

MacLeod Watts

December 22, 2021

Chief Scott Lindgren
Fire Chief
Tahoe Douglas Fire Protection District
PO Box 919
Zephyr Cove, NV 89448

Re: GASB 75 Actuarial Report for the Fiscal Year Ending June 30, 2021,
For the Tahoe Douglas Fire Protection District

Dear Chief Lindgren:

We are pleased to enclose our report providing actuarial information relating to the other post-employment benefit (OPEB) liabilities for the Tahoe Douglas Fire Protection District **relating to employees and retirees covered by the District Retiree Healthcare Plan** (District Plan). The report's text describes our analysis and assumptions in detail.

The primary purpose of this report is to provide information required by GASB 75 ("Accounting and Financial Reporting for Postemployment Benefits Other Than Pension") to be reported in the District's financial statements for the fiscal year ending June 30, 2021, relating to the District Plan. Information regarding the OPEB liability for the District's PEBP retirees is provided in a separate report.

Exhibits shown in this report are based on a roll forward of the results of the actuarial valuation prepared as of December 31, 2019, and on the employee and plan data provided to us by the District for that valuation. Our calculations reflect the assumption that the District will continue to finance this OPEB liability on a pay-as-you-go basis. The discount rate used has been updated, in keeping with the change in the applicable municipal bond index on which it is based.

We appreciate the opportunity to work on this analysis and acknowledge the efforts of District employees who provided valuable time and information to enable us to perform this valuation. Please let us know if we can be of further assistance.

Sincerely,



Catherine L. MacLeod, FSA, FCA, EA, MAAA
Principal & Consulting Actuary

Enclosure



Tahoe Douglas Fire Protection District
Retiree Healthcare Plan

GASB 75 Actuarial Report
Measured as of December 31, 2020
For Fiscal Year End June 30, 2021 Financial Reporting

Submitted December 2021

MacLeod Watts

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A. Executive Summary

This report presents actuarial information needed by Tahoe Douglas Fire Protection District (the District) relating to the District's Retiree Healthcare Plan required by Statement No. 74 and 75 of the Governmental Accounting Standards Board (GASB 74/75) for the fiscal year ending June 30, 2019. A separate GASB 75 report has been prepared for the District's PEBP OPEB liability.

Important background information regarding the valuation process can be found in Addendum 1. We recommend users of the report read this information to familiarize themselves with the process and context of actuarial valuations, including the requirements of GASB 75. The pages following this executive summary discuss the valuation results in detail and present various exhibits appropriate for disclosures under GASB 75. These exhibits were developed from a rollforward of the December 31, 2019 valuation.

A new biennial actuarial valuation of the District HBP liability will need to be prepared as of December 31, 2021 before the GASB 75 report can be prepared for the District's fiscal year end June 20, 2022.

OPEB Obligations of the District

The District provides continuation of medical, dental and vision coverage to its retiring employees under the District Plan as well as HRA contributions instead of medical coverage for retirees after age 65. These benefits create one or more of the following types of OPEB liabilities:

- **Explicit subsidy liabilities:** An "explicit subsidy" exists when the employer contributes directly toward the cost of retiree healthcare. In this program, the District pays a portion of retiree medical, dental and vision premiums for qualifying retirees. These benefits are described in Section 2.
- **Implicit subsidy liabilities:** An "implicit subsidy" exists when the premiums charged for retiree coverage are lower than the expected retiree claims for that coverage. In this program, the medical insurance claims experience is pooled for active employees and pre-Medicare retirees for determining premium rates. Retirees may not continue medical coverage after age 65.

As is the nature of group premium rate structures, at some ages, retirees may be expected to experience higher claims than the premiums they pay, where at other ages, the reverse may be true. For the medical insurance plans offered by the District, we determine the implicit rate subsidy as the projected difference between (a) expected retiree claim costs by age and (b) premiums charged for retiree coverage on District's plans. For more information on this process for medical coverage, see Section 3 and Addendum 2: MacLeod Watts Age Rating Methodology.

We believe no implicit liability exists with respect to dental and vision coverage provided to retirees, or that it is insignificant.

OPEB Funding Policy

The funding policy for the District RHP affects the calculation of GASB 75 liabilities by impacting the discount rate that is used to develop the plan liability and expense. "Prefunding" is the term used when an agency consistently contributes an amount based on an actuarially determined contribution (ADC) each year. GASB 75 allows prefunded plans to use a discount rate that reflects the expected



Executive Summary

(Continued)

earnings on trust assets. Pay-as-you-go, or “PAYGO”, is the term used when an agency only contributes the required retiree benefits when due. When an agency finances retiree benefits on a pay-as-you-go basis, GASB 75 requires the use of a discount rate equal to a 20-year high grade municipal bond rate.

District has been and continues to prefund this liability, contributing 100% or more of the Actuarially Determined Contributions each year for the District Retiree Healthcare Plan and Trust. With District’s approval, the assumed trust rate and discount rate applied for accounting purposes in this report is 6.7%, reflecting District’s expectations as of the measurement date. For more information, see Expected Return on Trust Assets on page 5.

Actuarial Assumptions

The actuarial “demographic” assumptions (i.e., rates of retirement, death, disability, or other termination of employment) used in this report were chosen, for the most part, to be the same as the actuarial demographic assumptions used for the most recent valuation of the retirement plan(s) covering District employees. Other assumptions, such as age-related healthcare claims, healthcare trend, retiree participation rates and spouse coverage, were selected based on demonstrated plan experience and/or our best estimate of expected future experience. All these assumptions, and more, impact expected future benefits. Please note that this valuation has been prepared on a closed group basis. This means that only employees and retirees present as of the valuation date are considered. We do not consider replacement employees for those we project to leave the current population of plan participants until the valuation date following their employment.

We emphasize that this actuarial valuation provides a projection of future results based on many assumptions. Actual results are likely to vary to some extent and we will continue to monitor these assumptions in future valuations. See Section 3 for a description of assumptions used in the valuation.

Important Dates Used in the Valuation

GASB 75 allows reporting liabilities as of any fiscal year end based on: (1) a *valuation date* no more than 30 months plus 1 day prior to the close of the fiscal year end; and (2) a *measurement date* up to one year prior to the close of the fiscal year. The following dates were used for this report:

Employer Fiscal Year End	June 30, 2021
Plan Year End	December 31, 2020
Measurement Date	December 31, 2020
Measurement Period	January 1, 2020, to December 31, 2020
Valuation Date	December 31, 2019



Executive Summary

(Continued)

Significant Results and Differences from the Prior Valuation

This report is based on a roll forward of the December 31, 2019, valuation. No benefit changes were reported to MacLeod Watts from those in place at the time the December 2019 valuation was prepared. As such, no new data was collected, and no plan experience was analyzed. No assumptions were changed other than to update the discount rate to reflect the change in the applicable municipal bond index rate, as mentioned above.

Impact on Statement of Net Position and OPEB Expense for Fiscal Year Ending 2021

The accounting impact of the plan as of the District's fiscal year end June 30, 2021 is shown below.

Items	For Reporting At Fiscal Year Ending June 30, 2021
Total OPEB Liability	\$ 11,623,856
Fiduciary Net Position	13,703,303
Net OPEB Liability (Asset)	(2,079,447)
Deferred (Outflows) of Resources	(1,006,305)
Deferred Inflows of Resources	1,892,708
Impact on Statement of Net Position	\$ (1,193,044)
 OPEB Expense, FYE 6/30/2021	 \$ (149,604)

Important Notices

This report is intended to be used only to present the actuarial information relating to other postemployment benefit liabilities for the District's financial statements. The results of this report may not be appropriate for other purposes, where other assumptions, methodology and/or actuarial standards of practice may be required or more suitable. We note that various issues in this report may involve legal analysis of applicable law or regulations. The District should consult counsel on these matters; MacLeod Watts does not practice law and does not intend anything in this report to constitute legal advice. In addition, we recommend the District consult with their internal accounting staff or external auditor or accounting firm about the accounting treatment of OPEB liabilities.



B. Accounting Information (GASB 75)

The following exhibits are designed to satisfy the reporting and disclosure requirements of GASB 75 and to facilitate an audit of plan changes.

Components of Net Position and Expense

The exhibit below shows the development of Net Position and Expense as of the Measurement Date.

Plan Summary Information for FYE June 30, 2021

Measurement Date is December 31, 2020

**Tahoe Douglas
FPD**

Items Impacting Net Position:

Total OPEB Liability	\$ 11,623,856
Fiduciary Net Position	13,703,303
Net OPEB Liability (Asset)	(2,079,447)

Deferred (Outflows) Inflows of Resources Due to:

Assumption Changes	(935,178)
Plan Experience	482,327
Investment Experience	1,410,381
Deferred Contributions	(71,127)
Net Deferred (Outflows) Inflows of Resources	886,403

Impact on Statement of Net Position, FYE 6/30/2021 **\$ (1,193,044)**

Items Impacting OPEB Expense:

Service Cost	\$ 296,956
Cost of Plan Changes	-
Interest Cost	751,172
Expected Earnings on Assets	(817,378)
Admin/Operating Expenses	45,821
Retiree premium co-pay into trust	(26,683)
Retiree premium co-pay from trust to insurers	26,683

Recognized Deferred Resource items:

Assumption Changes	143,212
Plan Experience	(73,863)
Investment Experience	(495,524)

OPEB Expense, FYE 6/30/2021 **\$ (149,604)**



Accounting Information
 (Continued)

Change in Net Position During the Fiscal Year

The exhibit below shows the year-to-year changes in the components of Net Position.

For Reporting at Fiscal Year End Measurement Date	6/30/2020 12/31/2019	6/30/2021 12/31/2020	Change During Period
Total OPEB Liability	\$ 11,253,416	\$ 11,623,856	\$ 370,440
Fiduciary Net Position	12,485,013	13,703,303	1,218,290
Net OPEB Liability (Asset)	(1,231,597)	(2,079,447)	(847,850)
<i>Deferred Resource (Outflows) Inflows Due to:</i>			
Assumption Changes	(1,078,390)	(935,178)	143,212
Plan Experience	556,190	482,327	(73,863)
Investment Experience	934,309	1,410,381	476,072
Deferred Contributions	(76,413)	(71,127)	5,286
Net Deferred (Outflows) Inflows	335,696	886,403	550,707
Impact on Statement of Net Position	\$ (895,901)	\$ (1,193,044)	\$ (297,143)

Change in Net Position During the Fiscal Year

Impact on Statement of Net Position, FYE 6/30/2020	\$ (895,901)
OPEB Expense (Income)	(149,604)
Employer Contributions During Fiscal Year	(147,539)
Impact on Statement of Net Position, FYE 6/30/2021	\$ (1,193,044)

OPEB Expense

Employer Contributions During Fiscal Year	\$ 147,539
Deterioration (Improvement) in Net Position	(297,143)
OPEB Expense (Income), FYE 6/30/2021	\$ (149,604)



Accounting Information
(Continued)

Change in Fiduciary Net Position During the Measurement Period

	RBIF	Wells Fargo	Total
12/31/2019 Account Statement Balances	\$ 12,385,167	\$ 138,672	\$ 12,523,839
Net Accrued/prepaid adjustments	-	(38,826)	(38,826)
Change to net accrued/prepaid adjustments	-	-	-
Adjusted 12/31/2019 Balance	12,385,167	99,846	12,485,013
Transfer Funds between RBIF and WF Checking	(600,000)	600,000	-
Retiree health co-payments in		26,683	26,683
Implicit subsidy contribution in		152,825	152,825
Benefit payments (<i>excludes retiree co-pays</i>)		(524,863)	
Retiree health co-payments out to insurers		(26,683)	(26,683)
Implicit subsidy benefits out		(152,825)	(152,825)
Administrative/Operating fees (incl audit)		(45,821)	(45,821)
Investment income (net of related fees)	1,788,974	-	1,788,974
Accrued 2020 fees and HRA payments		-	-
Change in accruals	\$ -		-
Cleared accruals from prior period			
Total changes	1,188,974	29,316	1,218,290
12/31/2020 Account Statement Balances	13,574,141	205,651	13,779,792
Net Accrued/prepaid adjustments	-	25,097	25,097
Uncleared Transactions		(101,586)	(101,586)
Adjusted 12/31/2020 Balance	13,574,141	129,162	13,703,303



Accounting Information
(Continued)

Expected Long-term Return on Trust Assets

The District established and maintains a single employer irrevocable OPEB trust through the Retirement Benefits Investment Fund (RBIF). RBIF publishes Investment Objective & Policies and issues publicly available financial statements. Note 3 (Investment Policy) of the June 30, 2019 RBIF audited financial statements stated that the long term trust return assumption is 7.5%. This Note 3 also states:

The System's policies which determine the investment portfolio target asset allocation are established by the Board. The asset allocation is reviewed annually and is designed to meet the future risk and return needs of the System.

The following was the Board adopted policy target asset allocation as of June 30, 2019:

Asset Class	Target Allocation	Long-Term Geometric Expected Real Rate of Return*
U.S. stocks	42%	5.50%
International stocks	18%	5.50%
U.S. bonds	28%	0.75%
Private markets	12%	6.65%

* As of June 30, 2019, PERS' long term inflation assumption was 2.75%.

The long term inflation assumption used in this valuation was 2.5%, which is 0.25% lower than the PERS assumption imbedded in the RBIF long term return assumption. The District is less optimistic about the future expected returns and approved a 0.55% margin for adverse investment returns. Accordingly, with the District's approval, the assumed long term trust return applied in this valuation is 6.7%.



Accounting Information (Continued)

Recognition Period or Deferred Resources

Liability changes due to plan experience which differs from what was assumed in the prior year and/or from assumption changes during the year are recognized over the plan's Expected Average Remaining Service Life ("EARSL"). The EARSL period is 8.53 years for deferred resources arising in this fiscal year.

When applicable, changes in the Fiduciary Net Position due to investment performance different from the assumed earnings rate are always recognized over 5 years. Liability changes attributable to benefit changes occurring during the period are recognized immediately.

Deferred Resources as of Fiscal Year End and Expected Future Recognition

The exhibit below shows deferred resources as of the fiscal year end June 30, 2021.

Tahoe Douglas FPD	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes of Assumptions	\$ 935,178	\$ -
Differences Between Expected and Actual Experience	-	482,327
Net Difference Between Projected and Actual Earnings on Investments	-	1,410,381
Deferred Contributions	71,127	-
Total	\$ 1,006,305	\$ 1,892,708

The District will recognize the Contributions Made Subsequent to the Measurement Date in the next fiscal year. In addition, future recognition of these deferred resources is shown below.

For the Fiscal Year Ending June 30	Recognized Net Deferred Outflows (Inflows) of Resources
2022	\$ (426,174)
2023	(157,334)
2024	(424,506)
2025	(124,971)
2026	69,349
Thereafter	106,106



Accounting Information
(Continued)

Sensitivity of Liabilities to Changes in the Discount Rate and Healthcare Cost Trend Rate

The discount rate used for the fiscal year end 2021 is 6.7%. is 6.7%. Healthcare Cost Trend Rate was assumed to start at 5.4% (increase effective January 1, 2021) and grade down to 4% for years 2076 and later. The impact of a 1% increase or decrease in these assumptions is shown in the chart below.

Sensitivity to:			
Change in Discount Rate	Current - 1% 5.70%	Current 6.70%	Current + 1% 7.70%
Total OPEB Liability	13,292,885	11,623,856	10,270,211
Increase (Decrease)	1,669,029		(1,353,645)
% Increase (Decrease)	14.4%		-11.6%
Net OPEB Liability (Asset)	(410,418)	(2,079,447)	(3,433,092)
Increase (Decrease)	1,669,029		(1,353,645)
% Increase (Decrease)	80.3%		-65.1%
Change in Healthcare Cost Trend Rate	Current Trend - 1%	Current Trend	Current Trend + 1%
Total OPEB Liability	10,180,284	11,623,856	13,437,429
Increase (Decrease)	(1,443,572)		1,813,573
% Increase (Decrease)	-12.4%		15.6%
Net OPEB Liability (Asset)	(3,523,019)	(2,079,447)	(265,874)
Increase (Decrease)	(1,443,572)		1,813,573
% Increase (Decrease)	-69.4%		87.2%



Accounting Information
(Continued)

Schedule of Changes in the District's Net OPEB Liability and Related Ratios

GASB 75 requires presentation of the 10-year history of changes in the Net OPEB Liability. Only results for years since GASB 75 was implemented (fiscal years 2018 through 2021) are shown in the table.

Fiscal Year Ending	6/30/2021	6/30/2020	6/30/2019	6/30/2018
Measurement Date	12/31/2020	12/31/2019	12/31/2018	12/31/2017
Discount Rate on Measurement Date	6.70%	6.70%	7.50%	7.50%
Total OPEB liability				
Service Cost	\$ 296,956	\$ 277,767	\$ 267,084	\$ 256,812
Interest	751,172	772,148	753,894	736,660
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	-	(630,053)	-	-
Changes of assumptions	-	1,221,602	-	-
Benefit payments	(677,688)	(811,181)	(765,360)	(782,565)
Net change in total OPEB liability	370,440	830,283	255,618	210,907
Total OPEB liability - beginning	11,253,416	10,423,133	10,167,515	9,956,608
Total OPEB liability - ending (a)	\$ 11,623,856	\$ 11,253,416	\$ 10,423,133	\$ 10,167,515
Plan fiduciary net position				
Contributions - employer	\$ 152,825	\$ 851,748	\$ 825,845	\$ 1,304,783
Net investment income	1,788,974	2,263,955	(514,662)	1,987,307
Benefit payments	(677,688)	(811,181)	(765,360)	(782,565)
Retiree premium co-pay into trust	26,683	23,500	23,811	-
Retiree premium co-pay transferred from trust to insurers	(26,683)	(23,500)	(23,811)	-
Admin/Operating Expenses	(45,821)	(32,246)	(26,859)	(16,445)
Net change in plan fiduciary net position	1,218,290	2,272,276	(481,036)	2,493,080
Plan fiduciary net position - beginning	12,485,013	10,212,737	10,693,773	8,200,693
Plan fiduciary net position - ending (b)	\$ 13,703,303	\$ 12,485,013	\$ 10,212,737	\$ 10,693,773
Net OPEB liability - ending (a) - (b)	\$ (2,079,447)	\$ (1,231,597)	\$ 210,396	\$ (526,258)
Covered-employee payroll	\$ 5,053,642	\$ 4,235,995	\$ 3,867,910	\$ 4,118,877
Net OPEB liability as a % of covered-employee payroll	-41.15%	-29.07%	5.44%	-12.78%



Accounting Information
(Continued)

Schedule of Contributions

Since establishing the OPEB trust, District has consistently contributed 100% or more of the Actuarially Determined Contribution (ADC) for the District RHP each year and/or maintained a Net OPEB Asset. This chart shows the contributions for the years since GASB 75 was implemented.

Fiscal Year Ending	2020	2020	2019	2018
Actuarially Determined Contribution	\$ 243,043	\$ 239,197	\$ 450,350	\$ 432,127
Contributions relative to the actuarially determined contribution	147,539	502,211	950,635	775,697
Contribution deficiency (excess)	\$ 95,504	\$ (263,014)	\$ (500,285)	\$ (343,570)
Covered employee payroll	\$ 5,118,918	\$ 4,669,347	\$ 3,967,157	\$ 4,118,877
Contributions as a percentage of covered employee payroll	2.88%	10.76%	23.96%	18.83%
Percent of ADC contributed	60.70%	209.96%	211.09%	179.51%

Notes to Schedule

Valuation Date for determining ADCs

Actuarial cost method

Amortization method

Amortization period

Asset valuation method

Inflation

Healthcare cost trend rates

Salary increases

Investment rate of return

Retirement age

Mortality

Mortality Improvement

12/31/2019	12/31/2017
Entry Age Normal	Entry Age Normal
Level % of pay	Level % of pay
Level % of Pay	Level % of Pay
30 yr open (surplus)	30 yr closed
30 years	21 yrs remain 22 yrs remain
Market Value	Market Value
2.50%	2.75%
5.4% in 2021, fluctuating down to 4.0% in 2076	6.25% in 2019, step down 0.25% per year to 5% in 2024
3.00%	4.00%
6.70%	7.50%
From 45 to 75 (Regular) and 40 to 70 (Safety)	From 45 to 75 (Regular) and 40 to 70 (Safety)
2019 Nevada PERS Experience Study	2016 Nevada PERS Experience Study
MacLeod Watts Scale 2020	MacLeod Watts Scale 2017



Accounting Information (Continued)

Detail of Changes to Net Position

The chart below details changes to all components of Net Position.

Tahoe Douglas FPD	Total OPEB Liability (a)	Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) - (b)	(d) Deferred Outflows (Inflows) Due to:				Impact on Statement of Net Position (e) = (c) - (d)
				Assumption Changes	Plan Experience	Investment Experience	Deferred Contributions	
Balance at Fiscal Year Ending 6/30/2020 <i>Measurement Date 12/31/2019</i>	\$ 11,253,416	\$ 12,485,013	\$ (1,231,597)	\$ 1,078,390	\$ (556,190)	\$ (934,309)	\$ 76,413	\$ (895,901)
Changes During the Period:								
Service Cost	296,956		296,956					296,956
Interest Cost	751,172		751,172					751,172
Expected Investment Income		817,378	(817,378)					(817,378)
Employer Contributions		152,825	(152,825)					(152,825)
Changes of Benefit Terms	-		-					-
Admin/Operating Expenses		(45,821)	45,821					45,821
Retiree premium co-pay into trust		26,683	(26,683)					(26,683)
Retiree premium co-pay from trust to insurers		(26,683)	26,683					26,683
Benefit Payments	(677,688)	(677,688)	-					-
Assumption Changes	-		-	-				-
Plan Experience	-		-		-			-
Investment Experience		971,596	(971,596)			(971,596)		-
Recognized Deferred Resources				(143,212)	73,863	495,524	(152,825)	(273,350)
Employer Contributions in Fiscal Year							147,539	(147,539)
Net Changes in Fiscal Year 2020-2021	370,440	1,218,290	(847,850)	(143,212)	73,863	(476,072)	(5,286)	(297,143)
Balance at Fiscal Year Ending 6/30/2021 <i>Measurement Date 12/31/2020</i>	\$ 11,623,856	\$ 13,703,303	\$ (2,079,447)	\$ 935,178	\$ (482,327)	\$ (1,410,381)	\$ 71,127	\$ (1,193,044)

Benefit payments shown above include \$524,863 in "explicit" benefit payments paid by the trust plus \$152,825 in implicit subsidy benefits.



Accounting Information (Continued)

Schedule of Deferred Outflows and Inflows of Resources

A listing of all deferred resource bases used to develop the Net Position and Pension Expense is shown below. Contributions subsequent to the measurement date are not shown.

Measurement Date: December 31, 2020

Date Created	Deferred Resource			Balance as of Dec 31, 2020	Recognition of Deferred Outflow or Deferred (Inflow) in Measurement Period:						
	Created Due To	Initial Amount	Period (Yrs)	Annual Recognition	2020 (FYE 2021)	2021 (FYE 2022)	2022 (FYE 2023)	2023 (FYE 2024)	2024 (FYE 2025)	2025 (FYE 2026)	Thereafter
12/31/2017	Investment Earnings Expected	\$ (1,344,194)	5.00	\$ (268,839)	\$ (268,838)	\$ (268,838)	\$ -	\$ -	\$ -	\$ -	\$ -
12/31/2018	Investment Earnings Expected	1,335,862	5.00	267,172	267,172	267,172	267,174	-	-	-	-
12/31/2019	Plan Experience Assumption	(630,053)	8.53	(73,863)	(73,863)	(73,863)	(73,863)	(73,863)	(73,863)	(73,863)	(113,012)
12/31/2019	Changes Investment	1,221,602	8.53	143,212	143,212	143,212	143,212	143,212	143,212	143,212	219,118
12/31/2019	Earnings Expected	(1,497,688)	5.00	(299,538)	(299,538)	(299,538)	(299,538)	(299,536)	-	-	-
12/31/2020	Investment Earnings Expected	(971,596)	5.00	(194,319)	(194,319)	(194,319)	(194,319)	(194,319)	(194,320)	-	-



Accounting Information (Continued)

District Contributions to the Plan

District contributions to the Plan occur as benefits are paid to retirees. Benefit payments may occur in the form of direct payments for premiums ("explicit subsidies") and/or indirect payments to retirees in the form of higher premiums for active employees ("implicit subsidies"). Note that the implicit subsidy contribution does not represent cash payments to retirees, but a reclassification of a portion of the active healthcare expense to be recognized as a retiree health expense. More detail about explicit and implicit subsidies can be found in Addendum 1 – Important Background Information.

The first and second charts show the benefits paid on behalf of retirees and District contributions, respectively, during the measurement period.

Benefit Payments During the Measurement Period, Jan 1, 2020 thru Dec 31, 2020	Tahoe Douglas FPD
Benefits Paid by Trust	\$ 524,863
Benefits Paid by Employer (not reimbursed by trust)	-
Implicit benefit payments	152,825
Total Benefit Payments During the Measurement Period	\$ 677,688
Employer Contributions During the Measurement Period, Jan 1, 2020 thru Dec 31, 2020	Tahoe Douglas FPD
Employer Contributions to the Trust	\$ -
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	-
Implicit contributions	152,825
Total Employer Contributions During the Measurement Period	\$ 152,825

District contributions made during the current fiscal year (ended June 30, 2021) were:

Employer Contributions During the Fiscal Year, Jul 1, 2020 thru Jun 30, 2021	Tahoe Douglas FPD
Employer Contributions to the Trust	\$ -
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	-
Implicit contributions	147,539 *
Total Employer Contributions During the Fiscal Year	\$ 147,539

* The implicit subsidy benefits include \$76,412.50 from 7/1/20 – 12/31/20 plus \$71,126.50 from 1/1/21 – 6/30/21.



Accounting Information

(Continued)

Projected Benefit Payments (15-year projection)

The following is an estimate of other post-employment benefits to be paid on behalf of current retirees and current employees expected to retire from the District. Expected annual benefits have been projected on the basis of the actuarial assumptions outlined in Section 3.

These projections do not include any benefits expected to be paid on behalf of current active employees *prior to* retirement, nor do they include any benefits for potential *future employees* (i.e., those who might be hired in future years).

Projected Annual Benefit Payments							
Calendar (Plan) Year Ending Dec 31	Explicit Subsidy			Implicit Subsidy			Total
	Current Retirees	Future Retirees	Total	Current Retirees	Future Retirees	Total	
2021	\$ 524,863	\$ -	\$ 524,863	\$ 152,825	\$ -	\$ 152,825	\$ 677,688
2022	509,761	49,372	559,133	128,724	11,710	140,434	699,567
2023	508,273	60,086	568,359	123,065	16,145	139,210	707,569
2024	510,659	70,037	580,696	121,351	15,532	136,883	717,579
2025	484,047	82,009	566,056	85,235	20,326	105,561	671,617
2026	477,032	93,094	570,126	69,224	25,617	94,841	664,967
2027	479,874	97,061	576,935	64,877	25,180	90,057	666,992
2028	481,758	112,254	594,012	58,296	31,168	89,464	683,476
2029	468,672	139,521	608,193	35,139	39,440	74,579	682,772
2030	452,813	176,221	629,034	7,399	55,523	62,922	691,956
2031	455,778	215,314	671,092	-	72,658	72,658	743,750
2032	465,012	245,022	710,034	-	86,123	86,123	796,157
2033	473,268	306,631	779,899	-	112,905	112,905	892,804
2034	480,412	351,186	831,598	-	118,556	118,556	950,154
2035	486,266	404,205	890,471	-	136,748	136,748	1,027,219

The amounts shown in the Explicit Subsidy table reflect the expected payment by the District toward retiree medical premiums in each of the years shown. The amounts are shown separately, and in total, for those retired on the valuation date ("current retirees") and those expected to retire after the valuation date ("future retirees").

The amounts shown above reflect the expected Implicit Subsidy provided under the District's retiree medical and/or life insurance premiums in each of the years shown above. These amounts are shown separately for those retired on the valuation date ("current retirees") and those expected to retire after the valuation date ("future retirees") and then totaled.



Accounting Information (Concluded)

Sample Journal Entries

Beginning Account Balances

As of the fiscal year beginning 7/1/2020

	Debit	Credit
Net OPEB Liability	1,231,597	
Deferred Resource -- Assumption Changes	1,078,390	
Deferred Resource -- Plan experience		556,190
Deferred Resource -- Investment Experience		934,309
Deferred Resource -- Contributions	± 76,413	
Net Position		895,901

* The entries above assume nothing is on the books at the beginning of the year. So to the extent that values already exist in, for example, the Net OPEB Liability account, then only the difference should be adjusted. The entries above represent the values assumed to exist at the start of the fiscal year.

Journal entries to record implicit subsidies during the fiscal year

	Debit	Credit
OPEB Expense	147,539	
Premium Expense		147,539

* This entry assumes that premiums for active employees were recorded to an account called "Premium Expense". This entry reverses the portion of premium payments that represent implicit subsidies and assigns that value to OPEB Expense.

Journal entries to record account activity during the fiscal year

	Debit	Credit
Net OPEB Liability	847,850	
Deferred Resource -- Assumption Changes		143,212
Deferred Resource -- Plan experience	73,863	
Deferred Resource -- Investment Experience		476,072
Deferred Resource -- Contributions		5,286
OPEB Expense		297,143

± The deferred contributions reported in the OPEB note to the fiscal year end 2020 audited financials does not match the value shown above. A small adjustment of \$151 may be appropriate to tie to the value shown above.



C. Funding Information

Prefunding (setting aside funds to accumulate in an irrevocable OPEB trust) has certain advantages, one of which is the ability to (potentially) use a higher discount rate in the determination of liabilities for GASB 75 reporting purposes.

Different terminology is sometimes used by actuaries and accountants when referring to key liability and expense components. Here are some of these terms which are often interchangeable:

Actuarial Funding Terminology

Present Value of Projected Benefits (PVPB)
Actuarially Accrued Liability (AAL)
Market Value of Assets
Unfunded Actuarially Accrued Liability (UAAL)
Normal Cost

GASB 75 Terminology

N/A; typically not reported for accounting purposes
Total OPEB Liability (TOL)
Fiduciary Net Position
Net OPEB Liability
Service Cost

The District approved development of Actuarially Determined Contributions (ADC) based on the following two components, adjusted with interest to fiscal year end:

- The amounts attributed to service performed in the current fiscal year (the normal cost) and
- Amortization of the unfunded actuarial accrued liability (UAAL).

The ADC determined for the District's fiscal year ending June 30, 2021 was developed based on the December 31, 2019 actuarial valuation using a 6.70% discount rate. A summary is shown below:

Discount Rate	6.70%
Actuarial Accrued Liability (projected)	\$ 12,324,247
Actuarial Value of Assets (projected)	13,653,521
Unfunded Actuarial Accrued Liability (UAAL)	(1,329,274)
Amortization Factor*	18.8345
Actuarially Determined Contribution for FYE 2021	
Amortization of UAAL	\$ (70,576)
Normal Cost	305,865
Interest to Fiscal Year End	7,754
Total ADC	\$ 243,043

** Determined on a level % of pay basis over an open 30 year period; 30 years remain for the FY 2021.*

In our professional judgement, the ADC determined on this basis should provide for trust sufficiency based on the current plan provisions and employee data provided for the December 2019 valuation,

- if all assumptions are exactly realized, and
- if the District were to begin consistently contributing 100% or more of the ADC each year.

When an agency commits to funding the trust at or above the ADC, GASB 75 allows use of the expected long-term trust return to be used as the discount rate in determining the plan liability. However, the ADC developed on this basis does not guarantee trust sufficiency due to the nontrivial risk that the assumptions used to determine plan contributions may not be realized.



D. Certification

The purpose of this report is to provide actuarial information in compliance with Statement 75 of the Governmental Accounting Standards Board (GASB 75) for other postemployment benefits provided by the Tahoe Douglas Fire Protection District (the District) Retiree Healthcare Plan. We summarized the benefits in this report and our calculations were based on our understanding of the benefits as described herein.

In preparing this report we relied without audit on information provided by the District. This information includes, but is not limited to, plan provisions, census data, and financial information. We summarized the benefits in this report and our calculations were based on our understanding of the benefits as described herein. A limited review of this data was performed, and we found the information to be reasonably consistent. The accuracy of this report is dependent on this information and if any of the information we relied on is incomplete or inaccurate, then the results reported herein will be different from any report relying on more accurate information.

We consider the actuarial assumptions and methods used in this report to be individually reasonable under the requirements imposed by GASB 75 and taking into consideration reasonable expectations of plan experience. The results, and the assumptions on which they depend, provide an estimate of the plan's financial condition at one point in time. Future actuarial results may be significantly different due to a variety of reasons including, but not limited to, demographic and economic assumptions differing from future plan experience, changes in plan provisions, changes in applicable law, or changes in the value of plan benefits relative to other alternatives available to plan members.

Alternative assumptions may also be reasonable; however, demonstrating the range of potential plan results based on alternative assumptions was beyond the scope of our assignment except to the limited extent required by GASB 75. Plan results for accounting purposes may be materially different than results obtained for other purposes such as plan termination, liability settlement, or underlying economic value of the promises made by the plan.

This report is prepared solely for the use and benefit of the District and may not be provided to third parties without prior written consent of MacLeod Watts. Exceptions are: The District may provide copies of this report to their professional accounting and legal advisors who are subject to a duty of confidentiality, and the District may provide this work to any party if required by law or court order. No part of this report should be used as the basis for any representations or warranties in any contract or agreement without the written consent of MacLeod Watts.

The undersigned actuaries are unaware of any relationship that might impair the objectivity of this work. Nothing within this report is intended to be a substitute for qualified legal or accounting counsel. Both actuaries are members of the American Academy of Actuaries and meet the qualification standards for rendering this opinion.

Signed: December 22, 2021



Catherine L. MacLeod, FSA, FCA, EA, MAAA



J. Kevin Watts, FSA, FCA, MAAA



E. Supporting Information

Section 1 - Summary of Employee Data

Active employees: The District reported 56 active members in the data provided to us for the December 2019 valuation. All 56 active employees were enrolled in a healthcare plan offered by the District on the valuation date.

Distribution of Benefits-Eligible Active Employees								
Current Age	Years of Service						Total	Percent
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 & Up		
Under 25	2						2	4%
25 to 29	3	1	1				5	9%
30 to 34	1	3	9	1			14	25%
35 to 39	2		4	2	1		9	16%
40 to 44		1	6	3	4		14	25%
45 to 49			2		1	1	4	7%
50 to 54			1			5	6	11%
55 to 59						2	2	4%
60 to 64							0	0%
65 to 69							0	0%
70 & Up							0	0%
Total	8	5	23	6	6	8	56	100%
Percent	14%	9%	41%	11%	11%	14%	100%	

Valuation	December 2017	December 2019
Average Attained Age for Actives	39.5	38.9
Average Years of Service	10.3	10.3

Retirees: The District reported 46 retirees participating in the District's Retiree Healthcare Plan and receiving benefits on the valuation date. Information on these individuals is summarized in the chart below.

Retirees by Age				
Current Age	Misc	Fire	Total	Percent
Below 50	0	0	0	0%
50 to 54	0	0	0	0%
55 to 59	1	9	4	40%
60 to 64	0	18	5	50%
65 to 69	0	11	1	10%
70 to 74	0	6	0	0%
75 to 79	0	1	0	0%
80 & up	0	0	0	0%
Total	1	45	10	100%
Average Age:				
On 12/31/2019	56.4	64.8	64.6	
At retirement	56.2	54.8	54.8	



Supporting Information

(Continued)

Summary of Employee Data (Concluded)

Summary of Plan Member Counts: GASB 75 requires the employer to report specific plan member counts. The chart below shows these counts as of the December 31, 2019 valuation date.

Summary of Plan Member Counts	
Number of active plan members	56
Number of inactive plan members currently receiving benefits	46
Number of inactive plan members entitled to but not receiving benefits	0



Supporting Information

(Continued)

Section 2 - Summary of Retiree Benefit Provisions

OPEB provided: Employees who retire from the District are eligible to continue their coverage under the medical (including vision) and dental plans offered by the District to its active employees or, if they retired prior to September 1, 2008, could elect to participate in the Public Employees' Benefit Plan (PEBP).

Access to District plan coverage and benefits paid: Retirees and their spouses under age 65 may elect to continue their medical, dental, vision coverage under the programs made available to the District's active employees. The District currently contributes toward the cost of retiree healthcare coverage as follows:

- Employees hired prior to June 1, 2003 retiring from the District after June 30, 1999 at age 50 or older with at least 15 years of service who elect to remain in the District's plans receive a percentage of the employee and spouse premiums paid by the District for their lifetimes. The percentage is based on the following service schedule:

Years of District Service	% of Employee Premium Paid	% of Spouse Premium Paid
Less than 15	0%	0%
15	50%	50%
16	60%	60%
17	70%	70%
18	80%	80%
19	90%	90%
20 or more	100%	100%

- Employees hired on or after June 1, 2003 and retiring from the District at age 55 or older with at least 20 years of service who elect to remain in the District's plans receive a percentage of the employee and spouse premiums paid by the District until they become eligible for Medicare benefits after which the District contribution ceases. The percentage is based on the following service schedule:

Years of District Service	% of Employee Premium Paid	% of Spouse Premium Paid
Less than 20	0%	0%
20	100%	0%
21	100%	20%
22	100%	40%
23	100%	60%
24	100%	80%
25 or More	100%	100%

If an employee completes the minimum service requirement (as determined based on his or her employment date) but terminates employment with the District prior to reaching the minimum required age, the employee *may* remain qualified for future postemployment healthcare benefits from the District. If, after leaving District employment, the employee retains District coverage and pays the entire premium, once the employee reaches the minimum required benefit age, the District will provide the postemployment healthcare benefits to which the employee would have been entitled had he or she terminated employment after meeting the minimum age requirement.



Supporting Information

(Continued)

Summary of Retiree Benefit Provisions

(Continued)

Retirees are no longer permitted to remain on the District's plans after age 65.

- Upon eligibility for Medicare, the District's monthly allowance (HRA) toward health insurance for a retired employee is equal to \$285 multiplied by his or her vested percentage (see tables above). Eligible spouses also receive a monthly health insurance allowance equal to \$285 multiplied by their applicable vested percentage (the percentage may be different from the retiree).
- The District will also pay the same vested percentage of Medicare Part A premiums for retired employees and their spouses who are not Part A Medicare premium qualified. The premium is \$458 in 2020.

The plans currently available to employees before Medicare eligibility include a low-deductible PPO and two high-deductible PPO plans. In addition to the applicable percent of premium (described above based on the employee's employment date and retirement date), the District also makes contributions to a Health Savings Account (HSA) for pre-65 retirees who elect a high deductible PPO. The amount of the District's subsidy to the HSA is the applicable *vested percent* of the applicable amount shown below:

Plan	80/20 HDHP
Retiree Only	\$ 159.01
Retiree & Spouse	316.59



Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

The ultimate real cost of an employee benefit plan is the value of all benefits and other expenses of the plan over its lifetime. These payments depend only on the terms of the plan and the administrative arrangements adopted. The actuarial assumptions are used to estimate the cost of these benefits; the funding method spreads the expected costs on a level basis over the life of the plan.

Important Dates

Fiscal Year End	June 30, 2021
GASB 75 Measurement Date	December 31, 2020
Valuation Date	December 31, 2019

Valuation Methods

Funding Method	Entry Age Normal Cost, level percent of pay
Asset Valuation Method	Market value of trust assets
Participants Valued	Only current active employees and retired participants and covered dependents are valued. No future entrants are considered in this valuation.

Development of Age-related Medical Premiums

Actual premium rates for retirees and their spouses were adjusted to an age-related basis by applying medical claim cost factors developed from the data presented in the report, "Health Care Costs – From Birth to Death", sponsored by the Society of Actuaries. A description of the use of claims cost curves can be found in MacLeod Watts's Age Rating Methodology provided in Addendum 2 to this report.

Actual premium rates for pre-Medicare retirees and their spouses were adjusted to an age-related basis by applying the medical claim cost factors to monthly baseline premium costs.

Representative claim costs are shown in the chart below.

Expected Monthly Claims by Medical Plan for Selected Ages								
Medical Plan	Male				Female			
	48	53	58	63	48	53	58	63
HSA	\$ 410	\$ 542	\$ 690	\$ 856	\$ 531	\$ 626	\$ 707	\$ 831
PPO	306	404	514	638	396	466	527	619



Supporting Information (Continued)

Section 3 - Actuarial Methods and Assumptions

Economic Assumptions

Long Term Return on Assets	6.7% as of December 31, 2020 & 6.7% as of December 31, 2019 net of plan investment expenses
Discount Rate	6.7% as of December 31, 2020 & 6.7% as of December 31, 2019
General Inflation Rate	2.5% per year
Salary Increase	3.0% per year; since benefits do not depend on salary, this is used to allocate the cost of benefits between service years.
Healthcare Trend	Medical plan premiums and claims costs by age are assumed to increase once each year. The increases over the prior year's levels are assumed to be effective on the dates shown below:

Effective January 1	Premium Increase	Effective January 1	Premium Increase
2021	5.40%	2067	4.70%
2022	5.30%	2068	4.60%
2023-26	5.20%	2069	4.50%
2027-46	5.30%	2070-71	4.40%
2047	5.20%	2072	4.30%
2048-49	5.10%	2073-74	4.20%
2050-53	5.00%	2075	4.10%
2054-59	4.90%	2076 & later	4.00%
2060-66	4.80%		

The healthcare trend shown above was developed using the Getzen Model 2019_b published by the Society of Actuaries using the following settings: CPI 2.5%; Real GDP Growth 1.5%; Excess Medical Growth 1.2%; Expected Health Share of GDP in 2028 20.5%; Resistance Point 25%; Year after which medical growth is limited to growth in GDP 2075.

Dental premiums were assumed to increase 3.5% per year and vision premiums were assumed to increase 2.5% per year.

Other Employer Cost-Sharing in the District plan

The District's HRA contribution for retirees covered by Medicare (HRA contribution) is assumed to increase by 5% annually.



Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Participant Election Assumptions

Participation Rate

Active employees: (a) 100% who qualify for a subsidy in retirement assumed to elect coverage in retirement; employees with high-deductible PPO coverage are assumed to elect 80/20 HDHP PPO coverage in retirement. (b) Those who do not qualify for a subsidy are assumed *not* to elect coverage. (c) Those who separate from the District after meeting the minimum service requirement but prior to the minimum retirement age and who will be eligible for a District subsidy upon reaching the minimum age if they pay their own premiums until such age are assumed to elect the District healthcare coverage at the following rates:

Years Before Subsidy Starts	5	4	3	2	1
% Assumed to elect to continue District health coverage until minimum benefit age	5%	10%	20%	40%	80%

Current retirees: All are assumed to retain their existing election until death.

Spouse Coverage

Active employees: 90% of those assumed to elect coverage in retirement are assumed to be married participants eligible for coverage or HRA contributions for their spouse until their death. Male employees are assumed to be 3 years older than their wives, and female employees are assumed to be 3 years younger than their husbands.

Retired employees: Existing elections for spouse coverage are assumed to continue until age 65 and HRA contributions are assumed to apply until the spouse's death. Actual spouse information is used where available; otherwise the assumptions for spouses of active employees are applied.

Medicare Eligibility

Absent contrary data, all individuals are assumed to be eligible for Medicare Parts A and B at 65. Retirees over age 65 who are not eligible for Medicare are assumed to remain ineligible.



Supporting Information (Continued)

Section 3 - Actuarial Methods and Assumptions

Demographic Assumptions

The demographic actuarial assumptions used in this valuation are based on the most recently published report of the Nevada Public Employees Retirement System, dated June 30, 2019 which covers the employees included in this valuation except for a different basis used to project future mortality improvements.

Mortality: The rates described below were described in the June 30, 2019 actuarial valuation of the Nevada PERS program as being reasonably representative of mortality experience as of that measurement date.

Non-disabled life rates for Regular & Safety employees:

Males and Females: Headcount-Weighted RP-2014 Healthy Annuitant Table

Pre-retirement life rates for Regular & Safety employees:

Males & Females: Headcount-Weighted RP-2014 Employee Table

Mortality Improvement In the June 30, 2019 Nevada PERS Valuation, the mortality rates described above were stated to “reasonably reflect the projected mortality experience of the Plan as of the measurement date.” We then adjusted these rates to anticipate future mortality improvement by applying MacLeod Watts Scale 2020 on a generational basis from 2018 forward (see Addendum 2 for additional details).

Changes recognized in the current measurement period:

None.



Addendum 1: Important Background Information

General Types of Other Post-Employment Benefits (OPEB)

Post-employment benefits other than pensions (OPEB) comprise a part of compensation that employers offer for services received. The most common OPEB are medical, prescription drug, dental, vision, and/or life insurance coverage. Other OPEB may include outside group legal, long-term care, or disability benefits outside of a pension plan. OPEB does not generally include COBRA, vacation, sick leave (unless converted to defined benefit OPEB), or other direct retiree payments.

A direct employer payment toward the cost of OPEB benefits is referred to as an “explicit subsidy”. In addition, if claims experience of employees and retirees are pooled when determining premiums, retiree premiums are based on a pool of members which, on average, are younger and healthier. For certain types of coverage such as medical insurance, this results in an “implicit subsidy” of retiree premiums by active employee premiums since the retiree premiums are lower than they would have been if retirees were insured separately. GASB 75 and Actuarial Standards of Practice generally require that an implicit subsidy of retiree premium rates be valued as an OPEB liability.

Expected retiree claims		
Premium charged for retiree coverage		Covered by higher active premiums
Retiree portion of premium	Agency portion of premium Explicit subsidy	Implicit subsidy

This chart shows the sources of funds needed to cover expected medical claims for pre-Medicare retirees. The implicit subsidy is not affected by how much or little of the premium might be paid by the District.

Valuation Process

The valuation was based on employee census data and benefits provided by the District. A summary of the employee data is provided in Section 1 and a summary of the benefits provided under the Plan is provided in Section 2. While individual employee records have been reviewed to verify that they are reasonable in various respects, the data has not been audited and we have otherwise relied on the District as to its accuracy. The valuation was also based on the actuarial methods and assumptions described in Section 3.

In developing the projected benefit values and liabilities, we first determine an expected premium or benefit stream over the employee’s future retirement. Benefits may include both direct employer payments (explicit subsidies) and/or an implicit subsidy, arising when retiree premiums are expected to be subsidized by active employee premiums. The projected benefit streams reflect assumed trends in the cost of those benefits and assumptions as to the expected date(s) when benefits will end. We then apply assumptions regarding:

- The probability that each individual employee will or will not continue in service to receive benefits.
- The probability of when such retirement will occur for each retiree, based on current age, service and employee type; and
- The likelihood that future retirees will or will not elect retiree coverage (and benefits) for themselves and/or their dependents.



Important Background Information

(Continued)

Valuation Process

(Continued)

We then calculate a present value of these benefits by discounting the value of each future expected benefit payment, multiplied by the assumed expectation that it will be paid, back to the valuation date using the discount rate. These benefit projections and liabilities have a very long time horizon. The final payments for currently active employees may not be made for 60 years or more.

The resulting present value for each employee is allocated as a level percent of payroll each year over the employee's career using the entry age normal cost method and the amounts for each individual are then summed to get the results for the entire plan. This creates a cost expected to increase each year as payroll increases. Amounts attributed to prior fiscal years form the *Total OPEB Liability*. The OPEB cost allocated for active employees in the current year is referred to as *Service Cost*.

Where contributions have been made to an irrevocable OPEB trust, the accumulated value of trust assets (*Fiduciary Net Position*) is applied to offset the *Total OPEB Liability*, resulting in the *Net OPEB Liability*. If a plan is not being funded, then the Net OPEB Liability is equal to the Total OPEB Liability.

It is important to remember that an actuarial valuation is, by its nature, a projection of one possible future outcome based on many assumptions. To the extent that actual experience is not what we assumed, future results will differ. Some possible sources of future differences may include:

- A significant change in the number of covered or eligible plan members;
- A significant increase or decrease in the future medical premium rates;
- A change in the subsidy provided by the District toward retiree medical premiums;
- Longer life expectancies of retirees;
- Significant changes in expected retiree healthcare claims by age, relative to healthcare claims for active employees and their dependents;
- Establishment of and recurring the District contributions to an irrevocable OPEB trust; and
- Changes in the discount rate used to value the OPEB liability

Requirements of GASB 75

The Governmental Accounting Standards Board (GASB) issued GASB Statement No. 75, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. This Statement establishes standards for the measurement, recognition, and disclosure of OPEB expense and related liabilities (assets), note disclosures, and, required supplementary information (RSI) in the financial reports of state and local governmental employers.



Important Background Information

(Continued)

Requirements of GASB 75

(Continued)

Important Dates

GASB 75 requires that the information used for financial reporting falls within prescribed timeframes. Actuarial valuations of the total OPEB liability are generally required at least every two years. If a valuation is not performed as of the Measurement Date, then liabilities are required to be based on roll forward procedures from a prior valuation performed no more than 30 months and 1 day prior to the most recent year-end. In addition, the net OPEB liability is required to be measured as of a date no earlier than the end of the prior fiscal year (the "Measurement Date").

Recognition of Plan Changes and Gains and Losses

Under GASB 75, gains and losses related to changes in Total OPEB Liability and Fiduciary Net Position are recognized in OPEB expense systematically over time.

- *Timing of recognition:* Changes in the Total OPEB Liability relating to changes in plan benefits are recognized immediately (fully expensed) in the year in which the change occurs. Gains and Losses are amortized, with the applicable period based on the type of gain or loss. The first amortized amounts are recognized in OPEB expense for the year the gain or loss occurs. The remaining amounts are categorized as deferred outflows and deferred inflows of resources related to OPEB and are to be recognized in future OPEB expense.
- *Deferred recognition periods:* These periods differ depending on the source of the gain or loss.

Difference between projected
and actual trust earnings:

5 year straight-line recognition

All other amounts:

Straight-line recognition over the expected average remaining service lifetime (EARSL) of all members that are provided with benefits, determined as of the beginning of the Measurement Period. In determining the EARSL, all active, retired and inactive (vested) members are counted, with the latter two groups having 0 remaining service years.

Implicit Subsidy Plan Contributions

An implicit subsidy occurs when expected retiree claims exceed the premiums charged for retiree coverage. When this occurs, we expect part of the premiums paid for active employees to cover a portion of retiree claims. This transfer represents the current year's "implicit subsidy". Because GASB 75 treats payments to an irrevocable trust *or directly to the insurer* as employer contributions, each year's implicit subsidy is treated as a contribution toward the payment of retiree benefits.



Important Background Information (Continued)

Implicit Subsidy Plan Contributions (Continued)

The following hypothetical example illustrates this treatment:

Hypothetical Illustration of Implicit Subsidy Recognition	For Active Employees	For Retired Employees
<i>Prior to Implicit Subsidy Adjustment</i>		
Premiums Paid by Agency During Fiscal Year	\$ 411,000	\$ 48,000
Accounting Treatment	Compensation Cost for Active Employees	Contribution to Plan & Benefits Paid from Plan
<i>After Implicit Subsidy Adjustment</i>		
Premiums Paid by Agency During Fiscal Year	\$ 411,000	\$ 48,000
Implicit Subsidy Adjustment	(23,000)	23,000
Accounting Cost of Premiums Paid	\$ 388,000	\$ 71,000
Accounting Treatment Impact	Reduces Compensation Cost for Active Employees	Increases Contributions to Plan & Benefits Paid from Plan

The example above shows that total payments toward active and retired employee healthcare premiums is the same, but for accounting purposes part of the total is shifted from actives to retirees. This shifted amount is recognized as an OPEB contribution and reduces the current year's premium expense for active employees.

Discount Rate

When the financing of OPEB liabilities is on a pay-as-you-go basis, GASB 75 requires that the discount rate used for valuing liabilities be based on 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). When a plan sponsor makes regular, sufficient contributions to a trust in order to prefund the OPEB liabilities, GASB 75 allows use of a rate up to the expected rate of return of the trust. Therefore, prefunding has an advantage of potentially being able to report overall lower liabilities due to future expected benefits being discounted at a higher rate.

Actuarial Funding Method and Assumptions

The "ultimate real cost" of an employee benefit plan is the value of all benefits and other expenses of the plan over its lifetime. These expenditures are dependent only on the terms of the plan and the administrative arrangements adopted, and as such are not affected by the actuarial funding method. The actuarial funding method attempts to spread recognition of these expected costs on a level basis over the life of the plan, and as such sets the "incidence of cost". GASB 75 specifically requires that the actuarial present value of projected benefit payments be attributed to periods of employee service using the Entry Age Actuarial Cost Method, with each period's service cost determined as a level percent of pay.



Addendum 2: MacLeod Watts Age Rating Methodology

Both accounting standards (e.g. GASB 75) and actuarial standards (e.g. ASOP 6) require that expected retiree claims, not just premiums paid, be reflected in most situations where an actuary is calculating retiree healthcare liabilities. Unfortunately, the actuary is often required to perform these calculations without any underlying claims information. In most situations, the information is not available, but even when available, the information may not be credible due to the size of the group being considered.

Actuaries have developed methodologies to approximate healthcare claims from the premiums being paid by the plan sponsor. Any methodology requires adopting certain assumptions and using general studies of healthcare costs as substitutes when there is a lack of credible claims information for the specific plan being reviewed.

Premiums paid by sponsors are often uniform for all employee and retiree ages and genders, with a drop in premiums for those participants who are Medicare-eligible. While the total premiums are expected to pay for the total claims for the insured group, on average, the premiums charged would not be sufficient to pay for the claims of older insureds and would be expected to exceed the expected claims of younger insureds. An age-rating methodology takes the typically uniform premiums paid by plan sponsors and spreads the total premium dollars to each age and gender intended to better approximate what the insurer might be expecting in actual claims costs at each age and gender.

The process of translating premiums into expected claims by age and gender generally follows the steps below.

1. *Obtain or Develop Relative Medical Claims Costs by Age, Gender, or other categories that are deemed significant.* For example, a claims cost curve might show that, if a 50 year old male has \$1 in claims, then on average a 50 year old female has claims of \$1.25, a 30 year male has claims of \$0.40, and an 8 year old female has claims of \$0.20. The claims cost curve provides such relative costs for each age, gender, or any other significant factor the curve might have been developed to reflect. Section 3 provides the source of information used to develop such a curve and shows sample relative claims costs developed for the plan under consideration.
2. *Obtain a census of participants, their chosen medical coverage, and the premium charged for their coverage.* An attempt is made to find the group of participants that the insurer considered in setting the premiums they charge for coverage. That group includes the participant and any covered spouses and children. When information about dependents is unavailable, assumptions must be made about spouse age and the number and age of children represented in the population. These assumptions are provided in Section 3.
3. *Spread the total premium paid by the group to each covered participant or dependent based on expected claims.* The medical claims cost curve is used to spread the total premium dollars paid by the group to each participant reflecting their age, gender, or other relevant category. After this step, the actuary has a schedule of expected claims costs for each age and gender for the current premium year. It is these claims costs that are projected into the future by medical cost inflation assumptions when valuing expected future retiree claims.

The methodology described above is dependent on the data and methodologies used in whatever study might be used to develop claims cost curves for any given plan sponsor. These methodologies and assumptions can be found in the referenced paper cited as a source in the valuation report.



Addendum 3: MacLeod Watts Mortality Projection Methodology

Actuarial standards of practice (e.g., ASOP 35, Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations, and ASOP 6, Measuring Retiree Group Benefits Obligations) indicate that the actuary should reflect the effect of mortality improvement (i.e., longer life expectancies in the future), both before and after the measurement date. The development of credible mortality improvement rates requires the analysis of large quantities of data over long periods of time. Because it would be extremely difficult for an individual actuary or firm to acquire and process such extensive amounts of data, actuaries typically rely on large studies published periodically by organizations such as the Society of Actuaries or Social Security Administration.

As noted in a recent actuarial study on mortality improvement, key principles in developing a credible mortality improvement model would include the following:

- (1) Short-term mortality improvement rates should be based on recent experience.
- (2) Long-term mortality improvement rates should be based on expert opinion.
- (3) Short-term mortality improvement rates should blend smoothly into the assumed long-term rates over an appropriate transition period.

The **MacLeod Watts Scale 2020** was developed from a blending of data and methodologies found in two published sources: (1) the Society of Actuaries Mortality Improvement Scale MP-2019 Report, published in October 2019 and (2) the demographic assumptions used in the 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, published April 2019.

MacLeod Watts Scale 2020 is a two-dimensional mortality improvement scale reflecting both age and year of mortality improvement. The underlying base scale is Scale MP-2019 which has two segments – (1) historical improvement rates for the period 1951-2015 and (2) an estimate of future mortality improvement for years 2016-2018 using the Scale MP-2019 methodology but utilizing the assumptions obtained from Scale MP-2015. The MacLeod Watts scale then transitions from the 2018 improvement rate to the Social Security Administration (SSA) Intermediate Scale linearly over the 10-year period 2019-2028. After this transition period, the MacLeod Watts Scale uses the constant mortality improvement rate from the SSA Intermediate Scale from 2028-2042. The SSA's Intermediate Scale has a final step down in 2043 which is reflected in the MacLeod Watts scale for years 2043 and thereafter. Over the ages 95 to 115, the SSA improvement rate is graded to zero.

Scale MP-2019 can be found at the SOA website and the projection scales used in the 2019 Social Security Administrations Trustees Report at the Social Security Administration website.



Glossary

Actuarial Funding Method – A procedure which calculates the actuarial present value of plan benefits and expenses, and allocates these expenses to time periods, typically as a normal cost and an actuarial accrued liability

Actuarial Present Value of Projected Benefits (APVPB) – The amount presently required to fund all projected plan benefits in the future. This value is determined by discounting the future payments by an appropriate interest rate and the probability of nonpayment.

Defined Benefit (DB) – A pension or OPEB plan which defines the monthly income or other benefit which the plan member receives at or after separation from employment

Defined Contribution (DC) – A pension or OPEB plan which establishes an individual account for each member and specifies how contributions to each active member's account are determined and the terms of distribution of the account after separation from employment

Discount Rate – Interest rate used to discount future potential benefit payments to the valuation date. Under GASB 75, if a plan is prefunded, then the discount rate is equal to the expected trust return. If a plan is not prefunded (pay-as-you-go), then the rate of return is based on a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher.

Expected Average Remaining Service Lifetime (EARSL) – Average of the expected remaining service lives of all employees that are provided with benefits through the OPEB plan (active employees and inactive employees), beginning in the current period

Entry Age Actuarial Cost Method – An actuarial funding method where, for each individual, the actuarial present value of benefits is levelly spread over the individual's projected earnings or service from entry age to the last age at which benefits can be paid

Explicit Subsidy – The projected dollar value of future retiree healthcare costs expected to be paid directly by the Employer, e.g., the Employer's payment of all or a portion of the monthly retiree premium billed by the insurer for the retiree's coverage

Fiduciary Net Position – The value of trust assets used to offset the Total OPEB Liability to determine the Net OPEB Liability.

Government Accounting Standards Board (GASB) – A private, not-for-profit organization which develops generally accepted accounting principles (GAAP) for U.S. state and local governments; like FASB, it is part of the Financial Accounting Foundation (FAF), which funds each organization and selects the members of each board

Health Care Trend – The assumed rate(s) of increase in future dollar values of premiums or healthcare claims, attributable to increases in the cost of healthcare; contributing factors include medical inflation, frequency or extent of utilization of services and technological developments.

Implicit Subsidy – The projected difference between future retiree claims and the premiums to be charged for retiree coverage; this difference results when the claims experience of active and retired employees are pooled together and a 'blended' group premium rate is charged for both actives and retirees; a portion of the active employee premiums subsidizes the retiree premiums.



Glossary

(Continued)

Net OPEB Liability (NOL) – The liability to employees for benefits provided through a defined benefit OPEB. Only assets administered through a trust that meet certain criteria may be used to reduce the Total OPEB Liability.

Net Position – The Impact on Statement of Net Position is the Net OPEB Liability adjusted for deferred resource items

Nevada PERS – Many state governments maintain a public employee retirement system; Nevada PERS is the Nevada program, covering all eligible state government employees as well as other employees of other governments within Nevada who have elected to join the system

OPEB Expense – The OPEB expense reported in the Agency's financial statement. OPEB expense is the annual cost of the plan recognized in the financial statements.

Other Post-Employment Benefits (OPEB) – Post-employment benefits other than pension benefits, most commonly healthcare benefits but also including life insurance if provided separately from a pension plan

Pay-As-You-Go (PAYGO) – Contributions to the plan are made at about the same time and in about the same amount as benefit payments and expenses coming due

Plan Assets – The value of cash and investments considered as 'belonging' to the plan and permitted to be used to offset the AAL for valuation purposes. To be considered a plan asset, GASB 75 requires (a) contributions to the OPEB plan be irrevocable, (b) OPEB assets to dedicated to providing OPEB benefit to plan members in accordance with the benefit terms of the plan, and (c) plan assets be legally protected from creditors, the OPEB plan administrator and the plan members.

Select and Ultimate – Actuarial assumptions which contemplate rates which differ by year initially (the select period) and then stabilize at a constant long-term rate (the ultimate rate)

Service Cost – Total dollar value of benefits expected to be earned by plan members in the current year, as assigned by the actuarial funding method; also called normal cost

Total OPEB Liability (TOL) – Total dollars required to fund all plan benefits attributable to service rendered as of the valuation date for current plan members and vested prior plan members; a subset of "Actuarial Present Value"

Vesting – As defined by the plan, requirements which when met make a plan benefit nonforfeitable on separation of service before retirement eligibility

