



**Cavanaugh Macdonald**  
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**GASB STATEMENT NO. 75 REPORT**  
**FOR THE**  
**RETIREE HEALTH CARE VALUATION**  
**OF THE**  
**SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO**  
**PREPARED AS OF JUNE 30, 2019**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

October 31, 2019

School Employees Retirement System of Ohio  
300 East Broad Street  
Suite 100  
Columbus, OH 43215-3746

Ladies and Gentlemen:

Presented in this report is information to assist School Employees Retirement System of Ohio (System) in providing information required under the Governmental Accounting Standards Board (GASB) Statement No. 75 to participating employers. GASB Statement No. 75 (GASB 75) establishes accounting and financial reporting requirements for governmental employers who have other post-employment benefits (OPEB) plans. This report has been prepared as of June 30, 2019 (Measurement Date) for financial reporting as of June 30, 2020. The calculations in this report have been made on a basis that is consistent with our understanding of the accounting standard. This is the first report issued under GASB 75.

The annual actuarial valuation performed as of June 30, 2019 was used as the basis for the information presented in this report. The valuation was based upon data, furnished by the System staff, concerning active, inactive and retired members along with pertinent financial information. This information was reviewed for completeness and internal consistency, but was not audited by us. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete our results may be different and our calculations may need to be revised. Please see the actuarial valuation for additional details on the funding requirements for the System including actuarial assumptions and methods and the funding policy.

To the best of our knowledge, the information contained in this report is complete and accurate. The calculations were performed by qualified actuaries according to generally accepted actuarial principles and practices, as well as in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board. The calculations are based on the current provisions of the System, and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of the System. In addition, the calculations were completed in compliance with applicable law and, in our opinion, meet the requirements of GASB 75.



October 31, 2019

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The calculations are based on the current provisions of the System, and on actuarial assumptions that are, individually and in the aggregate, internally consistent and reasonably based on the actual experience of the System. In addition, the calculations were completed in compliance with the laws governing the System. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 75 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

We, Alisa Bennett, FSA and John Garrett, ASA, are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in this report or to provide explanations or further details as may be appropriate.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Alisa Bennett'.

Alisa Bennett, FSA, EA, FCA, MAAA  
Principal and Consulting Actuary

A handwritten signature in blue ink, appearing to read 'John Garrett'.

John Garrett, ASA, FCA, MAAA  
Principal and Consulting Actuary

AB/JJG:jf



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**REPORT OF THE ANNUAL GASB STATEMENT NO. 75  
RETIREE HEALTH PLAN  
SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO  
PREPARED AS OF JUNE 30, 2019**

**SECTION I – SUMMARY OF COLLECTIVE AMOUNTS**

<b>Valuation Date (VD):</b>	June 30, 2019
<b>Measurement Date (MD):</b>	June 30, 2019
<b>Reporting Date (RD):</b>	June 30, 2020
<b>Single Equivalent Interest Rate (SEIR):</b>	
Long-Term Expected Rate of Return	7.50%
Municipal Bond Index Rate	3.13%
Fiscal Year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members	2029
Single Equivalent Interest Rate	3.22%
<b>Net OPEB Liability (Fiscal Year Ended 2018)</b>	
Total OPEB Liability (TOL)	\$ 3,209,899,769
Fiduciary Net Position (FNP)	<u>435,629,637</u>
Net OPEB Liability (NOL = TOL – FNP)	\$ 2,774,270,132
FNP as a percentage of TOL	13.57%
<b>Net OPEB Liability (Fiscal Year Ended 2019)</b>	
Total OPEB Liability (TOL)	\$ 2,978,600,373
Fiduciary Net Position (FNP)	<u>463,810,679</u>
Net OPEB Liability (NOL = TOL – FNP)	\$ 2,514,789,694
FNP as a percentage of TOL	15.57%
<b>OPEB Expense (OE):</b>	\$ 81,116,061
<b>Deferred Outflows of Resources:</b>	\$ 226,628,228
<b>Deferred Inflows of Resources:</b>	\$ 693,403,567



## **SECTION II – INTRODUCTION**

The Governmental Accounting Standards Board (GASB) issued Statement No. 75 (GASB 75), *“Accounting and Financial Reporting for Postemployment Benefit Plans other than Pension”* in June 2015. The effective date for reporting under GASB 75 is plan years beginning after June 15, 2017, but early implementation is encouraged. This report, prepared as of June 30, 2019 (the Measurement Date), presents information to assist the School Employees Retirement System of Ohio in providing the required information under GASB 75 to participating employers. Much of the material provided in this report, including the Net OPEB Liability, is based on the results of the GASB 74 report for the School Employees Retirement System of Ohio, which was issued October 21, 2019. See that report for more information on the member data, actuarial assumptions and methods used in developing the GASB 74 results.

GASB 75 replaces GASB 45, and represents a significant departure from the requirements of the prior statement. GASB 45 was issued as a “funding friendly” statement that required post-employment benefit plans other than pension plans (OPEB) to report items consistent with the results of the System’s actuarial valuations, as long as those valuations met certain parameters. GASB 75 basically separates accounting from funding by creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the System.

Two major changes in GASB 75 are the requirements to determine the Net OPEB Liability (NOL) and recognize an OPEB Expense (OE) in the financial statements of the participating employer.

GASB 75 requires the inclusion of a Net OPEB Liability (NOL) on the plan sponsor’s balance sheet and a determination of an OPEB Expense (OE), which may bear little relationship to the funding requirements for the School Employees Retirement System of Ohio. In fact, it is possible in some years for the NOL to be an asset or the OE to be an income item. The NOL is set equal to the Total OPEB Liability (TOL) minus the Fiduciary Net Position (FNP). The benefit provisions recognized in the calculation of the TOL are summarized in Appendix B. For the purposes of reporting under GASB 75, the School Employees Retirement System of Ohio is assumed to be a cost-sharing-employer defined benefit OPEB plan.

OE includes amounts for Service Cost (the Normal Cost under Entry Age Normal (EAN) for the year), interest on the TOL, employee contributions, administrative expenses, other cash flows during the year, recognition of increases/decreases in the TOL due to changes in the benefit structure, actual versus expected experience, actuarial assumption changes, and recognition of investment gains/losses. The actual experience and assumption change impacts are recognized over the average expected remaining service life of the System membership as of the beginning of the measurement period, while investment gains/losses are recognized equally over five years. The development of the OE is shown in Section V. The unrecognized portions of each year’s experience, assumption changes and investment gains/losses are used



to develop Deferred Inflows and Outflows of Resources, which also must be included on the employer's Statement of Net Position.

Among the items needed for the TOL calculation is a discount rate, as defined by GASB, or a Single Equivalent Interest Rate (SEIR). To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan provisions applicable to the membership and beneficiaries of the System on the Measurement Date. Future contributions were projected to be made at the current levels set in statute. If the FNP is not projected to be depleted at any point in the future, the long-term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, the FNP is projected to be depleted at a future measurement date, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long-term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. The rate used, if necessary, for this purpose is the Fidelity General Obligation 20-year Municipal Bond Index Rate (3.13%).

Our calculations indicated that the FNP is projected to be depleted, so the Municipal Bond Index Rate is used in the determination of the SEIR for both the June 30, 2018 and the June 30, 2019 TOL. The SEIR is 3.22% at June 30, 2019 and 3.70% at June 30, 2018.

The FNP projections are based upon the School Employees Retirement System of Ohio's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements of GASB 74 and 75. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the System, or the System's ability to make benefit payments in future years.

The sections that follow provide the results of all the required calculations, presented in the order laid out in GASB 75 for note disclosure and Required Supplementary Information (RSI).



**SECTION III – FINANCIAL STATEMENT NOTES**

The material presented herein will follow the order presented in GASB 75. Paragraph numbers are provided for ease of reference.

**Paragraph 89:** The information required to be prepared by the System and/or the individual employer.

**Paragraph 90:** The information required to be prepared by the individual employer.

**Paragraph 91:** The information required to be prepared by the System.

**Paragraph 92-93.:** This paragraph requires information to be disclosed regarding the actuarial assumptions and other inputs used to measure the TOL. The complete set of actuarial assumptions and other inputs used in developing the TOL are outlined in Appendix C. The TOL as of June 30, 2019 was determined based on an actuarial valuation prepared as of June 30, 2019, using the following actuarial assumptions and other inputs:

Price Inflation	3.00 percent
Salary increases, including price inflation	3.50 to 18.20 percent
Long-term Rate of Return, net of investment expense, including price inflation	7.50 percent
Municipal Bond Index Rate	
Prior Measurement Date	3.62 percent
Measurement Date	3.13 percent
Year FNP is projected to be depleted	2029
Single Equivalent Interest Rate, net of plan investment expense, including price inflation	
Prior Measurement Date	3.70 percent
Measurement Date	3.22 percent
Health Care Cost Trend Rate	Pre-Medicare: 7.00% - 4.75% Medicare: 5.25% - 4.75%



## Mortality

RP-2014 Blue Collar Mortality Table with fully generational projection and Scale BB, 120% of male rates and 110% of female rates. RP-2000 Disabled Mortality Table with 90% for male rates and 100% for female rates set back five years.

The actuarial assumptions used in the valuation are based on the results of the most recent actuarial experience study, which covered the five-year period ending June 30, 2015. The experience study report is dated April 2016.

### Paragraph 94:

- (a) Discount rate (SEIR):** The discount rate used to measure the TOL at June 30, 2019 was 3.22 percent. The discount rate used to measure the TOL at the Prior Measurement Date was 3.70 percent.
- (b) Projected cash flows:** The projection of cash flows used to determine the discount rate assumed that plan contributions from members and the System will be made at the current contribution rates as set out in state statute:
- a. State contribution rate: 2.00% of covered payroll; includes 1.50% payroll surcharge with no additional contribution from the basic benefits plan.
  - b. Administrative expenses in the prior year were projected forward with price inflation as an estimate for administrative expenses in current and future years. The portion of expenses in future years allocated to the current members was based on the proportionate share of covered payroll in each year for the remainder of the existing members to the total covered payroll for all members.
  - c. Both pension and OPEB benefits are paid by the trust as a whole.

Based on those assumptions, the System's FNP was projected to not be available to make all projected future benefit payments of current System members, so the Municipal Bond Index Rate is used in the determination of the SEIR for both the June 30, 2018 and the June 30, 2019 TOL. The SEIR is 3.22% at June 30, 2019 and 3.70% at June 30, 2018.

The FNP projections are based upon the System's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing System basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the System, or the System's ability to make benefit payments in future years.



- (c) Long-term rate of return:** The long-term expected return on plan assets is reviewed as part of the regular experience studies prepared every five years for the System. The most recent analysis, performed for the period covering fiscal years 2010 through 2015, is outlined in a report adopted by the Board on April 21, 2016. Several factors are considered in evaluating the long-term rate of return assumption including long-term historical data, estimates inherent in current market data, and a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) were developed by the investment consultant for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The capital market assumptions developed by the investment consultant are intended for use over a 10-year horizon and may not be useful in setting the long-term rate of return for funding pension plans which covers a longer timeframe. The assumption is intended to be a long-term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.
- (d) Municipal bond rate:** A municipal bond rate used in determining the discount rate was 3.13% on the Measurement Date.
- (e) Periods of projected benefit payments:** Projected future benefit payments for all current plan members until benefit payments ran out.



**Assumed asset allocation:** The target asset allocation and best estimates of arithmetic real rates of return for each major asset class, as used in the June 30, 2015 experience study, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Cash	1.0%	0.50%
US Equity	22.5	4.75
International Equity	22.5	7.00
Fixed Income	19.0	1.50
Private Equity	10.0	8.00
Real Assets	15.0	5.00
Multi-Asset Strategies	10.0	3.00

**(f) & 93(e) Sensitivity analysis:** These paragraphs require disclosure of the sensitivity of the NOL to changes in the health care cost trend rates and the discount rate. The following exhibit presents the NOL of the Plan, calculated using the health care cost trend rates, as well as what the Plan's NOL would be if it were calculated using a health care cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate. Similarly, the exhibit presents the NOL of the System, calculated using the discount rate of 3.22 percent, as well as the System's NOL calculated using a discount rate that is 1-percentage-point lower (2.22 percent) or 1-percentage-point higher (4.22 percent) than the current rate.

Net OPEB Liability			
Discount Rate	Health Care Cost Trend Rates		
	1% Decrease	Current	1% Increase
1% Increase (4.22%)		\$2,087,264,735	
Current (3.22%)	\$2,014,855,953	\$2,514,789,694	\$3,178,080,686
1% Decrease (2.22%)		\$3,052,477,754	



**Paragraph 96(a):** This paragraph requires the disclosure of the employer’s proportionate share of the Collective NOL and if an employer has a special funding situation, the portion of the non-employer contributing entities proportionate share of the collective NOL that is associated with the employer. This will be determined by the System.

**Paragraph 96(b):** This paragraph requires disclosure of the employer’s proportion of the collective NOL and the change in the proportion since the prior measurement date. This will be determined by the System.

**Paragraph 96(c):** June 30, 2019 is the actuarial valuation date upon which the TOL is based. No update procedures were used to determine the TOL.

**Paragraphs 96(d):** The following change was made to the assumptions as noted:

2019

1. The discount rate was changed from 3.70% to 3.22%

2018

1. The discount rate was changed from 3.63% to 3.70%
2. The health care trend rates were updated.

2017

1. The discount rate was changed from 2.98% to 3.63%

**Paragraphs 96(e):** There were no changes in benefit terms since the prior measurement period.

**Paragraph 96(f):** There were no changes between the measurement date of the collective net OPEB liability and the employer’s reporting date.

**Paragraph 96(g):** Please see Section V of the report for the development of the collective OPEB expense. OE for each employer will be determined by the System.

**Paragraph 96(h):** Since certain expense items are amortized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce OPEB expense they are labeled deferred inflows. If they will increase OPEB expense they are labeled deferred outflows. As noted in the previous section, the amortization of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are amortized over the average remaining service life of the active and inactive System members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five-year period.



The table below provides a summary of the deferred inflows and outflows as of the Measurement Date. The allocation of deferred inflows and outflows will be determined by the System.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 36,915,059	\$ 552,482,199
Changes of assumptions	\$ 183,676,731	\$ 140,921,368
Net difference between projected and actual earnings on plan investments	\$ 6,036,438	\$ 0
Employer contributions subsequent to the Measurement Date	<u>0</u>	<u>0</u>
Total	<u>\$ 226,628,228</u>	<u>\$ 693,403,567</u>



**Paragraph 96(i):** The collective amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in OPEB expense as follows:

Deferred Amounts to be Recognized in Fiscal Years Ending	Deferred Outflows / (Inflows) of Resources
Year 1	(\$144,414,597)
Year 2	(\$74,287,296)
Year 3	(\$72,515,519)
Year 4	(\$72,803,777)
Thereafter	(\$102,754,150)

**Paragraph 96(j):** The amount of revenue recognized for the support provided by non-employer contributing entities for the participating employers. The System will provide this information.



## **SECTION IV – REQUIRED SUPPLEMENTARY INFORMATION**

There are several tables of Required Supplementary Information (RSI) that need to be included in the System's financial statements:

**Paragraph 97(a) and (b):** This information will be provided by the System.

**Paragraph 98:** Information about factors that significantly affect trends in the amounts in the schedules required by paragraph 98 should be presented as notes to the schedule. Comments on additional years will be added as they occur.

***Changes of benefit and funding terms:*** There have been no changes to the benefit provisions.

***Changes in actuarial assumptions:***

### **2016**

- Assumed rate of inflation was reduced from 3.25% to 3.00%
- Payroll Growth Assumption was reduced from 4.00% to 3.50%
- Assumed real wage growth was reduced from 0.75% to 0.50%
- Rates of withdrawal, retirement and disability were updated to reflect recent experience.
- Mortality among active members was updated to the following:
  - RP-2014 Blue Collar Mortality Table with fully generational projection and a five year age set-back for both males and females.
- Mortality among service retired members, and beneficiaries was updated to the following:
  - RP-2014 Blue Collar Mortality Table with fully generational projection with Scale BB, 120% of male rates, and 110% of female rates.
- Mortality among disabled members was updated to the following:
  - RP-2000 Disabled Mortality Table, 90% for male rates and 100% for female rates, set back five years is used for the period after disability retirement.



***Method and assumptions used in calculations of actuarially determined contributions.***

The System is funded with fixed contribution rates for the state and with varying contributions for employees based on their job and personal elections. The Actuarially Determined Contributions in the *Schedule of Employer Contributions* are calculated as of the beginning of the fiscal year in which contributions are reported.

The following actuarial methods and assumptions (from the June 30, 2018 actuarial valuation) were used to determine the Actuarially Determined Contribution reported for Fiscal Year End 2019 in that schedule:

Actuarial cost method	Entry age normal
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	Market Value
Price Inflation	3.00 percent
Salary increase, including price inflation	18.20 percent – 3.50 percent, including inflation
Long-term Rate of Return, net of investment expense, including price inflation	5.25 percent
Health Care Cost Trend Rate	Pre-Medicare: 7.25% - 4.75% Medicare: 5.375% - 4.75%



**SECTION V – OPEB EXPENSE**

The OPEB Expense (OE) consists of a number of different items. GASB 75 refers to the first item as Service Cost which is the Normal Cost using the Entry Age Normal actuarial funding method. The second item is interest on the TOL at the Discount Rate in effect as of the Prior Measurement Date.

The next three items refer to any changes that occurred in the TOL due to:

- benefit changes, or
- actual versus expected experience, or
- changes in assumptions or other inputs.

Benefit changes are recognized immediately. Benefit improvements will increase OE. Benefit reductions will decrease the OE. For the year ended June 30, 2019, there were no benefit changes to be recognized.

The next item to be recognized is the portion of current year changes in TOL due to actual versus expected Plan experience for the year. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire Plan membership at the beginning of the measurement period. The average expected remaining service life of active members is the average number of years the active members are expected to remain in covered employment. For the year ended June 30, 2019 this number is 8.23 years. The average expected remaining service life of the inactive members is zero. Therefore, the recognition period is the weighted average of these two amounts, or 6.48 years. The development of the average remaining service life is shown in the table below.

**Calculation of Weighted Average Years of Working Lifetime**

Category	Number (1)	Average Years of Working Lifetime (2)
a. Active Members	158,343	8.23
b. Inactive Members	42,738	0.00
c. Total	201,081	
Weighted Average Years of Working Lifetime [(a1 * a2) + (b1 * b2)]/c1		6.48



The last item under changes in TOL is changes in assumptions or other inputs. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire Plan membership, similar to the way experience gains and losses are recognized. For the year ended June 30, 2019, there was a change in the TOL arising from the change in the Discount Rate from 3.70 percent on the Prior Measurement Date to 3.22 percent on the Measurement Date.

Member contributions for the year and projected earnings on the FNP at the discount rate serve to reduce the expense. One-fifth of current-period difference between actual and projected earning on the FNP are recognized in the OPEB expense.

<b>Investment Earnings (Gain)/Loss as of June 30, 2019</b>		
a	Expected asset return rate	7.50%
b	Beginning of year market value assets (BOY)	\$ 435,629,637
c	End of year market value assets (EOY)	\$ 463,810,679
d	Expected return on BOY for plan year (a x b)	\$ 32,672,223
External Cash Flow		
	Contributions - employer	\$ 81,944,848
	Contributions - member	0
	Benefits paid	(73,206,711)
	Admin expenses	(2,566,722)
	Other	\$ -
e	Total net external cash flow	\$ 6,171,415
f	Expected return on net cash flow (a x 0.5 x e)	\$ 231,428
g	Projected earnings for plan year (d + f)	\$ 32,903,651
h	Net investment income (c - b - d)	\$ 22,009,627
	<b>Investment earnings (gain)/loss (g - h)</b>	<b>10,894,024</b>



The current year portions of previously determined experience and assumption amounts, recognized as Deferred Outflows of Resources and Deferred Inflows of Resources are included. Deferred Outflows of Resources are added to the OE while Deferred Inflows of Resources are subtracted from the OE. Finally, other miscellaneous items are included.

OPEB Expense Determined as of the Measurement Date	
Service Cost	\$ 160,601,083
Interest on the TOL and Cash Flow	\$ 117,411,967
Current-period benefit changes	\$ 0
Expensed portion of current-period difference between expected and actual experience in the total OPEB liability	\$ (100,817,919)
Expensed portion of current-period changes of assumptions	\$ 33,517,652
Member contributions	\$ 0
Projected earnings on plan investments	\$ (32,903,651)
Expensed portion of current-period differences between actual and projected earnings on plan investments	\$ 2,178,805
Administrative expense	\$ 2,566,722
Other	\$ 0
Recognition of beginning deferred outflows of resources as OPEB expense	\$ 6,887,244
Recognition of beginning deferred inflows of resources as OPEB expense	<u>\$ (108,325,842)</u>
OPEB Expense	<u>\$ 81,116,061</u>



## **SCHEDULE A**

### **SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Summary of Main Plan Provisions as of June 30, 2019**

#### **ELIGIBILITY FOR ACCESS TO RETIREE HEALTH CARE:**

##### **Normal Retirement:**

*Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017:* Attainment of age 65 with at least ten years of creditable service, or completion of 30 years of creditable service, regardless of age.

*Members attaining 25 years of service after August 1, 2017:* Attainment of age 67 with at least ten years of creditable service, or attainment of age 57 with at least 30 years of creditable service. Buy-up option available.

##### **Early Retirement:**

*Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017:* Not eligible for unreduced service retirement but has attained age 55 with at least 25 years of service, or age 60 with ten years of service.

*Members attaining 25 years of service after August 1, 2017:* Attainment of age 62 with at least ten years of creditable service, or attainment of age 60 with at least 25 years of creditable service.

**Disability Retirement:** Permanently disabled after completion of at least 5 years of total service credit.

**Survivor Allowances:** Beneficiary must be receiving monthly benefits due to the death of a member, age and service retiree or disability benefit recipient.

**Termination:** Members that terminated with at least ten years of creditable service and have attained age 60 (age 62 for those retiring after August 1, 2017).

#### **PREMIUM PAYMENTS:**

Retirees, spouses and dependent children pay either all or a portion of the cost of health care and prescription drug coverage as well as a \$35 monthly surcharge. The remainder of the cost is paid by SERS.

Medicare-eligible retirees, spouses and dependent children may qualify for the health care Premium Discount Program if their household income falls at or below a specified level. Income limits are updated annually and those wishing to participate in the program are re-verified every year. Retirees, spouses and dependent children qualifying for the program will receive a 25% discount in their monthly health care premiums.



**PREMIUM PAYMENTS (Continued):**

The following schedule lists the percentage of the retiree premium paid by service retirees:

Years of Service	Retirement Date on or before July 1, 1989	Retirement Date August 1, 1989 through July 1, 2008	Retirement Date on or after August 1, 2008
	Service Retiree Premium Contribution Percentage		
5 – 9	50.0%	N/A	N/A
10 – 14	17.5	100.0%	100.0%
15 – 19	17.5	50.0	100.0
20 – 24	17.5	25.0	50.0
25 – 29	17.5	17.5	30.0
30 – 34	17.5	17.5	20.0
35 and over	17.5	17.5	15.0*

\* Additional 1% reduction for each year over 35.

The following schedule lists the percentage of the retiree premium paid by disability benefit recipients:

Years of Service	Disabled Benefit Recipient Premium Contribution Percentage
5 – 9	50.0%
10 – 24	33.0
25 and over	17.5

The following schedule lists the percentage of the spouse premium paid by spouses of retirees:

Service Retiree, Disability Recipient, or Member's Qualified Service	Spouse Premium Contribution Percentage
1.5 – 24	100.0%
25 – 29	90.0
30 and over	80.0

Dependent children pay 70.0% of the child premium.

In addition, SERS offered a new coverage option beginning in 2017, the Marketplace Wraparound Plan. This option is only available to healthcare participants who are not eligible for Medicare and who are not enrolled in Medicaid. Participants will be able to choose insurance from any insurer offering coverage in the federal Marketplace, and if eligible, receive a federal subsidy to lower the premium and cost-sharing amounts. The SERS Marketplace Wraparound Plan offers additional benefits to help pay for deductibles, co-pays, and other costs.



**OTHER POST-EMPLOYMENT BENEFITS:** Health care and prescription drug coverage is provided in all post-employment group health care plan options. Dental and vision coverage are made available to retirees, spouses and dependent children at the full cost.

**2020 RETIREE GROUP HEALTH CARE PLAN OPTIONS:**

**Options available to members without Medicare**

- ◇ Aetna Choice POS II with Express Scripts prescription drug coverage
- ◇ AultCare PPO with AultCare prescription drug coverage

**Options available to members with Medicare:**

- ◇ Aetna Medicare<sup>SM</sup> Plan (PPO) with Express Scripts Medicare Part D Prescription Drug Plan
- ◇ Aetna Traditional Choice with Express Scripts Medicare Part D Prescription Drug Plan (only available to members with special circumstances)
- ◇ AultCare PPO with AultCare prescription drug coverage (only available to members with Part B Only)
- ◇ PrimeTime Health Plan through AultCare with PrimeTime Medicare Part D prescription drug coverage

The following pages contain information that was provided by SERS in the 2020 Open Enrollment Guide and the 2020 Member Health Care Guide.



**2020 Contribution Rates**

<b>Years of Service</b>	<b>Aetna Choice POS II and Aetna Medicare<sup>SM</sup></b>	<b>Aetna Traditional Choice</b>	<b>AultCare PPO and PrimeTime</b>
<b>Service Retirement Date on or before July 1, 1989 Premiums</b>			
5-9.999 years			
Without Medicare	\$659		\$574
With Medicare A & B	\$117	\$428	\$150
With Medicare B Only	\$297		\$574
10-24.999 years			
Without Medicare	\$253		\$224
With Medicare A & B	\$64	\$173	\$75
With Medicare B Only	\$127		\$224
25 years & over			
Without Medicare	\$253		\$224
With Medicare A & B	\$64	\$173	\$75
With Medicare B Only	\$64		\$75

<b>Years of Service</b>	<b>Aetna Choice POS II and Aetna Medicare<sup>SM</sup></b>	<b>Aetna Traditional Choice</b>	<b>AultCare PPO and PrimeTime</b>
<b>Service Retirement Date August 1, 1989 through July 1, 2008 Premiums</b>			
10-14.999 years			
Without Medicare	\$1,282		\$1,113
With Medicare A & B	\$198	\$821	\$265
With Medicare B Only	\$558		\$1,113
15-19.999 years			
Without Medicare	\$659		\$574
With Medicare A & B	\$117	\$428	\$150
With Medicare B Only	\$297		\$574
20-24.999 years			
Without Medicare	\$347		\$304
With Medicare A & B	\$76	\$232	\$93
With Medicare B Only	\$166		\$304
25 years & over			
Without Medicare	\$253		\$224
With Medicare A & B	\$64	\$173	\$75
With Medicare B Only	\$64		\$75



**2020 Contribution Rates  
(continued)**

<b>Years of Service</b>	<b>Aetna Choice POS II and Aetna Medicare<sup>SM</sup></b>	<b>Aetna Traditional Choice</b>	<b>AultCare PPO and PrimeTime</b>
<b>Service Retirement Date on or after August 1, 2008 Premiums*</b>			
10-19.999 years			
Without Medicare	\$1,282		\$1,113
With Medicare A & B	\$198	\$821	\$265
With Medicare B Only	\$558		\$1,113
20-24.999 years			
Without Medicare	\$659		\$574
With Medicare A & B	\$117	\$428	\$150
With Medicare B Only	\$297		\$574
25-29.999 years			
Without Medicare	\$409		\$358
With Medicare A & B	\$84	\$271	\$104
With Medicare B Only	\$84		\$104
30-34.999 years*			
Without Medicare	\$284		\$251
With Medicare A & B	\$68	\$192	\$81
With Medicare B Only	\$68		\$81

\* Further reductions for each year over 35.

<b>Years of Service</b>	<b>Aetna Choice POS II and Aetna Medicare<sup>SM</sup></b>	<b>Aetna Traditional Choice</b>	<b>AultCare PPO and PrimeTime</b>
<b>Disability Benefit Recipient Premiums</b>			
5-9.999 years			
Without Medicare	\$659		\$574
With Medicare A & B	\$117	\$428	\$150
With Medicare B Only	\$297		\$574
10-24.999 years			
Without Medicare	\$447		\$391
With Medicare A & B	\$89	\$294	\$111
With Medicare B Only	\$208		\$391
25 years & over			
Without Medicare	\$253		\$224
With Medicare A & B	\$64	\$173	\$75
With Medicare B Only	\$64		\$75



**2020 Contribution Rates  
(continued)**

<b>Years of Service</b>	Aetna Choice POS II and Aetna Medicare <sup>SM</sup>	Aetna Traditional Choice	AultCare PPO and PrimeTime
<b>Spouse Premiums (Service Retiree, Disability Recipient, or Member's Qualified Service)</b>			
Up to 25 years			
Without Medicare	\$1,032		\$896
With Medicare A & B	\$198	\$821	\$265
With Medicare B Only	\$558		\$896
25-29.999 years			
Without Medicare	\$932		\$810
With Medicare A & B	\$182	\$743	\$242
With Medicare B Only	\$182		\$242
30 years & over			
Without Medicare	\$833		\$724
With Medicare A & B	\$166	\$664	\$219
With Medicare B Only	\$166		\$219

<b>Years of Service</b>	Aetna Choice POS II and Aetna Medicare <sup>SM</sup>	Aetna Traditional Choice	AultCare PPO and PrimeTime
<b>Child Premiums</b>			
<b>Child w/o Medicare A</b>	\$253		\$168
<b>Child with Medicare A &amp; B</b>	\$149	\$585	\$196



## **SERS' Non-Medicare Plans**

Non-Medicare plans are available to benefit recipients and dependents under age 65 and not Medicare eligible.

### **Aetna Choice POS II**

This is a Preferred Provider Organization (PPO) plan with prescription drug coverage by Express Scripts. The plan is available throughout the United States.

To enroll in this plan, a member must:

- Be under age 65 and not eligible for Medicare

Use of out-of-network providers will increase out-of-pocket costs.

### **AultCare PPO**

This is a Preferred Provider Organization (PPO) plan with prescription drug coverage by AultCare.

To enroll in this plan, a member must:

- Be under age 65 and not eligible for Medicare.
- Live in one of the Ohio counties listed on the map in the 2020 Open Enrollment Guide.

Use of out-of-network providers will increase out-of-pocket costs.

### **2020 SERS Marketplace Wraparound Plan**

The SERS Marketplace Wraparound Plan is available to participants who are not eligible for Medicare and who are not enrolled in Medicaid. Participants are able to choose insurance from any insurer offering coverage in the federal Marketplace. If eligible, participants receive a federal subsidy to lower the premium and cost-sharing amounts. The SERS Market place Wraparound Plan offers additional benefits to help pay for deductibles, co-pays, and other costs.

SERS Health Care and Government Relations staff are working with federal officials to extend the Wraparound program for 5-10 years. If approval is not granted by January 1, 2020 SERS will offer an HRA option.



## **SERS' Medicare Plans**

### **Aetna Medicare Plan (PPO)**

This is a Medicare Advantage plan with Medicare Part D prescription drug coverage administered by Express Scripts.

**Ohio Residents:** Aetna has a preferred provider network. Use of out-of-network providers will increase out-of-pocket costs.

**Non-Ohio Residents:** Can use any medical provider that accepts Medicare patients and agrees to file claims with Aetna.

This plan is available throughout the United States. To enroll, members must have:

- Medicare Part B
- Medicare Part A, if eligible

### **Aetna Traditional Choice Plan**

This plan is NOT available for optional enrollment. It is only available in special circumstances. SERS determines when enrollment is appropriate. Medicare Part D prescription drug coverage is administered through Express Scripts.

### **PrimeTime Health Plan**

This is a Medicare Advantage plan with Medicare Part D prescription drug coverage by PrimeTime. Members must use PrimeTime providers or pay the full cost for services.

To enroll in this plan, members must:

- Have Medicare Part A and Part B.
- Live in one of the Ohio counties listed on the map in the 2020 Open Enrollment Guide.

### **AultCare PPO**

This plan is available to individuals who do not have Medicare Part A but have Medicare Part B only. Prescription drug coverage is administered by AultCare.

To enroll in this plan, members must:

- Have Medicare Part B only.
  - Live in one of the Ohio counties listed on the map in the 2020 Open Enrollment Guide.



## Prescription Drug Coverage

Prescription drug coverage is included in SERS health care coverage and does not require a separate premium. Express Scripts provides the prescription drug coverage for Aetna. PrimeTime and AultCare provide their own prescription coverage. All prescription plans have a formulary of covered medications. These are referred to as preferred medications. Medications not on the formulary are referred to as non-preferred. The amount members are responsible for paying, known as the co-pay, is based on the medication's preferred status. Members pay the least for generic medications. Members pay the most for brand-name medications that are not preferred. Members can get prescriptions at retail pharmacies or through the mail. Members save money by having prescriptions for maintenance medications mailed to their homes.

The following is a partial list of situations or types of medications that are not covered.

- Prescriptions or medications dispensed in a hospital. These are typically covered under the medical plan.
- Prescriptions covered by Workers' Compensation.
- Prescriptions for fertility, erectile dysfunction, or cosmetic drugs.
- Over-the-counter drugs and herbal preparations, including homeopathic preparations.

With the exception of insulin, Express Scripts does not cover non-preferred medications. Members pay the full amount for non-preferred medications, and these costs do not count toward any out-of-pocket maximum or the Medicare coverage gap.

All prescription plans include these common coverage rules:

- Prior Authorization - For some medications, the doctor must contact the drug plan before certain prescriptions can be filled. The prescription is only covered if the doctor is able to confirm that the medication is necessary.
- Quantity Limits - Limits how much of a specific medication members can get at a time.
- Step Therapy - A process where certain medications that have proven to be safe and effective are tried as the first choice rather than starting with a more expensive prescribed medication.

### Medicare Part D Prescription Drugs

SERS' health plan participants enrolled in a Medicare plan are automatically covered under a Medicare Part D prescription drug plan through SERS and should not enroll in a separate Medicare Part D plan. Enrolling in another Part D plan would cause cancellation of SERS coverage for both medical and prescription drug benefits per federal law.



### Non-Medicare Plan Benefits

	Aetna Choice POS II (In-Network)	AultCare PPO (In Network)
Annual Combined Medical & Prescription Drug Out-of-Pocket Maximum	\$7,350/person \$14,700/family	\$7,350/person \$14,700/family
Deductible	\$2,000/person \$4,000/family	\$2,000/person \$4,000/family
Primary Care Office Visit	\$20 co-pay	\$20 co-pay
Specialist Office Visit	\$40 co-pay	\$40 co-pay
Outpatient Diagnostic X-Ray and Lab	20% coinsurance	20% coinsurance
Retail Walk-In Clinic	\$20 co-pay	\$20 co-pay
Urgent Care	\$40 co-pay	\$40 co-pay
Emergency Room	\$150 co-pay	\$150 co-pay
Ambulance	20% coinsurance	20% coinsurance
Inpatient Hospital	20% coinsurance after \$250 co-pay	20% coinsurance after \$250 co-pay
Outpatient Surgery	20% coinsurance	20% coinsurance
Skilled Nursing Facility (100-day max)	20% coinsurance	20% coinsurance
Home Health Care	20% coinsurance	20% coinsurance
Hospice Health Care	100% coverage	Inpatient: 100% coverage Outpatient: 20% coinsurance
Outpatient Short-Term Rehab	20% coinsurance	20% coinsurance
Chiropractic	20% coinsurance	20% coinsurance
Durable Medical Equipment	20% coinsurance	20% coinsurance
Prescription Drugs	<b>Express Scripts</b> <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min,\$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) <u>Insulin Retail</u> 25% or \$25 max preferred brand, 25% or \$45 max non-preferred brand <u>Insulin Mail Order</u> 25% or \$60 preferred brand, 25% or \$115 max non-preferred brand <u>Specialty medications:</u> 25% of cost (\$25 min,\$100 max) <u>Specialty Mail order 90-day max:</u> 25% of cost (\$25 min,\$67 max per 30 day supply)	<b>AultCare</b> <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min, \$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) Non-preferred at 100% <u>Insulin Retail</u> \$30 preferred brand, \$45 non-preferred brand <u>Insulin Mail Order</u> \$60 preferred brand, \$115 non-preferred brand <u>Specialty medications:</u> \$100 co-pay <u>Specialty Mail order</u> \$100 co-pay; 30-day supply only



**Non-Medicare Plan Benefits  
(continued)**

<b>Benefit</b>	<b>Maximum Reimbursement</b>
Deductible up to \$1,800	Reimbursements are limited to \$1,800 per family, per calendar year in accordance with federal limits.*
Covered prescription drugs (50% of the Marketplace plan's prescription drug co-payment/coinsurance up to \$200 per prescription*)	
Physician office visit co-payment up to \$50 per visit*	
Inpatient hospital admission co-payment/coinsurance up to \$300 per admission*	
Imaging (X-rays, CT/PET Scans, MRI) co-payment or coinsurance up to \$100 per service*	
<p>*All benefit category costs in the aggregate are subject to the overall total Maximum Amount under this Plan. Such costs can be used in various combinations but shall not, in the aggregate, exceed the Maximum Amount. Reimbursement is limited to cost sharing after the Participant's Marketplace plan has adjudicated any claim(s). Actual reimbursement may vary according to the Participant's Marketplace plan's terms, but will in no event exceed the Participant's actual out-of-pocket expenses under the applicable Marketplace plan.</p>	
<p>The SERS Wraparound HRA eligible expenses noted above only apply to covered services under your Marketplace plan. Claims for non-covered services are not eligible for reimbursement.</p>	



### Medicare Plan Benefits

	Aetna Medicare <sup>SM</sup> Plan (PPO)	PrimeTime Health Plan
Annual Out-of-Pocket Maximum	\$3,000 per person	\$3,000 per person
Deductible	None	None
Primary Care Office Visit	\$20 co-pay	\$20 co-pay
Specialist Office Visit	\$30 co-pay	\$30 co-pay
Outpatient Diagnostic X-Ray	\$25 co-pay	100% coverage
Outpatient Diagnostic Lab	100% coverage	100% coverage
Urgent Care	\$40 co-pay	\$40 co-pay
Emergency Room	\$100 co-pay	\$100 co-pay
Ambulance	\$80 co-pay	\$80 co-pay
Inpatient Hospital	\$150 co-pay per day 1-5, then 100%	\$150 co-pay per day 1-5, then 100%
Outpatient Surgery /Procedures	15% coinsurance up to \$200 max	\$200 co-pay
Skilled Nursing Facility (100-day max)	Co-pay: \$0 per day 1-10, \$25 per day 11-20, \$50 per day 21-100	Co-pay: \$0 per day 1-15, \$20 per day 16-30, \$0 per day 31-100
Home Health Care	100% coverage	100% coverage
Hospice	Covered per Medicare	Covered per Medicare
Outpatient Short-Term Rehab	\$20 co-pay	\$5 co-pay (cardiac rehab at 100% coverage)
Chiropractic	\$20 co-pay limited to Medicare coverage	\$20 co-pay limited to Medicare coverage
Durable Medical Equipment	20% coinsurance	20% coinsurance
Prescription Drugs	<b>Express Scripts Medicare D PDP</b> <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min,\$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) <u>Insulin Retail</u> 25% or \$25 max preferred brand, 25% or \$45 max non-preferred brand <u>Insulin Mail Order</u> 25% or \$60 max preferred brand, 25% or \$115 max non-preferred brand <u>Specialty medications:</u> 25% of cost (\$25 min,\$100 max) <u>Specialty Mail order 90-day max:</u> 25% of cost (\$25 min,\$67 max per 30 day supply)	<b>PrimeTime</b> <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min, \$100 max), 50% non-preferred brand <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max), 50% non-preferred_ <u>brand</u> <u>Insulin Retail</u> \$30 preferred brand, \$45 non-preferred brand <u>Insulin Mail Order</u> \$60 preferred brand, \$115 non-preferred brand <u>Specialty medications:</u> \$100 co-pay <u>Specialty Mail order</u> \$100 co-pay; 30-day supply only



**SCHEDULE B**

**STATEMENT OF ACTUARIAL ASSUMPTIONS**

The decremental assumptions used in the valuation were adopted by the Board in April, 2016.

INTEREST RATE: 5.25% per annum, compounded annually (net after all System expenses).

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions:

Calendar Year	Non-Medicare	Medicare
2019	7.00%	5.25%
2020	6.75	5.13
2021	6.50	5.00
2022	6.25	4.75
2023	6.00	4.75
2024	5.75	4.75
2025	5.50	4.75
2026	5.25	4.75
2027	5.00	4.75
2028 and beyond	4.75	4.75

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims was assumed to be:

Participant Age	Annual Increase	
	Medical	Prescription Drug
Under 41	0.00%	0.00%
41 – 45	2.50	1.25
46 – 50	2.60	1.30
51 – 55	3.20	1.60
56 – 60	3.40	1.70
61 – 65	3.70	1.85
66 – 70	3.20	1.60
71 – 75	2.40	1.20
76 – 80	1.80	0.90
81 – 85	1.30	0.65
85 and over	0.00	0.00



ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of retiree participation and spouse coverage are as follows:

Retiree Gender	Spouse Coverage	Dependent Child Coverage
Male	50.0%	0.0%
Female	30.0	0.0

Wives are assumed to be three years younger than husbands.

Years of Service	Service Retiree Participation	Disabled Retiree Participation	Deferred Vested Retiree Participation	Death in Service Surviving Spouse Participation
1.5 – 5	N/A	N/A	N/A	100.0%
5 – 9	N/A	50.0%	N/A	100.0
10 – 14	25.0%	50.0	50.0%	100.0
15 – 19	45.0	70.0	50.0	100.0
20 – 24	70.0	75.0	50.0	100.0
25 – 29	75.0	75.0	50.0	100.0
30 – 34	80.0	80.0	50.0	100.0
35 and over	90.0	90.0	50.0	100.0

ANTICIPATED PLAN ELECTIONS: The assumed annual rates of member plan elections are as follows:

Plan Type	Future Retirees	
	Non-Medicare	Medicare
PPO	90.0%	94.0%
HMO	0.0	6.0
Wraparound Plan	10.0	N/A

Anticipated plan elections within the above plan types are further expanded below:

Plan Type	Future Retirees*	
	Non-Medicare	Medicare
<u>PPO</u>		
Aetna Choice POS II	95.8%	0.0%
Aetna Medicare <sup>SM</sup> Plan	0.0	100.0
AultCare PPO	4.2	0.0
<u>HMO</u>		
PrimeTime	N/A	100.0

\* Future disabled retirees assumed 85% Non-Medicare coverage and 15% Medicare coverage before age 65.



ANTICIPATED MEDICARE COVERAGE AT AGE 65: The assumed annual rates of future retirees obtaining Medicare coverage at age 65 are as follows:

Medicare Coverage	Percent Covered
No Medicare at age 65	1.0%
Medicare Part A	98.0%
Medicare Part B Only	1.0%

Current service retirees, disabled benefit recipients, spouses and dependent children under age 65 were assumed to have similar Medicare coverage at age 65 as their post-Medicare counterparts.

HEALTH CARE PREMIUM DISCOUNT PROGRAM PARTICIPATION: Current Medicare-eligible service retirees, disabled benefit recipients, spouses and dependent children reported as qualifying for the health care Premium Discount Program were assumed to continue participating in the program for their lifetime. The health care premium Discount Program is not available for non-Medicare participants.



MONTHLY EXPECTED MEDICAL/PRESCRIPTION DRUG CLAIMS COSTS (INCLUDES ADMINISTRATIVE EXPENSES): Following are charts detailing expected claims for the year following the valuation date. For the Medicare Advantage plans, the Health Insurance Provider Fee under the Affordable Care Act has been included since the moratoriums in 2017 and 2019 are temporary.

Retiree Costs			
Medicare Status	Aetna Choice POS II and Aetna Medicare <sup>SM</sup>	Aetna Traditional Choice	AultCare PPO and PrimeTime
Non-Medicare	\$1,358	N/A	\$1,078
Medicare A	\$167	\$944	\$230
Medicare B Only	\$546	N/A	\$1,078

Spouse Costs			
Medicare Status	Aetna Choice POS II and Aetna Medicare <sup>SM</sup>	Aetna Traditional Choice	AultCare PPO and PrimeTime
Non-Medicare	\$1,087	N/A	\$861
Medicare A	\$167	\$944	\$230
Medicare B Only	\$546	N/A	\$861

Children Costs			
Medicare Status	Aetna Choice POS II and Aetna Medicare <sup>SM</sup>	Aetna Traditional Choice	AultCare PPO and PrimeTime
Non-Medicare	\$339	N/A	\$190
Medicare A	\$167	\$944	\$230

The above amounts are shown as average costs and represent premiums paid to insurers.



ANNUAL EXPECTED MEDICAL/PRESCRIPTION DRUG COSTS (INCLUDES ADMINISTRATIVE EXPENSES) (continued): In the valuation, the premium costs are converted to age 65 amounts, age adjusted and blended based on actual elections for current retirees, current disabled retirees, current retiree spouses and current dependent children, and based on projected elections for future retirees and future spouses. For this valuation, we have assumed 10% participation in the SERS Marketplace Wraparound Plan for pre-Medicare retirees. Current authority allows the Wraparound plan to enroll through 2019 with continuation under discussion. Going forward, administrative and/or legislative action to allow continuation of this plan will be monitored. The age adjusted and blended amounts are as follows:

Annual Pre-65 Blended Costs Age Adjusted to 65							
Pre-65 Cost Type	Future Service Retirees	Future Disabled Retirees	Future Spouses	Current Service Retires	Current Disabled Retirees	Current Retiree Spouses	Current Dependent Children
Medical	\$13,368	\$11,420	\$10,800	\$13,536	\$8,537	\$6,720	\$4,992
Prescription Drug	2,604	2,435	2,136	2,604	2,074	1,848	1,116

Annual 65 & Older Blended Costs Age Adjusted to 65						
65 & Older Cost Type	Future Service Retirees	Future Disabled Retirees	Future Spouses	Current Service Retires	Current Disabled Retirees	Current Retiree Spouses
Medical	\$384	\$384	\$348	\$432	\$672	\$324
Prescription Drug	1,476	1,476	1,440	1,440	1,464	1,404



SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

Service	Annual Rates of Withdrawal
0	45.00%
1	31.00
2	23.00
3	17.00
4	13.00
5	10.50
10	4.00
15	2.00
20	2.00
25	1.50

Age	Annual Rates of			
	Death *		Disability	
	Male	Female	Male	Female
20	.022%	.013%	.020%	.010%
25	.053	.018	.038	.010
30	.059	.019	.068	.026
35	.063	.024	.122	.055
40	.068	.032	.212	.102
45	.081	.044	.311	.170
50	.126	.074	.411	.300
55	.218	.124	.530	.450
60	.361	.188	.590	.450
65	.607	.274	.550	.300
70	1.071	.415	.300	.200
74	1.570	.629	.300	.200

\* Pre-retirement mortality is based on the RP-2014 Blue Collar Mortality Table with fully generational projection and a five year age set-back for both males and females. The above rates represent the base rates used.



Annual Rates of								
Age	Retirement Eligible prior to 8/1/17				Retirement Eligible after 8/1/17			
	Reduced	Reduced (55/25)	First Eligible Unreduced	Subsequent Unreduced	Reduced	Reduced (60/25)	First Eligible Unreduced	Subsequent Unreduced
50			27%	19%				
55		10%	27	19				
60	11%	14	27	19		14%	30%	19%
65			25	19	11%	14	30	19
70			20	22			30	22
75			100	100			100	100

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

Annual Rates of			
Service	Merit & Seniority (A)	Base (Economy) (B)	Increase Next Year (1+(A))*(1+(B))
0	14.20%	3.50%	18.20%
1	5.55	3.50	9.25
2	3.14	3.50	6.75
3	2.17	3.50	5.75
4	1.45	3.50	5.00
5	1.20	3.50	4.75
6	0.97	3.50	4.50
7	0.72	3.50	4.25
8	0.48	3.50	4.00
9	0.24	3.50	3.75
10 & over	0.00	3.50	3.50

PAYROLL GROWTH: 3.50% per annum, compounded annually.

PRICE INFLATION: 3.00% per annum, compounded annually.

DEATH AFTER RETIREMENT: The RP-2014 Blue Collar Mortality Table with fully generational projection and Scale BB, 120% of male rates and 110% of female rates is used to evaluate allowances to be paid. The RP-2000 Disabled Mortality Table with 90% for male rates and 100% for female rates set back five years is used for the period



after disability retirement. These assumptions are used to measure the probabilities of each benefit payment being made after retirement.

VALUATION METHOD: Entry age normal cost method. Entry age is established on an individual basis.

ASSET VALUATION METHOD: Market value.



**SCHEDULE C**

**SCHEDULE OF DIFFERENCES BETWEEN EXPECTED AND ACTUAL EXPERIENCE**

Year	Difference Between Expected and Actual Experience	Recognition Period (Years)	Increase/(Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Differences Between Expected and Actual Experience					
			2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	Thereafter
2016-2017	\$0	3.76	\$0	\$0	\$0	\$0	\$0	\$0
2017-2018	\$53,656,583	6.41	\$8,370,762	\$8,370,762	\$8,370,762	\$8,370,762	\$8,370,762	\$3,432,011
2018-2019	(\$653,300,118)	6.48	(\$100,817,919)	(\$100,817,919)	(\$100,817,919)	(\$100,817,919)	(\$100,817,919)	(\$149,210,523)
			(\$92,447,157)	(\$92,447,157)	(\$92,447,157)	(\$92,447,157)	(\$92,447,157)	(\$145,778,512)



**DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES ARISING FROM DIFFERENCES  
BETWEEN EXPECTED AND ACTUAL EXPERIENCE**

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in OPEB Expense Through June 30, 2019 (c)	Deferred Outflows of Resources (a) – (c)	Deferred Inflows of Resources (b) – (c)
2016-2017	\$0	\$0	\$0	\$0	\$0
2017-2018	\$53,656,583	\$0	\$16,741,524	\$36,915,059	\$0
2018-2019	\$0	\$653,300,118	(\$100,817,919)	\$0	\$552,482,199
			(\$84,076,395)	\$36,915,059	\$552,482,199



**SCHEDULE OF DIFFERENCES BETWEEN PROJECTED AND ACTUAL EARNINGS ON PLAN INVESTMENTS**

Increase/(Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Differences Between Projected and Actual Earnings on Plan Investments								
Year	Difference Between Projected and Actual Earnings on Plan Investments	Recognition Period (Years)	Increase/(Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Differences Between Projected and Actual Earnings on Plan Investments					
			2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	Thereafter
2016-2017	(\$8,858,872)	5.0	(\$1,771,774)	(\$1,771,774)	(\$1,771,776)	\$0	\$0	\$0
2017-2018	\$1,441,281	5.0	\$288,256	\$288,256	\$288,256	\$288,257	\$0	\$0
2018-2019	\$10,894,024	5.0	\$2,178,805	\$2,178,805	\$2,178,805	\$2,178,805	\$2,178,804	\$0
			\$695,287	\$695,287	\$695,285	\$2,467,062	\$2,178,804	\$0



**DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES ARISING FROM DIFFERENCES BETWEEN EXPECTED AND ACTUAL INVESTMENT EARNINGS**

Year	Difference Between Projected and Actual Earnings on Plan Investments (a)	Amounts Recognized in OPEB Expense Through June 30, 2019 (b)	Amounts of Deferred Resources (Inflows)/Outflows (a) – (b)
2016-2017	(\$8,858,872)	(\$5,315,322)	(\$3,543,550)
2017-2018	\$1,441,281	\$576,512	\$864,769
2018-2019	\$10,894,024	\$2,178,805	\$8,715,219
		(\$2,560,005)	\$6,036,438



### SCHEDULE OF CHANGES OF ASSUMPTION

Increase/(Decrease) in OPEB Expense Arising from the Recognition of the Effects of Assumption Changes								
Year	Assumption Changes	Recognition Period (Years)	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	Thereafter
2016-2017	(\$346,945,601)	3.76	(\$92,272,766)	(\$70,127,303)	\$0	\$0	\$0	\$0
2017-2018	(\$102,900,217)	6.41	(\$16,053,076)	(\$16,053,076)	(\$16,053,076)	(\$16,053,076)	(\$16,053,076)	(\$6,581,761)
2018-2019	\$217,194,383	6.48	\$33,517,652	\$33,517,652	\$33,517,652	\$33,517,652	\$33,517,652	\$49,606,123
			(\$74,808,190)	(\$52,662,727)	\$17,464,576	\$17,464,576	\$17,464,576	\$43,024,362



**DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF  
RESOURCES ARISING FROM CHANGES OF ASSUMPTION**

Year	Increases Due to Changes in Assumptions (a)	Decreases Due to Changes in Assumptions (b)	Amounts Recognized in OPEB Expense Through June 30, 2019 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016-2017	\$0	(\$346,945,601)	(\$276,818,298)	\$0	(\$70,127,303)
2017-2018	\$0	(\$102,900,217)	(\$32,106,152)	\$0	(\$70,794,065)
2018-2019	\$217,194,383	\$0	\$33,517,652	\$183,676,731	\$0
			<u>(\$275,406,798)</u>	<u>\$183,676,731</u>	<u>(\$140,921,368)</u>



**SUMMARY OF RECOGNIZED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES**

	Net Increase/(Decrease) in OPEB Expense					
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	Thereafter
Differences between Expected and Actual Experience	(\$92,447,157)	(\$92,447,157)	(\$92,447,157)	(\$92,447,157)	(\$92,447,157)	(\$145,778,512)
Changes of Assumptions	(\$74,808,190)	(\$52,662,727)	\$17,464,576	\$17,464,576	\$17,464,576	\$43,024,362
Differences between Projected and Actual Earnings on Plan Investments	\$695,287	\$695,287	\$695,285	\$2,467,062	\$2,178,804	\$0
<b>Grand Total</b>	<b>(\$166,560,060)</b>	<b>(\$144,414,597)</b>	<b>(\$74,287,296)</b>	<b>(\$72,515,519)</b>	<b>(\$72,803,777)</b>	<b>(\$102,754,150)</b>