WASHINGTON SUBURBAN SANITARY COMMISSION
EMPLOYEES' RETIREMENT PLAN

ACTUARIAL VALUATION
AS OF
JUNE 30, 2024

March 2025

CONTENTS

EXECUTIVE SUMMARY

This report contains the results of an actuarial valuation of the Washington Suburban Sanitary Commission Employees' Retirement Plan (the Plan) as of June 30, 2024. The contents of this report reflect generally accepted actuarial principles.

This study relies on the following information supplied by WSSC Water: data on plan participants, plan provisions, the amount of contributions, and a reconciliation of the plan's assets from the prior year.

Boomershine Consulting Group did not audit the participant data or financial information used in this report. Based on our review of this information, we believe that it is sufficiently complete and reliable, and that it is appropriate for the purposes intended. No future participants are assumed for this valuation, except for the projections shown in Section 3.

It is our understanding that WSSC Water currently maintains a 16.9% of covered payroll employer contributions to the Plan. This rate is slightly higher than the Actuarially Determined Employer Contribution Rate as defined in Section 1.3 (i.e., with 15-year level percentage of payroll amortization of Unfunded Liability). The financial health of the Plan sponsor is not taken into consideration.

The funding ratio is now 79.5% (AVA basis) and is expected to gradually improve, as shown in Section 3.2. Section 1 contains the results of the valuation, including evaluation of the contribution rate, per the Actuarial Funding Policy. The funding ratio using the market value of assets is 80.6% (i.e., recognizing all investment gains and losses immediately). The funded status is not appropriate for assessing the sufficiency of plan assets to cover the cost of settling the Plan's benefit obligation.

Plan experience since the prior valuation includes the following:

Favorable Experience (Gains)

- *Investment Return.* On a market-value basis, the Plan's return was 11.9% for the year ended June 30, 2024, compared to the assumed rate of 7.0%.

- *Retirements.* The number of active participants who retired during the plan year was 58, compared to the expected 63 retirements.

- *Mortality.* There were 60 deaths among plan participants for the plan year, compared to 56 expected. There were 14 new beneficiaries associated with these deaths.

- *Employee Turnover.* The number of active participants who terminated during the plan year for reasons other than retirement, disability, death or leave of absence was 79, which is more than the expected 61 terminations.

The experience gains from these items decreased the actuarial cost and liability of the Plan.

Unfavorable Experience (Losses)

- *Cost-of-Living Adjustments.* Benefits were increased by 3.24% to 3.68% for most retirees, each of which is greater than the assumed 2.5% annual cost-of-living increase for retirees.

- *Compensation.* This year's total payroll for continuing active employees increased by 9.36% over the prior valuation, which was more than assumed (weighted average increase of 3.63%).

The experience losses from above increased the actuarial cost and liability of the Plan, and outweighed the experience gains in aggregate.

The net impact of the experience gains and losses for the prior Plan year was a slight decrease in actuarial cost as a percentage of payroll, from 17.1% to 16.8%.

New Entrants. The number of active participants increased by 3.8% from 1,611 as of June 30, 2023 to 1,672 as of June 30, 2024. This included the net impact of exits and new entrants.

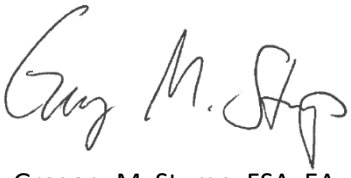
Actuarial Certification

In this study, we conducted an examination of all participant data for reasonableness and consistency, but did not audit such data. Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution provides for current cost (normal cost) plus an amount to amortize the unfunded actuarial accrued liability (UAAL). For actuarial valuation purposes, Plan assets are valued at Actuarial Value, using a method that gradually recognizes investment gains and losses. The plan provisions are the same as those used in the prior valuation. Actuarial assumptions and methods were updated as described herein.

Boomershine Consulting Group (BCG) uses a valuation system that we lease from an external vendor. The valuation software (an actuarial model) was developed and is supported by the independent vendor. BCG's actuarial consultants understand the intended purposes of the model and its operation.

The purpose of the valuation system is to develop actuarial liabilities and costs in accordance with a set of inputs. Inputs are determined by BCG and include actuarial assumptions, actuarial cost method(s), benefit provisions, and participant data. The output from the valuation model includes actuarial accrued liabilities, normal costs, and various present value calculations. For this valuation, BCG has reviewed the model output, including test lives, to ensure that the results are reasonable, valid, and consistent. BCG uses the output from the valuation model to perform the valuation calculations that appear in this report.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. The undersigned are members of the American Academy of Actuaries, and meet the Qualification Standards to provide the actuarial opinions herein.



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SECTION 1: SUMMARY OF VALUATION RESULTS

1.1: Plan Assets

An adjusted market value of assets, or Actuarial Value of Assets (AVA), is used for the valuation to gradually recognize investment gains and losses. This method reflects five-year smoothing, such that 20% of each gain or loss is recognized per year until the entire amount has been recognized.

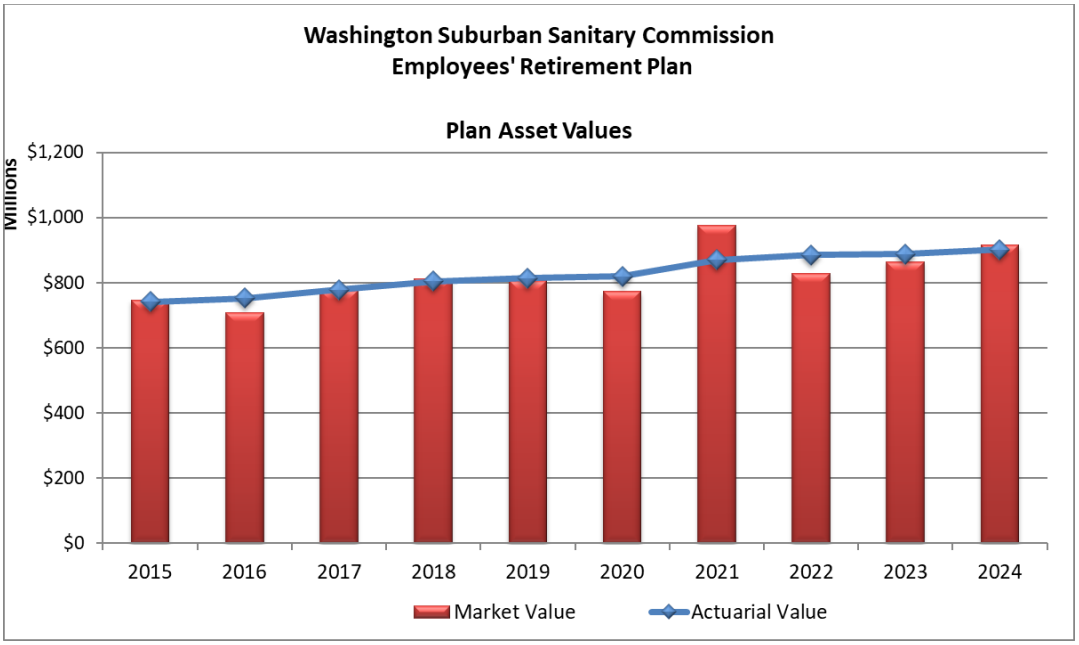
To ensure that the adjusted market value of assets remains reasonably close to the market value, a corridor is applied that requires the adjusted market value of assets be no less than 80% and no more than 120% of the market value.

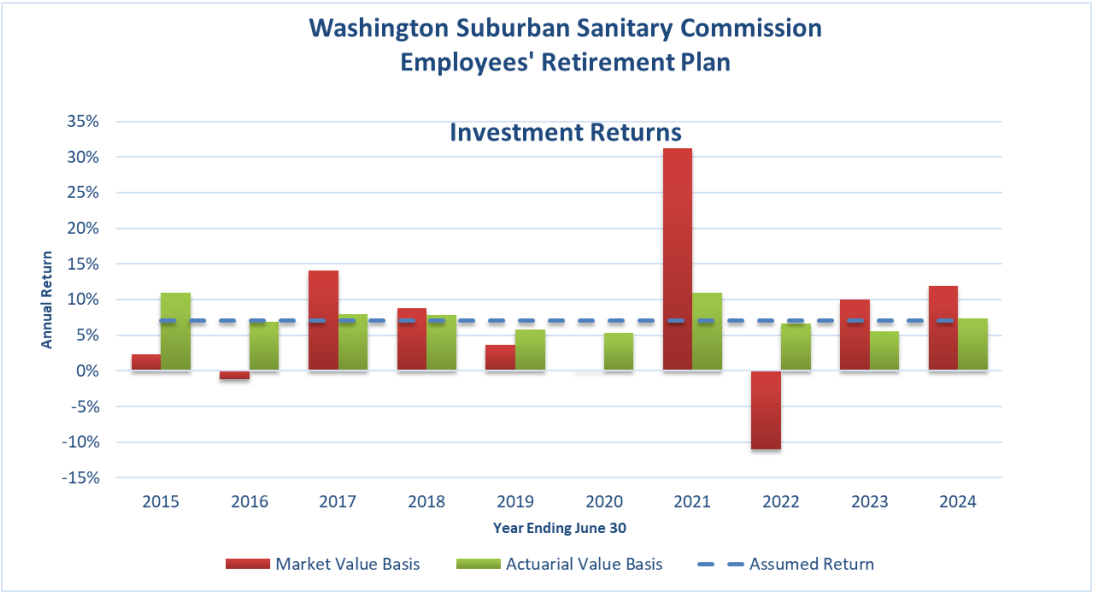
Historical Values

The following table shows the most recent five years of market values as well as smoothed asset values, and the accompanying annual returns.

Year Ending	Market Value		Actuarial Value	
June 30	Value	Annual Return	Value	Annual Return
2020	$773,168,364	0.02%	$819,689,860	5.27%
2021	974,626,269	31.25%	870,314,780	10.97%
2022	829,319,365	-10.98%	885,515,619	6.69%
2023	865,086,080	10.00%	888,076,563	5.50%
2024	914,819,372	11.88%	901,310,939	7.33%
Five Year Compound Return		7.54%		7.13%

As expected, some years the Actuarial Value is greater than the Market Value, and some years it is less. Therefore, the smoothing method has had the intended effect. This can also be seen in the graph below.





Earnings Experience for Fund on Plan Year Basis

Plan Year Ending

	6/30/2021	6/30/2022	6/30/2023	6/30/2024
Market Basis				
Net Investment Income*	$ 20,836,736	$ 15,538,423	$15,170,210	$11,059,280
Capital Gains (Losses)	215,321,418	(120,364,083)	65,500,905	88,713,310
Total Income	$ 236,158,154	$(104,825,660)	$80,671,115	$99,772,590
Average Mean Market Value of Assets**	$ 755,818,240	$ 954,385,647	$806,867,165	$840,066,431
Rate of Return*				
Net Investment Income	2.75%	1.63%	1.88%	1.32%
Capital Gains (Losses)	28.49%	-12.61%	8.12%	10.56%
Total Investment Return	31.25%	-10.98%	10.00%	11.88%

* Net of investment expenses
** [Beginning of Year Value + End of Year Value - Total Income] divided by 2
Note: Percentages may not sum to total due to rounding.

Annual Compounded Market Value Rate of Investment Return

Period Beginning July 1	Period Ending on June 30									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
2014	2.33%	0.60%	4.92%	5.87%	5.43%	4.52%	7.96%	5.39%	5.89%	6.48%
2015		-1.11%	6.26%	7.09%	6.22%	4.95%	8.93%	5.84%	6.35%	6.95%
2016			14.12%	11.43%	8.79%	6.52%	11.06%	7.04%	7.46%	8.00%
2017				8.79%	6.23%	4.11%	10.31%	5.68%	6.39%	7.15%
2018					3.67%	1.83%	10.83%	4.92%	5.91%	6.88%
2019						0.02%	14.57%	5.33%	6.48%	7.54%
2020							31.25%	8.13%	8.72%	9.50%
2021								-10.98%	-1.04%	3.09%
2022									10.00%	10.94%
2023										11.88%

Statement of Plan Assets (Market Value Basis)

	June 30, 2024	**June 30, 2023**
1. Cash	$0	$0
2. Investment	916,976,845	865,614,838
3. Subtotal (1 + 2)	$916,976,845	$865,614,838
4. Accrued Contributions		
a. Employer	0	0
b. Employee	623,028	610,745
c. Total	623,028	610,745
5. Accrued Income	1,182,230	690,082
6. Total Assets (3 + 4c + 5)	$918,782,103	$866,915,665
7. Accrued Liabilities	(3,962,731)	(1,829,585)
8. Net Plan Assets (6 + 7)	**$914,819,372**	**$865,086,080**

Statement of Receipts and Disbursements of Plan Assets

	Year ending June 30, 2024	Year ending June 30, 2023
Market Value as of the beginning of the year	$865,086,080	$829,319,364
Receipts		
Contributions:		
Employer Basic Contributions	$27,558,970	$27,416,800
Employer (Restoration Plan)	77,811	64,308
Employees	5,353,929	5,021,889
Subtotal	$32,990,710	$32,502,997
Investment Income:		
Interest and Dividends	$15,597,511	$17,196,877
Investment Expenses	(4,538,231)	(2,026,667)
Capital Gain (Loss)	88,713,310	65,500,905
Net Investment Income	$99,772,590	$80,671,115
Total Additions	$132,763,300	$113,174,112
Disbursements and Deferrals		
Benefit Payments and Refunds of Employee Contributions	$80,638,005	$75,733,849
Administrative Expenses	2,392,003	1,673,547
Total Disbursements	$83,030,008	$77,407,396
Market Value as of the end of the year	$914,819,372	$865,086,080
Adjustment for Accrued Liabilities	0	0
Adjusted Market Value	**$914,819,372**	**$865,086,080**

Development of Actuarial Value of Assets

The Actuarial Value of Assets equals the Market Value of Assets, adjusted for unrecognized gains and losses from prior years. Investment gains and losses are determined by calculating the expected asset return based on Plan assumptions and subtracting the actual Plan return. Each gain/loss is phased in 20% per year over a 5-year period. The Actuarial Value of Assets is adjusted, if necessary, to fall within a corridor of 80% to 120% of the Market Value of Assets on the valuation date.

	Year Ending 6/30/2024	**Year Ending 6/30/2023**
1. Market Value of Assets as of beginning of year Before adjustment for administrative expenses	$856,086,080	$829,319,364
2. Total Contributions for the year	32,990,710	32,502,997
3. Total Disbursements during the year	83,030,008	77,407,396
4. Expected Return	59,769,215	57,440,289
5. Actual Return for the year	99,772,590	80,671,115
6. Investment Gain/(Loss)	40,003,375	23,230,826
7. Gains/(Losses): Unrecognized Amounts:		
Current Year	$32,002,700	$18,584,661
First Prior Year	13,938,496	(103,544,787)
Second Prior Year	(69,029,858)	73,194,189
Third Prior Year	36,597,095	(11,224,546)
Total Unrecognized Gains/(Losses)	$13,508,433	($22,990,483)
8. Market Value of Assets as of end of year	$914,819,372	$865,086,080
9. Actuarial Value of Assets as of end of year: [(8) - (7)]	$901,310,939	$888,076,563
10. Actuarial Value of Assets (AVA) with 80% - 120% Corridor Limitation Applied	**$901,310,939**	**$888,076,563**
Ratio of Actuarial Value to Market Value	98.5%	102.7%

1.2: Development of Unfunded Actuarial Accrued Liability

	June 30, 2024	June 30, 2023
1. Actuarial Accrued Liability (AAL)		
a. Active Participants		
(i) Retirement (Immediate Pension)	$243,585,838	$231,257,456
(ii) Vested Termination (Deferred to Normal Retirement)*	(112,165)	(176,424)
(iii) Death - Spouse's Benefit*	8,573,007	8,206,611
(iv) Disability*	3,005,371	2,865,949
(v) Total Active Participants	$255,052,051	$242,153,592
b. Retired and Disabled Participants Receiving Benefits	864,757,285	846,850,891
c. Terminated Participants with Deferred Benefits **	13,919,982	12,005,594
d. Refunds		
(i) Accumulated Employee Contributions Credited to Account of Terminated Participants and Beneficiaries of Deceased Participants who have not received a refund	342,450	690,156
(ii) Nonvested Participants on Leave of Absence or Military Leave	7,303	814
(iii) Total Refunds	$349,753	$690,970
e. Total Actuarial Accrued Liability	$1,134,079,071	$1,101,701,047
2. Actuarial Value of Assets	901,310,939	888,076,563
3. Funding Ratio (2 / 1e)	79.5%	80.6%
4. Unfunded Actuarial Accrued Liability (UAAL), (1e-2)	$232,768,132	$213,624,484

*Including liability for refund of employee contributions for Active Participants.
**Including liability for vested Participants on Leave of Absence or Military Leave. Nonvested Participants who are on a Leave of Absence or Military Leave are included with Refunds in line 1d(ii)

1.3: Development of Experience Gain/Loss

1.	Unfunded actuarial accrued liability as of June 30, 2023		$213,624,484
2.	Change due to contributions:		
	(a) Employer Normal Cost, beginning of year	$8,457,102	
	(b) Prior Year ADEC, beginning of year	(26,783,987)	
	(c) Interest on (1) and (a) and (b)	13,670,832	
	(d) Net change expected [(a) + (b) + (c)]	($4,656,053)	
3.	Expected unfunded actuarial accrued liability as of June 30, 2024 [(1) + (2)]		$208,968,431
4.	Change since prior year:		
	(a) Non-investment experience (gain)/loss	$25,517,804	
	(b) (Gain)/loss from assets/contributions	(1,718,103)	
	(c) Net change [(a) + (b)]	$23,799,701	
5.	Unfunded actuarial accrued liability before changes [(3) + (4c)]		$232,768,132
6.	Change in actuarial assumptions		0
7.	Change in plan provisions		0
8.	Changes in actuarial methods		0
9.	**Unfunded actuarial accrued liability as of June 30, 2024** [(5) + (6) + (7) + (8)]		**$232,768,132**

1.4: Actuarially Determined Employer Contribution

	June 30, 2024	June 30, 2023
1. Total Normal Cost, with Expenses	$14,559,278	$13,153,748
As a percentage of payroll	8.35%	8.40%
2. Amortization of Unfunded Actuarial Accrued Liability	19,988,960	18,345,000
3. Expected Employee Contributions	(5,228,795)	(4,696,646)
4. Actuarially Determined Employer Contribution [sum of above]	$29,319,443	$26,783,987
5. Expected Payroll for the Year	174,293,173	156,554,864
6. Net Employer Cost as a % of Payroll [(4) / (5)]	16.82%	17.12%
7. Fixed WSSC Water Contribution Rate, % of Payroll	16.90%	16.90%
Equivalent Amortization Years Implied by Fixed Rate:		
Level Dollar	20.9	22.1
Level Percentage of Payroll	14.9	15.7
Fixed Contribution Adequate to cover Actuarial Cost:	YES	NO
Estimated Additional Contribution to satisfy ADEC shown above:	N/A	$344,330

The calculation above is based on WSSC Water's current Actuarial Funding Policy for the Retirement Plan. The amortization above is based on a level percentage of payroll over 15 years.

Maintaining the fixed rate implies that the unfunded AAL will be fully amortized over the next 15 years.

History of Equivalent Amortization Years

Valuation Year	Equivalent Years - Level Dollar	Equivalent Years - Level % of Payroll
2015	16.3	12.2
2016	14.2	11.0
2017	13.0	10.3
2018	12.4	9.9
2019	12.2	9.8
2020	18.7	13.3
2021	15.1	11.5
2022	21.3	15.0
2023	22.1	15.7
2024	20.9	14.9

1.5: Present Value of Plan Benefits

	June 30, 2024	June 30, 2023
Number of Plan Participants		
Active Participants	1,672	1,611
Retired and Disabled Participants Receiving Benefits	1,743	1,711
Terminated Participants with Deferred Benefits or Refunds Due	406	286
Participants on Leave of Absence or Military Leave	10	12
Total Participants	3,831	3,608
Total Annual Earnings of Active Participants	$174,293,173	$156,554,864
Total Annual Benefits of Retired and Disabled Participants	80,531,641	77,839,749
Present Value of Plan Benefits (PVB)		
1. Active Participants		
a. Retirement (Immediate Pension)	$336,825,794	$314,325,666
b. Vested Termination (Pension Deferred to Normal Retirement)*	9,598,859	8,375,792
c. Death - Spouse's Benefit*	13,138,014	12,365,366
d. Disability*	7,439,297	6,771,513
e. Total Active PVB (a + b + c + d)	$367,001,964	$341,838,327
2. Retired and Disabled Participants Receiving Benefits	864,757,285	846,850,891
3. Terminated Participants with Deferred Benefits**	13,919,982	12,005,594
4. Refunds		
a. Accumulated Employee Contributions Credited to Account of Terminated Participants and Beneficiaries of Deceased Participants who have not received a refund	342,450	690,156
b. Nonvested Participants on Leave of Absence or Military Leave	7,303	814
c. Total Refunds (a + b)	349,753	$690,970
Total Present Value of Benefits (1e + 2 + 3 + 4c)	$1,246,028,984	$1,201,385,782

*Including liability for refund of employee contributions for Active Participants.
**Including liability for vested Participants on Leave of Absence or Military Leave. Non-vested Participants who are on a Leave of Absence or Military Leave are included with Refunds in line 4.

1.6: Present Value of Accumulated Plan Benefits (PVAB)

	June 30, 2024	June 30, 2023
1. Actuarial present value of vested benefits (PVVB)		
a. Participants currently receiving payments		
(retired and disabled participants and beneficiaries)	$864,757,285	$846,850,891
b. Other participants		
i. Active participants	196,451,102	187,217,754
ii. Deferred vested participants/refunds	14,269,735	12,696,564
iii. Total	$210,720,837	$199,914,318
c. Total PVVB (a. + b.)	$1,075,478,122	$1,046,765,209
2. Actuarial present value of non-vested benefits	4,386,738	3,931,231
3. Total actuarial present value of accumulated plan benefits (PVAB) (1.c. + 2.)	$1,079,864,860	$1,050,696,440
4. Market value of assets	914,819,372	865,086,080
5. Ratio of Assets to PVAB (4. ÷ 3.)	84.7%	82.3%

The calculation of the actuarial present value of accumulated plan benefits is based on the unit credit cost method (which is based on no future service or salary increases) and the actuarial assumptions shown in Section 2.3.

1.7: Change in Present Value of Accumulated Plan Benefits

1. Actuarial present value of accumulated plan benefits (PVAB) as of July 1, 2023	$1,050,696,440
2. Change due to plan amendments	0
3. Change due to changes in assumptions and/or methods	0
4. Change due to passage of time	70,726,421
5. Change due to benefits paid	(80,638,005)
6. Change due to benefits accumulated and plan experience	39,080,004
7. Actuarial present value of accumulated plan benefits (PVAB) as of June 30, 2024: (1 + 2 + 3 + 4 + 5 + 6)	**$1,079,864,860**

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SECTION 2: BASIS OF VALUATION

2.1: Summary of Plan Provisions

The salient features of the retirement plan are presented below.

1. Effective date	May 1, 1967. The most recent amendment was adopted in April, 2019.
2. Closed version	Closed version means the retirement plan in effect on June 30, 1978. Membership in this version is mandatory for employees hired prior to July 1, 1978 who did not elect to transfer membership to the open version.
3. Participation	Each permanent full-time employee automatically becomes a participant on his hire date. A contract employee may be excluded by contractual agreement.
4. Gross compensation	Gross compensation is defined as total compensation paid to the employee by WSSC Water excluding merit bonuses, lump sum pay awards, and General Manager's awards, plus any amounts of compensation for which the employee has entered into a deferred compensation agreement and/or employer pick-up contributions. It does not include the employee's final pay period unless he receives compensation for the full pay period.
5. Final average monthly compensation	Final average monthly compensation is defined as an amount equal to the participant's gross compensation during each of the three years prior to termination which were the highest (to include 78 pay periods), divided by 36 months.
6. Credited service	Credited service means the years and fractional years (measured to the nearest month) of an employee's latest period of continuous service but excludes periods of non-military leaves of absence without pay which are not otherwise purchased. Additional "purchased" years of WSSC Water service, military service, prior agency service and authorized leave(s) of absence are added. Credited service includes accumulated unused sick leave that counts at the rate of .000481 year's credited service for each hour of unused sick leave. For purposes of computing benefits, credited service, excluding credit for unused sick leave, is limited to a maximum of 36 years.

7. Closed version credited service	Closed version credited service means all credited service earned by an employee hired prior to July 1, 1978 until the date he transfers his membership to the open version. Also included is purchased service if the employee is a member at the time of purchase.
8. Open version credited service	Open version credited service means all credited service earned by an employee hired after June 30, 1978. Any employee hired prior to July 1, 1978 who transfers his membership to the open version shall have all credited service earned after his transfer counted as open version credited service. Also included is purchased service if the employee is a member at the time of purchase.
9. Employee contributions	Mandatory: Each participant in the closed version is required to contribute 6% of his gross compensation with respect to each pay period. Each participant in the open version is required to contribute 3% of his gross compensation with respect to each pay period. All contributions are credited with 5% interest per annum.
10. Normal retirement	Eligibility: A participant in the closed version is eligible to retire upon the earlier of (i) attainment of age 60 and completion of one-year credited service and (ii) the completion of 30 years of credited service. A participant in the open version hired before March 31, 1994 is eligible to retire upon the earlier of (i) attainment of age 62 and completion of three years credited service, and (ii) the date on which he has completed at least 30 years credited service and the sum of his credited service and attained age total at least 85. A participant in the open version hired after March 31, 1994 is eligible to retire upon the earlier of (i) attainment of 65 and completion of five years credited service, and (ii) the date on which he has completed at least 30 years credited service and the sum of his credited service and attained age total at least 85. Monthly benefit amount: 2.1% x final average monthly compensation x closed version credited service plus 1.4% x final average monthly compensation x open version credited service.

11. Early retirement

Any employee in the closed version may retire early provided he has completed 15 or more years of credited service and has attained age 45, and further provided that the sum of his age and credited service at termination total at least 65.

Any employee in the open version may retire early provided he has completed 15 or more years of credited service and has attained age 50.

Monthly benefit amount: The annual monthly benefit is determined in accordance with the normal retirement formula but using final average monthly compensation and credited service at the time of termination. This benefit is reduced to reflect early commencement. The percentage payable is as follows (provided, however, that the Open Version reductions for years 13, 14 and 15 shall be effective only with respect to Employees hired on and after January 21, 2009):

	Percentage of Benefit Payable	
Years Early	Closed Version	Open Version
1	98%	95%
2	95%	90%
3	91%	85%
4	86%	80%
5	80%	75%
6	74%	70%
7	68%	65%
8	62%	60%
9	56%	55%
10	50%	50%
11	44%	45%
12	38%	40%
13	32%	35%
14	26%	30%
15	20%	25%

If a participant defers the commencement of benefits, his benefit will be adjusted by any cost-of-living increases that were effective during the deferral period.

12. Temporary supplemental benefit	Any participant in the Open Version whose benefit commencement date is prior to age 62 shall receive a benefit equal to 0.6% of his final average monthly compensation at termination multiplied by his Open Version credited service at termination, reduced to reflect early commencement if applicable. The percentage of benefit payable is determined in accordance with the percentages in the previous table. The benefit is payable through the month in which he attains age 62 or dies, if earlier.
13. Disability retirement	Eligibility: A participant is eligible for a disability benefit if he has one year of credited service and is found by the Social Security Administration to be disabled under its criteria for a period of at least 24 months. Monthly benefit amount: The disability benefit is determined under the normal retirement formula using credited service and final average monthly compensation at the time of termination. This benefit is subject to a minimum of 35% of final average monthly compensation, or 50% of final average monthly compensation if disabled as a result of a job-related accident.
14. Deferred vested retirement	Eligibility: Any participant of the plan who terminates after completing five years of credited service is eligible for a deferred vested benefit beginning on his normal retirement date. Monthly benefit amount: The deferred vested benefit is determined using the normal retirement formula based on final average monthly compensation and credited service at the time of termination. In lieu of this benefit the participant may elect a withdrawal benefit and thereby forfeit his deferred vested benefit.
15. Withdrawal benefit	Eligibility: Each participant, who terminates before becoming eligible for a normal, early, disability or deferred retirement benefit, automatically receives a withdrawal benefit. Any participant eligible for a normal, early, disability or deferred vested retirement benefit, which will not commence within one month of termination, may elect a withdrawal benefit. Amount: The withdrawal benefit shall be the sum of all contributions made by the employee which have not been withdrawn previously, plus credited interest.
16. Pre-retirement death	If any employee completes at least 15 years of Credited Service, the spouse if named as beneficiary will receive a spousal benefit equal to the benefit payable had the participant retired on a joint and 100% survivor option on the day before death. Alternatively, the spouse may elect a refund of contributions and interest. If not married at date of death, the sum of all contributions made by the employee plus credited interest will be paid to the employee's designated beneficiaries.

17. Consumer Price Index increase

All benefits payable to pensioners and beneficiaries retired under the Closed Version shall be increased following two months during which the Consumer Price Index is at least 3% higher than the Consumer Price Index of the base month.

All benefits payable to pensioners and beneficiaries retired under the Open Version shall be increased each March 1 following retirement in accordance with increases in the Consumer Price Index from the prior calendar year. In the event the participant retired during the preceding calendar year, a pro rata increase to reflect the partial year during which he was retired will be provided.

18. Normal and optional forms of payment

Pensions are normally payable for the life of the participant; however, a participant may elect to receive any other form of benefit provided under the plan which is actuarially equivalent in value. The following optional forms of payment are available under the plan:

- A reduced pension which is payable during the lifetime of the pensioner and continues to the surviving spouse at a rate equal to 100%, 75%, 66-2/3% or 50% of the reduced initial pension.
- A reduced pension which is payable as long as both the pensioner and the spouse are surviving. In addition, if the spouse survives the pensioner, a lifetime pension will continue to the spouse at a rate equal to 100%, 75%, 66-2/3% or 50% of the reduced initial pension. However, if the pensioner survives the spouse, the lifetime benefit will be increased to the original standard form of pension.
- A reduced pension to the participant during his lifetime with benefit payments guaranteed for at least 120 months or 180 months.

If a participant marries following his Benefit Commencement Date, the Participant may revoke any existing election and in its place elect a joint and contingent survivor option, provided such election is made within one year of the date of marriage and the Participant names his spouse as contingent annuitant.

A pensioner who elects a joint and contingent survivor option and subsequently divorces may revoke the existing election. After such revocation, a lifetime pension will continue to the pensioner at a rate equal to the unreduced initial pension.

There have been no changes in Plan provisions since the prior valuation.

2.2: Demographic Information

Participant Summary

	June 30, 2024		June 30, 2023	
1. Closed Plan Active Participants				
a. Number	3		3	
b. Average Age	72.72		71.72	
c. Average Years of Service	49.30		48.30	
d. Total Pay	$427,396		$396,560	
e. Average Pay	142,465		132,187	
2. Open Plan Active Participants				
a. Number	1,669		1,608	
b. Average Age	47.70		47.97	
c. Average Years of Service	11.24		11.60	
d. Total Pay	$ 169,560,811		$ 152,391,620	
e. Average Pay	101,594		94,711	
3. All Active Participants				
a. Number	1,672		1,611	
b. Average Age	47.75		48.02	
c. Average Years of Service	11.31		11.67	
d. Total Pay	$ 169,988,207		$ 152,788,180	
e. Average Pay	101,668		94,841	
4. Retired Participants and Beneficiaries				
a. Number	1,700		1,667	
b. Average Age	72.10		71.86	
c. Total Annual Pension	$ 79,537,213		$ 76,851,097	
d. Average Annual Pension	46,732		46,101	
5. Disabled Participants				
a. Number	42		42	
b. Average Age	67.67		67.40	
c. Total Annual Pension	$ 1,044,366		$ 988,652	
d. Average Annual Pension	24,866		23,539	
6. Deferred Vested Participants				
a. Number	179	*	172	*
b. Average Age	50.50		51.20	
c. Total Annual Pension	$ 2,413,123		$ 1,898,708	
d. Average Annual Pension	13,406		11,039	

*Including vested Participants on Leave of Absence or Military Leave (6 for 2023 and 7 for 2024). Non-vested Participants who are on a Leave of Absence or Military Leave are not shown above (1 for 2023 and 3 for 2024).

Reconciliation of Closed Plan Participants

	Active	Inactive	Retired and Beneficiaries	Deferred Vested	Disabled	Total
Census as of June 30, 2023	3	0	655	0	4	662
Retired						0
Disabled						0
Died:						
With Beneficiary			-5			-5
Without Beneficiary			-29		-1	-30
Refund Paid to Beneficiary						0
Refund Payable to Beneficiary						0
DRO stopped						0
Beneficiaries Added			5			5
Alternate Payees Added						0
Terminated						
Vested						0
Non-vested: Refund Paid						0
Non-vested: Refund Payable						0
Vested and Paid Employee Contributions						0
Added						0
Went on Leave						0
Returned from Leave						0
Reinstated						0
Adjustments						0
Census as of June 30, 2024	3	0	626	0	3	632

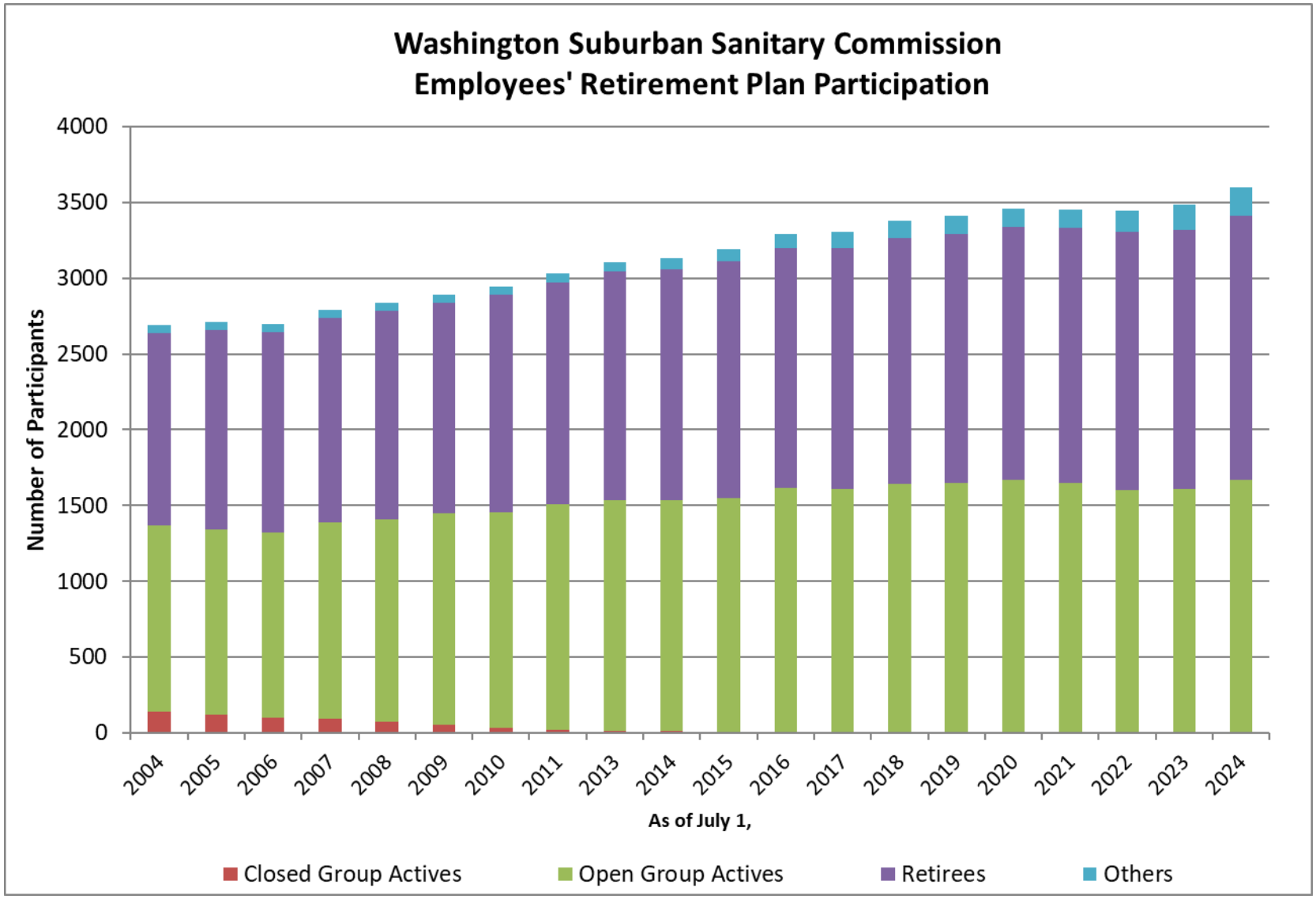
Reconciliation of Open Plan Participants

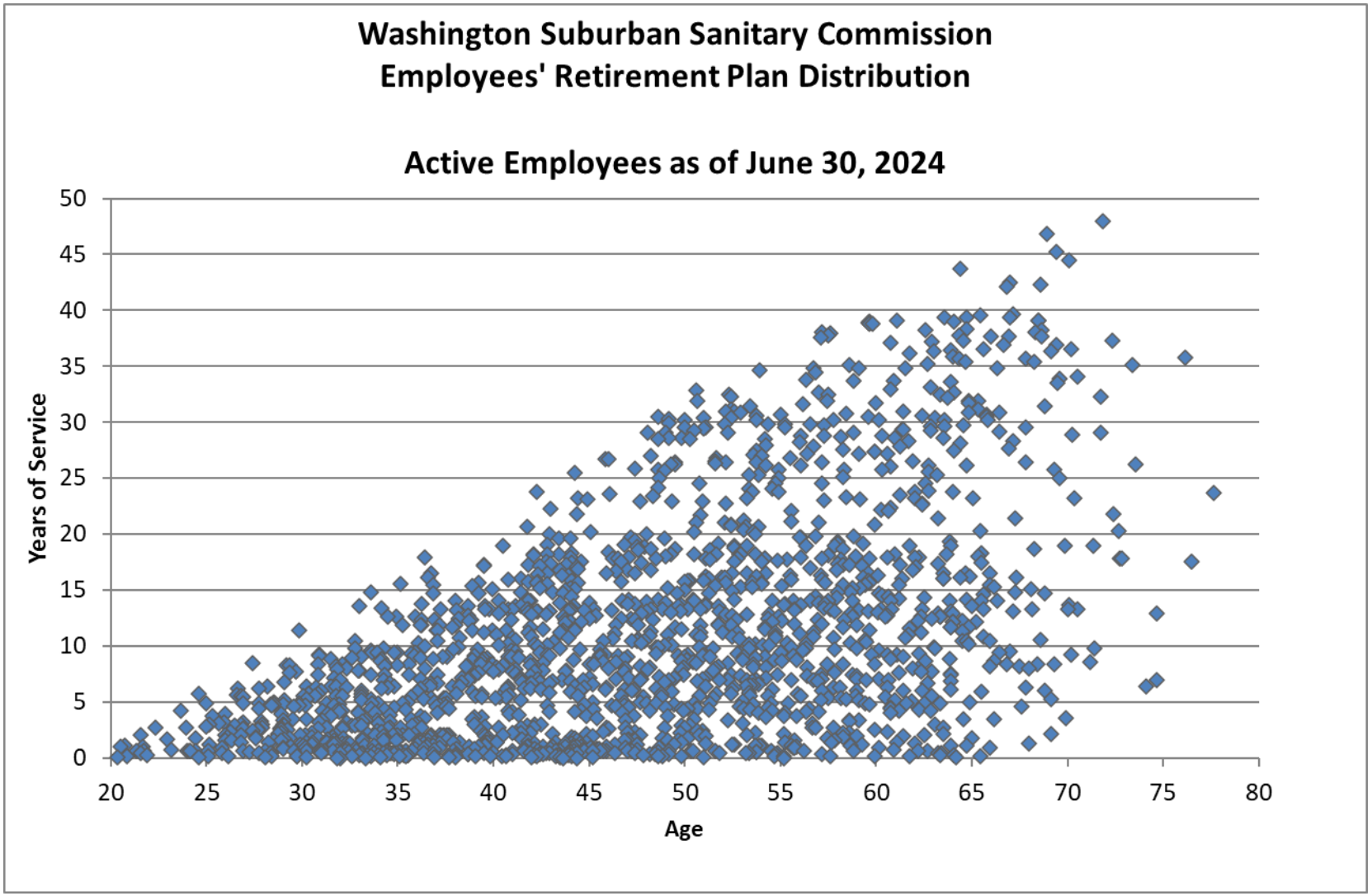
	Active*	Inactive	Retired and Beneficiaries	Deferred Vested	Disabled	Total
Census as of June 30, 2023	1,608	7	1,012	166	38	2,831
Retired	-58	-1	72	-13		0
Disabled				-2	2	0
Died:						
With Beneficiary			-9			-9
Without Beneficiary	-3		-11	-1	-1	-16
Refund Paid to Beneficiary						0
Refund Payable to Beneficiary						0
DRO Stopped						0
Beneficiaries Added			9			9
Alternate Payees Added						0
Terminated						
Vested	-33			33		0
Non-vested: Refund Paid	-27					-27
Non-vested: Refund Payable	-19					-19
Vested and Paid Employee Contributions				-10		-10
Added	201	1				202
Went on Leave	-8	8				0
Returned from Leave	5	-5				0
Reinstated	3			-3		0
Adjustments			1	2		3
Census as of June 30, 2024	1,669	10	1,074	172	39	2,964

*Those with retiree payments stopped while reemployed are included in the active count.

Active Participant Age/Service Distribution

Age Group	SERVICE LEVEL 0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
MALE										
0 - 19	2									2
20 - 24	19	1								20
25 - 29	67	14	1							82
30 - 34	92	46	5							143
35 - 39	57	44	24	10						135
40 – 44	49	41	45	29	5	1				170
45 - 49	44	32	31	20	4	12	2			145
50 - 54	32	39	29	28	15	19	12			174
55 - 59	27	24	31	25	5	11	9	2		134
60 - 64	18	19	28	14	4	11	10	10	1	115
65 - 69	6	8	10	5	3	4	5	12	2	55
70+	0	4	3	2	4	2	1	1	2	19
Total	413	272	207	133	40	60	39	25	5	1,194
FEMALE										
0 – 19										0
20 - 24	2									2
25 - 29	9									9
30 - 34	25	7	1							33
35 - 39	35	11	8							54
40 – 44	33	16	12	7	2					70
45 - 49	22	21	12	5	3	4				67
50 - 54	14	14	11	11	6	4	3			63
55 - 59	13	14	8	12	3	9	4	7		70
60 - 64	12	11	8	7	8	10	7	7		70
65 - 69	2	5	3	5	0	3	5	4	3	30
70+	0	1	1	2	0	1	1	3	1	10
Total	167	100	64	49	22	31	20	21	4	478





2.3: Actuarial Assumptions and Methods

The funding methods and assumptions are used in determining the actuarial costs and liabilities presented in this Report. The assumptions were developed from the actuarial assumption review and experience study prepared in 2021, covering Plan experience from July 1, 2015 through June 30, 2020. The next study and assumption review will cover 2020 through 2025. The combined impact of all assumptions is not expected to produce any significant bias.

1. Employee data	The employee data used in the determination of cost estimates consist of pertinent information with respect to active participants and pensioners of the Washington Suburban Sanitary Commission Employee's Retirement Plan.
2. Valuation date	June 30, 2024
3. Actuarial funding method	The Entry Age Normal Cost Method is used. The contributions equal the Normal Cost plus an amount to amortize the Unfunded Actuarial Accrued Liability over a period no longer than 30 years. Beginning with the June 30, 2018 valuation, a 20-year amortization period is used for the purpose of comparing the actuarial cost to WSSC Water's contribution rate. The Normal Cost is the level annual payment that would be required to fund the Plan if paid from the date each employee became eligible to participate to the date of exit. The Actuarial Accrued Liability is the accumulated value of the Normal Cost for each employee from date of participation to the present. The Unfunded Actuarial Accrued Liability is the Actuarial Accrued Liability minus the Actuarial Value of Assets. Actuarial gains and losses reduce or increase the Unfunded Actuarial Accrued Liability.
4. Valuation of assets	The Average Value Method is used to determine the Actuarial Value of Assets. This method determines the value of assets so that asset appreciation or depreciation is only partially recognized in the year of occurrence. The result is a gradual recognition of 20% per year over a 5-year period of each year's appreciation or depreciation in excess of or less than that which was assumed. The Actuarial Value of Assets must be within 80% to 120% of the Market Value of Assets.
5. Rate of investment return	A rate of 7.00% per year, net of investment expenses, is assumed as the annual investment return for the trust.
6. Cost-of-living	An annual retiree cost-of-living increase of 2.50% is assumed.
7. Expenses	Administrative expenses are assumed to be $1,000,000 per year (added to the Normal Cost).

8. Salary Increases

The total pay increase assumption, including wage growth and career increases, is:

Years of Service	Increase
Less than 5	7.50%
5+	2.75%

9. Mortality tables for employees and annuitants

For non-disability annuitant mortality, the Pub2010G(B) mortality tables (Employees rates up to age 49, and Healthy Retiree rates thereafter) projected with Scale SSA (2024 intermediate long-term) 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 tables, projected with Scale SSA generationally (2024 long-term intermediate).

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

10. Rates of age retirement

Age	Rate
50-54	7.0%
55-60	11.0%
61-64	7.0%
65-69	20.0%
70+	100%

11. Withdrawal Rates

Years of Service	Male	Female
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%

As shown above, female rates are equal to 125% of male rates.

12. Disability rates

The assumed rates of disability are illustrated by the following table:

Age	Rate	Age	Rate
40	0.01%	53	0.14%
41	0.02%	54	0.15%
42	0.03%	55	0.16%
43	0.04%	56	0.17%
44	0.05%	57	0.18%
45	0.06%	58	0.19%
46	0.07%	59	0.20%
47	0.08%	60	0.21%
48	0.09%	61	0.22%
49	0.10%	62	0.23%
50	0.11%	63	0.24%
51	0.12%	64	0.25%
52	0.13%	65+	0.00%

13. Marital status

It is assumed that 70% of the participants are married. Male (female) participants are assumed to have a female (male) spouse three years younger.

There have been no changes in methods and assumptions since the prior valuation, except the update of the mortality projection scale.

SECTION 3: PROJECTIONS OF PLAN FUNDING

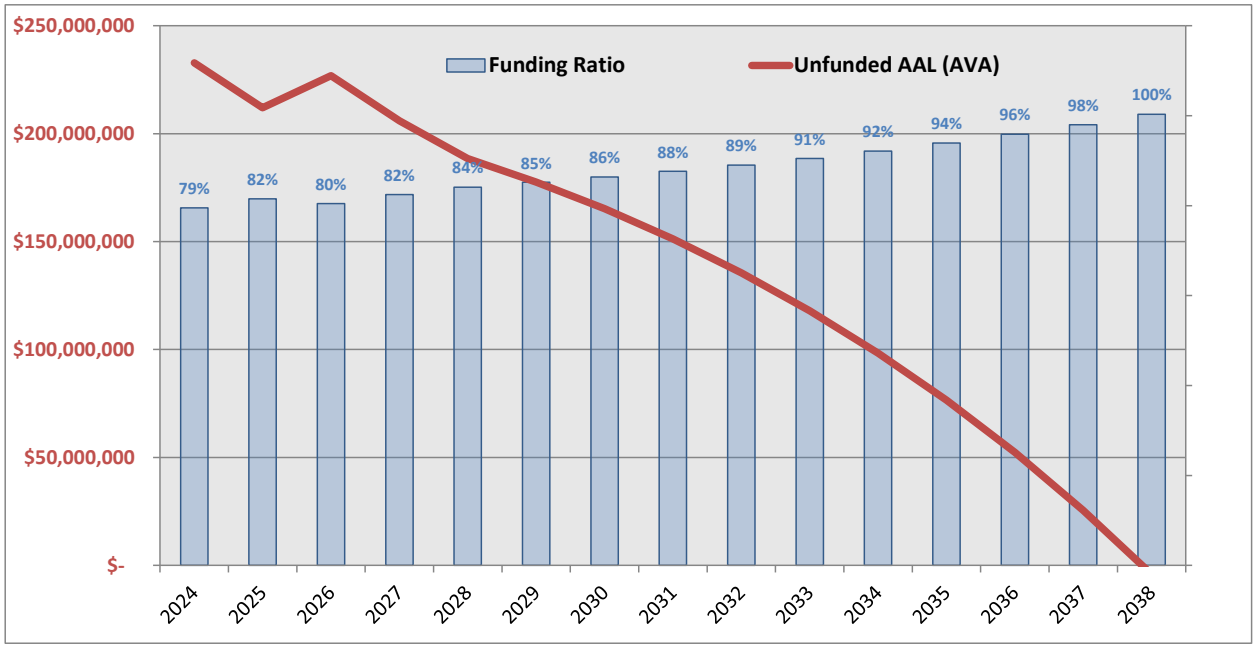
3.1: Projection of Cash Flows

Year	MVA BOY	AVA BOY	WSSC Contrib	EE Contrib	Disbursements	Investment Income	Net Increase
2024	$ 914,819,372	$ 901,310,940	$ 29,455,546	$ 5,228,795	$ 77,858,688	$ 62,551,811	$ 19,377,465
2025	934,196,837	935,417,410	30,339,213	5,385,659	79,415,862	63,890,457	20,199,467
2026	954,396,304	933,748,788	31,249,389	5,547,229	81,004,179	65,286,646	21,079,085
2027	975,475,388	967,474,713	32,186,871	5,713,646	82,624,262	66,744,421	22,020,674
2028	997,496,063	997,496,063	33,152,477	5,885,055	84,276,748	68,268,131	23,028,916
2029	1,020,524,978	1,020,524,978	34,147,051	6,061,607	85,962,283	69,862,456	24,108,831
2030	1,044,633,809	1,044,633,809	35,171,463	6,243,455	87,681,528	71,532,423	25,265,812
2031	1,069,899,621	1,069,899,621	36,226,607	6,430,759	89,435,159	73,283,441	26,505,647
2032	1,096,405,269	1,096,405,269	37,313,405	6,623,681	91,223,862	75,121,323	27,834,547
2033	1,124,239,816	1,124,239,816	38,432,807	6,822,392	93,048,339	77,052,319	29,259,178
2034	1,153,498,994	1,153,498,994	39,585,791	7,027,064	94,909,306	79,083,143	30,786,692
2035	1,184,285,686	1,184,285,686	40,773,365	7,237,875	96,807,492	81,221,014	32,424,762
2036	1,216,710,448	1,216,710,448	41,996,566	7,455,012	98,743,642	83,473,688	34,181,623
2037	1,250,892,071	1,250,892,071	43,256,463	7,678,662	100,718,515	85,849,496	36,066,106
2038	1,286,958,177	1,286,958,177	44,554,157	7,909,022	102,732,885	88,357,390	38,087,683

*Assuming 7.00% returns each year, and
3.00% increases in total payroll

MVA = Market Value of Assets
AVA = Actuarial Value of Assets

3.2: Projection of Funding Progress



The projection above is based on no experience gains or losses over the next 15 years. Notably, investment returns are expected to be exactly 7.0% per year. While this exact scenario is impossible, it does provide an assessment of the employer's funding policy. Given no significant experience losses, the policy is expected to maintain a funding level near the current level and lead to 100% funding over this time frame.

RISK ASSESSMENT

There are a number of risks inherent in managing a pension plan/trust. Some of the most substantial risks are (not an all-inclusive list):

- Investment Return Risk: Future investment returns may be unfavorable compared to what is assumed for Plan funding purposes.
- Investment Volatility Risk: Investment returns will vary from year to year and over time, with a possible single or multiple year significant drop in plan assets. This impacts contribution amounts as well as compound returns.
- Longevity Risk: Plan members and beneficiaries may live longer than projected, and thus be entitled to additional years of benefit payments versus what had been expected.
- Other Demographic Risks: Future demographic experience may be unfavorable compared to expected rates of retirement, termination, and disability. Future salary increases may also be higher than expected, thereby increasing the liability of pay-related benefits.

The following examples quantify several of these risks. In the first table, we can see that a lower investment return would have a significant impact on funding and plan costs. All other assumptions and methods are the same for each column.

1. Investment Return Risk

($ mm)	Current Return Assumption (7.00%)	6.00% Return Assumption	4.25% Return Assumption
Actuarial Liability	$1,134.1	$1,253.8	$1,522.2
Plan Assets	901.3	901.3	901.3
Unfunded Liability	$232.7	$352.5	$620.9
Funding Ratio	79%	72%	59%
Actuarially Determined Employer Contribution	$29.3	$41.3	$66.6
% of Payroll	16.8%	23.7%	38.2%

The actuarial liability in the right column can be considered a low default-risk obligation measure, as defined in Actuarial Standard of Practice (ASOP) 4. The discount rate shown above is the rate that would be required for an unfunded plan (no plan assets) under GASB 68, and is therefore based on expected returns on municipal bonds (i.e., the plan sponsor's estimated borrowing cost), which results in a higher actuarial liability. This discount rate would be appropriate if the fund was invested only in high quality fixed income securities. As shown in the table above, this would also entail a significantly greater shortfall in funding and accompanying higher annual contributions.

The difference in funded status between the two columns above can be thought of as an estimate of the present value of future expected investment returns from "risky" assets (e.g., equities). These additional returns are not guaranteed: any long-term shortfalls in investment returns will need to be made up for with additional contributions to ensure benefit security for Plan participants.

The next table illustrates the impact of plan participants living longer than expected. In general, each 10% lower rate of mortality entails one additional year of life expectancy. The right column below indicates that if all participants lived two years longer than expected, then the cost of the Plan would be about 4% of payroll higher.

2. Longevity Risk

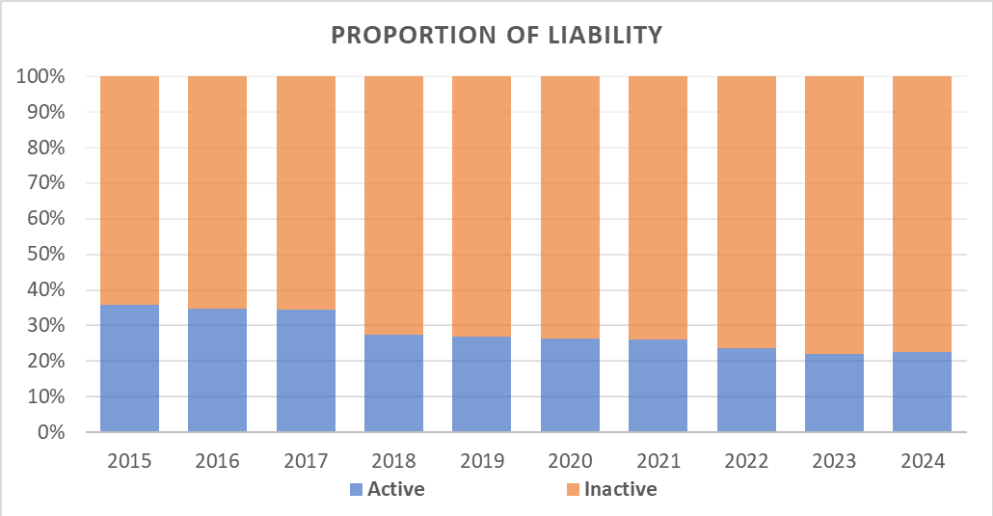
($ mm)	Current Mortality Assumption	20% Lower Mortality Rates
Actuarial Liability	$1,134.1	$1,205.0
Plan Assets	901.3	901.3
Unfunded Liability	$232.7	$303.7
Funding Ratio	79%	75%
Actuarially Determined Employer Contribution	$29.3	$36.1
% of Payroll	16.8%	20.7%

Plan Maturity

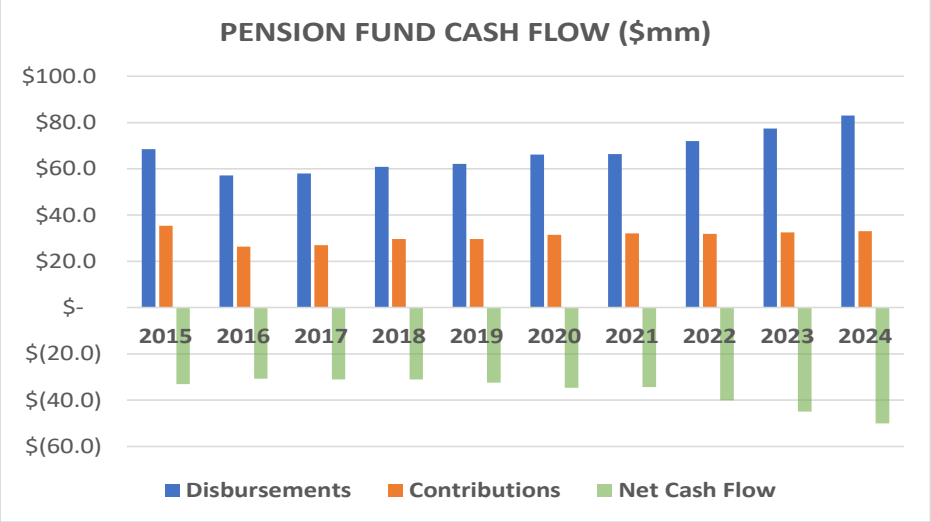
Another challenging risk faced by many pension plans is the maturing of the plan over time. This can be seen in the number of inactive (retirees, beneficiaries, etc.) versus the number of active employees in the plan population, as well as the liability of each group. As the plan matures risks emerge, including:

- Higher ratio of assets to payroll, which leads to a greater degree of contribution rate volatility.
- Negative cash flow (disbursements exceeding contributions), which exacerbates the impact of an economic downturn.
- Greater degree of longevity risk (as illustrated above).

The following graphs illustrate some of these plan maturity measures in recent years, showing how the plan is maturing over time. Over the past decade, the percentage of participants has remained fairly consistent and is about 56% inactive (by headcount) as of June 30, 2024. However, as shown in the graph below, the Plan liability has increased from about 64% inactive in 2015 to 78% in 2024, indicating continued maturing/aging.



The fund has experienced negative cash flow (disbursements greater than contributions) of approximately $36 million per year over the last decade, in increasing amounts. This is another indication of a very mature plan. As the Plan's funding approaches 100% and the fixed employer contribution rate is higher than the actuarial rate, investment returns are expected to finance benefit payments.


PENSION FUND CASH FLOW ($mm)
$100.0
$80.0
$60.0
$40.0
$20.0
$-
$(20.0)
$(40.0)
$(60.0)
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Disbursements
Contributions
Net Cash Flow