



**Actuarial Valuation of
Other Postemployment Benefits (OPEB)
Under GASB Statement Nos. 74 and 75
For Fiscal Year Ending December 31, 2018**

April 30, 2019

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RAMSEY COUNTY
Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

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Introduction and Certification**Purposes of the valuation**

This report includes OPEB financial reporting information determined under Governmental Accounting Standards Board Statement Nos. 74 and 75 (GASB 74/75) for Ramsey County (the County). GASB 74/75 standardizes OPEB disclosure requirements and requires plans and employers to provide additional details about their OPEB obligations. The information to be disclosed includes:

- Obligations and funded status of the plan,
- The annual GASB 75 accounting expense, and
- Other disclosure information.

The valuation, measurement and reporting dates are:

Valuation date (census)	December 31, 2016
Measurement date (assets and liabilities)	December 31, 2018
Reporting date (fiscal year end)	December 31, 2018

This report has been prepared solely for the County. The purpose of this valuation is to provide the County's GASB 74/75 accounting information. It is important to recognize that calculations performed for other purposes may yield significantly different results. Other considerations are summarized in the Important Notices and Accounting Requirements and Valuation Considerations sections of this report.

This report may not be used for any other purpose, and Van Iwaarden Associates is not responsible for the consequences of any unauthorized use. Its content may not be modified, incorporated into or used in other material, or otherwise provided, in whole or in part, to any other person or entity, without our permission.

The language of this report includes a number of technical terms which have special meanings. The glossary at the end of the report is provided to enhance understanding of these terms; many of them are defined there.

Introduction and Certification

Changes from the prior valuation

This is the County's first valuation under the new GASB 74/75 accounting rules. These new financial reporting requirements substantially adjust the measurement and reporting of OPEB liabilities. The new results are not directly comparable to the County's prior GASB 45 Net OPEB Obligation. The following chart outlines some of the most substantial reporting changes under GASB 74/75 accounting rules.

Old GASB 45 Rules	New GASB 74/75 Rules
<ul style="list-style-type: none"> ▪ The balance sheet liability is the Net OPEB Obligation: the cumulative difference between the Annual Required Contribution (ARC) and employer contributions. 	<ul style="list-style-type: none"> ▪ The entire unfunded accrued liability goes on the face of the financial statements.
<ul style="list-style-type: none"> ▪ The discount rate is based on the plan assets' expected investment return if the employer's funding policy is to consistently contribute at least the ARC. The assets do not have to be held in an irrevocable trust in order to use them for the discount rate development. 	<ul style="list-style-type: none"> ▪ The discount rate is based on a projection of how long current irrevocable trust assets and future contributions will cover current plan members' future benefit payments (cross-over calculation). ▪ Unfunded plans and those with revocable OPEB trusts must use a municipal bond index rate as their discount rate.
<ul style="list-style-type: none"> ▪ Actuarial reports are required every 2 to 3 years, depending on employer size. 	<ul style="list-style-type: none"> ▪ All employers require an actuarial report every 2 years. In the "off-year", a simplified report will also be needed in order to reflect assumption and asset changes.
<ul style="list-style-type: none"> ▪ The ARC is often used as a de-facto funding policy even though it is not intended to be one. 	<ul style="list-style-type: none"> ▪ Funding and accounting are officially separated. Employers who pre-fund their OPEB will need to develop their own funding policies and Actuarially Determined Contribution (ADC).

In addition to the changes above, GASB 74/75 introduced many other reporting requirements, including:

- Enhanced disclosures of historical contributions, funded status, and basis for assumptions
- Disclosure of the Net OPEB Liability's sensitivity to changes in medical trend and discount rate (+/- 1%)

Changes to the plan provisions and actuarial assumptions reflected in this valuation are described at the end of each of those sections in this report. The County has confirmed that there have been no significant changes in the plan provisions or census since the December 31, 2016 valuation. A detailed liability and asset reconciliation can be found on page 8.

Introduction and Certification (continued)**Actuarial certification**

To the best of our knowledge, this report is complete and accurate and all costs and liabilities under the plan were determined in accordance with generally accepted actuarial principles and practices. Upon receipt of the valuation report, the County should notify us if you disagree with any information contained in the report or if you are aware of any information that would affect the results that has not been communicated to us. The report will be deemed final and acceptable to the County unless you immediately notify us otherwise.

The actuarial assumptions and methods are the responsibility of the employer. We have reviewed the assumptions and believe that they are reasonable estimates of future plan experience, both individually and in the aggregate. The calculations reported herein are consistent with our understanding of the provisions of GASB Statement Nos. 74 and 75.

The undersigned credentialed actuaries are Members of the American Academy of Actuaries and meet the Qualification Standards of the Academy to render the actuarial opinion contained herein. We are available to answer questions on the material contained in the report or to provide explanations or further detail, as may be appropriate. We are not aware of any material direct or indirect financial interest or relationship that could create a conflict of interest or impair the objectivity of our work.



Brenda K. Hardy, ASA, EA, MAAA
Consulting Actuary



Mary P. Ratelle, FSA, MAAA
(Health claims and assumptions)

April 30, 2019

L/D/C/R: 4/ee/bh/sb

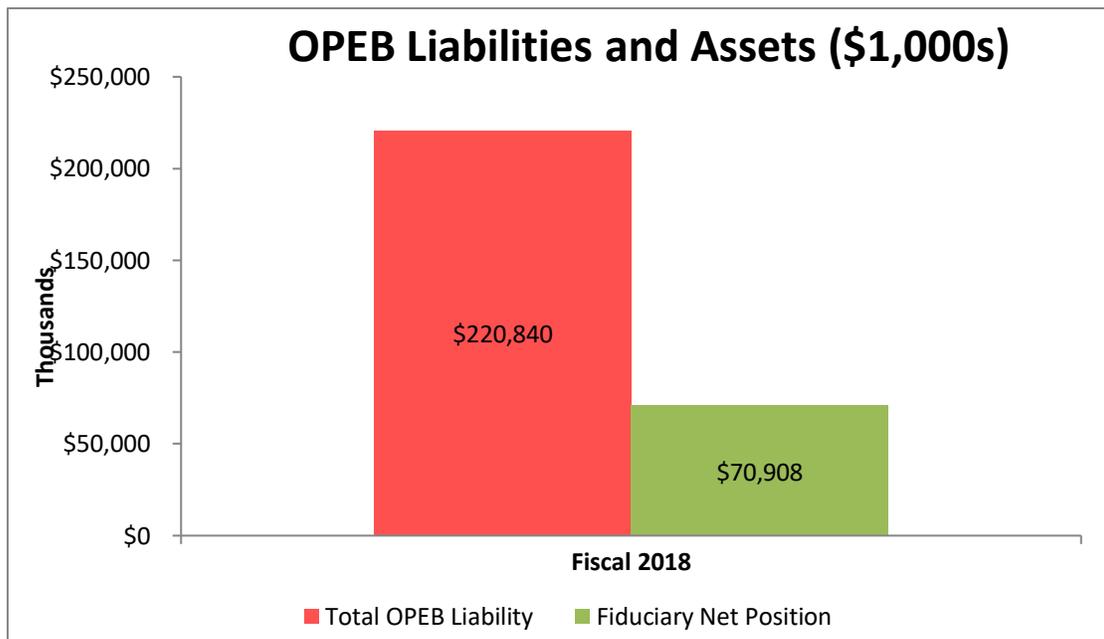
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RAMSEY COUNTY

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Summary of Results

	Valuation Date 12/31/2016
A. Participants eligible for OPEB	
1. Active employees electing coverage	3,154
2. Active employees waiving coverage	484
3. Retirees electing coverage	2,011
4. Total	<u>5,649</u>
	Fiscal Year Ending 12/31/2018
B. Funded Status	
1. Total OPEB Liability	\$ 220,840,122
2. Plan Fiduciary Net Position (assets)	70,908,236
3. Net OPEB Liability (1. - 2.)	<u>149,931,886</u>
4. Funded Percent (2./1.)	32.1%
5. Liability Discount Rate	6.50%
C. Accounting Expense (see page 14)	\$ (4,416,848)
D. Actuarially Determined Contribution (ADC)	N/A ¹



¹ The County does not currently calculate an ADC.

RAMSEY COUNTY

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Funding/Accounting History

Measurement Date	Market Value of Assets ¹	Total OPEB Liability (TOL) ²	Net OPEB Liability (NOL)	Funded Ratio	Net OPEB Obligation (GASB 45 Only)
12/31/2018	\$ 70,908,236	\$ 220,840,122	\$ 149,931,886	32.1%	\$ N/A
12/31/2016	63,261,910	243,582,068	180,320,158	26.0%	117,041,771
1/1/2015	56,234,156	235,503,520	179,269,364	23.9%	100,715,358
1/1/2013	43,284,989	220,835,832	177,550,843	19.6%	85,803,717
1/1/2011	32,993,236	307,634,820	274,641,584	10.7%	57,672,977
1/1/2009	28,497,297	272,698,609	244,201,312	10.5%	34,145,915
1/1/2007	-	315,651,119	315,651,119	0.0%	N/A

Historical Investment Returns

Year	Transfers In	Investment Earnings	Early Retiree Reinsurance Program ³	Total	Investment Rate of Return ⁴
2018	\$ 0	\$ (2,079,888)	\$ 0	\$ (2,079,888)	-2.84%
2017	0	9,726,214	0	9,726,214	15.38%
2016	0	4,890,079	0	4,890,079	8.39%
2015	1,500,000	637,675	0	2,137,675	1.16%
2014	2,500,000	4,236,704	0	6,736,704	10.29%
2013	3,705,838	2,506,625	0	6,212,463	7.06%
2012	6,314,755	35,399	0	6,350,154	1.12%
2011	3,027,326	14,534	899,739	3,941,599	0.96%
2010	2,348,428	38,545	548,331	2,935,304	3.28%
2009	1,520,918	39,717	0	1,560,635	5.22%
2008	3,948,904	342,487	0	4,291,391	17.35%
2007	23,290,254	915,652	0	24,205,906	7.86%
Total	\$ 48,156,423	\$ 21,303,743	\$ 1,448,070	\$ 70,908,236	

1 Prior to July 2018, the County OPEB trust was revocable and was not included in OPEB reporting. The County also has an internal service fund which held all OPEB assets prior to the establishment of the revocable trust in 2012. The cash held in this internal fund is not included in the asset balance.

2 Liabilities prior to FY2018 were measured under GASB 45 accounting requirements.

3 This is funding from the Federal government's Affordable Care Act's Early Retiree Reinsurance Program. The County credits this revenue to the Retiree Insurance Fund.

4 Investment rates of return after 2012 were provided by the County. Rates of return for 2007 - 2012 were estimated assuming mid-year contributions.

Statement of Fiduciary Net Position (Assets)

	Fiscal Year Ending 12/31/2018
Assets	
Cash and deposits	\$ -
Money market funds and interest-bearing cash	6,966,250
Total cash	6,966,250
Cash position of investments	-
Receivables	
Contributions	-
Investment income	-
Other	-
Total receivables	-
Investments	
Domestic equity	48,310,464
International equity	-
Fixed income	15,631,522
Real estate and alternatives	-
Total investments	63,941,986
Total assets	70,908,236
Short term liabilities	
Payables	
Investment management fees	-
Reimbursement to employer for benefit payments	-
Reimbursement to employer for administrative expenses	-
Total liabilities	-
Net position restricted for OPEB	\$ 70,908,236

Statement of Changes in Fiduciary Net Position

	Fiscal Year Ending 12/31/2018
Additions	
Contributions	
Employee	-
Employer	
Cash contributions to OPEB trust ¹	74,142,296
Benefits paid from employer assets ²	13,694,457
Total	<u>87,836,753</u>
Investment income	
Net appreciation in fair value of investments	(3,231,657)
Interest and dividends	-
Less investment expense	-
Net investment income	<u>(3,231,657)</u>
Other additions	-
Total additions	<u>84,605,096</u>
Deductions	
Benefit payments ²	
Direct subsidy	(11,754,947)
Implicit subsidy	(1,939,510)
Total	<u>(13,694,457)</u>
Administrative expense	(2,403)
Other deductions	-
Total deductions	<u>(13,696,860)</u>
Net increase in net position	70,908,236
Net position restricted for OPEB	
Beginning of year	-
End of year	\$ 70,908,236
Investment return for the measurement year	
a. Net investment income	\$ (3,231,657)
b. Beginning balance	-
c. Time-weighted cash flows	36,765,737
d. Investment return: a. / (b. + c.)	-8.79%

¹ Cash contributions are equal to the balance of the OPEB trust at the beginning of July 2018, the date the trust was converted from a revocable to an irrevocable trust.

² Although the OPEB plan is administered through a trust, the FY2018 OPEB payments were paid from the employer's general assets rather than from the trust assets. GASB 74 Q&A 4.52 specifies that this arrangement should be recognized as an offsetting contribution and benefit payment in the reconciliation of the plan's Fiduciary Net Position.

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Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Changes in Net OPEB Liability			
	Total OPEB Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) - (b)
Balance for fiscal year ending 12/31/2017	\$ 324,331,394	\$ -	\$ 324,331,394
Changes for the year:			
Service cost	6,324,679	-	6,324,679
Interest	10,718,073	-	10,718,073
Differences between expected and actual experience	-	-	-
Changes of assumptions	(106,839,567)	-	(106,839,567)
Changes of benefit terms	-	-	-
Employee contributions	-	-	-
Employer contributions ¹	-	87,836,753	(87,836,753)
Net investment income	-	(3,231,657)	3,231,657
Other additions	-	-	-
Benefit payments ¹	(13,694,457)	(13,694,457)	-
Administrative expense	-	(2,403)	2,403
Other deductions	-	-	-
Net changes	(103,491,272)	70,908,236	(174,399,508)
Balance for fiscal year ending 12/31/2018	\$ 220,840,122	\$ 70,908,236	\$ 149,931,886

¹ Benefit payments equal \$11,754,947 direct subsidy payments to retirees and \$1,939,510 implicit subsidy costs incurred during the measurement period ending 12/31/2018.

RAMSEY COUNTY

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) - (b)
1% decrease in Discount Rate (5.5%)	\$ 247,513,957	\$ 70,908,236	\$ 176,605,721
Current Discount Rate (6.5%)	220,840,122	70,908,236	149,931,886
1% increase in Discount Rate (7.5%)	198,586,579	70,908,236	127,678,343

Sensitivity of the Net OPEB Liability to Changes in the Trend Rates

	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) - (b)
1% decrease in Trend Rates	\$ 193,275,998	\$ 70,908,236	\$ 122,367,762
Current Trend Rates	220,840,122	70,908,236	149,931,886
1% increase in Trend Rates	254,370,518	70,908,236	183,462,282

Summary of Deferred Outflows and Deferred Inflows

	<u>Outflows</u>	<u>Inflows</u>
<u>Summary of Deferred Outflows/Inflows</u>		
A. Difference between expected and actual liability	\$ -	\$ -
B. Change of assumptions	-	86,643,051
C. Net difference between projected and actual investment earnings	4,497,144	-
D. Contributions between measurement date and reporting date	N/A	N/A
E. Total	<u>\$ 4,497,144</u>	<u>\$ 86,643,051</u>

See page 16 for amortization schedules and development of deferred outflows/inflows.

Amounts reported as deferred (inflows) outflows of resources related to OPEBs will be recognized in OPEB expense as follows:

<u>Year ended</u>	<u>Future recognition</u>
2019	(19,072,230)
2020	(19,072,230)
2021	(19,072,230)
2022	(19,072,230)
2023	(5,856,987)
Thereafter	-
	<u>\$ (82,145,907)</u>

Significant Assumptions Used to Measure the Total OPEB Liability

Discount rate	6.50%
Expected return on plan assets	6.50%
Inflation rate	2.50%
Mortality	
General employees	From the July 1, 2016 PERA of Minnesota General Employees Retirement Plan actuarial valuation, mortality rates were based on the RP-2014 mortality tables with projected mortality improvements based on scale MP-2015, and other adjustments.
Police & Fire and Correctional	From the July 1, 2016 PERA of Minnesota Public Employees' Police & Fire Plan and Local Government Correctional Service Employees' Plan actuarial valuations, mortality rates were based on the RP-2000 mortality tables with projected mortality improvements based on Scale AA, and other adjustments.
Health care cost trend rate	Actual premium increase rates for FY2017 and FY2018 and 6.40% for FY2020, gradually decreasing over several decades to an ultimate rate of 4.00% in FY2075 and later years. In addition, the medical trend rates above were increased to reflect the projected effect of the Affordable Care Act's Excise Tax on high-cost health insurance plans. The additional trend rate adjustments vary by year, but average 0.36% beginning calendar year 2022 for plans other than Medicare plans.

See pages 17 to 29 for more details on actuarial assumptions and methods.

Schedule of Changes in Net OPEB Liability and Related Ratios¹

	Fiscal Year Ending 12/31/2018
Total OPEB Liability	
Service cost	\$ 6,324,679
Interest	10,718,073
Differences between expected and actual experience	-
Changes of assumptions	(106,839,567)
Changes of benefit terms	-
Benefit payments	(13,694,457)
Net change in total OPEB liability	(103,491,272)
Total OPEB Liability - beginning of year	324,331,394
Total OPEB Liability - end of year	\$ 220,840,122
Plan Fiduciary Net Position (FNP, assets)	
Employee contributions	\$ -
Employer contributions	87,836,753
Net investment income	(3,231,657)
Other additions	-
Benefit payments	(13,694,457)
Administrative expense	(2,403)
Other deductions	-
Net change in plan fiduciary net position	70,908,236
Plan Fiduciary Net Position - beginning of year	-
Plan Fiduciary Net Position - end of year	\$ 70,908,236
Net OPEB Liability - end of year	\$ 149,931,886
FNP as a percentage of the Total OPEB Liability	32.1%
OPEB-eligible payroll for the measurement period	\$ 256,509,636
Net OPEB Liability as a % of eligible payroll	58.5%

¹ The employer must eventually disclose a 10-year history of the schedule of changes in Net OPEB Liability and related ratios.

Schedule of Contributions¹

	Fiscal Year Ending	
	12/31/2018	12/31/2017
Actuarially determined contribution (ADC) ²	N/A	N/A
Contributions in relation to the ADC	N/A	N/A
Contribution deficiency (excess)	N/A	N/A
OPEB-eligible payroll for reporting period (fiscal year)	N/A	N/A
Contributions as a percent of payroll	N/A	N/A

Schedule of Investment Returns¹

	Fiscal Year Ending	
	12/31/2018	12/31/2017
Annual money-weighted rate of return, net of investment expense	-8.79%	N/A

¹ The employer must eventually disclose a 10-year history of the contribution, investment return, and payroll schedules.

² Per GASB 75 paragraph 57c., these disclosures are only required if the employer calculates an Actuarially Determined Contribution (ADC). The County does not currently calculate an ADC.

Calculation of OPEB Expense

	Fiscal Year Ending 12/31/2018
A. Service cost	\$ 6,324,679
B. Interest cost	10,718,073
C. Current period benefit changes	-
D. Employee contributions	-
E. Projected earnings on OPEB plan investments	(2,389,773)
F. Administrative expenses paid from the trust	2,403
G. Other changes in fiduciary net position	-
H. Recognition of expected vs. actual experience	-
I. Recognition of assumption changes	(20,196,516)
J. Recognition of net difference between projected and actual investment earnings	1,124,286
K. Total OPEB expense (sum of A. through J.)	\$ (4,416,848)

Calculation of Interest Cost and Projected Plan Earnings for OPEB Expense	
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	Fiscal Year Ending 12/31/2018
<u>Interest cost calculation</u>	
A. Total OPEB Liability at beginning of measurement year	\$ 324,331,394
B. Service cost	6,324,679
C. Benefit payments	(13,694,457)
D. Discount rate at beginning of measurement year	3.31%
E. Interest cost ((A. + B. + 1/2 x C.) x D.)	\$ 10,718,073
<u>Projected plan earnings calculation</u>	
A. Fiduciary Net Position at beginning of measurement year	\$ -
B. Time-weighted cash flows	36,765,737
C. Expected return on assets at beginning of measurement year	6.50%
D. Projected plan earnings ((A. + B.) x C.)	\$ 2,389,773
<u>Investment (gain) or loss</u>	
A. Projected plan earnings	\$ 2,389,773
B. Actual plan investment earnings	(3,231,657)
C. Investment (gain) or loss (A. - B.)	\$ 5,621,430

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Schedule of Amortizations: Liability Experience (Gains) and Losses

Fiscal Year	Initial Deferred (Inflow)/Outflow	Initial Amortization Period	Unrecognized Amount	Remaining Amortization Period	Current Year Amortization
2018	\$ -	N/A	\$ -	N/A	\$ -
Subtotal liability experience amortizations			\$ -		\$ -

Schedule of Amortizations: Assumption Changes

Fiscal Year	Initial Deferred (Inflow)/Outflow	Initial Amortization Period	Unrecognized Amount	Remaining Amortization Period	Current Year Amortization
2018	\$ (106,839,567)	5.29	\$ (86,643,051)	4.29	\$ (20,196,516)
Subtotal assumption change amortizations			\$ (86,643,051)		\$ (20,196,516)

Schedule of Amortizations: Investment (Gains) and Losses

Fiscal Year	Initial Deferred (Inflow)/Outflow	Initial Amortization Period	Unrecognized Amount	Remaining Amortization Period	Current Year Amortization
2018	\$ 5,621,430	5.00	\$ 4,497,144	4.00	\$ 1,124,286
Subtotal investment experience amortizations			\$ 4,497,144		\$ 1,124,286

Summary of Actuarial Methods

A. Liability Measurement Method GASB 74 requires that "The total OPEB liability should be determined by (a) an actuarial valuation as of the OPEB plan's most recent fiscal year-end or (b) the use of update procedures to roll forward to the OPEB plan's most recent fiscal year-end amounts from an actuarial valuation as of a date no more than 24 months earlier than the OPEB plan's most recent fiscal year-end." Similarly, GASB 75 requires that "The total OPEB liability should be determined by (a) an actuarial valuation as of the measurement date or (b) the use of update procedures to roll forward to the measurement date amounts from an actuarial valuation as of a date no more than 30 months and 1 day earlier than the employer's most recent fiscal year-end."

Liabilities in this report were calculated as of the valuation date and rolled forward to the measurement date using standard actuarial roll-forward techniques per GASB 74/75 option (b) above.

Valuation date (census)	December 31, 2016
Measurement date (assets and liabilities)	December 31, 2018
Reporting date (fiscal year end)	December 31, 2018

B. Actuarial Cost Method Liabilities are based on the Entry Age Normal level percent of pay cost method. In this method, the actuarial Present Value of Benefits (PVB) for each individual is allocated as a level percent of pay from entry age (hire age, for most employees) to age at which retirement rates become 100%. The portion of the PVB allocated to the valuation year is called the Normal Cost (NC). The portion of the PVB allocated to past years is called the Actuarial Accrued Liability (AAL) or the Total OPEB Liability (TOL).

C. Amortization Method Investment Gains and Losses:
Straight-line amortization over a closed 5-year period.

Effects of Assumption Changes and Experience Gains and Losses:
Straight-line amortization over a closed period equal to the average of the expected remaining service lives of all members (i.e., active employees and terminated/retired members) that are provided with OPEB through the plan.

Summary of Actuarial Methods (continued)

- D. Funding Policy** The County has assets designated for OPEB. These assets are in a qualified irrevocable trust. The trust was originally established as a revocable trust was converted to an irrevocable trust on July 3, 2018. No additional trust contributions are expected to be made, and no benefits are currently being paid from the trust. As a result, the funding policy is considered to be the pay-as-you-go method under which contributions to the plan are generally made at the same time and in the same amount as retiree benefits and expenses become due.
- E. Data Methods** The census data used in this report is the same data used in the December 31, 2016 GASB 45 actuarial valuation report dated October 13, 2017.
- To the extent that census data was collected as of a date later than December 31, 2016, we have assumed that it is reasonably representative of the plan census on the valuation date and used it with only minor adjustments.
- F. Covered Payroll** Covered OPEB-eligible payroll information for the fiscal year ending December 31, 2018 was provided by the County.

Summary of Actuarial Assumptions

The benefits, actuarial assumptions and methods valued in this report are based on the same plan provisions, assumptions and methods described in the December 31, 2016 GASB 45 actuarial valuation report dated October 13, 2017, with the exception of the changes listed below.

A. Economic Assumptions

	Measurement Date	
	December 31, 2018	December 31, 2017
Discount Rate	6.50%	3.31%
Expected long-term rate of return on assets	6.50%	N/A
Index rate for 20-year, tax-exempt municipal bonds ¹ (Fidelity 20-Year Municipal GO AA Index) used in discount rate determination	3.71%	3.31%
General Inflation (CPI-U)	2.50%	2.50%
Payroll Growth Rate	3.50%	3.50%

Healthcare Trend Rates Annual increases in per capita claims costs and plan premiums are as follows:

Fiscal Year Ending	Medical Coverage	
	Not Medicare Eligible	Medicare Eligible
2017	Actual ²	Actual ²
2018	Actual ²	Actual ²
2019	6.40%	5.10%
2020	6.00%	5.10%
2021	5.60%	5.20%
2022-2047	5.20%	5.20%
2048-2074	Transition to ultimate rate	Transition to ultimate rate
2075+	4.00%	4.00%

- Medicare Part B premiums increased 1.12% from 2018 to 2019, and are assumed to increase 5.0% annually through fiscal year ending 2066 and 4.0% annually thereafter.
- In addition, the medical trend rates above were increased to reflect the projected effect of the Affordable Care Act's Excise Tax on high-cost health insurance plans. The additional trend rate adjustments vary by year, but average 0.36% beginning calendar year 2022 for plans other than Medicare plans.

¹ The municipal bond index rate was updated to reflect rates as of the December 31, 2018 and 2017 measurement dates.

² Actual premium increase rates from 2017 to 2018 averaged 5.00% for the non-Medicare plans and 4.51% for the Medicare plans. Actual premium increase rates from 2018 to 2019 averaged -5.00% for the non-Medicare plans and 8.41% for the Medicare plans.

Summary of Actuarial Assumptions (continued)

B. Medical Elections

Current Retirees

- Plan Election¹ Current retirees over age 65 were assumed to elect coverage based on the plan elections outlined below for future retirees when their current plan was discontinued, effective 1/1/2019.

Future Retirees

- Plan Election¹ The following table provides the assumed percent of future Medicare eligible retirees electing each plan:

Medicare Medical Plan	
HealthPartners Journey	45%
HealthPartners Retiree National Choice	40%
Blue Cross Medicare Advantage Classic	5%
Blue Cross Medicare Advantage Standard	10%

¹ Plan election rates only include medical plans available as of January 1, 2019. Any new plans added after this date are excluded from this valuation, but will be included in the next valuation.

Long-Term Expected Investment Return

GASB 74/75 require the development of an assumption regarding the long-term expected rate of return on plan assets. The process utilized for this actuarial valuation is described below.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimates of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These asset class estimates are combined to produce the portfolio long-term expected rate of return by weighting the expected future real rates of return by the current asset allocation percentage (or target allocation, if available) and by adding expected inflation (2.50%). All results are then rounded to the nearest quarter percentage point.

The best-estimates of expected future asset class returns were published in the 2018 Survey of Capital Market Assumptions produced by Horizon Actuarial Services. These expected returns, along with expected asset class standard deviations and correlation coefficients, are based on Horizon’s annual survey of investment advisory firms. The expected inflation assumption was developed based on an analysis of historical experience blended with forward-looking expectations available in market data.

Best-estimates of geometric real and nominal rates of return for each major asset class included in the OPEB plan’s asset allocation as of the measurement date are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation at Measurement Date</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Long-Term Expected Nominal Rate of Return¹</u>
Domestic equity	70.00%	4.95%	7.45%
International equity	0.00%	5.24%	7.74%
Fixed income	25.00%	1.99%	4.49%
Real estate and alternatives	0.00%	4.19%	6.69%
Cash and equivalents	5.00%	0.58%	3.08%
Total ²	100.00%		6.77%
Reduction for assumed investment expense ³			(0.17%)
Net assumed investment return (weighted avg, rounded to ¼%)			6.50%

¹ Nominal rates of return are equal to real rates of return plus the assumed inflation rate.

² Portfolio total expected return is weighted average of arithmetic asset class returns, with adjustment to reflect geometric averages. It is not equal to the weighted average of the asset class geometric returns shown above.

³ Assumed investment expenses include investment management fees.

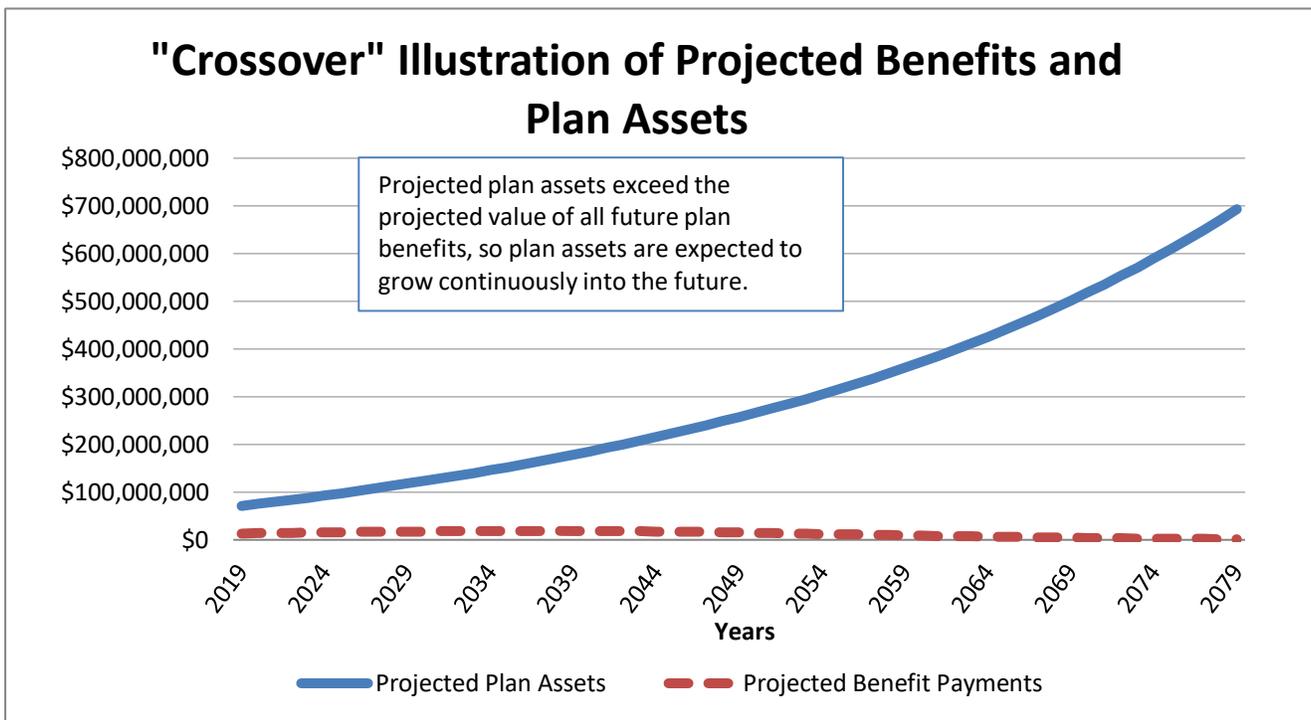
Discount Rate Development

GASB 74/75 require that the liability discount rate be the single rate that reflects the following:

- A. The long-term expected rate of return on OPEB plan investments that are expected to be used to finance the payment of benefits, to the extent that (1) the OPEB plan’s fiduciary net position is projected to be sufficient to make projected benefit payments and (2) OPEB plan assets are expected to be invested using a strategy to achieve that return; and
- B. A yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale), to the extent that the conditions in A. are not met.

GASB 75 has very specific rules regarding the the projection of benefit payments, contributions, and Fiduciary Net Position used to determine the discount rate. Regardless of an employer’s actual funding policy, we must assume that (1) benefits are paid out of the OPEB trust until assets are depleted, and (2) projected employer contributions are first applied to employee service costs in each period (including future employees) before paying for current accrued benefit costs.

Below is an illustration of the GASB 75 "crossover" discount rate projections for your plan. A detailed summary of the calculations is presented on the following pages.



- Projected plan assets include projected funding policy contributions, investment earnings, and benefit payments. They do not include anticipated future ad-hoc contributions.
- Projected benefit payments include only current members (i.e., no new lives) per GASB rules.

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Discount Rate Development: Projected Contributions for Current Participants

Year	OPEB-Eligible Projected Payroll			Projected Contributions		
	Payroll for Current Employees (a)	Payroll for Future Employees (b) = (c) - (a)	Total Payroll (c)	Total Employer Contributions ¹ (d)	Employer Contributions Related to Payroll of Future Employees (e) = (b) x 1.09% ²	Employer Contributions for Current Participants (f) = (d) - (e)
1	218,746,344	35,073,229	253,819,573	13,218,472	382,298	12,836,174
2	211,027,286	51,675,972	262,703,258	13,757,413	563,268	13,194,145
3	203,628,466	68,269,406	271,897,872	14,401,101	744,137	13,656,964
4	197,140,804	84,273,494	281,414,298	14,853,599	918,581	13,935,018
5	190,897,915	100,365,883	291,263,798	15,196,265	1,093,988	14,102,277
6	184,430,678	117,027,353	301,458,031	15,603,166	1,275,598	14,327,568
7	178,251,538	133,757,524	312,009,062	15,810,714	1,457,957	14,352,757
8	172,311,115	150,618,264	322,929,379	16,500,080	1,641,739	14,858,341
9	166,517,952	167,713,955	334,231,907	16,679,919	1,828,082	14,851,837
10	160,711,890	185,218,134	345,930,024	17,009,890	2,018,878	14,991,012
11	155,304,909	202,732,666	358,037,575	17,191,092	2,209,786	14,981,306
12	149,773,872	220,795,018	370,568,890	17,360,181	2,406,666	14,953,515
13	144,306,134	239,232,667	383,538,801	17,806,106	2,607,636	15,198,470
14	138,761,665	258,200,994	396,962,659	17,946,224	2,814,391	15,131,833
15	133,318,495	277,537,857	410,856,352	18,074,241	3,025,163	15,049,078
16	127,529,686	297,706,638	425,236,324	18,228,022	3,245,002	14,983,020
17	121,598,622	318,520,973	440,119,595	18,407,443	3,471,879	14,935,564
18	115,498,787	340,024,994	455,523,781	18,555,394	3,706,272	14,849,122
19	109,081,507	362,385,606	471,467,113	18,435,899	3,950,003	14,485,896
20	102,936,821	385,031,641	487,968,462	18,660,324	4,196,845	14,463,479
21	96,388,316	408,659,042	505,047,358	18,565,886	4,454,384	14,111,502
22	89,693,845	433,030,171	522,724,016	18,421,941	4,720,029	13,701,912
23	82,899,299	458,120,058	541,019,357	18,398,142	4,993,509	13,404,633
24	76,034,128	483,920,906	559,955,034	18,208,372	5,274,738	12,933,634
25	69,160,048	510,393,412	579,553,460	17,959,725	5,563,288	12,396,437
26	62,171,189	537,666,642	599,837,831	17,664,806	5,860,566	11,804,240
27	55,719,562	565,112,593	620,832,155	17,262,443	6,159,727	11,102,716
28	49,172,858	593,388,422	642,561,280	16,838,121	6,467,934	10,370,187
29	43,044,580	622,006,345	665,050,925	16,401,752	6,779,869	9,621,883
30	37,276,157	651,051,550	688,327,707	15,842,813	7,096,462	8,746,351
31	31,746,016	680,673,161	712,419,177	15,296,247	7,419,337	7,876,910
32	26,475,813	710,878,035	737,353,848	14,745,791	7,748,571	6,997,220
33	21,944,269	741,216,964	763,161,233	14,111,124	8,079,265	6,031,859
34	17,972,176	771,899,700	789,871,876	13,579,196	8,413,707	5,165,489
35	14,482,492	803,034,900	817,517,392	13,001,192	8,753,080	4,248,112
36	11,451,843	834,678,658	846,130,501	12,312,569	9,097,997	3,214,572
37	8,767,736	866,977,333	875,745,069	11,714,747	9,450,053	2,264,694
38	6,526,851	899,869,295	906,396,146	11,117,074	9,808,575	1,308,499
39	4,758,198	933,361,813	938,120,011	10,476,586	10,173,644	302,942
40	3,462,760	967,491,451	970,954,211	9,891,898	10,545,657	-
41	2,427,890	1,002,509,718	1,004,937,608	9,332,965	10,927,356	-
42	1,653,793	1,038,456,631	1,040,110,424	8,774,577	11,319,177	-
43	1,163,968	1,075,350,321	1,076,514,289	8,227,884	11,721,318	-
44	690,599	1,113,501,690	1,114,192,289	7,702,488	12,137,168	-
45	400,590	1,152,788,429	1,153,189,019	7,190,520	12,565,394	-
46	223,068	1,193,327,567	1,193,550,635	6,691,876	13,007,270	-
47	86,596	1,235,238,311	1,235,324,907	6,201,787	13,464,098	-

¹ Total employer contributions are equal to expected benefit payments.

² Service cost based on the OPEB trust's expected long-term rate of return.

RAMSEY COUNTY

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Discount Rate Development: Projected Contributions for Current Participants (continued)

Year	OPEB-Eligible Projected Payroll			Projected Contributions		
	Payroll for Current Employees (a)	Payroll for Future Employees (b) = (c) - (a)	Total Payroll (c)	Total Employer Contributions ¹ (d)	Employer Contributions Related to Payroll of Future Employees (e) = (b) x 1.09% ²	Employer Contributions for Current Participants (f) = (d) - (e)
48	14,269	1,278,547,010	1,278,561,279	5,728,193	13,936,162	-
49	12,516	1,323,298,408	1,323,310,924	5,271,990	14,423,953	-
50	10,652	1,369,616,154	1,369,626,806	4,829,095	14,928,816	-
51	-	1,417,563,744	1,417,563,744	4,401,035	15,451,445	-
52	-	1,467,178,475	1,467,178,475	3,989,277	15,992,245	-
53	-	1,518,529,722	1,518,529,722	3,598,652	16,551,974	-
54	-	1,571,678,262	1,571,678,262	3,226,265	17,131,293	-
55	-	1,626,687,001	1,626,687,001	2,873,248	17,730,888	-
56	-	1,683,621,046	1,683,621,046	2,542,913	18,351,469	-
57	-	1,742,547,783	1,742,547,783	2,233,217	18,993,771	-
58	-	1,803,536,955	1,803,536,955	1,945,142	19,658,553	-
59	-	1,866,660,748	1,866,660,748	1,680,937	20,346,602	-
60	-	1,931,993,874	1,931,993,874	1,440,284	21,058,733	-
61	-	1,999,613,660	1,999,613,660	1,222,920	21,795,789	-
62	-	2,069,600,138	2,069,600,138	1,028,386	22,558,642	-
63	-	2,142,036,143	2,142,036,143	855,941	23,348,194	-
64	-	2,217,007,408	2,217,007,408	704,634	24,165,381	-
65	-	2,294,602,667	2,294,602,667	573,403	25,011,169	-
66	-	2,374,913,760	2,374,913,760	461,029	25,886,560	-
67	-	2,458,035,742	2,458,035,742	366,053	26,792,590	-
68	-	2,544,066,993	2,544,066,993	286,860	27,730,330	-
69	-	2,633,109,338	2,633,109,338	221,790	28,700,892	-
70	-	2,725,268,165	2,725,268,165	169,160	29,705,423	-
71	-	2,820,652,551	2,820,652,551	127,241	30,745,113	-
72	-	2,919,375,390	2,919,375,390	94,371	31,821,192	-
73	-	3,021,553,529	3,021,553,529	69,051	32,934,933	-
74	-	3,127,307,903	3,127,307,903	49,870	34,087,656	-
75	-	3,236,763,680	3,236,763,680	35,564	35,280,724	-
76	-	3,350,050,409	3,350,050,409	25,069	36,515,549	-
77	-	3,467,302,173	3,467,302,173	17,493	37,793,594	-
78	-	3,588,657,749	3,588,657,749	12,101	39,116,369	-
79	-	3,714,260,770	3,714,260,770	8,299	40,485,442	-
80	-	3,844,259,897	3,844,259,897	5,645	41,902,433	-
81	-	3,978,808,993	3,978,808,993	3,816	43,369,018	-
82	-	4,118,067,308	4,118,067,308	2,555	44,886,934	-
83	-	4,262,199,664	4,262,199,664	1,689	46,457,976	-
84	-	4,411,376,652	4,411,376,652	1,103	48,084,006	-
85	-	4,565,774,835	4,565,774,835	707	49,766,946	-
86	-	4,725,576,954	4,725,576,954	442	51,508,789	-
87	-	4,890,972,147	4,890,972,147	272	53,311,596	-
88	-	5,062,156,172	5,062,156,172	167	55,177,502	-
89	-	5,239,331,638	5,239,331,638	100	57,108,715	-
90	-	5,422,708,245	5,422,708,245	59	59,107,520	-
91	-	5,612,503,034	5,612,503,034	35	61,176,283	-
92	-	5,808,940,640	5,808,940,640	20	63,317,453	-
93	-	6,012,253,562	6,012,253,562	12	65,533,564	-

¹ Total employer contributions are equal to expected benefit payments.

² Service cost based on the OPEB trust's expected long-term rate of return.

RAMSEY COUNTY

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Discount Rate Development: Projection of Fiduciary Net Position (FNP)

Year	Projected Beginning FNP (a)	Employer Contributions for Current Participants (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings @ 6.50% (e)	Projected Ending FNP (a)+(b)-(c)-(d)+(e)
1	70,908,236	12,836,174	13,218,472	2,272	4,596,537	75,120,203
2	75,120,203	13,194,145	13,757,413	2,078	4,864,439	79,419,296
3	79,419,296	13,656,964	14,401,101	2,066	5,138,002	83,811,095
4	83,811,095	13,935,018	14,853,599	2,055	5,417,800	88,308,259
5	88,308,259	14,102,277	15,196,265	2,045	5,704,416	92,916,642
6	92,916,642	14,327,568	15,603,166	2,035	5,998,059	97,637,068
7	97,637,068	14,352,757	15,810,714	2,025	6,298,960	102,476,046
8	102,476,046	14,858,341	16,500,080	2,015	6,607,521	107,439,813
9	107,439,813	14,851,837	16,679,919	2,003	6,924,111	112,533,839
10	112,533,839	14,991,012	17,009,890	1,989	7,249,022	117,761,994
11	117,761,994	14,981,306	17,191,092	1,974	7,582,648	123,132,882
12	123,132,882	14,953,515	17,360,181	1,956	7,925,356	128,649,616
13	128,649,616	15,198,470	17,806,106	1,937	8,277,414	134,317,457
14	134,317,457	15,131,833	17,946,224	1,915	8,639,106	140,140,257
15	140,140,257	15,049,078	18,074,241	1,889	9,010,738	146,123,943
16	146,123,943	14,983,020	18,228,022	1,861	9,392,533	152,269,613
17	152,269,613	14,935,564	18,407,443	1,829	9,784,630	158,580,535
18	158,580,535	14,849,122	18,555,394	1,794	10,187,223	165,059,692
19	165,059,692	14,485,896	18,435,899	1,756	10,600,448	171,708,381
20	171,708,381	14,463,479	18,660,324	1,716	11,024,591	178,534,411
21	178,534,411	14,111,502	18,565,886	1,671	11,459,916	185,538,272
22	185,538,272	13,701,912	18,421,941	1,623	11,906,534	192,723,154
23	192,723,154	13,404,633	18,398,142	1,572	12,364,665	200,092,738
24	200,092,738	12,933,634	18,208,372	1,517	12,834,550	207,651,033
25	207,651,033	12,396,437	17,959,725	1,458	13,316,463	215,402,750
26	215,402,750	11,804,240	17,664,806	1,397	13,810,666	223,351,453
27	223,351,453	11,102,716	17,262,443	1,335	14,317,610	231,508,001
28	231,508,001	10,370,187	16,838,121	1,271	14,837,771	239,876,567
29	239,876,567	9,621,883	16,401,752	1,206	15,371,592	248,467,084
30	248,467,084	8,746,351	15,842,813	1,139	15,919,688	257,289,171
31	257,289,171	7,876,910	15,296,247	1,072	16,482,633	266,351,395
32	266,351,395	6,997,220	14,745,791	1,005	17,060,980	275,662,799
33	275,662,799	6,031,859	14,111,124	940	17,655,474	285,238,068
34	285,238,068	5,165,489	13,579,196	878	18,266,999	295,090,482
35	295,090,482	4,248,112	13,001,192	817	18,896,379	305,232,964
36	305,232,964	3,214,572	12,312,569	759	19,544,434	315,678,642
37	315,678,642	2,264,694	11,714,747	703	20,211,963	326,439,849
38	326,439,849	1,308,499	11,117,074	650	20,899,790	337,530,414
39	337,530,414	302,942	10,476,586	599	21,608,815	348,964,986
40	348,964,986	-	9,891,898	553	22,339,972	361,412,507
41	360,758,748	-	9,332,965	508	23,094,163	374,519,438
42	372,925,047	-	8,774,577	467	23,872,239	388,022,242
43	385,477,642	-	8,227,884	428	24,675,090	401,924,420
44	398,430,986	-	7,702,488	391	25,503,543	416,231,650
45	411,796,970	-	7,190,520	357	26,358,416	430,964,509
46	425,589,635	-	6,691,876	325	27,240,579	446,138,013
47	439,822,619	-	6,201,787	295	28,150,877	461,771,414

Note: Projected contributions, benefit payments, and administrative expenses are assumed to occur mid-year.

RAMSEY COUNTY

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Discount Rate Development: Projection of Fiduciary Net Position (FNP) (continued)

Year	Projected Beginning FNP (a)	Employer Contributions for Current Participants (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings @ 6.50% (e)	Projected Ending FNP (a)+(b)-(c)-(d)+(e)
48	454,509,103	-	5,728,193	267	29,090,158	477,870,801
49	469,662,832	-	5,271,990	241	30,059,297	494,449,898
50	485,297,935	-	4,829,095	216	31,059,172	511,527,796
51	501,428,075	-	4,401,035	194	32,090,647	529,117,493
52	518,067,083	-	3,989,277	173	33,154,606	547,232,239
53	535,229,271	-	3,598,652	153	34,251,959	565,882,425
54	552,929,103	-	3,226,265	135	35,383,621	585,086,324
55	571,181,296	-	2,873,248	119	36,550,526	604,858,455
56	590,000,815	-	2,542,913	104	37,753,627	625,211,425
57	609,402,869	-	2,233,217	90	38,993,885	646,163,447
58	629,402,893	-	1,945,142	77	40,272,282	667,729,956
59	650,016,545	-	1,680,937	66	41,589,809	689,925,351
60	671,259,686	-	1,440,284	56	42,947,469	712,766,815
61	693,148,366	-	1,222,920	47	44,346,279	736,271,678
62	715,698,809	-	1,028,386	39	45,787,266	760,457,650
63	738,927,394	-	855,941	32	47,271,464	785,342,885
64	762,850,632	-	704,634	26	48,799,915	810,945,887
65	787,485,140	-	573,403	21	50,373,670	837,285,386
66	812,847,620	-	461,029	17	51,993,781	864,380,355
67	838,954,824	-	366,053	13	53,661,305	892,250,063
68	865,823,526	-	286,860	10	55,377,293	920,913,949
69	893,470,479	-	221,790	8	57,142,802	950,391,483
70	921,912,381	-	169,160	6	58,958,878	980,702,093
71	951,165,830	-	127,241	4	60,826,563	1,011,865,148
72	981,247,276	-	94,371	3	62,746,884	1,043,899,786
73	1,012,172,965	-	69,051	2	64,720,858	1,076,824,770
74	1,043,958,888	-	49,870	2	66,749,479	1,110,658,495
75	1,076,620,709	-	35,564	1	68,833,722	1,145,418,866
76	1,110,173,706	-	25,069	1	70,974,535	1,181,123,171
77	1,144,632,691	-	17,493	1	73,172,833	1,217,788,030
78	1,180,011,929	-	12,101	-	75,429,493	1,255,429,321
79	1,216,325,053	-	8,299	-	77,745,351	1,294,062,105
80	1,253,584,962	-	5,645	-	80,121,194	1,333,700,511
81	1,291,803,723	-	3,816	-	82,557,749	1,374,357,656
82	1,330,992,454	-	2,555	-	85,055,685	1,416,045,584
83	1,371,161,205	-	1,689	-	87,615,594	1,458,775,110
84	1,412,318,823	-	1,103	-	90,237,993	1,502,555,713
85	1,454,472,810	-	707	-	92,923,307	1,547,395,410
86	1,497,629,171	-	442	-	95,671,861	1,593,300,590
87	1,541,792,243	-	272	-	98,483,869	1,640,275,840
88	1,586,964,516	-	167	-	101,359,426	1,688,323,775
89	1,633,146,440	-	100	-	104,298,486	1,737,444,826
90	1,680,336,211	-	59	-	107,300,860	1,787,637,012
91	1,728,529,551	-	35	-	110,366,192	1,838,895,708
92	1,777,719,460	-	20	-	113,493,947	1,891,213,387
93	1,827,895,954	-	12	-	116,683,397	1,944,579,339

Note: Projected contributions, benefit payments, and administrative expenses are assumed to occur mid-year.

RAMSEY COUNTY

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Discount Rate Development: Present Value of Projected Benefit Payments

Year	Projected Beginning FNP	Total Projected Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments ¹	Present Value of "Unfunded" Benefit Payments ²	Present Value of Benefit Payments Using Single Discount Rate
1	70,908,236	13,218,472	13,218,472	-	12,808,741	-	12,808,741
2	75,120,203	13,757,413	13,757,413	-	12,517,349	-	12,517,349
3	79,419,296	14,401,101	14,401,101	-	12,303,302	-	12,303,302
4	83,811,095	14,853,599	14,853,599	-	11,915,385	-	11,915,385
5	88,308,259	15,196,265	15,196,265	-	11,446,260	-	11,446,260
6	92,916,642	15,603,166	15,603,166	-	11,035,446	-	11,035,446
7	97,637,068	15,810,714	15,810,714	-	10,499,752	-	10,499,752
8	102,476,046	16,500,080	16,500,080	-	10,288,783	-	10,288,783
9	107,439,813	16,679,919	16,679,919	-	9,766,125	-	9,766,125
10	112,533,839	17,009,890	17,009,890	-	9,351,477	-	9,351,477
11	117,761,994	17,191,092	17,191,092	-	8,874,269	-	8,874,269
12	123,132,882	17,360,181	17,360,181	-	8,414,605	-	8,414,605
13	128,649,616	17,806,106	17,806,106	-	8,103,989	-	8,103,989
14	134,317,457	17,946,224	17,946,224	-	7,669,259	-	7,669,259
15	140,140,257	18,074,241	18,074,241	-	7,252,550	-	7,252,550
16	146,123,943	18,228,022	18,228,022	-	6,867,847	-	6,867,847
17	152,269,613	18,407,443	18,407,443	-	6,512,158	-	6,512,158
18	158,580,535	18,555,394	18,555,394	-	6,163,850	-	6,163,850
19	165,059,692	18,435,899	18,435,899	-	5,750,380	-	5,750,380
20	171,708,381	18,660,324	18,660,324	-	5,465,147	-	5,465,147
21	178,534,411	18,565,886	18,565,886	-	5,105,623	-	5,105,623
22	185,538,272	18,421,941	18,421,941	-	4,756,843	-	4,756,843
23	192,723,154	18,398,142	18,398,142	-	4,460,749	-	4,460,749
24	200,092,738	18,208,372	18,208,372	-	4,145,294	-	4,145,294
25	207,651,033	17,959,725	17,959,725	-	3,839,143	-	3,839,143
26	215,402,750	17,664,806	17,664,806	-	3,545,634	-	3,545,634
27	223,351,453	17,262,443	17,262,443	-	3,253,401	-	3,253,401
28	231,508,001	16,838,121	16,838,121	-	2,979,747	-	2,979,747
29	239,876,567	16,401,752	16,401,752	-	2,725,376	-	2,725,376
30	248,467,084	15,842,813	15,842,813	-	2,471,832	-	2,471,832
31	257,289,171	15,296,247	15,296,247	-	2,240,897	-	2,240,897
32	266,351,395	14,745,791	14,745,791	-	2,028,409	-	2,028,409
33	275,662,799	14,111,124	14,111,124	-	1,822,634	-	1,822,634
34	285,238,068	13,579,196	13,579,196	-	1,646,881	-	1,646,881
35	295,090,482	13,001,192	13,001,192	-	1,480,545	-	1,480,545
36	305,232,964	12,312,569	12,312,569	-	1,316,551	-	1,316,551
37	315,678,642	11,714,747	11,714,747	-	1,176,176	-	1,176,176
38	326,439,849	11,117,074	11,117,074	-	1,048,046	-	1,048,046
39	337,530,414	10,476,586	10,476,586	-	927,385	-	927,385
40	348,964,986	9,891,898	9,891,898	-	822,186	-	822,186
41	360,758,748	9,332,965	9,332,965	-	728,384	-	728,384
42	372,925,047	8,774,577	8,774,577	-	643,010	-	643,010
43	385,477,642	8,227,884	8,227,884	-	566,148	-	566,148
44	398,430,986	7,702,488	7,702,488	-	497,649	-	497,649
45	411,796,970	7,190,520	7,190,520	-	436,217	-	436,217
46	425,589,635	6,691,876	6,691,876	-	381,189	-	381,189
47	439,822,619	6,201,787	6,201,787	-	331,711	-	331,711

1 Funded benefit payments discounted using the assumed 6.50% long-term investment return.

2 Unfunded benefit payments discounted using the assumed 3.71% municipal bond index rate.

RAMSEY COUNTY

Actuarial Valuation of Other Postemployment Benefits (OPEB) for Fiscal 2018

Discount Rate Development: Present Value of Projected Benefit Payments (continued)

Year	Projected Beginning FNP	Total Projected Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments ¹	Present Value of "Unfunded" Benefit Payments ²	Present Value of Benefit Payments Using Single Discount Rate
48	454,509,103	5,728,193	5,728,193	-	287,681	-	287,681
49	469,662,832	5,271,990	5,271,990	-	248,610	-	248,610
50	485,297,935	4,829,095	4,829,095	-	213,826	-	213,826
51	501,428,075	4,401,035	4,401,035	-	182,978	-	182,978
52	518,067,083	3,989,277	3,989,277	-	155,736	-	155,736
53	535,229,271	3,598,652	3,598,652	-	131,912	-	131,912
54	552,929,103	3,226,265	3,226,265	-	111,044	-	111,044
55	571,181,296	2,873,248	2,873,248	-	92,858	-	92,858
56	590,000,815	2,542,913	2,542,913	-	77,166	-	77,166
57	609,402,869	2,233,217	2,233,217	-	63,632	-	63,632
58	629,402,893	1,945,142	1,945,142	-	52,041	-	52,041
59	650,016,545	1,680,937	1,680,937	-	42,228	-	42,228
60	671,259,686	1,440,284	1,440,284	-	33,974	-	33,974
61	693,148,366	1,222,920	1,222,920	-	27,086	-	27,086
62	715,698,809	1,028,386	1,028,386	-	21,387	-	21,387
63	738,927,394	855,941	855,941	-	16,714	-	16,714
64	762,850,632	704,634	704,634	-	12,920	-	12,920
65	787,485,140	573,403	573,403	-	9,872	-	9,872
66	812,847,620	461,029	461,029	-	7,453	-	7,453
67	838,954,824	366,053	366,053	-	5,556	-	5,556
68	865,823,526	286,860	286,860	-	4,089	-	4,089
69	893,470,479	221,790	221,790	-	2,968	-	2,968
70	921,912,381	169,160	169,160	-	2,126	-	2,126
71	951,165,830	127,241	127,241	-	1,501	-	1,501
72	981,247,276	94,371	94,371	-	1,046	-	1,046
73	1,012,172,965	69,051	69,051	-	718	-	718
74	1,043,958,888	49,870	49,870	-	487	-	487
75	1,076,620,709	35,564	35,564	-	326	-	326
76	1,110,173,706	25,069	25,069	-	216	-	216
77	1,144,632,691	17,493	17,493	-	141	-	141
78	1,180,011,929	12,101	12,101	-	92	-	92
79	1,216,325,053	8,299	8,299	-	59	-	59
80	1,253,584,962	5,645	5,645	-	38	-	38
81	1,291,803,723	3,816	3,816	-	24	-	24
82	1,330,992,454	2,555	2,555	-	15	-	15
83	1,371,161,205	1,689	1,689	-	9	-	9
84	1,412,318,823	1,103	1,103	-	6	-	6
85	1,454,472,810	707	707	-	3	-	3
86	1,497,629,171	442	442	-	2	-	2
87	1,541,792,243	272	272	-	1	-	1
88	1,586,964,516	167	167	-	1	-	1
89	1,633,146,440	100	100	-	-	-	-
90	1,680,336,211	59	59	-	-	-	-
91	1,728,529,551	35	35	-	-	-	-
92	1,777,719,460	20	20	-	-	-	-
93	1,827,895,954	12	12	-	-	-	-
					\$ 240,192,876	\$ -	\$ 240,192,876

1 Funded benefit payments discounted using the assumed 6.50% long-term investment return.

2 Unfunded benefit payments discounted using the assumed 3.71% municipal bond index rate.

Selection of Economic Assumptions

The Actuarial Standards Board (ASB) provides coordinated guidance for measuring pension and retiree group benefit obligations through a series of Actuarial Standards of Practice (ASOPs). ASOP No. 27, Selection of Economic Assumptions for Measuring Pension Obligations, requires that the actuary disclose the rationale used in selecting each non-prescribed economic assumption and any changes to non-prescribed economic assumptions.¹

The table below summarizes the rationale for selecting the non-prescribed economic assumptions. The rationale for assumption changes, along with a description of the assumptions themselves, is included in the Actuarial Assumption and Methods section of the report.

Economic Assumptions (non-prescribed)	
Assumption	Rationale for Selecting Assumption
Discount rate	Per GASB guidance, the single rate that produces the same present value of expected benefit payments as (1) the expected long-term rate of return on plan assets during the period when projected assets are sufficient to pay future retiree benefits, and (2) the 20-year municipal bond rate after assets are projected to be exhausted. We use the Fidelity 20-Year Municipal GO AA Index because it meets the GASB requirements and is based on a large amount of municipal security data.
Expected return on assets	The expected employer asset return is based on expected long-term asset class returns and the County's target asset allocation.
Inflation rate	Based on analysis of historical CPI-U and 30-year TIPS data, the Federal Open Market Committee target inflation rate, and the 2018 Survey of Capital Market Assumptions produced by Horizon Actuarial Services.
Annual salary increases	Based on the most recently disclosed assumption for the pension plan in which the employee participates.
Annual payroll growth rate	Based on the most recently disclosed assumption for the pension plan in which the employee participates.

¹ ASOP No.6, Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions, specifies that actuaries should comply with ASOP 27 when selecting economic assumptions not covered by ASOP 6.

Important Notices

Purpose and Scope of the Valuation

This valuation has been prepared exclusively for the County and solely to provide GASB 74 and 75 accounting information. It is important to recognize that calculations performed for other purposes (such as benefit design, investment policy, or plan funding) may yield significantly different results.

A valuation report is only a snapshot of a plan's estimated financial condition at a single point in time. A plan's total cost will depend on many factors and variables that are uncertain and unknowable at the current valuation date.

Actuarial valuations are extremely complex and it's possible that data, computer coding, and mathematical errors could occur during the valuation process. Errors in a valuation discovered after its preparation may be corrected by revising the current valuation or in a subsequent year's valuation.

Assumptions and Methods

Since modeling all possible future outcomes is not possible or practical, the valuation is based on a single set of data, assumptions, methods, and plan provisions which satisfy current GASB 74 and 75 accounting requirements. We may also use estimates or simplifications to model future events in an efficient and cost-effective manner, so long as we believe that these simplifying techniques do not affect the reasonableness of the valuation results.

The County is responsible for the assumptions, methods, and funding policies used to prepare the valuation. The assumptions used in this report are among a wide range of possibilities (each of which may be considered reasonable), but have been chosen as a single "best estimate". If the County is interested in analyzing the effect of different assumption sets on the valuation results, then we suggest a sensitivity analysis to be performed at a later date.

To the extent that actual plan experience differs from the valuation assumptions, actuarial gains and losses will occur and be amortized over future periods. A summary of the actuarial assumptions and methods used in this valuation are summarized in the Actuarial Basis section of the report.

Accuracy of Substantive Plan Information and Census Data

For purposes of this valuation, we have assumed that the County has validated our summary of the substantive plan provisions and has provided us with any relevant information regarding interpretation of the plan provisions and changes to the plan terms since the prior valuation.

The County is solely responsible for the validity, accuracy and comprehensiveness of this information. If any data or plan provisions supplied are not accurate and complete, the valuation results may differ significantly. Moreover, different interpretations of the substantive plan may produce substantially different valuation results.

Accounting Requirements and Valuation Considerations

This section summarizes the applicable accounting requirements for the plan and describes important considerations and methods used to complete the valuation.

Accounting Information under GASB 74 and GASB 75

The Governmental Accounting Standards Board (GASB) issued Statements No. 74 (GASB 74 for funded OPEB plans) and 75 (GASB 75 for employers). The statements' objectives are to establish uniform standards of financial reporting by state and local governmental entities for postemployment benefit plans other than pension benefits (OPEB plans). This includes benefits such as postemployment medical, dental, vision and life insurance benefits.

For OPEB plans sponsored by governmental entities, these GASB Statements require certain standards and disclosures of plan and fund information including financial reporting of plan assets, liabilities of plan, changes in net assets, funded status and funding progress of the plan, and contributions to the plan in comparison to the accounting expense.

Valuing Postretirement Health Benefits

Determining the value of future healthcare benefits is challenged by the fact that assumptions must be made about many future events that are especially hard to predict. Future increases in healthcare costs are affected by many factors, including:

- OPEB inflation
- Utilization
- Technological advances
- Cost shifting between private and public healthcare plans
- Cost leveraging (i.e., erosion of fixed deductibles and out-of-pocket maximums)

OPEB obligations are also heavily influenced by demographic assumptions such as:

- Withdrawal rates (i.e., employees terminating before receiving benefits)
- Retirement rates (i.e., employees retiring at various ages and subsidy levels)
- Mortality rates (i.e., how long employees and spouses will receive benefits)
- Election rates (i.e., retirees electing to participate, electing which plan, and electing spouse coverage or not)

The Summary of Actuarial Assumptions and Methods section outlines the assumptions used in this valuation.

Accounting Requirements and Valuation Considerations (continued)**Estimating Healthcare Costs and Implicit Subsidy**

Estimating future healthcare costs involves calculating a starting claims plus administrative cost on a per-covered-individual basis, as well as developing an assumption regarding future increases in healthcare costs.

For insured plans, the premiums usually represent a blended average cost of both active and retired individuals. Since older, pre-65 retirees generally incur higher claims than younger active employees, GASB requires employers to value retiree liability based on retirees' estimated true costs rather than anticipated premium costs. Age-adjusted claims are developed and used to value the OPEB liability.

Impact of Legislative Changes

The legislative and regulatory environments have many implications for OPEB plans. Changes to current rules and implementation of new legislation are difficult to predict but could have a dramatic impact on the value of future plan benefits. These include changes to government medical programs, such as Medicare and the Affordable Care Act. Future changes to these programs will be reflected if/when they become law.

Glossary of Selected Terms

This section provides the definitions of applicable terminology in the actuarial valuation, with references to the Governmental Accounting Standards (GASB) Nos. 74 and 75.

Actuarial Cost Method - the method used to allocate OPEB liability costs between past, current, and future years.

Actuarial Present Value of Benefits - the amount of money needed today to cover the promised benefits for the current participant group, if all actuarial assumptions are exactly met.

Direct Subsidy - OPEB explicitly provided by employer.

Discount Rate - the interest rate used to adjust liabilities and obligations for the time value of money.

Fiduciary Net Position - The value of assets reported by the plan/employer.

GASB Statement No. 74 - the Governmental Accounting Standards Board Statement Number 74 Financial Reporting for OPEB Plans.

GASB Statement No. 75 - the Governmental Accounting Standards Board Statement Number 75 Accounting and Financial Reporting for OPEB Plans.

Implicit Subsidy or Implicit Rate Subsidy - the difference between the actual and apparent cost of OPEB coverage. The actual cost for early retirees is higher than the average per-person premium for the active/retiree group. Plans in which retirees pay the average active/retiree rate (the apparent cost) give rise to an implicit rate subsidy: the employer pays the difference between the actual and apparent cost.

Long-Term Expected Investment Return - the assumed long-term asset return expected to be earned by the OPEB investments.

Measurement Date - the date as of which the Total OPEB Liability and Fiduciary Net Position (assets) are measured.

Net OPEB Liability - the difference between the actuarial accrued liability (Total OPEB Liability) and OPEB assets (Fiduciary Net Position).

Net Position Restricted for OPEB - accounting terminology for OPEB plan assets.

Reporting Date - the plan's or employer's fiscal year end.

Service Cost - the portion of the actuarial present value which is allocated to the current year by the actuarial cost method.

Total OPEB Liability - the portion of the actuarial present value which is not attributable to future service costs, determined under the actuarial cost method.

Valuation Date - the date as of which liabilities are calculated. Liabilities may be "rolled forward" from the Valuation Date to the Measurement Date.