.1	26,805	146,201

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
2021	\$ 677,361	4.8%	\$32,513	\$ 169,049	5.9%	\$39,964	\$ 190,757	6.3%	\$42,674	\$ 197,515
2022	695,988	4.8	33,407	170,671	5.9	41,063	192,587	6.3	43,847	199,410
2023	715,128	4.8	34,326	172,125	5.9	42,193	194,228	6.3	45,053	201,109
2024	734,794	4.8	35,270	173,393	5.9	43,353	195,658	6.3	46,292	202,590
2025	755,001	4.8	36,240	174,453	5.9	44,545	196,854	6.3	47,565	203,828
2026	775,764	4.8	37,237	175,282	5.9	45,770	197,790	6.3	48,873	204,797
2027	797,098	4.8	38,261	175,856	5.9	47,029	198,438	6.3	50,217	205,468
2028	819,018	4.8	39,313	176,149	5.9	48,322	198,769	6.3	51,598	205,810
2029	841,541	4.8	40,394	176,132	5.9	49,651	198,750	6.3	53,017	205,790
2030	864,683	4.8	41,505	175,774	5.9	51,016	198,346	6.3	54,475	205,372

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
2021	\$ 677,361	7.8%	\$52,834	\$ 222,543	7.9%	\$53,511	\$ 225,879	9.6%	\$65,027	\$ 254,267
2022	695,988	7.8	54,287	224,678	7.9	54,983	228,046	9.6	66,815	256,706
2023	715,128	7.8	55,780	226,593	7.9	56,495	229,989	9.6	68,652	258,893
2024	734,794	7.8	57,314	228,262	7.9	58,049	231,683	9.6	70,540	260,800
2025	755,001	7.8	58,890	229,657	7.9	59,645	233,099	9.6	72,480	262,394
2026	775,764	7.8	60,510	230,749	7.9	61,285	234,207	9.6	74,473	263,641
2027	797,098	7.8	62,174	231,505	7.9	62,971	234,975	9.6	76,521	264,505
2028	819,018	7.8	63,883	231,891	7.9	64,702	235,367	9.6	78,626	264,946
2029	841,541	7.8	65,640	231,869	7.9	66,482	235,344	9.6	80,788	264,921
2030	864,683	7.8	67,445	231,398	7.9	68,310	234,866	9.6	83,010	264,383

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	8.3%	\$56,221	\$ 133,589	10.1%	\$68,413	\$ 166,980	9.6%	\$65,027	\$ 165,555
2022	695,988	8.3	57,767	134,870	10.1	70,295	168,582	9.6	66,815	167,143
2023	715,128	8.3	59,356	136,019	10.1	72,228	170,019	9.6	68,652	168,567
2024	734,794	8.3	60,988	137,021	10.1	74,214	171,271	9.6	70,540	169,808
2025	755,001	8.3	62,665	137,859	10.1	76,255	172,318	9.6	72,480	170,846
2026	775,764	8.3	64,388	138,514	10.1	78,352	173,137	9.6	74,473	171,658
2027	797,098	8.3	66,159	138,968	10.1	80,507	173,704	9.6	76,521	172,221
2028	819,018	8.3	67,978	139,200	10.1	82,721	173,993	9.6	78,626	172,508
2029	841,541	8.3	69,848	139,187	10.1	84,996	173,976	9.6	80,788	172,491
2030	864,683	8.3	71,769	138,904	10.1	87,333	173,623	9.6	83,010	172,141

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
2021	\$ 677,361	11.1%	\$75,187	\$ 191,000	11.9%	\$80,606	\$ 200,384	12.6%	\$85,347	\$ 216,376
2022	695,988	11.1	77,255	192,832	11.9	82,823	202,306	12.6	87,694	218,452
2023	715,128	11.1	79,379	194,475	11.9	85,100	204,030	12.6	90,106	220,313
2024	734,794	11.1	81,562	195,907	11.9	87,440	205,533	12.6	92,584	221,935
2025	755,001	11.1	83,805	197,104	11.9	89,845	206,789	12.6	95,130	223,292
2026	775,764	11.1	86,110	198,041	11.9	92,316	207,772	12.6	97,746	224,354
2027	797,098	11.1	88,478	198,690	11.9	94,855	208,453	12.6	100,434	225,089
2028	819,018	11.1	90,911	199,021	11.9	97,463	208,800	12.6	103,196	225,464
2029	841,541	11.1	93,411	199,002	11.9	100,143	208,780	12.6	106,034	225,442
2030	864,683	11.1	95,980	198,598	11.9	102,897	208,356	12.6	108,950	224,984

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
2021	\$ 677,361	13.8%	\$93,476	\$ 233,811	14.2%	\$96,185	\$ 241,810	15.7%	\$106,346	\$ 267,177
2022	695,988	13.8	96,046	236,054	14.2	98,830	244,130	15.7	109,270	269,740
2023	715,128	13.8	98,688	238,065	14.2	101,548	246,210	15.7	112,275	272,039
2024	734,794	13.8	101,402	239,818	14.2	104,341	248,023	15.7	115,363	274,042
2025	755,001	13.8	104,190	241,284	14.2	107,210	249,539	15.7	118,535	275,717
2026	775,764	13.8	107,055	242,431	14.2	110,158	250,725	15.7	121,795	277,028
2027	797,098	13.8	110,000	243,225	14.2	113,188	251,547	15.7	125,144	277,936
2028	819,018	13.8	113,024	243,630	14.2	116,301	251,966	15.7	128,586	278,399
2029	841,541	13.8	116,133	243,607	14.2	119,499	251,942	15.7	132,122	278,372
2030	864,683	13.8	119,326	243,112	14.2	122,785	251,430	15.7	135,755	277,807

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	6.4%	\$43,351	\$ 133,589	8.2%	\$55,544	\$ 166,980	7.7%	\$52,157	\$ 165,555
2022	695,988	6.4	44,543	134,870	8.2	57,071	168,582	7.7	53,591	167,143
2023	715,128	6.4	45,768	136,019	8.2	58,640	170,019	7.7	55,065	168,567
2024	734,794	6.4	47,027	137,021	8.2	60,253	171,271	7.7	56,579	169,808
2025	755,001	6.4	48,320	137,859	8.2	61,910	172,318	7.7	58,135	170,846
2026	775,764	6.4	49,649	138,514	8.2	63,613	173,137	7.7	59,734	171,658
2027	797,098	6.4	51,014	138,968	8.2	65,362	173,704	7.7	61,377	172,221
2028	819,018	6.4	52,417	139,200	8.2	67,159	173,993	7.7	63,064	172,508
2029	841,541	6.4	53,859	139,187	8.2	69,006	173,976	7.7	64,799	172,491
2030	864,683	6.4	55,340	138,904	8.2	70,904	173,623	7.7	66,581	172,141

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
2021	\$ 677,361	9.2%	\$62,317	\$ 191,000	10.0%	\$67,736	\$ 200,384	10.7%	\$72,478	\$ 216,376
2022	695,988	9.2	64,031	192,832	10.0	69,599	202,306	10.7	74,471	218,452
2023	715,128	9.2	65,792	194,475	10.0	71,513	204,030	10.7	76,519	220,313
2024	734,794	9.2	67,601	195,907	10.0	73,479	205,533	10.7	78,623	221,935
2025	755,001	9.2	69,460	197,104	10.0	75,500	206,789	10.7	80,785	223,292
2026	775,764	9.2	71,370	198,041	10.0	77,576	207,772	10.7	83,007	224,354
2027	797,098	9.2	73,333	198,690	10.0	79,710	208,453	10.7	85,289	225,089
2028	819,018	9.2	75,350	199,021	10.0	81,902	208,800	10.7	87,635	225,464
2029	841,541	9.2	77,422	199,002	10.0	84,154	208,780	10.7	90,045	225,442
2030	864,683	9.2	79,551	198,598	10.0	86,468	208,356	10.7	92,521	224,984

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
2021	\$ 677,361	11.9%	\$80,606	\$ 233,811	12.3%	\$83,315	\$ 241,810	13.8%	\$93,476	\$ 267,177
2022	695,988	11.9	82,823	236,054	12.3	85,607	244,130	13.8	96,046	269,740
2023	715,128	11.9	85,100	238,065	12.3	87,961	246,210	13.8	98,688	272,039
2024	734,794	11.9	87,440	239,818	12.3	90,380	248,023	13.8	101,402	274,042
2025	755,001	11.9	89,845	241,284	12.3	92,865	249,539	13.8	104,190	275,717
2026	775,764	11.9	92,316	242,431	12.3	95,419	250,725	13.8	107,055	277,028
2027	797,098	11.9	94,855	243,225	12.3	98,043	251,547	13.8	110,000	277,936
2028	819,018	11.9	97,463	243,630	12.3	100,739	251,966	13.8	113,024	278,399
2029	841,541	11.9	100,143	243,607	12.3	103,510	251,942	13.8	116,133	278,372
2030	864,683	11.9	102,897	243,112	12.3	106,356	251,430	13.8	119,326	277,807

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	4.5%	\$30,481	\$ 133,589	6.3%	\$42,674	\$ 166,980	5.8%	\$39,287	\$ 165,555
2022	695,988	4.5	31,319	134,870	6.3	43,847	168,582	5.8	40,367	167,143
2023	715,128	4.5	32,181	136,019	6.3	45,053	170,019	5.8	41,477	168,567
2024	734,794	4.5	33,066	137,021	6.3	46,292	171,271	5.8	42,618	169,808
2025	755,001	4.5	33,975	137,859	6.3	47,565	172,318	5.8	43,790	170,846
2026	775,764	4.5	34,909	138,514	6.3	48,873	173,137	5.8	44,994	171,658
2027	797,098	4.5	35,869	138,968	6.3	50,217	173,704	5.8	46,232	172,221
2028	819,018	4.5	36,856	139,200	6.3	51,598	173,993	5.8	47,503	172,508
2029	841,541	4.5	37,869	139,187	6.3	53,017	173,976	5.8	48,809	172,491
2030	864,683	4.5	38,911	138,904	6.3	54,475	173,623	5.8	50,152	172,141

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
2021	\$ 677,361	7.3%	\$49,447	\$ 191,000	8.1%	\$54,866	\$ 200,384	8.8%	\$59,608	\$ 216,376
2022	695,988	7.3	50,807	192,832	8.1	56,375	202,306	8.8	61,247	218,452
2023	715,128	7.3	52,204	194,475	8.1	57,925	204,030	8.8	62,931	220,313
2024	734,794	7.3	53,640	195,907	8.1	59,518	205,533	8.8	64,662	221,935
2025	755,001	7.3	55,115	197,104	8.1	61,155	206,789	8.8	66,440	223,292
2026	775,764	7.3	56,631	198,041	8.1	62,837	207,772	8.8	68,267	224,354
2027	797,098	7.3	58,188	198,690	8.1	64,565	208,453	8.8	70,145	225,089
2028	819,018	7.3	59,788	199,021	8.1	66,340	208,800	8.8	72,074	225,464
2029	841,541	7.3	61,432	199,002	8.1	68,165	208,780	8.8	74,056	225,442
2030	864,683	7.3	63,122	198,598	8.1	70,039	208,356	8.8	76,092	224,984

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
2021	\$ 677,361	10.0%	\$67,736	\$ 233,811	10.4%	\$70,446	\$ 241,810	11.9%	\$80,606	\$ 267,177
2022	695,988	10.0	69,599	236,054	10.4	72,383	244,130	11.9	82,823	269,740
2023	715,128	10.0	71,513	238,065	10.4	74,373	246,210	11.9	85,100	272,039
2024	734,794	10.0	73,479	239,818	10.4	76,419	248,023	11.9	87,440	274,042
2025	755,001	10.0	75,500	241,284	10.4	78,520	249,539	11.9	89,845	275,717
2026	775,764	10.0	77,576	242,431	10.4	80,679	250,725	11.9	92,316	277,028
2027	797,098	10.0	79,710	243,225	10.4	82,898	251,547	11.9	94,855	277,936
2028	819,018	10.0	81,902	243,630	10.4	85,178	251,966	11.9	97,463	278,399
2029	841,541	10.0	84,154	243,607	10.4	87,520	251,942	11.9	100,143	278,372
2030	864,683	10.0	86,468	243,112	10.4	89,927	251,430	11.9	102,897	277,807

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	2.6%	\$17,611	\$ 133,589	4.4%	\$29,804	\$ 166,980	3.9%	\$26,417	\$ 165,555
2022	695,988	2.6	18,096	134,870	4.4	30,623	168,582	3.9	27,144	167,143
2023	715,128	2.6	18,593	136,019	4.4	31,466	170,019	3.9	27,890	168,567
2024	734,794	2.6	19,105	137,021	4.4	32,331	171,271	3.9	28,657	169,808
2025	755,001	2.6	19,630	137,859	4.4	33,220	172,318	3.9	29,445	170,846
2026	775,764	2.6	20,170	138,514	4.4	34,134	173,137	3.9	30,255	171,658
2027	797,098	2.6	20,725	138,968	4.4	35,072	173,704	3.9	31,087	172,221
2028	819,018	2.6	21,294	139,200	4.4	36,037	173,993	3.9	31,942	172,508
2029	841,541	2.6	21,880	139,187	4.4	37,028	173,976	3.9	32,820	172,491
2030	864,683	2.6	22,482	138,904	4.4	38,046	173,623	3.9	33,723	172,141

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
2021	\$ 677,361	5.4%	\$36,577	\$ 191,000	6.2%	\$41,996	\$ 200,384	6.9%	\$46,738	\$ 216,376
2022	695,988	5.4	37,583	192,832	6.2	43,151	202,306	6.9	48,023	218,452
2023	715,128	5.4	38,617	194,475	6.2	44,338	204,030	6.9	49,344	220,313
2024	734,794	5.4	39,679	195,907	6.2	45,557	205,533	6.9	50,701	221,935
2025	755,001	5.4	40,770	197,104	6.2	46,810	206,789	6.9	52,095	223,292
2026	775,764	5.4	41,891	198,041	6.2	48,097	207,772	6.9	53,528	224,354
2027	797,098	5.4	43,043	198,690	6.2	49,420	208,453	6.9	55,000	225,089
2028	819,018	5.4	44,227	199,021	6.2	50,779	208,800	6.9	56,512	225,464
2029	841,541	5.4	45,443	199,002	6.2	52,176	208,780	6.9	58,066	225,442
2030	864,683	5.4	46,693	198,598	6.2	53,610	208,356	6.9	59,663	224,984

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
2021	\$ 677,361	8.1%	\$54,866	\$ 233,811	8.5%	\$57,576	\$ 241,810	10.0%	\$67,736	\$ 267,177
2022	695,988	8.1	56,375	236,054	8.5	59,159	244,130	10.0	69,599	269,740
2023	715,128	8.1	57,925	238,065	8.5	60,786	246,210	10.0	71,513	272,039
2024	734,794	8.1	59,518	239,818	8.5	62,457	248,023	10.0	73,479	274,042
2025	755,001	8.1	61,155	241,284	8.5	64,175	249,539	10.0	75,500	275,717
2026	775,764	8.1	62,837	242,431	8.5	65,940	250,725	10.0	77,576	277,028
2027	797,098	8.1	64,565	243,225	8.5	67,753	251,547	10.0	79,710	277,936
2028	819,018	8.1	66,340	243,630	8.5	69,617	251,966	10.0	81,902	278,399
2029	841,541	8.1	68,165	243,607	8.5	71,531	251,942	10.0	84,154	278,372
2030	864,683	8.1	70,039	243,112	8.5	73,498	251,430	10.0	86,468	277,807

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	8.5%	\$57,576	\$ 137,977	10.5%	\$71,123	\$ 172,422	9.9%	\$67,059	\$ 171,116
2022	695,988	8.5	59,159	139,301	10.5	73,079	174,076	9.9	68,903	172,757
2023	715,128	8.5	60,786	140,488	10.5	75,088	175,559	9.9	70,798	174,229
2024	734,794	8.5	62,457	141,523	10.5	77,153	176,852	9.9	72,745	175,512
2025	755,001	8.5	64,175	142,388	10.5	79,275	177,933	9.9	74,745	176,585
2026	775,764	8.5	65,940	143,065	10.5	81,455	178,779	9.9	76,801	177,425
2027	797,098	8.5	67,753	143,534	10.5	83,695	179,365	9.9	78,913	178,006
2028	819,018	8.5	69,617	143,773	10.5	85,997	179,664	9.9	81,083	178,303
2029	841,541	8.5	71,531	143,759	10.5	88,362	179,647	9.9	83,313	178,286
2030	864,683	8.5	73,498	143,467	10.5	90,792	179,282	9.9	85,604	177,924

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
2021	\$ 677,361	11.5%	\$77,896	\$ 197,278	12.3%	\$83,315	\$ 206,930	13.0%	\$88,057	\$ 223,505
2022	695,988	11.5	80,039	199,170	12.3	85,607	208,915	13.0	90,478	225,649
2023	715,128	11.5	82,240	200,867	12.3	87,961	210,695	13.0	92,967	227,572
2024	734,794	11.5	84,501	202,346	12.3	90,380	212,247	13.0	95,523	229,248
2025	755,001	11.5	86,825	203,583	12.3	92,865	213,544	13.0	98,150	230,649
2026	775,764	11.5	89,213	204,551	12.3	95,419	214,559	13.0	100,849	231,746
2027	797,098	11.5	91,666	205,221	12.3	98,043	215,262	13.0	103,623	232,505
2028	819,018	11.5	94,187	205,563	12.3	100,739	215,621	13.0	106,472	232,892
2029	841,541	11.5	96,777	205,543	12.3	103,510	215,600	13.0	109,400	232,870
2030	864,683	11.5	99,439	205,126	12.3	106,356	215,162	13.0	112,409	232,397

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
2021	\$ 677,361	14.3%	\$96,863	\$ 241,394	14.7%	\$99,572	\$ 249,677	16.2%	\$109,732	\$ 275,895
2022	695,988	14.3	99,526	243,710	14.7	102,310	252,072	16.2	112,750	278,542
2023	715,128	14.3	102,263	245,787	14.7	105,124	254,220	16.2	115,851	280,916
2024	734,794	14.3	105,076	247,597	14.7	108,015	256,092	16.2	119,037	282,985
2025	755,001	14.3	107,965	249,110	14.7	110,985	257,657	16.2	122,310	284,715
2026	775,764	14.3	110,934	250,294	14.7	114,037	258,882	16.2	125,674	286,069
2027	797,098	14.3	113,985	251,114	14.7	117,173	259,730	16.2	129,130	287,006
2028	819,018	14.3	117,120	251,532	14.7	120,396	260,163	16.2	132,681	287,484
2029	841,541	14.3	120,340	251,508	14.7	123,707	260,138	16.2	136,330	287,456
2030	864,683	14.3	123,650	250,997	14.7	127,108	259,610	16.2	140,079	286,872

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - General

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

Rule of 80 Retirement Eligibility

		L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
Valuation Year	Estimated Projected Payroll	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
2021	\$ 677,361	6.6%	\$44,706	\$ 137,977	8.6%	\$58,253	\$ 172,422	8.0%	\$54,189	\$ 171,116
2022	695,988	6.6	45,935	139,301	8.6	59,855	174,076	8.0	55,679	172,757
2023	715,128	6.6	47,198	140,488	8.6	61,501	175,559	8.0	57,210	174,229
2024	734,794	6.6	48,496	141,523	8.6	63,192	176,852	8.0	58,784	175,512
2025	755,001	6.6	49,830	142,388	8.6	64,930	177,933	8.0	60,400	176,585
2026	775,764	6.6	51,200	143,065	8.6	66,716	178,779	8.0	62,061	177,425
2027	797,098	6.6	52,608	143,534	8.6	68,550	179,365	8.0	63,768	178,006
2028	819,018	6.6	54,055	143,773	8.6	70,436	179,664	8.0	65,521	178,303
2029	841,541	6.6	55,542	143,759	8.6	72,373	179,647	8.0	67,323	178,286
2030	864,683	6.6	57,069	143,467	8.6	74,363	179,282	8.0	69,175	177,924

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
Valuation Year	Estimated Projected Payroll	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
2021	\$ 677,361	9.6%	\$65,027	\$ 197,278	10.4%	\$70,446	\$ 206,930	11.1%	\$75,187	\$ 223,505
2022	695,988	9.6	66,815	199,170	10.4	72,383	208,915	11.1	77,255	225,649
2023	715,128	9.6	68,652	200,867	10.4	74,373	210,695	11.1	79,379	227,572
2024	734,794	9.6	70,540	202,346	10.4	76,419	212,247	11.1	81,562	229,248
2025	755,001	9.6	72,480	203,583	10.4	78,520	213,544	11.1	83,805	230,649
2026	775,764	9.6	74,473	204,551	10.4	80,679	214,559	11.1	86,110	231,746
2027	797,098	9.6	76,521	205,221	10.4	82,898	215,262	11.1	88,478	232,505
2028	819,018	9.6	78,626	205,563	10.4	85,178	215,621	11.1	90,911	232,892
2029	841,541	9.6	80,788	205,543	10.4	87,520	215,600	11.1	93,411	232,870
2030	864,683	9.6	83,010	205,126	10.4	89,927	215,162	11.1	95,980	232,397

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
Valuation Year	Estimated Projected Payroll	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
2021	\$ 677,361	12.4%	\$83,993	\$ 241,394	12.8%	\$86,702	\$ 249,677	14.3%	\$96,863	\$ 275,895
2022	695,988	12.4	86,303	243,710	12.8	89,086	252,072	14.3	99,526	278,542
2023	715,128	12.4	88,676	245,787	12.8	91,536	254,220	14.3	102,263	280,916
2024	734,794	12.4	91,114	247,597	12.8	94,054	256,092	14.3	105,076	282,985
2025	755,001	12.4	93,620	249,110	12.8	96,640	257,657	14.3	107,965	284,715
2026	775,764	12.4	96,195	250,294	12.8	99,298	258,882	14.3	110,934	286,069
2027	797,098	12.4	98,840	251,114	12.8	102,029	259,730	14.3	113,985	287,006
2028	819,018	12.4	101,558	251,532	12.8	104,834	260,163	14.3	117,120	287,484
2029	841,541	12.4	104,351	251,508	12.8	107,717	260,138	14.3	120,340	287,456
2030	864,683	12.4	107,221	250,997	12.8	110,679	259,610	14.3	123,650	286,872

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	4.7%	\$31,836	\$ 137,977	6.7%	\$45,383	\$ 172,422	6.1%	\$41,319	\$ 171,116
2022	695,988	4.7	32,711	139,301	6.7	46,631	174,076	6.1	42,455	172,757
2023	715,128	4.7	33,611	140,488	6.7	47,914	175,559	6.1	43,623	174,229
2024	734,794	4.7	34,535	141,523	6.7	49,231	176,852	6.1	44,822	175,512
2025	755,001	4.7	35,485	142,388	6.7	50,585	177,933	6.1	46,055	176,585
2026	775,764	4.7	36,461	143,065	6.7	51,976	178,779	6.1	47,322	177,425
2027	797,098	4.7	37,464	143,534	6.7	53,406	179,365	6.1	48,623	178,006
2028	819,018	4.7	38,494	143,773	6.7	54,874	179,664	6.1	49,960	178,303
2029	841,541	4.7	39,552	143,759	6.7	56,383	179,647	6.1	51,334	178,286
2030	864,683	4.7	40,640	143,467	6.7	57,934	179,282	6.1	52,746	177,924

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
2021	\$ 677,361	7.7%	\$52,157	\$ 197,278	8.5%	\$57,576	\$ 206,930	9.2%	\$62,317	\$ 223,505
2022	695,988	7.7	53,591	199,170	8.5	59,159	208,915	9.2	64,031	225,649
2023	715,128	7.7	55,065	200,867	8.5	60,786	210,695	9.2	65,792	227,572
2024	734,794	7.7	56,579	202,346	8.5	62,457	212,247	9.2	67,601	229,248
2025	755,001	7.7	58,135	203,583	8.5	64,175	213,544	9.2	69,460	230,649
2026	775,764	7.7	59,734	204,551	8.5	65,940	214,559	9.2	71,370	231,746
2027	797,098	7.7	61,377	205,221	8.5	67,753	215,262	9.2	73,333	232,505
2028	819,018	7.7	63,064	205,563	8.5	69,617	215,621	9.2	75,350	232,892
2029	841,541	7.7	64,799	205,543	8.5	71,531	215,600	9.2	77,422	232,870
2030	864,683	7.7	66,581	205,126	8.5	73,498	215,162	9.2	79,551	232,397

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
2021	\$ 677,361	10.5%	\$71,123	\$ 241,394	10.9%	\$73,832	\$ 249,677	12.4%	\$83,993	\$ 275,895
2022	695,988	10.5	73,079	243,710	10.9	75,863	252,072	12.4	86,303	278,542
2023	715,128	10.5	75,088	245,787	10.9	77,949	254,220	12.4	88,676	280,916
2024	734,794	10.5	77,153	247,597	10.9	80,093	256,092	12.4	91,114	282,985
2025	755,001	10.5	79,275	249,110	10.9	82,295	257,657	12.4	93,620	284,715
2026	775,764	10.5	81,455	250,294	10.9	84,558	258,882	12.4	96,195	286,069
2027	797,098	10.5	83,695	251,114	10.9	86,884	259,730	12.4	98,840	287,006
2028	819,018	10.5	85,997	251,532	10.9	89,273	260,163	12.4	101,558	287,484
2029	841,541	10.5	88,362	251,508	10.9	91,728	260,138	12.4	104,351	287,456
2030	864,683	10.5	90,792	250,997	10.9	94,250	259,610	12.4	107,221	286,872

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 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 2.75%.
- 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.

Kirkwood Public Library - 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
2021	\$ 677,361	2.8%	\$18,966	\$ 137,977	4.8%	\$32,513	\$ 172,422	4.2%	\$28,449	\$ 171,116
2022	695,988	2.8	19,488	139,301	4.8	33,407	174,076	4.2	29,231	172,757
2023	715,128	2.8	20,024	140,488	4.8	34,326	175,559	4.2	30,035	174,229
2024	734,794	2.8	20,574	141,523	4.8	35,270	176,852	4.2	30,861	175,512
2025	755,001	2.8	21,140	142,388	4.8	36,240	177,933	4.2	31,710	176,585
2026	775,764	2.8	21,721	143,065	4.8	37,237	178,779	4.2	32,582	177,425
2027	797,098	2.8	22,319	143,534	4.8	38,261	179,365	4.2	33,478	178,006
2028	819,018	2.8	22,933	143,773	4.8	39,313	179,664	4.2	34,399	178,303
2029	841,541	2.8	23,563	143,759	4.8	40,394	179,647	4.2	35,345	178,286
2030	864,683	2.8	24,211	143,467	4.8	41,505	179,282	4.2	36,317	177,924

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
2021	\$ 677,361	5.8%	\$39,287	\$ 197,278	6.6%	\$44,706	\$ 206,930	7.3%	\$49,447	\$ 223,505
2022	695,988	5.8	40,367	199,170	6.6	45,935	208,915	7.3	50,807	225,649
2023	715,128	5.8	41,477	200,867	6.6	47,198	210,695	7.3	52,204	227,572
2024	734,794	5.8	42,618	202,346	6.6	48,496	212,247	7.3	53,640	229,248
2025	755,001	5.8	43,790	203,583	6.6	49,830	213,544	7.3	55,115	230,649
2026	775,764	5.8	44,994	204,551	6.6	51,200	214,559	7.3	56,631	231,746
2027	797,098	5.8	46,232	205,221	6.6	52,608	215,262	7.3	58,188	232,505
2028	819,018	5.8	47,503	205,563	6.6	54,055	215,621	7.3	59,788	232,892
2029	841,541	5.8	48,809	205,543	6.6	55,542	215,600	7.3	61,432	232,870
2030	864,683	5.8	50,152	205,126	6.6	57,069	215,162	7.3	63,122	232,397

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
2021	\$ 677,361	8.6%	\$58,253	\$ 241,394	9.0%	\$60,962	\$ 249,677	10.5%	\$71,123	\$ 275,895
2022	695,988	8.6	59,855	243,710	9.0	62,639	252,072	10.5	73,079	278,542
2023	715,128	8.6	61,501	245,787	9.0	64,362	254,220	10.5	75,088	280,916
2024	734,794	8.6	63,192	247,597	9.0	66,131	256,092	10.5	77,153	282,985
2025	755,001	8.6	64,930	249,110	9.0	67,950	257,657	10.5	79,275	284,715
2026	775,764	8.6	66,716	250,294	9.0	69,819	258,882	10.5	81,455	286,069
2027	797,098	8.6	68,550	251,114	9.0	71,739	259,730	10.5	83,695	287,006
2028	819,018	8.6	70,436	251,532	9.0	73,712	260,163	10.5	85,997	287,484
2029	841,541	8.6	72,373	251,508	9.0	75,739	260,138	10.5	88,362	287,456
2030	864,683	8.6	74,363	250,997	9.0	77,821	259,610	10.5	90,792	286,872

Notes regarding the above projections:

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- 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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