



FUNDING ACTUARIAL VALUATION

As of December 31, 2017

St. Clair County

CONTACT

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January 7, 2019

**Tami Rumsey
St. Clair County
200 Grand River Avenue, Ste. 206
Port Huron, MI 48060**

This report summarizes the funding recommendations for calendar years 2018 and 2019 for St. Clair County. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 74 (Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans).

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor, with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

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.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.



Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.

A handwritten signature in black ink that reads "Emily Clauss".

Emily Clauss, ASA, MAAA
Valuation Actuary

A handwritten signature in black ink that reads "Randy Gomez".

Randy Gomez, FSA, MAAA
Consulting Actuary

Executive Summary

St. Clair County as of December 31, 2017

Summary of Results

Presented below is the summary of results as of December 31, 2017.

| | |
|---|--------------------------------|
| | FY 2018 |
| Annual Employer Contribution¹ | \$ 2,516,487 |
| | As of December 31, 2017 |
| Expected Return on Assets | 6.5% |
| | As of December 31, 2017 |
| Total Active Participants | 574 |
| Total Retiree Participants | 582 |

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

¹ Expected for FY 2018. This should be updated once actual contributions are available after the end of the fiscal year.

GASB Disclosures

St. Clair County as of December 31, 2017

Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below prior to FY 2017 are based on the Annual Required Contribution (ARC) calculated in the prior GASB 45 actuarial valuations as shown in the County's financial statements.

| | FY 2018 | FY 2017 | FY 2016 | FY 2015 | FY 2014 |
|---|---------------|---------------|---------------|---------------|---------------|
| Actuarially Determined Contribution (ADC) | \$ 5,341,113 | \$ 10,720,206 | \$ 12,980,909 | \$ 10,682,722 | \$ 10,420,633 |
| Contributions in relation to the ADC ² | 2,516,487 | 2,368,393 | 2,401,311 | 3,591,579 | 2,900,392 |
| Contribution deficiency / (excess) | \$ 2,824,626 | \$ 8,351,813 | \$ 10,579,598 | \$ 7,091,143 | \$ 7,520,241 |
| Covered employee payroll | \$ 32,739,763 | \$ 35,368,535 | \$ 37,205,389 | \$ 36,573,262 | \$ 37,222,197 |
| Contribution as a % of covered employee payroll | 7.7% | 6.7% | 6.5% | 9.8% | 7.8% |
| | FY 2013 | FY 2012 | FY 2011 | FY 2010 | FY 2009 |
| Actuarially Determined Contribution (ADC) | \$ 11,211,597 | \$ 16,580,583 | \$ 17,395,598 | \$ 11,513,436 | \$ 12,277,448 |
| Contributions in relation to the ADC | 1,326,721 | 1,613,947 | 4,302,586 | 3,094,421 | 2,641,641 |
| Contribution deficiency / (excess) | \$ 9,884,876 | \$ 14,966,636 | \$ 13,093,012 | \$ 8,419,015 | \$ 9,635,807 |
| Covered employee payroll | \$ 40,053,245 | \$ 43,482,070 | \$ 44,623,366 | \$ 46,078,581 | \$ 45,511,253 |
| Contribution as a % of covered employee payroll | 3.3% | 3.7% | 9.6% | 6.7% | 5.8% |

² Expected for FY 2018. This should be updated once actual contributions are available after the end of the fiscal year.

Asset Information

St. Clair County as of December 31, 2017

| Asset Breakdown as of | Dec 31, 2017 |
|--|----------------------|
| Assets | |
| Cash and cash equivalents | \$ 2,175,315 |
| Securities lending cash collateral | 0 |
| Total cash | \$ 2,175,315 |
| Receivables | |
| Contributions | \$ 96,458 |
| Accrued interest | 470,993 |
| Total receivables | \$ 567,451 |
| Investments | |
| Fixed Income | \$ 19,424,727 |
| Equities | 22,154,597 |
| Other assets | 1,652,984 |
| Total investments | \$ 43,232,308 |
| Total assets | \$ 45,975,074 |
| Liabilities | |
| Payables | |
| Accounts payable | \$ (169,667) |
| Due to other funds | (199,258) |
| Total liabilities | \$ (368,925) |
| Net position restricted to OPEB | \$ 45,606,149 |

| Reconciliation of Asset | FY 2017 |
|--|---------------------|
| Additions | |
| Contributions received | |
| Employer | \$ 2,368,393 |
| Employee | 443,110 |
| Total contributions | \$ 2,811,503 |
| Investment income | |
| Net increase in fair value of investments | \$ 4,268,910 |
| Interests and dividends | 926,313 |
| Investment expense, other than from securities lending | (140,159) |
| Securities lending income | 0 |
| Securities lending expense | 0 |
| Net investment income | \$ 5,055,064 |
| Total additions | \$ 7,866,567 |
| Deductions | |
| Benefit payments (including employee refunds) | \$ (4,106,202) |
| Administrative expenses | (36,627) |
| Other | 0 |
| Total deductions | \$ (4,142,829) |
| Net increase in net position | \$ 3,723,738 |
| Net position restricted to OPEB | |
| Beginning of year | \$ 41,882,411 |
| End of year | \$ 45,606,149 |

Asset Information

St. Clair County as of December 31, 2017

The Trust assets are actuarially adjusted to reduce the impact of market-based fluctuations when determining future funding requirements. The adjusted assets are referred to as the “funding value of assets”. The actuarial smoothing method essentially spreads investment gains and losses over a five-year period. Below is a schedule with the calculation details for this adjustment.

| <i>Year Ended December 31,</i> | <i>2016</i> | <i>2017</i> | <i>2018³</i> |
|--|---------------|----------------|-------------------------|
| A. Funding value as of beginning of year | \$ 40,218,063 | \$ 42,041,565 | \$ 43,397,385 |
| B. Market value as of end of year | \$ 41,882,411 | \$ 45,606,149 | \$ 45,985,682 |
| C. Market value as of beginning of year | \$ 40,328,817 | \$ 41,882,411 | \$ 45,606,149 |
| D. Non-investment net cash flow | \$ (999,842) | \$ (1,471,485) | \$ (2,504,744) |
| E. Investment income: | | | |
| E1. Reflecting actual market conditions (B – C – D) | \$ 2,553,436 | \$ 5,195,223 | \$ 2,884,277 |
| E2. Amount for immediate recognition ⁴ | \$ 2,978,861 | \$ 2,684,878 | \$ 2,739,426 |
| E3. Amount for phased-in recognition (E1 – E2) | \$ (425,425) | \$ 2,510,345 | \$ 144,851 |
| F. Phased-in recognition of investment income | | | |
| F1. Current year (E3 / 5) | \$ (85,085) | \$ 502,069 | \$ 28,970 |
| F2. First prior year | (501,169) | (85,085) | 502,069 |
| F3. Second prior year | (75,705) | (501,169) | (85,085) |
| F4. Third prior year | 302,317 | (75,705) | (501,169) |
| F5. Fourth prior year | 204,125 | 302,317 | (75,705) |
| F6. Total recognized gain recognized in current period | \$ (155,517) | \$ 142,427 | \$ (130,920) |
| G. Funding value as of end of year (A + D + E2 + F6) | \$ 42,041,565 | \$ 43,397,385 | \$ 43,501,147 |
| I. Recognized rate of return using funding value | 6.9% | 6.5% | 6.2% |
| J. Rate of return using market value of assets (net of expenses) | 5.9% | 11.9% | 6.2% |
| K. Ratio funding value to market value (G / B) | 100.4% | 95.2% | 94.6% |

³ CY 2018 non-investment net cash flow is based on expected contributions and benefit payments. The end of year fair market value is projected from the beginning of year fair market value assuming a 6.5% asset rate of return.

⁴ 7.5% in 2016, 6.5% in 2017 and 2018.

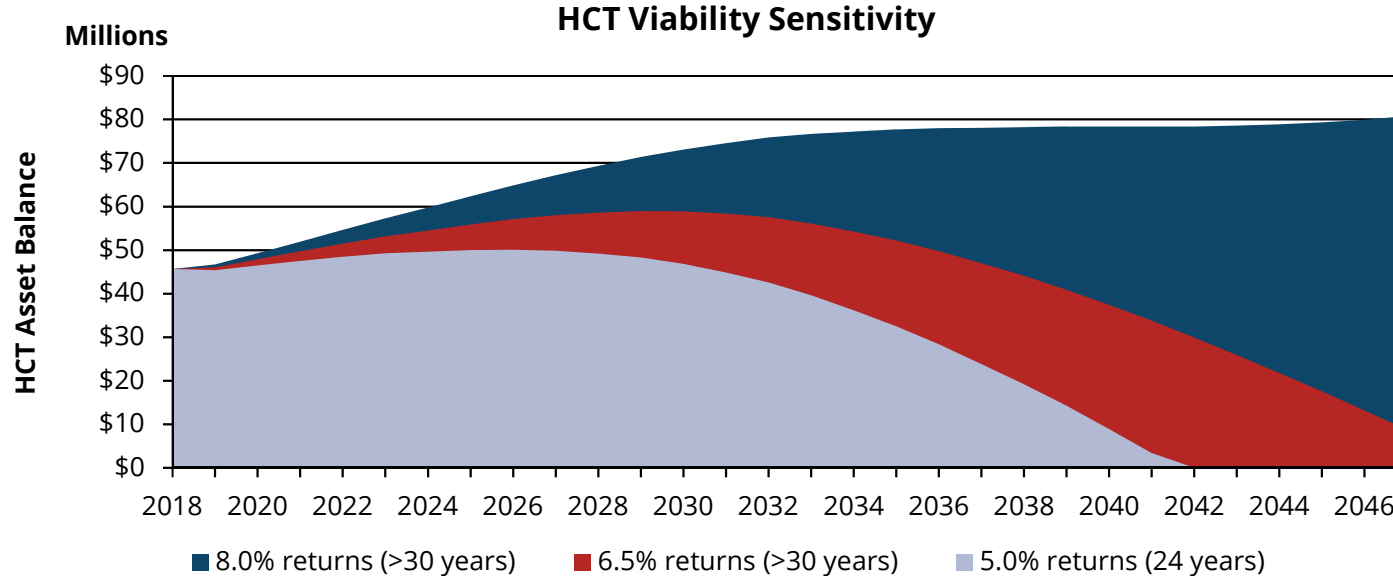
Health Care Trust Projections

St. Clair County as of December 31, 2017

St. Clair County established a Health Care Trust (HCT) for the purpose of funding future retiree health benefits. Currently both the County and its employees (except for Road Commission) contribute a percentage of salary to this Trust, and payments for retirees' premiums are made from this Trust annually.

The viability of this Trust is highly sensitive to the investment return earned and future Trust contribution. Below is a comparison of the viability of the Trust under three different investment return scenarios:

1. Low return (5.0%) – the HCT will be depleted in 24 years.
2. Medium return (6.5%) – the HCT will be depleted in over 30 years.
3. High return (8.0%) – the HCT will be depleted in over 30 years.



Additional assumptions made in our analysis:

1. Market value of assets of \$45,606,149 as of January 1, 2018.
2. Active employee contributions to HCT effective on 1/1/2018 as shown on page 18 of this report.
3. Flat dollar employer contributions determined based on the average contribution in the past six fiscal years (projected for FY 2018): \$918,000 for the County (including Sheriff), \$581,000 for Mental Health Authority, and \$931,000 for Road Commission.
4. Projected future retiree health costs using current retirement and health care trend assumptions.

Actuarially Determined Contributions

St. Clair County as of December 31, 2017

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the County has the ability to contribute these amounts on an annual basis. The County has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

| FY 2018 | Total | St. Clair County | Mental Health | Road Commission |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Discount rate | 6.5% | 6.5% | 6.5% | 6.5% |
| Payroll growth factor used for amortization ³ | Varies | N/A | 3.5% | 3.5% |
| Actuarial cost method | Entry Age Normal Level % of Salary | Entry Age Normal Level % of Salary | Entry Age Normal Level % of Salary | Entry Age Normal Level % of Salary |
| Amortization type | Varies | Level Dollar | Level % of Pay | Level % of Pay |
| Amortization period | 12 years | 12 years | 12 years | 12 years |
| AAL as of January 1, 2018 | \$ 80,189,632 | \$ 52,608,103 | \$ 13,213,558 | \$ 14,367,971 |
| AVA as of January 1, 2018 | (43,397,385) | (24,301,762) | (17,386,803) | (1,708,820) |
| Unfunded AAL as of January 1, 2018 | \$ 36,792,247 | \$ 28,306,341 | \$ (4,173,245) | \$ 12,659,151 |
| Funded Ratio | 54.1% | 46.2% | 131.6% | 11.9% |
| Normal cost as of beginning of year | \$ 1,356,940 | \$ 853,325 | \$ 308,341 | \$ 195,274 |
| Reduction for employee contributions | (423,004) | (342,235) | (80,769) | 0 |
| Net normal cost | \$ 933,936 | \$ 511,090 | \$ 227,572 | \$ 195,274 |
| Amortization of UAAL | 4,081,193 | 3,257,705 | (404,979) | 1,228,467 |
| Total normal cost plus amortization | \$ 5,015,129 | \$ 3,768,795 | \$ (177,407) | \$ 1,423,741 |
| Interest to end of year | 325,984 | 244,972 | (11,531) | 92,543 |
| Actuarially Determined Contribution (ADC) - Preliminary | \$ 5,341,113 | \$ 4,013,767 | \$ (188,938) | \$ 1,516,284 |
| ADC recommendation if fully-funded ⁵ | N/A | N/A | 242,364 | N/A |
| Final Recommended ADC⁶ | \$ 5,772,415 | \$ 4,013,767 | \$ 242,364 | \$ 1,516,284 |

⁵ If fully funded under the long-term expected discount rate, as shown above for the Mental Health group, an entity could contribute \$0. However, for long-term sustainability purposes, Nyhart would recommend contributing the normal cost plus interest for years in which that entity is fully funded.

⁶ Greater of the preliminary ADC and the ADC recommendation if fully funded.

Actuarially Determined Contributions

St. Clair County as of December 31, 2017

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the County has the ability to contribute these amounts on an annual basis. The County has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

| FY 2019 | Total | St. Clair County | Mental Health | Road Commission |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Discount rate | 6.5% | 6.5% | 6.5% | 6.5% |
| Payroll growth factor used for amortization ³ | Varies | N/A | 3.5% | 3.5% |
| Actuarial cost method | Entry Age Normal Level % of Salary | Entry Age Normal Level % of Salary | Entry Age Normal Level % of Salary | Entry Age Normal Level % of Salary |
| Amortization type | Varies | Level Dollar | Level % of Pay | Level % of Pay |
| Amortization period | 11 years | 11 years | 11 years | 11 years |
| Expected AAL as of January 1, 2019 | \$ 81,821,048 | \$ 53,642,278 | \$ 13,683,361 | \$ 14,495,409 |
| Expected AVA as of January 1, 2019 ⁷ | (43,501,147) | (23,449,372) | (18,300,719) | (1,751,056) |
| Expected unfunded AAL as of January 1, 2019 | \$ 38,319,901 | \$ 30,192,906 | \$ (4,617,358) | \$ 12,744,353 |
| Funded Ratio | 53.2% | 43.7% | 133.7% | 12.1% |
| Normal cost as of beginning of year | \$ 1,309,862 | \$ 826,376 | \$ 299,781 | \$ 183,705 |
| Reduction for employee contributions | (664,917) | (483,679) | (181,238) | |
| Net normal cost | \$ 644,945 | \$ 342,697 | \$ 118,543 | \$ 183,705 |
| Amortization of UAAL | 4,535,897 | 3,687,084 | (482,254) | 1,331,067 |
| Total normal cost plus amortization | \$ 5,180,842 | \$ 4,029,781 | \$ (363,711) | \$ 1,514,772 |
| Interest to end of year | 336,755 | 261,936 | (23,641) | 98,460 |
| Actuarially Determined Contribution (ADC) - Preliminary | \$ 5,517,597 | \$ 4,291,717 | \$ (387,352) | \$ 1,613,232 |
| ADC recommendation if fully-funded ⁸ | N/A | N/A | 126,248 | N/A |
| Final Recommended ADC⁹ | \$ 6,031,197 | \$ 4,291,717 | \$ 126,248 | \$ 1,613,232 |

⁷ Estimated as of January 1, 2019.

⁸ If fully funded under the long-term expected discount rate, as shown above for the Mental Health group, an entity could contribute \$0. However, for long-term sustainability purposes, Nyhart would recommend contributing the normal cost plus interest for years in which that entity is fully funded.

⁹ Greater of the preliminary ADC and the ADC recommendation if fully funded.

Discussion of Discount Rates

St. Clair County as of December 31, 2017

Under GASB 74, for purposes of calculating the Actuarially Determined Contribution (ADC), the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments.

The long-term expected rate of return on OPEB plan investment is assumed to be 6.50%. This was determined using a building block method in which expected future nominal rates of return are developed for each major asset class. These expected future nominal rates of return (including expected inflation (2.80%)) are then combined to produce the long-term expected rate of return by weighting them based on the target asset allocation percentage. The best estimates of median nominal rates of return for each major asset class included in the OPEB Plan's target asset allocation as of December 31, 2017 are summarized in the following table.

| Asset Class | Target Allocation | L/T Expected ROR (including inflation) |
|--|-------------------|--|
| Large Cap U.S. Equities | 28.00% | 7.40% |
| Mid Cap U.S. Equities | 7.00% | 8.50% |
| Small Cap U.S. Equities | 3.00% | 9.10% |
| International Equities – Developed Markets | 13.00% | 7.80% |
| International Equities – Emerging Markets | 4.00% | 9.60% |
| U.S. Investment-Grade Credit | 42.00% | 4.75% |
| U.S. High Yield Credit | 3.00% | 4.60% |
| Total | 100.00% | 6.50% |

Summary of Plan Participants

St. Clair County as of December 31, 2017

Active Employees

| Actives | Total | Avg. Age | Avg. Svc | Salary |
|-------------------------|------------|-------------|-------------|----------------------|
| St. Clair County | 352 | 49.5 | 16.3 | \$ 20,021,640 |
| Mental Health Authority | 164 | 47.1 | 11.3 | \$ 9,325,996 |
| Road Commission | 58 | 52.4 | 19.8 | \$ 3,392,127 |
| Total actives | 574 | 49.1 | 15.2 | \$ 32,739,763 |

Active enrollment above includes employees that are eligible for retiree health benefits only. Employees hired after the cut-off date as noted on pages 15 and 16 of this report are not eligible for retiree health benefits.

Summary of Plan Participants

St. Clair County as of December 31, 2017

Active Age-Service Distribution

All Groups (including those eligible for retiree health benefits only)

| Age | Years of Service | | | | | | | | | | Total |
|--------------|------------------|-----------|-----------|------------|------------|-----------|-----------|-----------|----------|----------|------------|
| | < 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 | | | | | | | | | | | 0 |
| 25 to 29 | | 6 | 1 | | | | | | | | 7 |
| 30 to 34 | | 9 | 12 | 14 | | | | | | | 35 |
| 35 to 39 | | 7 | 9 | 41 | 4 | | | | | | 61 |
| 40 to 44 | | 7 | 14 | 31 | 31 | 4 | | | | | 87 |
| 45 to 49 | | 3 | 12 | 36 | 41 | 25 | 6 | 2 | | | 125 |
| 50 to 54 | | 7 | 11 | 27 | 19 | 27 | 7 | 7 | | | 105 |
| 55 to 59 | | 2 | 5 | 23 | 27 | 13 | 2 | 4 | 1 | | 77 |
| 60 to 64 | | 4 | 2 | 15 | 24 | 6 | 4 | 3 | 2 | | 60 |
| 65 to 69 | | 1 | 2 | | 3 | | 1 | 1 | 1 | | 9 |
| 70 & up | | | | 1 | 5 | | | | 1 | 1 | 8 |
| Total | 0 | 46 | 68 | 188 | 154 | 75 | 20 | 17 | 5 | 1 | 574 |

Summary of Plan Participants

St. Clair County as of December 31, 2017

Active Age-Service Distribution (Continued)

St. Clair County (including those eligible for retiree health benefits only)

| Age | Years of Service | | | | | | | | | | Total |
|--------------|------------------|----------|-----------|------------|------------|-----------|-----------|----------|----------|----------|------------|
| | < 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 | | | | | | | | | | | 0 |
| 25 to 29 | | | | | | | | | | | 0 |
| 30 to 34 | | | 7 | 11 | | | | | | | 18 |
| 35 to 39 | | | 8 | 34 | 3 | | | | | | 45 |
| 40 to 44 | | | 4 | 21 | 22 | 3 | | | | | 50 |
| 45 to 49 | | | 6 | 24 | 27 | 15 | 5 | 1 | | | 78 |
| 50 to 54 | | | 5 | 19 | 13 | 16 | 6 | 5 | | | 64 |
| 55 to 59 | | | 2 | 14 | 20 | 8 | | 1 | 1 | | 46 |
| 60 to 64 | | | | 13 | 18 | 5 | 3 | 1 | | | 40 |
| 65 to 69 | | | 1 | | 2 | | 1 | | 1 | | 5 |
| 70 & up | | | | 1 | 3 | | | | 1 | 1 | 6 |
| Total | 0 | 0 | 33 | 137 | 108 | 47 | 15 | 8 | 3 | 1 | 352 |

Summary of Plan Participants

St. Clair County as of December 31, 2017

Active Age-Service Distribution (Continued)

Mental Health Authority (including those eligible for retiree health benefits only)

| Age | Years of Service | | | | | | | | | | Total |
|--------------|------------------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|------------|
| | < 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 | | | | | | | | | | | 0 |
| 25 to 29 | | 6 | | | | | | | | | 6 |
| 30 to 34 | | 9 | 5 | 3 | | | | | | | 17 |
| 35 to 39 | | 7 | 1 | 5 | 1 | | | | | | 14 |
| 40 to 44 | | 7 | 10 | 8 | 5 | | | | | | 30 |
| 45 to 49 | | 3 | 6 | 11 | 8 | 7 | | | | | 35 |
| 50 to 54 | | 7 | 6 | 6 | 4 | 3 | | 1 | | | 27 |
| 55 to 59 | | 2 | 2 | 8 | 4 | | 2 | | | | 18 |
| 60 to 64 | | 4 | 2 | 1 | 2 | | 1 | 1 | 2 | | 13 |
| 65 to 69 | | 1 | 1 | | 1 | | | 1 | | | 4 |
| 70 & up | | | | | | | | | | | 0 |
| Total | 0 | 46 | 33 | 42 | 25 | 10 | 3 | 3 | 2 | 0 | 164 |

Summary of Plan Participants

St. Clair County as of December 31, 2017

Active Age-Service Distribution (Continued)

Road Commission (including those eligible for retiree health benefits only)

| Age | Years of Service | | | | | | | | | | Total |
|--------------|------------------|----------|----------|----------|-----------|-----------|----------|----------|----------|----------|-----------|
| | < 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 | | | | | | | | | | | 0 |
| 25 to 29 | | | 1 | | | | | | | | 1 |
| 30 to 34 | | | | | | | | | | | 0 |
| 35 to 39 | | | | 2 | | | | | | | 2 |
| 40 to 44 | | | | 2 | 4 | 1 | | | | | 7 |
| 45 to 49 | | | | 1 | 6 | 3 | 1 | 1 | | | 12 |
| 50 to 54 | | | | 2 | 2 | 8 | 1 | 1 | | | 14 |
| 55 to 59 | | | 1 | 1 | 3 | 5 | | 3 | | | 13 |
| 60 to 64 | | | | 1 | 4 | 1 | | 1 | | | 7 |
| 65 to 69 | | | | | | | | | | | 0 |
| 70 & up | | | | | 2 | | | | | | 2 |
| Total | 0 | 0 | 2 | 9 | 21 | 18 | 2 | 6 | 0 | 0 | 58 |

Summary of Plan Participants

St. Clair County as of December 31, 2017

Inactives

| | Retirees ¹⁰ | | Terminated Vested ¹¹ | |
|-------------------------|------------------------|-------------|---------------------------------|-------------|
| | Total | Avg. Age | Total | Avg. Age |
| St. Clair County | 377 | 70.9 | 39 | 52.1 |
| Mental Health Authority | 82 | 69.3 | 32 | 51.7 |
| Road Commission | 123 | 73.5 | 6 | 53.9 |
| Total | 582 | 71.2 | 77 | 52.1 |

Retiree Age Distribution

| Age | Retirees |
|--------------|------------|
| < 45 | |
| 45 to 49 | 1 |
| 50 to 54 | 12 |
| 55 to 59 | 45 |
| 60 to 64 | 94 |
| 65 to 69 | 134 |
| 70 to 74 | 125 |
| 75 to 79 | 71 |
| 80 to 84 | 46 |
| 85 to 89 | 32 |
| 90 & up | 22 |
| Total | 582 |

¹⁰ Includes disabled retirees and beneficiaries but excludes all those without coverage.

¹¹ Includes all terminated vested employees, including those that are not eligible for retiree health benefits. Out of 77 terminated vested employees, 16 of them are not eligible for retiree health benefits.

Substantive Plan Provisions

St. Clair County as of December 31, 2017

Eligibility

Retiree health benefits eligibility requirements:

1. Original Plan members – earlier of:
 - a. Age 55 (or age 50 for Sheriff) with 25 years of service
 - b. Age 60 with 8 years of service
 - c. 25 years of service and 80 points
2. Modified Plan members – earlier of:
 - a. Age 55 (or age 50 for Sheriff) with 25 years of service
 - b. Age 60 with 20 years of service
 - c. 25 years of service and 80 points

Employees hired after the eligibility cut-off date shown below are not eligible for retiree health benefits.

| Union Code | Union Name | Retiree Health Eligibility Cut-Off Date |
|------------|---|--|
| CBSO | Bailiff and Court Security Officers Association | Hired after 7/1/2012 |
| RC | Road Commission | |
| | Production and Op Eng Clerical and TPOAM | Hired after 9/14/2011 Hired after 8/23/2011 |
| CDCO | Communication Officers POAM | |
| FOCP | Friend of the Court Supervisors | Hired after 7/1/2011 |
| PCCL | Probate Clerical | |
| SDEI | Correction Officers and Support Staff | Hired after 10/21/2009 |
| PSE | Public Service Employees | Hired after 6/29/2011 |
| FOCE | Friend of the Court | Hired after 5/11/2011 |
| PCJC | Probate Court Juvenile Counselors | Hired after 12/16/2009 |
| DCE | District Court AFSCME | Hired after 8/19/2009 |
| CMH | Mental Health | Hired after 1/1/2016 |
| SDEE | Sheriff's Deputies | Hired after 1/6/2011 |

Substantive Plan Provisions

St. Clair County as of December 31, 2017

Eligibility (continued)

Employees hired after the eligibility cut-off date shown below are not eligible for retiree health benefits.

| Union Code | Union Name | Retiree Health Eligibility Cut-Off Date |
|------------|---|---|
| BDMB | Board Member | |
| CANUE | CANUE Non-Affiliated | |
| COMM | Commissioners | |
| SDCO | Correction Officers Supervisors | |
| ELEC | Elected Officials | |
| HRE | Human Resources Clerks and Specialists | Hired after 1/1/2009 |
| JDGS | Judges | |
| PCSP | Probate Court Supervisors | |
| PAPE | Prosecuting Attorneys | |
| PHNS | Public Health Nurse Supervisors | |
| PHNA | Public Health Nurses | |
| CPEA | Circuit Court Probate Court Employee Associates | |
| SDSP | Sheriff Deputies Supervisors | Based on lower unit cut-off date |

Terminated Vested Employees

Employees who terminated employment with vested pension benefits are eligible for retiree health benefits commencing at age 55 if they have at least 25 years of service at termination or at age 60 if they have fewer than 25 years of service at termination. Upon benefits commencement, contribution requirements follow regular retirees.

Disability Retirement

Employees disabled in the line of duty are eligible for retiree health benefits without any age or service requirement. Employees disabled under any other circumstances are eligible for retiree health benefits if they have at least ten years of service at time of disability. Retiree contribution requirements follow regular retirees.

Spouse Benefit

Surviving spouse can continue coverage upon death of the retiree or active employees who have at least ten years of service at time of death. Surviving spouse contribution requirement follows member's contribution requirements prior to their death.

Substantive Plan Provisions

St. Clair County as of December 31, 2017

Health Care Trust Contributions

Health Care Trust contribution requirements as a % of salary while actively employed are as shown below:

| Union Code | Union Name | Eff. 1/1/2017 |
|------------|---|---------------|
| CBSO | Bailiff and Court Security Officers Association | |
| COMM | Commissioners | |
| ELEC | Elected Officials | |
| JDGS | Judges | |
| CDCO | Communication Officers POAM | |
| SDEI | Correction Officers and Support Staff | |
| SDCO | Correction Officers Supervisors | |
| FOCE | Friend of the Court | |
| FOCP | Friend of the Court Supervisors | |
| PCCL | Probate Clerical | |
| PCJC | Probate Court Juvenile Counselors | 2.50%* |
| PCSP | Probate Court Supervisors | |
| PAPE | Prosecuting Attorneys | |
| SDEE | Sheriff Deputies | |
| SDSP | Sheriff Deputies Supervisors | |
| CPEA | Circuit Court Probate Court Employee Associates | |
| PSE | Public Service Employees | |
| BDMB | Board Member | |
| CANUE | CANUE Non-Affiliated | |
| DCE | District Court AFSCME | |
| HRE | Human Resources Clerks and Specialists | |
| CMH | Mental Health | 2.00% |
| PHNS | Public Health Nurse Supervisors | 2.50% |
| PHNA | Public Health Nurses | |

* Limited to the first \$50,000 of salary.

Road Commission employees are not required to contribute to the Health Care Trust.

Substantive Plan Provisions

St. Clair County as of December 31, 2017

Retiree Contributions

Employees are eligible for retiree health benefits if they meet all of the following requirements:

1. Original Plan members – have at least 8 years of service at retirement and contribute to Health Care Trust (HCT) while actively employed if it's required in their Collective Bargaining Unit (CBA).
2. Modified Plan members – have at least 20 years of service at retirement and contribute to HCT while actively employed if it's required in their CBA.

Any employees may purchase retiree health benefits at retirement if they have at least 11 years of service at retirement regardless of whether they contribute to HCT while actively employed.

Medical Benefit

All health plans are self-insured except for the Medicare Advantage plan. The monthly retiree illustrative rates for medical and prescription drug benefits (excluding dental) by suffix are as shown below. These illustrative rates are calculated based on the blended claims experience for active employees and retirees.

| Pre-65 | | Eff. 1/1/2018 | |
|-----------------------------------|--|------------------|---------------|
| Suffix ¹² | Group | Single | 2-person |
| 900/40/54/2000 | St. Clair County Non-Hardship Retirees | \$ 499.67 | \$ 1,199.21 |
| 920/44/56/2002 | Mental Health Non-Hardship Retirees | \$ 499.67 | \$ 1,199.21 |
| 910/42/55/2001 | Road Commission Non-Hardship Retirees | \$ 499.67 | \$ 1,199.21 |
| Post-65 (Medicare Advantage Plan) | | Rates Per Person | |
| Suffix | Group | Eff. 1/1/2018 | Eff. 1/1/2019 |
| 600/601/602 | Non-Hardship Retirees | \$ 282.74 | \$ 163.09 |

Dental Benefit

Dental monthly illustrative rates effective on January 1, 2018 for all locations are as shown below.

| | Single | 2-person |
|----------|----------|----------|
| All ages | \$ 23.93 | \$ 45.52 |

¹² There are separate illustrative rates for hardship retirees. Hardship retirees are those with annual household incomes of \$24,999 or less and have at least 20 years of service at retirement. Annual household income means any and all income (taxable or not) received by a retired member and/or their spouse residing in the same household. For purposes of this valuation, all retirees are assumed to be non-hardship.

Actuarial Methods and Assumptions

St. Clair County as of December 31, 2017

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and County experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

There are significant changes to the actuarial methods and assumptions since the last GASB valuation, which was as of December 31, 2016. Please refer to the Detailed Actuary's Notes in the appendix for complete information on these changes. For the current year GASB valuation, we have also updated the per capita costs. We expect to update health care trend rates, mortality table, per capita costs, and discount rate in the next full GASB valuation, which will be as of December 31, 2018.

Measurement Date For fiscal year ending December 31, 2017, December 31, 2017 measurement date was used.

Actuarial Valuation Date December 31, 2017. Liabilities as of January 1, 2019 are based on an actuarial valuation date of December 31, 2017 with results projected on a "no gain/no loss" basis to January 1, 2019.

Discount Rate 6.5% for funding disclosure purposes (in calculating the Actuarially Determined Contribution)
Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

Payroll Growth 3.5% for general inflation plus merit increases as follows:

| YOS | Rates |
|------------|--------------|
| 0 - 1 | 4.5% |
| 2 | 3.5% |
| 3 | 3.0% |
| 4 | 2.5% |
| 5 | 2.0% |
| 6 - 19 | 0.5% |
| 20+ | 0.0% |

Inflation Rate 2.8% per year

Cost Method Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant's benefit at retirement; and
- annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.

Actuarial Methods and Assumptions

St. Clair County as of December 31, 2017

Census Data

Census information was provided by the County as of December 31, 2017. We have reviewed it for reasonableness and no material modifications were made.

Employer Funding Policy

Partial pre-funding at the County's discretion

Asset Valuation Method

Actuarial value of assets with a five-year smoothing

Mortality

RP-2017 Mortality Table with generational improvements from 2006 based on the Social Security mortality improvement assumptions

Disability

Annual sample rates are as shown below. Disability benefit is only valued for the Sheriff group (CDCO, SDEI, SDCO, SDEE, and SDSP unions) and 25% of disability is assumed to be duty-related.

| Age | Rates | Age | Rates |
|-----|-------|-----|-------|
| 20 | 0.08% | 45 | 0.27% |
| 25 | 0.08% | 50 | 0.49% |
| 30 | 0.08% | 55 | 0.89% |
| 35 | 0.08% | 60 | 1.41% |
| 40 | 0.20% | | |

Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The rates represent the probability of termination in the next 12 months.

| YOS | General / Mental Health | Sheriff / Road Commission |
|-------|----------------------------|------------------------------|
| 0 – 2 | 11.0% | 4.0% |
| 3 – 4 | 10.0% | 4.0% |
| 5 | 6.0% | 4.0% |
| 6+ | 4.0% ¹³ | 4.0% |

¹³ Annual turnover rate before age 35 for employees with at least 6 years of service is 6.0%.

Actuarial Methods and Assumptions

St. Clair County as of December 31, 2017

Retirement Rate

Annual rates of retirement by group are as shown below:

| Age | General / Mental Health | Road Commission | Age | Sheriff ¹⁴ | | | |
|---------|----------------------------|--------------------|---------|-----------------------|-------------|-------------|---------|
| | | | | <25 YOS | 25 - 29 YOS | 30 - 34 YOS | 35+ YOS |
| 50 - 59 | 15% | 25% | 40 - 59 | 0% | 25% | 100% | 100% |
| 60 | 15% | 15% | 60 - 61 | 15% | 15% | 15% | 100% |
| 61 | 20% | 15% | 62 | 40% | 40% | 40% | 100% |
| 62 | 40% | 40% | 63 - 64 | 20% | 20% | 20% | 100% |
| 63 - 64 | 20% | 20% | 65+ | 100% | 100% | 100% | 100% |
| 65 | 40% | 100% | | | | | |
| 66 - 69 | 25% | 100% | | | | | |
| 70+ | 100% | 100% | | | | | |

Health Care Trend Rates

| FYE | Rates | FYE | Rates |
|------|-------|-------|-------|
| 2019 | 8.5%* | 2023 | 6.5% |
| 2020 | 8.0%* | 2024 | 6.0% |
| 2021 | 7.5%* | 2025 | 5.5% |
| 2022 | 7.0% | 2026+ | 5.0% |

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

* Annual health care trend rates for the Medicare Advantage plan for FYE 2019-2021 are based on projected premium increases due to plan design changes, which are -42.32% from 2018 to 2019, -2.09% from 2019 to 2020, and 0.36% from 2020 to 2021 for all entities.

Retiree Contributions

Retiree contributions are assumed to increase according to health care trend rates.

¹⁴ Applies to CDCO, SDEI, SDCO, SDEE, and SDSP unions.

Actuarial Methods and Assumptions

St. Clair County as of December 31, 2017

Health Care Coverage Election Rate

Active employees eligible for retiree health benefits are assumed to elect coverage according to the table below:

| Group | Rates |
|-----------------|-------|
| County General | 85% |
| County Police | 100% |
| Mental Health | 80% |
| Road Commission | 95% |

All retirees that currently have coverage are assumed to continue coverage in the future.

All retirees that currently have no coverage are assumed never to elect coverage in the future.

Spousal Coverage

Spousal coverage and age for current retirees is based on actual data. 80% of male and 50% of female employees is assumed to be married at retirement. Husbands are assumed to be three years older than wives.

Per Capita Costs¹⁵

Annual per capita costs were calculated based on the County's non-hardship illustrative rates effective on January 1, 2018 actuarially increased using health index factors and current enrollment. The costs are assumed to increase with health care trend rates. Annual per capita costs applicable to all groups are as shown below:

| Age | Male | Female |
|---------|-----------|-----------|
| < 55 | \$ 6,800 | \$ 7,000 |
| 55 – 59 | \$ 8,400 | \$ 8,100 |
| 60 – 64 | \$ 11,300 | \$ 10,000 |
| 65 – 69 | \$ 2,600 | \$ 2,600 |
| 70 – 74 | \$ 3,200 | \$ 3,200 |
| 75 – 79 | \$ 3,800 | \$ 3,800 |
| 80+ | \$ 4,400 | \$ 4,400 |

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

Annual dental per capita costs are \$287 and they are assumed to increase with dental trend rates.

¹⁵ Nyhart used the 2018 County's illustrative rates without adjustment in our calculations. The rates were provided by BCBS and were assumed to represent the expected cost of claims and administrative expenses under the self-insured health plan. To the extent the rates do not reflect the full cost of coverage, our actuarial results will need to be revised. Common reasons for rates not reflecting the full cost are (1) use of asset reserves to pay a portion of the expected costs which leads to lower rates than required based on claims experience and (2) use of maximum claim exposure under the plan's aggregate stop-loss policy to set rates which overstate the expected costs for GASB 74 purposes.

Actuarial Methods and Assumptions

St. Clair County as of December 31, 2017

Explicit Subsidy

The difference between (a) the illustrative rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a County retiree in the Modified plan enrolled in the non-hardship plan with 20 years of service at retirement.

| | Illustrative Rate | Retiree Contribution | Explicit Subsidy |
|---------|--------------------------|-----------------------------|-------------------------|
| | A | B | C = A - B |
| Retiree | \$ 499.67 | \$ 0.00 | \$ 499.67 |
| Spouse | \$ 699.54 | \$ 0.00 | \$ 699.54 |

Implicit Subsidy

The difference between (a) the per capita cost and (b) the illustrative rate. Below is an example of the monthly implicit subsidies for a male County retiree age 60 in the Modified plan enrolled in the non-hardship plan with a spouse of the same age.

| | Per Capita Cost | Premium Rate | Implicit Subsidy |
|---------|------------------------|---------------------|-------------------------|
| | A | B | C = A - B |
| Retiree | \$ 941.67 | \$ 499.67 | \$ 442.00 |
| Spouse | \$ 833.33 | \$ 699.54 | \$ 133.79 |

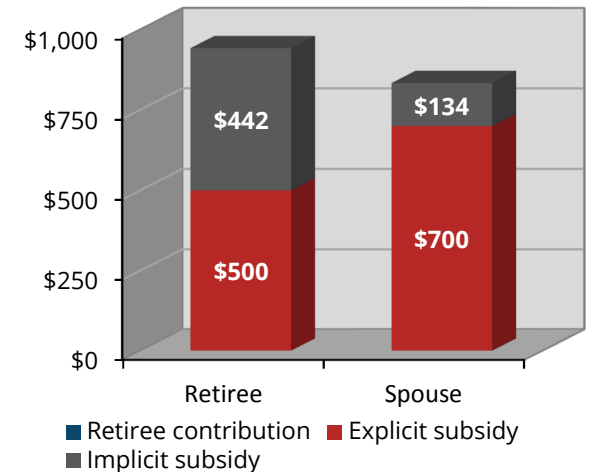
All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.

GASB Subsidy Breakdown

Below is a breakdown of the GASB 45 monthly total cost for a male County retiree age 60 in the Modified plan and his / her spouse of the same age enrolled in the non-hardship plan.

| | Retiree | Spouse |
|---------------------------|------------------|------------------|
| Retiree contribution | \$ 0.00 | \$ 0.00 |
| Explicit subsidy | \$ 499.67 | \$ 699.54 |
| Implicit subsidy | \$ 442.00 | \$ 133.79 |
| Total monthly cost | \$ 941.67 | \$ 833.33 |

GASB Subsidy Breakdown



APPENDIX

The background features a complex geometric design. The top half is a solid dark gray. Below this, there are several overlapping, semi-transparent shapes. On the left, there are white and light gray shapes. On the right, there is a large, solid red shape that overlaps with the other elements. The overall effect is a modern, minimalist aesthetic.

Appendix

St. Clair County as of December 31, 2017

Comparison of Participant Demographic Information

The active participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

| | <i>As of December 31, 2016</i> | <i>As of December 31, 2017</i> |
|------------------------------------|------------------------------------|------------------------------------|
| Active Participants | 635 | 574 |
| Retired Participants ¹⁶ | 550 | 582 |
| Averages for Active | | |
| Age | 48.0 | 49.1 |
| Service | 14.1 | 15.2 |
| Salary | \$ 55,698 | \$ 57,038 |
| Averages for Inactive | | |
| Age | 70.8 | 71.2 |

¹⁶ Retired participants' enrollment includes only those who have medical coverage.

Appendix

St. Clair County as of December 31, 2017

Detailed Actuary's Notes

There have been no substantive plan provision changes since the last full valuation, which was as of December 31, 2016. However, the County has opted to modify the post-65 retiree plan design effective on January 1, 2019. They have approved a series of changes to the post-65 design through 2021. Post-65 non-hardship premiums effective on January 1, 2018 and 2019 are as shown below as well as premiums expected as of January 1, 2020 and 2021:

| Effective Date | Rate per Person |
|-----------------------|------------------------|
| 1/1/2018 | \$ 282.74 |
| 1/1/2019 | \$ 163.09 |
| 1/1/2020 (expected) | \$ 159.69* |
| 1/1/2021 (expected) | \$ 160.26* |

*Rates as of 1/1/2020 and 1/1/2021 are based on separate plan design options with premiums of \$147.86 and \$138.04 as of 1/1/2019. These rates were provided to Nyhart for use in our calculations. These premium rates were projected to 1/1/2020 and 1/1/2021 using 8% trend from 2019 to 2020 and 7.5% trend from 2020 to 2021.

Additionally, the following assumptions have also been updated:

1. Mortality table has been updated from RP-2016 Mortality Table with generational improvements from 2006 based on the Social Security mortality improvement assumptions from the 2016 Trustees' Report to RP-2017 Mortality Table with generational improvements from 2006 based on the Social Security mortality improvement assumptions from the 2017 Trustees' Report. The impact of this change is a decrease in liabilities.
2. Health care trend rates have been reset to an initial rate of 8.5% decreasing by 0.5% annually to an ultimate rate of 5.0%. For FYE 2019 – 2021, post-65 premium rates have been updated to reflect actual and expected increases, as shown above. Due to the updates to the post-65 benefit design, the net impact of this change was a significant decrease in liabilities.

Appendix

St. Clair County as of December 31, 2017

Actuarial Value of Asset Allocations by Group

| 2017 | | Total | St. Clair County | Mental Health | Road Commission |
|------|---|---------------|------------------|---------------|-----------------|
| A. | Actuarial Value of Assets as of BOY | \$ 42,041,565 | \$ 24,356,391 | \$ 16,324,626 | \$ 1,360,548 |
| B. | Employee contributions | 443,110 | 353,887 | 89,223 | 0 |
| C. | Employer contributions | 2,368,393 | 841,331 | 536,606 | 990,456 |
| D. | Benefit payments (including employee refunds) | (4,106,202) | (2,757,600) | (610,569) | (738,033) |
| E. | Professional expenses | (176,786) | (102,419) | (68,646) | (5,721) |
| F. | Investment income allocation | 2,827,305 | 1,610,172 | 1,115,563 | 101,570 |
| G. | Actuarial Value of Assets as of EOY | \$ 43,397,385 | \$ 24,301,762 | \$ 17,386,803 | \$ 1,708,820 |

| 2018 (Projected) | | Total | St. Clair County | Mental Health | Road Commission |
|------------------|--|---------------|------------------|---------------|-----------------|
| A. | Actuarial Value of Assets as of BOY | \$ 43,397,385 | \$ 24,301,762 | \$ 17,386,803 | \$ 1,708,820 |
| B. | Expected employee contributions | 423,004 | 342,235 | 80,769 | 0 |
| C. | Expected employer contributions | 2,516,487 | 971,669 | 549,818 | 995,000 |
| D. | Expected benefit payments (including employee refunds) | (5,330,220) | (3,535,834) | (742,254) | (1,052,132) |
| E. | Professional expenses | (114,015) | (63,846) | (45,679) | (4,490) |
| F. | Investment income allocation | 2,608,506 | 1,433,386 | 1,071,262 | 103,858 |
| G. | Actuarial Value of Assets as of EOY | \$ 43,501,147 | \$ 23,449,372 | \$ 18,300,719 | \$ 1,751,056 |

GLOSSARY

The background features a complex geometric design. It consists of several overlapping, semi-transparent shapes. A large, solid red shape is prominent in the lower right quadrant. Other shapes in various shades of gray and white are layered on top of each other and the red shape, creating a sense of depth and movement. The overall aesthetic is modern and minimalist.

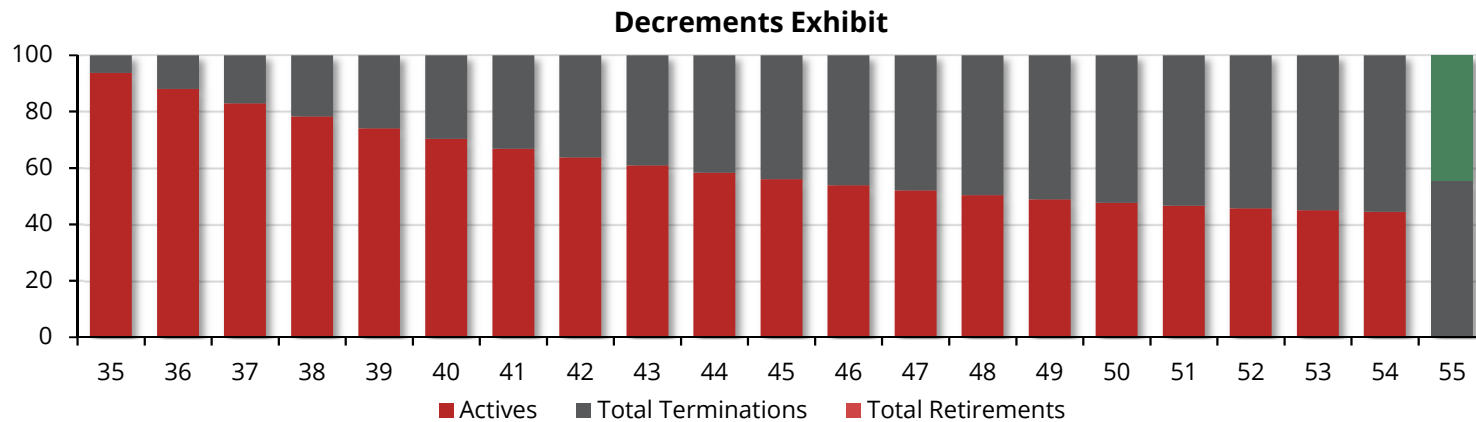
Glossary – Decrements Exhibit

St. Clair County as of December 31, 2017

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.43 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

| Age | # Remaining Employees | # of Terminations per Year ¹⁷ | # of Retirements per Year | Total Decrements |
|-----|-----------------------|--|---------------------------|------------------|
| 35 | 100.000 | 6.276 | 0.000 | 6.276 |
| 36 | 93.724 | 5.677 | 0.000 | 5.677 |
| 37 | 88.047 | 5.136 | 0.000 | 5.136 |
| 38 | 82.911 | 4.648 | 0.000 | 4.648 |
| 39 | 78.262 | 4.209 | 0.000 | 4.209 |
| 40 | 74.053 | 3.814 | 0.000 | 3.814 |
| 41 | 70.239 | 3.456 | 0.000 | 3.456 |
| 42 | 66.783 | 3.131 | 0.000 | 3.131 |
| 43 | 63.652 | 2.835 | 0.000 | 2.835 |
| 44 | 60.817 | 2.564 | 0.000 | 2.564 |
| 45 | 58.253 | 2.316 | 0.000 | 2.316 |

| Age | # Remaining Employees | # of Terminations per Year | # of Retirements per Year | Total Decrements |
|-----|-----------------------|----------------------------|---------------------------|------------------|
| 46 | 55.938 | 2.085 | 0.000 | 2.085 |
| 47 | 53.853 | 1.866 | 0.000 | 1.866 |
| 48 | 51.987 | 1.656 | 0.000 | 1.656 |
| 49 | 50.331 | 1.452 | 0.000 | 1.452 |
| 50 | 48.880 | 1.253 | 0.000 | 1.253 |
| 51 | 47.627 | 1.060 | 0.000 | 1.060 |
| 52 | 46.567 | 0.877 | 0.000 | 0.877 |
| 53 | 45.690 | 0.707 | 0.000 | 0.707 |
| 54 | 44.983 | 0.553 | 0.000 | 0.553 |
| 55 | 44.430 | 0.000 | 44.430 | 44.430 |



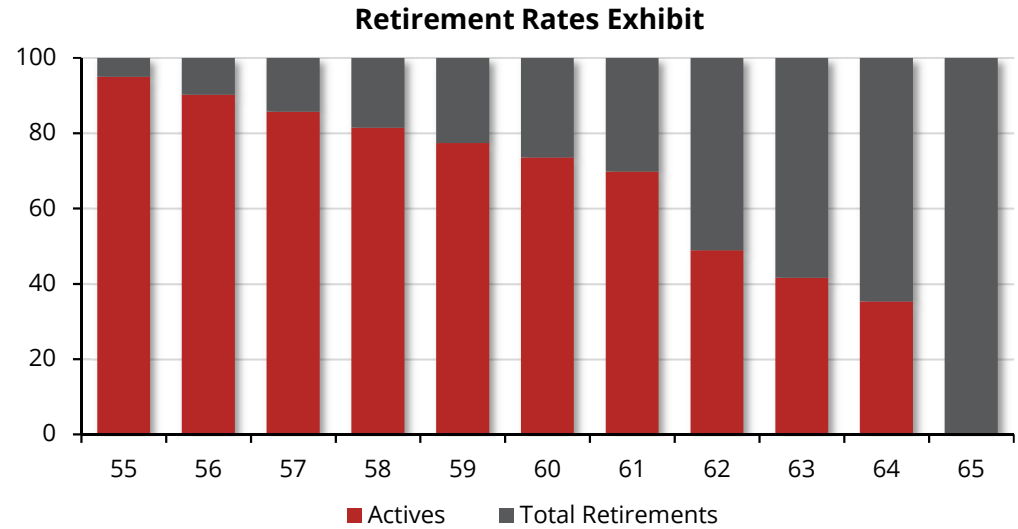
¹⁷ The above rates are illustrative rates and are not used in our GASB calculations.

Glossary – Retirement Rates Exhibit

St. Clair County as of December 31, 2017

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

| Age | Active Employees BOY | Annual Retirement Rates* | # Retirements per Year | Active Employees EOY |
|-----|----------------------|--------------------------|------------------------|----------------------|
| 55 | 100.000 | 5.0% | 5.000 | 95.000 |
| 56 | 95.000 | 5.0% | 4.750 | 90.250 |
| 57 | 90.250 | 5.0% | 4.513 | 85.738 |
| 58 | 85.738 | 5.0% | 4.287 | 81.451 |
| 59 | 81.451 | 5.0% | 4.073 | 77.378 |
| 60 | 77.378 | 5.0% | 3.869 | 73.509 |
| 61 | 73.509 | 5.0% | 3.675 | 69.834 |
| 62 | 69.834 | 30.0% | 20.950 | 48.884 |
| 63 | 48.884 | 15.0% | 7.333 | 41.551 |
| 64 | 41.551 | 15.0% | 6.233 | 35.318 |
| 65 | 35.318 | 100.0% | 35.318 | 0.000 |



* The above rates are illustrative rates and are not used in our GASB calculations.

Glossary – Definitions

St. Clair County as of December 31, 2017

GASB 75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
2. **Actuarial Cost Method** – A procedure for determining the Actuarial Present Value of Future Benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Service Cost and a Total OPEB Liability.
3. **Actuarially Determined Contribution** - A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.
4. **Actuarial Present Value** – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
 - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
 - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
 - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
5. **Deferred Outflow / (Inflow) of Resources** – represents the following items that have not been recognized in the OPEB Expense:
 - a. Differences between expected and actual experience of the OPEB plan
 - b. Changes in assumptions
 - c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)
6. **Explicit Subsidy** – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
7. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the Total OPEB Liability.

Glossary – Definitions

St. Clair County as of December 31, 2017

8. **Healthcare Cost Trend Rate** – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
9. **Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
10. **OPEB** – Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
11. **OPEB Expense** – Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.
12. **Pay-as-you-go** – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
13. **Per Capita Costs** – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
14. **Present Value of Future Benefits** – Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.
15. **Real Rate of Return** – the rate of return on an investment after adjustment to eliminate inflation.

Glossary – Definitions

St. Clair County as of December 31, 2017

16. **Select and Ultimate Rates** – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% select rates, and 7% is the ultimate rate.
17. **Service Cost** – The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.
18. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.
19. **Total OPEB Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).