



St. Clair County Employees' Retirement System

December 31, 2018
Actuarial Valuation Report

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At the request of the plan sponsor, this report summarizes the actuarial results of the St. Clair County Employees' Retirement System as of December 31, 2018. The purpose of this report is to communicate the following results of the valuation:

- Funded Status;
- and Determine Recommended Contribution;

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census and asset information has been provided to us by the employer. Asset information has been provided to us by the County. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the employer. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. 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;
- 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); and
- changes in plan provisions or applicable law.

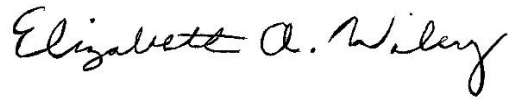
We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

Actuarial Certification

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart



Elizabeth A. Wiley, FSA, EA



Nick H. Meggos, EA, FCA

July 11, 2019

Date

Executive Summary

The actuarial report provides the plan sponsor with several ways to measure the funded status of the pension plan. The following detail is included in the report:

- Recommended Contribution
- Asset Performance
- Plan Demographics

This report is filled with actuarial terminology. However, the ultimate objective of the valuation is to provide a rational method of funding the plan. It is necessary to fund the benefit promised by the employer in a manner that is logical and employer friendly, yet safeguards the participants' interest. The actuarially derived contribution, however, is not the true cost of the pension plan. The true cost is illustrated by the following formula:

$$\text{Ultimate Pension Cost} = \text{Benefits Paid} - \text{Investment Income} + \text{Plan Expenses}$$

While the plan's liability and normal cost determine the current contribution recommendations, the true cost is controlled only by the "defined" benefit and investment income generated by the underlying assets. The actuarial process only controls the timing of costs.

We suggest that a plan sponsor treat the actuarial report as you would treat a scorecard. It is simply a measure of progress toward the ultimate goal of paying all pension benefits when participants retire.

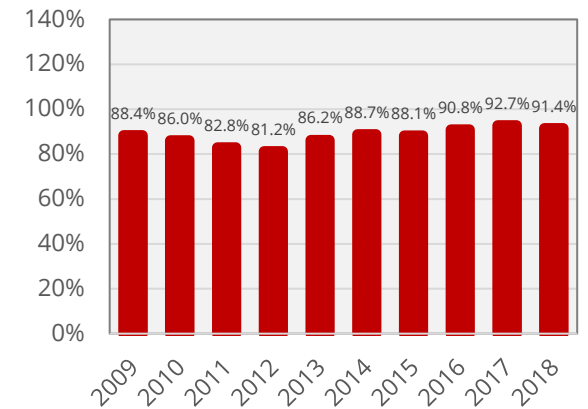
Executive Summary

Summary Results

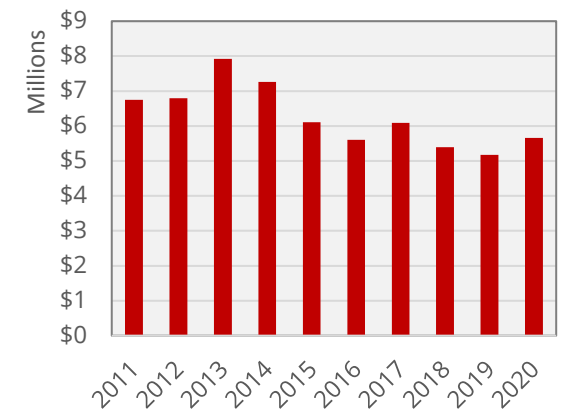
The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

Valuation Date For Fiscal Year Beginning	December 31, 2017 January 1, 2019	December 31, 2018 January 1, 2020
Funded Status Measures		
Entry Age Accrued Liability	\$259,759,791	\$267,201,290
Actuarial Value of Assets	240,751,178	244,280,219
Unfunded Actuarial Accrued Liability (UAAL)	\$19,008,613	\$22,921,071
Funded Percentage (AVA)	92.7%	91.4%
Funded Percentage (MVA)	93.0%	83.4%
Cost Measures		
Recommended Contribution	\$5,174,822	\$5,655,485
Recommended Contribution as a Percentage of Payroll	15.1%	16.9%
Asset Performance		
Market Value of Assets (MVA)	\$241,595,039	\$222,940,832
Actuarial Value of Assets (AVA)	\$240,751,178	\$244,280,219
Actuarial Value/Market Value	99.7%	109.6%
Market Value Rate of Return	11.9%	-4.7%
Actuarial Value Rate of Return	8.1%	4.6%
Participant Information		
Active Participants	604	578
Terminated Vested Participants	152	144
Retirees, Beneficiaries, and Disabled Participants	733	740
Total	1,489	1,462
Expected Fiscal Year Payroll	\$34,265,366	\$33,483,820
Covered Payroll	\$35,236,433	\$34,322,001

History of Funded Ratio



History of Recommended Contribution



Executive Summary

Changes since Prior Valuation and Key Notes

There have been no changes to the plan provisions since the last valuation.

The mortality table has been updated from the RP-2014 mortality table with generational improvements from 2006 based on the Social Security mortality improvement assumptions from the 2017 Trustee's Report to the RP-2014 mortality table with generational improvements from 2006 based on the Society of Actuaries mortality improvement assumptions from Scale MP-2018. The mortality table (RP-2014 Total) and the year in which improvements begin (2006) remain the same. This change results in a decrease in liability and normal cost.

Executive Summary

Five Year Valuation Summary

	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
Funding					
Entry Age Accrued Liability	\$235,705,687	\$247,490,511	\$252,268,270	\$259,759,791	\$267,201,290
Actuarial Value of Assets	209,139,589	218,132,651	229,130,114	240,751,178	244,280,219
Unfunded Actuarial Accrued Liability	\$26,566,098	\$29,357,860	\$23,138,156	\$19,008,613	\$22,921,071
Funded Percentage	88.7%	88.1%	90.8%	92.7%	91.4%
Normal Cost (NC)	\$4,389,780	\$4,390,796	\$4,196,619	\$4,080,653	\$3,967,039
NC as a Percent of Covered Payroll	11.3%	11.3%	11.4%	11.6%	11.6%
Actual Contributions	\$7,192,197	\$7,179,980	\$6,264,277	\$6,392,847	\$6,172,608
Recommended Contribution	\$7,258,395	\$6,108,936	\$5,608,719	\$6,090,683	\$5,396,056
Recommended Contribution (% of Pay)	14.4%	16.1%	15.1%	15.1%	16.9%
Interest Rate	7.50%	7.50%	7.50%	7.50%	7.50%
Expense Load Assumption	\$77,700	\$77,577	\$73,624	\$170,000	\$160,000
Rate of Return					
Actuarial Value of Assets	8.7%	6.6%	8.0%	8.1%	4.6%
Market Value of Assets	5.6%	1.6%	8.1%	11.9%	-4.7%
Demographic Information					
Active Participants	708	696	642	604	578
Terminated Vested Participants	159	163	173	152	144
Retired Participants	569	585	599	629	641
Beneficiaries	106	102	97	95	90
Disabled Participants	8	7	8	9	9
Total Participants	1,550	1,553	1,519	1,489	1,462
Covered Payroll	\$38,849,835	\$38,788,593	\$36,811,921	\$35,236,433	\$34,322,001
Average Compensation	\$52,744	\$53,777	\$55,579	\$56,587	\$58,248

Executive Summary

Identification of Risks

The results presented in this report are shown as single point values. However, these values are derived using assumptions about future markets and demographic behavior. If actual experience deviates from our assumptions, the actual results for the plan will consequently deviate from those presented in this report. Therefore, it is critical to understand the risks facing this pension plan. The following table shows the risks we believe are most relevant to the St. Clair County Employees' Retirement System. The risks are generally ordered with those we believe to have the most significance at the top. Also shown are possible methods by which a more detailed assessment of the risk can be performed.

Type of Risk	Method to Assess Risk
Investment Return	Scenario Testing; Asset Liability Study
Contribution Risk	Scenario Testing; Stress Testing
Demographic Risk	Scenario Testing; Stress Testing; Experience Study
Participant Longevity	Stress Testing; Experience Study
Salary Growth	Scenario Testing; Experience Study
Interest Rates	Scenario Testing; Stochastic Modeling

Plan Maturity Measures - December 31, 2018

Each pension plan has a distinct life-cycle. New plans promise future benefits to active employees and then accumulate assets to pre-fund those benefits. As the plan matures, benefits are paid and the pre-funded assets begin to decumulate until ultimately, the plan pays out all benefits. A plan's maturity has a dramatic influence on how risks should be viewed. The following maturity measures illustrate where the St. Clair County Employees' Retirement System falls in its life-cycle.

Duration of Liabilities: 11.3

Duration is the most common measure of plan maturity. It is defined as the sensitivity of the liabilities to a change in the interest rate assumption. The metric also approximates the weighted average length of time, in years, until benefits are expected to be paid. A plan with high duration is, by definition, more sensitive to changes in interest rates. A plan with low duration is more susceptible to risk if asset performance deviates from expectations as there would be less time to make up for market losses in adverse market environments while more favorable environments could result in trapped surplus from gains. Conversely, high duration plans can often take on more risk when investing, and low duration plans are less sensitive to interest rate fluctuations.

Demographic Distribution - Ratio of Actively Accruing Participants to All Participants: 39.5%

A plan with a high ratio is more sensitive to fluctuations in salary (if a salary-based plan) and statutory changes. A plan with a low ratio is at higher risk from demographic experience. Such a plan should pay close attention to valuation assumptions as there will be less opportunity to realize future offsetting gains or losses when current experience deviates from assumptions. Plans with a low ratio also have limited opportunities to make alterations to plan design to affect future funded status.

Asset Leverage - Ratio of Payroll for Plan Participants to Market Value of Assets: 15.4%

Younger plans typically have a large payroll base from which to draw in order to fund the plan while mature plans often have a large pool of assets dedicated to providing benefits to a population primarily consisting of members no longer on payroll. Plans with low asset leverage will find it more difficult to address underfunding, as the contributions needed to make up the deficit will represent a higher percentage of payroll than for a plan with high asset leverage.

Benefit Payment Percentage - Ratio of Annual Benefit Payments to Market Value of Assets: 6.9%

As a plan enters its decumulation phase, a larger percentage of the pre-funded assets are paid out each year to retirees. A high percentage is not cause for alarm as long as the plan is nearly fully funded. However, such a plan is more sensitive to negative asset performance, especially if cash contributions are not an option to make up for losses.

Assets and Liabilities

The basic building blocks of the actuarial report are contained in this section. These include:

- Actuarial Accrued Liabilities
- Asset Information
- Summary of Contributions

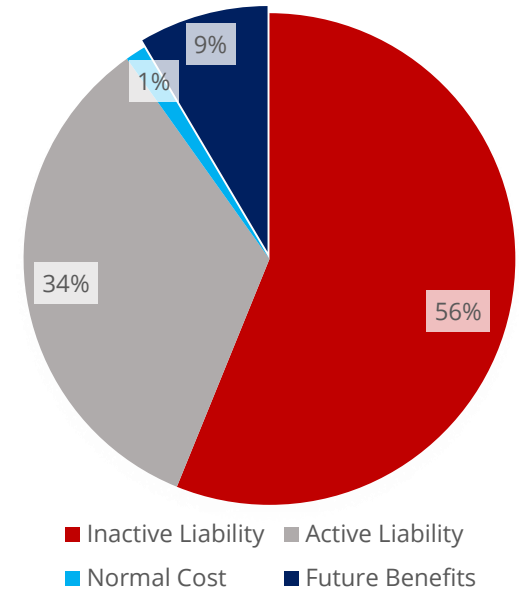
Assets and Liabilities

Present Value of Future Benefits

The Present Value of Future Benefits represents the future benefits payable to the existing participants.

	December 31, 2018
Present Value of Future Benefits	
Active participants	
Retirement	\$100,113,105
Disability	8,620,723
Death	1,516,600
Termination	19,728,025
Total active	<u>\$129,978,453</u>
Inactive participants	
Retired participants	\$145,040,909
Beneficiaries	10,478,440
Disabled participants	1,090,796
Terminated vested participants	9,802,431
Total inactive	<u>\$166,412,576</u>
Total	<u>\$296,391,029</u>
Present value of future payrolls	\$255,408,608

Breakdown of Present Value of Future Benefits



Assets and Liabilities

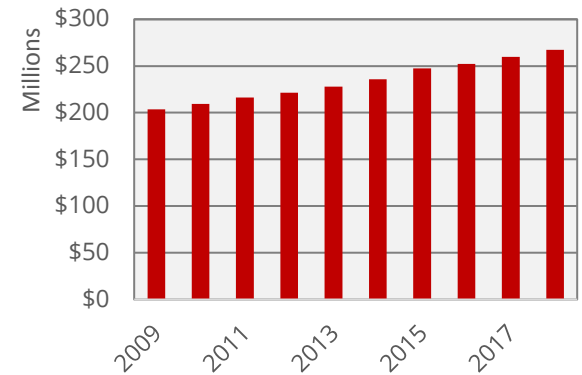
Entry Age Accrued Liability

The Entry Age Accrued Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions.

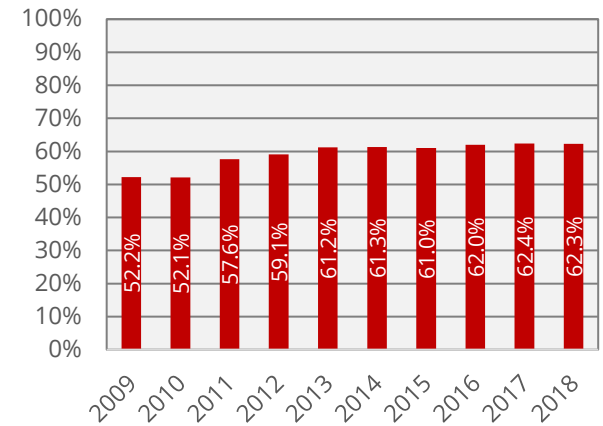
December 31, 2018

Active participants	
Retirement	\$83,276,421
Disability	6,206,045
Death	1,190,481
Termination	10,115,767
Total Active	<u>\$100,788,714</u>
Inactive participants	
Retired participants	\$145,040,909
Beneficiaries	10,478,440
Disabled participants	1,090,796
Terminated vested participants	9,802,431
Total Inactive	<u>\$166,412,576</u>
 Total Entry Age Accrued Liability	 \$267,201,290
 Normal Cost	 \$3,967,039
Interest Rate	7.50%

History of Liabilities



History of the Percentage of Inactive Liability



Assets and Liabilities

Reconciliation of Entry Age Accrued Liabilities

A plan's Entry Age Accrued Liability will change from one year to the next. It increases due to benefit accruals (Normal Cost) and interest, and it decreases as benefits are paid. Demographic experience, assumptions changes, and plan changes can cause increases or decreases.

	December 31, 2018
1. Entry Age Accrued Liability prior year	\$259,759,791
2. Increases or decreases due to:	
(a) Normal Cost	\$4,080,653
(b) Interest Adjustment	19,225,387
(c) Benefits Paid	(15,280,128)
(d) Demographic Experience	269,204
(e) Interest Rate Changes	0
(f) Mortality Changes	(853,617)
(g) Other Assumption Changes	0
(h) Plan Changes	0
(i) Other Changes	0
3. Entry Age Accrued Liability current year	<u>\$267,201,290</u>

Assets and Liabilities

Asset Information

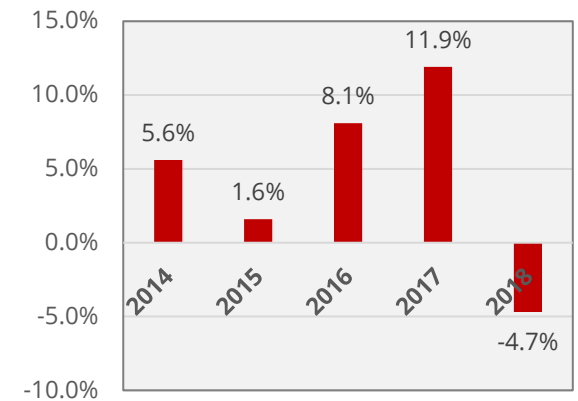
The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

December 31, 2018

Market Value Reconciliation

Market value of assets, beginning of prior year	\$241,595,039
Contributions	
Employer contributions	\$6,172,608
Employee contributions	1,854,730
Total	<u>\$8,027,338</u>
Investment income	(\$11,247,946)
Benefit payments	(\$15,280,128)
Administrative expenses	<u>(\$153,471)</u>
Market value of assets, beginning of current year (without receivable contributions)	\$222,940,832
Discounted receivable contributions	\$0
Market value of assets, beginning of current year (with discounted receivables)	\$222,940,832
Historical Rates of Return	
Rate of return for 2018	-4.7%
Rate of return for 2017	11.9%
Rate of return for 2016	8.1%
Rate of return for 2015	1.6%
Actuarial Value of Assets	
Value at beginning of current year	\$244,280,219

Rates of Return



Monitoring the pension plan's investment performance is crucial to eliminating surprises.

Assets and Liabilities

Asset Information (continued) – 20% Phase in

Plan Assets are used to develop funded percentages and contribution requirements.

December 31, 2018

Investment Gain or (Loss)

1. Prior year's actuarial value of assets	\$240,751,178
2. Employer contributions for the prior plan year	6,172,608
3. Employee contributions for the prior plan year	1,854,730
4. Benefit payments during the prior plan year	(15,280,128)
5. Administrative expenses during the prior plan year	(153,471)
6. Expected earnings at 7.50% to the end of the plan year on	
(a) Actuarial value of assets	\$18,056,339
(b) Contributions	301,025
(c) Benefit payments	(573,005)
(d) Administrative expenses	(5,755)
(e) Total expected earnings, (a) + (b) + (c) + (d)	\$17,778,604
7. Expected actuarial value of assets, beginning of current year	\$251,123,521
8. Market value of assets, beginning of current year	\$222,940,832
9. Actual return on market value	(\$11,247,946)
10. Investment Gain or (Loss), (9) – (6e)	(\$29,026,550)

Actuarial Value of Assets

11. Phase in of asset gain/(loss)	
(a) Current year (20% x (\$29,026,550))	(5,805,310)
(b) First prior year (20% x \$9,145,529)	1,829,106
(c) Second prior year (20% x 850,184)	170,037
(d) Third prior year (20% x (\$12,058,774))	(2,411,755)
(e) Fourth prior year (20% x (\$3,126,900))	(625,380)
(f) Total phase-in	(\$6,843,302)
12. Preliminary actuarial value of assets, [(1) + (2) + (3) + (4) + (5) + (6e)] + (10f)	\$244,280,219
13. 80% Market value of assets	\$178,352,666
14. 120% Market value of assets	\$267,528,998
15. Final actuarial value of assets	\$244,280,219
16. Return on actuarial value of assets	4.6%

Funding Results

The basic building blocks of the actuarial report are contained in this section. These include:

- Reconciliation of Gain/Loss
- Recommended Contribution

Funding Results

Reconciliation of Gain/Loss

December 31, 2018

Liability (Gain)/Loss

1. Entry Age Accrued liability, beginning of prior year	\$259,759,791
2. Normal cost for prior year	4,080,653
3. Benefit payments	(15,280,128)
4. Expected Interest	19,225,387
5. Change in Assumptions	(853,617)
6. Change in Plan Provisions	0
7. Expected Entry Age Accrued liability, beginning of current year	\$266,932,086
8. Actual Entry Age Accrued liability	\$267,201,290
9. Liability Gain/(Loss), (7) – (8)	(\$269,204)

Asset Gain/(Loss)

10. Actuarial value of assets, beginning of prior year	\$240,751,178
11. Contributions	8,027,338
12. Benefit payments	(15,280,128)
13. Administrative expenses	(153,471)
14. Expected Investment return	17,778,604
15. Expected actuarial value of assets, beginning of current year	\$251,123,521
16. Actual actuarial value of assets, beginning of current year	\$244,280,219
17. Asset Gain/(Loss), (16) – (15)	(\$6,843,302)

Total Gain/(Loss), (17) + (9)

(\$7,112,506)

Funding Results

Development of Recommended Contribution

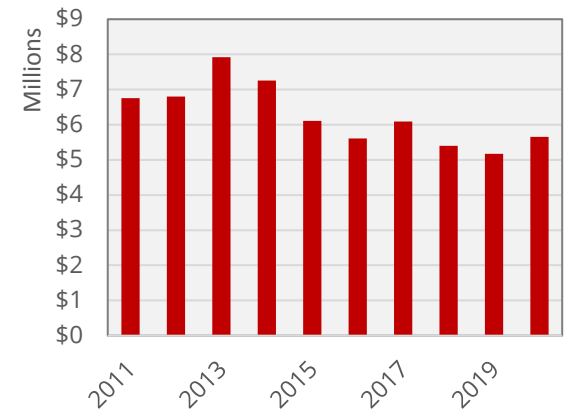
The recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

December 31, 2018

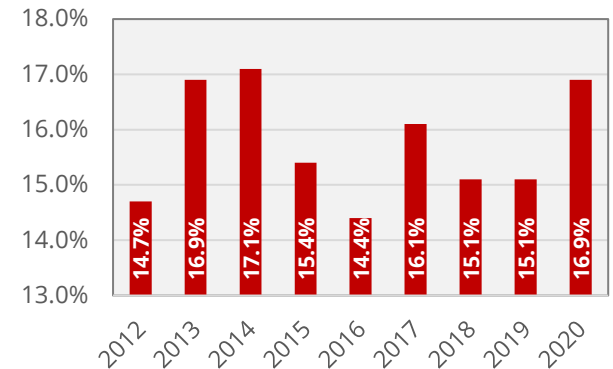
Recommended Contribution

1. Entry Age Accrued Liability	
(a) Active	\$100,788,714
(b) Terminated Vested Benefits	9,802,431
(c) Receiving Benefits	156,610,145
(d) Total, (a) + (b) + (c)	\$267,201,290
2. Actuarial value of assets	\$244,280,219
3. Unfunded accrued liability, (1d) - (2)	\$22,921,071
4. Amortization of (3)*	\$2,707,244
5. Normal Cost	
(a) Total Normal Cost	\$3,967,039
(b) Expected Participant Contributions	(1,754,522)
(c) Net Normal Cost	\$2,212,517
6. Administrative Expenses	\$160,000
7. Applicable Interest	575,724
8. Total Recommended Contribution, (4) + (5c) + (6) + (7)	\$5,655,485
9. Estimated Fiscal Year Payroll	\$33,483,820
10. Percent of Participating Payroll, (8) / (9)	16.9%

History of Recommended Contribution



History of Recommended Contribution (% of Payroll)



*More details are provided in the back of the report.

Data, Assumptions, and Plan Provisions

- Demographic Information
- Plan Provisions
- Assumptions and Methods

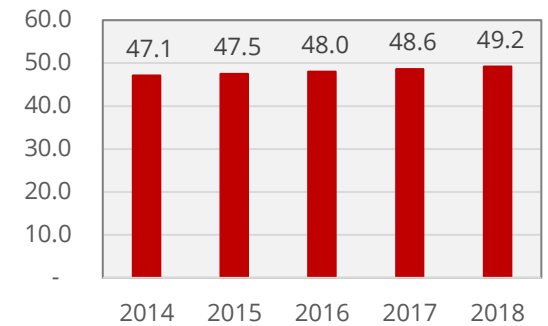
Data, Assumptions, and Plan Provisions

Demographic Information

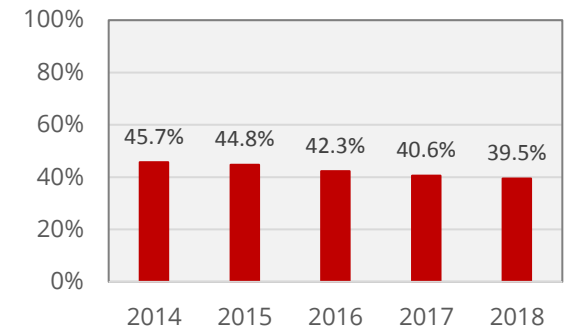
The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

	December 31, 2017	December 31, 2018
Participant Counts		
Active Participants	604	578
Retired Participants	629	641
Beneficiaries	95	90
Disabled Participants	9	9
Terminated Vested Participants	152	144
Total Participants	1,489	1,462
Active Participant Demographics (Ongoing)		
Average Age	48.6	49.2
Average Service	14.8	15.5
Average Compensation	\$56,587	\$58,248
Estimated Fiscal Year Payroll	\$34,265,366	\$33,483,820
Total Covered Payroll	\$35,236,433	\$34,322,001

History of Average Active Participant Age



History of Active Participant Ratio



Demographic Information (continued)

	December 31, 2017	December 31, 2018
Retiree Statistics		
Average Age	69.6	70.0
Average Monthly Benefit	\$1,772	\$1,795
Beneficiary Statistics		
Average Age	77.0	76.8
Average Monthly Benefit	\$1,093	\$1,182
Disabled Participant Statistics		
Average Age	63.8	64.8
Average Monthly Benefit	\$953	\$953
Terminated Vested Participant Statistics		
Average Age	49.6	50.2
Number with Monthly Benefits	122	124
Average Monthly Benefit	\$953	\$981

Monitoring the average age of the population is important due to the relationship of actuarial cost to age. Generally speaking, an older population generates a higher actuarial cost.

Changes in the ratio of active to retired participants can be a significant driver of costs in a volatile asset market.

Data, Assumptions, and Plan Provisions

Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Totals
Prior Year	604	152	9	629	95	1,489
Active						
To Death	0	0	0	0	0	0
To Terminated Vested	(8)	8	0	0	0	0
To Lump Sum Cash-Out	(1)	0	0	0	0	(1)
To Retired	(20)	0	0	20	0	0
Terminated Vested						
To Active	0	0	0	0	0	0
To Non-Participating	0	0	0	0	0	0
To Retired	0	(4)	0	4	0	0
To Survivor	0	0	0	0	0	0
To Lump Sum Cash-Out	0	(11)	0	0	0	(11)
To Death	0	(1)	0	0	0	(1)
Retired						
To Death	0	0	0	(15)	0	(15)
Survivor						
To Death	0	0	0	0	(9)	(9)
Additions	3	0	0	3	4	10
Departures	0	0	0	0	0	0
Current Year	578	144	9	641	90	1,462

Data, Assumptions, and Plan Provisions

Active Participant Schedule

Active participant information grouped based on age and service.

Age Group	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	
Under 25		3									3
25 to 29	2	6									8
30 to 34	1	12	13	14	1						41
35 to 39		3	10	29	6						48
40 to 44		9	16	24	37	5	1				92
45 to 49		2	11	37	36	21	9				116
50 to 54		1	9	28	26	25	10	8	1		108
55 to 59		6	5	16	31	17	3	6	1		85
60 to 64		2	5	10	19	8	3	3	1		51
65 to 69		1	1	4	6	3		3	1		19
70 & up				1	4	1			1		7
Total	3	45	70	163	166	80	26	20	5		578

Data, Assumptions, and Plan Provisions

Plan Provisions

Name of plan

St. Clair County Employees' Retirement System

Effective date

The plan was originally effective as of January 1, 1964.

Participation

A county policeman, sheriff, or deputy sheriff who agrees to make required participant contributions shall become a participant on his/her date of hire.

Plan is closed to new hires for most of General County employees, Road Commission, and Mental Health.

Benefits

Normal Retirement

Eligibility

Sheriffs	25 years of service regardless of age.
Others	Age 55 with 25 years of service.
All	Age 60 with 8 years of service. When age plus service equals 80 and service is at least 25 years.

Benefit

The pension payable for modified plan members is determined as the Final Average Compensation (FAC) multiplied by:

<u>Years of Service</u>	<u>Annual Multiplier</u>	<u>Annual Application</u>
1-10	1.75%	Accumulative
11-19	2.00%	Accumulative
20-24	2.00%	Retroactive to 1st Year
25-29	2.40%	Retroactive to 1st Year
	(2.50% for Sheriff Department Supervisors)	

The pension payable for original plan members is determined as the FAC multiplied by total service and 2.00%.

Data, Assumptions, and Plan Provisions

Final Average Compensation (FAC)

Highest 3 years out of last 10 (highest 5 years out of last 10 for Mental Health; Friend of the Court and Road Commission is the highest 3 years out of the last 5). Base pay only for certain General County and Sheriff's Department members.

Please see the appendix for applicable provisions by group

Non-Duty Disability Retirement

Eligibility	10 or more years of service
Benefit	Computed as a regular retirement, offsets apply.

Duty Disability Retirement

Eligibility	
Sheriffs	10 years of service
Others	No age or service requirements. Must be in receipt of Worker's Compensation payments.
Benefit	
Sheriffs	50% of compensation at the time of disability and offsets apply.
Others	Computed as a regular retirement. Upon termination of Worker's Compensation payments, additional service credit is granted and benefit is recomputed. Offsets apply.

Termination Benefit

Participants become vested in their accrued benefit after 8 years of service.

Supplemental Payments to Retirees Age 65 and Older

If a retiree had less than 20 years of service at retirement, an annual payment of \$14.00 per month will be made for the life of the retiree. For members with 20 or more years of service at retirement, an annual payment of \$16.00 per month.

Data, Assumptions, and Plan Provisions

Post-Retirement Life Insurance

The Retirement System provides \$3,500 of life insurance to retirees.

Credited Service

Service is credited for employees working more than 1,000 hours (nearest 1/12th). Full year of service is granted for more than 1,950 hours and partial credit is provided for hours worked between 1,000 and 1,950.

Optional forms of payment

A participant may choose to receive distributable benefits in an actuarially equivalent alternative form of benefit as follows.

- a monthly benefit payable for the participant's lifetime; or
- a monthly benefit payable for the participant's lifetime with a guarantee that the remainder, if any, of ether 120 monthly payments will be made to the participant's beneficiary following his death; or
- a monthly benefit payable for the participant's lifetime with 50% or 100% of such benefit continued to a surviving contingent annuitant following his death; or
- a monthly benefit payable for the participant's lifetime with a pop-up option with 50% or 100% of such benefit continued to a surviving contingent annuitant following his death

Employee Contributions

As a condition for participation, an employee must agree to contribute 5% of his compensation to the plan (8% for Road Commission).

Plan Provisions Not Included

We are not aware of any plan provisions not included in the valuation

Adjustments Made for Subsequent Events

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results of this report.

Data, Assumptions, and Plan Provisions

Actuarial Assumptions and Methods

Except where otherwise indicated, the following assumptions were selected by the plan sponsor with the concurrence of the actuary. Prescribed assumptions are based on the requirements of the relevant law, the Internal Revenue Code, and applicable regulation. The actuary was not able to evaluate the prescribed assumptions for reasonableness for the purpose of the measurement.

Valuation Date

December 31, 2018

Participant and Asset Information Collected as of

December 31, 2018

Cost Method (CO)

Individual Entry Age Level Percent of Pay Cost Method

Amortization Method (CO)

Mental Health

17 year level dollar amortization of Unfunded Actuarial Accrued Liability

General County

15 year level dollar closed amortization of Unfunded Actuarial Accrued Liability

Road Commission

15 year level dollar closed amortization of Unfunded Actuarial Accrued Liability

Each subsequent year after an employer who has closed participation reaches a 15 year amortization period of their unfunded accrued liability, a new amortization base for any assumption changes, plan changes, or actuarial gain/loss will be set up which will be fully amortized in 15 years.

Asset Valuation Method

20% Phase-In Method: Expected actuarial value of assets, adjusted by 20% of the asset gain/(loss) from the previous five years. Where the asset gain/(loss) for a particular year is defined as the difference between the actual market value return and the expected actuarial value return. This method was first used for the December 31, 2005 valuation.

Interest Rates (CO)

7.50%

The interest rate is the expected long term rate of return on assets. This assumption is supported by the investment mix of the plan assets as of 12/31/2018.

Data, Assumptions, and Plan Provisions

Retirement Rates (FE)

Age	General*	Road Commission	Sheriff**	Service	Sheriff**
50	15.0%	25.0%		25	25.0%
51	15.0%	25.0%		26	25.0%
52	15.0%	25.0%		27	25.0%
53	15.0%	25.0%		28	25.0%
54	15.0%	25.0%		29	25.0%
55	15.0%	25.0%		30+	100.0%
56	15.0%	25.0%			
57	15.0%	25.0%			
58	15.0%	25.0%			
59	15.0%	25.0%			
60	15.0%	15.0%	15.0%		
61	20.0%	15.0%	15.0%		
62	40.0%	40.0%	40.0%		
63	20.0%	20.0%	20.0%		
64	20.0%	20.0%	20.0%		
65	40.0%	100.0%	100.0%		
66	25.0%	100.0%	100.0%		
67	25.0%	100.0%	100.0%		
68	25.0%	100.0%	100.0%		
69	25.0%	100.0%	100.0%		
70+	100.0%	100.0%	100.0%		

*Includes Mental Health Authority

**Sherriff Retirement Rates are only based on age when the participant has less than 25 years of service.

Retirement rates are based on professional judgment and expectation for the general population adjusted as necessary for the specific provisions of the plan.

Disability Rates (FE)

Ages	Percent Becoming Disabled within Next Year
20	0.08%
25	0.08%
30	0.08%
35	0.08%
40	0.20%
45	0.26%
50	0.49%
55	0.89%
60	1.41%

Disability rates are determined based on the results of broad population studies.
50% of Disabilities are assumed to be duty related.
50% of Disabilities are assumed to be non-duty related.

Withdrawal Rates (FE)

Age	Years of Service	Percent of Active Members Separating within Next Year	
		General*	Road Commission/ Sheriff
ALL	0	11.0%	4.0%
	1	11.0%	4.0%
	2	11.0%	4.0%
	3	10.0%	4.0%
	4	10.0%	4.0%
	5+	6.0%	4.0%
20		6.0%	4.0%
25		6.0%	4.0%
30		6.0%	4.0%
35		4.0%	4.0%
40		4.0%	4.0%
45		4.0%	4.0%
50		4.0%	4.0%
55		4.0%	4.0%
60		4.0%	4.0%
65		4.0%	4.0%

*Includes Mental Health Authority

Withdrawal rates are based on professional judgment and expectation for the general population adjusted as necessary for the specific provisions of the plan.

Data, Assumptions, and Plan Provisions

Annual Pay Increases (FE)

Pay increase assumption applies to all groups and includes 3.5% inflation. Pay increases compounded with inflation are based on service as follows:

<u>Service</u>	<u>Increase</u>
1	4.5%
2	3.5%
3	3.0%
4	2.5%
5	2.0%
6-19	0.5%
20+	0.0%

The annual pay increase reflects the employer’s average target increase for a career employee.

Mortality Rates (FE)

RP-2014 Mortality Table with generational improvements from 2006 based on mortality improvement assumptions from the Society of Actuaries Scale MP-2018.

Mortality assumptions are set to reflect general population trends.

Marital Status and Ages (FE)

100% of Participants assumed to be married with female spouse assumed to be 3 years younger

Expense and/or Contingency Loading (FE)

Preceding year’s administrative expenses, rounded up to the nearest \$10,000. Expenses are assumed to be paid mid-year. Administrative expenses are allocated to each employer based on each employer’s proportional share of the total actuarial value of assets.

Cost of Living Increases (FE)

None

FE indicates an assumption representing an estimate of future experience

MD indicates an assumption representing observations of estimates inherent in market data

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data

Other Measurements

- Asset Allocation by Group
- Development of Recommended Contribution by Group
- Amortization Bases
- Demographic Information by Group
- Plan Provisions by Group

Other Measurements

Asset Allocation by Group

The assets were originally allocated by group for the December 31, 2005 valuation. This asset allocation by group has been maintained for each valuation thereafter taking into account contributions and benefit payments by group. The table below shows how the assets changed by group since the last valuation.

	General	Mental Health	Road Commission	Total
Actuarial Value of Assets, 12/31/2017	\$ 159,475,539	\$ 43,096,355	\$ 38,179,284	\$ 240,751,178
Employer Contributions	3,737,255	1,360,190	1,075,163	6,172,608
Employee Contributions	1,110,063	469,513	275,154	1,854,730
Benefit Payments	(10,190,567)	(2,308,681)	(2,780,880)	(15,280,128)
Expenses	(101,660)	(27,473)	(24,338)	(153,471)
Investment Income	<u>7,231,202</u>	<u>1,976,403</u>	<u>1,727,697</u>	<u>10,935,302</u>
Actuarial Value of Assets, 12/31/2018	\$ 161,261,832	\$ 44,566,307	\$ 38,452,080	\$ 244,280,219

Other Measurements

Development of Recommended Contribution by Group – General County (Including Sheriff Division)

The recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

December 31, 2018

Funded Position

1. Entry age accrued liability	\$176,719,630
2. Actuarial value of assets	\$161,261,832
3. Unfunded actuarial accrued liability (UAAL)	\$15,457,798
4. Funded Ratio, (2) / (1)	91.3%

Employer Contributions

5. Normal Cost	
(a) Total normal cost	\$2,530,093
(b) Expected participant contributions	1,035,713
(c) Net normal cost	<u>\$1,494,380</u>
6. Administrative expenses	\$105,624
7. Amortization of UAAL	1,910,188
8. Applicable interest	<u>398,030</u>
9. Total recommended contribution	\$3,908,222
10. Estimated fiscal year payroll	\$21,225,409
11. Recommended contribution as a percentage of estimated payroll	18.4%

Other Measurements

Development of Recommended Contribution by Group – Mental Health

The recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

December 31, 2018

Funded Position

1. Entry age accrued liability	\$48,183,045
2. Actuarial value of assets	\$44,566,307
3. Unfunded actuarial accrued liability (UAAL)	\$3,616,738
4. Funded Ratio, (2) / (1)	92.5%

Employer Contributions

5. Normal Cost	
(a) Total normal cost	\$1,020,745
(b) Expected participant contributions	453,827
(c) Net normal cost	<u>\$566,918</u>
6. Administrative expenses	\$29,190
7. Amortization of UAAL	\$356,627
8. Applicable interest	<u>108,012</u>
9. Total recommended contribution	\$1,060,747
10. Estimated fiscal year payroll	\$9,089,594
11. Recommended contribution as a percentage of estimated payroll	11.7%

Other Measurements

Development of Recommended Contribution by Group – Road Commission

The recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

December 31, 2018

Funded Position

1. Entry age accrued liability	\$42,298,615
2. Actuarial value of assets	\$38,452,080
3. Unfunded actuarial accrued liability (UAAL)	\$3,846,535
4. Funded Ratio, (2) / (1)	90.9%

Employer Contributions

5. Normal Cost	
(a) Total normal cost	\$416,201
(b) Expected participant contributions	264,982
(c) Net normal cost	<u>\$151,219</u>
6. Administrative expenses	\$25,186
7. Amortization of UAAL	\$440,429
8. Applicable interest	<u>69,682</u>
9. Total recommended contribution	\$686,516
10. Estimated fiscal year payroll	\$3,168,817
11. Recommended contribution as a percentage of estimated payroll	21.7%

Other Measurements

Amortization Bases

General County (Including Sheriff Division)

<u>Date Established</u>	<u>Years Remaining</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
12/31/2014	11	\$12,312,815	\$1,565,703
12/31/2015	12	2,419,913	291,015
12/31/2016	13	(1,886,313)	(215,942)
12/31/2017	14	(1,378,869)	(151,095)
12/31/2018	15	3,990,252	420,507
Total		\$15,457,798	\$1,910,188

Mental Health

<u>Date Established</u>	<u>Years Remaining</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
12/31/2018	17	\$3,616,738	\$356,627

Road Commission

<u>Date Established</u>	<u>Years Remaining</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
12/31/2016	13	\$4,249,119	\$486,432
12/31/2017	14	(852,646)	(93,432)
12/31/2018	15	450,062	47,429
Total		\$3,846,535	\$440,429

Total **\$22,921,071** **\$2,707,244**

Other Measurements

Demographic Information by Group

	General County	Mental Health	Road Commission	Plan Total
Active Participants				
Number accruing benefits	366	157	55	578
Average age	49.1	48.0	53.3	49.2
Average years of employment	16.1	12.4	20.7	15.5
Average pay	\$58,020	\$57,575	\$61,692	\$58,248
Terminated Vested				
Number of Terminated Vested	77	59	8	144
Average age	50.1	50.0	51.2	50.2
Number with monthly benefits	67	49	8	124
Total deferred monthly benefits	\$61,649	\$52,183	\$7,817	\$121,649
Average deferred monthly benefit	\$920	\$1,065	\$977	\$981
Participants Receiving Benefits				
Number of Receiving Benefits	491	118	131	740
Average age	70.8	68.9	72.4	70.8
Total monthly benefits	\$853,797	\$183,904	\$228,138	\$1,265,839
Average monthly benefit	\$1,739	\$1,559	\$1,742	\$1,711

Other Measurements

Demographic Information by Group - Total Actives at 12/31/2018

Attained Age as of 12/31/2018	Credited Service							Total	Average Pay
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +		
20 - 24	3							3	\$50,405
25 - 29	8							8	\$47,473
30 - 34	13	13	14	1				41	\$56,029
35 - 39	3	10	29	6				48	\$58,108
40 - 44	9	16	24	37	5	1		92	\$61,690
45 - 49	2	11	37	36	21	9		116	\$62,541
50 - 54	1	9	28	26	25	10	9	108	\$60,539
55 - 59	6	5	16	31	17	3	7	85	\$53,447
60		1	1	5	3	1		11	\$52,408
61	1	3	4	3			1	12	\$48,934
62		1	1	7	5	1		15	\$61,794
63			2	4			3	9	\$65,995
64	1		2			1		4	\$56,360
65 +	1	1	5	10	4		5	26	\$43,409
Total	48	70	163	166	80	26	25	578	\$58,248

Other Measurements

Demographic Information by Group - General County Actives at 12/31/2018

Attained Age as of 12/31/2018	Credited Service								Average Pay
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +	Total	
20 - 24	3							3	\$50,405
25 - 29	4							4	\$44,412
30 - 34	5	8	9	1				23	\$57,606
35 - 39	1	7	25	4				37	\$58,759
40 - 44	3	4	19	27	3			56	\$65,277
45 - 49		8	21	24	16	4		73	\$61,810
50 - 54		2	20	17	17	8	6	70	\$58,672
55 - 59		3	11	24	7	1	4	50	\$50,106
60		1		4	2			7	\$46,551
61			4	2				6	\$41,794
62		1	1	3	5	1		11	\$57,759
63			1	4			1	6	\$70,049
64			2			1		3	\$65,493
65 +			5	8	1		3	17	\$46,978
Total	16	34	118	118	51	15	14	366	\$58,020

Other Measurements

Demographic Information by Group - Mental Health Actives at 12/31/2018

Attained Age as of 12/31/2018	Credited Service							Total	Average Pay
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +		
20 - 24									
25 - 29	4							4	\$50,534
30 - 34	8	5	4					17	\$53,587
35 - 39	2	3	2	2				9	\$54,555
40 - 44	6	12	4	8	1			31	\$54,522
45 - 49	2	3	14	8	2	3		32	\$64,663
50 - 54	1	7	7	4	5	1	1	26	\$65,590
55 - 59	6	1	5	4	3	1	1	21	\$50,058
60			1	1	1			3	\$59,368
61	1	3		1			1	6	\$56,074
62				1				1	\$65,426
63							1	1	\$64,428
64	1							1	\$28,961
65 +	1	1		1			2	5	\$49,174
Total	32	35	37	30	12	5	6	157	\$57,575

Other Measurements

Demographic Information by Group - Road Commission Actives at 12/31/2018

Attained Age as of 12/31/2018	Credited Service								Average Pay
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +	Total	
20 - 24									
25 - 29									
30 - 34			1					1	\$61,285
35 - 39			2					2	\$62,064
40 - 44			1	2	1	1		5	\$65,948
45 - 49			2	4	3	2		11	\$61,223
50 - 54			1	5	3	1	2	12	\$60,491
55 - 59		1		3	7	1	2	14	\$70,464
60						1		1	\$72,531
61									
62				3				3	\$75,380
63			1				1	2	\$54,618
64									
65 +				1	3			4	\$21,034
Total		1	8	18	17	6	5	55	\$61,692

Other Measurements

Demographic Information by Group - Terminated Vested at 12/31/2018

Due Only Employee Contributions Refund

Attained Age as of 12/31/2018	General		Mental Health		Road Commission		Total	
	#	Dollars	#	Dollars	#	Dollars	#	Dollars
20 - 39	5	\$32,259	5	\$53,874	0	\$0	10	\$86,133
40 - 49	2	8,164	2	15,396	0	0	4	23,560
50 - 59	2	28,569	2	11,607	0	0	4	40,176
60 +	1	7	1	5,611	0	0	2	5,618
Total	10	\$68,999	10	\$86,488	0	\$0	20	\$155,487

Have a Vested Monthly Benefit Payable

Attained Age as of 12/31/2018	General		Mental Health		Road Commission		Total	
	#	Average Benefit	#	Average Benefit	#	Average Benefit	#	Average Benefit
20 - 39	7	\$955	5	\$865	0	\$0	12	\$918
40 - 49	19	981	18	1,089	4	812	41	1,012
50 - 59	36	937	21	1,162	3	1,180	60	1,028
60 +	5	515	5	772	1	1,028	11	679
Total	67	\$920	49	\$1,065	8	\$977	124	\$981

Other Measurements

Demographic Information by Group - Participants Receiving Benefits at 12/31/2018

Attained Age as of 12/31/2018	General		Mental Health		Road Commission		Total	
	#	Average Benefit	#	Average Benefit	#	Average Benefit	#	Average Benefit
<40	0	\$0	0	\$0	0	\$0	0	\$0
40 - 49	2	4,442	0	0	1	932	3	3,272
50 - 54	3	2,385	1	1,214	3	2,661	7	2,336
55 - 59	40	2,672	11	2,448	5	1,568	56	2,529
60 - 64	82	2,114	21	1,605	22	2,068	125	2,020
65 - 69	118	1,777	38	1,478	22	2,200	178	1,765
70 - 74	119	1,718	26	1,565	32	1,967	177	1,740
75 - 79	63	1,205	13	1,203	17	1,671	93	1,290
80 - 84	25	1,077	7	1,300	14	905	46	1,058
85 - 89	24	1,138	1	481	8	1,012	33	1,087
90 +	15	887	0	0	7	770	22	850
Total	491	\$1,739	118	\$1,559	131	\$1,742	740	\$1,711

Other Measurements

Plan Provisions by Group

Group	Code	Category	Eligibility	Multiplier	Maximum	Lump Sums in FAC	Years in FAC period	Closed to New Hires
Bailiff and Court Security Officers Assoc. Modified	66	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 1/1/08 75% - hired after 1/1/08 70%	N	3	7/1/2012
Bailiff and Court Security Officers Assoc. Original	67	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	7/1/2012
Board Members Modified	13	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Board Members Original	57	G	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	N	3	1/1/2009
CANUE Non-Affiliated Modified	36	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
CANUE Non-Affiliated Original	37	G	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	N	3	1/1/2009
Circuit Crt/Probate Crt Employees Assoc	72	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Commissioners Modified	14	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Communication Officers POAM Modified	69	G	Rule of 80, 25 & Out, 60 & 8, 55 & 25	Graded	75.00%	Y	3	7/1/2011
Communication Officers POAM Original	68	G	Rule of 80, 25 & Out, 60 & 8, 55 & 25	2%	64.00%	Y	3	7/1/2011
Corr. Ofcrs. & Support Staff Modified	24	G	Rule of 80, 25 & out (Corr Off Only), 60 & 8, 55 & 25	Graded	75.00%	Y	3	10/21/2009
Corr. Ofcrs. & Support Staff Original	23	G	Rule of 80, 25 & out (Corr Off Only), 60 & 8, 55 & 25	2%	64.00%	Y	3	10/21/2009
Corrections Officers Supervisors Modified	25	G	Rule of 80, 25 & out (Corr Off Only), 60 & 8, 55 & 25	Graded	75.00%	Y	3	1/1/2009
Corrections Officers Supervisors Original	26	G	Rule of 80, 25 & out (Corr Off Only), 60 & 8, 55 & 25	2%	64.00%	Y	3	1/1/2009
District Court AFSCME Modified	38	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 7/1/06 75% - hired after 7/1/06 70%	N	3	8/19/2009
District Court AFSCME Original	39	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	8/19/2009
Elected Officials Modified	15	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Elected Officials Original	16	G	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	N	3	1/1/2009
Friend of Court Supervisors Modified	32	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 1/1/07 75% - hired after 1/1/07 70%	N	3	7/1/2011
Friend of Court Supervisors Original	33	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	7/1/2011
Friend of the Court Modified	30	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	5/11/2011
Friend of the Court Original	31	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	5/11/2011
Human Resources Clerks and Specialists Modified	58	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Human Resources Clerks and Specialists Original	59	G	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	N	3	1/1/2009

Other Measurements

Plan Provisions by Group

Group	Code	Category	Eligibility	Multiplier	Maximum	Lump Sums in FAC	Years in FAC period	Closed to New Hires
Judges Modified	35	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Mental Health Chapter 10 Modified	17	MH	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	5	1/1/2016
Mental Health Chapter 10 Original	18	MH	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	5	1/1/2016
Mental Health Chapter 20 Modified	17	MH	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	Y	5	1/1/2016
Mental Health Chapter 20 Original	18	MH	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	Y	5	1/1/2016
Probate Clerical Modified	44	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 7/1/06 75% - hired after 7/1/06 70%	N	3	7/1/2011
Probate Court Juvenile Counselors Modified	46	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	12/16/2009
Probate Court Juvenile Counselors Original	47	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	12/16/2009
Probate Court Supervisors Modified	48	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Probate Court Supervisors Original	49	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	1/1/2009
Prosecuting Attorneys Modified	42	G	Rule of 80, 60 & 8, 55 & 25	Graded	69.60%	N	3	1/1/2009
Prosecuting Attorneys Original	43	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	1/1/2009
Public Health Nurse Supervisors Modified	60	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Public Health Nurse Supervisors Original	61	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	1/1/2009
Public Health Nurses Modified	52	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Public Health Nurses Original	53	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	1/1/2009
Public Service Employees Modified	50	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 7/1/06 75% - hired after 7/1/06 70%	N	3	7/1/2009
Public Service Employees Original	51	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	7/1/2009
Road Commission Modified	20	RC	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	Y	3	8/23/2011
Road Commission Original	19	RC	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	Y	3	8/23/2011
Sheriff Deputies Modified	22	G	Rule of 80, 25 & out, 60 & 8, 55 & 25	Graded	75.00%	Y	3	No
Sheriff Deputies Original	21	G	Rule of 80, 25 & out, 60 & 8, 55 & 25	2%	64.00%	Y	3	No
Sheriff Deputies Supervisors Modified	27	G	Rule of 80, 25 & out, 60 & 8, 55 & 25	Graded	hired prior 1/1/07 75% - hired after 1/1/07 70%	Y	3	7/1/2011