State of Utah Employee Other Post-Employment Benefit Plan

Post-Employment Medical Plan
GASB 74/75 Financial Accounting Disclosure
For the Fiscal Year Ending June 30, 2019

September 2019

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Actuarial Certification

The State of Utah retained Korn Ferry to perform an actuarial valuation in accordance with GASB Statements No. 74 (Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans) and No. 75 (Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions). The purpose of this valuation is to provide the State with certain actuarial values that are required for its financial statements disclosure. Use of the valuation results for other purposes may not be appropriate.

We have relied on census and benefit information provided by the State and/or its benefits administrator. We have not audited the information provided and its sources although we have reviewed it for reasonableness and, where necessary, requested corrections and clarifications. We are satisfied that the information provided by the State is sufficient for the purpose for which it has been used.

Assumptions used for the valuation were selected by the plan sponsor with our advice and concurrence, and we believe they are each reasonable based on its own merits and in combination represent the expected experience of the plan. All calculations have been conducted in accordance with generally accepted actuarial principles and practices.

Future actuarial measurements may differ significantly from current measurements due to such factors as plan experience differing from that anticipated by the assumptions, changes in future assumptions, and changes in plan provisions or applicable law. Because of the limited scope of our engagement, an analysis of the potential range of such future differences in measurement was not performed.

The actuaries certifying to this valuation are members of the Society of Actuaries and other professional actuarial organizations and meet the General Qualification Standards of the American Academy of Actuaries for purposes of issuing Statements of Actuarial Opinion, including Code of Professional Conduct Precept 7 regarding conflict of interest. Neither Korn Ferry nor any of its employees has any relationship with the Plan Sponsor that could impair or appear to impair the objectivity of this report.

Evi Laksana, ASA, MAAA

Audra Mardis, ASA, MAAA

September 11, 2019

Section 1: Executive Summary

The State of Utah ("the State") sponsors post-employment medical and life insurance coverage for eligible retirees and their dependents. Health care coverage may continue through the State plan ("plan") until retirees have exhausted their Program I unused accumulated sick leave and Program I unused accumulated converted sick leave. The plan covers eligible retirees who elect to participate and pay any required contributions. This report is for the actuarial valuation of the postemployment health benefit plan. The State implemented GASB 74/75 for the fiscal year ended June 30, 2017.

The calculations were based on an actuarial valuation as of December 31, 2018 using census data and recent health care cost information which was provided by the State.

GASB 74/75

In June 2015 the Governmental Accounting Standards Board (GASB) issued Statement Number 74 (Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans) and 75 (Accounting and Financial Reporting for Postemployment Benefits Other than Pensions) which replace GASB 43 and 45. The State is assumed to be a single employer without a special funding situation with a qualified trust for the purposes of reporting under GASB 74/75.

GASB 74 and 75 require the Total OPEB Liability (TOL) to be calculated based on the Entry Age Normal Level Percent of Pay (EAN) actuarial cost method. These benefits are currently pre-funded.

This valuation includes:

- all retirees who are currently receiving these benefits; and
- all active employees who will be eligible in the future to receive these benefits.

The State has provided a census of these employees and retirees. A summary of this data is presented in Section 7.

An actuarial valuation requires assumptions for the following parameters:

- A discount rate, at which future benefit cashflows are discounted, is set as (a) the long-term expected rate of return on OPEB Plan investments to the extent that the OPEB plan assets are projected to be sufficient to make projected benefit payments and expected to be invested using a strategy to achieve that return or (b) the 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) if the conditions in (a) are not met;
- Mortality rates relevant to the underlying group of employees and retirees;
- Withdrawal rates relevant to the underlying group of employees;
- Retirement rates relevant to the underlying group of employees;
- Current and future per capita claim costs for the benefits being valued;

- Health care cost trend assumptions;
- Salary scale relevant to the underlying group of employees; and
- Inflation assumptions relevant to the underlying population.

In determining the initial per capita claim cost, we have relied on Health Cost information provided by the State (or its benefits administrator on its behalf).

The assumptions used in this valuation conform to the requirements of GASB 74 and 75 and generally accepted actuarial principles. Details of the assumptions are presented in Section 6.

The calculations were performed using a Valuation Date (VD) of December 31, 2018 and the valuation will be rolled forward to June 30, 2019 Measurement Date (MD) for use in preparation of the State's full accrual financial statements.

The valuation results as of December 31, 2018 will be rolled-forward and used for June 30, 2020 financial statements provided there are no material changes to:

- any of the benefits packages;
- any of the cost-sharing structures; and
- the census.

The State's next full valuation should be as of December 31, 2020, for reporting in the State's full accrual financial statements as of June 30, 2021.

Excise Tax

The impact of the Excise Tax provisions contained in the Patient Protection and Affordable Care Act was excluded from this analysis due to the uncertainty of its implementation. Under the provision of the Excise Tax, the State is liable for 40% of the cost of coverage above the excise tax thresholds beginning on January 1, 2022, which could have an impact on the State's liabilities. Analysis of the excise tax impact on the State's health plans is outside of the scope of this engagement.

Below is the summary of key results. The meaning of the terms presented in the table below can be found in Appendix B.

Table 1 - Executive Summary

	FY 2018/19	FY 2017/18
Valuation Date (VD)	December 31, 2018	December 31, 2016
Prior Measurement Date	June 30, 2018	June 30, 2017
Measurement Date (MD)	June 30, 2019	June 30, 2018
Membership Data as of December 31, 2018		
Retirees or Beneficiaries Currently Receiving Benefits	3,229	3,119
Active Members	5,592	6,739
Total Membership	8,821	9,858
Discount Rate		
Municipal Bond Index Rate at Prior MD	3.87%	3.58%
Municipal Bond Index Rate at MD	3.51%	3.87%
Long-term Expected Asset Return	3.00%	3.75%
Year in which Fiduciary Net Position is Projected to be Depleted	N/A	N/A
Single Equivalent Interest Rate at Prior MD	3.75%	3.75%
Single Equivalent Interest Rate at MD	3.00%	3.75%
Net OPEB Liability as of Measurement Date		
Total OPEB Liability (TOL)	$ 340,401,563	$ 349,915,522
Fiduciary Net Position (FNP)	(271,852,560)	(251,464,350)
Net OPEB Liability (NOL = TOL – FNP)	$ 68,549,003	$ 98,451,172
FNP as a percentage of TOL	79.9%	71.9%
OPEB Expense	$ 7,164,068	$ 10,028,620
Deferred Outflows of Resources	$ 31,881,160	$ 9,267,544
Deferred Inflows of Resources	$ (36,322,036)	$ (3,152,259)

Section 2: Financial Accounting Information

In response to the GASB 74/75 requirements, this section provides the necessary accounting disclosures for the State's financial reports which are shown in the following exhibits:

- Table 2: Plan Demographics
- Table 3: Assumptions
- Table 4: OPEB Expense
- Table 5: Net OPEB Liability Sensitivity
- Table 6: Deferred Inflows and Outflows
- Table 7: Unamortized Balance of Deferred Inflows and Outflows
- Table 8: Schedule of Future Deferred Inflows and Outflows Amortization

Brief Summary of Membership and Assumptions

The table below displays the number of employees covered by the benefit terms. As of December 31, 2005, these OPEB plans are closed to new entrants.

Table 2 - Demographics

Retirees or Beneficiaries Currently Receiving Benefits	3,229
Active Employees	5,592
Total Membership	**8,821**

Significant assumptions and other inputs used to measure the Total OPEB Liability for the current fiscal year are summarized in the table below.

Table 3 - Assumptions

Inflation	2.4%
Salary Increases	2.5%
Discount Rate[1]	
Prior Measurement Date	3.75%
Measurement Date	3.00%
Long-term Expected Asset Return for Current Measurement Date	3.00%
Mortality Table	RP-2014 Healthy Employee / Annuitant Mortality Tables for males and females with generational projection using 75% of Scale-MP 2015
Health Care Cost Trends	5.40% for 2019 decreasing to an ultimate rate of 3.94% by 2075

[1] The discount rate was based on the expected asset return of the Trust which is expected to be able to pay for all future benefit payments (i.e. no depletion date).

OPEB Expense

GASB 75 states the OPEB expense also should be recognized in the current reporting period for costs incurred by the government related to the administration of OPEB. The measurement period for these costs should be the same as the measurement period applied to changes in the Total OPEB Liability.

The OPEB Expense consists of:

1. Service Costs for the year
2. Interest on the TOL using the single equivalent interest rate at the beginning of the period[2]
3. Change in the TOL due to benefit changes
4. The current year recognition of changes in the TOL due to Actual versus Expected experience
5. The current year recognition of changes in the TOL due to changes of assumptions or other inputs experience (including the change in discount rate)
6. Recognition of Deferred Inflows and Outflows of Resources from prior years.

The following table provides a breakdown of the OPEB Expense as of the current and prior fiscal year-ends:

Table 4 - OPEB Expense

Fiscal Year Ending	June 30, 2019	June 30, 2018
Service Cost	$ 5,189,329	$ 5,062,760
Interest on Total OPEB Liability and Service Cost	12,748,711	13,219,130
Current Period Benefit Changes	0	0
Projected Earnings on OPEB Plan Investments	(9,361,301)	(9,519,403)
Administrative Expenses Net of All Other Revenues	(356,298)	0
Current Period Recognition of Deferred Inflows and Outflows of Resources		
Difference Between Expected and Actual Experience in the Total OPEB Liability	(5,611,091)	0
Changes of Assumptions or Other Inputs	6,232,626	0
Net Difference Between Projected and Actual Earnings on OPEB Plan Investments	(1,677,908)	1,266,133
Other	0	0
OPEB Expense	**$ 7,164,068**	**$ 10,028,620**

[2] The single equivalent interest rates used were 3.75% and 3.00% for fiscal year ending 6/30/2018 and 6/30/2019 respectively.

Sensitivity Results

Measures of the Net OPEB Liability (NOL) calculated using each of the following rates, should be disclosed:

a. If applicable, a healthcare cost trend rate that is 1-percentage-point lower/higher than the assumed healthcare cost trend rate.

b. A discount rate that is 1-percentage-point lower/higher than that required by GASB 75 paragraph 36 or GASB 74 paragraph 35(b)(2).

Changes in the discount and health care cost trend rates affect the measurement of the Total OPEB Liability (TOL). Lower discount rates produce a higher TOL whereas lower trend rates produce a lower TOL. The converse is true for higher discount rates and trend rates. Because the discount rate and trend rates do not affect the measurement of assets, the percentage change in the NOL can be very significant for a relatively small change in either rates. The table below shows the sensitivity of the NOL to the discount rate and healthcare cost trend rates.

Table 5 - Net OPEB Liability Sensitivity

Healthcare Cost Trend	Discount Rate		
	1% Increase (4.00%)	Current (3.00%)	1% Decrease (2.00%)
1% Decrease (4.40% initial)		$ 45,066,682	
Current (5.40% initial)	$ 49,896,419	$ 68,549,003	$ 88,296,678
1% Increase (6.40% initial)		$ 94,572,950	

Deferred Inflows and Outflows

The following table provides a summary of the Deferred Outflows of Resources and Deferred Inflows of Resources as of June 30, 2019:

Table 6 - Deferred Inflows and Outflows

Differences Between Expected and Actual Experience					
FYE	Initial Balance	Initial Amortization Period (in years)	Annual Recognition	Recognized in OPEB Expense through June 30, 2019	Unamortized Balance as of June 30, 2019
6/30/2017	$ 0	4	$ 0	$ 0	$ 0
6/30/2018	$ 0	4	$ 0	$ 0	$ 0
6/30/2019	$ (28,055,457)	5	$ (5,611,091)	$ (5,611,091)	$ (22,444,366)

Changes in Assumptions					
FYE	Initial Balance	Initial Amortization Period (in years)	Annual Recognition	Recognized in OPEB Expense through June 30, 2019	Unamortized Balance as of June 30, 2019
6/30/2017	$ 0	4	$ 0	$ 0	$ 0
6/30/2018	$ 0	4	$ 0	$ 0	$ 0
6/30/2019	$ 31,163,128	5	$ 6,232,626	$ 6,232,626	$ 24,930,502

Net Difference Between Projected and Actual Earnings on OPEB Plan Investments					
FYE	Initial Balance	Initial Amortization Period (in years)	Annual Recognition	Recognized in OPEB Expense through June 30, 2019	Unamortized Balance as of June 30, 2019
6/30/2017	$ (5,253,765)	5	$ (1,050,753)	$ (3,152,259)	$ (2,101,506)
6/30/2018	$ 11,584,430	5	$ 2,316,886	$ 4,633,772	$ 6,950,658
6/30/2019	$ (14,720,205)	5	$ (2,944,041)	$ (2,944,041)	$ (11,776,164)

Deferred Inflows and Outflows of resources for (a) differences between expected and actual experience and (b) changes of assumptions or other inputs should be recognized in OPEB expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with OPEB through the OPEB plan (active employees and retirees) determined as of the beginning of the measurement period.

For the current fiscal year, the average expected remaining service life of active employees and retirees is 5.17 years and the Deferred Inflows and Outflows of resources for (a) differences between expected and actual experience and (b) changes of assumptions or other inputs as of June 30, 2019 are amortized over 5 years.

Deferred Inflows and Outflows of resources due to net difference between projected and actual earnings on OPEB Plan investments will be recognized in OPEB expense over a 5-year period.

Table 7 – Unamortized Balance of Deferred Inflows and Outflows

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences Between Expected and Actual Experience	$ 0	$ (22,444,366)
Changes of Assumptions or Other Inputs	24,930,502	0
Net Difference Between Projected and Actual Earnings on OPEB Plan Investments	$ 6,950,658	$ (13,877,670)
Total	**$ 31,881,160**	**$ (36,322,036)**

The following table presents the Deferred Inflows and Outflows by year of recognition for each of the next five years and all years after that.

Table 8 - Schedule of Future Deferred Inflows and Outflows Amortization

Measurement Period Ended June 30	Net Deferred Inflows / Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources
2020	$ (1,056,373)	$ (9,605,885)	$ 8,549,512
2021	$ (1,056,373)	$ (9,605,885)	$ 8,549,512
2022	$ (5,620)	$ (8,555,132)	$ 8,549,512
2023	$ (2,322,510)	$ (8,555,134)	$ 6,232,624
2024	$ 0	$ 0	$ 0
Thereafter	$ 0	$ 0	$ 0

Schedule of Changes in Total OPEB Liability and Fiduciary Net Position

	Fiscal Years Ending		
	2019	2018	2017
Total OPEB Liability (TOL)			
Service Cost	$ 5,189,329	$ 5,062,760	$ 4,938,525
Interest on TOL and Service Cost	12,748,711	13,219,130	13,660,531
Changes of benefit terms	0	0	0
Difference between expected and actual experience	(28,055,457)	0	0
Changes of assumptions or other inputs	31,163,128	0	0
Benefit payments	(30,559,670)	(31,338,972)	(30,157,811)
Net change in Total OPEB Liability	**$ (9,513,959)**	**$ (13,057,082)**	**$ (11,558,754)**
Total OPEB Liability – beginning	**$ 349,915,522**	**$ 362,972,604**	**$ 374,531,358**
Total OPEB Liability – ending	**$ 340,401,563**	**$ 349,915,522**	**$ 362,972,604**
Plan Fiduciary Net Position (FNP)			
Contributions – Employer	$ 26,510,076	$ 29,735,171	$ 33,361,013
Contributions – Member	0	0	0
Other additions	356,298	961,096	0
Net investment income	24,081,506	(2,065,027)	14,192,923
Benefit payments	(30,559,670)	(31,338,972)	(30,157,811)
Administrative expenses	0	0	0
Net change in Plan Fiduciary Net Position	**$ 20,388,210**	**$ (2,707,732)**	**$ 17,396,125**
Plan Fiduciary Net Position – beginning	**$ 251,464,350**	**$ 254,172,082**	**$ 236,775,957**
Plan Fiduciary Net Position – ending	**$ 271,852,560**	**$ 251,464,350**	**$ 254,172,082**
Net OPEB Liability (NOL) – ending	**$ 68,549,003**	**$ 98,451,172**	**$ 108,800,522**
Funded Ratio	79.9%	71.9%	70.0%
Covered payroll	$ 1,032,287,570	$ 994,839,412	$ 966,278,518
NOL as % of covered payroll	6.6%	9.9%	11.3%

Schedule of Employer Contributions

Actuarially Determined Contributions prior to FYE 2018 is based on the Annual Required Contribution shown in prior actuarial valuation reports.

	Fiscal Years Ending (Shown in Thousands)				
	2019	2018	2017	2016	2015
Actuarially Determined Contributions (ADC)	$ 25,928	$ 29,100	$ 29,100	$ 29,100	$ 30,342
Contributions in relation to the ADC	$ 26,510	$ 29,735	$ 33,361	$ 35,683	$ 30,342
Contribution deficiency / (excess)	$ (582)	$ (635)	$ (4,261)	$ (6,583)	$ 0

	Fiscal Years Ending (Shown in Thousands)				
	2014	2013	2012	2011	2010
Actuarially Determined Contributions (ADC)	$ 30,342	$ 37,594	$ 37,594	$ 43,819	$ 43,819
Contributions in relation to the ADC	$ 30,342	$ 38,070	$ 43,293	$ 43,819	$ 43,819
Contribution deficiency / (excess)	$ 0	$ (476)	$ (5,699)	$ 0	$ 0

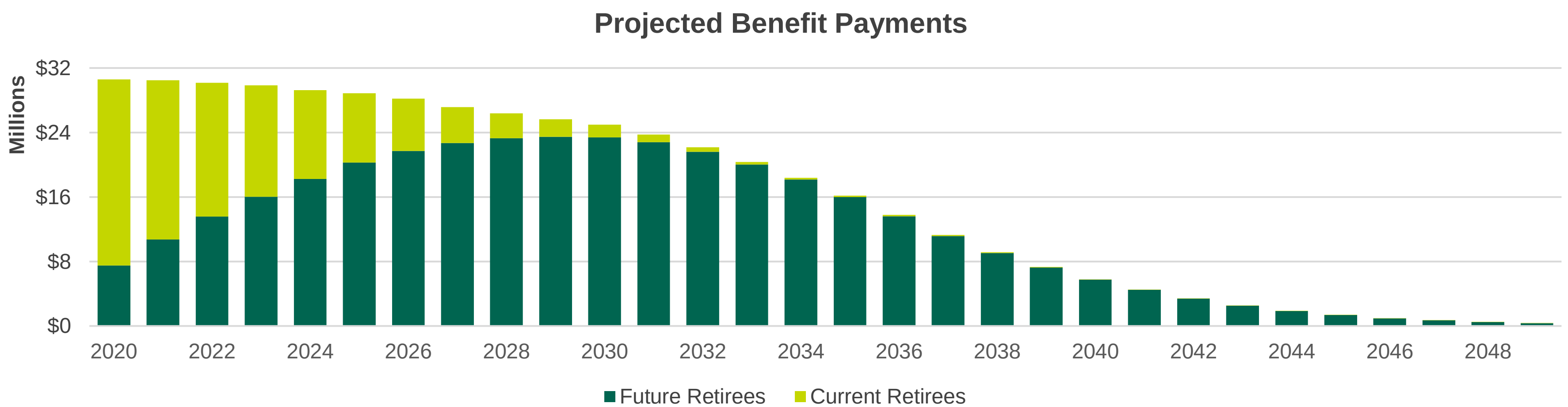
Section 3: Projected Benefit Payments

The following table is not a required financial accounting disclosure under GASB 74/75 but it's been provided for information purposes only. The table below shows the projected benefit payments for the next 30 years for future retirees (current active employees) and retirees. The costs include explicit subsidy (if any) and implicit subsidy and net of any retiree contributions.

FYE	Future Retirees	Current Retirees	Total
2020	$ 7,504,909	$ 23,074,060	$ 30,578,969
2021	$ 10,716,709	$ 19,770,275	$ 30,486,984
2022	$ 13,561,262	$ 16,609,213	$ 30,170,475
2023	$ 16,023,434	$ 13,835,069	$ 29,858,503
2024	$ 18,253,874	$ 10,983,755	$ 29,237,629
2025	$ 20,268,353	$ 8,609,581	$ 28,877,934
2026	$ 21,722,016	$ 6,462,210	$ 28,184,226
2027	$ 22,684,943	$ 4,456,902	$ 27,141,845
2028	$ 23,281,057	$ 3,112,111	$ 26,393,168
2029	$ 23,466,664	$ 2,181,922	$ 25,648,586

FYE	Future Retirees	Current Retirees	Total
2030	$ 23,412,723	$ 1,560,882	$ 24,973,605
2031	$ 22,788,583	$ 950,544	$ 23,739,127
2032	$ 21,619,898	$ 539,617	$ 22,159,515
2033	$ 20,010,231	$ 319,097	$ 20,329,328
2034	$ 18,164,477	$ 230,010	$ 18,394,487
2035	$ 15,997,841	$ 185,287	$ 16,183,128
2036	$ 13,621,494	$ 145,369	$ 13,766,863
2037	$ 11,161,424	$ 125,051	$ 11,286,475
2038	$ 9,038,217	$ 104,803	$ 9,143,020
2039	$ 7,266,919	$ 73,791	$ 7,340,710

FYE	Future Retirees	Current Retirees	Total
2040	$ 5,748,835	$ 45,036	$ 5,793,871
2041	$ 4,473,348	$ 42,930	$ 4,516,278
2042	$ 3,400,569	$ 35,004	$ 3,435,573
2043	$ 2,538,571	$ 33,216	$ 2,571,787
2044	$ 1,869,026	$ 25,964	$ 1,894,990
2045	$ 1,354,318	$ 24,568	$ 1,378,886
2046	$ 957,439	$ 23,258	$ 980,697
2047	$ 686,009	$ 22,032	$ 708,041
2048	$ 494,941	$ 20,889	$ 515,830
2049	$ 357,309	$ 19,839	$ 377,148



Section 4: Asset and Actuarially Determined Contribution

Asset Breakdown

As of	June 30, 2019	June 30, 2018
Asset		
Cash and cash equivalents	$ 219,699	$ 1,346,800
Receivables	1,050,231	1,162,134
Investments	270,642,987	256,624,774
Total assets	$ 271,912,917	$ 259,133,708
Liabilities		
Benefits payable	$ (60,357)	$ (7,669,358)
Total liabilities	$ (60,357)	$ (7,669,358)
Net assets available for benefits	$ 271,852,560	$ 251,464,350

Reconciliation of Net Assets

For Fiscal Year	2019		2018	
Additions				
Contributions				
Employer	$	26,510,076	$	29,735,171
Active members		0		0
Total contributions	$	26,510,076	$	29,735,171
Investment income				
Interest and dividend	$	4,417,416	$	7,001,960
Net increase/(decrease) in fair value of investments		19,664,090		(9,066,987)
Other increases/(transfers)		356,298		961,096
Total investment income	$	24,437,804	$	(1,103,931)
Investment expense				
Net investment income	$	24,437,804	$	(1,103,931)
Total additions	$	50,947,880	$	28,631,240
Deductions				
Benefit payments	$	(30,559,670)	$	(31,338,972)
Administrative expenses		0		0
Total deductions	$	(30,559,670)	$	(31,338,972)
Change in net position	$	20,388,210	$	(2,707,732)
Net position – beginning of year	$	251,464,350	$	254,172,082
Net position – end of year	$	271,852,560	$	251,464,350

Actuarially Determined Contribution

The Actuarially Determined Contribution is the recommended contribution that, if paid on an ongoing basis, is expected to provide sufficient resources to fund (a) future normal costs (the costs for new service) and (b) the amortized unfunded liabilities (if the plan is not fully funded) costs attributed to past service). There is no requirement to fund OPEB benefit under GASB 74/75 and it is the Plan Sponsor's responsibility to determine the OPEB contributions based on current budgetary resources and/or constraints.

	As of December 31, 2018
Discount Rate for Funding Purposes[3]	3.00%
Cost Method	Entry Age Normal Level % of Salary
Amortization Method	Level $ Closed Period
Salary Scale for Amortization Purposes	2.50%
Amortization Period (in years)	5
Actuarial Accrued Liability (AAL) – beginning of year	$ 348,080,862
Actuarial Value of Assets (AVA) – beginning of year	(251,553,799)
Unfunded AAL – beginning of year	$ 96,527,063
Normal Cost – beginning of year	$ 5,655,333
Amortization of unfunded AAL	20,463,229
Total Normal Cost and Amortization of Unfunded AAL	$ 26,118,562
Interest to the end of the year	783,557
Actuarially Determined Contribution	$ 26,902,119
Actual Benefit Payments	$ 30,559,670

[3] Based on the expected rate of return of the OPEB Trust.

Section 5: Summary of Plan Provisions

Summary

State employees hired prior to January 1, 2006 who retire from the state are eligible for post-employment medical and life insurance benefits. The following retirement eligibility criteria applies unless otherwise noted under the individual employee groups.

Eligibility Eligibility requirements to receive retirement benefits from Utah Retirement System are as follows:

	Tier I Public Safety / Firefighters	Tier I General	Judges
Reduced	N/A	• Age 62 with 10 YOS • Age 60 with 20 YOS • 25 YOS	Age 55 with 20 YOS
Unreduced	• Age 65 with 4 Years of Service (YOS) • Age 60 with 10 YOS • 20 YOS	Age 65 with 4 YOS	• Age 70 with 6 YOS • Age 62 with 10 YOS • 25 YOS

Spouse Benefits Employees may elect spousal coverage at retirement. Coverage continues to surviving spouses upon retiree's death.

Retiree Contributions Retirees are required to contribute the following amounts per month as determined by the State effective on July 1, 2018.

	First 18 months			After the first 18 months		
Summit / Advantage	**Single**	**Double**	**Family**	**Single**	**Double**	**Family**
Traditional	$ 46.22	$ 95.29	$ 127.22	$ 58.91	$ 121.45	$ 162.14
Star	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Preferred	**Single**	**Double**	**Family**	**Single**	**Double**	**Family**
Traditional	$ 228.82	$ 471.88	$ 629.89	$ 291.63	$ 601.42	$ 802.80
Star	$ 142.14	$ 294.44	$ 407.95	$ 181.16	$ 375.27	$ 519.93

Retiree Life Insurance Participants who are hired prior to January 1, 2006 are also eligible for life insurance benefits while receiving medical coverage up to age 65. Participants who retired prior to July 1, 1999 receive $18,000 in life insurance. Participants who retired/retire after July 1, 1999 receive $25,000 in life insurance.

State Employees

State employees entitled to receive retirement benefits and with Program I sick leave and Program I converted sick leave (remaining after 25% non-elective employer contribution into 401(k) account balances) are eligible to receive post-employment health and life insurance benefits.

- Employees may exchange 8 hours of remaining Program I unused accumulated sick leave and converted sick leave for one month of subsidized health insurance coverage for both employee and spouse up to age 65.
- Once the retiree turns 65:
    - 8 hours of leave may be exchanged for one month of subsidized health coverage for the spouse to age 65 or Medicare supplemental insurance for the retiree only.
    - 16 hours of leave may be exchanged for one month of subsidized health coverage for the retiree and the spouse (whether on a combined health insurance / Medicare supplemental or both receiving Medicare Supplemental).

Judges

Under State Rule 3-501, justices, judges, and court commissioners are eligible for the following benefits:

Earned benefits:

- Participants who use less than four sick leave days in a year can accumulate 8 months of medical, dental, and life insurance benefits at retirement. These benefits do not require retiree contributions.

Automatic benefits:

- Regardless of the preceding benefits, retired judges are eligible for 5 years of medical, dental, and life insurance benefits at retirement.

Earned benefits and automatic benefits are subject to a 7-year combined maximum payment period. A qualifying senior judge and spouse will pay 50% of the cost of medical and dental insurance premiums under this program.

Office of Education Plan

An employee of the Office of Education Plan may elect to retire either under the State plan or the Office of Education plan. Eligibility requirements for the Office of Education plan are as follows:

- At least five years of service with the Office of Education
- Eligible to participate in the State Retirement System
- Hired before July 1, 2012

Plan benefits include: 7.6% of annual salary (“stipend”) at retirement per year

Medical and life insurance benefits, subject to cost-sharing as under the State Employee Retiree Health Care Plan Benefits continue until the earlier of: (a) 5 years or (b) the employee becomes eligible for unreduced Social Security benefits.

Section 6: Actuarial Methods and Assumptions

This section explains the actuarial methodology used for valuation of the post-employment retiree health and life insurance benefits programs.

Actuarial Valuation Process

1. The actuarial cost method used in this report is the Entry Age Normal Level Percentage of Pay Cost Method (EAN). For employees who have not yet retired, the accrued benefit is defined to be the pro-rata portion of the benefit projected to be payable upon retirement. For each active employee, the valuation considers the future OPEB benefit and determines the annual cost based on a constant percentage of pay for each individual.
   - **a** The benefit projected to be payable at retirement is defined to be the per capita claim cost at that date and is subject to increases after that date. The initial per capita claim cost is the value in effect at the Valuation Date. This is developed from either claims or premium information, as appropriate. Subsequent values are determined by applying cost trend factors to the initial value.
   - **b** For retirees, the accrued benefit is 100% of the benefit currently being received, which is represented by the initial per capita claim cost. This benefit is subject to future increases.
   - **c** Assumptions for per capita claim costs and cost trend factors are discussed later in this section.
   - **d** Once each employee's accrued benefit is determined, the TOL is calculated in a sequential manner.
2. The Service Cost is determined for each employee, by considering the future OPEB benefit and determining the annual cost based on a constant percentage of pay for active member. There is no Service Cost for retirees because, by definition, there is no incremental benefit.
3. The Deferred Inflows and Outflows is the portion of the TOL that is required to be recognized in a given year. Under GASB 75 changes in the actuarial experience and assumption change impacts are recognized in the OPEB Expense over a closed period equal to the average of the expected remaining service lives of all employees that are provided with benefits through the OPEB plan (active employees and retirees), beginning in the current period.
4. The OPEB expense (OE) is the sum of interest to the Measurement Date on the TOL, the Service Cost, benefit payments, and recognition of increases/decreases in the TOL due to changes in benefit structure, difference between expected and actual experience, and assumption changes. The difference between expected and actual experience and assumption changes are spread over the average remaining service lives of the population for the purposes of the OPEB expense.
5. The item Employer Contribution consists of payments made by the State in a trust fund used to pay for post-employment benefits.

Actuarial Assumptions

In accordance with GASB 74/75, the selection of all actuarial assumptions, in valuations of post-employment health care plans including the health care cost trend rate, should be guided by Actuarial Standard of Practice No. 6, Measuring Retiree Group Benefit Obligations, as revised from time to time by the Actuarial Standards Board. Accordingly, actuarial assumptions should be based on the actual experience of the covered group, to the extent that credible experience data are available, but should emphasize expected long-term future trends rather than give undue weight to recent past experience. The reasonableness of each actuarial assumption should be considered independently based on its own merits, its consistency with each other assumption, and the combined impact of all assumptions.

The assumptions used in this valuation are similar to what was used in past OPEB valuations.

The actuarial assumptions used to value the post-employment medical liabilities can be categorized into three groups:

1. Economic assumptions
2. Medical assumptions
3. Demographic assumptions

Changes since Prior Valuation

The following assumptions have been updated since the prior valuation:

1. The Per Capita Claims Costs (PCCC) aging factors were updated for pre-Medicare and post-Medicare retirees. This change caused a decrease in the liability.
    a. The pre-Medicare PCCC now vary by age instead of 5-year age bands used in the prior valuation.
    b. The post-Medicare PCCC varied by 5-year age bands in the prior valuation, but they are now based on the annualized premium rates provided for Medicare Supplement 100 and Enhanced Rx.
2. Termination and retirement rates have been updated to be based on the assumptions used in the Utah Retirement Systems (URS) Actuarial Valuation as of January 1, 2017. These assumptions were based on the URS actuarial experience study for the five-year period ending December 31, 2016. The net impact of this change is a decrease in liability.
3. Health care trend rate assumption was updated to reflect the 2019 SOA Long-Run Medical Cost Trend model, which caused a decrease in liability.
4. Discount rate used for accounting disclosure and funding valuation has been reduced from 3.75% to 3.00% based on lower expected inflation in the future. This change caused an increase in liability.

Economic Assumptions

The three economic assumptions used in the valuation are discount rate, health care cost trend rates, and payroll growth. The economic assumptions are used to account for changes in the cost of benefits over time and to discount future benefit payments for the time value of money.

Discussion of Discount Rate

Under GASB 74/75, the discount rate is set as (a) the long-term expected rate of return on OPEB Plan investments to the extent that the OPEB plan assets are projected to be sufficient to make projected benefit payments and expected to be invested using a strategy to achieve that return or (b) the 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) if the conditions in (a) are not met.

1. The expected rate of return of the OPEB Trust is 3.00% as of June 30, 2019, which was determined using a building-block method in which expected future real rates of return (expected returns before inflation, net of OPEB Plan investment expense) are developed for each major asset class. The long-term expected rate of return is calculated by weighting the expected rate of return by the target allocation percentage and then summing the products to get a subtotal and adding inflation to the subtotal. The expected inflation is 2.00%. The State's expected future real rates of return by asset class is as shown below. The assumed long-term rate of return of the OPEB Trust used in the valuation is 3.00% as of June 30, 2019.

Asset Class	Target Allocation %	Real Rates of Return[4]
Debt Securities	90%	0.90%
Real Estate	10%	2.00%

2. The municipal bond index as of the prior and current measurement dates are as shown below:

Bond Index	June 30, 2018	June 30, 2019
Bond Buyer 20-Bond GO Index	3.87%	3.51%

3. The final equivalent single discount rate used for accounting disclosure is 3.75% as of June 30, 2018 and 3.00% as of June 30, 2019 with the expectation that the State will continue to contribute at least the Actuarially Determined Contribution. Under this funding scenario, the OPEB Trust is expected to be sufficient to pay for all future benefit payments (i.e. no depletion date).

   The discount rate used to calculate the Actuarially Determined Contribution for recommended funding contribution is 3.00%.

[4] The expected real rates of return and inflation rate are based on the information provided by the State Treasurer's Office.

Health Care Cost Trend Rates

Medical costs have historically increased more rapidly than the rate of inflation. In estimating future retiree benefits, future increases in medical costs must be taken into consideration. The medical trend assumptions used in the valuation were developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model (Version 2019_b). The SOA model was first released in December 2007. The SOA Long-Run Medical Cost Trend Model and its baseline projection are based on an econometric analysis of historical U.S. medical expenditures and the judgments of experts in the field. The long-run baseline projection and input variables were developed under the guidance of the SOA Project Oversight Group.

The following assumptions were used as input variables into this model:

Rate of Inflation	2.4%
Rate of Growth in Real Income/ GDP per capita	1.5%
Excess Medical Cost Growth	1.2%
Health Share of GDP Resistance Point	20.5%
Year for Limiting Cost Growth to GDP Growth	2075

Table 9 shows the medical cost trends used in the valuation and are an output of the SOA Long-Run Medical Cost Trend Model.

Table 9 - Health Care Cost Trend Rate Assumption

Year	Annual Trend
2019	5.40%
2020	5.40%
2025	5.19%
2030	5.18%
2035	5.18%
2040	5.18%
2050	4.91%
2060	4.72%
2070	4.27%
2075 & Ultimate	3.94%

Payroll Growth

Payroll growth assumption used in this valuation is based on salary increases at 2.50% compounded annually, including inflation.

Medical Assumptions

The valuation projects the healthcare costs for employees who remain insured by the State with coverage during retirement. Under GASB 74/75 and ASOP 6, the initial per capita claim cost should be based on the recent claims experience of the State and must be age-banded, unless the State has premium equivalent rates or fully-insured rates that are determined using retirees only claims experience.

Depending on the credibility of the experience data provided by the State, industry-wide information may be incorporated into the analysis. The cost of covering retirees is on average significantly higher than the cost of covering active employees. By charging retirees a blended premium that is less than their true cost of coverage would dictate, the State is providing an additional subsidy for these retirees (implicit subsidy). Under the rules set out in GASB 74/75, both the direct contribution and the implicit subsidy must be considered in measuring the State's postemployment medical benefit obligation.

Following actuarial standards, specifically ASOP 6, leads us to develop age-specific health care cost estimates using retirees only claims and enrollment experience for the 36-month period ending June 30, 2018 prior to age 65. The PCCC on/after age 65 is based on the annualized premium rates effective on January 1, 2019.The table below shows annual per capita medical plan costs at representative ages for 2018/19 period. These costs are assumed to increase with health care trend rates in the future.

Table 10 - Initial Per Capita Claim Costs

Pre-Medicare		
Age	Advantage/ Summit	Preferred
50	$ 5,852	$ 9,363
55	$ 6,883	$ 11,013
60	$ 8,214	$ 13,143
64	$ 9,684	$ 15,494

Medicare	
Age	Plan 100 + Enhanced Rx
65	$ 3,402
70	$ 3,633
80	$ 4,097
90	$ 4,329

Demographic Assumptions

The demographic assumptions use for valuing the liabilities of the retiree medical plan are those used in the URS Actuarial Valuation as of January 1, 2017 except for the mortality table that is set to the Society of Actuaries (SOA) RP-2014 Healthy Employee / Annuitant Mortality Tables with generational projection using 75% of Scale MP-2015.

The demographic assumptions include the rates of mortality, withdrawal, retirement, and disability. Ancillary demographic assumptions include the participation rates, spousal coverage election rate, and plan participation. The complete set of demographic assumptions is included in Appendix A.

Section 7: Participant Data

The following table shows the current participants as of December 31, 2018. The participant data is provided by the State as of December 31, 2018. The data has been reviewed for reasonableness and no material modification was made to the information provided.

Table 11 - Current Retired and Active Population

Retirees			
Age Group	Females	Males	Total
<55	220	166	386
55 – 59	198	238	436
60 – 64	334	477	811
65 – 69	325	632	957
70 – 74	193	276	469
75 – 79	45	96	141
80 – 84	9	12	21
85 – 89	2	4	6
90+	1	1	2
Total	**1,327**	**1,902**	**3,229**

Active Employees			
Age Group	Females	Males	Total
<30			0
30 – 34	6	38	44
35 – 39	106	189	295
40 – 44	258	450	708
45 – 49	372	582	954
50 – 54	401	589	990
55 – 59	550	611	1,161
60 – 64	482	477	959
65+	224	257	481
Total	**2,399**	**3,193**	**5,592**

Average Age	65.3

Average Age	53.1
Average Service	21.2

Appendix A: Detailed Actuarial Assumptions

General Assumptions

Measurement Date	June 30, 2019
Valuation Date	December 31, 2018 with liabilities projected to June 30, 2019 on a "no gain/loss basis". Liabilities as of June 30, 2018 are based on December 31, 2016 valuation projected on a "no gain/loss basis".
Discount Rate	For accounting disclosure purposes: 3.00% as of June 30, 2019 and 3.75% as of June 30, 2018 For funding purposes in calculating the ADC: 3.00% as of June 30, 2019 and 3.75% as of June 30, 2018 Refer to the Discussion of Discount Rate section for complete information on the discount rate setting.
Salary Growth	2.50%

Mortality

Pre-Retirement Mortality	RP-2014 Healthy Employee Mortality Tables for males and females with generational projection under 75% of Scale MP-2015
Post-Employment Mortality	RP-2014 Healthy Annuitant Mortality Table for males and females with generational projection under 75% of Scale MP-2015

Disability

No disability rates were assumed

Withdrawal

The rates are based on the same assumption used in the Utah Retirement Systems Actuarial Valuation as of January 1, 2017.

	Male				Female			
Years of Service	Public Employees	Public Educators	Public Safety	Firefighters	Public Employees	Public Educators	Public Safety	Firefighters
0	0.2500	0.1400	0.1200	0.0600	0.2800	0.1600	0.1200	0.0600
1	0.2000	0.1100	0.0800	0.0500	0.2300	0.1500	0.0800	0.0500
2	0.1400	0.0800	0.0650	0.0400	0.1700	0.1200	0.0650	0.0400
3	0.1000	0.0700	0.0600	0.0350	0.1300	0.1000	0.0600	0.0350
4	0.1000	0.0650	0.0500	0.0300	0.1250	0.0900	0.0500	0.0300
5	0.1000	0.0600	0.0450	0.0250	0.1100	0.0800	0.0450	0.0250
6	0.0900	0.0550	0.0425	0.0225	0.1000	0.0750	0.0425	0.0225
7	0.0750	0.0400	0.0400	0.0200	0.0750	0.0600	0.0400	0.0200
8	0.0600	0.0350	0.0350	0.0175	0.0650	0.0500	0.0350	0.0175
9	0.0550	0.0300	0.0325	0.0150	0.0600	0.0450	0.0325	0.0150
10	0.0500	0.0275	0.0300	0.0150	0.0550	0.0400	0.0300	0.0150
11	0.0450	0.0250	0.0275	0.0150	0.0475	0.0350	0.0275	0.0150
12	0.0400	0.0250	0.0250	0.0050	0.0450	0.0325	0.0250	0.0050
13	0.0375	0.0225	0.0225	0.0050	0.0425	0.0300	0.0225	0.0050
14	0.0350	0.0200	0.0150	0.0050	0.0375	0.0250	0.0150	0.0050
15	0.0300	0.0200	0.0150	0.0050	0.0350	0.0225	0.0150	0.0050
16	0.0275	0.0175	0.0150	0.0050	0.0300	0.0200	0.0150	0.0050
17	0.0250	0.0175	0.0150	0.0050	0.0275	0.0175	0.0150	0.0050
18	0.0200	0.0175	0.0150	0.0050	0.0275	0.0150	0.0150	0.0050
19	0.0200	0.0150	0.0150	0.0050	0.0275	0.0125	0.0150	0.0050
20	0.0200	0.0100	0.0100	0.0050	0.0275	0.0125	0.0100	0.0050
21	0.0200	0.0100	0.0100	0.0050	0.0250	0.0125	0.0100	0.0050
22	0.0200	0.0100	0.0100	0.0050	0.0225	0.0125	0.0100	0.0050
23	0.0150	0.0100	0.0100	0.0050	0.0200	0.0125	0.0100	0.0050
24	0.0150	0.0100	0.0100	0.0050	0.0200	0.0125	0.0100	0.0050
25+	0.0100	0.0100	0.0100	0.0050	0.0100	0.0100	0.0100	0.0050

Retirement

Annual retirement rates by group are as shown below and they are based on the same retirements assumptions used in the Utah Retirement Systems Actuarial Valuation as of January 1, 2017.

Public Employees (Tier I)				
Age	Male		Female	
	Reduced	Unreduced	Reduced	Unreduced
50	0.023	0.150	0.025	0.170
51	0.023	0.150	0.025	0.160
52 – 54	0.025	0.150	0.025	0.160
55	0.025	0.160	0.040	0.160
56 – 57	0.040	0.160	0.040	0.160
58	0.040	0.160	0.040	0.200
59	0.050	0.160	0.040	0.200
60 – 61	0.075	0.200	0.100	0.250
62 – 64	0.130	0.300	0.160	0.330
65 – 67	N/A	0.220	N/A	0.280
68 – 74	N/A	0.220	N/A	0.220
75+	N/A	1.000	N/A	1.000

Public Educators (Tier I)				
Age	Male		Female	
	Reduced	Unreduced	Reduced	Unreduced
50 – 52	0.020	0.200	0.020	0.300
53	0.025	0.200	0.030	0.140
54	0.025	0.150	0.030	0.140
55	0.028	0.150	0.040	0.140
56	0.028	0.150	0.040	0.180
57 – 59	0.035	0.150	0.070	0.180
60 – 61	0.100	0.230	0.110	0.300
62 – 64	0.130	0.330	0.180	0.350
65 – 66	N/A	0.330	N/A	0.350
67	N/A	0.300	N/A	0.350
68	N/A	0.300	N/A	0.230
69	N/A	0.250	N/A	0.230
70 – 74	N/A	0.200	N/A	0.230
75+	N/A	1.000	N/A	1.000

Retirement (Continued)

Tier I - Public Safety (Unisex)					Tier I - Firefighters (Unisex)	
Age	0 – 19 YOS	20 – 29 YOS	30+ YOS		<30 YOS	30+ YOS
40 – 46	0.000	0.150	0.150		0.100	0.150
47 – 52	0.000	0.150	0.150		0.050	0.150
53 – 58	0.000	0.150	0.150		0.100	0.200
59	0.000	0.150	0.200		0.100	0.200
60 – 61	0.120	0.200	0.200		0.100	0.200
62 – 64	0.120	0.300	0.350		0.250	0.250
65	0.250	0.300	0.350		0.500	0.500
66 – 69	0.250	0.300	0.500		0.500	0.500
70+	1.000	1.000	1.000		1.000	1.000

Judges			
Age	0 – 24 YOS	25 – 29 YOS	30+ YOS
45 – 61	N/A	0.100	0.100
62	0.200	0.100	0.100
63	0.200	0.100	0.100
64	0.200	0.150	0.150
65	0.200	0.150	0.150
66	0.200	0.200	0.200
67	0.200	0.200	0.200
68	0.200	0.200	0.200
69	0.200	0.200	0.200
70	1.000	1.000	1.000

Ancillary Demographic Assumptions

Participation Rates

We have assumed that 100% of eligible participants will elect coverage at retirement. For Public Educators eligible to participate in the Office of Education plan, it is assumed 50% of Public Educators with a Program I balance will participate in the Office of Education plan. If a Public Education employee has a zero Program I balance, the valuation assumes 100% participation in the Office of Education plan.

Spousal Coverage Election Rates

For current retirees actual coverage status and spouse age is used.

For future retirees, 80% of retirees are assumed to elect spouse coverage. Husbands are assumed to be three years older than wives.

Appendix B: Glossary

Actuarial Accrued Liability

Same definition as Total OPEB Liability (TOL).

Actuarial Cost Method

A procedure to allocate the Actuarial Present Value of Future Benefits into time periods, usually in the form of Normal Cost and Actuarial Accrued Liability.

Actuarial Present Value of Future Benefits

Total projected benefits estimated to be payable to Plan Members as a result of their service through the valuation date and their expected future service. The actuarial present value of future benefits as of the valuation date is:

a. The present value of the cost to finance benefits payable in the future,
b. Discounted using the Investment Return to reflect the expected effects of the time value of money and the probabilities of payment (which is contingent on occurrence of certain events such as death, disability, retirement, etc).

Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient asset to pay total projected benefits when due.

Covered Group

Plan Members included in actuarial valuation.

Deferred Inflows

Gains in the Total OPEB Liability and in the OPEB Plan's Fiduciary Net Position (for funded plan only) due to be recognized in the future.

Deferred Outflows

Losses in the Total OPEB Liability and in the OPEB Plan's Fiduciary Net Position (for funded plan only) due to be recognized in the future.

Defined Benefit OPEB Plan

An OPEB plan having terms that specify the amount of benefits to be provided at or after separation from employment. The benefits may be specified in dollars (for example, a flat dollar payment or an amount based on one or more factors such as age, years of service, and compensation), or as a type or level of coverage (for example, prescription drugs or a percentage of healthcare premiums).

Fiduciary Net Position

OPEB plan assets in a secure Trust that meet the following criteria:

a. Contributions from employers to the OPEB plan and earnings on those contributions are irrevocable.
b. OPEB plan assets are dedicated to providing OPEB to plan members in accordance with the benefit terms.
c. OPEB plan assets are legally protected from the creditor of employers, OPEB plan administrator, and the plan members.

Funded Ratio

The Fiduciary Net Position expressed as a percentage of the Total OPEB Liability.

Healthcare Cost Trend Rate

The rate of change in per capita health claim costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

Investment Return Assumption (Discount Rate)

The rate used to adjust a series of future payments to reflect the time value of money.

Normal Cost (or Service Cost)

That portion of the Actuarial Present Value of plan benefits and expenses which is allocated to a 12-month period following the valuation date by the Actuarial Cost Method.

Net OPEB Liability (NOL)

The Total OPEB Liability less the Fiduciary Net Plan Position set aside to pre-fund the benefit.

Other Postemployment Benefits (OPEB)

Postemployment benefits (such as death benefits, life insurance, disability, and long-term care) as well as postemployment healthcare benefits that are paid in the period after employment and are provided separately from the pension plan. OPEB does not include benefits defined as termination benefits or termination payments for sick leave.

Payroll Growth Rate

An actuarial assumption with respect to future increases in total payroll including inflation; used in the Actuarial Cost Method in the determination of the Total OPEB Liability.

Plan Members

The individuals covered by the terms of an OPEB plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.

Postemployment Healthcare Benefits

Medical, dental, vision, and other health-related benefits provided to terminated or retired employees and their dependents and beneficiaries.

Select and Ultimate Rates

Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20X1, 7.5% for 20X2, and 7% for 20X3 and thereafter, then 8% and 7.5% are select rates, and 7% is the ultimate rate.

Total OPEB Liability (TOL)

The portion of the Actuarial Present Value of projected benefit payments that is attributed to employees' past service as of the valuation date as determined by Actuarial Cost Method.

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