



WSSC Water

Other Post-Employment Benefits

Actuarial Valuation as of July 1, 2023

Submitted by

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This report presents the July 1, 2023 actuarial valuation results for the WSSC Water Other Post-Employment Benefits (OPEB) Plan. The purposes of this report are to:

- (1) Determine WSSC Water's actuarial OPEB obligation;
- (2) Establish the basis for GASB 74/75 reporting for the next two years;
- (3) Provide information that may be helpful in future planning for OPEB.

A summary of the major results is shown in the Executive Summary, while the Principal Valuation Results section provides more detail. Financial Reporting information under GASB 74 and 75 is provided in a separate report. This report establishes the basis for the Actuarially Determined Contribution.

The actuarial costs and liabilities shown in this report are based upon the data and plan provisions provided by WSSC Water, as summarized in the Demographic Information and Plan Provisions Sections, and the funding method and actuarial assumptions outlined in the Methods and Assumptions Section of this report.

To the best of our knowledge, this report is complete and accurate and conforms to generally accepted actuarial principles and methodology.

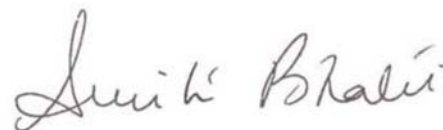
This report is intended for the sole use of the addressee. It is intended only to supply sufficient information for WSSC Water to comply with the stated purposes, and may not be appropriate for other business purposes. Reliance on information contained in the report by anyone for other than the intended purposes puts the relying entity at risk of being misled because of confusion or failure to understand applicable assumptions, methodologies, or limitations of the Report's conclusions.

The undersigned are members of the American Academy of Actuaries, and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinions presented herein.

Respectfully submitted,



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## ***Table of Contents***

	Page
Executive Summary .....	1
Principal Valuation Results.....	2
Actuarially Determined Contribution and Funding .....	3
Payout Projection .....	4
Demographic Information.....	5
Summary of Plan Provisions.....	6
Actuarial Methods and Assumptions .....	8
Glossary of Actuarial Terms .....	11
15 Year Projection of Cash Flows.....	12

## *Executive Summary*

WSSC Water provides healthcare, life insurance and prescription drug benefits to retirees and their dependents. The cost of the insurance is paid partially by the retiree and partially by WSSC Water. Employees who retire or qualify for disability or retirement directly from WSSC Water, and meet the eligibility criteria, may participate.

The following table summarizes the valuation results. These figures have been calculated based on assumptions as to current claim cost, projected increases in health care costs, participation, demographics, and investment earnings.

This summary identifies the actuarial value of benefits as of July 1, 2023 and actuarial cost, reflecting full pre-funding, utilizing a discount rate of 7.00% and amortizing the Unfunded Actuarial Accrued Liability as a level dollar amount (24 years remaining).

	7/1/2023	7/1/2021
Present Value of Projected Benefits (PVPB)	\$272,965,836	\$277,584,140
Actuarial Accrued Liability (AAL)	241,318,475	244,426,234
Plan Asset Value	192,881,257	199,104,061
Unfunded Actuarial Accrued Liability	48,437,218	45,322,173
Funding Ratio	79.9%	81.5%
Actuarially Determined Employer Contribution (ADEC)	7,858,891	7,567,555
Estimated Employer Benefit Payments	\$14,697,246	\$14,318,141

The funding of the Plan has remained relatively steady since the prior valuation, as the asset value and actuarial accrued liability both decreased. The actuarial determined employer contribution (ADEC) has increased somewhat due to an increase in the unfunded actuarial accrued liability, resulting from investment losses.

Per-capita cost assumptions were updated to reflect updated coverage and participant information regarding healthcare costs, as well as recent claims experience. This experience was favorable and was the primary reason for the decrease in actuarial accrued liability since the last valuation.

## ***Principal Valuation Results***

This section presents detailed valuation results for WSSC Water's OPEB program.

- The Present Value of Projected Benefits (PVPB) is the total present value of all expected future benefits, based on a set of actuarial assumptions. Essentially, the PVPB is the value (on the valuation date) of the benefits promised to current plan participants. The Plan's PVPB (as of July 1, 2023) is \$273.0 million. About 38% (\$104.9 million) of this liability is for current active employees (future retirees), with the remainder attributable to current retirees enrolled in WSSC Water's healthcare plan.
- The Actuarial Accrued Liability (AAL) is the liability or obligation for benefits earned through the valuation date, based on a set of actuarial methods and assumptions. The Plan's AAL (as of July 1, 2023) is \$241.3 million. The AAL represents approximately 88% of the PVPB.
- The Normal Cost is the value of benefits expected to be earned during the year (active employees only), again based on certain actuarial methods and assumptions. The Normal Cost for the plan is \$3.4 million.

The AAL and Normal Cost have been developed using the Entry Age actuarial cost method.

The following table shows results by active and retired employee groups.

	<b>July 1, 2023</b>	<b>July 1, 2021</b>
<b>Present Value of Projected Benefits</b>		
Active Employees	\$104,929,079	\$109,925,714
<u>Receiving Benefits</u>	<u>168,036,757</u>	<u>167,658,426</u>
Total PVPB	\$272,965,836	\$277,584,140
<b>Actuarial Accrued Liability (AAL)</b>		
Active Employees	\$73,281,718	\$76,767,808
<u>Receiving Benefits</u>	<u>168,036,757</u>	<u>167,658,426</u>
Total AAL	\$241,318,475	\$244,426,234
<b>Plan Assets</b>	\$192,881,257	\$199,104,061
<b>Unfunded AAL</b>	48,437,218	45,322,173
<b>Normal Cost</b>	\$3,397,848	\$3,490,715

## Actuarially Determined Contribution and Funding

### Actuarially Determined Employer Contribution (ADEC)

The Actuarially Determined Contribution (ADEC) includes both the value of benefits earned during the year (Normal Cost) and an amortization of the Unfunded Accrued Liability (UAAL). Accordingly, the following table shows WSSC Water's ADEC based on a closed amortization of the unfunded AAL (24 years remaining).

	July 1, 2023	July 1, 2021
Normal Cost	\$3,397,848	\$3,490,715
Unfunded AAL Amortization	3,946,910	3,581,766
Interest to End of Year	514,133	495,074
<b>Actuarially Determined Employer Contribution (ADEC)</b>	<b>\$7,858,891</b>	<b>\$7,567,555</b>

Benefits paid directly (i.e., not from the Trust) as well as Trust contributions can be used to satisfy payment of the ADC.

### History of Funding Progress

Valuation Date	Plan Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a / b)
7/1/2008	\$1,861,000	\$237,714,544	\$235,853,544	0.8%
7/1/2009	5,070,986	208,728,929	203,657,943	2.4%
7/1/2010	11,308,207	213,159,274	201,851,067	5.3%
7/1/2011	21,295,568	205,940,969	184,645,401	10.3%
7/1/2013	41,300,000	217,195,977	175,895,977	19.0%
7/1/2015	69,136,817	218,174,615	149,037,798	31.7%
7/1/2017	100,123,139	236,603,033	136,479,893	42.3%
7/1/2019	135,177,866	250,628,483	115,450,617	53.9%
7/1/2021	199,104,061	244,426,234	45,322,173	81.5%
7/1/2023	192,881,257	241,318,475	48,437,218	79.9%

***Payout Projection***

Annual Payments expected based on the assumptions detailed in the Methods and Assumptions section. These amounts include total benefits/claims/expenses net of retiree contributions.

<b>Year Ending</b>	<b>Expected Payout</b>
6/30/2024	\$14,998,613
6/30/2025	15,303,623
6/30/2026	15,609,078
6/30/2027	16,058,127
6/30/2028	16,397,548
6/30/2029	16,756,281
6/30/2030	17,159,396
6/30/2031	17,818,726
6/30/2032	18,379,039
6/30/2033	18,875,417

***Demographic Information***

The following Table summarizes active and retiree demographic information.

	<b>Number of Participants</b>	
	<b>7/1/2023</b>	<b>7/1/2021</b>
Active Employees*	1,618	1,639
Retired (Beneficiaries and Disabled participants)	1,598	1,562
Covered Spouses	472	451
<b>Total Participants</b>	<b>3,688</b>	<b>3,652</b>

	<b>7/1/2023</b>	<b>7/1/2021</b>
Average Age (Medical/Drug) (with insurance coverage)		
• Active Employees	48.0	48.0
• Retired, Beneficiaries, and Disabled	72.4	70.9
Average Service (for actives)	11.7	12.3

\* Includes those with Health and/or Life Insurance coverage.



## *Summary of Plan Provisions*

Medical/Drug	United Healthcare ChoicePlus POS, United Healthcare Select EPO, Kaiser Permanente HMO for retirees/spouses under 65, United Healthcare Medicare Supplement or Kaiser Permanente HMO Medicare Plus for retirees/spouses 65 and over.
Eligibility	<p>WSSC Water employees are eligible to continue with their group insurance coverage if retiring employee had coverage in effect for two years prior to retirement. Retirement is effective on the last day of the month.</p> <p>The surviving spouse and dependent children who were covered under WSSC Water health insurance may continue coverage after the death of the employee/Retiree, if a joint and contingent survivor option is chosen at pension commencement.</p> <p>Retirement eligibility for the <b>closed group</b>: Normal retirement is the earlier of age 60 with one year of service or 30 years of service. Early retirement is the rule of 65 attaining at least age 45 with 15 years of service.</p> <p>Retirement eligibility for the <b>open group hired prior to 3/1/1994</b>: Normal retirement is the earlier of age 62 with 3 years of service or the rule of 85 with at least 30 years of service. Early retirement is at least age 50 with 15 years of service.</p> <p>Retirement eligibility for the <b>open group hired on or after 3/1/1994</b>: Normal retirement is the earlier of age 65 with 5 years of service or the rule of 85 with at least 30 years of service. Early retirement is at least age 50 with 15 years of service.</p>
Retiree Payment	WSSC Water pays a portion of the full premium for retiree coverage for eligible participants and qualified dependents.
Life Insurance Benefit	When an employee retires, the basic life insurance amount (equal to the annual base pay before retirement) will be reduced on the first day of retirement by 15%. On each of the next four anniversaries of retirement, the insurance amount will be further reduced by that same dollar amount. The insurance amount will never be less than 25% of annual base pay immediately prior to retirement, nor less than \$5,000.

**2023 Premiums (Monthly)**

	<i>WSSC Water</i>	<i>Retiree</i>
United Healthcare Choice Plus POS		
Retiree	\$898.50	\$299.50
2-Person	1,773.00	591.00
United Healthcare Medicare Supplement		
Retiree	535.62	142.38
2-Person	1,074.40	285.60
United Healthcare Select EPO		
Retiree	671.50	178.50
2-Person	1,343.79	357.21
Kaiser Permanente HMO		
Retiree	507.18	134.82
2-Person	1,014.36	269.64
Kaiser Permanente Medicare Plus		
Retiree	201.45	53.55
2-Person	402.90	107.10

**Changes in Plan Provisions**

There were no changes in eligibility or cost sharing provisions since the last valuation.

## Actuarial Methods and Assumptions

The non-healthcare assumptions used for this study were developed and adopted based on 2021 experience study for the Retirement Plan. All of the assumptions and methods are in compliance with relevant Actuarial Standards of Practice, as well as with GASB Statements 74 and 75.

**Actuarial Cost Method**      Entry Age, individual level percentage of pay

**Amortization Period**      Closed, 24 years remaining

**Amortization Method**      Level Dollar

**Investment Return/  
Discount rate**      7.00%, net of investment expenses and including inflation

### Healthcare Trend

Year	UHC POS (Pre-65)	UHC EPO/HMO (Pre-65)	Medicare Plus/ Supplement
2023	5.75%	6.00%	4.00%
2024	5.50%	5.75%	4.00%
2025	5.25%	5.50%	4.00%
2026	5.00%	5.25%	4.00%
2027	4.75%	5.00%	4.00%
2028	4.50%	4.75%	4.00%
2029	4.25%	4.50%	4.00%
2030	4.00%	4.25%	4.00%
2031 +	4.00%	4.25%	4.00%

### Expected Annual Per Capita Claims (representative amounts)

Age	UHC POS (Retiree)	UHC POS (Dependent)	UHC EPO (Retiree)	UHC EPO (Dependent)	Kaiser HMO (Retiree)	Kaiser HMO (Dependent)
45	\$10,781	\$10,493	\$8,180	\$8,599	\$6,739	\$6,739
50	12,486	12,153	\$9,473	\$9,959	\$7,804	\$7,804
55	14,901	14,503	\$11,305	\$11,884	\$9,313	\$9,313
60	18,549	18,054	\$14,073	\$14,794	\$11,594	\$11,594
65	6,842	6,882	\$6,842	\$6,882	\$2,596	\$2,596
70	7,553	7,598	\$7,553	\$7,598	\$2,866	\$2,866
75	8,237	8,285	\$8,237	\$8,285	\$3,126	\$3,126
80	8,873	8,926	\$8,873	\$8,926	\$3,367	\$3,367
85	9,326	9,381	\$9,326	\$9,381	\$3,539	\$3,539

The per capita costs above were developed based on standard aging rates and plan demographic and premium information. The trend rates are based on a consolidated version of the Society of Actuaries' Getzen Model of Long-Run Medical Cost Trends.

**Mortality**

For non-disability annuitant mortality, the Pub2010G(B) headcount weighted mortality tables (Employees rates up to age 49, and Healthy Retiree rates thereafter) projected with Scale SSA (2023 long-term intermediate) generationally. Mortality for pre-retirement deaths is 50% of the annuitant mortality for males and females.

For disability retirement pension mortality, the Pub2010G Disabled Retiree headcount weighted tables, projected with Scale SSA generationally.

A 109% factor is applied to female rates in each case.

**Retirement**

Age	Rate
50-54	7%
55-60	11%
61-64	7%
65-69	20%
70+	100%

**Disability (Sample Rates)**

Age	Rate
35	0.00%
40	0.01%
45	0.06%
50	0.11%
55	0.16%
60	0.21%
65+	0.00%

**Age Difference/  
Family  
Assumptions**

Males are assumed to be 3 years older than females; For current retirees and actives, actual family status, plan elections and ages were used, 70% of both males and females are assumed to be married; 85% of actives are assumed to continue in the medical plan after retirement.

**Withdrawal/Termination**

<b>Years of Service</b>	<b>Males</b>	<b>Females</b>
0	11.0%	13.8%
1	9.4%	11.7%
2	7.9%	9.9%
3	6.8%	8.4%
4	5.7%	7.2%
5	4.9%	6.1%
6	4.1%	5.2%
7	3.5%	4.4%
8	3.0%	3.7%
9	2.5%	3.2%
10	2.2%	2.7%
11	1.8%	2.3%
12	1.6%	2.0%
13	1.3%	1.7%
14	1.1%	1.4%
15+	1.0%	1.2%

**Assumption Changes Since Prior Valuation**

Per-capita cost assumptions were updated to reflect actual experience and available information regarding healthcare costs.

## ***Glossary of Actuarial Terms***

### Actuarial Accrued Liability

A plan's actuarial accrued liability is the level of assets estimated by the system actuary to be needed as of the valuation date to

Finance all previously earned benefits for actively employed members of the plan (and their beneficiaries, if applicable) for when they eventually retire, die or terminate with deferred vested benefits, and

Finance all currently payable benefits of current pensioners and their beneficiaries (if applicable).

The Actuarial Accrued Liability is not a debt; instead, it is an asset target set by the actuarial cost method to produce an orderly accumulation of assets to pay for the plan's obligations.

### Annually Determined Contribution (ADC)

The annual cost of the plan. The ADC is the Sum of the Normal cost and the amortization of the unfunded actuarial accrued liability.

### Normal Cost

The Normal Cost is calculated as the annual amount necessary to fund each member's benefits from that member's Plan entry date to the end of his or her projected working life.

### Other Postemployment Benefits (OPEB)

Postemployment benefits other than pensions, OPEB, generally takes the form of health insurance and dental, vision, prescription drugs or other healthcare benefits.

### Unfunded Actuarial Accrued Liability

When the actuarial value of assets is below the Actuarial Accrued Liability, there is an Unfunded Actuarial Accrued Liability which must be paid off or amortized on a schedule. When the actuarial value of assets is in excess of the Actuarial Accrued Liability, this can lead to a reduction in future contributions on an amortization schedule.

**15 Year Projection of Cash Flows**

The projections shown below are based on only one scenario, in which there are no gains or losses from investments or otherwise. The actual figures will be based on actual experience during this time frame and will differ from what is shown in the table.

**WSSC Water OPEB Fund**

Year Beginning <u>July 1</u>	Plan Assets Beginning <u>of Year</u>	Trust <u>Contribution~</u>	Expected Benefit <u>Payments~</u>	Estimated Investment <u>Income*</u>	Net Increase <u>in Fund</u>	Actuarial Accrued <u>Liability</u>	Funding <u>Ratio</u>
2023	\$192,881,257	\$7,858,891	\$14,998,613	\$13,001,907	\$5,862,186	\$241,318,475	80%
2024	198,743,443	8,011,562	15,303,623	13,401,597	6,109,535	246,331,780	81%
2025	204,852,978	8,170,754	15,609,078	13,819,026	6,380,702	251,534,627	81%
2026	211,233,680	8,336,701	16,058,127	14,245,858	6,524,432	256,946,359	82%
2027	217,758,112	8,510,123	16,397,548	14,690,948	6,803,524	262,439,872	83%
2028	224,561,636	8,690,912	16,756,281	15,154,739	7,089,369	268,141,389	84%
2029	231,651,005	8,879,392	17,159,396	15,635,970	7,355,965	274,052,894	85%
2030	239,006,971	9,075,994	17,818,726	16,118,497	7,375,765	280,150,888	85%
2031	246,382,735	9,281,968	18,379,039	16,609,997	7,512,926	286,191,437	86%
2032	253,895,661	9,497,280	18,875,417	17,116,227	7,738,089	292,281,325	87%
2033	261,633,751	9,722,016	19,456,349	17,632,959	7,898,626	298,498,875	88%
2034	269,532,376	9,956,872	20,027,826	18,162,300	8,091,346	304,774,667	88%
2035	277,623,722	10,202,190	20,541,777	18,709,889	8,370,303	311,132,052	89%
2036	285,994,025	10,458,089	21,001,252	19,281,560	8,738,398	317,646,141	90%
2037	294,732,422	10,724,671	21,522,988	19,875,387	9,077,070	324,394,568	91%

\*Assuming 7.00% returns each year.

~Actuarially Determined Contribution assumed to be contributed and benefits assumed to be paid from trust each year.