



Actuarial Report

State of Nevada Postretirement Health and Life Insurance Plan

GASB 75 Accounting Valuation for the Fiscal Year Ending
June 30, 2019

Based on a July 1, 2018 Measurement Date

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Introduction

This report documents the results of the actuarial valuation for the fiscal year ending June 30, 2019 of the Postretirement Health and Life Insurance Plan for the State of Nevada (the "State"). These results are based on a measurement date of June 30, 2018. The information provided in this report is intended strictly for documenting financial accounting disclosure and reporting requirements.

Determinations for purposes other than financial accounting disclosure and reporting 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 Governmental Accounting Standards Board Statement 75 (GASB 75) including any guidance or interpretations provided by the State 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's auditors. Additional disclosures may be required under GASB 74.

Future actuarial measurements may differ significantly from the current measurements presented in this report due (but not limited to) 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 financial accounting 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 financial accounting disclosure and reporting purposes may not be appropriate for assessing the need for or the amount of future contributions.

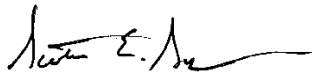
In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the State. While we cannot verify the accuracy of all the information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt 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. The State selected the economic and demographic assumptions and

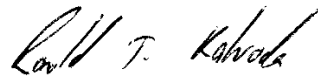
prescribed them for use for purposes of compliance with GASB 75. Aon provided guidance with respect to these assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience.

The undersigned are familiar with the near-term and long-term aspects of postemployment benefits 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 the State has any material direct or indirect financial interest in the State. Thus, we believe there is no relationship existing that might affect our capacity to prepare and certify this actuarial report for the State.



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June 2019

Summary

This report documents the results of the actuarial valuation for the State of Nevada Postretirement Health and Life Insurance Plan for the fiscal year ending June 30, 2019. The valuation results are based on the financial accounting and reporting requirements under GASB 75 and a July 1, 2018 measurement date.

This valuation includes retiree medical, prescription drug, dental and life insurance benefits. The valuation results reflect the plan provisions in effect as of January 1, 2018. It's our understanding there have been no significant plan changes since January 1, 2018. In addition, the valuation is based census data provided by the State as of January 1, 2018. Active employees hired after December 31, 2011 are not eligible for benefits and have been excluded from the valuation.

A nominal amount of assets, associated with the HRA benefit, have been accumulated in a trust by the State for purposes of paying future benefits. The amount of assets in the trust are less than the expected benefit payments in the first year. In addition, it is our understanding that the State intends to fund future benefits on a pay-as-you-go basis. Therefore, the discount rate used in the valuation is based on the Bond Buyer General Obligation 20-Bond Municipal Bond Index for all years, consistent with the requirements of GASB 75.

Plan Changes

There have been no plan changes since the prior valuation.

Assumption Changes

The valuation reflects the following assumption changes from the July 1, 2017 measurement date to the July 1, 2018 measurement date:

- Discount rate changed from 3.58% to 3.87%

Method Changes

There have been no method changes since the prior valuation.

Valuing Postretirement Medical Benefits

In reviewing these valuation results, it should be noted that determining the value of future health care benefits is especially difficult because assumptions must be made about future events that are difficult to predict. Future increases in health care costs are affected by many factors, including:

- Health care inflation
- Changes in utilization patterns
- Technological advances
- Cost shifting (i.e., increase in private plans' costs in non-managed programs due to uninsured claims, changes in the Medicare payment structure, and increased emphasis on managed care programs)
- Cost leveraging (i.e., erosion of fixed deductibles and out of pocket maximums)
- Changes to government medical programs, such as Medicare

Changes, even small changes, in assumptions or actual experience can lead to significant changes in results. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

Estimating Current Health Care Costs

In addition to estimating future increases in health care claims costs, it is necessary to develop a starting claims cost on a per covered individual basis. For a discussion of the process used to develop claims and details on the health care trend and other assumptions used in this valuation, see the Health Care Claims Development and Actuarial Assumptions and Method sections of this report.

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 6/30/2018	Fiscal Year Ending 6/30/2019
▪ Total OPEB Liability		
– Retired Participants and Beneficiaries Receiving Payment	\$ 744,952,000	\$ 712,368,500
– Active Participants	<u>557,912,500</u>	<u>613,611,300</u>
– Total	\$ 1,302,864,500	\$ 1,325,979,800
▪ Plan Fiduciary Net Position	\$ 1,476,200	\$ 1,597,300
▪ Net OPEB Liability	\$ 1,301,388,300	\$ 1,324,382,500
▪ Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	0%	0%
▪ Deferred Outflow of Resources for Contributions Made After Measurement Date	\$ 39,668,900	\$ TBD

Expense

The following table illustrates the OPEB expense under GASB 75.

	Fiscal Year Ending 6/30/2019
▪ Service Cost	\$ 51,881,500
▪ Interest Cost	47,795,300
▪ Expected Investment Return	(52,100)
▪ Contributions from Non-Employer Contributing Entities	0
▪ Administrative Expense	0
▪ Plan Changes	0
▪ Amortization of Unrecognized	
– Liability (Gain)/Loss	0
– Asset (Gain)/Loss	(47,500)
– Assumption Changes	<u>(29,111,100)</u>
▪ Total Expense	\$ 70,466,100

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

	Fiscal Year Ending 6/30/2019
Development of Service Cost:	
▪ Normal Cost at Measurement Date	\$ 51,881,500
Development of Interest Cost:	
▪ Total OPEB Liability at Measurement Date	\$ 1,302,864,500
▪ Normal Cost at Measurement Date	51,881,500
▪ Benefit Payments, net of Employee Contributions	(39,710,200)
▪ Discount Rate	평 <u>3.58%</u>
▪ Interest Cost	\$ 47,795,300
Development of Expected Investment Return:	
▪ Plan Fiduciary Net Position at Measurement Date	\$ 1,476,200
▪ Employer Contributions	39,668,900
▪ Benefit Payments, net of Employee Contributions	(39,710,200)
▪ Administrative Expenses	0
▪ Expected Return on Assets	<u>3.58%</u>
▪ Expected Investment Return	\$ 52,100

Reconciliation of Net OPEB Liability

Shown below are details regarding the Total OPEB Liability, Plan Fiduciary Net Position, and Net OPEB Liability for the period from June 30, 2018 to June 30, 2019.

	Fiscal Year Ending 6/30/2019		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
Balance Recognized at 6/30/2018 (Based on 7/1/2017 Measurement Date)	\$ 1,302,864,500	\$ 1,476,200	\$ 1,301,388,300
Changes Recognized for the Fiscal Year:			
▪ Service Cost	51,881,500	N/A	51,881,500
▪ Interest on Total OPEB Liability	47,795,300	N/A	47,795,300
▪ Changes of Benefit Terms	0	N/A	0
▪ Differences Between Expected and Actual Experience	0	N/A	0
▪ Assumption Changes	(36,851,300)	N/A	(36,851,300)
▪ Benefit Payments, net of Employee Contributions	(39,710,200)	(39,710,200)	0
▪ Employer Contributions	N/A	39,668,900	(39,668,900)
▪ Net Investment Income	N/A	162,400	(162,400)
▪ Administrative Expense	N/A	0	0
Net Changes	<u>23,115,300</u>	<u>121,100</u>	<u>22,994,200</u>
Balance Recognized at 6/30/2019 (Based on 7/1/2018 Measurement Date)	\$ 1,325,979,800	\$ 1,597,300	\$ 1,324,382,500

Sensitivity

The following table illustrates the impact of discount rate sensitivity on the Net OPEB Liability for fiscal year ending June 30, 2019:

	1% Decrease (2.87%)	Discount Rate (3.87%)	1% Increase (4.87%)
Total OPEB Liability	\$ 1,460,832,500	\$ 1,325,979,800	\$ 1,208,782,300
Plan Fiduciary Net Position	<u>1,597,300</u>	<u>1,597,300</u>	<u>1,597,300</u>
Net OPEB Liability	\$ 1,459,235,200	\$ 1,324,382,500	\$ 1,207,185,000

The following table illustrates the impact of health care trend rate sensitivity on the Net OPEB Liability for fiscal year ending June 30, 2019:

	1% Decrease	Trend Rates	1% Increase
Total OPEB Liability	\$ 1,236,938,500	\$ 1,325,979,800	\$ 1,431,098,400
Plan Fiduciary Net Position	<u>1,597,300</u>	<u>1,597,300</u>	<u>1,597,300</u>
Net OPEB Liability	\$ 1,235,341,200	\$ 1,324,382,500	\$ 1,429,501,100

Liability (Gain)/Loss

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

	Fiscal Year Ending 6/30/2019
▪ OPEB Liability at Beginning of Measurement Period	\$ 1,302,864,500
▪ Service Cost	51,881,500
▪ Interest on the Total OPEB Liability	47,795,300
▪ Changes of Benefit Terms	0
▪ Assumption Changes	(36,851,300)
▪ Benefit Payments, net of Employee Contributions	<u>(39,710,200)</u>
▪ Expected OPEB Liability at End of Measurement Period	\$ 1,325,979,800
▪ Actual OPEB Liability at End of Measurement Period	<u>1,325,979,800</u>
▪ OPEB Liability (Gain)/Loss	\$ 0
▪ Average Future Working Life Expectancy	<u>4.78</u>
▪ OPEB Liability (Gain)/Loss Amortization	\$ 0
▪ Assumption Changes	\$ (36,851,300)
▪ Average Future Working Life Expectancy	<u>4.78</u>
▪ Assumption Changes Amortization	\$ (7,709,500)

Asset (Gain)/Loss

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

	Fiscal Year Ending 6/30/2019
▪ OPEB Asset at Beginning of Measurement Period	\$ 1,476,200
▪ Employer Contributions	39,668,900
▪ Expected Investment Income	52,100
▪ Benefit Payments, net of Employee Contributions	(39,710,200)
▪ Administrative Expense	<u>0</u>
▪ Expected OPEB Asset at End of Measurement Period	\$ 1,487,000
▪ Actual OPEB Asset at End of Measurement Period	<u>1,597,300</u>
▪ OPEB Asset (Gain)/Loss	\$ (110,300)
▪ Amortization Factor	<u>5.00</u>
▪ OPEB Asset (Gain)/Loss Amortization	\$ (22,100)

Deferred Outflows/Inflows

The following table illustrates the Deferred Inflows and Outflows at the end of the fiscal year under GASB 75.

	Deferred Outflows	Deferred Inflows
Difference Between Actual and Expected Experience		
▪ Measurement Date July 1, 2017	\$ 0	\$ 0
▪ Measurement Date July 1, 2018	\$ 0	\$ 0
Assumption Changes		
▪ Measurement Date July 1, 2017	\$ 0	\$ 59,496,300
▪ Measurement Date July 1, 2018	\$ 0	\$ 29,141,800
Net Difference Between Expected and Actual Earnings on OPEB Plan Investments		
▪ Measurement Date July 1, 2017	\$ 0	\$ 76,400
▪ Measurement Date July 1, 2018	\$ 0	\$ 88,200
Contribution Made in Fiscal Year Ending June 30, 2019	<u>TBD</u>	<u>N/A</u>
Total	\$ 0	\$ 88,802,700

Amortization of Deferred Inflows/Outflows

The table below lists the amortization bases included in the deferred inflows/outflows as of June 30, 2019.

Date Established	Type of Base	Period		Balance		Annual Payment
		Original	Remaining	Original	Remaining	
July 1, 2017	Liability (Gain)/Loss	4.78	2.78	\$ 0	\$ 0	\$ 0
July 1, 2017	Assumption Changes	4.78	2.78	\$ (102,299,500)	\$ (59,496,300)	\$ (21,401,600)
July 1, 2017	Asset (Gain)/Loss	5.00	3.00	\$ (127,200)	\$ (76,400)	\$ (25,400)
July 1, 2018	Liability (Gain)/Loss	4.78	3.78	\$ 0	\$ 0	\$ 0
July 1, 2018	Assumption Changes	4.78	3.78	\$ (36,851,300)	\$ (29,141,800)	\$ (7,709,500)
July 1, 2018	Asset (Gain)/Loss	5.00	4.00	\$ (110,300)	<u>\$ (88,200)</u>	<u>\$ (22,100)</u>
	Total Charges				\$ (88,802,700)	\$ (29,158,600)

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 6/30	
2020	\$ (29,158,600)
2021	\$ (29,158,600)
2022	\$ (24,450,100)
2023	\$ (6,035,400)
2024	\$ 0

Supplemental Information

Changes in the Net OPEB Liability and Related Ratios

The follow exhibit is a 3-year history of change in Net OPEB Liability.

	Fiscal Year Ending June 30		
	2017	2018	2019
Total OPEB Liability			
▪ Service Cost	N/A	\$ 59,309,600	\$ 51,881,500
▪ Interest Cost	N/A	39,468,600	47,795,300
▪ Changes of Benefit Terms	N/A	0	0
▪ Differences Between Expected and Actual Experiences	N/A	0	0
▪ Changes of Assumptions	N/A	(102,299,500)	(36,851,300)
▪ Benefit Payments, net of Employee Contributions	N/A	<u>(38,069,200)</u>	<u>(39,710,200)</u>
▪ Net Change in Total OPEB Liability	N/A	\$ (41,590,500)	\$ 23,115,300
▪ Total OPEB Liability (Beginning)	N/A	\$ 1,344,455,000	\$ 1,302,864,500
▪ Total OPEB Liability (Ending)	N/A	\$ 1,302,864,500	\$ 1,325,979,800
Plan Fiduciary Net Position			
▪ Employer Contributions	N/A	\$ 38,048,600	\$ 39,668,900
▪ Net Investment Income	N/A	164,800	162,400
▪ Benefit Payments, net of Employee Contributions	N/A	(38,069,200)	(39,710,200)
▪ Administrative Expense	N/A	<u>0</u>	<u>0</u>
▪ Net Change in Plan Fiduciary Net Position	N/A	\$ 144,300	\$ 121,100
▪ Plan Fiduciary Net Position (Beginning)	N/A	\$ 1,331,900	\$ 1,476,200
▪ Plan Fiduciary Net Position (Ending)	N/A	\$ 1,476,200	\$ 1,597,300
▪ Net OPEB Liability (Ending)	N/A	\$ 1,301,388,300	\$ 1,324,382,500
▪ Net Position as a % of OPEB Liability	N/A	0%	0%
▪ Covered Payroll	N/A	\$ 1,663,856,400	TBD
▪ Net OPEB Liability as a % of Payroll	N/A	78%	N/A

Contribution Schedule

The follow exhibit is a 3-year history of Contributions.

	Fiscal Year Ending June 30		
	2017	2018	2019
Actuarially Determined Contribution	N/A	N/A	N/A
Contributions Made in Relation to the Actuarially Determined Contribution	N/A	N/A	N/A
Contribution Deficiency (Excess)	N/A	N/A	N/A
Covered Employee Payroll	N/A	\$ 1,663,856,400	TBD
Contributions as a % of Payroll	N/A	N/A	N/A

Notes to Schedule

Valuation Date January 1, 2018

Methods and Assumptions used to Determine Contribution Rates

Actuarial Cost Method Entry Age Normal Level % of Salary

Asset Valuation Method Market Value of Assets

Retirement Rates Varies by age and service

Mortality Rates Regular: RP-2000 Combined Healthy Mortality projected to 2014 with Scale AA, set back one year for females

Police/Fire: RP-2000 Combined Healthy Mortality projected to 2014 with Scale AA, set forward one year

Personnel Information

This actuarial valuation was based on personnel data supplied by the State as of January 1, 2018.

January 1, 2018

Health Care Participants

Active Participants¹

Number	13,190
Average Age	51.51
Average Service	14.41

Inactive Participants²

State Retirees and Surviving Spouses Under Age 65	3,355
Average Age	59.36
State Retirees and Surviving Spouses Age 65 and Older	7,129
Average Age	73.69
Terminated Vested	2,272
Average Age	53.38
State Covered Spouses	2,067
Average Age	63.57
Total Participants	
Number	28,013

Life Insurance Participants

Active Participants¹

Number	13,190
Average Age	51.51
Average Service	14.41

State Inactive Participants

Number	12,375
Average Age	62.67

Non-State Inactive Participants

Number	7,354
Average Age	68.15

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, 2018:

HTH ACTIVES
(AS OF JANUARY 1, 2018)

Age	COMPLETED YEARS OF SERVICE										Total
	Under 1	1 to 4	5-10	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	8	2	0	0	0	0	0	0	10
30-34	0	0	53	27	2	0	0	0	0	0	82
35-39	0	0	63	80	14	2	0	0	0	0	159
40-44	0	0	68	88	64	12	0	0	0	0	232
45-49	0	0	74	140	93	58	14	0	0	0	379
50-54	0	0	111	107	82	72	22	5	0	0	399
55-59	0	0	82	137	91	59	32	0	1	0	402
60-64	0	0	72	103	65	34	15	6	2	0	297
65-69	0	0	27	28	20	14	12	2	1	0	104
70+	0	0	3	12	12	5	4	1	0	0	37
Total	0	0	561	724	443	256	99	14	4	0	2,101

HPN ACTIVES
(AS OF JANUARY 1, 2018)

Age	COMPLETED YEARS OF SERVICE										Total
	Under 1	1 to 4	5-10	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	12	1	0	0	0	0	0	0	13
30-34	0	0	56	28	1	0	0	0	0	0	85
35-39	0	0	63	75	15	0	0	0	0	0	153
40-44	0	0	67	108	43	18	1	0	0	0	237
45-49	0	0	86	118	80	39	6	0	0	0	329
50-54	0	0	64	120	78	42	25	1	0	0	330
55-59	0	0	52	100	70	47	22	3	0	0	294
60-64	0	0	45	83	59	36	19	1	0	0	243
65-69	0	0	21	32	26	7	12	2	2	0	102
70+	0	0	7	9	9	10	6	2	2	1	46
Total	0	0	473	674	381	199	91	9	4	1	1,832

CDHP ACTIVES
(AS OF JANUARY 1, 2018)

Age	COMPLETED YEARS OF SERVICE										Total
	Under 1	1 to 4	5-10	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	83	4	0	0	0	0	0	0	87
30-34	0	0	299	161	4	0	0	0	0	0	464
35-39	0	0	375	437	65	2	0	0	0	0	879
40-44	0	0	371	510	257	57	2	0	0	0	1,197
45-49	0	0	368	512	371	198	35	3	0	0	1,487
50-54	0	0	382	522	374	209	98	19	0	0	1,604
55-59	0	0	309	498	314	227	109	41	3	0	1,501
60-64	0	0	200	365	266	165	98	49	6	1	1,150
65-69	0	0	110	176	106	82	76	38	18	6	612
70+	0	0	26	68	58	37	29	23	16	19	276
Total	0	0	2,523	3,253	1,815	977	447	173	43	26	9,257

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, 2016:

- For those who retired prior to January 1, 1994, the dollar amount is equal to \$180 (previously was \$165).
- For those who retired on or after January 1, 1994, the dollar amount is equal to the base amount (\$12) 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 \$11.
- A one-time contribution \$2 per year of service per month for plan year 2016 and 2017.

Retiree Medical Contributions (Effective 7/1/2017-6/30/2018)

		CDHP	HMO
<ul style="list-style-type: none"> ▪ State Non-Medicare Retirees and Survivors 	Retiree	\$ 209.08	\$ 397.99
	Retiree + Spouse	\$ 477.86	\$ 942.40
	Surviving Spouse	\$ 581.78	\$ 802.75
		CDHP	HMO
<ul style="list-style-type: none"> ▪ Non-State Non-Medicare Retirees and Survivors 	Retiree	\$ 391.67	\$ 439.31
	Retiree + Spouse	\$ 953.23	\$ 1,038.00
	Surviving Spouse	\$ 1,100.86	\$ 868.57
		State	Non-State
<ul style="list-style-type: none"> ▪ Voluntary Dental Rates for Medicare Exchange Retirees 	Retiree	\$ 38.89	\$ 38.21
	Retiree + Spouse	\$ 77.78	\$ 76.42
	Surviving Spouse	\$ 38.89	\$ 38.21
		7/1/2016	7/1/2017
Subsidy for Retirees Enrolled in CDHP or HMO Plans	Years of Service		
	5	\$ 322.72	\$ 333.77
	6	\$ 290.45	\$ 300.39
	7	\$ 258.18	\$ 267.02
	8	\$ 225.91	\$ 233.64
	9	\$ 193.63	\$ 200.26
	10	\$ 161.36	\$ 166.89
	11	\$ 129.09	\$ 133.51
	12	\$ 96.82	\$ 100.13
	13	\$ 64.54	\$ 66.75
	14	\$ 32.27	\$ 33.38
	15	\$ 0.00	\$ 0.00
	16	\$ (32.27)	\$ (33.38)
	17	\$ (64.54)	\$ (66.75)
	18	\$ (96.82)	\$ (100.13)
	19	\$ (129.09)	\$ (133.51)
	20	\$ (161.36)	\$ (166.89)

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 2018 calendar year is \$134 per month.
Administrative Fees (Per Employee Basis)	Effective as of January 1, 2018 <ul style="list-style-type: none">▪ CDHP: \$610.92▪ HMO: \$269.04
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.

Excise Tax on High-Cost Health Plans

The excise tax on high cost plans becomes effective in 2022. However, the expected additional cost needs to be reflected in current valuations. Key features of the law include:

- Imposes a non-deductible excise tax of 40% on plans with an aggregate value of health insurance coverage exceeding specified dollar thresholds beginning in 2022
 - Aggregate value includes medical, pharmacy, and employer HSA/HRA contributions (excludes standalone dental and vision plans)
- 2018 thresholds for high-risk professions are:
 - \$11,850 for single coverage and \$30,950 for family coverage for age 55 to 64 retirees
 - \$10,200 for single coverage and \$27,500 for family coverage for Medicare retirees
- Thresholds will be increased if the increase in the cost of the Federal Employees Health Benefit Plan (FEHBP) increases by more than 55% from 2010 to 2018
 - Thresholds indexed at general inflation (CPI-U) plus 1 % from 2018 to 2019, and to CPI-U only thereafter
- Excise tax applies only to portion of cost that exceeds threshold amount
- The law provides for blending of pre-65 and post-65 retirees

The pre-65 and the post-65 retirees were blended together to determine the overall value of the benefit relative to the excise tax threshold. The values of the benefits were assumed to increase with the valuation trend and the excise tax thresholds were assumed to increase by 2.5% per year.

For purposes of determining the impact of excise tax on the State’s Plan, the impact associated with the Medicare Exchange was determined separately from all other plans at the request of the State. As a result, the excise tax has no impact on the Medicare Exchange. The excise tax is anticipated to impact the non-Medicare Exchange plans in 2022. The estimated impact of the excise tax on the Total OPEB Liability is an increase of approximately 3.8%.

Health Care Claims Development

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:

- For the CDHP plan, the per capita costs were based on the claims and enrollment for the time period January 1, 2015 – December 31, 2017, separately for state versus non-state. The experience was adjusted for demographics, historical plan design changes, rebates, and trended to the valuation period.
- For the HMO plans, the per capita rates were based on the July 2017 – June 2018 retiree premium rates provided for state versus non-state, and adjusted for trend and demographics.
- For the dental plan, the per capita costs were based on the claims and enrollment for the time period January 1, 2015 – December 31, 2017. The experience was trended to the valuation period. No aging was assumed.
- The final per capita costs for all the plans were based on a blend of the preliminary claim costs and the prior valuation’s claim costs trended forward to the valuation period.

A sample of the resulting age related annual claims rates, including administrative expenses are shown below:

Health Care Claims Development

Health Care Claims as of January 1, 2018—CDHP Medical

Age	CDHP Medical			
	State		Non-State	
	Non-Medicare	Medicare	Non-Medicare	Medicare
30	\$3,016	\$3,016	\$3,479	\$3,479
31	\$3,106	\$3,106	\$3,583	\$3,583
32	\$3,199	\$3,199	\$3,691	\$3,691
33	\$3,295	\$3,295	\$3,802	\$3,802
34	\$3,394	\$3,394	\$3,916	\$3,916
35	\$3,496	\$3,496	\$4,033	\$4,033
36	\$3,601	\$3,601	\$4,154	\$4,154
37	\$3,709	\$3,709	\$4,279	\$4,279
38	\$3,820	\$3,820	\$4,407	\$4,407
39	\$3,935	\$3,935	\$4,539	\$4,539
40	\$4,053	\$4,053	\$4,675	\$4,675
41	\$4,175	\$4,175	\$4,815	\$4,815
42	\$4,300	\$4,300	\$4,959	\$4,959
43	\$4,429	\$4,429	\$5,108	\$5,108
44	\$4,562	\$4,562	\$5,261	\$5,261
45	\$4,699	\$4,699	\$5,419	\$5,419
46	\$4,873	\$4,873	\$5,619	\$5,619
47	\$5,053	\$5,053	\$5,827	\$5,827
48	\$5,240	\$5,240	\$6,043	\$6,043
49	\$5,434	\$5,434	\$6,267	\$6,267
50	\$5,635	\$5,635	\$6,499	\$6,499
51	\$5,872	\$5,872	\$6,772	\$6,772
52	\$6,119	\$6,119	\$7,056	\$7,056
53	\$6,376	\$6,376	\$7,352	\$7,352
54	\$6,644	\$6,644	\$7,661	\$7,661
55	\$6,923	\$6,923	\$7,983	\$7,983
56	\$7,228	\$7,228	\$8,334	\$8,334
57	\$7,546	\$7,546	\$8,701	\$8,701
58	\$7,878	\$7,878	\$9,084	\$9,084
59	\$8,225	\$8,225	\$9,484	\$9,484
60	\$8,587	\$8,587	\$9,901	\$9,901
61	\$8,905	\$8,905	\$10,267	\$10,267
62	\$9,234	\$9,234	\$10,647	\$10,647
63	\$9,576	\$9,576	\$11,041	\$11,041
64	\$9,930	\$9,930	\$11,450	\$11,450
65	\$10,297	\$3,604	\$11,874	\$4,156
66	\$10,575	\$3,701	\$12,195	\$4,268
67	\$10,861	\$3,801	\$12,524	\$4,383
68	\$11,154	\$3,904	\$12,862	\$4,502
69	\$11,455	\$4,009	\$13,209	\$4,623
70	\$11,764	\$4,117	\$13,566	\$4,748
71	\$11,976	\$4,192	\$13,810	\$4,834
72	\$12,192	\$4,267	\$14,059	\$4,921
73	\$12,411	\$4,344	\$14,312	\$5,009
74	\$12,634	\$4,422	\$14,570	\$5,100
75	\$12,861	\$4,501	\$14,832	\$5,191

Health Care Claims Development

Health Care Claims as of January 1, 2018—CDHP Rx

Age	CDHP Rx			
	State		Non-State	
	Non-Medicare	Medicare	Non-Medicare	Medicare
30	\$652	\$652	\$599	\$599
31	\$683	\$683	\$628	\$628
32	\$716	\$716	\$658	\$658
33	\$750	\$750	\$690	\$690
34	\$786	\$786	\$723	\$723
35	\$824	\$824	\$758	\$758
36	\$864	\$864	\$794	\$794
37	\$905	\$905	\$832	\$832
38	\$948	\$948	\$872	\$872
39	\$993	\$993	\$914	\$914
40	\$1,041	\$1,041	\$958	\$958
41	\$1,091	\$1,091	\$1,004	\$1,004
42	\$1,143	\$1,143	\$1,052	\$1,052
43	\$1,198	\$1,198	\$1,103	\$1,103
44	\$1,255	\$1,255	\$1,156	\$1,156
45	\$1,315	\$1,315	\$1,211	\$1,211
46	\$1,377	\$1,377	\$1,268	\$1,268
47	\$1,442	\$1,442	\$1,328	\$1,328
48	\$1,510	\$1,510	\$1,390	\$1,390
49	\$1,581	\$1,581	\$1,455	\$1,455
50	\$1,655	\$1,655	\$1,523	\$1,523
51	\$1,733	\$1,733	\$1,595	\$1,595
52	\$1,814	\$1,814	\$1,670	\$1,670
53	\$1,899	\$1,899	\$1,748	\$1,748
54	\$1,988	\$1,988	\$1,830	\$1,830
55	\$2,081	\$2,081	\$1,916	\$1,916
56	\$2,177	\$2,177	\$2,004	\$2,004
57	\$2,277	\$2,277	\$2,096	\$2,096
58	\$2,382	\$2,382	\$2,192	\$2,192
59	\$2,492	\$2,492	\$2,293	\$2,293
60	\$2,607	\$2,607	\$2,399	\$2,399
61	\$2,727	\$2,727	\$2,509	\$2,509
62	\$2,853	\$2,853	\$2,624	\$2,624
63	\$2,984	\$2,984	\$2,745	\$2,745
64	\$3,121	\$3,121	\$2,871	\$2,871
65	\$3,265	\$3,265	\$3,003	\$3,003
66	\$3,389	\$3,389	\$3,117	\$3,117
67	\$3,518	\$3,518	\$3,235	\$3,235
68	\$3,652	\$3,652	\$3,358	\$3,358
69	\$3,791	\$3,791	\$3,486	\$3,486
70	\$3,935	\$3,935	\$3,618	\$3,618
71	\$4,033	\$4,033	\$3,708	\$3,708
72	\$4,134	\$4,134	\$3,801	\$3,801
73	\$4,237	\$4,237	\$3,896	\$3,896
74	\$4,343	\$4,343	\$3,993	\$3,993
75	\$4,452	\$4,452	\$4,093	\$4,093

Health Care Claims Development

Health Care Claims as of January 1, 2018—HMO

Age	HMO			
	State		Non-State	
	Non-Medicare	Medicare	Non-Medicare	Medicare
30	\$3,723	\$3,723	\$3,727	\$3,727
31	\$3,835	\$3,835	\$3,839	\$3,839
32	\$3,950	\$3,950	\$3,954	\$3,954
33	\$4,069	\$4,069	\$4,073	\$4,073
34	\$4,191	\$4,191	\$4,195	\$4,195
35	\$4,317	\$4,317	\$4,321	\$4,321
36	\$4,446	\$4,446	\$4,451	\$4,451
37	\$4,579	\$4,579	\$4,585	\$4,585
38	\$4,716	\$4,716	\$4,723	\$4,723
39	\$4,857	\$4,857	\$4,865	\$4,865
40	\$5,003	\$5,003	\$5,011	\$5,011
41	\$5,153	\$5,153	\$5,161	\$5,161
42	\$5,308	\$5,308	\$5,316	\$5,316
43	\$5,467	\$5,467	\$5,475	\$5,475
44	\$5,631	\$5,631	\$5,639	\$5,639
45	\$5,800	\$5,800	\$5,808	\$5,808
46	\$6,015	\$6,015	\$6,023	\$6,023
47	\$6,238	\$6,238	\$6,246	\$6,246
48	\$6,469	\$6,469	\$6,477	\$6,477
49	\$6,708	\$6,708	\$6,717	\$6,717
50	\$6,956	\$6,956	\$6,966	\$6,966
51	\$7,248	\$7,248	\$7,259	\$7,259
52	\$7,552	\$7,552	\$7,564	\$7,564
53	\$7,869	\$7,869	\$7,882	\$7,882
54	\$8,200	\$8,200	\$8,213	\$8,213
55	\$8,544	\$8,544	\$8,558	\$8,558
56	\$8,920	\$8,920	\$8,935	\$8,935
57	\$9,313	\$9,313	\$9,328	\$9,328
58	\$9,723	\$9,723	\$9,738	\$9,738
59	\$10,151	\$10,151	\$10,166	\$10,166
60	\$10,598	\$10,598	\$10,613	\$10,613
61	\$10,990	\$10,990	\$11,006	\$11,006
62	\$11,397	\$11,397	\$11,413	\$11,413
63	\$11,819	\$11,819	\$11,835	\$11,835
64	\$12,256	\$12,256	\$12,273	\$12,273
65	\$12,709	\$4,448	\$12,727	\$4,454
66	\$13,052	\$4,568	\$13,071	\$4,575
67	\$13,404	\$4,691	\$13,424	\$4,698
68	\$13,766	\$4,818	\$13,786	\$4,825
69	\$14,138	\$4,948	\$14,158	\$4,955
70	\$14,520	\$5,082	\$14,540	\$5,089
71	\$14,781	\$5,173	\$14,802	\$5,181
72	\$15,047	\$5,266	\$15,068	\$5,274
73	\$15,318	\$5,361	\$15,339	\$5,369
74	\$15,594	\$5,458	\$15,615	\$5,465
75	\$15,875	\$5,556	\$15,896	\$5,564

Health Care Claims Development

Dental Claims as of January 1, 2018

	Gross Claims	
Pre-65	\$	533
Post-65	\$	533

Age Grading Factors

Age	Medical	Rx
Under 44	3.0%	4.8%
45-49	3.7%	4.7%
50-54	4.2%	4.7%
55-59	4.4%	4.6%
60-64	3.7%	4.6%
65-69	2.7%	3.8%
70-74	1.8%	2.5%
75-79	2.2%	0.8%
80-84	2.8%	0.2%
85-89	1.4%	0.1%
90 and Over	0.0%	0.0%

Actuarial Assumptions and Methods

The actuarial assumptions and methods used in the June 30, 2019 valuation are stated below.

Valuation Date	January 1, 2018
Census Date	January 1, 2018
Measurement Date	July 1, 2018
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, 2017: 3.58% ▪ Measurement Date June 30, 2018: 3.87%

Health Care Trend Rates

<ul style="list-style-type: none"> ▪ Medical, Rx and Administrative Fees 	<table> <thead> <tr> <th style="text-align: left;">Year</th> <th style="text-align: left;">Trend</th> </tr> </thead> <tbody> <tr><td>2017</td><td>6.50%</td></tr> <tr><td>2018</td><td>7.50%</td></tr> <tr><td>2019</td><td>7.00%</td></tr> <tr><td>2020</td><td>6.50%</td></tr> <tr><td>2021</td><td>6.00%</td></tr> <tr><td>2022</td><td>5.50%</td></tr> <tr><td>2023</td><td>5.25%</td></tr> <tr><td>2024</td><td>5.00%</td></tr> <tr><td>2025</td><td>4.75%</td></tr> <tr><td>2026+</td><td>4.50%</td></tr> </tbody> </table>	Year	Trend	2017	6.50%	2018	7.50%	2019	7.00%	2020	6.50%	2021	6.00%	2022	5.50%	2023	5.25%	2024	5.00%	2025	4.75%	2026+	4.50%
Year	Trend																						
2017	6.50%																						
2018	7.50%																						
2019	7.00%																						
2020	6.50%																						
2021	6.00%																						
2022	5.50%																						
2023	5.25%																						
2024	5.00%																						
2025	4.75%																						
2026+	4.50%																						
<ul style="list-style-type: none"> ▪ Dental 	4.00%																						
<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	<p>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.</p>
Life Insurance Participation	<p>All active employees and current retirees that elected healthcare coverage. Reinstated retirees and survivors are not eligible to receive the life insurance benefit.</p>
Plan Election Percentage	<p>Future retiree election percentage is based on the current retiree plan enrollment distribution.</p>
Demographic Assumptions	<p>Census data was provided by the State and adjustments were made for missing data, which have an insignificant effect on the liability.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> ▪ State: 94% ▪ Non-State Retiree: 13%
Spouse Age Difference & Marriage Percentage	<p>Male participants are assumed to be four years older than spouses; female participants are assumed to be two years younger than spouses.</p> <p>30% of active males and 15% of active females will elect retiree spouse coverage.</p>

Actuarial Assumptions and Methods

- Healthy Mortality
- Regular: RP-2000 Combined Healthy Mortality projected to 2014 with Scale AA, set back one year for females.
 - Police / Fire: RP-2000 Combined Healthy Mortality projected to 2014 with Scale AA, set forward one year.

Disabled Mortality RP-2000 Disabled Retiree Mortality projected to 2014 with Scale AA, set forward three years.

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	1.00	7.00	20.00
50 - 54	1.00	2.00	2.00	10.00	20.00
55 - 59	2.00	4.00	6.00	13.00	25.00
60 - 61	8.00	12.00	18.00	25.00	25.00
62 - 64	10.00	14.00	18.00	25.00	25.00
65 - 69	20.00	20.00	22.00	25.00	25.00
70 - 74	40.00	40.00	60.00	60.00	60.00
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	0.75	3.00	0.00	0.00
45 - 49	0.00	1.00	5.00	15.00	15.00
50 - 54	1.50	5.00	13.00	18.00	27.00
55 - 59	3.50	11.00	20.00	25.00	35.00
60 - 64	10.00	18.00	25.00	32.00	35.00
65 - 69	60.00	60.00	65.00	70.00	70.00
70+	100.00	100.00	100.00	100.00	100.00

Actuarial Assumptions and Methods

Table B—Withdrawal Rates

<u>Years of Service</u>	<u>% Regular</u>	<u>% Police / Fire</u>
0 - 1	16.50	14.00
1 - 2	12.50	6.50
2 - 3	9.70	5.75
3 - 4	7.30	4.75
4 - 5	6.60	4.25
5 - 6	5.00	3.50
6 - 7	4.00	3.00
7 - 8	3.50	2.25
8 - 9	3.25	1.90
9 - 10	3.00	1.75
10 - 11	2.75	1.50
11 - 12	2.50	1.25
12 - 13	2.25	1.00
13 - 14	2.00	0.90
14 - 15	1.75	0.80
15+	1.50	0.50

Actuarial Assumptions and Methods

Table C—Disability Rates

<u>Age</u>	<u>% Regular</u>	<u>% Police / Fire</u>
20 - 24	0.01	0.00
25 - 29	0.02	0.06
30 - 34	0.06	0.10
35 - 39	0.09	0.18
40 - 44	0.21	0.35
45 - 49	0.35	0.56
50 - 54	0.57	0.75
55 - 59	0.75	0.50
60 - 64	0.40	0.50
65+	0.00	0.00