



The Initial Valuation For

# Clay County Children's Service Fund

as of August 31, 2019



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October 4, 2019

Clay County Children's Service Fund  
Gladstone, 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, 2019.

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 August 31, 2019. 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.

# Clay County Children's Service Fund

## 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			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.40%	5.10%	0.20%	5.70%
L-3	General	0.50	7.00	0.30	7.80
LT-4(65)	General	0.50	5.90	0.20	6.60
LT-5(65)	General	0.60	7.50	0.30	8.40
L-7	General	0.70	8.80	0.30	9.80
LT-8(65)	General	0.70	9.20	0.30	10.20
L-12	General	0.80	10.70	0.40	11.90
LT-14(65)	General	0.80	10.80	0.40	12.00
L-6	General	0.90	12.50	0.50	13.90

\* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

# Clay County Children's Service Fund

## 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	0.40%	5.40%	0.20%	6.00%
L-3	General	0.60	7.30	0.30	8.20
LT-4(65)	General	0.50	6.10	0.20	6.80
LT-5(65)	General	0.60	7.90	0.30	8.80
L-7	General	0.70	9.20	0.30	10.20
LT-8(65)	General	0.70	9.60	0.30	10.60
L-12	General	0.80	11.10	0.40	12.30
LT-14(65)	General	0.80	11.30	0.40	12.50
L-6	General	0.90	13.00	0.50	14.40

\* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

# Clay County Children's Service Fund

## 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	0.50%	8.30%	0.20%	9.00%
L-3	General	0.60	10.10	0.30	11.00
LT-4(65)	General	0.50	9.00	0.20	9.70
LT-5(65)	General	0.70	10.70	0.30	11.70
L-7	General	0.70	12.00	0.30	13.00
LT-8(65)	General	0.80	12.40	0.30	13.50
L-12	General	0.90	13.80	0.40	15.10
LT-14(65)	General	0.90	14.00	0.40	15.30
L-6	General	1.00	15.70	0.50	17.20

\* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.



# Clay County Children's Service Fund

## Employer Contribution Rates (Non-Contributory Plan - 3 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	0.50%	8.50%	0.20%	9.20%
L-3	General	0.60	10.40	0.30	11.30
LT-4(65)	General	0.60	9.30	0.20	10.10
LT-5(65)	General	0.70	11.00	0.30	12.00
L-7	General	0.80	12.40	0.30	13.50
LT-8(65)	General	0.80	12.70	0.30	13.80
L-12	General	0.90	14.30	0.40	15.60
LT-14(65)	General	0.90	14.50	0.40	15.80
L-6	General	1.00	16.20	0.50	17.70

\* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

# Clay County Children's Service Fund

## 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	0.40%	5.10%	0.20%	5.70%
L-3	General	0.50	7.00	0.30	7.80
LT-4(65)	General	0.50	5.90	0.20	6.60
LT-5(65)	General	0.60	7.50	0.30	8.40
L-7	General	0.70	8.80	0.30	9.80
LT-8(65)	General	0.70	9.20	0.30	10.20
L-12	General	0.80	10.70	0.40	11.90
LT-14(65)	General	0.80	10.80	0.40	12.00
L-6	General	0.90	12.50	0.50	13.90

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

\* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

# Clay County Children's Service Fund

## 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			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.40%	5.40%	0.20%	6.00%
L-3	General	0.60	7.30	0.30	8.20
LT-4(65)	General	0.50	6.10	0.20	6.80
LT-5(65)	General	0.60	7.90	0.30	8.80
L-7	General	0.70	9.20	0.30	10.20
LT-8(65)	General	0.70	9.60	0.30	10.60
L-12	General	0.80	11.10	0.40	12.30
LT-14(65)	General	0.80	11.30	0.40	12.50
L-6	General	0.90	13.00	0.50	14.40

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

\* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

# Clay County Children's Service Fund

## 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	0.50%	8.30%	0.20%	9.00%
L-3	General	0.60	10.10	0.30	11.00
LT-4(65)	General	0.50	9.00	0.20	9.70
LT-5(65)	General	0.70	10.70	0.30	11.70
L-7	General	0.70	12.00	0.30	13.00
LT-8(65)	General	0.80	12.40	0.30	13.50
L-12	General	0.90	13.80	0.40	15.10
LT-14(65)	General	0.90	14.00	0.40	15.30
L-6	General	1.00	15.70	0.50	17.20

# 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 for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

# Clay County Children's Service Fund

## 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	0.50%	8.50%	0.20%	9.20%
L-3	General	0.60	10.40	0.30	11.30
LT-4(65)	General	0.60	9.30	0.20	10.10
LT-5(65)	General	0.70	11.00	0.30	12.00
L-7	General	0.80	12.40	0.30	13.50
LT-8(65)	General	0.80	12.70	0.30	13.80
L-12	General	0.90	14.30	0.40	15.60
LT-14(65)	General	0.90	14.50	0.40	15.80
L-6	General	1.00	16.20	0.50	17.70

# 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 for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

# Clay County Children's Service Fund

## 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	\$ 5,130
L-3	7,020
LT-4(65)	5,940
LT-5(65)	7,560
L-7	8,820
LT-8(65)	9,180
L-12	10,710
LT-14(65)	10,800
L-6	12,510

3 Year FAS	
Benefit Program	General
L-1	\$ 5,400
L-3	7,380
LT-4(65)	6,120
LT-5(65)	7,920
L-7	9,180
LT-8(65)	9,540
L-12	11,070
LT-14(65)	11,250
L-6	12,960

### Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 8,100
L-3	9,900
LT-4(65)	8,730
LT-5(65)	10,530
L-7	11,700
LT-8(65)	12,150
L-12	13,590
LT-14(65)	13,770
L-6	15,480

3 Year FAS	
Benefit Program	General
L-1	\$ 8,280
L-3	10,170
LT-4(65)	9,090
LT-5(65)	10,800
L-7	12,150
LT-8(65)	12,420
L-12	14,040
LT-14(65)	14,220
L-6	15,930

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.

# Clay County Children's Service Fund

## 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	\$ 5,130
L-3	7,020
LT-4(65)	5,940
LT-5(65)	7,560
L-7	8,820
LT-8(65)	9,180
L-12	10,710
LT-14(65)	10,800
L-6	12,510

3 Year FAS	
Benefit Program	General
L-1	\$ 5,400
L-3	7,380
LT-4(65)	6,120
LT-5(65)	7,920
L-7	9,180
LT-8(65)	9,540
L-12	11,070
LT-14(65)	11,250
L-6	12,960

### Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 8,100
L-3	9,900
LT-4(65)	8,730
LT-5(65)	10,530
L-7	11,700
LT-8(65)	12,150
L-12	13,590
LT-14(65)	13,770
L-6	15,480

3 Year FAS	
Benefit Program	General
L-1	\$ 8,280
L-3	10,170
LT-4(65)	9,090
LT-5(65)	10,800
L-7	12,150
LT-8(65)	12,420
L-12	14,040
LT-14(65)	14,220
L-6	15,930

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.

# Clay County Children's Service Fund

## Employees and Payroll Included in the Valuation

	General
Number of Employees	1
Annual Payroll	\$ 90,000

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



## **APPENDIX I**

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### **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:

### Clay County Children's Service Fund

#### 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	\$ 6,590	\$ 6,853	\$ 7,873	\$ 8,134
L-3	General	8,557	8,893	9,845	10,176
LT-4(65)	General	7,392	7,682	8,678	8,962
LT-5(65)	General	9,162	9,514	10,442	10,796
L-7	General	10,525	10,935	11,818	12,208
LT-8(65)	General	10,932	11,350	12,217	12,621
L-12	General	12,500	12,968	13,781	14,251
LT-14(65)	General	12,704	13,174	13,984	14,458
L-6	General	14,482	15,010	15,748	16,280

# Clay County Children's Service Fund

## 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	\$ 6,590	\$ 6,853	\$ 7,873	\$ 8,134
L-3	General	8,557	8,893	9,845	10,176
LT-4(65)	General	7,392	7,682	8,678	8,962
LT-5(65)	General	9,162	9,514	10,442	10,796
L-7	General	10,525	10,935	11,818	12,208
LT-8(65)	General	10,932	11,350	12,217	12,621
L-12	General	12,500	12,968	13,781	14,251
LT-14(65)	General	12,704	13,174	13,984	14,458
L-6	General	14,482	15,010	15,748	16,280

## **APPENDIX II**

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### **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**

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### **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, 2019

(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**

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### **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 <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 930	\$1,455	97%
2,000	700	1,076	1,776	89%
2,500	875	1,223	2,098	84%
3,000	1,050	1,370	2,420	81%
3,500	1,225	1,516	2,741	78%
4,000	1,400	1,662	3,062	77%
25 Years of Service:				
\$1,500	\$ 375	\$ 930	\$1,305	87%
2,000	500	1,076	1,576	79%
2,500	625	1,223	1,848	74%
3,000	750	1,370	2,120	71%
3,500	875	1,516	2,391	68%
4,000	1,000	1,662	2,662	67%
15 Years of Service:				
\$1,500	\$225	\$ 930	\$1,155	77%
2,000	300	1,076	1,376	69%
2,500	375	1,223	1,598	64%
3,000	450	1,370	1,820	61%
3,500	525	1,516	2,041	58%
4,000	600	1,662	2,262	57%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> 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 <sup>1</sup> )**

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 930	\$1,586	106%
2,000	875	1,076	1,951	98%
2,500	1,094	1,223	2,317	93%
3,000	1,313	1,370	2,683	89%
3,500	1,531	1,516	3,047	87%
4,000	1,750	1,662	3,412	85%
25 Years of Service:				
\$1,500	\$ 469	\$ 930	\$1,399	93%
2,000	625	1,076	1,701	85%
2,500	781	1,223	2,004	80%
3,000	938	1,370	2,308	77%
3,500	1,094	1,516	2,610	75%
4,000	1,250	1,662	2,912	73%
15 Years of Service:				
\$1,500	\$281	\$ 930	\$1,211	81%
2,000	375	1,076	1,451	73%
2,500	469	1,223	1,692	68%
3,000	563	1,370	1,933	64%
3,500	656	1,516	2,172	62%
4,000	750	1,662	2,412	60%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> 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 <sup>1</sup> )**

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 930	\$1,718	115%
2,000	1,050	1,076	2,126	106%
2,500	1,313	1,223	2,536	101%
3,000	1,575	1,370	2,945	98%
3,500	1,838	1,516	3,354	96%
4,000	2,100	1,662	3,762	94%
25 Years of Service:				
\$1,500	\$ 563	\$ 930	\$1,493	100%
2,000	750	1,076	1,826	91%
2,500	938	1,223	2,161	86%
3,000	1,125	1,370	2,495	83%
3,500	1,313	1,516	2,829	81%
4,000	1,500	1,662	3,162	79%
15 Years of Service:				
\$1,500	\$338	\$ 930	\$1,268	85%
2,000	450	1,076	1,526	76%
2,500	563	1,223	1,786	71%
3,000	675	1,370	2,045	68%
3,500	788	1,516	2,304	66%
4,000	900	1,662	2,562	64%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> 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 <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 930	\$1,849	123%
2,000	1,225	1,076	2,301	115%
2,500	1,531	1,223	2,754	110%
3,000	1,838	1,370	3,208	107%
3,500	2,144	1,516	3,660	105%
4,000	2,450	1,662	4,112	103%
25 Years of Service:				
\$1,500	\$ 656	\$ 930	\$1,586	106%
2,000	875	1,076	1,951	98%
2,500	1,094	1,223	2,317	93%
3,000	1,313	1,370	2,683	89%
3,500	1,531	1,516	3,047	87%
4,000	1,750	1,662	3,412	85%
15 Years of Service:				
\$1,500	\$ 394	\$ 930	\$1,324	88%
2,000	525	1,076	1,601	80%
2,500	656	1,223	1,879	75%
3,000	788	1,370	2,158	72%
3,500	919	1,516	2,435	70%
4,000	1,050	1,662	2,712	68%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> 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 <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 930	\$1,980	132%
2,000	1,400	1,076	2,476	124%
2,500	1,750	1,223	2,973	119%
3,000	2,100	1,370	3,470	116%
3,500	2,450	1,516	3,966	113%
4,000	2,800	1,662	4,462	112%
25 Years of Service:				
\$1,500	\$ 750	\$ 930	\$1,680	112%
2,000	1,000	1,076	2,076	104%
2,500	1,250	1,223	2,473	99%
3,000	1,500	1,370	2,870	96%
3,500	1,750	1,516	3,266	93%
4,000	2,000	1,662	3,662	92%
15 Years of Service:				
\$1,500	\$ 450	\$ 930	\$1,380	92%
2,000	600	1,076	1,676	84%
2,500	750	1,223	1,973	79%
3,000	900	1,370	2,270	76%
3,500	1,050	1,516	2,566	73%
4,000	1,200	1,662	2,862	72%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> 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 <sup>1</sup> to age 65)**  
**1.00% of FAS <sup>1</sup> at age 65)**

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	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	\$ 930	\$1,050	\$1,455	70%	97%
2,000	1,400	700	1,076	1,400	1,776	70%	89%
2,500	1,750	875	1,223	1,750	2,098	70%	84%
3,000	2,100	1,050	1,370	2,100	2,420	70%	81%
3,500	2,450	1,225	1,516	2,450	2,741	70%	78%
4,000	2,800	1,400	1,662	2,800	3,062	70%	77%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 930	\$ 750	\$1,305	50%	87%
2,000	1,000	500	1,076	1,000	1,576	50%	79%
2,500	1,250	625	1,223	1,250	1,848	50%	74%
3,000	1,500	750	1,370	1,500	2,120	50%	71%
3,500	1,750	875	1,516	1,750	2,391	50%	68%
4,000	2,000	1,000	1,662	2,000	2,662	50%	67%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 930	\$ 450	\$1,155	30%	77%
2,000	600	300	1,076	600	1,376	30%	69%
2,500	750	375	1,223	750	1,598	30%	64%
3,000	900	450	1,370	900	1,820	30%	61%
3,500	1,050	525	1,516	1,050	2,041	30%	58%
4,000	1,200	600	1,662	1,200	2,262	30%	57%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> 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 <sup>1</sup> to age 65)  
1.25% of FAS <sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	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	\$ 930	\$1,050	\$1,586	70%	106%
2,000	1,400	875	1,076	1,400	1,951	70%	98%
2,500	1,750	1,094	1,223	1,750	2,317	70%	93%
3,000	2,100	1,313	1,370	2,100	2,683	70%	89%
3,500	2,450	1,531	1,516	2,450	3,047	70%	87%
4,000	2,800	1,750	1,662	2,800	3,412	70%	85%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 930	\$ 750	\$1,399	50%	93%
2,000	1,000	625	1,076	1,000	1,701	50%	85%
2,500	1,250	781	1,223	1,250	2,004	50%	80%
3,000	1,500	938	1,370	1,500	2,308	50%	77%
3,500	1,750	1,094	1,516	1,750	2,610	50%	75%
4,000	2,000	1,250	1,662	2,000	2,912	50%	73%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 930	\$ 450	\$1,211	30%	81%
2,000	600	375	1,076	600	1,451	30%	73%
2,500	750	469	1,223	750	1,692	30%	68%
3,000	900	563	1,370	900	1,933	30%	64%
3,500	1,050	656	1,516	1,050	2,172	30%	62%
4,000	1,200	750	1,662	1,200	2,412	30%	60%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> 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 <sup>1</sup> to age 65)**  
**1.50% of FAS <sup>1</sup> at age 65)**

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	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	\$ 930	\$1,050	\$1,718	70%	115%
2,000	1,400	1,050	1,076	1,400	2,126	70%	106%
2,500	1,750	1,313	1,223	1,750	2,536	70%	101%
3,000	2,100	1,575	1,370	2,100	2,945	70%	98%
3,500	2,450	1,838	1,516	2,450	3,354	70%	96%
4,000	2,800	2,100	1,662	2,800	3,762	70%	94%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 930	\$ 750	\$1,493	50%	100%
2,000	1,000	750	1,076	1,000	1,826	50%	91%
2,500	1,250	938	1,223	1,250	2,161	50%	86%
3,000	1,500	1,125	1,370	1,500	2,495	50%	83%
3,500	1,750	1,313	1,516	1,750	2,829	50%	81%
4,000	2,000	1,500	1,662	2,000	3,162	50%	79%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 930	\$ 450	\$1,268	30%	85%
2,000	600	450	1,076	600	1,526	30%	76%
2,500	750	563	1,223	750	1,786	30%	71%
3,000	900	675	1,370	900	2,045	30%	68%
3,500	1,050	788	1,516	1,050	2,304	30%	66%
4,000	1,200	900	1,662	1,200	2,562	30%	64%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> 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 <sup>1</sup> to age 65)**  
**1.75% of FAS <sup>1</sup> at age 65)**

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	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	\$ 930	\$1,050	\$1,849	70%	123%
2,000	1,400	1,225	1,076	1,400	2,301	70%	115%
2,500	1,750	1,531	1,223	1,750	2,754	70%	110%
3,000	2,100	1,838	1,370	2,100	3,208	70%	107%
3,500	2,450	2,144	1,516	2,450	3,660	70%	105%
4,000	2,800	2,450	1,662	2,800	4,112	70%	103%
25 Years of Service:							
\$1,500	\$ 750	\$ 656	\$ 930	\$ 750	\$1,586	50%	106%
2,000	1,000	875	1,076	1,000	1,951	50%	98%
2,500	1,250	1,094	1,223	1,250	2,317	50%	93%
3,000	1,500	1,313	1,370	1,500	2,683	50%	89%
3,500	1,750	1,531	1,516	1,750	3,047	50%	87%
4,000	2,000	1,750	1,662	2,000	3,412	50%	85%
15 Years of Service:							
\$1,500	\$ 450	\$ 394	\$ 930	\$ 450	\$1,324	30%	88%
2,000	600	525	1,076	600	1,601	30%	80%
2,500	750	656	1,223	750	1,879	30%	75%
3,000	900	788	1,370	900	2,158	30%	72%
3,500	1,050	919	1,516	1,050	2,435	30%	70%
4,000	1,200	1,050	1,662	1,200	2,712	30%	68%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

## **APPENDIX V**

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### **AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES**

# Clay County Children's Service Fund

August 31, 2019

## 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
<b>Under 20</b>									
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54	1							1	\$ 90,000
55-59									
60-64									
65-69									
<b>70 &amp; Over</b>									
<b>Totals</b>	<b>1</b>							<b>1</b>	<b>\$ 90,000</b>

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

Age: 53.0 years.

Benefit Service: 0.6 years.

Annual Pay: \$90,000.



## **APPENDIX VI**

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### **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.



October 4, 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 August 31, 2019 Initial Actuarial Valuation of LAGERS benefits for the employees of

Clay County Children's Service Fund

Sincerely,

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

Mita D. Drazilov, ASA, FCA, MAAA

MDD:wp

October 4, 2019

Clay County Children's Service Fund  
Gladstone, Missouri

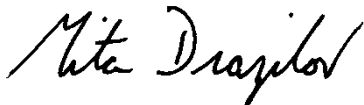
Ladies and Gentlemen:

This report contains projections needed to comply with Missouri state disclosure requirements (Section 105.660 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision. This report is intended to be a supplement to the August 31, 2019 Initial Valuation for the Clay County Children's Service Fund dated October 4, 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, 2019.

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

# Clay County Children's Service Fund - 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
2019	\$ 90,000	5.7%	\$5,130	\$ 6,590	7.8%	\$7,020	\$ 8,557	6.6%	\$5,940	\$ 7,392
2020	92,925	5.7	5,297	6,680	7.8	7,248	8,674	6.6	6,133	7,493
2021	95,945	5.7	5,469	6,764	7.8	7,484	8,783	6.6	6,332	7,587
2022	99,063	5.7	5,647	6,841	7.8	7,727	8,883	6.6	6,538	7,674
2023	102,283	5.7	5,830	6,911	7.8	7,978	8,973	6.6	6,751	7,752
2024	105,607	5.7	6,020	6,972	7.8	8,237	9,052	6.6	6,970	7,820
2025	109,039	5.7	6,215	7,023	7.8	8,505	9,118	6.6	7,197	7,877
2026	112,583	5.7	6,417	7,063	7.8	8,781	9,170	6.6	7,430	7,922
2027	116,242	5.7	6,626	7,090	7.8	9,067	9,205	6.6	7,672	7,953
2028	120,020	5.7	6,841	7,104	7.8	9,362	9,223	6.6	7,921	7,968

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
2019	\$ 90,000	8.4%	\$7,560	\$ 9,162	9.8%	\$8,820	\$ 10,525	10.2%	\$9,180	\$ 10,932
2020	92,925	8.4	7,806	9,288	9.8	9,107	10,669	10.2	9,478	11,082
2021	95,945	8.4	8,059	9,405	9.8	9,403	10,804	10.2	9,786	11,222
2022	99,063	8.4	8,321	9,513	9.8	9,708	10,928	10.2	10,104	11,350
2023	102,283	8.4	8,592	9,610	9.8	10,024	11,039	10.2	10,433	11,465
2024	105,607	8.4	8,871	9,694	9.8	10,349	11,136	10.2	10,772	11,566
2025	109,039	8.4	9,159	9,765	9.8	10,686	11,217	10.2	11,122	11,650
2026	112,583	8.4	9,457	9,820	9.8	11,033	11,280	10.2	11,483	11,716
2027	116,242	8.4	9,764	9,858	9.8	11,392	11,324	10.2	11,857	11,761
2028	120,020	8.4	10,082	9,877	9.8	11,762	11,346	10.2	12,242	11,783

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
2019	\$ 90,000	11.9%	\$10,710	\$ 12,500	12.0%	\$10,800	\$ 12,704	13.9%	\$12,510	\$ 14,482
2020	92,925	11.9	11,058	12,671	12.0	11,151	12,878	13.9	12,917	14,680
2021	95,945	11.9	11,417	12,831	12.0	11,513	13,040	13.9	13,336	14,865
2022	99,063	11.9	11,788	12,978	12.0	11,888	13,189	13.9	13,770	15,035
2023	102,283	11.9	12,172	13,110	12.0	12,274	13,323	13.9	14,217	15,188
2024	105,607	11.9	12,567	13,225	12.0	12,673	13,440	13.9	14,679	15,321
2025	109,039	11.9	12,976	13,321	12.0	13,085	13,538	13.9	15,156	15,433
2026	112,583	11.9	13,397	13,396	12.0	13,510	13,615	13.9	15,649	15,520
2027	116,242	11.9	13,833	13,448	12.0	13,949	13,668	13.9	16,158	15,580
2028	120,020	11.9	14,282	13,474	12.0	14,402	13,694	13.9	16,683	15,610

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

# Clay County Children's Service Fund - 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 %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 90,000	6.0%	\$5,400	\$ 6,853	8.2%	\$7,380	\$ 8,893	6.8%	\$6,120	\$ 7,682
2020	92,925	6.0	5,576	6,947	8.2	7,620	9,015	6.8	6,319	7,787
2021	95,945	6.0	5,757	7,035	8.2	7,867	9,129	6.8	6,524	7,885
2022	99,063	6.0	5,944	7,115	8.2	8,123	9,233	6.8	6,736	7,975
2023	102,283	6.0	6,137	7,187	8.2	8,387	9,327	6.8	6,955	8,056
2024	105,607	6.0	6,336	7,250	8.2	8,660	9,409	6.8	7,181	8,127
2025	109,039	6.0	6,542	7,303	8.2	8,941	9,478	6.8	7,415	8,186
2026	112,583	6.0	6,755	7,344	8.2	9,232	9,532	6.8	7,656	8,232
2027	116,242	6.0	6,975	7,372	8.2	9,532	9,569	6.8	7,904	8,264
2028	120,020	6.0	7,201	7,386	8.2	9,842	9,587	6.8	8,161	8,280

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
2019	\$ 90,000	8.8%	\$7,920	\$ 9,514	10.2%	\$9,180	\$ 10,935	10.6%	\$9,540	\$ 11,350
2020	92,925	8.8	8,177	9,644	10.2	9,478	11,085	10.6	9,850	11,505
2021	95,945	8.8	8,443	9,766	10.2	9,786	11,225	10.6	10,170	11,650
2022	99,063	8.8	8,718	9,878	10.2	10,104	11,353	10.6	10,501	11,783
2023	102,283	8.8	9,001	9,978	10.2	10,433	11,468	10.6	10,842	11,903
2024	105,607	8.8	9,293	10,066	10.2	10,772	11,569	10.6	11,194	12,008
2025	109,039	8.8	9,595	10,139	10.2	11,122	11,653	10.6	11,558	12,095
2026	112,583	8.8	9,907	10,196	10.2	11,483	11,719	10.6	11,934	12,163
2027	116,242	8.8	10,229	10,235	10.2	11,857	11,764	10.6	12,322	12,210
2028	120,020	8.8	10,562	10,255	10.2	12,242	11,786	10.6	12,722	12,233

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
2019	\$ 90,000	12.3%	\$11,070	\$ 12,968	12.5%	\$11,250	\$ 13,174	14.4%	\$12,960	\$ 15,010
2020	92,925	12.3	11,430	13,146	12.5	11,616	13,354	14.4	13,381	15,216
2021	95,945	12.3	11,801	13,312	12.5	11,993	13,522	14.4	13,816	15,408
2022	99,063	12.3	12,185	13,464	12.5	12,383	13,677	14.4	14,265	15,584
2023	102,283	12.3	12,581	13,601	12.5	12,785	13,816	14.4	14,729	15,742
2024	105,607	12.3	12,990	13,720	12.5	13,201	13,937	14.4	15,207	15,880
2025	109,039	12.3	13,412	13,820	12.5	13,630	14,039	14.4	15,702	15,996
2026	112,583	12.3	13,848	13,898	12.5	14,073	14,118	14.4	16,212	16,086
2027	116,242	12.3	14,298	13,952	12.5	14,530	14,173	14.4	16,739	16,148
2028	120,020	12.3	14,762	13,979	12.5	15,003	14,200	14.4	17,283	16,179

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

# Clay County Children's Service Fund - 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
2019	\$ 90,000	9.0%	\$8,100	\$ 7,873	11.0%	\$9,900	\$ 9,845	9.7%	\$8,730	\$ 8,678
2020	92,925	9.0	8,363	7,981	11.0	10,222	9,980	9.7	9,014	8,797
2021	95,945	9.0	8,635	8,082	11.0	10,554	10,106	9.7	9,307	8,908
2022	99,063	9.0	8,916	8,174	11.0	10,897	10,222	9.7	9,609	9,010
2023	102,283	9.0	9,205	8,257	11.0	11,251	10,326	9.7	9,921	9,102
2024	105,607	9.0	9,505	8,330	11.0	11,617	10,417	9.7	10,244	9,182
2025	109,039	9.0	9,814	8,391	11.0	11,994	10,493	9.7	10,577	9,249
2026	112,583	9.0	10,132	8,438	11.0	12,384	10,552	9.7	10,921	9,301
2027	116,242	9.0	10,462	8,471	11.0	12,787	10,593	9.7	11,275	9,337
2028	120,020	9.0	10,802	8,487	11.0	13,202	10,613	9.7	11,642	9,355

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
2019	\$ 90,000	11.7%	\$10,530	\$ 10,442	13.0%	\$11,700	\$ 11,818	13.5%	\$12,150	\$ 12,217
2020	92,925	11.7	10,872	10,585	13.0	12,080	11,980	13.5	12,545	12,384
2021	95,945	11.7	11,226	10,718	13.0	12,473	12,131	13.5	12,953	12,540
2022	99,063	11.7	11,590	10,841	13.0	12,878	12,270	13.5	13,374	12,683
2023	102,283	11.7	11,967	10,951	13.0	13,297	12,395	13.5	13,808	12,812
2024	105,607	11.7	12,356	11,047	13.0	13,729	12,504	13.5	14,257	12,925
2025	109,039	11.7	12,758	11,127	13.0	14,175	12,595	13.5	14,720	13,019
2026	112,583	11.7	13,172	11,190	13.0	14,636	12,666	13.5	15,199	13,093
2027	116,242	11.7	13,600	11,233	13.0	15,111	12,715	13.5	15,693	13,144
2028	120,020	11.7	14,042	11,254	13.0	15,603	12,739	13.5	16,203	13,169

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
2019	\$ 90,000	15.1%	\$13,590	\$ 13,781	15.3%	\$13,770	\$ 13,984	17.2%	\$15,480	\$ 15,748
2020	92,925	15.1	14,032	13,970	15.3	14,218	14,176	17.2	15,983	15,964
2021	95,945	15.1	14,488	14,146	15.3	14,680	14,355	17.2	16,503	16,165
2022	99,063	15.1	14,959	14,308	15.3	15,157	14,519	17.2	17,039	16,350
2023	102,283	15.1	15,445	14,453	15.3	15,649	14,667	17.2	17,593	16,516
2024	105,607	15.1	15,947	14,580	15.3	16,158	14,796	17.2	18,164	16,661
2025	109,039	15.1	16,465	14,686	15.3	16,683	14,904	17.2	18,755	16,782
2026	112,583	15.1	17,000	14,769	15.3	17,225	14,988	17.2	19,364	16,877
2027	116,242	15.1	17,553	14,826	15.3	17,785	15,046	17.2	19,994	16,942
2028	120,020	15.1	18,123	14,854	15.3	18,363	15,075	17.2	20,643	16,974

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



# Clay County Children's Service Fund - 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	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
2019	\$ 90,000	9.2%	\$8,280	\$ 8,134	11.3%	\$10,170	\$ 10,176	10.1%	\$9,090	\$ 8,962
2020	92,925	9.2	8,549	8,245	11.3	10,501	10,315	10.1	9,385	9,085
2021	95,945	9.2	8,827	8,349	11.3	10,842	10,445	10.1	9,690	9,200
2022	99,063	9.2	9,114	8,444	11.3	11,194	10,564	10.1	10,005	9,305
2023	102,283	9.2	9,410	8,530	11.3	11,558	10,671	10.1	10,331	9,400
2024	105,607	9.2	9,716	8,605	11.3	11,934	10,765	10.1	10,666	9,483
2025	109,039	9.2	10,032	8,668	11.3	12,321	10,843	10.1	11,013	9,552
2026	112,583	9.2	10,358	8,717	11.3	12,722	10,904	10.1	11,371	9,606
2027	116,242	9.2	10,694	8,751	11.3	13,135	10,946	10.1	11,740	9,643
2028	120,020	9.2	11,042	8,768	11.3	13,562	10,967	10.1	12,122	9,661

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
2019	\$ 90,000	12.0%	\$10,800	\$ 10,796	13.5%	\$12,150	\$ 12,208	13.8%	\$12,420	\$ 12,621
2020	92,925	12.0	11,151	10,944	13.5	12,545	12,375	13.8	12,824	12,794
2021	95,945	12.0	11,513	11,082	13.5	12,953	12,531	13.8	13,240	12,955
2022	99,063	12.0	11,888	11,209	13.5	13,374	12,674	13.8	13,671	13,103
2023	102,283	12.0	12,274	11,323	13.5	13,808	12,803	13.8	14,115	13,236
2024	105,607	12.0	12,673	11,422	13.5	14,257	12,915	13.8	14,574	13,352
2025	109,039	12.0	13,085	11,505	13.5	14,720	13,009	13.8	15,047	13,449
2026	112,583	12.0	13,510	11,570	13.5	15,199	13,083	13.8	15,536	13,525
2027	116,242	12.0	13,949	11,615	13.5	15,693	13,134	13.8	16,041	13,577
2028	120,020	12.0	14,402	11,637	13.5	16,203	13,159	13.8	16,563	13,603

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
2019	\$ 90,000	15.6%	\$14,040	\$ 14,251	15.8%	\$14,220	\$ 14,458	17.7%	\$15,930	\$ 16,280
2020	92,925	15.6	14,496	14,446	15.8	14,682	14,656	17.7	16,448	16,503
2021	95,945	15.6	14,967	14,628	15.8	15,159	14,841	17.7	16,982	16,711
2022	99,063	15.6	15,454	14,795	15.8	15,652	15,011	17.7	17,534	16,902
2023	102,283	15.6	15,956	14,945	15.8	16,161	15,164	17.7	18,104	17,074
2024	105,607	15.6	16,475	15,076	15.8	16,686	15,297	17.7	18,692	17,224
2025	109,039	15.6	17,010	15,186	15.8	17,228	15,408	17.7	19,300	17,349
2026	112,583	15.6	17,563	15,272	15.8	17,788	15,495	17.7	19,927	17,447
2027	116,242	15.6	18,134	15,331	15.8	18,366	15,555	17.7	20,575	17,514
2028	120,020	15.6	18,723	15,360	15.8	18,963	15,585	17.7	21,244	17,547

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

# Clay County Children's Service Fund - 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
2019	\$ 90,000	5.7%	\$5,130	\$ 6,590	7.8%	\$7,020	\$ 8,557	6.6%	\$5,940	\$ 7,392
2020	92,925	5.7	5,297	6,680	7.8	7,248	8,674	6.6	6,133	7,493
2021	95,945	5.7	5,469	6,764	7.8	7,484	8,783	6.6	6,332	7,587
2022	99,063	5.7	5,647	6,841	7.8	7,727	8,883	6.6	6,538	7,674
2023	102,283	5.7	5,830	6,911	7.8	7,978	8,973	6.6	6,751	7,752
2024	105,607	5.7	6,020	6,972	7.8	8,237	9,052	6.6	6,970	7,820
2025	109,039	5.7	6,215	7,023	7.8	8,505	9,118	6.6	7,197	7,877
2026	112,583	5.7	6,417	7,063	7.8	8,781	9,170	6.6	7,430	7,922
2027	116,242	5.7	6,626	7,090	7.8	9,067	9,205	6.6	7,672	7,953
2028	120,020	5.7	6,841	7,104	7.8	9,362	9,223	6.6	7,921	7,968

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
2019	\$ 90,000	8.4%	\$7,560	\$ 9,162	9.8%	\$8,820	\$ 10,525	10.2%	\$9,180	\$ 10,932
2020	92,925	8.4	7,806	9,288	9.8	9,107	10,669	10.2	9,478	11,082
2021	95,945	8.4	8,059	9,405	9.8	9,403	10,804	10.2	9,786	11,222
2022	99,063	8.4	8,321	9,513	9.8	9,708	10,928	10.2	10,104	11,350
2023	102,283	8.4	8,592	9,610	9.8	10,024	11,039	10.2	10,433	11,465
2024	105,607	8.4	8,871	9,694	9.8	10,349	11,136	10.2	10,772	11,566
2025	109,039	8.4	9,159	9,765	9.8	10,686	11,217	10.2	11,122	11,650
2026	112,583	8.4	9,457	9,820	9.8	11,033	11,280	10.2	11,483	11,716
2027	116,242	8.4	9,764	9,858	9.8	11,392	11,324	10.2	11,857	11,761
2028	120,020	8.4	10,082	9,877	9.8	11,762	11,346	10.2	12,242	11,783

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
2019	\$ 90,000	11.9%	\$10,710	\$ 12,500	12.0%	\$10,800	\$ 12,704	13.9%	\$12,510	\$ 14,482
2020	92,925	11.9	11,058	12,671	12.0	11,151	12,878	13.9	12,917	14,680
2021	95,945	11.9	11,417	12,831	12.0	11,513	13,040	13.9	13,336	14,865
2022	99,063	11.9	11,788	12,978	12.0	11,888	13,189	13.9	13,770	15,035
2023	102,283	11.9	12,172	13,110	12.0	12,274	13,323	13.9	14,217	15,188
2024	105,607	11.9	12,567	13,225	12.0	12,673	13,440	13.9	14,679	15,321
2025	109,039	11.9	12,976	13,321	12.0	13,085	13,538	13.9	15,156	15,433
2026	112,583	11.9	13,397	13,396	12.0	13,510	13,615	13.9	15,649	15,520
2027	116,242	11.9	13,833	13,448	12.0	13,949	13,668	13.9	16,158	15,580
2028	120,020	11.9	14,282	13,474	12.0	14,402	13,694	13.9	16,683	15,610

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

# Clay County Children's Service Fund - 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 % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 90,000	6.0%	\$5,400	\$ 6,853	8.2%	\$7,380	\$ 8,893	6.8%	\$6,120	\$ 7,682
2020	92,925	6.0	5,576	6,947	8.2	7,620	9,015	6.8	6,319	7,787
2021	95,945	6.0	5,757	7,035	8.2	7,867	9,129	6.8	6,524	7,885
2022	99,063	6.0	5,944	7,115	8.2	8,123	9,233	6.8	6,736	7,975
2023	102,283	6.0	6,137	7,187	8.2	8,387	9,327	6.8	6,955	8,056
2024	105,607	6.0	6,336	7,250	8.2	8,660	9,409	6.8	7,181	8,127
2025	109,039	6.0	6,542	7,303	8.2	8,941	9,478	6.8	7,415	8,186
2026	112,583	6.0	6,755	7,344	8.2	9,232	9,532	6.8	7,656	8,232
2027	116,242	6.0	6,975	7,372	8.2	9,532	9,569	6.8	7,904	8,264
2028	120,020	6.0	7,201	7,386	8.2	9,842	9,587	6.8	8,161	8,280

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
2019	\$ 90,000	8.8%	\$7,920	\$ 9,514	10.2%	\$9,180	\$ 10,935	10.6%	\$9,540	\$ 11,350
2020	92,925	8.8	8,177	9,644	10.2	9,478	11,085	10.6	9,850	11,505
2021	95,945	8.8	8,443	9,766	10.2	9,786	11,225	10.6	10,170	11,650
2022	99,063	8.8	8,718	9,878	10.2	10,104	11,353	10.6	10,501	11,783
2023	102,283	8.8	9,001	9,978	10.2	10,433	11,468	10.6	10,842	11,903
2024	105,607	8.8	9,293	10,066	10.2	10,772	11,569	10.6	11,194	12,008
2025	109,039	8.8	9,595	10,139	10.2	11,122	11,653	10.6	11,558	12,095
2026	112,583	8.8	9,907	10,196	10.2	11,483	11,719	10.6	11,934	12,163
2027	116,242	8.8	10,229	10,235	10.2	11,857	11,764	10.6	12,322	12,210
2028	120,020	8.8	10,562	10,255	10.2	12,242	11,786	10.6	12,722	12,233

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
2019	\$ 90,000	12.3%	\$11,070	\$ 12,968	12.5%	\$11,250	\$ 13,174	14.4%	\$12,960	\$ 15,010
2020	92,925	12.3	11,430	13,146	12.5	11,616	13,354	14.4	13,381	15,216
2021	95,945	12.3	11,801	13,312	12.5	11,993	13,522	14.4	13,816	15,408
2022	99,063	12.3	12,185	13,464	12.5	12,383	13,677	14.4	14,265	15,584
2023	102,283	12.3	12,581	13,601	12.5	12,785	13,816	14.4	14,729	15,742
2024	105,607	12.3	12,990	13,720	12.5	13,201	13,937	14.4	15,207	15,880
2025	109,039	12.3	13,412	13,820	12.5	13,630	14,039	14.4	15,702	15,996
2026	112,583	12.3	13,848	13,898	12.5	14,073	14,118	14.4	16,212	16,086
2027	116,242	12.3	14,298	13,952	12.5	14,530	14,173	14.4	16,739	16,148
2028	120,020	12.3	14,762	13,979	12.5	15,003	14,200	14.4	17,283	16,179

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

# Clay County Children's Service Fund - 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	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
2019	\$ 90,000	9.0%	\$8,100	\$ 7,873	11.0%	\$9,900	\$ 9,845	9.7%	\$8,730	\$ 8,678
2020	92,925	9.0	8,363	7,981	11.0	10,222	9,980	9.7	9,014	8,797
2021	95,945	9.0	8,635	8,082	11.0	10,554	10,106	9.7	9,307	8,908
2022	99,063	9.0	8,916	8,174	11.0	10,897	10,222	9.7	9,609	9,010
2023	102,283	9.0	9,205	8,257	11.0	11,251	10,326	9.7	9,921	9,102
2024	105,607	9.0	9,505	8,330	11.0	11,617	10,417	9.7	10,244	9,182
2025	109,039	9.0	9,814	8,391	11.0	11,994	10,493	9.7	10,577	9,249
2026	112,583	9.0	10,132	8,438	11.0	12,384	10,552	9.7	10,921	9,301
2027	116,242	9.0	10,462	8,471	11.0	12,787	10,593	9.7	11,275	9,337
2028	120,020	9.0	10,802	8,487	11.0	13,202	10,613	9.7	11,642	9,355

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
2019	\$ 90,000	11.7%	\$10,530	\$ 10,442	13.0%	\$11,700	\$ 11,818	13.5%	\$12,150	\$ 12,217
2020	92,925	11.7	10,872	10,585	13.0	12,080	11,980	13.5	12,545	12,384
2021	95,945	11.7	11,226	10,718	13.0	12,473	12,131	13.5	12,953	12,540
2022	99,063	11.7	11,590	10,841	13.0	12,878	12,270	13.5	13,374	12,683
2023	102,283	11.7	11,967	10,951	13.0	13,297	12,395	13.5	13,808	12,812
2024	105,607	11.7	12,356	11,047	13.0	13,729	12,504	13.5	14,257	12,925
2025	109,039	11.7	12,758	11,127	13.0	14,175	12,595	13.5	14,720	13,019
2026	112,583	11.7	13,172	11,190	13.0	14,636	12,666	13.5	15,199	13,093
2027	116,242	11.7	13,600	11,233	13.0	15,111	12,715	13.5	15,693	13,144
2028	120,020	11.7	14,042	11,254	13.0	15,603	12,739	13.5	16,203	13,169

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
2019	\$ 90,000	15.1%	\$13,590	\$ 13,781	15.3%	\$13,770	\$ 13,984	17.2%	\$15,480	\$ 15,748
2020	92,925	15.1	14,032	13,970	15.3	14,218	14,176	17.2	15,983	15,964
2021	95,945	15.1	14,488	14,146	15.3	14,680	14,355	17.2	16,503	16,165
2022	99,063	15.1	14,959	14,308	15.3	15,157	14,519	17.2	17,039	16,350
2023	102,283	15.1	15,445	14,453	15.3	15,649	14,667	17.2	17,593	16,516
2024	105,607	15.1	15,947	14,580	15.3	16,158	14,796	17.2	18,164	16,661
2025	109,039	15.1	16,465	14,686	15.3	16,683	14,904	17.2	18,755	16,782
2026	112,583	15.1	17,000	14,769	15.3	17,225	14,988	17.2	19,364	16,877
2027	116,242	15.1	17,553	14,826	15.3	17,785	15,046	17.2	19,994	16,942
2028	120,020	15.1	18,123	14,854	15.3	18,363	15,075	17.2	20,643	16,974

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

# Clay County Children's Service Fund - 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
2019	\$ 90,000	9.2%	\$8,280	\$ 8,134	11.3%	\$10,170	\$ 10,176	10.1%	\$9,090	\$ 8,962
2020	92,925	9.2	8,549	8,245	11.3	10,501	10,315	10.1	9,385	9,085
2021	95,945	9.2	8,827	8,349	11.3	10,842	10,445	10.1	9,690	9,200
2022	99,063	9.2	9,114	8,444	11.3	11,194	10,564	10.1	10,005	9,305
2023	102,283	9.2	9,410	8,530	11.3	11,558	10,671	10.1	10,331	9,400
2024	105,607	9.2	9,716	8,605	11.3	11,934	10,765	10.1	10,666	9,483
2025	109,039	9.2	10,032	8,668	11.3	12,321	10,843	10.1	11,013	9,552
2026	112,583	9.2	10,358	8,717	11.3	12,722	10,904	10.1	11,371	9,606
2027	116,242	9.2	10,694	8,751	11.3	13,135	10,946	10.1	11,740	9,643
2028	120,020	9.2	11,042	8,768	11.3	13,562	10,967	10.1	12,122	9,661

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
2019	\$ 90,000	12.0%	\$10,800	\$ 10,796	13.5%	\$12,150	\$ 12,208	13.8%	\$12,420	\$ 12,621
2020	92,925	12.0	11,151	10,944	13.5	12,545	12,375	13.8	12,824	12,794
2021	95,945	12.0	11,513	11,082	13.5	12,953	12,531	13.8	13,240	12,955
2022	99,063	12.0	11,888	11,209	13.5	13,374	12,674	13.8	13,671	13,103
2023	102,283	12.0	12,274	11,323	13.5	13,808	12,803	13.8	14,115	13,236
2024	105,607	12.0	12,673	11,422	13.5	14,257	12,915	13.8	14,574	13,352
2025	109,039	12.0	13,085	11,505	13.5	14,720	13,009	13.8	15,047	13,449
2026	112,583	12.0	13,510	11,570	13.5	15,199	13,083	13.8	15,536	13,525
2027	116,242	12.0	13,949	11,615	13.5	15,693	13,134	13.8	16,041	13,577
2028	120,020	12.0	14,402	11,637	13.5	16,203	13,159	13.8	16,563	13,603

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
2019	\$ 90,000	15.6%	\$14,040	\$ 14,251	15.8%	\$14,220	\$ 14,458	17.7%	\$15,930	\$ 16,280
2020	92,925	15.6	14,496	14,446	15.8	14,682	14,656	17.7	16,448	16,503
2021	95,945	15.6	14,967	14,628	15.8	15,159	14,841	17.7	16,982	16,711
2022	99,063	15.6	15,454	14,795	15.8	15,652	15,011	17.7	17,534	16,902
2023	102,283	15.6	15,956	14,945	15.8	16,161	15,164	17.7	18,104	17,074
2024	105,607	15.6	16,475	15,076	15.8	16,686	15,297	17.7	18,692	17,224
2025	109,039	15.6	17,010	15,186	15.8	17,228	15,408	17.7	19,300	17,349
2026	112,583	15.6	17,563	15,272	15.8	17,788	15,495	17.7	19,927	17,447
2027	116,242	15.6	18,134	15,331	15.8	18,366	15,555	17.7	20,575	17,514
2028	120,020	15.6	18,723	15,360	15.8	18,963	15,585	17.7	21,244	17,547

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