



The Initial Valuation For

Centralia Special Road District

as of December 31, 2019



Table of Contents

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



January 17, 2020

Centralia Special Road District
Centralia, 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 December 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.

Centralia Special Road District

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	10.00%	3.20%	0.20%	13.40%
L-3	General	12.50	4.70	0.30	17.50
LT-4(65)	General	11.10	4.10	0.20	15.40
LT-5(65)	General	13.40	5.30	0.30	19.00
L-7	General	15.10	6.10	0.30	21.50
LT-8(65)	General	15.60	6.50	0.30	22.40
L-12	General	17.60	7.50	0.40	25.50
LT-14(65)	General	17.90	7.70	0.40	26.00
L-6	General	20.10	8.90	0.50	29.50

* 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.

Centralia Special Road District

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			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	General	10.30%	3.40%	0.20%	13.90%
L-3	General	12.90	4.90	0.30	18.10
LT-4(65)	General	11.50	4.30	0.20	16.00
LT-5(65)	General	13.80	5.50	0.30	19.60
L-7	General	15.60	6.40	0.30	22.30
LT-8(65)	General	16.20	6.80	0.30	23.30
L-12	General	18.20	7.90	0.40	26.50
LT-14(65)	General	18.50	8.10	0.40	27.00
L-6	General	20.80	9.30	0.50	30.60

* 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.

Centralia Special Road District

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	10.10%	6.80%	0.20%	17.10%
L-3	General	12.60	8.20	0.30	21.10
LT-4(65)	General	11.30	7.60	0.20	19.10
LT-5(65)	General	13.50	8.80	0.30	22.60
L-7	General	15.20	9.70	0.30	25.20
LT-8(65)	General	15.70	10.10	0.30	26.10
L-12	General	17.70	11.20	0.40	29.30
LT-14(65)	General	18.00	11.40	0.40	29.80
L-6	General	20.20	12.60	0.50	33.30

* 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.

Centralia Special Road District

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	10.50%	7.00%	0.20%	17.70%
L-3	General	13.10	8.50	0.30	21.90
LT-4(65)	General	11.60	7.80	0.20	19.60
LT-5(65)	General	14.00	9.10	0.30	23.40
L-7	General	15.70	10.00	0.30	26.00
LT-8(65)	General	16.30	10.40	0.30	27.00
L-12	General	18.30	11.50	0.40	30.20
LT-14(65)	General	18.60	11.70	0.40	30.70
L-6	General	20.90	13.00	0.50	34.40

* 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.

Centralia Special Road District

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	10.90%	3.60%	0.20%	14.70%
L-3	General	13.70	5.10	0.30	19.10
LT-4(65)	General	13.10	4.80	0.20	18.10
LT-5(65)	General	15.40	6.00	0.30	21.70
L-7	General	16.50	6.60	0.30	23.40
LT-8(65)	General	17.60	7.20	0.30	25.10
L-12	General	19.20	8.10	0.40	27.70
LT-14(65)	General	19.80	8.40	0.40	28.60
L-6	General	22.00	9.60	0.50	32.10

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.

Centralia Special Road District

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	General	11.30%	3.80%	0.20%	15.30%
L-3	General	14.20	5.40	0.30	19.90
LT-4(65)	General	13.60	5.10	0.20	18.90
LT-5(65)	General	15.90	6.30	0.30	22.50
L-7	General	17.00	6.90	0.30	24.20
LT-8(65)	General	18.20	7.50	0.30	26.00
L-12	General	19.90	8.50	0.40	28.80
LT-14(65)	General	20.50	8.80	0.40	29.70
L-6	General	22.80	10.10	0.50	33.40

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.

Centralia Special Road District

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	11.10%	7.10%	0.20%	18.40%
L-3	General	13.80	8.70	0.30	22.80
LT-4(65)	General	13.30	8.30	0.20	21.80
LT-5(65)	General	15.50	9.60	0.30	25.40
L-7	General	16.60	10.20	0.30	27.10
LT-8(65)	General	17.70	10.80	0.30	28.80
L-12	General	19.30	11.80	0.40	31.50
LT-14(65)	General	19.90	12.10	0.40	32.40
L-6	General	22.10	13.30	0.50	35.90

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.

Centralia Special Road District

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			Total Employer Contribution Rate
		Prior Service Cost *	Current Cost	Disability Cost	
L-1	General	11.40%	7.30%	0.20%	18.90%
L-3	General	14.30	8.90	0.30	23.50
LT-4(65)	General	13.70	8.60	0.20	22.50
LT-5(65)	General	16.00	9.90	0.30	26.20
L-7	General	17.10	10.50	0.30	27.90
LT-8(65)	General	18.30	11.20	0.30	29.80
L-12	General	20.00	12.20	0.40	32.60
LT-14(65)	General	20.60	12.50	0.40	33.50
L-6	General	22.90	13.80	0.50	37.20

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.

Centralia Special Road District

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	\$ 12,779
L-3	16,689
LT-4(65)	14,687
LT-5(65)	18,120
L-7	20,504
LT-8(65)	21,362
L-12	24,319
LT-14(65)	24,796
L-6	28,134

3 Year FAS	
Benefit Program	General
L-1	\$ 13,256
L-3	17,262
LT-4(65)	15,259
LT-5(65)	18,692
L-7	21,267
LT-8(65)	22,221
L-12	25,273
LT-14(65)	25,749
L-6	29,183

Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 16,308
L-3	20,123
LT-4(65)	18,215
LT-5(65)	21,553
L-7	24,033
LT-8(65)	24,891
L-12	27,943
LT-14(65)	28,420
L-6	31,758

3 Year FAS	
Benefit Program	General
L-1	\$ 16,880
L-3	20,886
LT-4(65)	18,692
LT-5(65)	22,316
L-7	24,796
LT-8(65)	25,749
L-12	28,801
LT-14(65)	29,278
L-6	32,807

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.

Centralia Special Road District

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	\$ 14,019
L-3	18,215
LT-4(65)	17,262
LT-5(65)	20,695
L-7	22,316
LT-8(65)	23,937
L-12	26,417
LT-14(65)	27,275
L-6	30,613

3 Year FAS	
Benefit Program	General
L-1	\$ 14,591
L-3	18,978
LT-4(65)	18,025
LT-5(65)	21,458
L-7	23,079
LT-8(65)	24,796
L-12	27,466
LT-14(65)	28,324
L-6	31,853

Non-Contributory Plan

5 Year FAS	
Benefit Program	General
L-1	\$ 17,548
L-3	21,744
LT-4(65)	20,790
LT-5(65)	24,223
L-7	25,845
LT-8(65)	27,466
L-12	30,041
LT-14(65)	30,899
L-6	34,237

3 Year FAS	
Benefit Program	General
L-1	\$ 18,025
L-3	22,411
LT-4(65)	21,458
LT-5(65)	24,986
L-7	26,608
LT-8(65)	28,420
L-12	31,090
LT-14(65)	31,948
L-6	35,477

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.

Centralia Special Road District

Employees and Payroll Included in the Valuation

	General
Number of Employees	2
Annual Payroll	\$ 95,368

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

APPENDIX I

UNFUNDED ACTUARIAL ACCRUED LIABILITY

Unfunded Actuarial Accrued Liability (UAAL)

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

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

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

Centralia Special Road District

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	\$ 167,369	\$ 173,176	\$ 169,921	\$ 175,674
L-3	General	210,200	217,445	212,420	219,588
LT-4(65)	General	186,651	193,126	189,054	195,464
LT-5(65)	General	224,667	232,407	226,761	234,432
L-7	General	252,965	261,620	254,902	263,516
LT-8(65)	General	262,606	271,594	264,464	273,403
L-12	General	295,623	305,730	297,383	307,426
LT-14(65)	General	300,449	310,716	302,165	312,376
L-6	General	338,285	349,827	339,869	351,344

Centralia Special Road District

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	\$ 183,369	\$ 189,807	\$ 185,689	\$ 192,071
L-3	General	230,055	238,076	232,109	240,082
LT-4(65)	General	220,816	228,574	222,921	230,623
LT-5(65)	General	258,142	267,148	260,036	268,995
L-7	General	276,673	286,268	278,539	288,103
LT-8(65)	General	295,394	305,656	297,158	307,378
L-12	General	323,231	334,428	324,953	336,118
LT-14(65)	General	332,597	344,114	334,264	345,754
L-6	General	369,779	382,566	371,395	384,140

APPENDIX II

SUMMARY OF FINANCIAL ASSUMPTIONS

Summary of Assumptions Used in Actuarial Valuations

Assumptions Adopted by Board of Trustees After Consulting With Actuary

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

Schedule 1.

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

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

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

Schedule 2.

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

Early Retirement

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

Normal Retirement

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

Schedule 2. (Continued)

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

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

APPENDIX III

SUMMARY OF LAGERS PROVISIONS

Missouri Local Government Employees Retirement System

Brief Summary of LAGERS

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

BENEFIT ILLUSTRATIONS

Missouri LAGERS

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 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%

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

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

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 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%

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

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

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 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%

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

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

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 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%

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

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

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 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%

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

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

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 525	\$ 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%

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

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

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

Missouri LAGERS

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 656	\$ 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%

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

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

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 788	\$ 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%

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

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

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 919	\$ 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%

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

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

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

APPENDIX V

AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

Centralia Special Road District

December 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
Under 20									
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54					1			1	\$ 50,752
55-59									
60-64			1					1	\$ 44,616
65-69									
70 & Over									
Totals			1		1			2	\$ 95,368

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

- Age: 57.6 years.
- Benefit Service: 17.9 years.
- Annual Pay: \$47,684.

APPENDIX VI

RISK COMMENTARY

Risk Commentary

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

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

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

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

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

The computed contribution rates shown on pages 4 thru 11 may be considered as a minimum contribution rate for the selected benefit provisions that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risk Commentary (Concluded)

PLAN MATURITY MEASURES

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

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

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

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

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

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

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

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

DURATION OF ACTUARIAL ACCRUED LIABILITY

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

ADDITIONAL RISK ASSESSMENT

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



January 17, 2020 E-mail

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

Dear Bob:

Enclosed is the report of the December 31, 2019 Initial Actuarial Valuation of LAGERS benefits for the employees of

Centralia Special Road District

Sincerely,

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

Mita D. Drazilov, ASA, FCA, MAAA

MDD:wp

January 17, 2020

Centralia Special Road District
Centralia, Missouri

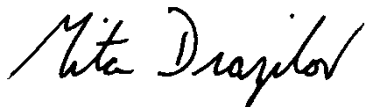
Ladies and Gentlemen:

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 December 31, 2019 Initial Valuation for the Centralia Special Road District dated January 17, 2020.

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

Centralia Special Road District - 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 Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2019	\$ 95,368	13.4%	\$12,779	\$ 167,369	17.5%	\$16,689	\$ 210,200	15.4%	\$14,687	\$ 186,651
2020	98,467	13.4	13,195	169,662	17.5	17,232	213,080	15.4	15,164	189,208
2021	101,667	13.4	13,623	171,801	17.5	17,792	215,767	15.4	15,657	191,594
2022	104,971	13.4	14,066	173,765	17.5	18,370	218,234	15.4	16,166	193,784
2023	108,383	13.4	14,523	175,531	17.5	18,967	220,451	15.4	16,691	195,753
2024	111,905	13.4	14,995	177,073	17.5	19,583	222,387	15.4	17,233	197,472
2025	115,542	13.4	15,483	178,363	17.5	20,220	224,007	15.4	17,793	198,910
2026	119,297	13.4	15,986	179,371	17.5	20,877	225,273	15.4	18,372	200,034
2027	123,174	13.4	16,505	180,065	17.5	21,555	226,144	15.4	18,969	200,808
2028	127,177	13.4	17,042	180,409	17.5	22,256	226,576	15.4	19,585	201,191

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2019	\$ 95,368	19.0%	\$18,120	\$ 224,667	21.5%	\$20,504	\$ 252,965	22.4%	\$21,362	\$ 262,606
2020	98,467	19.0	18,709	227,745	21.5	21,170	256,431	22.4	22,057	266,204
2021	101,667	19.0	19,317	230,617	21.5	21,858	259,664	22.4	22,773	269,561
2022	104,971	19.0	19,944	233,254	21.5	22,569	262,633	22.4	23,514	272,643
2023	108,383	19.0	20,593	235,624	21.5	23,302	265,302	22.4	24,278	275,413
2024	111,905	19.0	21,262	237,693	21.5	24,060	267,632	22.4	25,067	277,832
2025	115,542	19.0	21,953	239,424	21.5	24,842	269,582	22.4	25,881	279,856
2026	119,297	19.0	22,666	240,777	21.5	25,649	271,106	22.4	26,723	281,438
2027	123,174	19.0	23,403	241,708	21.5	26,482	272,154	22.4	27,591	282,526
2028	127,177	19.0	24,164	242,170	21.5	27,343	272,674	22.4	28,488	283,065

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2019	\$ 95,368	25.5%	\$24,319	\$ 295,623	26.0%	\$24,796	\$ 300,449	29.5%	\$28,134	\$ 338,285
2020	98,467	25.5	25,109	299,673	26.0	25,601	304,565	29.5	29,048	342,919
2021	101,667	25.5	25,925	303,452	26.0	26,433	308,405	29.5	29,992	347,243
2022	104,971	25.5	26,768	306,921	26.0	27,292	311,931	29.5	30,966	351,213
2023	108,383	25.5	27,638	310,040	26.0	28,180	315,101	29.5	31,973	354,782
2024	111,905	25.5	28,536	312,763	26.0	29,095	317,868	29.5	33,012	357,898
2025	115,542	25.5	29,463	315,041	26.0	30,041	320,183	29.5	34,085	360,505
2026	119,297	25.5	30,421	316,822	26.0	31,017	321,993	29.5	35,193	362,542
2027	123,174	25.5	31,409	318,047	26.0	32,025	323,238	29.5	36,336	363,944
2028	127,177	25.5	32,430	318,654	26.0	33,066	323,855	29.5	37,517	364,639

Notes regarding the above projections:

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

Centralia Special Road District - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 95,368	13.9%	\$13,256	\$ 173,176	18.1%	\$17,262	\$ 217,445	16.0%	\$15,259	\$ 193,126
2020	98,467	13.9	13,687	175,548	18.1	17,823	220,424	16.0	15,755	195,772
2021	101,667	13.9	14,132	177,762	18.1	18,402	223,203	16.0	16,267	198,241
2022	104,971	13.9	14,591	179,794	18.1	19,000	225,755	16.0	16,795	200,507
2023	108,383	13.9	15,065	181,621	18.1	19,617	228,049	16.0	17,341	202,544
2024	111,905	13.9	15,555	183,216	18.1	20,255	230,052	16.0	17,905	204,323
2025	115,542	13.9	16,060	184,551	18.1	20,913	231,728	16.0	18,487	205,811
2026	119,297	13.9	16,582	185,594	18.1	21,593	233,038	16.0	19,088	206,974
2027	123,174	13.9	17,121	186,312	18.1	22,294	233,939	16.0	19,708	207,774
2028	127,177	13.9	17,678	186,668	18.1	23,019	234,386	16.0	20,348	208,171

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	\$ 95,368	19.6%	\$18,692	\$ 232,407	22.3%	\$21,267	\$ 261,620	23.3%	\$22,221	\$ 271,594
2020	98,467	19.6	19,300	235,591	22.3	21,958	265,204	23.3	22,943	275,315
2021	101,667	19.6	19,927	238,562	22.3	22,672	268,548	23.3	23,688	278,787
2022	104,971	19.6	20,574	241,289	22.3	23,409	271,618	23.3	24,458	281,974
2023	108,383	19.6	21,243	243,741	22.3	24,169	274,378	23.3	25,253	284,839
2024	111,905	19.6	21,933	245,882	22.3	24,955	276,788	23.3	26,074	287,341
2025	115,542	19.6	22,646	247,673	22.3	25,766	278,804	23.3	26,921	289,434
2026	119,297	19.6	23,382	249,073	22.3	26,603	280,380	23.3	27,796	291,070
2027	123,174	19.6	24,142	250,036	22.3	27,468	281,464	23.3	28,700	292,196
2028	127,177	19.6	24,927	250,513	22.3	28,360	282,001	23.3	29,632	292,754

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	\$ 95,368	26.5%	\$25,273	\$ 305,730	27.0%	\$25,749	\$ 310,716	30.6%	\$29,183	\$ 349,827
2020	98,467	26.5	26,094	309,918	27.0	26,586	314,973	30.6	30,131	354,620
2021	101,667	26.5	26,942	313,826	27.0	27,450	318,945	30.6	31,110	359,092
2022	104,971	26.5	27,817	317,414	27.0	28,342	322,591	30.6	32,121	363,197
2023	108,383	26.5	28,721	320,639	27.0	29,263	325,869	30.6	33,165	366,887
2024	111,905	26.5	29,655	323,455	27.0	30,214	328,731	30.6	34,243	370,109
2025	115,542	26.5	30,619	325,811	27.0	31,196	331,126	30.6	35,356	372,805
2026	119,297	26.5	31,614	327,652	27.0	32,210	332,997	30.6	36,505	374,912
2027	123,174	26.5	32,641	328,919	27.0	33,257	334,285	30.6	37,691	376,362
2028	127,177	26.5	33,702	329,547	27.0	34,338	334,923	30.6	38,916	377,081

Notes regarding the above projections:

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

Centralia Special Road District - 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 % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 95,368	17.1%	\$16,308	\$ 169,921	21.1%	\$20,123	\$ 212,420	19.1%	\$18,215	\$ 189,054
2020	98,467	17.1	16,838	172,249	21.1	20,777	215,330	19.1	18,807	191,644
2021	101,667	17.1	17,385	174,421	21.1	21,452	218,045	19.1	19,418	194,061
2022	104,971	17.1	17,950	176,415	21.1	22,149	220,538	19.1	20,049	196,280
2023	108,383	17.1	18,533	178,208	21.1	22,869	222,779	19.1	20,701	198,274
2024	111,905	17.1	19,136	179,773	21.1	23,612	224,736	19.1	21,374	200,015
2025	115,542	17.1	19,758	181,083	21.1	24,379	226,373	19.1	22,069	201,472
2026	119,297	17.1	20,400	182,106	21.1	25,172	227,652	19.1	22,786	202,611
2027	123,174	17.1	21,063	182,810	21.1	25,990	228,532	19.1	23,526	203,395
2028	127,177	17.1	21,747	183,159	21.1	26,834	228,968	19.1	24,291	203,783

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	\$ 95,368	22.6%	\$21,553	\$ 226,761	25.2%	\$24,033	\$ 254,902	26.1%	\$24,891	\$ 264,464
2020	98,467	22.6	22,254	229,868	25.2	24,814	258,394	26.1	25,700	268,087
2021	101,667	22.6	22,977	232,766	25.2	25,620	261,652	26.1	26,535	271,467
2022	104,971	22.6	23,723	235,427	25.2	26,453	264,643	26.1	27,397	274,571
2023	108,383	22.6	24,495	237,819	25.2	27,313	267,332	26.1	28,288	277,361
2024	111,905	22.6	25,291	239,908	25.2	28,200	269,680	26.1	29,207	279,797
2025	115,542	22.6	26,112	241,656	25.2	29,117	271,644	26.1	30,156	281,835
2026	119,297	22.6	26,961	243,022	25.2	30,063	273,179	26.1	31,137	283,428
2027	123,174	22.6	27,837	243,962	25.2	31,040	274,235	26.1	32,148	284,524
2028	127,177	22.6	28,742	244,428	25.2	32,049	274,759	26.1	33,193	285,067

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	\$ 95,368	29.3%	\$27,943	\$ 297,383	29.8%	\$28,420	\$ 302,165	33.3%	\$31,758	\$ 339,869
2020	98,467	29.3	28,851	301,457	29.8	29,343	306,305	33.3	32,790	344,525
2021	101,667	29.3	29,788	305,258	29.8	30,297	310,167	33.3	33,855	348,869
2022	104,971	29.3	30,757	308,748	29.8	31,281	313,713	33.3	34,955	352,858
2023	108,383	29.3	31,756	311,885	29.8	32,298	316,901	33.3	36,092	356,443
2024	111,905	29.3	32,788	314,624	29.8	33,348	319,684	33.3	37,264	359,573
2025	115,542	29.3	33,854	316,916	29.8	34,432	322,013	33.3	38,475	362,192
2026	119,297	29.3	34,954	318,707	29.8	35,551	323,833	33.3	39,726	364,239
2027	123,174	29.3	36,090	319,939	29.8	36,706	325,085	33.3	41,017	365,648
2028	127,177	29.3	37,263	320,550	29.8	37,899	325,706	33.3	42,350	366,346

Notes regarding the above projections:

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

Centralia Special Road District - 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 % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	\$ 95,368	17.7%	\$16,880	\$ 175,674	21.9%	\$20,886	\$ 219,588	19.6%	\$18,692	\$ 195,464
2020	98,467	17.7	17,429	178,081	21.9	21,564	222,596	19.6	19,300	198,142
2021	101,667	17.7	17,995	180,326	21.9	22,265	225,403	19.6	19,927	200,640
2022	104,971	17.7	18,580	182,388	21.9	22,989	227,980	19.6	20,574	202,934
2023	108,383	17.7	19,184	184,241	21.9	23,736	230,296	19.6	21,243	204,996
2024	111,905	17.7	19,807	185,859	21.9	24,507	232,319	19.6	21,933	206,796
2025	115,542	17.7	20,451	187,213	21.9	25,304	234,011	19.6	22,646	208,302
2026	119,297	17.7	21,116	188,271	21.9	26,126	235,334	19.6	23,382	209,479
2027	123,174	17.7	21,802	188,999	21.9	26,975	236,244	19.6	24,142	210,289
2028	127,177	17.7	22,510	189,360	21.9	27,852	236,695	19.6	24,927	210,691

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	\$ 95,368	23.4%	\$22,316	\$ 234,432	26.0%	\$24,796	\$ 263,516	27.0%	\$25,749	\$ 273,403
2020	98,467	23.4	23,041	237,644	26.0	25,601	267,126	27.0	26,586	277,149
2021	101,667	23.4	23,790	240,641	26.0	26,433	270,494	27.0	27,450	280,644
2022	104,971	23.4	24,563	243,392	26.0	27,292	273,587	27.0	28,342	283,853
2023	108,383	23.4	25,362	245,865	26.0	28,180	276,367	27.0	29,263	286,737
2024	111,905	23.4	26,186	248,024	26.0	29,095	278,794	27.0	30,214	289,255
2025	115,542	23.4	27,037	249,831	26.0	30,041	280,825	27.0	31,196	291,362
2026	119,297	23.4	27,915	251,243	26.0	31,017	282,412	27.0	32,210	293,009
2027	123,174	23.4	28,823	252,215	26.0	32,025	283,504	27.0	33,257	294,142
2028	127,177	23.4	29,759	252,697	26.0	33,066	284,045	27.0	34,338	294,704

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	\$ 95,368	30.2%	\$28,801	\$ 307,426	30.7%	\$29,278	\$ 312,376	34.4%	\$32,807	\$ 351,344
2020	98,467	30.2	29,737	311,638	30.7	30,229	316,656	34.4	33,873	356,157
2021	101,667	30.2	30,703	315,568	30.7	31,212	320,649	34.4	34,973	360,648
2022	104,971	30.2	31,701	319,176	30.7	32,226	324,315	34.4	36,110	364,771
2023	108,383	30.2	32,732	322,419	30.7	33,274	327,610	34.4	37,284	368,477
2024	111,905	30.2	33,795	325,251	30.7	34,355	330,487	34.4	38,495	371,713
2025	115,542	30.2	34,894	327,620	30.7	35,471	332,894	34.4	39,746	374,421
2026	119,297	30.2	36,028	329,472	30.7	36,624	334,775	34.4	41,038	376,537
2027	123,174	30.2	37,199	330,746	30.7	37,814	336,070	34.4	42,372	377,993
2028	127,177	30.2	38,407	331,378	30.7	39,043	336,712	34.4	43,749	378,715

Notes regarding the above projections:

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

Centralia Special Road District - 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	\$ 95,368	14.7%	\$14,019	\$ 183,369	19.1%	\$18,215	\$ 230,055	18.1%	\$17,262	\$ 220,816
2020	98,467	14.7	14,475	185,881	19.1	18,807	233,207	18.1	17,823	223,841
2021	101,667	14.7	14,945	188,225	19.1	19,418	236,148	18.1	18,402	226,663
2022	104,971	14.7	15,431	190,377	19.1	20,049	238,848	18.1	19,000	229,254
2023	108,383	14.7	15,932	192,311	19.1	20,701	241,275	18.1	19,617	231,583
2024	111,905	14.7	16,450	194,000	19.1	21,374	243,394	18.1	20,255	233,617
2025	115,542	14.7	16,985	195,413	19.1	22,069	245,167	18.1	20,913	235,319
2026	119,297	14.7	17,537	196,517	19.1	22,786	246,553	18.1	21,593	236,649
2027	123,174	14.7	18,107	197,277	19.1	23,526	247,506	18.1	22,294	237,564
2028	127,177	14.7	18,695	197,654	19.1	24,291	247,979	18.1	23,019	238,018

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	\$ 95,368	21.7%	\$20,695	\$ 258,142	23.4%	\$22,316	\$ 276,673	25.1%	\$23,937	\$ 295,394
2020	98,467	21.7	21,367	261,679	23.4	23,041	280,463	25.1	24,715	299,441
2021	101,667	21.7	22,062	264,979	23.4	23,790	283,999	25.1	25,518	303,217
2022	104,971	21.7	22,779	268,008	23.4	24,563	287,246	25.1	26,348	306,684
2023	108,383	21.7	23,519	270,731	23.4	25,362	290,165	25.1	27,204	309,800
2024	111,905	21.7	24,283	273,109	23.4	26,186	292,713	25.1	28,088	312,521
2025	115,542	21.7	25,073	275,098	23.4	27,037	294,845	25.1	29,001	314,798
2026	119,297	21.7	25,887	276,653	23.4	27,915	296,511	25.1	29,944	316,577
2027	123,174	21.7	26,729	277,723	23.4	28,823	297,658	25.1	30,917	317,801
2028	127,177	21.7	27,597	278,253	23.4	29,759	298,226	25.1	31,921	318,408

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	\$ 95,368	27.7%	\$26,417	\$ 323,231	28.6%	\$27,275	\$ 332,597	32.1%	\$30,613	\$ 369,779
2020	98,467	27.7	27,275	327,659	28.6	28,162	337,154	32.1	31,608	374,845
2021	101,667	27.7	28,162	331,791	28.6	29,077	341,405	32.1	32,635	379,572
2022	104,971	27.7	29,077	335,584	28.6	30,022	345,308	32.1	33,696	383,912
2023	108,383	27.7	30,022	338,994	28.6	30,998	348,817	32.1	34,791	387,813
2024	111,905	27.7	30,998	341,971	28.6	32,005	351,880	32.1	35,922	391,219
2025	115,542	27.7	32,005	344,462	28.6	33,045	354,443	32.1	37,089	394,069
2026	119,297	27.7	33,045	346,409	28.6	34,119	356,446	32.1	38,294	396,296
2027	123,174	27.7	34,119	347,749	28.6	35,228	357,824	32.1	39,539	397,828
2028	127,177	27.7	35,228	348,413	28.6	36,373	358,507	32.1	40,824	398,588

Notes regarding the above projections:

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

Centralia Special Road District - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2019	\$ 95,368	15.3%	\$14,591	\$ 189,807	19.9%	\$18,978	\$ 238,076	18.9%	\$18,025	\$ 228,574
2020	98,467	15.3	15,065	192,407	19.9	19,595	241,338	18.9	18,610	231,705
2021	101,667	15.3	15,555	194,833	19.9	20,232	244,381	18.9	19,215	234,627
2022	104,971	15.3	16,061	197,061	19.9	20,889	247,175	18.9	19,840	237,309
2023	108,383	15.3	16,583	199,063	19.9	21,568	249,687	18.9	20,484	239,720
2024	111,905	15.3	17,121	200,811	19.9	22,269	251,880	18.9	21,150	241,825
2025	115,542	15.3	17,678	202,274	19.9	22,993	253,715	18.9	21,837	243,587
2026	119,297	15.3	18,252	203,417	19.9	23,740	255,149	18.9	22,547	244,964
2027	123,174	15.3	18,846	204,204	19.9	24,512	256,136	18.9	23,280	245,911
2028	127,177	15.3	19,458	204,594	19.9	25,308	256,625	18.9	24,036	246,381

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	\$ 95,368	22.5%	\$21,458	\$ 267,148	24.2%	\$23,079	\$ 286,268	26.0%	\$24,796	\$ 305,656
2020	98,467	22.5	22,155	270,808	24.2	23,829	290,190	26.0	25,601	309,843
2021	101,667	22.5	22,875	274,223	24.2	24,603	293,849	26.0	26,433	313,750
2022	104,971	22.5	23,618	277,358	24.2	25,403	297,209	26.0	27,292	317,337
2023	108,383	22.5	24,386	280,176	24.2	26,229	300,229	26.0	28,180	320,561
2024	111,905	22.5	25,179	282,637	24.2	27,081	302,866	26.0	29,095	323,376
2025	115,542	22.5	25,997	284,696	24.2	27,961	305,072	26.0	30,041	325,732
2026	119,297	22.5	26,842	286,305	24.2	28,870	306,796	26.0	31,017	327,573
2027	123,174	22.5	27,714	287,412	24.2	29,808	307,982	26.0	32,025	328,840
2028	127,177	22.5	28,615	287,961	24.2	30,777	308,570	26.0	33,066	329,468

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	\$ 95,368	28.8%	\$27,466	\$ 334,428	29.7%	\$28,324	\$ 344,114	33.4%	\$31,853	\$ 382,566
2020	98,467	28.8	28,358	339,010	29.7	29,245	348,828	33.4	32,888	387,807
2021	101,667	28.8	29,280	343,285	29.7	30,195	353,227	33.4	33,957	392,697
2022	104,971	28.8	30,232	347,210	29.7	31,176	357,265	33.4	35,060	397,187
2023	108,383	28.8	31,214	350,738	29.7	32,190	360,895	33.4	36,200	401,223
2024	111,905	28.8	32,229	353,818	29.7	33,236	364,065	33.4	37,376	404,747
2025	115,542	28.8	33,276	356,395	29.7	34,316	366,717	33.4	38,591	407,695
2026	119,297	28.8	34,358	358,409	29.7	35,431	368,790	33.4	39,845	409,999
2027	123,174	28.8	35,474	359,795	29.7	36,583	370,216	33.4	41,140	411,584
2028	127,177	28.8	36,627	360,482	29.7	37,772	370,923	33.4	42,477	412,370

Notes regarding the above projections:

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

Centralia Special Road District - 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	\$ 95,368	18.4%	\$17,548	\$ 185,689	22.8%	\$21,744	\$ 232,109	21.8%	\$20,790	\$ 222,921
2020	98,467	18.4	18,118	188,233	22.8	22,450	235,289	21.8	21,466	225,975
2021	101,667	18.4	18,707	190,606	22.8	23,180	238,256	21.8	22,163	228,824
2022	104,971	18.4	19,315	192,785	22.8	23,933	240,980	21.8	22,884	231,440
2023	108,383	18.4	19,942	194,744	22.8	24,711	243,429	21.8	23,627	233,792
2024	111,905	18.4	20,591	196,454	22.8	25,514	245,567	21.8	24,395	235,845
2025	115,542	18.4	21,260	197,885	22.8	26,344	247,356	21.8	25,188	237,563
2026	119,297	18.4	21,951	199,003	22.8	27,200	248,754	21.8	26,007	238,906
2027	123,174	18.4	22,664	199,773	22.8	28,084	249,716	21.8	26,852	239,830
2028	127,177	18.4	23,401	200,154	22.8	28,996	250,193	21.8	27,725	240,288

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	\$ 95,368	25.4%	\$24,223	\$ 260,036	27.1%	\$25,845	\$ 278,539	28.8%	\$27,466	\$ 297,158
2020	98,467	25.4	25,011	263,598	27.1	26,685	282,355	28.8	28,358	301,229
2021	101,667	25.4	25,823	266,922	27.1	27,552	285,915	28.8	29,280	305,027
2022	104,971	25.4	26,663	269,974	27.1	28,447	289,184	28.8	30,232	308,514
2023	108,383	25.4	27,529	272,717	27.1	29,372	292,122	28.8	31,214	311,649
2024	111,905	25.4	28,424	275,112	27.1	30,326	294,688	28.8	32,229	314,386
2025	115,542	25.4	29,348	277,116	27.1	31,312	296,835	28.8	33,276	316,676
2026	119,297	25.4	30,301	278,682	27.1	32,329	298,513	28.8	34,358	318,466
2027	123,174	25.4	31,286	279,760	27.1	33,380	299,667	28.8	35,474	319,698
2028	127,177	25.4	32,303	280,294	27.1	34,465	300,239	28.8	36,627	320,308

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	\$ 95,368	31.5%	\$30,041	\$ 324,953	32.4%	\$30,899	\$ 334,264	35.9%	\$34,237	\$ 371,395
2020	98,467	31.5	31,017	329,405	32.4	31,903	338,843	35.9	35,350	376,483
2021	101,667	31.5	32,025	333,559	32.4	32,940	343,116	35.9	36,498	381,230
2022	104,971	31.5	33,066	337,373	32.4	34,011	347,039	35.9	37,685	385,589
2023	108,383	31.5	34,141	340,801	32.4	35,116	350,565	35.9	38,909	389,507
2024	111,905	31.5	35,250	343,794	32.4	36,257	353,644	35.9	40,174	392,928
2025	115,542	31.5	36,396	346,298	32.4	37,436	356,220	35.9	41,480	395,790
2026	119,297	31.5	37,579	348,255	32.4	38,652	358,233	35.9	42,828	398,027
2027	123,174	31.5	38,800	349,602	32.4	39,908	359,618	35.9	44,219	399,566
2028	127,177	31.5	40,061	350,270	32.4	41,205	360,305	35.9	45,657	400,329

Notes regarding the above projections:

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

Centralia Special Road District - 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	\$ 95,368	18.9%	\$18,025	\$ 192,071	23.5%	\$22,411	\$ 240,082	22.5%	\$21,458	\$ 230,623
2020	98,467	18.9	18,610	194,702	23.5	23,140	243,371	22.5	22,155	233,783
2021	101,667	18.9	19,215	197,157	23.5	23,892	246,440	22.5	22,875	236,731
2022	104,971	18.9	19,840	199,411	23.5	24,668	249,258	22.5	23,618	239,438
2023	108,383	18.9	20,484	201,437	23.5	25,470	251,791	22.5	24,386	241,871
2024	111,905	18.9	21,150	203,206	23.5	26,298	254,002	22.5	25,179	243,995
2025	115,542	18.9	21,837	204,686	23.5	27,152	255,852	22.5	25,997	245,772
2026	119,297	18.9	22,547	205,843	23.5	28,035	257,298	22.5	26,842	247,161
2027	123,174	18.9	23,280	206,639	23.5	28,946	258,293	22.5	27,714	248,117
2028	127,177	18.9	24,036	207,034	23.5	29,887	258,786	22.5	28,615	248,591

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	\$ 95,368	26.2%	\$24,986	\$ 268,995	27.9%	\$26,608	\$ 288,103	29.8%	\$28,420	\$ 307,378
2020	98,467	26.2	25,798	272,680	27.9	27,472	292,050	29.8	29,343	311,589
2021	101,667	26.2	26,637	276,118	27.9	28,365	295,733	29.8	30,297	315,518
2022	104,971	26.2	27,502	279,275	27.9	29,287	299,114	29.8	31,281	319,125
2023	108,383	26.2	28,396	282,113	27.9	30,239	302,153	29.8	32,298	322,368
2024	111,905	26.2	29,319	284,591	27.9	31,221	304,807	29.8	33,348	325,199
2025	115,542	26.2	30,272	286,664	27.9	32,236	307,027	29.8	34,432	327,568
2026	119,297	26.2	31,256	288,284	27.9	33,284	308,762	29.8	35,551	329,419
2027	123,174	26.2	32,272	289,399	27.9	34,366	309,956	29.8	36,706	330,693
2028	127,177	26.2	33,320	289,952	27.9	35,482	310,548	29.8	37,899	331,324

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	\$ 95,368	32.6%	\$31,090	\$ 336,118	33.5%	\$31,948	\$ 345,754	37.2%	\$35,477	\$ 384,140
2020	98,467	32.6	32,100	340,723	33.5	32,986	350,491	37.2	36,630	389,403
2021	101,667	32.6	33,143	345,019	33.5	34,058	354,910	37.2	37,820	394,313
2022	104,971	32.6	34,221	348,964	33.5	35,165	358,968	37.2	39,049	398,821
2023	108,383	32.6	35,333	352,510	33.5	36,308	362,615	37.2	40,318	402,873
2024	111,905	32.6	36,481	355,606	33.5	37,488	365,800	37.2	41,629	406,411
2025	115,542	32.6	37,667	358,196	33.5	38,707	368,465	37.2	42,982	409,371
2026	119,297	32.6	38,891	360,220	33.5	39,964	370,547	37.2	44,378	411,685
2027	123,174	32.6	40,155	361,613	33.5	41,263	371,980	37.2	45,821	413,277
2028	127,177	32.6	41,460	362,303	33.5	42,604	372,690	37.2	47,310	414,066

Notes regarding the above projections:

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