



The Initial Valuation For

Daniel Boone Regional Library

as of November 30, 2018



Table of Contents

	Page
Actuary's Certification Letter	1
Alternate Plans Available	3
Employer Contribution Rates	
Regular Eligibility:	
Contributory Plan	4
Non-Contributory Plan	6
Rule of 80 Eligibility:	
Contributory Plan	8
Non-Contributory Plan	10
Employer Contribution Dollars	12
Appendix I	
Unfunded Actuarial Accrued Liability	15
Appendix II	
Summary of Financial Assumptions	17
Appendix III	
Summary of LAGERS Provisions	21
Appendix IV	
Benefit Illustrations.....	24
Appendix V	
Age and Service Characteristics of Employees	33
Appendix VI	
Risk Commentary.....	34



January 10, 2019

Daniel Boone Regional Library
Columbia, Missouri

Ladies and Gentlemen:

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

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

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

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

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

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

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

The computed contributions required for LAGERS participation will permit the System to continue to operate in accordance with the actuarial principles of level cost financing and the State law which governs LAGERS. 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 November 30, 2018. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

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

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

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

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

The signing actuary is independent of the plan sponsor.

Respectfully submitted,



Mita D. Drazilov, ASA, FCA, MAAA



Alternate Plan Provisions Affecting Employer Contribution Rates

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

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

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

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

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

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

Daniel Boone Regional Library

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	General	8.00%	2.80%	0.20%	11.00%
L-3	General	10.10	4.00	0.30	14.40
LT-4(65)	General	8.70	3.30	0.20	12.20
LT-5(65)	General	10.60	4.40	0.30	15.30
L-7	General	12.20	5.20	0.30	17.70
LT-8(65)	General	12.50	5.50	0.30	18.30
L-12	General	14.30	6.60	0.40	21.30
LT-14(65)	General	14.40	6.70	0.40	21.50
L-6	General	16.30	7.90	0.50	24.70

* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

Daniel Boone Regional Library

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	8.30%	3.00%	0.20%	11.50%
L-3	General	10.50	4.20	0.30	15.00
LT-4(65)	General	9.00	3.50	0.20	12.70
LT-5(65)	General	11.00	4.70	0.30	16.00
L-7	General	12.60	5.50	0.30	18.40
LT-8(65)	General	12.90	5.80	0.30	19.00
L-12	General	14.80	6.90	0.40	22.10
LT-14(65)	General	14.90	7.00	0.40	22.30
L-6	General	16.90	8.30	0.50	25.70

* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

Daniel Boone Regional Library

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	8.30%	6.20%	0.20%	14.70%
L-3	General	10.40	7.50	0.30	18.20
LT-4(65)	General	9.00	6.70	0.20	15.90
LT-5(65)	General	10.90	7.90	0.30	19.10
L-7	General	12.50	8.80	0.30	21.60
LT-8(65)	General	12.80	9.10	0.30	22.20
L-12	General	14.60	10.20	0.40	25.20
LT-14(65)	General	14.70	10.30	0.40	25.40
L-6	General	16.60	11.50	0.50	28.60

* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

Daniel Boone Regional Library

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	General	8.60%	6.40%	0.20%	15.20%
L-3	General	10.80	7.80	0.30	18.90
LT-4(65)	General	9.30	7.00	0.20	16.50
LT-5(65)	General	11.30	8.20	0.30	19.80
L-7	General	12.90	9.10	0.30	22.30
LT-8(65)	General	13.20	9.40	0.30	22.90
L-12	General	15.10	10.50	0.40	26.00
LT-14(65)	General	15.20	10.60	0.40	26.20
L-6	General	17.20	11.90	0.50	29.60

* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

Daniel Boone Regional Library

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	8.60%	3.30%	0.20%	12.10%
L-3	General	10.90	4.60	0.30	15.80
LT-4(65)	General	10.00	4.40	0.20	14.60
LT-5(65)	General	11.90	5.40	0.30	17.60
L-7	General	13.10	5.90	0.30	19.30
LT-8(65)	General	13.80	6.50	0.30	20.60
L-12	General	15.30	7.30	0.40	23.00
LT-14(65)	General	15.70	7.50	0.40	23.60
L-6	General	17.50	8.80	0.50	26.80

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

* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

Daniel Boone Regional Library

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	General	8.90%	3.40%	0.20%	12.50%
L-3	General	11.30	4.80	0.30	16.40
LT-4(65)	General	10.40	4.60	0.20	15.20
LT-5(65)	General	12.30	5.70	0.30	18.30
L-7	General	13.60	6.20	0.30	20.10
LT-8(65)	General	14.30	6.80	0.30	21.40
L-12	General	15.90	7.60	0.40	23.90
LT-14(65)	General	16.20	8.00	0.40	24.60
L-6	General	18.10	9.20	0.50	27.80

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

* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

Daniel Boone Regional Library

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	8.90%	6.60%	0.20%	15.70%
L-3	General	11.10	8.10	0.30	19.50
LT-4(65)	General	10.30	7.70	0.20	18.20
LT-5(65)	General	12.20	8.90	0.30	21.40
L-7	General	13.40	9.50	0.30	23.20
LT-8(65)	General	14.10	10.00	0.30	24.40
L-12	General	15.60	10.90	0.40	26.90
LT-14(65)	General	15.90	11.20	0.40	27.50
L-6	General	17.80	12.40	0.50	30.70

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

* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

Daniel Boone Regional Library

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	9.20%	6.80%	0.20%	16.20%
L-3	General	11.50	8.30	0.30	20.10
LT-4(65)	General	10.60	8.00	0.20	18.80
LT-5(65)	General	12.60	9.20	0.30	22.10
L-7	General	13.80	9.80	0.30	23.90
LT-8(65)	General	14.50	10.40	0.30	25.20
L-12	General	16.10	11.30	0.40	27.80
LT-14(65)	General	16.50	11.60	0.40	28.50
L-6	General	18.40	12.80	0.50	31.70

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

* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.

Daniel Boone Regional Library

Employer Contribution Dollars Regular Retirement Eligibility

Employer contributions are payable monthly, and each month's actual dollar contribution will be the contribution percent multiplied by the payroll during the month. If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation, the approximate employer dollar contribution for the year would be as follows:

Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 484,873
L-3	634,743
LT-4(65)	537,768
LT-5(65)	674,414
L-7	780,205
LT-8(65)	806,652
L-12	938,890
LT-14(65)	947,706
L-6	1,088,760

3 Year FAS	
Benefit Program	General
L-1	\$ 506,913
L-3	661,190
LT-4(65)	559,808
LT-5(65)	705,270
L-7	811,060
LT-8(65)	837,508
L-12	974,154
LT-14(65)	982,970
L-6	1,132,839

Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 647,967
L-3	802,244
LT-4(65)	700,862
LT-5(65)	841,916
L-7	952,114
LT-8(65)	978,562
L-12	1,110,800
LT-14(65)	1,119,616
L-6	1,260,670

3 Year FAS	
Benefit Program	General
L-1	\$ 670,006
L-3	833,100
LT-4(65)	727,309
LT-5(65)	872,771
L-7	982,970
LT-8(65)	1,009,417
L-12	1,146,063
LT-14(65)	1,154,879
L-6	1,304,749

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.

Daniel Boone Regional Library

Employer Contribution Dollars Rule of 80 Retirement Eligibility

Employer contributions are payable monthly, and each month's actual dollar contribution will be the contribution percent multiplied by the payroll during the month. If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation, the approximate employer dollar contribution for the year would be as follows:

Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 533,360
L-3	696,454
LT-4(65)	643,559
LT-5(65)	775,797
L-7	850,732
LT-8(65)	908,035
L-12	1,013,825
LT-14(65)	1,040,273
L-6	1,181,327

3 Year FAS	
Benefit Program	General
L-1	\$ 550,992
L-3	722,901
LT-4(65)	670,006
LT-5(65)	806,652
L-7	885,995
LT-8(65)	943,298
L-12	1,053,497
LT-14(65)	1,084,352
L-6	1,225,406

Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 692,046
L-3	859,547
LT-4(65)	802,244
LT-5(65)	943,298
L-7	1,022,641
LT-8(65)	1,075,536
L-12	1,185,735
LT-14(65)	1,212,182
L-6	1,353,236

3 Year FAS	
Benefit Program	General
L-1	\$ 714,086
L-3	885,995
LT-4(65)	828,692
LT-5(65)	974,154
L-7	1,053,497
LT-8(65)	1,110,800
L-12	1,225,406
LT-14(65)	1,256,262
L-6	1,397,316

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.

Daniel Boone Regional Library

Employees and Payroll Included in the Valuation

	General
Number of Employees	131
Annual Payroll	\$ 4,407,936

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

APPENDIX I

UNFUNDED ACTUARIAL ACCRUED LIABILITY

Unfunded Actuarial Accrued Liability (UAAL)

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

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

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

Daniel Boone Regional Library

Regular Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 6,226,847	\$ 6,444,007	\$ 6,467,043	\$ 6,683,745
L-3	General	7,844,530	8,115,778	8,083,872	8,354,662
LT-4(65)	General	6,731,049	6,965,775	6,967,920	7,202,161
LT-5(65)	General	8,222,762	8,507,103	8,459,595	8,743,353
L-7	General	9,461,559	9,786,822	9,700,686	10,025,483
LT-8(65)	General	9,713,732	10,047,737	9,951,190	10,284,760
L-12	General	11,077,242	11,455,905	11,317,421	11,696,448
LT-14(65)	General	11,203,387	11,586,348	11,442,651	11,826,035
L-6	General	12,671,098	13,102,281	12,914,290	13,346,701

Daniel Boone Regional Library

Unfunded Actuarial Accrued Liability (UAAL)

Rule of 80 Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 6,709,832	\$ 6,946,023	\$ 6,923,671	\$ 7,159,528
L-3	General	8,441,784	8,736,866	8,654,753	8,949,374
LT-4(65)	General	7,783,460	8,058,042	7,992,920	8,266,964
LT-5(65)	General	9,247,106	9,570,863	9,456,698	9,780,036
L-7	General	10,173,298	10,527,005	10,385,746	10,739,294
LT-8(65)	General	10,710,067	11,083,143	10,920,319	11,293,001
L-12	General	11,903,587	12,315,642	12,116,683	12,529,099
LT-14(65)	General	12,172,061	12,593,666	12,384,065	12,805,951
L-6	General	13,612,871	14,082,255	13,828,355	14,299,025

APPENDIX II

SUMMARY OF FINANCIAL ASSUMPTIONS

Summary of Assumptions Used in Actuarial Valuations

Assumptions Adopted by Board of Trustees After Consulting With Actuary

1. The investment return rate used in making the valuations was 7.25% per year, net of investment expenses, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. The price inflation rate used in making the valuations was 2.50% and the wage inflation rate used in making the valuations was 3.25%. The investment return rate translates to an assumed real rate of return over price inflation of 4.75% and over wage inflation of 4.00%. Adopted 2011 and 2016.
2. The healthy retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The disabled retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The pre-retirement mortality tables used were the RP-2014 employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. For both the post-retirement and pre-retirement tables, the base year for males was then established to be 2017. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to the above described tables. Adopted 2016.
3. The probabilities of withdrawal and disability from service, together with individual pay increase assumptions, are shown in Schedule 1. Adopted 2016.
4. The probabilities of retirement with an age and service allowance are shown in Schedule 2. Adopted 2016.
5. Post-retirement cost of living allowances are assumed to be 2.50% per year. Adopted 2016.
6. Total active member payroll is assumed to increase a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. In effect, this assumes no change in the number of active members per employer. Adopted 2016.
7. An individual entry-age actuarial cost method of valuation was used in determining age and service allowance actuarial liabilities and normal cost. Adopted 1986.
8. The data about persons now covered was furnished by the political subdivision. Although examined for general reasonableness, the data was not audited by us.

Schedule 1.

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

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

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

Schedule 2.

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

Early Retirement

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

Normal Retirement

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

Schedule 2. (Continued)

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

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

APPENDIX III

SUMMARY OF LAGERS PROVISIONS

Missouri Local Government Employees Retirement System

Brief Summary of LAGERS

Benefits and Conditions Evaluated and/or Considered as of February 28, 2018

(Section references are to RSMo)

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

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

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

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

L-1 Benefit Program:	1.00% for life
L-3 Benefit Program:	1.25% for life
L-7 Benefit Program:	1.50% for life
L-12 Benefit Program:	1.75% for life
L-6 Benefit Program:	2.00% for life
LT-4(65) Benefit Program:	1.00% for life, plus 1.00% to age 65
LT-5(65) Benefit Program:	1.25% for life, plus 0.75% to age 65
LT-8(65) Benefit Program:	1.50% for life, plus 0.50% to age 65
LT-14(65) Benefit Program:	1.75% for life, plus 0.25% to age 65

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

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

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

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

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

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

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

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

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

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

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

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

- (a) The surviving spouse receives an allowance equal to the Option A allowance (joint and 75% survivor benefit) computed based upon the deceased members' service & earnings record to time of death.
- (b) When no spouse benefit is payable, the dependent children under age 18 (age 23 if they are full time students) each receive an equal share of 60% of an age & service allowance computed based upon the deceased member's service & earnings record to time of death.
- (c) If the death is determined to be duty related, the 5 year service requirement is waived and the benefit is based on years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

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

- (a) Subject to the maximum in (b), the redetermined amount is the amount other-wise payable multiplied by: 100% plus up to 4%, as determined by the LAGERS Board of Trustees, for each full year of retirement.
- (b) The redetermined amount may not exceed the amount otherwise payable multiplied by the ratio of the Consumer Price Index for the immediately preceding month of June to the Consumer Price Index for the month of June immediately preceding retirement.

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

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

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

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

APPENDIX IV

BENEFIT ILLUSTRATIONS

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

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

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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

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

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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

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

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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

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

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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

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

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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

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

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 2018 - 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	\$ 889	\$1,050	\$1,545	70%	103%
2,000	1,400	875	1,032	1,400	1,907	70%	95%
2,500	1,750	1,094	1,175	1,750	2,269	70%	91%
3,000	2,100	1,313	1,318	2,100	2,631	70%	88%
3,500	2,450	1,531	1,462	2,450	2,993	70%	86%
4,000	2,800	1,750	1,604	2,800	3,354	70%	84%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 889	\$ 750	\$1,358	50%	91%
2,000	1,000	625	1,032	1,000	1,657	50%	83%
2,500	1,250	781	1,175	1,250	1,956	50%	78%
3,000	1,500	938	1,318	1,500	2,256	50%	75%
3,500	1,750	1,094	1,462	1,750	2,556	50%	73%
4,000	2,000	1,250	1,604	2,000	2,854	50%	71%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 889	\$ 450	\$1,170	30%	78%
2,000	600	375	1,032	600	1,407	30%	70%
2,500	750	469	1,175	750	1,644	30%	66%
3,000	900	563	1,318	900	1,881	30%	63%
3,500	1,050	656	1,462	1,050	2,118	30%	61%
4,000	1,200	750	1,604	1,200	2,354	30%	59%

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 2018 - 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	\$ 889	\$1,050	\$1,677	70%	112%
2,000	1,400	1,050	1,032	1,400	2,082	70%	104%
2,500	1,750	1,313	1,175	1,750	2,488	70%	100%
3,000	2,100	1,575	1,318	2,100	2,893	70%	96%
3,500	2,450	1,838	1,462	2,450	3,300	70%	94%
4,000	2,800	2,100	1,604	2,800	3,704	70%	93%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 889	\$ 750	\$1,452	50%	97%
2,000	1,000	750	1,032	1,000	1,782	50%	89%
2,500	1,250	938	1,175	1,250	2,113	50%	85%
3,000	1,500	1,125	1,318	1,500	2,443	50%	81%
3,500	1,750	1,313	1,462	1,750	2,775	50%	79%
4,000	2,000	1,500	1,604	2,000	3,104	50%	78%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 889	\$ 450	\$1,227	30%	82%
2,000	600	450	1,032	600	1,482	30%	74%
2,500	750	563	1,175	750	1,738	30%	70%
3,000	900	675	1,318	900	1,993	30%	66%
3,500	1,050	788	1,462	1,050	2,250	30%	64%
4,000	1,200	900	1,604	1,200	2,504	30%	63%

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 2018 - 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	\$ 889	\$1,050	\$1,808	70%	121%
2,000	1,400	1,225	1,032	1,400	2,257	70%	113%
2,500	1,750	1,531	1,175	1,750	2,706	70%	108%
3,000	2,100	1,838	1,318	2,100	3,156	70%	105%
3,500	2,450	2,144	1,462	2,450	3,606	70%	103%
4,000	2,800	2,450	1,604	2,800	4,054	70%	101%
25 Years of Service:							
\$1,500	\$ 750	\$ 656	\$ 889	\$ 750	\$1,545	50%	103%
2,000	1,000	875	1,032	1,000	1,907	50%	95%
2,500	1,250	1,094	1,175	1,250	2,269	50%	91%
3,000	1,500	1,313	1,318	1,500	2,631	50%	88%
3,500	1,750	1,531	1,462	1,750	2,993	50%	86%
4,000	2,000	1,750	1,604	2,000	3,354	50%	84%
15 Years of Service:							
\$1,500	\$ 450	\$ 394	\$ 889	\$ 450	\$1,283	30%	86%
2,000	600	525	1,032	600	1,557	30%	78%
2,500	750	656	1,175	750	1,831	30%	73%
3,000	900	788	1,318	900	2,106	30%	70%
3,500	1,050	919	1,462	1,050	2,381	30%	68%
4,000	1,200	1,050	1,604	1,200	2,654	30%	66%

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 2018 - 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

Daniel Boone Regional Library

November 30, 2018

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	6							6	\$ 117,154
25-29	20	1						21	\$ 462,094
30-34	8	3	1					12	\$ 326,443
35-39	7	3	3	1				14	\$ 470,170
40-44	2	3	1	3	2			11	\$ 420,820
45-49	1	2	3		2			8	\$ 310,050
50-54	4		4		2	1	3	14	\$ 501,853
55-59	3	2	3	1	1	3	1	14	\$ 629,193
60-64	5	1	5	4	1	1	2	19	\$ 647,913
65-69	1	1	1		2	1	5	11	\$ 479,731
70 & Over							1	1	\$ 42,515
Totals	57	16	21	9	10	6	12	131	\$ 4,407,936

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

Age: 45.3 years.

Benefit Service: 11.5 years.

Annual Pay: \$33,648.

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

Risk Commentary (Concluded)

PLAN MATURITY MEASURES

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

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

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

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

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

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

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

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

DURATION OF ACTUARIAL ACCRUED LIABILITY

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

ADDITIONAL RISK ASSESSMENT

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



January 10, 2019 E-mail

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

Dear Bob:

Enclosed is the report of the November 30, 2018 Initial Actuarial Valuation of LAGERS benefits for the employees of

Daniel Boone Regional 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

January 10, 2019

Daniel Boone Regional Library
Columbia, Missouri

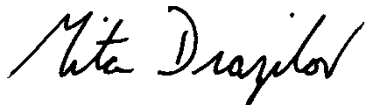
Ladies and Gentlemen:

This report contains projections needed to comply with Missouri state disclosure requirements (Section 105.660 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision. This report is intended to be a supplement to the November 30, 2018 Initial Valuation for the Daniel Boone Regional Library dated January 10, 2019.

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

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

Respectfully submitted,



Mita D. Drazilov, ASA, FCA, MAAA

Daniel Boone Regional Library - General

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% 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
2018	\$ 4,407,936	11.0%	\$484,873	\$ 6,226,847	14.4%	\$634,743	\$ 7,844,530	12.2%	\$537,768	\$ 6,731,049
2019	4,551,194	11.0	500,631	6,312,154	14.4	655,372	7,951,999	12.2	555,246	6,823,263
2020	4,699,108	11.0	516,902	6,391,746	14.4	676,672	8,052,269	12.2	573,291	6,909,300
2021	4,851,829	11.0	533,701	6,464,822	14.4	698,663	8,144,330	12.2	591,923	6,988,294
2022	5,009,513	11.0	551,046	6,530,510	14.4	721,370	8,227,084	12.2	611,161	7,059,301
2023	5,172,322	11.0	568,955	6,587,863	14.4	744,814	8,299,337	12.2	631,023	7,121,298
2024	5,340,422	11.0	587,446	6,635,851	14.4	769,021	8,359,792	12.2	651,531	7,173,172
2025	5,513,986	11.0	606,538	6,673,355	14.4	794,014	8,407,039	12.2	672,706	7,213,712
2026	5,693,191	11.0	626,251	6,699,161	14.4	819,820	8,439,549	12.2	694,569	7,241,608
2027	5,878,220	11.0	646,604	6,711,953	14.4	846,464	8,455,664	12.2	717,143	7,255,436

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
2018	\$ 4,407,936	15.3%	\$674,414	\$ 8,222,762	17.7%	\$780,205	\$ 9,461,559	18.3%	\$806,652	\$ 9,713,732
2019	4,551,194	15.3	696,333	8,335,413	17.7	805,561	9,591,181	18.3	832,869	9,846,809
2020	4,699,108	15.3	718,964	8,440,517	17.7	831,742	9,712,120	18.3	859,937	9,970,971
2021	4,851,829	15.3	742,330	8,537,017	17.7	858,774	9,823,158	18.3	887,885	10,084,968
2022	5,009,513	15.3	766,455	8,623,761	17.7	886,684	9,922,970	18.3	916,741	10,187,440
2023	5,172,322	15.3	791,365	8,699,498	17.7	915,501	10,010,117	18.3	946,535	10,276,910
2024	5,340,422	15.3	817,085	8,762,868	17.7	945,255	10,083,034	18.3	977,297	10,351,771
2025	5,513,986	15.3	843,640	8,812,393	17.7	975,976	10,140,020	18.3	1,009,059	10,410,276
2026	5,693,191	15.3	871,058	8,846,471	17.7	1,007,695	10,179,232	18.3	1,041,854	10,450,533
2027	5,878,220	15.3	899,368	8,863,363	17.7	1,040,445	10,198,669	18.3	1,075,714	10,470,488

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
2018	\$ 4,407,936	21.3%	\$938,890	\$ 11,077,242	21.5%	\$947,706	\$ 11,203,387	24.7%	\$1,088,760	\$ 12,671,098
2019	4,551,194	21.3	969,404	11,228,999	21.5	978,507	11,356,872	24.7	1,124,145	12,844,690
2020	4,699,108	21.3	1,000,910	11,370,590	21.5	1,010,308	11,500,075	24.7	1,160,680	13,006,653
2021	4,851,829	21.3	1,033,440	11,500,589	21.5	1,043,143	11,631,555	24.7	1,198,402	13,155,357
2022	5,009,513	21.3	1,067,026	11,617,445	21.5	1,077,045	11,749,742	24.7	1,237,350	13,289,027
2023	5,172,322	21.3	1,101,705	11,719,473	21.5	1,112,049	11,852,932	24.7	1,277,564	13,405,736
2024	5,340,422	21.3	1,137,510	11,804,842	21.5	1,148,191	11,939,273	24.7	1,319,084	13,503,388
2025	5,513,986	21.3	1,174,479	11,871,559	21.5	1,185,507	12,006,750	24.7	1,361,955	13,579,705
2026	5,693,191	21.3	1,212,650	11,917,467	21.5	1,224,036	12,053,181	24.7	1,406,218	13,632,218
2027	5,878,220	21.3	1,252,061	11,940,223	21.5	1,263,817	12,076,196	24.7	1,451,920	13,658,248

Notes regarding the above projections:

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

Daniel Boone Regional Library - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% 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
2018	\$ 4,407,936	11.5%	\$506,913	\$ 6,444,007	15.0%	\$661,190	\$ 8,115,778	12.7%	\$559,808	\$ 6,965,775
2019	4,551,194	11.5	523,387	6,532,289	15.0	682,679	8,226,963	12.7	578,002	7,061,205
2020	4,699,108	11.5	540,397	6,614,657	15.0	704,866	8,330,700	12.7	596,787	7,150,242
2021	4,851,829	11.5	557,960	6,690,282	15.0	727,774	8,425,944	12.7	616,182	7,231,990
2022	5,009,513	11.5	576,094	6,758,261	15.0	751,427	8,511,559	12.7	636,208	7,305,474
2023	5,172,322	11.5	594,817	6,817,614	15.0	775,848	8,586,311	12.7	656,885	7,369,633
2024	5,340,422	11.5	614,149	6,867,276	15.0	801,063	8,648,857	12.7	678,234	7,423,316
2025	5,513,986	11.5	634,108	6,906,088	15.0	827,098	8,697,738	12.7	700,276	7,465,270
2026	5,693,191	11.5	654,717	6,932,794	15.0	853,979	8,731,373	12.7	723,035	7,494,139
2027	5,878,220	11.5	675,995	6,946,032	15.0	881,733	8,748,045	12.7	746,534	7,508,449

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
2018	\$ 4,407,936	16.0%	\$705,270	\$ 8,507,103	18.4%	\$811,060	\$ 9,786,822	19.0%	\$837,508	\$ 10,047,737
2019	4,551,194	16.0	728,191	8,623,649	18.4	837,420	9,920,900	19.0	864,727	10,185,389
2020	4,699,108	16.0	751,857	8,732,388	18.4	864,636	10,045,996	19.0	892,831	10,313,820
2021	4,851,829	16.0	776,293	8,832,225	18.4	892,737	10,160,851	19.0	921,848	10,431,737
2022	5,009,513	16.0	801,522	8,921,968	18.4	921,750	10,264,095	19.0	951,807	10,537,733
2023	5,172,322	16.0	827,572	9,000,324	18.4	951,707	10,354,238	19.0	982,741	10,630,279
2024	5,340,422	16.0	854,468	9,065,885	18.4	982,638	10,429,662	19.0	1,014,680	10,707,714
2025	5,513,986	16.0	882,238	9,117,122	18.4	1,014,573	10,488,607	19.0	1,047,657	10,768,231
2026	5,693,191	16.0	910,911	9,152,378	18.4	1,047,547	10,529,167	19.0	1,081,706	10,809,872
2027	5,878,220	16.0	940,515	9,169,854	18.4	1,081,592	10,549,272	19.0	1,116,862	10,830,513

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 4,407,936	22.1%	\$974,154	\$ 11,455,905	22.3%	\$982,970	\$ 11,586,348	25.7%	\$1,132,839	\$ 13,102,281
2019	4,551,194	22.1	1,005,814	11,612,849	22.3	1,014,916	11,745,079	25.7	1,169,657	13,281,780
2020	4,699,108	22.1	1,038,503	11,759,280	22.3	1,047,901	11,893,177	25.7	1,207,671	13,449,255
2021	4,851,829	22.1	1,072,254	11,893,723	22.3	1,081,958	12,029,151	25.7	1,246,920	13,603,019
2022	5,009,513	22.1	1,107,102	12,014,574	22.3	1,117,121	12,151,378	25.7	1,287,445	13,741,238
2023	5,172,322	22.1	1,143,083	12,120,090	22.3	1,153,428	12,258,096	25.7	1,329,287	13,861,918
2024	5,340,422	22.1	1,180,233	12,208,377	22.3	1,190,914	12,347,388	25.7	1,372,488	13,962,893
2025	5,513,986	22.1	1,218,591	12,277,375	22.3	1,229,619	12,417,171	25.7	1,417,094	14,041,807
2026	5,693,191	22.1	1,258,195	12,324,852	22.3	1,269,582	12,465,189	25.7	1,463,150	14,096,107
2027	5,878,220	22.1	1,299,087	12,348,386	22.3	1,310,843	12,488,991	25.7	1,510,703	14,123,023

Notes regarding the above projections:

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

Daniel Boone Regional Library - General

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

(0% 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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 4,407,936	14.7%	\$647,967	\$ 6,467,043	18.2%	\$802,244	\$ 8,083,872	15.9%	\$700,862	\$ 6,967,920
2019	4,551,194	14.7	669,026	6,555,641	18.2	828,317	8,194,620	15.9	723,640	7,063,379
2020	4,699,108	14.7	690,769	6,638,303	18.2	855,238	8,297,949	15.9	747,158	7,152,444
2021	4,851,829	14.7	713,219	6,714,198	18.2	883,033	8,392,819	15.9	771,441	7,234,217
2022	5,009,513	14.7	736,398	6,782,420	18.2	911,731	8,478,098	15.9	796,513	7,307,723
2023	5,172,322	14.7	760,331	6,841,986	18.2	941,363	8,552,556	15.9	822,399	7,371,902
2024	5,340,422	14.7	785,042	6,891,825	18.2	971,957	8,614,856	15.9	849,127	7,425,601
2025	5,513,986	14.7	810,556	6,930,775	18.2	1,003,545	8,663,544	15.9	876,724	7,467,568
2026	5,693,191	14.7	836,899	6,957,577	18.2	1,036,161	8,697,046	15.9	905,217	7,496,445
2027	5,878,220	14.7	864,098	6,970,862	18.2	1,069,836	8,713,653	15.9	934,637	7,510,759

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	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 4,407,936	19.1%	\$841,916	\$ 8,459,595	21.6%	\$952,114	\$ 9,700,686	22.2%	\$978,562	\$ 9,951,190
2019	4,551,194	19.1	869,278	8,575,490	21.6	983,058	9,833,584	22.2	1,010,365	10,087,520
2020	4,699,108	19.1	897,530	8,683,622	21.6	1,015,007	9,957,579	22.2	1,043,202	10,214,717
2021	4,851,829	19.1	926,699	8,782,901	21.6	1,047,995	10,071,423	22.2	1,077,106	10,331,501
2022	5,009,513	19.1	956,817	8,872,143	21.6	1,082,055	10,173,758	22.2	1,112,112	10,436,478
2023	5,172,322	19.1	987,914	8,950,061	21.6	1,117,222	10,263,108	22.2	1,148,255	10,528,135
2024	5,340,422	19.1	1,020,021	9,015,256	21.6	1,153,531	10,337,868	22.2	1,185,574	10,604,826
2025	5,513,986	19.1	1,053,171	9,066,207	21.6	1,191,021	10,396,294	22.2	1,224,105	10,664,761
2026	5,693,191	19.1	1,087,399	9,101,266	21.6	1,229,729	10,436,497	22.2	1,263,888	10,706,002
2027	5,878,220	19.1	1,122,740	9,118,645	21.6	1,269,696	10,456,425	22.2	1,304,965	10,726,445

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	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 4,407,936	25.2%	\$1,110,800	\$ 11,317,421	25.4%	\$1,119,616	\$ 11,442,651	28.6%	\$1,260,670	\$ 12,914,290
2019	4,551,194	25.2	1,146,901	11,472,468	25.4	1,156,003	11,599,414	28.6	1,301,641	13,091,214
2020	4,699,108	25.2	1,184,175	11,617,129	25.4	1,193,573	11,745,675	28.6	1,343,945	13,256,286
2021	4,851,829	25.2	1,222,661	11,749,947	25.4	1,232,365	11,879,963	28.6	1,387,623	13,407,844
2022	5,009,513	25.2	1,262,397	11,869,337	25.4	1,272,416	12,000,674	28.6	1,432,721	13,544,080
2023	5,172,322	25.2	1,303,425	11,973,578	25.4	1,313,770	12,106,068	28.6	1,479,284	13,663,029
2024	5,340,422	25.2	1,345,786	12,060,798	25.4	1,356,467	12,194,253	28.6	1,527,361	13,762,555
2025	5,513,986	25.2	1,389,524	12,128,962	25.4	1,400,552	12,263,171	28.6	1,577,000	13,840,336
2026	5,693,191	25.2	1,434,684	12,175,865	25.4	1,446,071	12,310,593	28.6	1,628,253	13,893,857
2027	5,878,220	25.2	1,481,311	12,199,115	25.4	1,493,068	12,334,100	28.6	1,681,171	13,920,387

Notes regarding the above projections:

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

Daniel Boone Regional Library - General

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

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 4,407,936	15.2%	\$670,006	\$ 6,683,745	18.9%	\$833,100	\$ 8,354,662	16.5%	\$727,309	\$ 7,202,161
2019	4,551,194	15.2	691,781	6,775,311	18.9	860,176	8,469,120	16.5	750,947	7,300,830
2020	4,699,108	15.2	714,264	6,860,743	18.9	888,131	8,575,910	16.5	775,353	7,392,889
2021	4,851,829	15.2	737,478	6,939,181	18.9	916,996	8,673,958	16.5	800,552	7,477,411
2022	5,009,513	15.2	761,446	7,009,689	18.9	946,798	8,762,093	16.5	826,570	7,553,388
2023	5,172,322	15.2	786,193	7,071,251	18.9	977,569	8,839,045	16.5	853,433	7,619,725
2024	5,340,422	15.2	811,744	7,122,760	18.9	1,009,340	8,903,432	16.5	881,170	7,675,230
2025	5,513,986	15.2	838,126	7,163,016	18.9	1,042,143	8,953,751	16.5	909,808	7,718,608
2026	5,693,191	15.2	865,365	7,190,716	18.9	1,076,013	8,988,376	16.5	939,377	7,748,456
2027	5,878,220	15.2	893,489	7,204,446	18.9	1,110,984	9,005,539	16.5	969,906	7,763,251

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 4,407,936	19.8%	\$872,771	\$ 8,743,353	22.3%	\$982,970	\$ 10,025,483	22.9%	\$1,009,417	\$ 10,284,760
2019	4,551,194	19.8	901,136	8,863,136	22.3	1,014,916	10,162,831	22.9	1,042,223	10,425,660
2020	4,699,108	19.8	930,423	8,974,895	22.3	1,047,901	10,290,978	22.9	1,076,096	10,557,121
2021	4,851,829	19.8	960,662	9,077,504	22.3	1,081,958	10,408,634	22.9	1,111,069	10,677,820
2022	5,009,513	19.8	991,884	9,169,740	22.3	1,117,121	10,514,395	22.9	1,147,178	10,786,316
2023	5,172,322	19.8	1,024,120	9,250,272	22.3	1,153,428	10,606,736	22.9	1,184,462	10,881,045
2024	5,340,422	19.8	1,057,404	9,317,654	22.3	1,190,914	10,683,999	22.9	1,222,957	10,960,306
2025	5,513,986	19.8	1,091,769	9,370,314	22.3	1,229,619	10,744,381	22.9	1,262,703	11,022,250
2026	5,693,191	19.8	1,127,252	9,406,549	22.3	1,269,582	10,785,930	22.9	1,303,741	11,064,874
2027	5,878,220	19.8	1,163,888	9,424,511	22.3	1,310,843	10,806,525	22.9	1,346,112	11,086,002

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 4,407,936	26.0%	\$1,146,063	\$ 11,696,448	26.2%	\$1,154,879	\$ 11,826,035	29.6%	\$1,304,749	\$ 13,346,701
2019	4,551,194	26.0	1,183,310	11,856,688	26.2	1,192,413	11,988,050	29.6	1,347,153	13,529,549
2020	4,699,108	26.0	1,221,768	12,006,193	26.2	1,231,166	12,139,212	29.6	1,390,936	13,700,148
2021	4,851,829	26.0	1,261,476	12,143,459	26.2	1,271,179	12,277,999	29.6	1,436,141	13,856,781
2022	5,009,513	26.0	1,302,473	12,266,848	26.2	1,312,492	12,402,755	29.6	1,482,816	13,997,579
2023	5,172,322	26.0	1,344,804	12,374,580	26.2	1,355,148	12,511,680	29.6	1,531,007	14,120,511
2024	5,340,422	26.0	1,388,510	12,464,721	26.2	1,399,191	12,602,819	29.6	1,580,765	14,223,370
2025	5,513,986	26.0	1,433,636	12,535,168	26.2	1,444,664	12,674,046	29.6	1,632,140	14,303,756
2026	5,693,191	26.0	1,480,230	12,583,642	26.2	1,491,616	12,723,057	29.6	1,685,185	14,359,069
2027	5,878,220	26.0	1,528,337	12,607,670	26.2	1,540,094	12,747,351	29.6	1,739,953	14,386,487

Notes regarding the above projections:

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

Daniel Boone Regional Library - General

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% 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
2018	\$ 4,407,936	12.1%	\$533,360	\$ 6,709,832	15.8%	\$696,454	\$ 8,441,784	14.6%	\$643,559	\$ 7,783,460
2019	4,551,194	12.1	550,694	6,801,756	15.8	719,089	8,557,435	14.6	664,474	7,890,092
2020	4,699,108	12.1	568,592	6,887,522	15.8	742,459	8,665,339	14.6	686,070	7,989,581
2021	4,851,829	12.1	587,071	6,966,267	15.8	766,589	8,764,409	14.6	708,367	8,080,925
2022	5,009,513	12.1	606,151	7,037,051	15.8	791,503	8,853,463	14.6	731,389	8,163,035
2023	5,172,322	12.1	625,851	7,098,853	15.8	817,227	8,931,217	14.6	755,159	8,234,726
2024	5,340,422	12.1	646,191	7,150,563	15.8	843,787	8,996,275	14.6	779,702	8,294,711
2025	5,513,986	12.1	667,192	7,190,976	15.8	871,210	9,047,119	14.6	805,042	8,341,590
2026	5,693,191	12.1	688,876	7,218,784	15.8	899,524	9,082,105	14.6	831,206	8,373,847
2027	5,878,220	12.1	711,265	7,232,568	15.8	928,759	9,099,447	14.6	858,220	8,389,837

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
2018	\$ 4,407,936	17.6%	\$775,797	\$ 9,247,106	19.3%	\$850,732	\$ 10,173,298	20.6%	\$908,035	\$ 10,710,067
2019	4,551,194	17.6	801,010	9,373,790	19.3	878,380	10,312,671	20.6	937,546	10,856,793
2020	4,699,108	17.6	827,043	9,491,988	19.3	906,928	10,442,707	20.6	968,016	10,993,690
2021	4,851,829	17.6	853,922	9,600,509	19.3	936,403	10,562,098	20.6	999,477	11,119,380
2022	5,009,513	17.6	881,674	9,698,059	19.3	966,836	10,669,419	20.6	1,031,960	11,232,363
2023	5,172,322	17.6	910,329	9,783,231	19.3	998,258	10,763,122	20.6	1,065,498	11,331,010
2024	5,340,422	17.6	939,914	9,854,495	19.3	1,030,701	10,841,524	20.6	1,100,127	11,413,549
2025	5,513,986	17.6	970,462	9,910,189	19.3	1,064,199	10,902,797	20.6	1,135,881	11,478,055
2026	5,693,191	17.6	1,002,002	9,948,512	19.3	1,098,786	10,944,959	20.6	1,172,797	11,522,441
2027	5,878,220	17.6	1,034,567	9,967,508	19.3	1,134,496	10,965,858	20.6	1,210,913	11,544,443

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
2018	\$ 4,407,936	23.0%	\$1,013,825	\$ 11,903,587	23.6%	\$1,040,273	\$ 12,172,061	26.8%	\$1,181,327	\$ 13,612,871
2019	4,551,194	23.0	1,046,775	12,066,664	23.6	1,074,082	12,338,816	26.8	1,219,720	13,799,365
2020	4,699,108	23.0	1,080,795	12,218,817	23.6	1,108,989	12,494,401	26.8	1,259,361	13,973,366
2021	4,851,829	23.0	1,115,921	12,358,514	23.6	1,145,032	12,637,249	26.8	1,300,290	14,133,123
2022	5,009,513	23.0	1,152,188	12,484,088	23.6	1,182,245	12,765,655	26.8	1,342,549	14,276,728
2023	5,172,322	23.0	1,189,634	12,593,728	23.6	1,220,668	12,877,767	26.8	1,386,182	14,402,111
2024	5,340,422	23.0	1,228,297	12,685,465	23.6	1,260,340	12,971,573	26.8	1,431,233	14,507,021
2025	5,513,986	23.0	1,268,217	12,757,159	23.6	1,301,301	13,044,884	26.8	1,477,748	14,589,010
2026	5,693,191	23.0	1,309,434	12,806,491	23.6	1,343,593	13,095,329	26.8	1,525,775	14,645,426
2027	5,878,220	23.0	1,351,991	12,830,945	23.6	1,387,260	13,120,334	26.8	1,575,363	14,673,391

Notes regarding the above projections:

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

Daniel Boone Regional Library - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% 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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 4,407,936	12.5%	\$550,992	\$ 6,946,023	16.4%	\$722,901	\$ 8,736,866	15.2%	\$670,006	\$ 8,058,042
2019	4,551,194	12.5	568,899	7,041,182	16.4	746,396	8,856,560	15.2	691,781	8,168,436
2020	4,699,108	12.5	587,389	7,129,967	16.4	770,654	8,968,236	15.2	714,264	8,271,435
2021	4,851,829	12.5	606,479	7,211,483	16.4	795,700	9,070,769	15.2	737,478	8,366,002
2022	5,009,513	12.5	626,189	7,284,758	16.4	821,560	9,162,936	15.2	761,446	8,451,008
2023	5,172,322	12.5	646,540	7,348,735	16.4	848,261	9,243,408	15.2	786,193	8,525,228
2024	5,340,422	12.5	667,553	7,402,266	16.4	875,829	9,310,740	15.2	811,744	8,587,329
2025	5,513,986	12.5	689,248	7,444,101	16.4	904,294	9,363,361	15.2	838,126	8,635,862
2026	5,693,191	12.5	711,649	7,472,888	16.4	933,683	9,399,570	15.2	865,365	8,669,257
2027	5,878,220	12.5	734,778	7,487,157	16.4	964,028	9,417,518	15.2	893,489	8,685,811

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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 4,407,936	18.3%	\$806,652	\$ 9,570,863	20.1%	\$885,995	\$ 10,527,005	21.4%	\$943,298	\$ 11,083,143
2019	4,551,194	18.3	832,869	9,701,982	20.1	914,790	10,671,223	21.4	973,956	11,234,980
2020	4,699,108	18.3	859,937	9,824,318	20.1	944,521	10,805,780	21.4	1,005,609	11,376,646
2021	4,851,829	18.3	887,885	9,936,639	20.1	975,218	10,929,322	21.4	1,038,291	11,506,714
2022	5,009,513	18.3	916,741	10,037,604	20.1	1,006,912	11,040,374	21.4	1,072,036	11,623,633
2023	5,172,322	18.3	946,535	10,125,758	20.1	1,039,637	11,137,334	21.4	1,106,877	11,725,716
2024	5,340,422	18.3	977,297	10,199,517	20.1	1,073,425	11,218,462	21.4	1,142,850	11,811,130
2025	5,513,986	18.3	1,009,059	10,257,161	20.1	1,108,311	11,281,865	21.4	1,179,993	11,877,883
2026	5,693,191	18.3	1,041,854	10,296,826	20.1	1,144,331	11,325,492	21.4	1,218,343	11,923,815
2027	5,878,220	18.3	1,075,714	10,316,488	20.1	1,181,522	11,347,118	21.4	1,257,939	11,946,583

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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 4,407,936	23.9%	\$1,053,497	\$ 12,315,642	24.6%	\$1,084,352	\$ 12,593,666	27.8%	\$1,225,406	\$ 14,082,255
2019	4,551,194	23.9	1,087,735	12,484,364	24.6	1,119,594	12,766,197	27.8	1,265,232	14,275,180
2020	4,699,108	23.9	1,123,087	12,641,784	24.6	1,155,981	12,927,171	27.8	1,306,352	14,455,181
2021	4,851,829	23.9	1,159,587	12,786,317	24.6	1,193,550	13,074,967	27.8	1,348,808	14,620,446
2022	5,009,513	23.9	1,197,274	12,916,238	24.6	1,232,340	13,207,821	27.8	1,392,645	14,769,003
2023	5,172,322	23.9	1,236,185	13,029,673	24.6	1,272,391	13,323,817	27.8	1,437,906	14,898,710
2024	5,340,422	23.9	1,276,361	13,124,586	24.6	1,313,744	13,420,872	27.8	1,484,637	15,007,237
2025	5,513,986	23.9	1,317,843	13,198,762	24.6	1,356,441	13,496,722	27.8	1,532,888	15,092,053
2026	5,693,191	23.9	1,360,673	13,249,802	24.6	1,400,525	13,548,914	27.8	1,582,707	15,150,415
2027	5,878,220	23.9	1,404,895	13,275,102	24.6	1,446,042	13,574,785	27.8	1,634,145	15,179,344

Notes regarding the above projections:

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

Daniel Boone Regional Library - General

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

(0% 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 Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 4,407,936	15.7%	\$692,046	\$ 6,923,671	19.5%	\$859,547	\$ 8,654,753	18.2%	\$802,244	\$ 7,992,920
2019	4,551,194	15.7	714,537	7,018,524	19.5	887,483	8,773,322	18.2	828,317	8,102,422
2020	4,699,108	15.7	737,760	7,107,023	19.5	916,326	8,883,948	18.2	855,238	8,204,588
2021	4,851,829	15.7	761,737	7,188,277	19.5	946,107	8,985,518	18.2	883,033	8,298,391
2022	5,009,513	15.7	786,494	7,261,316	19.5	976,855	9,076,819	18.2	911,731	8,382,710
2023	5,172,322	15.7	812,055	7,325,087	19.5	1,008,603	9,156,535	18.2	941,363	8,456,330
2024	5,340,422	15.7	838,446	7,378,445	19.5	1,041,382	9,223,234	18.2	971,957	8,517,929
2025	5,513,986	15.7	865,696	7,420,146	19.5	1,075,227	9,275,361	18.2	1,003,545	8,566,070
2026	5,693,191	15.7	893,831	7,448,840	19.5	1,110,172	9,311,229	18.2	1,036,161	8,599,195
2027	5,878,220	15.7	922,881	7,463,063	19.5	1,146,253	9,329,009	18.2	1,069,836	8,615,615

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 4,407,936	21.4%	\$943,298	\$ 9,456,698	23.2%	\$1,022,641	\$ 10,385,746	24.4%	\$1,075,536	\$ 10,920,319
2019	4,551,194	21.4	973,956	9,586,253	23.2	1,055,877	10,528,029	24.4	1,110,491	11,069,926
2020	4,699,108	21.4	1,005,609	9,707,130	23.2	1,090,193	10,660,781	24.4	1,146,582	11,209,511
2021	4,851,829	21.4	1,038,291	9,818,111	23.2	1,125,624	10,782,665	24.4	1,183,846	11,337,669
2022	5,009,513	21.4	1,072,036	9,917,872	23.2	1,162,207	10,892,227	24.4	1,222,321	11,452,870
2023	5,172,322	21.4	1,106,877	10,004,974	23.2	1,199,979	10,987,886	24.4	1,262,047	11,553,453
2024	5,340,422	21.4	1,142,850	10,077,854	23.2	1,238,978	11,067,926	24.4	1,303,063	11,637,612
2025	5,513,986	21.4	1,179,993	10,134,811	23.2	1,279,245	11,130,478	24.4	1,345,413	11,703,384
2026	5,693,191	21.4	1,218,343	10,174,003	23.2	1,320,820	11,173,520	24.4	1,389,139	11,748,641
2027	5,878,220	21.4	1,257,939	10,193,430	23.2	1,363,747	11,194,856	24.4	1,434,286	11,771,075

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2018	\$ 4,407,936	26.9%	\$1,185,735	\$ 12,116,683	27.5%	\$1,212,182	\$ 12,384,065	30.7%	\$1,353,236	\$ 13,828,355
2019	4,551,194	26.9	1,224,271	12,282,680	27.5	1,251,578	12,553,725	30.7	1,397,217	14,017,801
2020	4,699,108	26.9	1,264,060	12,437,557	27.5	1,292,255	12,712,020	30.7	1,442,626	14,194,557
2021	4,851,829	26.9	1,305,142	12,579,755	27.5	1,334,253	12,857,356	30.7	1,489,512	14,356,842
2022	5,009,513	26.9	1,347,559	12,707,577	27.5	1,377,616	12,987,998	30.7	1,537,920	14,502,721
2023	5,172,322	26.9	1,391,355	12,819,179	27.5	1,422,389	13,102,063	30.7	1,587,903	14,630,089
2024	5,340,422	26.9	1,436,574	12,912,558	27.5	1,468,616	13,197,503	30.7	1,639,510	14,736,660
2025	5,513,986	26.9	1,483,262	12,985,536	27.5	1,516,346	13,272,091	30.7	1,692,794	14,819,947
2026	5,693,191	26.9	1,531,468	13,035,752	27.5	1,565,628	13,323,415	30.7	1,747,810	14,877,256
2027	5,878,220	26.9	1,581,241	13,060,643	27.5	1,616,511	13,348,856	30.7	1,804,614	14,905,664

Notes regarding the above projections:

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

Daniel Boone Regional Library - General

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

(0% 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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 4,407,936	16.2%	\$714,086	\$ 7,159,528	20.1%	\$885,995	\$ 8,949,374	18.8%	\$828,692	\$ 8,266,964
2019	4,551,194	16.2	737,293	7,257,612	20.1	914,790	9,071,979	18.8	855,624	8,380,220
2020	4,699,108	16.2	761,255	7,349,126	20.1	944,521	9,186,371	18.8	883,432	8,485,889
2021	4,851,829	16.2	785,996	7,433,148	20.1	975,218	9,291,398	18.8	912,144	8,582,908
2022	5,009,513	16.2	811,541	7,508,676	20.1	1,006,912	9,385,807	18.8	941,788	8,670,118
2023	5,172,322	16.2	837,916	7,574,620	20.1	1,039,637	9,468,236	18.8	972,397	8,746,262
2024	5,340,422	16.2	865,148	7,629,796	20.1	1,073,425	9,537,206	18.8	1,003,999	8,809,973
2025	5,513,986	16.2	893,266	7,672,917	20.1	1,108,311	9,591,107	18.8	1,036,629	8,859,764
2026	5,693,191	16.2	922,297	7,702,588	20.1	1,144,331	9,628,196	18.8	1,070,320	8,894,025
2027	5,878,220	16.2	952,272	7,717,296	20.1	1,181,522	9,646,581	18.8	1,105,105	8,911,008

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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 4,407,936	22.1%	\$974,154	\$ 9,780,036	23.9%	\$1,053,497	\$ 10,739,294	25.2%	\$1,110,800	\$ 11,293,001
2019	4,551,194	22.1	1,005,814	9,914,021	23.9	1,087,735	10,886,421	25.2	1,146,901	11,447,713
2020	4,699,108	22.1	1,038,503	10,039,031	23.9	1,123,087	11,023,692	25.2	1,184,175	11,592,061
2021	4,851,829	22.1	1,072,254	10,153,807	23.9	1,159,587	11,149,725	25.2	1,222,661	11,724,592
2022	5,009,513	22.1	1,107,102	10,256,979	23.9	1,197,274	11,263,016	25.2	1,262,397	11,843,725
2023	5,172,322	22.1	1,143,083	10,347,059	23.9	1,236,185	11,361,932	25.2	1,303,425	11,947,741
2024	5,340,422	22.1	1,180,233	10,422,431	23.9	1,276,361	11,444,696	25.2	1,345,786	12,034,772
2025	5,513,986	22.1	1,218,591	10,481,335	23.9	1,317,843	11,509,378	25.2	1,389,524	12,102,789
2026	5,693,191	22.1	1,258,195	10,521,867	23.9	1,360,673	11,553,885	25.2	1,434,684	12,149,591
2027	5,878,220	22.1	1,299,087	10,541,958	23.9	1,404,895	11,575,947	25.2	1,481,311	12,172,790

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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 4,407,936	27.8%	\$1,225,406	\$ 12,529,099	28.5%	\$1,256,262	\$ 12,805,951	31.7%	\$1,397,316	\$ 14,299,025
2019	4,551,194	27.8	1,265,232	12,700,746	28.5	1,297,090	12,981,391	31.7	1,442,728	14,494,919
2020	4,699,108	27.8	1,306,352	12,860,894	28.5	1,339,246	13,145,078	31.7	1,489,617	14,677,691
2021	4,851,829	27.8	1,348,808	13,007,932	28.5	1,382,771	13,295,365	31.7	1,538,030	14,845,500
2022	5,009,513	27.8	1,392,645	13,140,104	28.5	1,427,711	13,430,458	31.7	1,588,016	14,996,344
2023	5,172,322	27.8	1,437,906	13,255,505	28.5	1,474,112	13,548,409	31.7	1,639,626	15,128,047
2024	5,340,422	27.8	1,484,637	13,352,063	28.5	1,522,020	13,647,100	31.7	1,692,914	15,238,245
2025	5,513,986	27.8	1,532,888	13,427,525	28.5	1,571,486	13,724,229	31.7	1,747,934	15,324,367
2026	5,693,191	27.8	1,582,707	13,479,450	28.5	1,622,559	13,777,301	31.7	1,804,742	15,383,627
2027	5,878,220	27.8	1,634,145	13,505,189	28.5	1,675,293	13,803,608	31.7	1,863,396	15,413,002

Notes regarding the above projections:

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