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City of Roseville Employees Retirement System

General Employees

June 30, 2022 | Actuarial Valuation Report

Nyhart Actuary & Employee Benefits

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Actuarial Certification

At the request of the plan sponsor, this report summarizes City of Roseville Employees Retirement System (General Employees) as of June 30, 2022. The purpose of this report is to communicate the following results of the valuation:

- Determine Funded Status; and
- Determine Recommended Contribution for the fiscal year July 1, 2023 through June 30, 2024.

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the employer. Asset information has been provided to us by the trustee. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes 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.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable.

Actuarial Certification

In preparing these results, Nyhart used ProVal valuation software designed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing pension valuations. We coded the plan provisions, assumptions, methods, and participant data summarized in this report, and reviewed the liability and cost outputs for reasonableness. We are not aware of any weaknesses or limitations in the software, and have determined it is appropriate for performing this valuation.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart



Derek Schmitt, FSA, EA, MAAA
Enrolled Actuary No. 20-07642

January 26, 2023
Date



Danielle Winegardner, FSA, EA, MAAA
Enrolled Actuary No. 20-8260

Executive Summary

Summary Results

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

	June 30, 2021	June 30, 2022
Funded Status Measures		
Accrued Liability	\$80,796,685	\$80,521,813
Actuarial Value of Assets	<u>\$56,832,262</u>	<u>\$56,603,160</u>
Unfunded Accrued Liability	\$23,964,423	\$23,918,653
Funded Percentage (AVA)	70.3%	70.3%
Funded percentage (MVA)	83.0%	68.0%
Interest Rate	7.00%	7.00%
Cost Measures		
Recommended Total Contribution	\$1,781,384	\$1,904,444
Recommended Contribution (as a percentage of payroll)	27.4%	26.4%
Asset Performance		
Market Value of Assets	\$67,093,519	\$54,758,167
Actuarial Value of Assets	\$56,832,262	\$56,603,160
Actuarial Value/Market Value	84.7%	103.4%
Member Information		
Active Members	116	121
Terminated Vested Members	10	9
Retirees, Beneficiaries, and Disabled Members	<u>202</u>	<u>198</u>
Total	328	328
Covered Payroll	\$6,500,416	\$7,219,072

Changes Since Prior Valuation and Key Notes

The mortality assumption was changed from PubG-2010 Mortality with Scale MP-2020 to the PubG-2010 Mortality Table with Scale MP-2021. This caused an increase to liability and contribution requirements.

Identification of Risks

The results presented in this report are shown as single point values. However, these values are derived using assumptions about future markets and demographic behavior. If actual experience deviates from our assumptions, the actual results for the plan will consequently deviate from those presented in this report. Therefore, it is critical to understand the risks facing this pension plan. The following table shows the risks we believe are most relevant to the City of Roseville Employees Retirement System. The risks are generally ordered with those we believe to have the most significance at the top. Also shown are possible methods by which a more detailed assessment of the risk can be performed.

Type of Risk	Method to Assess Risk
Investment Return	Scenario Testing; Asset Liability Study
Demographic Risk	Scenario Testing; Stress Testing; Experience Study
Participant Longevity	Stress Testing; Experience Study
Salary Growth	Scenario Testing; Experience Study; Review Future Budgets

Plan Maturity Measures – June 30, 2022

Each pension plan has a distinct life-cycle. New plans promise future benefits to active employees and then accumulate assets to pre-fund those benefits. As the plan matures, benefits are paid and the pre-funded assets begin to decumulate until ultimately, the plan pays out all benefits. A plan's maturity has a dramatic influence on how risks should be viewed. The following maturity measures illustrate where the City of Roseville Employees Retirement System falls in its life-cycle.

Duration of Liabilities: 10.1%

Duration is the most common measure of plan maturity. It is defined as the sensitivity of the liabilities to a change in the interest rate assumption. The metric also approximates the weighted average length of time, in years, until benefits are expected to be paid. A plan with high duration is, by definition, more sensitive to changes in interest rates. A plan with low duration is more susceptible to risk if asset performance deviates from expectations as there would be less time to make up for market losses in adverse market environments while more favorable environments could result in trapped surplus from gains. Conversely, high duration plans can often take on more risk when investing, and low duration plans are less sensitive to interest rate fluctuations.

Demographic Distribution - Ratio of Actively Accruing Participants to All Participants: 36.9%

A plan with a high ratio is more sensitive to fluctuations in salary (if a salary-based plan) and statutory changes. A plan with a low ratio is at higher risk from demographic experience. Such a plan should pay close attention to valuation assumptions as there will be less opportunity to realize future offsetting gains or losses when current experience deviates from assumptions. Plans with a low ratio also have limited opportunities to make alterations to plan design to affect future funded status.

Asset Leverage - Ratio of Payroll for Plan Participants to Market Value of Assets: 13.2%

Younger plans typically have a large payroll base from which to draw in order to fund the plan while mature plans often have a large pool of assets dedicated to providing benefits to a population primarily consisting of members no longer on payroll. Plans with low asset leverage will find it more difficult to address underfunding, as the contributions needed to make up the deficit will represent a higher percentage of payroll than for a plan with high asset leverage.

Benefit Payment Percentage - Ratio of Annual Benefit Payments to Market Value of Assets: 12.4%

As a plan enters its decumulation phase, a larger percentage of the pre-funded assets are paid out each year to retirees. A high percentage is not cause for alarm as long as the plan is nearly fully funded. However, such a plan is more sensitive to negative asset performance, especially if cash contributions are not an option to make up for losses.

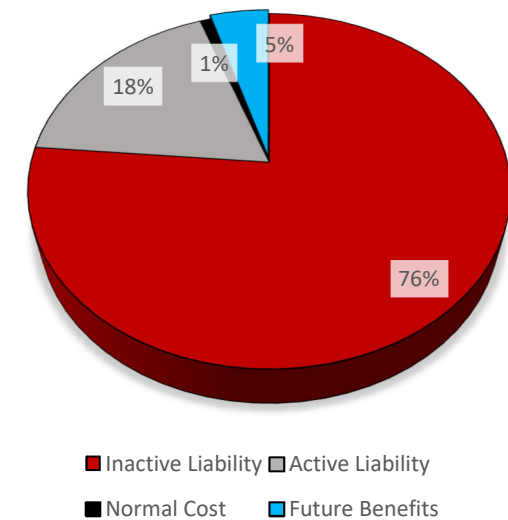
Assets and Liabilities

Present Value of Future Benefits

The Present Value of Future Benefits represents the discounted value of all future benefits expected to be payable to current members, considering future service and compensation not yet earned.

	June 30, 2022
Present Value of Future Benefits	
Active members	
Retirement	\$17,067,522
Disability	706,341
Death	226,043
Termination	1,542,902
Refund of Employee Contributions	578,336
Total active	<u>\$20,121,144</u>
Inactive members	
Retired and Disabled members	\$60,810,809
Beneficiaries	3,164,891
Terminated vested members	1,078,115
Total inactive	<u>\$65,053,815</u>
Total	\$85,174,959
Present Value of Future Payrolls	\$48,162,476
Present Value of Future Employee Contributions	\$3,819,184

Breakdown of Present Value of Future Benefits



Assets and Liabilities

Accrued Liability

The Accrued Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions. It is not a long-term snapshot of the liabilities.

	June 30, 2022
Accrued Liabilities	
Active members	
Retirement	\$14,179,137
Disability	502,923
Death	162,621
Termination	623,317
Total Active	<u>\$15,467,998</u>
Inactive members	
Retired and Disabled members	\$60,810,809
Beneficiaries	3,164,891
Terminated vested members	1,078,115
Total Inactive	<u>\$65,053,815</u>
Total	\$80,521,813
Total Normal Cost	\$717,143

Assets and Liabilities

Asset Information

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

	Market Value
	June 30, 2022
Asset Value Reconciliation	
Value of assets, beginning of year	\$67,093,519
Contributions	
Employer	\$2,222,235
Employee	550,603
Total	\$2,772,838
Investment income, net expenses	(\$8,185,418)
Benefit payments and refunds	(6,811,922)
Administrative expenses	(110,850)
Value of assets, end of year	\$54,758,167
Return on Market Value	(12.6%)
Actuarial Value of Plan Assets	
Actuarial value, end of year	\$56,603,160

Assets and Liabilities

Asset Information (continued)

Plan Assets are used to develop funded percentages and contribution requirements.

	June 30, 2022
1. Actuarial value of assets, beginning of year	\$56,832,262
2. Market value of assets, beginning of year	\$67,093,519
3. Contributions	\$2,772,838
4. Admin Expenses	(110,850)
5. Benefit Payments and Refunds	(6,811,922)
6. Expected Total Investment Income	3,833,011
7. Market Value of Assets, end of year	54,758,167
8. Investment Income, net expenses	(8,185,418)
9. Amount of Phased-In Recognition (8-6)	(12,018,429)
10. Investment Gain/Loss	
a. From current year (9*.25)	(3,004,607)
b. From 1 year prior	3,754,563
c. From 2 years prior	(352,655)
d. From 3 years prior	(309,480)
e. Total	87,821
11. Preliminary Actuarial value of assets, end of year (1 + 3 + 4 + 5 +6 +10e)	\$56,603,160
12. 80% of Market value of assets	\$43,806,534
13. 120% of Market value of assets	\$65,709,800
14. Final Actuarial value of assets	\$56,603,160
15. Return on Actuarial Value	7.2%

Assets and Liabilities

Reconciliation of Gain/Loss

June 30, 2022

Liability (gain)/loss

Actuarial liability (06/30/2021)	\$80,796,685
Normal cost	640,494
Benefit payments	(6,811,922)
Expected Interest	5,466,218
Assumption changes	127,452
Plan provision changes	0
Expected actuarial liability (06/30/2022)	<u>\$80,218,927</u>
Actual actuarial liability (06/30/2022)	<u>\$80,521,813</u>
Liability (gain)/loss	\$302,886

Asset (gain)/loss

Actuarial value of assets (06/30/2021)	\$56,832,262
Contributions	2,772,838
Benefit payments and expenses	(6,922,772)
Expected Investment return	3,833,011
Change in actuarial value of assets method	0
Expected actuarial value of assets (06/30/2022)	<u>\$56,515,339</u>
Actual actuarial value of assets (06/30/2022)	<u>\$56,603,160</u>
Asset (gain)/loss	(\$87,821)

Total (gain)/loss

\$215,065

Contribution Requirements

Development of Recommended Contribution

The minimum recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws. The recommended contribution is composed of the normal cost, administrative expenses, plus an amortization charge.

June 30, 2022

Funded Position

1. Entry age accrued liability	\$80,521,813
2. Actuarial value of assets	56,603,160
3. Unfunded actuarial accrued liability (UAAL)	\$23,918,653
4. Expected Contribution Discounted to June 30, 2022	1,751,506
5. Unfunded actuarial accrued liability to amortize	\$22,167,147

Employer Contributions

1. Normal Cost	
(a) Total normal cost	\$717,143
(b) Expected participant contributions	547,341
(c) Net normal cost	\$169,802
2. Administrative expenses	120,000
3. Amortization of UAAL	1,460,200
4. Interest	154,442
5. Total recommended contribution for July 2023- June 2024	\$1,904,444
6. Expected covered payroll	\$7,219,072
As a percentage of covered payroll	26.4%
7. Total Normal Cost as a Percentage of Covered Payroll	9.9%

Michigan PA 202 Reporting Requirements

Under Michigan PA 202 Reporting, the Funded Ratio and Actuarial Determined Contribution must also be reported under State Treasury Uniform Assumptions as shown.

	June 30, 2022	
	Plan Assumptions	State Treasury Uniform Assumptions
Funded Ratio		
<i>Interest Rate</i>	7.00%	6.85%
<i>Mortality</i>	<i>PubG-2010 with Scale MP 2021</i>	<i>PubG-2010 with Scale MP 2020</i>
Accrued Liability	\$80,223,826	\$81,209,893
Market Value of Assets	\$54,758,167	\$54,758,167
Unfunded Accrued Liability, MVA Basis	\$25,465,659	\$26,451,726
Funded Percentage (MVA)	68.26%	67.43%
Actuarial Determined Contribution		
<i>Interest Rate</i>	7.50%	6.85%
<i>Mortality</i>	<i>PubG-2010 with Scale MP-2020</i>	<i>PubG-2010 with Scale MP 2020</i>
Amortization	24 years	17 years
Actuarially Determined Contribution*	\$2,222,235	\$3,080,799

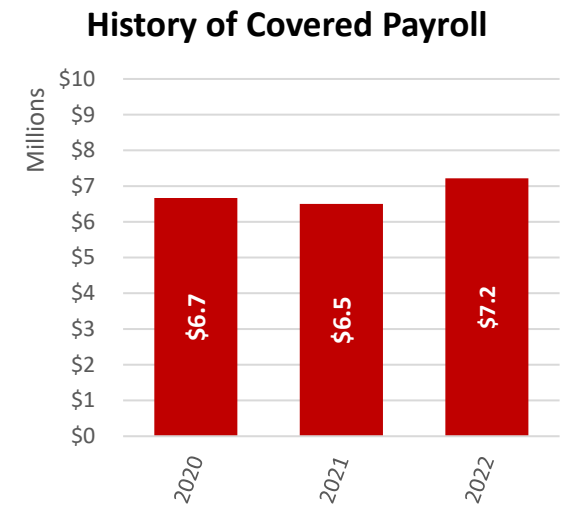
*The Actuarially Determined Contribution payable for the fiscal year ending June 30, 2022 is calculated as of June 30, 2020 and based on data, assumptions, and plan provisions summarized in the June 30, 2020 Actuarial Valuation Report. The Actuarially Determined Contribution under Uniform Assumptions is calculated using the same information except as noted above.

Demographic Information

Demographic Information

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

	June 30, 2021	June 30, 2022
Participant Counts		
Active Participants	116	121
Retired Participants	168	166
Disabled Participants	2	2
Beneficiaries	32	30
Terminated Vested Participants	10	9
Total Participants	328	328
Active Participant Demographics		
Average Age	48.4	49.0
Average Service	9.7	9.7
Average Compensation	\$56,038	\$59,662
Covered Payroll	\$6,500,416	\$7,219,072



Demographic Information

Demographic Information (continued)

	June 30, 2021	June 30, 2022
Retiree Statistics		
Count	168	166
Average Age	69.7	69.8
Average Monthly Benefit	\$2,798	\$2,804
Disabled Participant Statistics		
Count	2	2
Average Age	74.3	75.3
Average Monthly Benefit	\$417	\$417
Beneficiary Statistics		
Count	32	30
Average Age	76.5	76.6
Average Monthly Benefit	\$1,101	\$1,108
Terminated Vested Participant Statistics		
Count	10	9
Average Age	48.1	41.8
Average Monthly Benefit	\$893	\$925

Monitoring the average age of the population is important due to the relationship of actuarial cost to age. Generally speaking, an older population generates a higher actuarial cost.

Changes in the ratio of active to retired participants can be a significant driver of costs in a volatile asset market.

Participant Reconciliation

Participant Reconciliation

	Active	Terminated Vested	Retired	Disabled	Beneficiaries	Totals
Prior Year	116	10	168	2	32	328
Active						
To Terminated Vested	(1)	1				0
To Retired	(3)		3			0
To Lump Sum Cash-Out	(4)					(4)
Terminated Vested						
To Lump Sum Cash-Out		(3)				(3)
To Death		(1)				(1)
Retired						
To Active						
To Terminated Vested						
To Death			(6)			(6)
Survivor						
To Death					(3)	(3)
Additions	13	2	1		1	17
Departures						
Current Year	121	9	166	2	30	328

Participant Reconciliation

Active Participant Schedule

Active participant information grouped based on age and service.

Age Group	Years of Service										Total	Average Pay
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up		
Under 25		3									3	\$51,367
25 to 29	2	9	2								13	\$51,306
30 to 34	2	3	1								6	\$53,005
35 to 39		3	5								8	\$55,866
40 to 44	1	4	4	3	2						14	\$71,892
45 to 49	3	2	5	1		2					13	\$63,003
50 to 54	1	3	1	2	4	2	4	1			18	\$71,915
55 to 59	2	5	6	2	3	6	2				26	\$61,698
60 to 64		1	4		3	1					9	\$55,400
65 to 69	2	1		4			1				8	\$46,715
70 & up			1		2						3	\$12,191
Total	13	34	29	12	14	11	7	1	0	0	121	\$59,662

Plan Status	The plan provides ongoing benefit accruals and participation is open to new entrants
Accrual of Benefits	A participant shall accumulate a benefit payable at normal retirement date based upon compensation and credited service earned as of the date of determination.
Benefits	
Normal Retirement	
Eligibility	General and Supervisors: Any age with 30 or more years of credited service, age 55 with 20 or more years of credited service, or age 60 with 10 or more years of credited service.
Benefit	The benefit amounts attributable to service retirements and the conditions under which such benefits may be paid are described <i>Plan Provision by Group</i> table. Benefit formula is the following: $FAC \times \text{Years of Credited Service} \times \text{Multiplier}$, with a maximum allowable benefit of $\text{Maximum Multiplier} \times FAC$
Deferred Retirement Option Program (DROP)	
Eligibility	Supervisors: Age 55 with 25 years of service or with 30 years of service regardless of age. Clerical: Age 50 with 25 years of service or with 30 years of service regardless of age
Conditions	See the <i>Plan Provisions by Group</i> table for details

Deferred Retirement (Vested Benefit)

Eligibility	Termination of City employment with 10 or more years of credited service.
Benefit	General: Accrued regular retirement amount payable beginning at age 55 with 20 years of service or age 60 with 10 years of service

Duty Disability Retirement

Eligibility	Total and permanent disability incurred in line of duty with the City for which Worker's Compensation is paid.
Benefit	General and Supervisors: Accrued regular retirement amount; minimum to age 55, 15% of FAC; minimum at age 55, sum of 10% of first \$4,200 of FAC, plus 15% of FAC in excess of \$4,200. For all members, upon termination of Worker's Compensation period, or attainment of age 65, if earlier, service credit increased to include years in receipt of Worker's Compensation. Minimum - 50% of FAC.

Non-Duty Disability

Eligibility	Total and permanent disability after 10 years of credited service.
Benefit	General and Supervisors: Accrued regular retirement amount, minimum 15% of FAC.

Duty Death in Service

Eligibility	Death incurred in line of duty with the City, or death of disability retiree as a result of same injury or disease for which he was retired; Worker's Compensation is being paid as a result of the death.
Benefit	Termination of Worker's Compensation period, an amount equal to Worker's Compensation payments are continued to unmarried spouse, unmarried children under age 18, and parents who were in receipt of Worker's Compensation as a result of the death.

Non-Duty Death in Service

Eligibility	Any age with 10 or more years of credited service.
Benefit	100% survivor actuarial equivalent of accrued regular retirement amount to elected beneficiary

Post-Retirement Increase

Eligibility	General members with effective dates of retirement on or after January 1, 1993.
Benefit	See <i>Plan Provisions by Group</i> for details

Plan Provisions

Final Average Compensation See the *Plan Provisions by Group* table for details.

Employee Contributions See the *Plan Provision by Group* table for details.

Plan Provisions Not Included We are not aware of any plan provisions not included in the valuation

Adjustments Made for Subsequent Events

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results of this report

Plan Provision by Group

EMPLOYEES HIRED PRIOR TO JULY 1, 2012

UNION	RETIREMENT ELIGIBILITY Service/Age	FINAL AVERAGE COMP	BENEFIT MULTIPLIER Service earned prior to 6/30/2012	BENEFIT MULTIPLIER Service earned after 6/30/2012	MAXIMUM MULTIPLIER Hired Prior to 7/1/1994 vs Hired After 7/1/1994	COLA Retired Prior to 7/1/2012 (5/20/2013 for Command)	COLA Retired After 7/1/2012 (5/20/2013 for Command)	MEMBER CONTR RATE	DROP PARTICIPATION	DROP TERMS
CLERICAL	10 / 60; 20 / 55; or 30 / any age	5 highest consecutive years out of last 10	2.50%	2.00%	80% 75%	10% increase years 5 and 10	5% increase years 5, 10, and 15	8.25% / 10.00% DROP	25 Years and age 50 / 30 years and any age	2 Years Max
COURT	10 / 60; 20 / 55; or 30 / any age	Any 3 years out of last 5 years	2.50%	2.00%	80% 75%	10% increase years 5 and 10	5% increase years 5 and 10	9%	N/A	N/A
LOCAL 520	10 / 60; 20 / 55; or 30 / any age	Any 3 years out of last 5 years	2.80%	2.00%	80% 75% Eff 1/1/1995	10% increase years 5 and 10	5% increase years 5, 10, and 15	6.5%	N/A	N/A
SUPERVISORS	10 / 60; 20 / 55; or 30 / any age	Any 3 years out of last 5 years*	2.50%	2.00%	80% 75%	10% increase years 5 and 10	5% increase years 5, 10, and 15	7.0%	25 Years and age 55 / 30 years and any age	7 Years Max

*Year is any 4 consecutive quarters

Plan Provision by Group

EMPLOYEES HIRED ON OR AFTER JULY 1, 2012

UNION	RETIREMENT ELIGIBILITY Service/Age	FINAL AVERAGE COMP	BENEFIT MULTIPLIER	MAXIMUM MULTIPLIER	COLA	MEMBER CONTR RATE	DROP PARTICIPATION	DROP TERMS
CLERICAL	10 / 60; 20 / 55; or 30 / any age	5 highest consecutive years out of last 10	1.50%	75%	5% increase years 5, 10, and 15	9.5% / 10.0% DROP	25 Years and age 50 / 30 years and any age	2 Years Max
COURT	10 / 60; 20 / 55; or 30 / any age	Any 3 years out of last 5 years	1.50%	70%	5% increase years 5 and 10	9%	N/A	N/A
LOCAL 520	10 / 60; 20 / 55; or 30 / any age	Any 3 years out of last 5 years	1.50%	75%	5% increase years 5, 10, and 15	8%	N/A	N/A
SUPERVISORS	10 / 60; 20 / 55; or 30 / any age	Any 3 years out of last 5 years (Year is any 4 consecutive quarters)	1.50%	75%	5% increase years 5, 10, and 15	8.5%	25 Years and age 55 / 30 years and any age	7 Years Max

Actuarial Assumptions

Except where otherwise indicated, the following assumptions were selected by the plan sponsor with the concurrence of the prior actuary. Actuarial Assumptions adopted based on most recent Experience Study, dated July 1, 2022.

Actuarial Assumptions, Methods and Additional Information for Funding

Valuation Date	June 30, 2022
Participant Information as of	June 30, 2022
Asset Information as of	June 30, 2022
Cost Method	Entry Age Normal Cost Method
Amortization Method	Level percent of payroll
Remaining Amortization Period	22 years (25-year closed began in 2019)
Payroll Growth Assumptions	3.0%
Asset Valuation Method	4-year adjusted market value
Interest Rates	7.0% (net of investment expenses)
Investment Rate of Return	The interest rate is the long term rate of return on assets. This assumption is supported by the investment mix of the plan assets and long-term capital market return assumptions.
Expense Loading	\$120,000 was added to cover anticipated administrative expenses
Marital Status and Ages	No assumptions
Lump Sum Payments	Lump Sum Payments included in the calculation of average pay upon which benefits are computed were assumed to increase benefits by 10%. Using non-consecutive quarters in FAC was assumed to increase benefits by 1%.

Actuarial Assumptions

Annual Pay Increases

The rates of salary increase used for individual members are in accordance with the following table:

Sample Ages	Years of Service	TOTAL
ALL	0	5.50%
	1	4.50%
	2	3.00%
	3	3.00%
	4	3.00%
20	5 & Over	
25		5.00%
30		4.00%
35		3.00%
40		2.00%
45		2.00%
50		2.00%
55		1.00%
60		1.00%
65		1.00%

Mortality Rates

Healthy

PubG-2010 Mortality Table with scale MP-2021

Disabled

PubG-2010 Disabled Mortality with scale MP-2021

Actuarial Assumptions

Retirement Rates

Retirement rates are based on the last experience study conducted in 2021.
 Retirement rates are separated by age of participant, as shown below.

Age Retiring	SUPERVISORS	GENERAL
50	30%	20%
51	25%	15%
52	20%	10%
53	20%	10%
54	20%	10%
55	20%	20%
56	20%	20%
57	20%	20%
58	20%	20%
59	20%	20%
60	20%	20%
61	20%	20%
62	40%	20%
63	20%	20%
64	20%	20%
65	100%	100%

Actuarial Assumptions

Disability Rates

Disability rates vary by age, gender, and division. This assumption measures the probability of members retiring with a disability benefit.

Sample Ages	GENERAL	
	Men	Women
20	0.07%	0.03%
25	0.09%	0.05%
30	0.10%	0.07%
35	0.14%	0.13%
40	0.21%	0.19%
45	0.32%	0.28%
50	0.52%	0.45%
55	0.92%	0.76%

Withdrawal Rates

Withdrawal rates vary by service for first 5 years of employment, and vary by age after 5 years.

Sample Ages	Years of Service	GENERAL MEMBERS
ALL	0	10.00%
	1	10.00%
	2	10.00%
	3	10.00%
	4	10.00%
20	5 & Over	10.00%
25		6.00%
30		6.00%
35		5.00%
40		4.00%
45		4.00%
50		4.00%
55		4.00%
60		4.00%
65		4.00%

Changes Since Prior Report

The mortality assumption was changed from PubG-2010 Mortality with Scale MP-2020 to the PubG-2010 Mortality Table with Scale MP-2021. This caused an increase to liability and contribution requirements.

Other Measurements

Supplemental Information for Housing Employees as of June 30, 2022

Participant Counts

Active Participants	5
Inactive Participants	4

Liability Summary

Present Value of Future Benefits	2,438,472
Actuarial Accrued Liability	2,267,021
Total Normal Cost	27,687
Expected Employee Contributions	<u>(19,198)</u>
Net Normal Cost	8,489