



Actuarial Valuation Report

State of Nevada

State of Nevada Postretirement Health and Life Insurance Plan

For the Fiscal Year Ending June 30, 2022

Measurement Date July 1, 2021

Introduction

This report documents the results of the actuarial valuation for the fiscal year ending June 30, 2022 of the State of Nevada Postretirement Health and Life Insurance Plan for the State of Nevada. The plan is a single-employer plan and does not issue a separate financial statement. As a result, all reporting requirements are included in the employer's financial statement. These results are based on a Measurement Date of July 1, 2021. The information provided in this report is intended strictly for documenting information relating to company and plan disclosure and reporting requirements.

Determinations for purposes other than the financial accounting requirements may be significantly different from the results in this report. Thus, the use of this report for purposes other than those expressed here may not be appropriate.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board. In addition, the valuation results are based on our understanding of the financial accounting and reporting requirements under U.S. Generally Accepted Accounting Principles as set forth in Government Accounting Standards Board Statement 75 (GASB 75) including any guidance or interpretations provided by the Company and/or its audit partners prior to the issuance of this report. The information in this report is not intended to supersede or supplant the advice and interpretations of the State of Nevada's auditors. Additional disclosures may be required under GASB 74.

A valuation model was used to develop the liabilities for this valuation. The valuation model relies on ProVal software, which was developed by Winklevoss Technologies, LLC. Experts within Aon selected this software and determined it is appropriate for performing valuations. We coded and reviewed the software for the provisions, assumptions, methods, and data of the State of Nevada Postretirement Health and Life Insurance Plan.

The valuation model outputs various cost scenarios. The "1% increase" and "1% decrease" interest rate scenarios vary only the discount rate assumption, in order to illustrate the impact of a change in that assumption in isolation. In practice, certain other assumptions would also be expected to vary when the discount rate changes. Therefore, the output from these scenarios should be used solely for assessing the impact of the discount rate in isolation and may not represent a realistic set of results for other purposes.

The "1% increase" and "1% decrease" healthcare cost trend scenarios vary only the healthcare cost trend assumption, in order to illustrate the impact of a change in that assumption in isolation. Therefore, the output from these scenarios should be used solely for assessing the impact of the healthcare cost trend in isolation and may not represent a realistic set of results for other purposes.

Models are used to estimate underlying per capita medical and prescription drug claims costs, subsequently utilized as assumption inputs for valuation models used to develop the liabilities for the 2020 and future valuations. Models are also used to develop underlying future trend rates for Medical plans. The Aon consulting team leveraged expertise of Health experts within Aon as it relates to reviewing the models used for development of the per capita claims costs and future trend rates.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to (but not limited to) such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in actuarial methods or in economic or demographic assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- Changes in plan provisions or applicable law.

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

Funded status measurements shown in this report are determined based on various measures of plan assets and liabilities. For entity and plan disclosure and reporting purposes, funded status is determined using plan assets measured at market value. Plan liabilities are measured based on the interest rates and other assumptions summarized in the Actuarial Assumptions and Methods section of this report.

These funded status measurements may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, and funded status measurements for State of Nevada and plan disclosure and reporting purposes may not be appropriate for assessing the need for or the amount of future contributions. In conducting the valuation, we have relied on personnel, plan design, health care claim cost, and asset information supplied by State of Nevada as of the valuation date. While we cannot verify the accuracy of all the information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results.

The actuarial assumptions and methods used in this valuation are described in the Actuarial Assumptions and Methods section of this report. State of Nevada selected the economic and demographic assumptions and prescribed them for use for purposes of compliance with GASB 75. Aon provided guidance with respect to these assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience.

The undersigned are familiar with the near-term and long-term aspects of OPEB valuations and collectively meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. The information provided in this report is dependent upon various factors as documented throughout this report, which may be subject to change. Each section of this report is considered to be an integral part of the actuarial opinions.

To our knowledge, no colleague of Aon providing services to State of Nevada has any material direct or indirect financial interest in State of Nevada. Thus, we believe there is no relationship existing that might affect our capacity to prepare and certify this actuarial report for State of Nevada.



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Accounting Requirements

Development of GASB 75 Net OPEB Expense

Calculation Details

The following table illustrates the Net OPEB Liability under GASB 75.

	Fiscal Year Ending 6/30/2021	Fiscal Year Ending 6/30/2022
(1) OPEB Liability		
(a) Retired Participants and Beneficiaries Receiving Payment	\$ 945,882,039	\$ 919,816,989
(b) Active Participants	<u>552,176,636</u>	<u>620,365,738</u>
(c) Total	\$ 1,498,058,675	\$ 1,540,182,727
(2) Plan Fiduciary Net Position	<u>(5,651,615)</u>	<u>(9,967,828)</u>
(3) Net OPEB Liability	\$ 1,503,710,290	\$ 1,550,150,555
(4) Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	0.00%	0.00%
(5) Deferred Outflow of Resources for Contributions Made After Measurement Date	\$ 39,563,787	TBD

Expense

The following table illustrates the OPEB expense under GASB 75.

	Fiscal Year Ending 6/30/2021	Fiscal Year Ending 6/30/2022
(1) Service Cost	\$ 53,039,002	\$ 55,710,061
(2) Interest Cost	49,915,121	33,852,685
(3) Expected Investment Return	(8,122)	124,901
(4) Employee Contributions	0	0
(5) Administrative Expense	0	0
(6) Plan Changes	0	0
(7) Amortization of Unrecognized		
(a) Liability (Gain)/Loss	(21,823,734)	(22,404,928)
(b) Asset (Gain)/Loss	(116,631)	(203,321)
(c) Assumption Change (Gain)/Loss	<u>4,771,068</u>	<u>9,243,892</u>
(8) Total Expense	\$ 85,776,704	\$ 76,323,290

Shown below are details regarding the calculation of Service Cost, Interest Cost and Expected Investment Return components of the Expense.

	Fiscal Year Ending 6/30/2021	Fiscal Year Ending 6/30/2022
(1) Development of Service Cost:		
(a) Normal Cost at Beginning of Measurement Period	\$ 53,039,002	\$ 55,710,061
(2) Development of Interest Cost:		
(a) Total OPEB Liability at Beginning of Measurement Period	\$ 1,393,813,300	\$ 1,498,058,675
(b) Normal Cost at Beginning of Measurement Period	53,039,002	55,710,061
(c) Actual Benefit Payments	(49,969,098)	(44,187,551)
(d) Discount Rate	<u>3.51%</u>	<u>2.21%</u>
(e) Interest Cost	\$ 49,915,121	\$ 33,852,685
(3) Development of Expected Investment Return:		
(a) Plan Fiduciary Net Position at Beginning of Measurement Period	\$ 231,400	\$ (5,651,615)
(b) Actual Contributions—Employer	43,881,808	39,563,787
(c) Actual Contributions—Employee	0	0
(d) Actual Benefit Payments	(49,969,098)	(44,187,551)
(e) Administrative Expenses	0	0
(f) Other	0	0
(g) Expected Return on Assets	<u>3.51%</u>	<u>2.21%</u>
(h) Expected Return	\$ 8,122	\$ (124,901)

Reconciliation of Net OPEB Liability

Shown below are details regarding the Total OPEB Liability, Plan Fiduciary Net Position, and Net OPEB Liability for the Measurement Period from June 30, 2021 to June 30, 2022:

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) – (b)
Balance Recognized at 6/30/2021 (Based on 6/30/2020 Measurement Date)	\$ 1,498,058,675	\$ (5,651,615)	\$ 1,503,710,290
Changes Recognized for the Fiscal Year:			
Service Cost	\$ 55,710,061	N/A	\$ 55,710,061
Interest on the Total OPEB Liability	33,852,685	N/A	33,852,685
Changes of Benefit Terms	0	N/A	0
Differences Between Expected and Actual Experience	(2,313,154)	N/A	(2,313,154)
Changes of Assumptions	(937,989)	N/A	(937,989)
Benefit Payments	(44,187,551)	(44,187,551)	0
Contributions From the Employer	N/A	39,563,787	(39,563,787)
Contributions From the Employee	N/A	0	0
Net Investment Income	N/A	307,551	(307,551)
Administrative Expense	N/A	0	0
Net Changes	\$ 42,124,052	\$ (4,316,213)	\$ 46,440,265
Balance Recognized at 6/30/2022 (Based on 6/30/2021 Measurement Date)	\$ 1,540,182,727	\$ (9,967,828)	\$ 1,550,150,555

Liability (Gain)/Loss

The following table illustrates the liability gain/loss under GASB 75.

	Fiscal Year Ending 6/30/2021	Fiscal Year Ending 6/30/2022
(1) OPEB Liability at Beginning of Measurement Period	\$ 1,393,813,300	\$ 1,498,058,675
(2) Service Cost	53,039,002	55,710,061
(3) Interest on the Total OPEB Liability	49,915,121	33,852,685
(4) Changes of Benefit Terms	0	0
(5) Changes of Assumptions	124,244,784	(937,989)
(6) Benefit Payments	<u>(49,969,098)</u>	<u>(44,187,551)</u>
(7) Expected OPEB Liability at End of Measurement Period	\$ 1,571,043,109	\$ 1,542,495,881
(8) Actual OPEB Liability at End of Measurement Period	<u>1,498,058,675</u>	<u>1,540,182,727</u>
(9) OPEB Liability (Gain)/Loss	\$ (72,984,434)	\$ (2,313,154)
(10) Average Future Working Life Expectancy	<u>4.79</u>	<u>3.98</u>
(11) OPEB Liability (Gain)/Loss Amortization	\$ (15,236,834)	\$ (581,194)

Asset (Gain)/Loss

The following table illustrates the asset gain/loss under GASB 75.

	Fiscal Year Ending 6/30/2021	Fiscal Year Ending 6/30/2022
(1) OPEB Asset at Beginning of Measurement Period	\$ 231,400	\$ (5,651,615)
(2) Contributions—Employer	43,881,808	39,563,787
(3) Contributions—Employee	0	0
(4) Expected Investment Income	8,122	(124,901)
(5) Benefit Payments	(49,969,098)	(44,187,551)
(6) Administrative Expense	0	0
(7) Other	<u>0</u>	<u>0</u>
(8) Expected OPEB Asset at End of Measurement Period	\$ (5,847,768)	\$ (10,400,280)
(9) Actual OPEB Asset at End of Measurement Period	<u>(5,651,615)</u>	<u>(9,967,828)</u>
(10) OPEB Asset (Gain)/Loss	\$ (196,153)	\$ (432,452)
(11) Amortization Factor	<u>5.00</u>	<u>5.00</u>
(12) OPEB Asset (Gain)/Loss Amortization	\$ (39,231)	\$ (86,490)

Deferred Outflows/Inflows

The following table illustrates the Deferred Inflows and Outflows as of June 30, 2022 under GASB 75.

	Deferred Outflows	Deferred Inflows
(1) Difference Between Actual and Expected Experience	\$ 0	\$ 55,967,226
(2) Net Difference Between Expected and Actual Earnings on OPEB Plan Investments	0	545,153
(3) Assumption Changes	<u>86,508,148</u>	<u>6,715,613</u>
(4) Sub Total	\$ 86,508,148	\$ 63,227,992
(5) Contributions Made in Fiscal Year Ending 6/30/2022 After Measurement Date	<u>TBD</u>	<u>N/A</u>
(6) Total	\$ TBD	\$ 63,227,992

Amortization of Deferred Inflows/Outflows

The table below lists the amortization bases included in the deferred inflows/outflows as of June 30, 2022.

Date Established	Type of Base	Period		Balance		Annual Payment
		Original	Remaining	Original	Remaining	
7/1/2017	Liability (Gain)/Loss	4.78	0.00	0	0	0
7/1/2017	Assumption Changes	4.78	0.00	(102,299,500)	0	(16,693,100)
7/1/2017	Assets (Gain)/Loss	5.00	0.00	(127,200)	0	(25,600)
7/1/2018	Liability (Gain)/Loss	4.78	0.78	0	0	0
7/1/2018	Assumption Changes	4.78	0.78	(36,851,300)	(6,013,300)	(7,709,500)
7/1/2018	Assets (Gain)/Loss	5.00	1.00	(110,300)	(21,900)	(22,100)
7/1/2019	Liability (Gain)/Loss	4.78	1.78	(31,485,200)	(11,724,500)	(6,586,900)
7/1/2019	Assumption Changes	4.78	1.78	37,971,500	14,140,100	7,943,800
7/1/2019	Assets (Gain)/Loss	5.00	2.00	(149,300)	(59,600)	(29,900)
7/1/2020	Liability (Gain)/Loss	4.79	2.79	(72,984,434)	(42,510,766)	(15,236,834)
7/1/2020	Assumption Changes	4.79	2.79	124,244,784	72,368,048	25,938,368
7/1/2020	Assets (Gain)/Loss	5.00	3.00	(196,153)	(117,691)	(39,231)
7/1/2021	Liability (Gain)/Loss	3.98	2.98	(2,313,154)	(1,731,960)	(581,194)
7/1/2021	Assumption Changes	3.98	2.98	(937,989)	(702,313)	(235,676)
7/1/2021	Assets (Gain)/Loss	5.00	4.00	<u>(432,452)</u>	<u>(345,962)</u>	<u>(86,490)</u>
	Total Changes			(85,670,698)	23,280,156	(13,364,357)

Amounts Recognized in the deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in the OPEB expense as follows:

Year End June 30:

2023	\$ 5,050,743
2024	\$ 10,787,943
2025	\$ 7,527,962
2026	\$ (86,492)
2027	\$ 0
Total Thereafter	\$ 0

Interest Rate Sensitivity

The following table illustrates the impact of interest rate sensitivity on the Net OPEB Liability for fiscal year ending June 30, 2021:

	1% Decrease (1.21%)	Current Rate (2.21%)	1% Increase (3.21%)
(1) Total OPEB Liability	\$ 1,677,075,730	\$ 1,498,058,675	\$ 1,346,801,587
(2) Plan Fiduciary Net Position	<u>(5,651,615)</u>	<u>(5,651,615)</u>	<u>(5,651,615)</u>
(3) Net OPEB Liability (Asset)	\$ 1,682,727,345	\$ 1,503,710,290	\$ 1,352,453,202

The following table illustrates the impact of interest rate sensitivity on the Net OPEB Liability for fiscal year ending June 30, 2022:

	1% Decrease (1.16%)	Current Rate (2.16%)	1% Increase (3.16%)
(1) Total OPEB Liability	\$ 1,695,388,420	\$ 1,540,182,727	\$ 1,370,270,197
(2) Plan Fiduciary Net Position	<u>(9,967,828)</u>	<u>(9,967,828)</u>	<u>(9,967,828)</u>
(3) Net OPEB Liability (Asset)	\$ 1,705,356,248	\$ 1,550,150,555	\$ 1,380,238,025

Healthcare Cost Trend Sensitivity

The following table illustrates the impact of healthcare cost trend sensitivity on the Net OPEB Liability for fiscal year ending June 30, 2021:

	1% Decrease	Trend Rate	1% Increase
(1) Total OPEB Liability	\$ 1,400,818,341	\$ 1,498,058,675	\$ 1,614,470,625
(2) Plan Fiduciary Net Position	<u>(5,651,615)</u>	<u>(5,651,615)</u>	<u>(5,651,615)</u>
(3) Net OPEB Liability (Asset)	\$ 1,406,469,956	\$ 1,503,710,290	\$ 1,620,122,240

The following table illustrates the impact of healthcare cost trend sensitivity on the Net OPEB Liability for fiscal year ending June 30, 2022:

	1% Decrease	Trend Rate	1% Increase
(1) Total OPEB Liability	\$ 1,415,313,394	\$ 1,540,182,727	\$ 1,644,385,247
(2) Plan Fiduciary Net Position	<u>(9,967,828)</u>	<u>(9,967,828)</u>	<u>(9,967,828)</u>
(3) Net OPEB Liability (Asset)	\$ 1,425,281,222	\$ 1,550,150,555	\$ 1,654,353,075

Disclosure—Changes in the Net OPEB Liability and Related Ratios

Changes in the Net OPEB Liability and Related Ratios¹

	Fiscal Year Ending				
	2018	2019	2020	2021	2022
Total OPEB Liability					
Service Cost	\$ 59,309,600	\$ 51,881,500	\$ 51,348,800	\$ 53,039,002	\$ 55,710,061
Interest Cost	39,468,600	47,795,300	52,488,200	49,915,121	33,852,685
Changes of Benefit Terms	0	0	0	0	0
Differences Between Expected and Actual Experiences	0	0	(31,485,200)	(72,984,434)	(2,313,154)
Changes of Assumptions	(102,299,500)	(36,851,300)	37,971,500	124,244,784	(937,989)
Benefit Payments	(38,069,200)	(39,710,200)	(42,489,800)	(49,969,098)	(44,187,551)
Net Change in Total OPEB Liability	\$ (41,590,500)	\$ 23,115,300	\$ 67,833,500	\$ 104,245,375	\$ 42,124,052
Total OPEB Liability (Beginning)	1,344,455,000	1,302,864,500	1,325,979,800	1,393,813,300	1,498,058,675
Total OPEB Liability (Ending)	\$ 1,302,864,500	\$ 1,325,979,800	\$ 1,393,813,300	\$ 1,498,058,675	\$ 1,540,182,727
Plan Fiduciary Net Position					
Contributions—Employer	\$ 38,048,600	\$ 39,668,900	\$ 40,942,400	\$ 43,881,808	\$ 39,563,787
Contributions—Member	0	0	0	0	0
Net Investment Income	164,800	162,400	181,500	204,275	307,551
Benefit Payments	(38,069,200)	(39,710,200)	(42,489,800)	(49,969,098)	(44,187,551)
Administrative Expense	0	0	0	0	0
Other	0	0	0	0	0
Net Change in Plan Fiduciary Net Position	\$ 144,300	\$ 121,100	\$ (1,365,900)	\$ (5,883,015)	\$ (4,316,213)
Plan Fiduciary Net Position (Beginning)	1,331,900	1,476,200	1,597,300	231,400	(5,651,615)
Plan Fiduciary Net Position (Ending)	\$ 1,476,200	\$ 1,597,300	\$ 231,400	\$ (5,651,615)	\$ (9,967,828)
Net OPEB Liability (Ending)	\$ 1,301,388,300	\$ 1,324,382,500	\$ 1,393,581,900	\$ 1,503,710,290	\$ 1,550,150,555
Net Position as a Percentage of OPEB Liability	N/A	N/A	N/A	N/A	N/A
Covered-Employee Payroll	\$ 1,663,856,400	\$ 1,890,946,300	\$ 1,991,456,200	\$ 2,046,677,655	\$ 2,090,281,552
Net OPEB Liability as a Percentage of Payroll	78%	70%	70%	73%	74%

¹ GASB 75 was effective first for employer fiscal years beginning after June 15, 2017.

Disclosure—Contribution Schedule

Contributions

	Fiscal Year Ending				
	2018	2019	2020	2021	2022
Actuarially Determined Contribution	\$ N/A	\$ N/A	\$ N/A	\$ N/A	\$ N/A
Contributions Made in Relation to the Actuarially Determined Contribution	N/A	N/A	N/A	N/A	N/A
Contribution Deficiency (Excess)	\$ N/A	\$ N/A	\$ N/A	\$ N/A	\$ N/A
Covered-Employee Payroll	\$ 1,663,856,400	\$ 1,890,946,300	\$ 1,991,456,200	\$ 2,046,677,655	\$ 2,090,281,552
Contributions as a Percentage of Payroll	N/A	N/A	N/A	N/A	N/A

Notes to Schedule: There is no actuarially determined contribution

Methods and assumptions used to determine contribution rates:

- Actuarial Cost Method Entry Age Normal Level % of Salary
- Asset Valuation Method Market Value of Assets
- Salary Increases 2.75%
- Investment Rate of Return 2.21%, net of OPEB plan investment expense, including inflation.
- Retirement Rates Varies by age and service
- Mortality Rates Pub-2010 Public Retirement Plans Mortality Table weighted by Headcount, projected by MP-2020 (See Actuarial Assumptions and Methods section for additional details)

Appendix

Participant Data

The actuarial valuation was based on personnel information from State of Nevada records as of January 1, 2020. Following are some of the pertinent characteristics from the personnel data as of that date. Prior year characteristics are also provided for comparison purposes. Both age and service have been determined using years and months as of the valuation date.

	January 1, 2018	January 1, 2020
Health Care Participants		
Active Participants ¹		
Number	13,190	10,183
Average Age	51.5	52.1
Average Service	14.4	15.9
Inactive Participants ²		
State Retirees and Surviving Spouses Under Age 65	3,355	3,726
Average Age	59.4	59.7
State Retirees and Surviving Spouses Age 65 and Older	7,129	7,924
Average Age	73.7	74.4
Terminated Vested	2,272	2,280
Average Age	53.4	56.4
State Covered Spouses	2,067	2,250
Average Age	63.6	66.7
Total Participants		
Number	28,013	26,363
Life Insurance Participants		
Active Participants		
Number	13,190	10,183
Average Age	51.5	52.1
Average Service	14.4	15.9
State Inactive Participants		
Number	12,375	13,961
Average Age	62.7	67.6
Non-State Inactive Participants		
Number	7,354	4,233
Average Age	68.2	73.2

¹ Active counts reflect those hired prior to January 1, 2012.

² Inactive counts include terminated vested participants.

Active Participants By Age and Service

The following table summarizes the distribution of the future retiree population by age and service as of January 1, 2020:

(AS OF JANUARY 1, 2020)

Age	COMPLETED YEARS OF SERVICE										Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 25	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	19	2	0	0	0	0	0	0	21
30-34	0	0	159	147	7	0	0	0	0	0	313
35-39	0	0	231	505	148	3	0	0	0	0	887
40-44	0	0	176	635	375	95	3	0	0	1	1,285
45-49	0	0	208	677	544	275	56	3	0	1	1,764
50-54	0	0	204	656	537	357	110	11	1	0	1,876
55-59	0	0	189	579	502	322	129	33	3	1	1,758
60-64	0	0	138	444	343	221	117	55	15	5	1,338
65-69	0	0	61	171	153	117	58	46	16	5	627
70+	0	0	17	62	75	43	35	43	18	21	314
Total	0	0	1,402	3,878	2,684	1,433	508	191	53	34	10,183

Plan Provisions

Eligibility

For a retiree to participate in the PEBP program, the participant must be receiving a PERS, LRS, JRS, or RPA benefit. PERS eligibility requirements vary by employee group and benefit type. Actives hired after December 31, 2011 are not eligible for any subsidy from PEBP. In addition, actives hired after December 31, 2009 and who retire with less than 15 years of continuous service (except a disability retirement) are not eligible for a subsidy from PEBP.

Normal Retirement—Regular Employees

- Minimum age of 65 with 5+ years of service
- Minimum age of 60 with 10+ years of service
- Minimum 30 years of service, regardless of age

Normal Retirement—Police & Fire Employees

- Minimum age of 65 with 5+ years of service
- Minimum age of 55 with 10+ years of service
- Minimum age of 50 and 20+ years of service
- Minimum 25 years of service, regardless of age

Disability Benefit

- Minimum 5 years of service, regardless of age

Reduced Benefit

- Minimum 5 years of service, regardless of age

For this valuation, Regular Employees were considered eligible for retirement at a minimum age of 50 with 5 years of service and Police & Fire Employees were considered eligible for retirement at a minimum age of 45 with 5 years of service.

Surviving spouses are not eligible to receive post-Medicare benefits.

Medical and Rx Benefits

▪ Pre-Medicare Retirees

For retirees with younger spouses, retirees and spouses will move to the Exchange once the spouse becomes Medicare eligible (age 65). For retirees with older spouse, retirees and spouses will both move to the Exchange when the retiree becomes Medicare eligible.

▪ Medicare Retirees

Certain retirees over age 65 are not eligible for Medicare Part A as indicated on the data. For these participants, we have assumed they will not become eligible for Medicare Part A at any time in the future. Current active employees are assumed to be eligible for Medicare Part A. Medicare eligible retirees will go to the Exchange.

Medical and Rx Benefits

▪ Terminated Vested

If service is less than 10 years, Terminated Vested (TVs) participants are assumed to retire at age 65 and go directly to the Exchange. If service is ten years or more, TVs are assumed to retire at age 60 and move to the Exchange in the same manner as actives outlines above.

▪ Current Actives

Actives enrolled in the CDHP are assumed to participate in this plan upon retirement. It is assumed 5% of pre-Medicare actives enrolled in the HPN Plan will participate in the CDHP upon retirement. Likewise, it is assumed 20% of pre-Medicare actives enrolled in the HTH Plan will participate in the CDHP upon retirement. The balance of the HMO populations will remain in the HMO plan as early retirees. These assumptions were based upon actual PEBP census. For all plans, when actives retire and then reach age 65, it is assumed they become Medicare eligible. Once both the participant and spouse become Medicare eligible, it is assumed they will both participate in the Exchange.

Dental Benefits

Pre-Medicare retirees will participate in PEBP's Dental Plan. Those enrolled in the EHPD plan will assume to enroll in PEBP's dental plan. For those future Exchange retirees, we assume 55% will participate in PEBP's Dental program.

Life Insurance Benefits

If you participate in a PEBP medical plan, your benefits include \$12,500 life insurance. Zero retiree contributions have been assumed for the life insurance. The life insurance retiree contribution for non-Medicare retirees is included in the medical premium. For Medicare retirees, the premium is paid by PEBP.

HRA Benefit

The following monthly amount will be credited on behalf of Medicare Eligible Retirees, effective July 1, 2020:

- For those who retired prior to January 1, 1994, the dollar amount is equal to \$195 (previously was \$180).
- For those who retired on or after January 1, 1994, the dollar amount is equal to the base amount (\$13) multiplied by the years of service credit up to a maximum of 20 years of service. Prior to this plan year, the base amount was \$12.

Retiree Medical Contributions (Effective 7/1/2020-6/30/2021)

<ul style="list-style-type: none"> ▪ State Non-Medicare Retirees and Survivors 		CDHP	HMO
	Retiree	\$233.59	\$419.79
	Retiree + Spouse	\$553.84	\$994.97
	Surviving Spouse	\$627.31	\$855.12
<ul style="list-style-type: none"> ▪ Non-State Non-Medicare Retirees and Survivors 		CDHP	HMO
	Retiree	\$233.59	\$419.79
	Retiree + Spouse	\$553.84	\$994.97
	Surviving Spouse	\$1,022.49	\$813.22
<ul style="list-style-type: none"> ▪ Voluntary Dental Rates for Medicare Exchange Retirees 		State	Non-State
	Retiree	\$40.44	\$41.67
	Retiree + Spouse	\$80.87	\$83.33
	Surviving Spouse	\$40.44	\$41.67
Subsidy for Retirees Enrolled in CDHP or HMO Plans	Years of Service	7/1/2020	
	5		\$358.61
	6		\$322.75
	7		\$286.89
	8		\$251.03
	9		\$215.17
	10		\$179.31
	11		\$143.45
	12		\$107.58
	13		\$71.72
	14		\$35.86
	15		\$0.00
	16		(\$35.86)
	17		(\$71.72)
18		(\$107.58)	
19		(\$143.45)	
20		(\$179.31)	

Part B Premium	The State of Nevada pays the Part B premium for eligible participants in the CDHP and HMO Plans. If not specifically indicated on the data, it is assumed any retiree over age 65 and participating in these plans will receive the Part B premium and the State pays the premium. For retirees indicated on the data file as eligible for Part B, it is assumed they will receive the Part B premium subsidy. The Part B premium subsidy in effect for 2020 calendar year is \$135.50 per month.
Administrative Fees (Per Employee Basis)	Effective as of January 1, 2020 <ul style="list-style-type: none">▪ CDHP: \$672.12▪ HMO: \$673.68
HRA Account Reversions	<ul style="list-style-type: none">▪ Pre-65 CDHP: 5.0%▪ Medicare HRA: 0.5%

Health Care Claims Development

On March 23, 2010, the “Patient Protection and Affordable Care Act” was signed into law, followed by the passage of the “Health Care and Education Affordability Reconciliation Act of 2010” on March 30, 2010 (“Acts”). The health care reforms contained in these Acts have wide-spread impact on health care programs, including those covering retirees. This valuation reflects Aon’s interpretation of the Acts based on information currently available. Future regulations on each aspect of the Acts may be different than Aon’s initial interpretations.

Key issues in Health Care Reform that have an effect on the valuation include:

- Excise tax on high-cost health plans
- Group market reforms
- Early Retiree Reimbursement Program
- Taxation of Retiree Drug Subsidy for post-65 coverage

The valuation issues related to each of these topics are discussed below.

Health Care Reform Excise Tax Adjustment:

The “Further Consolidated Appropriations Act, 2020” signed into law on December 20, 2019, included a permanent repeal of the excise tax on high-cost plans (a.k.a. “the Cadillac tax”) originally imposed by the Affordable Care Act in 2010. As a result, there is no impact from the excise tax in the valuation.

Group Market Reforms

- Requirement to Cover Children to Age 26
 - The Acts requires that a group health plan that provides dependent coverage of children shall continue to make such coverage available for an adult child until the child turns 26 years of age. Current and future dependent children are valued implicitly in the valuation. Per capita claims costs were developed using claims information for all covered lives and adult headcounts. As such, the impact of child coverage is built into the per capita claims for retirees and spouses.
- Elimination of Benefit Limitations
 - The Acts include a number of other provisions that may increase the cost of retiree health care including the elimination of lifetime maximum benefits and “restrictive” annual benefit limitations. We have made no adjustment for these additional benefits because there are no material limits in the plans.

Medicare Part D reimbursements and the Early Retiree Reinsurance program do not fall under GASB 75.

Claims Cost Development

The first step in determining the liabilities under a postretirement welfare plan is to calculate the expected average claims cost per participant in the coming year. The preliminary per capita costs were developed as follows:

- The average medical/Rx and dental per capita claims costs were developed from the fiscal year 2021 premium rates for the HMO plan and premium-equivalent rates for the other plans. Premium/premium-equivalent rates were provided by the State of Nevada health pricing actuary. The

expected medical/Rx and dental per capita “adult-equivalent” claims costs were based on the respective active, pre-65 retiree, and non-Medicare eligible post-65 retiree enrollment weighted average of the four-tier rate structure including the cost of dependent children as provided by the State of Nevada, and were already centered at the mid-point of the annual period following the valuation date. Average medical/Rx per capita claims costs were then age-adjusted based on the demographics of the population, and the assumed health care aging factors shown in the table below. Average dental per capita claims costs were not adjusted for aging.

- Participants who are eligible for Medicare Part A and not yet eligible to participate in the retiree medical exchange are assumed to experience per capita costs 50% lower than post65 participants not eligible for Medicare Part A.
- Fiscal year 2021 per capita administrative costs are assumed to be \$432 and \$485 for CDHP and HMO, respectively. Administrative expenses were based on actual fiscal 2021 administrative costs, converted to a per member per year rate.

Models are used to estimate underlying per capita medical, prescription drug, and dental claims costs, subsequently utilized as assumption inputs for valuation models used to develop the liabilities for the 2020 and future valuations. The Aon consulting team leveraged expertise of Health experts within Aon as it relates to reviewing the models used for development of the per capita claims costs and future trend rates.

The sample per capita medical/Rx and dental claims cost assumptions shown below by age, benefit, and plan represent the true underlying baseline experience for non-Medicare eligible participants, not including administrative expenses, estimated for the State of Nevada's sponsored postretirement benefits and costs. These rates are used in the expense calculation for the period 7/1/2020 – 6/30/2021 and disclosures as of 6/30/2021.

Age	State CDHP/PPO	State EPO/HMO	Non-State CDHP/PPO	Non-State EPO/HMO	Dental
50	\$7,129	\$9,440	\$7,276	\$5,803	\$490
55	8,800	11,652	8,980	7,162	490
60	10,914	14,451	11,138	8,882	490
65	13,152	17,413	13,420	10,703	490
70	15,321	20,286	15,633	12,469	490
75	16,999	22,507	17,344	13,835	490
80	18,223	24,128	18,593	14,831	490
85	19,438	25,738	19,834	15,820	490
90+	20,028	26,518	20,436	16,300	490

Age Grading Factors

Age	Composite
Under 44	3.3%
45–49	3.8%
50–54	4.3%
55–59	4.4%
60–64	3.8%
65–69	3.1%
70–74	2.1%
75–79	1.4%
80–84	1.3%
85–89	0.6%
90 and Over	0.0%

Actuarial Assumptions and Methods

The actuarial assumptions and methods used in the June 30, 2022 valuation are stated below.

Valuation Date	January 1, 2020
Census Date	January 1, 2020
Measurement Date	June 30, 2021
Actuarial Method	Entry Age Normal Level % of Pay
Inflation (CPI)	2.50%
Discount Rate	Based on Bond Buyer General Obligation 20-Bond Municipal Bond Index: <ul style="list-style-type: none"> ▪ Measurement Date June 30, 2020: 2.21% ▪ Measurement Date June 30, 2021: 2.16%

Health Care Trend Rates

<ul style="list-style-type: none"> ▪ Medical, Rx and Administrative Fees 	<table border="1"> <thead> <tr> <th style="border-bottom: 1px solid black;">Year</th> <th style="border-bottom: 1px solid black;">Trend</th> </tr> </thead> <tbody> <tr><td>2020</td><td>6.25%</td></tr> <tr><td>2021</td><td>6.25%</td></tr> <tr><td>2022</td><td>6.00%</td></tr> <tr><td>2023</td><td>5.75%</td></tr> <tr><td>2024</td><td>5.75%</td></tr> <tr><td>2025</td><td>5.50%</td></tr> <tr><td>2026</td><td>5.25%</td></tr> <tr><td>2027</td><td>5.25%</td></tr> <tr><td>2028</td><td>5.00%</td></tr> <tr><td>2029</td><td>4.75%</td></tr> <tr><td>2030</td><td>4.75%</td></tr> <tr><td>2031</td><td>4.50%</td></tr> </tbody> </table>	Year	Trend	2020	6.25%	2021	6.25%	2022	6.00%	2023	5.75%	2024	5.75%	2025	5.50%	2026	5.25%	2027	5.25%	2028	5.00%	2029	4.75%	2030	4.75%	2031	4.50%
Year	Trend																										
2020	6.25%																										
2021	6.25%																										
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2026	5.25%																										
2027	5.25%																										
2028	5.00%																										
2029	4.75%																										
2030	4.75%																										
2031	4.50%																										
<ul style="list-style-type: none"> ▪ Dental 	4.00%																										
<ul style="list-style-type: none"> ▪ Admin 	3.00%																										
<ul style="list-style-type: none"> ▪ HRA Accounts 	0.00%																										
<ul style="list-style-type: none"> ▪ Part B Premiums 	4.50%																										
Life Insurance Administrative Load	10.00%																										

Actuarial Assumptions and Methods

Health Benefits Participation	90% of current eligible actives and 60% of current terminated vested employees will elect retiree plan coverage. Additionally, 60% of future retirees who have declined coverage are assumed to elect to participate in the plan upon retirement. 60% of actives decremented to withdrawal from the plan with at least five years of service will elect retiree medical and dental coverage.
Life Insurance Participation	All active employees and current retirees that elected healthcare coverage. Reinstated retirees and survivors are not eligible to receive the life insurance benefit.
Plan Election Percentage	Future retiree election percentage is based on the current retiree plan enrollment distribution.
Demographic Assumptions	Census data was provided by the State and adjustments were made for missing data, which have an insignificant effect on the liability.
	The census provided did not include gender for every terminated vested participant, so it was assumed that the percentage of males among the terminated vested population is consistent with the percentage of males among the retiree population.
	All actives are assumed to accumulate State service only. A factor has been applied to total service for State and Non-State retirees which represents the percentage of a retiree's total service that is attributable to service with the State:
	<ul style="list-style-type: none"> ▪ State: 94% ▪ Non-State Retiree: 13%
Spouse Age Difference & Marriage Percentage	Male participants are assumed to be four years older than spouses; female participants are assumed to be two years younger than spouses.
	30% of active males and 15% of active females will elect retiree spouse coverage.

Actuarial Assumptions and Methods

Healthy Mortality Officers: Pub-2010 Public Retirement Plans Safety Mortality Table weighted by Headcount, projected by MP-2020
 Civilians: Pub-2010 Public Retirement Plans General Mortality Table weighted by Headcount, projected by MP-2020

Disabled Mortality Officers: Pub-2010 Public Retirement Plans Safety Disabled Mortality Table weighted by Headcount, projected by MP-2020
 Civilians: Pub-2010 Public Retirement Plans General Disabled Mortality Table weighted by Headcount, projected by MP-2020

Retirement Rates See Table A.

Withdrawal Rates See Table B.

Disability Rates See Table C.

Salary Scale

- Inflation 2.75%
- Productivity Pay Increases 0.50%

- Promotional and Merit Salary Increase

Years of Service	Regular	Police & Fire
Under 1	5.90%	10.65%
1	4.80%	7.15%
2	4.00%	5.20%
3	3.60%	4.60%
4	3.30%	4.30%
5	3.00%	4.15%
6	2.80%	3.90%
7	2.70%	3.50%
8	2.50%	3.15%
9	2.35%	2.90%
10	2.15%	2.50%
11	1.75%	1.90%
12	1.50%	1.50%
13	1.25%	1.30%
14	1.10%	1.30%
15+	1.00%	1.30%

Actuarial Assumptions and Methods

Table A—Retirement Rates

Age	Regular Years of Service (%)				
	5-9	10-19	20-24	25-29	30+
45-49	0.00	0.00	0.75	6.50	16.00
50-54	0.50	1.50	1.50	8.50	18.00
55-59	1.50	3.50	5.00	12.00	20.00
60-61	6.50	11.00	17.00	22.00	22.00
62-64	9.00	13.00	17.00	22.00	22.00
65-69	20.00	20.00	22.00	25.00	25.00
70-74	30.00	30.00	40.00	40.00	40.00
75+	100.00	100.00	100.00	100.00	100.00

Age	Police/Fire Years of Service (%)				
	5-9	10-19	20-24	25-29	30+
Under 40	0.00	0.00	0.00	0.00	0.00
40-44	0.00	0.50	3.50	0.00	0.00
45-49	0.00	1.00	6.50	18.00	18.00
50-54	1.50	4.50	13.00	20.00	24.00
55-59	3.50	10.00	20.00	25.00	28.00
60-64	9.00	18.00	25.00	35.00	35.00
65-69	50.00	50.00	60.00	60.00	60.00
70+	100.00	100.00	100.00	100.00	100.00

Actuarial Assumptions and Methods

Table B—Withdrawal Rates

Years of Service	% Regular	% Police/Fire
0-1	16.00	15.00
1-2	12.50	8.00
2-3	10.25	7.50
3-4	8.00	6.00
4-5	7.50	5.00
5-6	6.00	3.75
6-7	5.25	3.50
7-8	4.25	2.50
8-9	4.00	2.25
9-10	3.75	1.90
10-11	3.25	1.50
11-12	3.00	1.30
12-13	2.75	1.00
13-14	2.50	0.90
14-15	2.25	0.80
15-16	2.00	0.70
16-17	2.00	0.60
17-18	1.75	0.50
18-19	1.75	0.50
19-20	1.75	0.50
20+	1.75	0.45

Actuarial Assumptions and Methods

Table C—Disability Rates

Age	% Regular	% Police/Fire
20-24	0.01	0.00
25-29	0.03	0.06
30-34	0.06	0.12
35-39	0.10	0.30
40-44	0.21	0.45
45-49	0.35	0.65
50-54	0.60	0.80
55-59	0.75	0.65
60-64	0.40	0.50
65+	0.00	0.00