



nyhart
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GASB 74/75 ACTUARIAL VALUATION

Fiscal Year Ending June 30, 2022

CITY OF SOUTH LYON

CONTACT

Jack Leemhuis, ASA
jack.leemhuis@nyhart.com

PHONE

General (317) 845-3500

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August 9, 2022

**Paul Zelenak
City of South Lyon
335 S. Warren
South Lyon, MI 48178**

This report summarizes the GASB actuarial valuation for the City of South Lyon 2021/22 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 74 (Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans) and GASB Statement No. 75 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions). This report 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 information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

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.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.



Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.

Should you have any questions please do not hesitate to contact us.

A handwritten signature in black ink that reads 'Jack Leemhuis'.

Jack Leemhuis, ASA
Actuary

A handwritten signature in black ink that reads 'Cody Kocher'.

Cody Kocher, ASA, MAAA
Actuary

Executive Summary

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Summary of Results

Presented below is the summary of GASB 75 results for the fiscal year ending June 30, 2022 compared to the prior fiscal year as shown in the City's Notes to Financial Statement.

	As of June 30, 2021	As of June 30, 2022
Total OPEB Liability	\$ 563,268	\$ 645,690
Actuarial Value of Assets	\$ (144,995)	\$ (194,765)
Net OPEB Liability	\$ 418,273	\$ 450,925
Funded Ratio	25.7%	30.2%

	FY 2020/21	FY 2021/22
OPEB Expense	\$ 76,456	\$ 42,704
Annual Employer Contributions	\$ 180,650	\$ 94,011
Actuarially Determined Contribution	\$ 78,997	\$ 60,192

	As of June 30, 2021	As of June 30, 2022
Discount Rate	7.35%	7.35%
Expected Return on Assets	7.35%	7.35%

	As of June 30, 2022
Total Active Participants	43
Total Retiree Participants	3

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

Executive Summary

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Summary of Results

Below is a breakdown of total GASB 75 liabilities allocated to past and current service compared to the prior year. The table below also provides a breakdown of the Total OPEB Liability allocated to pre- and post- Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor's GASB subsidies.

Present Value of Future Benefits	As of June 30, 2021	As of June 30, 2022
Active Employees	\$ 623,700	\$ 693,071
Retired Employees	103,114	76,882
Total Present Value of Future Benefits	\$ 726,814	\$ 769,953

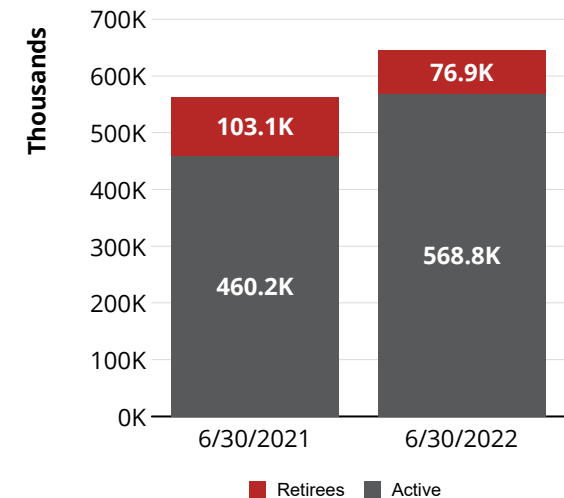
Total OPEB Liability	As of June 30, 2021	As of June 30, 2022
Active Pre-Medicare	\$ 460,154	\$ 568,808
Active Post-Medicare	0	0
Active Liability	\$ 460,154	\$ 568,808

Retiree Pre-Medicare	\$ 103,114	\$ 76,882
Retiree Post-Medicare	0	0
Retiree Liability	\$ 103,114	\$ 76,882

Total OPEB Liability	\$ 563,268	\$ 645,690
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	As of June 30, 2021	As of June 30, 2022
Discount Rate	7.35%	7.35%

Changes In Total OPEB Liability



Present Value of Future Benefits (PVFB) is the amount needed as of June 30, 2022 and June 30, 2021, to fully fund the City's retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

Total OPEB Liability is the portion of PVFB considered to be accrued or earned as of June 30, 2022 and June 30, 2021. This amount is a required disclosure in the Required Supplementary Information section.

GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2021/22	FY 2020/21	FY 2019/20	FY 2018/19	FY 2017/18
Total OPEB Liability					
Total OPEB Liability - beginning of year	\$ 563,268	\$ 696,587	\$ 545,542	\$ 464,775	\$ 601,126
Service cost	23,561	42,275	28,071	23,545	28,001
Interest	42,265	19,156	19,711	18,637	22,363
Change of benefit terms	0	37,742	0	0	0
Changes in assumptions	10,744	(195,900)	42,861	13,697	(9,871)
Differences between expected and actual experience	29,863	1,061	84,734	38,510	(167,844)
Benefit payments	(24,011)	(37,653)	(24,332)	(13,622)	(9,000)
Net change in total OPEB liability	\$ 82,422	\$ (133,319)	\$ 151,045	\$ 80,767	\$ (136,351)
Total OPEB Liability - end of year	\$ 645,690	\$ 563,268	\$ 696,587	\$ 545,542	\$ 464,775
Plan Fiduciary Net Position					
Plan fiduciary net position - beginning of year	\$ 144,995	\$ 0	\$ 0	\$ 0	\$ 0
Contributions - employer	94,011	180,650	24,332	13,622	9,000
Contributions - active employees	0	0	0	0	0
Net investment income	(19,896)	2,127	0	0	0
Benefit payments	(24,011)	(37,653)	(24,332)	(13,622)	(9,000)
Trust administrative expenses	(334)	(129)	0	0	0
Net change in plan fiduciary net position	\$ 49,770	\$ 144,995	\$ 0	\$ 0	\$ 0
Plan fiduciary net position - end of year	\$ 194,765	\$ 144,995	\$ 0	\$ 0	\$ 0
Net OPEB Liability - end of year	\$ 450,925	\$ 418,273	\$ 696,587	\$ 545,542	\$ 464,775
Plan fiduciary net position as % of total OPEB liability	30.2%	25.7%	0.0%	0.0%	0.0%
Covered employee payroll	\$ 2,906,807	\$ 2,855,707	\$ 2,633,383	\$ 2,705,916	\$ 2,084,986
Net OPEB liability as % of covered payroll	15.5%	14.6%	26.5%	20.2%	22.3%

GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below are based on the Annual Required Contribution (ARC) calculated in prior GASB 45 actuarial valuations as shown in the City's financial statements.

	FY 2021/22	FY 2020/21
Actuarially Determined Contribution (ADC)	\$ 60,192	\$ 78,997
Contributions in relation to the ADC	94,011	180,650
Contribution deficiency/(excess)	\$ (33,819)	\$ (101,653)
Covered employee payroll	\$ 2,906,807	\$ 2,855,707
Contribution as a % of covered payroll	3.2%	6.3%

GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

OPEB Expense

OPEB Expense		FY 2021/22		FY 2020/21
Discount Rate				
Beginning of year		7.35%		2.66%
End of year		7.35%		7.35%
Service cost	\$	23,561	\$	42,275
Interest		42,265		19,156
Change of benefit terms		0		37,742
Projected earnings on OPEB plan investments		(13,172)		(1,888)
Reduction for contributions from active employees		0		0
OPEB plan administrative expenses		334		129
Current period recognition of deferred outflows / (inflows) of resources				
Differences between expected and actual experience	\$	(2,488)	\$	(5,474)
Changes in assumptions		(14,362)		(15,436)
Net difference between projected and actual earnings on OPEB plan investments		6,566		(48)
Total current period recognition	\$	(10,284)	\$	(20,958)
Total OPEB expense	\$	42,704	\$	76,456

GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)

The initial amortization period for the first two items noted above is based on expected future service lives while the difference between the projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the items above.

Differences between expected and actual experience for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2022
June 30, 2018	\$ (167,844)	10	\$ (16,784)	\$ (83,924)
June 30, 2019	\$ 38,510	11	\$ 3,501	\$ 24,506
June 30, 2020	\$ 84,734	11	\$ 7,703	\$ 61,625
June 30, 2021	\$ 1,061	10	\$ 106	\$ 849
June 30, 2022	\$ 29,863	10	\$ 2,986	\$ 26,877

Changes in assumptions for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2022
June 30, 2018	\$ (9,871)	10	\$ (987)	\$ (4,936)
June 30, 2019	\$ 13,697	11	\$ 1,245	\$ 8,717
June 30, 2020	\$ 42,861	11	\$ 3,896	\$ 31,173
June 30, 2021	\$ (195,900)	10	\$ (19,590)	\$ (156,720)
June 30, 2022	\$ 10,744	10	\$ 1,074	\$ 9,670

GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Deferred Outflows / (Inflows) of Resources (Continued)

Net Difference between projected and actual earnings in OPEB plan investments for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2022
June 30, 2018	\$ 0	N/A	\$ 0	\$ 0
June 30, 2019	\$ 0	N/A	\$ 0	\$ 0
June 30, 2020	\$ 0	N/A	\$ 0	\$ 0
June 30, 2021	\$ (239)	5	\$ (48)	\$ (143)
June 30, 2022	\$ 33,068	5	\$ 6,614	\$ 26,454

As of fiscal year ending June 30, 2022	Deferred Outflows	Deferred Inflows
Differences between expected and actual experience	\$ 113,857	\$ (83,924)
Changes in assumptions	49,560	(161,656)
Net difference between projected and actual earnings in OPEB plan investments	26,311	0
Total	\$ 189,728	\$ (245,580)

Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2022 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

FYE	Balance
2023	\$ (10,284)
2024	\$ (10,284)
2025	\$ (10,283)
2026	\$ (10,238)
2027	\$ (16,855)
Thereafter	\$ 2,092

GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Sensitivity Results

The following presents the Net OPEB Liability as of June 30, 2022, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 7.35%.
- The 1% decrease in discount rate would be 6.35%.
- The 1% increase in discount rate would be 8.35%.

As of June 30, 2022	Net OPEB Liability	
1% Decrease	\$	492,180
Current Discount Rate	\$	450,925
1% Increase	\$	412,379

The following presents the Net OPEB Liability as of June 30, 2022, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 7.50%, decreasing to an ultimate rate of 4.50%.
- The 1% decrease in health care trend rates would assume an initial rate of 6.50%, decreasing to an ultimate rate of 3.50%.
- The 1% increase in health care trend rates would assume an initial rate of 8.50%, decreasing to an ultimate rate of 5.50%.

As of June 30, 2022	Net OPEB Liability	
1% Decrease	\$	413,391
Current Trend Rates	\$	450,925
1% Increase	\$	492,565

* HRA trend rate is a flat 2.00%. The sensitivity results above account for a 1% increase/decrease to this rate as well.

GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Asset Information

Asset Breakdown	FY 2020/21		FY 2021/22	
Assets				
Cash and deposits	\$	0	\$	0
Securities lending cash collateral		0		0
Total cash	\$	0	\$	0
Receivables				
Contributions	\$	0	\$	0
Accrued interest		0		0
Total receivables	\$	0	\$	0
Investments				
Fixed income	\$	0	\$	0
Equities		0		0
Mutual Funds		144,995		194,765
Total investments	\$	144,995	\$	194,765
Total Assets	\$	144,995	\$	194,765
Liabilities				
Payables				
Investment management fees	\$	0	\$	0
Securities lending expense		0		0
Total liabilities	\$	0	\$	0
Net Position Restricted to OPEB	\$	144,995	\$	194,765

GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Asset Information (Continued)

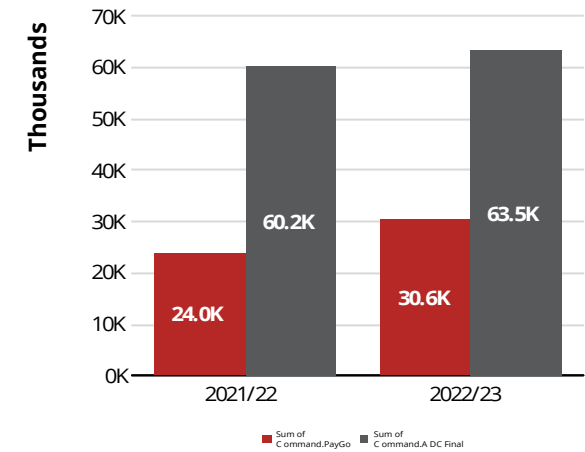
Asset Reconciliation	FY 2020/21	FY 2021/22
Additions		
Contributions Received		
Employer	\$ 180,650	\$ 94,011
Active employees	0	0
Total contributions	\$ 180,650	\$ 94,011
Investment Income		
Net increase in fair value of investments	\$ 2,127	\$ (19,896)
Interest and dividends	0	0
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 2,127	\$ (19,896)
Total additions	\$ 182,777	\$ 74,115
Deductions		
Benefit payments	\$ 37,653	\$ 24,011
Administrative expenses	129	334
Other	0	0
Total deductions	\$ 37,782	\$ 24,345
Net increase in net position	\$ 144,995	\$ 49,770
Net position restricted to OPEB		
Beginning of year	\$ 0	\$ 144,995
End of year	\$ 144,995	\$ 194,765

Actuarially Determined Contributions

City of South Lyon GASB 74/75 Valuation For Fiscal Year Ending June 30, 2022

	FY 2021/22		FY 2022/23	
Discount rate (Funding)		7.35%		7.35%
Payroll growth factor used for amortization		N/A		N/A
Actuarial cost method		Entry Age Normal Level % of Salary		Entry Age Normal Level % of Salary
Amortization type		Level Dollar		Level Dollar
Amortization period (years)		30		29
Actuarial Accrued Liability (AAL) - beginning of year	\$	563,268	\$	645,690
Actuarial Value of Assets (AVA) - beginning of year		(144,995)		(194,765)
Unfunded AAL - beginning of year	\$	418,273	\$	450,925
Normal Cost	\$	23,561	\$	23,722
Amortization of Unfunded AAL		32,510		35,400
Total normal cost plus amortization	\$	56,071	\$	59,122
Interest to end of year		4,121		4,345
Actuarially Determined Contribution - Preliminary	\$	60,192	\$	63,467
Expected Benefit Payments		24,011		30,559
Actuarially Determined Contribution - Final	\$	60,192	\$	63,467

Cash Vs Accrual Accounting



Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

Projection of GASB Disclosures

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

Unexpected Events

- Increases in TOL when actual health care costs increase more than expected. A liability decrease occurs when the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

Projection of Total OPEB Liability (TOL)	FY 2021/22	FY 2022/23
TOL as of beginning of year	\$ 563,268	\$ 645,690
Normal cost as of beginning of year	23,561	23,722
Exp. benefit payments during the year	(24,011)	(30,559)
Interest adjustment to end of year	42,265	48,099
Exp. TOL as of end of year	\$ 605,083	\$ 686,952
Actuarial Loss / (Gain)	40,607	TBD
Actual TOL as of end of year	\$ 645,690	\$ TBD

Discount rate as of beginning of year	7.35%	7.35%
Discount rate as of end of year	7.35%	TBD

Projection of Actuarial Value of Assets (AVA)	FY 2021/22	FY 2022/23
AVA as of beginning of year	\$ 144,995	\$ 194,765
Exp. employer contributions during the year	94,011	63,467
Exp. benefit payments during the year	(24,011)	(30,559)
Expected investment income	13,172	15,487
Exp. Trust administrative expenses	(334)	(449)
Exp. AVA as of end of year	\$ 227,833	\$ 242,711
Differences between expected and actual experience	(33,068)	TBD
AVA as of end of year	\$ 194,765	\$ TBD

Expected asset return as of beginning of year	7.35%	7.35%
Expected asset return as of end of year	7.35%	TBD

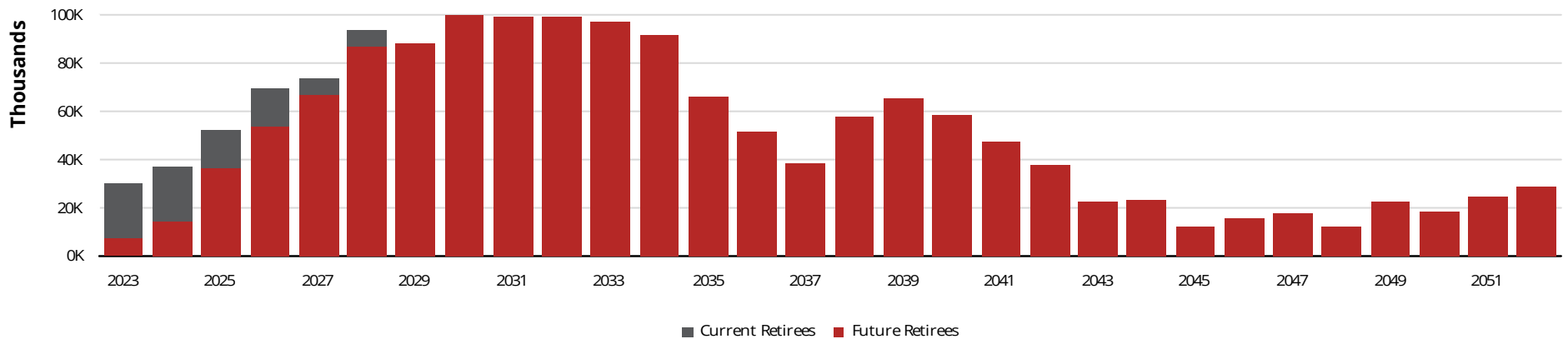
Cash Flow Projections

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current/future retirees. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees*	Total	FYE	Current Retirees	Future Retirees*	Total	FYE	Current Retirees	Future Retirees*	Total
2023	\$ 22,712	\$ 7,847	\$ 30,559	2033	\$ 0	\$ 97,373	\$ 97,373	2043	\$ 0	\$ 22,570	\$ 22,570
2024	\$ 22,600	\$ 14,736	\$ 37,336	2034	\$ 0	\$ 91,473	\$ 91,473	2044	\$ 0	\$ 23,213	\$ 23,213
2025	\$ 15,754	\$ 36,368	\$ 52,122	2035	\$ 0	\$ 66,537	\$ 66,537	2045	\$ 0	\$ 12,555	\$ 12,555
2026	\$ 15,648	\$ 54,039	\$ 69,687	2036	\$ 0	\$ 51,564	\$ 51,564	2046	\$ 0	\$ 16,135	\$ 16,135
2027	\$ 6,605	\$ 66,979	\$ 73,584	2037	\$ 0	\$ 38,788	\$ 38,788	2047	\$ 0	\$ 17,678	\$ 17,678
2028	\$ 6,557	\$ 87,010	\$ 93,567	2038	\$ 0	\$ 57,853	\$ 57,853	2048	\$ 0	\$ 12,623	\$ 12,623
2029	\$ 0	\$ 88,605	\$ 88,605	2039	\$ 0	\$ 65,240	\$ 65,240	2049	\$ 0	\$ 23,094	\$ 23,094
2030	\$ 0	\$ 99,719	\$ 99,719	2040	\$ 0	\$ 58,463	\$ 58,463	2050	\$ 0	\$ 18,518	\$ 18,518
2031	\$ 0	\$ 99,433	\$ 99,433	2041	\$ 0	\$ 47,923	\$ 47,923	2051	\$ 0	\$ 24,565	\$ 24,565
2032	\$ 0	\$ 99,195	\$ 99,195	2042	\$ 0	\$ 37,813	\$ 37,813	2052	\$ 0	\$ 29,208	\$ 29,208

Projected Employer Pay-go Cost



* Projections for future retirees do not take into account future new hires.

Discussion of Discount Rates

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale) must be used.

For the current valuation:

1. The long-term expected rate of return on OPEB plan investment is assumed to be 7.35%. As of January 1, 2022, the rate of return of the MERS Total Market Portfolio, where the OPEB Trust is invested, is 7.35%. This was determined using a building block method in which expected future rates of return are developed for each major asset class. These expected future real rates of return are then combined to produce the long-term expected rate of return by weighting them based on the target asset allocation and includes expected inflation (2.50%). The best estimates of arithmetic returns for each major asset class of the MERS Total Market Portfolio included in the OPEB Plan's target asset allocation as of June 30, 2022 are summarized in the following table.

Asset Class	Target Allocation	L/T Expected Real ROR
Global Equity	60.0%	5.25%
Global Fixed Income	20.0%	1.25%
Private Investments	20.0%	7.25%
Total	100.0%	4.85%

2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments are selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

Yield as of	July 1, 2021	June 30, 2022
Bond Buyer Go 20-Bond Municipal Bond Index	2.16%	3.54%
S&P Municipal Bond 20-Year High Grade Rate Index	2.19%	4.09%
Fidelity 20-Year Go Municipal Bond Index	1.94%	3.69%
Bond Index Range	1.94% - 2.19%	3.54% - 4.09%

3. With the expectation that the City will contribute the ADC each year, the Trust is expected to be sufficient to pay for all future projected benefit payments, and there will not be a cross-over point. As such, the final equivalent single discount rate used for this year's valuation is 7.35% as of June 30, 2022.

Summary of Plan Participants

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Active Employees

Actives with coverage	Single ¹	Non-Single	Total	Avg. Age	Avg. Svc	Salary
General	9	15	24	47.3	11.6	\$ 1,437,647
Police	3	11	14	46.1	20.6	\$ 1,127,409
Total actives with coverage	12	26	38	46.8	14.9	\$ 2,565,056

Actives without coverage	Total	Avg. Age	Avg. Svc	Salary
Total actives without coverage	5	52.6	11.6	\$ 341,751

Active employees who currently have no coverage are assumed not to elect coverage at retirement. They have been excluded from the GASB valuation.

¹ Single enrollment above includes employee only and employee + child(ren) coverage levels.

Summary of Plan Participants

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Active Age-Service Distribution

Age	Years of Service										Total	
	< 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												0
25 to 29		1										1
30 to 34	1	1	3		1							6
35 to 39		1		1								2
40 to 44	1	1		1	1	1						5
45 to 49		1		2		3						6
50 to 54			2			3	2	3				10
55 to 59		3	1			1		1				6
60 to 64					1	1						2
65 to 69												0
70 & up												0
Total	2	8	6	4	3	9	2	4	0	0		38

Summary of Plan Participants

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Retirees

Retirees with coverage	Single	Non-Single	Total	Avg. Age
General	2		2	*
Police	1		1	*
Total retirees with coverage	3	0	3	60.7

*Average age is shown in aggregate for privacy purposes.

Retiree Age Distribution

Age	Retirees
< 45	
45 to 49	
50 to 54	
55 to 59	1
60 to 64	2
65 to 69	
70 to 74	
75 to 79	
80 to 84	
85 to 89	
90 & up	
Total	3

Substantive Plan Provisions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Eligibility

All employees retiring under Regular, work related disability, or workers compensation retirement are eligible to continue healthcare coverage until age 65. Police Regular retirees are required to have 25 years of service to be eligible for the employer stipend. General retirees have no service requirement.

Spouse Benefit

Spousal coverage continues until the earlier of (1) the date the retiree becomes Medicare eligible and (2) the date the spouse becomes Medicare eligible. Surviving spouses are eligible for COBRA coverage.

Medical Benefits

Same benefits are available to retirees as active employees. The HRA PPO Gold health plan is fully-insured and partially experience-rated. The monthly funding rates vary by age and are effective on July 1, 2022. Rates at sample ages are as shown below.

Age	Rate
55	\$ 632.32
60	\$ 769.55
64	\$ 850.65

Retiree Cost Sharing

Retirees pay for the portion of the premium rates not covered by the City's explicit subsidy.

Explicit Subsidy

Eligible Police retirees from the POAM union receive a stipend of up to \$700 per month for healthcare premiums. Eligible Police retirees from the POLC union receive a stipend of up to \$900 per month for healthcare premiums. Eligible General Retirees receive a stipend of up to \$500 per month for healthcare premiums. To the extent the stipend exceeds the monthly healthcare premiums, the remainder may be used to offset spousal healthcare premiums

HRA

The City funds \$4,000 annually in a health reimbursement account. The cost of this benefit is not included in the healthcare premium funding rates shown above. The flat monthly premium for the HRA benefit as of July 1, 2022 is \$128.44 for single coverage and \$281.72 for two-person coverage.

Actuarial Methods and Assumptions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and City experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

There are changes to the actuarial methods and assumptions since the last GASB valuation, which was for the fiscal year ending June 30, 2020. Refer to Actuary's Notes section for complete information on these changes. For the current year GASB valuation, we have also updated the per capita costs. We expect to update discount rate, health care trend rates, mortality table, and per capita costs again in the next full GASB valuation, which will be for the fiscal year ending June 30, 2024.

Measurement Date

For fiscal year ending June 30, 2022, a June 30, 2022 measurement date was used.

Actuarial Valuation Date

June 30, 2022 with no adjustments to get to the June 30, 2022 measurement date. Liabilities as of July 1, 2021 are based on an actuarial valuation date of July 1, 2020 projected to July 1, 2021 on a "no loss / no gain" basis.

Discount Rate

7.35% as of June 30, 2022 and July 1, 2021 for accounting and funding disclosure purposes. Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

The discount rate was chosen by the plan sponsor based on the information provided in the "Discussion of Discount Rates" section above

Actuarial Methods and Assumptions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Payroll Growth

From the MERS actuarial valuation as of December 31, 2020. Sample rates are as follows and include assumed inflation of 3.00%:

<u>Service</u>	<u>Total Salary Growth Rate</u>
0	9.70%
5	4.90%
10	4.10%
15	3.70%
20	3.60%
25	3.40%
30	3.20%
35	3.10%
40+	3.00%

Inflation Rate

3.00% per year

The inflation rate is based on the current economic environment and future expectations.

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant's benefit at retirement; and
- Annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.

Employer Funding Policy

Pay-as-you-go cash basis

Census Data

Census information was provided by the City and it was provided in July 2022. We have reviewed it for reasonableness and no material modifications were made to the census data.

Experience Study

Best actuarial practices call for a periodic assumption review and Nyhart recommends the City to complete an actuarial assumption review (also referred to as an experience study) in the future.

Actuarial Methods and Assumptions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Health Care Coverage Election Rate

Active employees with current coverage: 100%

Active employees with no coverage: 0%

Inactive employees with current coverage: 100%

Inactive employees with no coverage: 0%

It is assumed 100% of current and future eligible retirees receive the stipend regardless of whether they have healthcare coverage through the City.

The participation rates are based on City experience.

Spousal Coverage

Spousal coverage for current and future retirees is based on actual data.

Spousal age for current retirees is based on actual data. For future retirees, husbands are assumed to be three years older than wives.

The spousal coverage is based on City experience.

Actuarial Methods and Assumptions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Mortality

General: SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2021

Police: SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2021

Disabled General Retirees: SOA Pub-2010 Non-Safety Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2021

Disabled Police Retirees: SOA Pub-2010 Public Safety Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2021

Surviving Spouses: SOA Pub-2010 Contingent Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2021

The plan does not have sufficient data to have credible experience. Therefore, mortality assumptions are set to reflect general population trends based upon Pub-2010 Mortality tables and the most recent generational projection scale MP-2021 released by the Society of Actuaries (SOA) for future mortality improvements.

Disability

From the MERS actuarial valuation as of December 31, 2020. Since 20% of disability incidence are assumed to be work related, we have used 20% of the rates shown in the MERS actuarial valuation. The assumptions from the state-wide valuations provide reasonable estimates for experience for municipal employers such as the City of South Lyon. Sample rates are as follows:

Age	Percent Becoming Disabled (Work Related)
20	0.004%
25	0.004%
30	0.004%
35	0.010%
40	0.016%
45	0.040%
50	0.058%
55	0.076%
60+	0.078%

Actuarial Methods and Assumptions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The rates represent the probability of termination in the next 12 months.

The termination rates are based on MERS pension actuarial valuation for FYE December 31, 2020, adjusted by 0.6 for the City's actual experience from 2014 through 2018. Sample annual turnover rates are shown below:

General		Public Safety	
Years of Service	Rate	Years of Service	Rate
0	14.04%	0	8.34%
5	4.98%	5	2.94%
10	3.24%	10	1.92%
15	2.40%	15	1.44%
20	1.86%	20	1.08%
25+	1.56%	25+	0.90%

Retirement Rate

100% at age 58 for Police employees
100% at age 61 for General employees

Health Care Trend Rates

FYE	Medical/Rx	FYE	Medical/Rx
2023	7.5%	2027	5.5%
2024	7.0%	2028	5.0%
2025	6.5%	2029+	4.5%
2026	6.0%		

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

HRA benefit premium is assumed to increase 2.0% per year. General and Police stipends are assumed to remain flat (0% increase).

Retiree Contributions

Retiree contributions are assumed to increase according to health care trend rates.

Actuarial Methods and Assumptions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Per Capita Costs

Annual per capita costs were calculated based on the 2022 funding rates. Since the rates are age appropriate, they have been used without adjustment as shown on page 20. These costs are assumed to increase with health care trend rates.

The HRA benefit per capita cost was based on the HRA monthly premium and was actuarially increased using a retiree load of 1.5. Annual pre-65 HRA per capita costs are as shown below:

Retiree	Spouse
\$ 2,312	\$ 2,759

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

Explicit Subsidy

The difference between (a) the premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a General retiree age 60 with spouse of the same age enrolled in the HRA PPO Gold Plan.

	Premium Rate	Retiree Contribution	Explicit Subsidy
	A	B	C = A - B
Retiree	\$ 897.99	\$ 397.99	\$ 500.00
Spouse	\$ 922.83	\$ 922.83	\$ 0.00

Implicit Subsidy

The difference between (a) the per capita cost and (b) the premium rate. Below is an example of the monthly implicit subsidies for a General retiree age 60 with spouse of the same age enrolled in the HRA PPO Gold Plan

	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A - B
Retiree	\$ 962.21	\$ 897.99	\$ 64.22
Spouse	\$ 999.47	\$ 922.83	\$ 76.64

All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.

Actuarial Methods and Assumptions

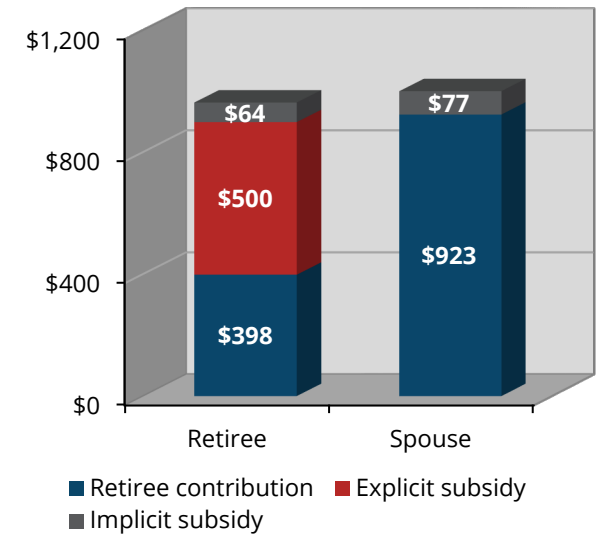
City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

GASB Subsidy Breakdown

Below is a breakdown of the GASB 75 monthly total cost for a General retiree age 60 with spouse of the same age enrolled in the HRA PPO Gold Plan.

	Retiree		Spouse	
Retiree contribution	\$	397.99	\$	922.83
Explicit subsidy	\$	500.00	\$	0.00
Implicit subsidy	\$	64.22	\$	76.64
Total monthly cost	\$	962.21	\$	999.47

GASB Subsidy Breakdown



Models

ProVal

Valuation software developed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing postretirement medical 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 weakness or limitations in the software and have determined it is appropriate for performing this valuation.

APPENDIX

The background features a complex geometric design. It consists of several overlapping, semi-transparent shapes. A large, solid red shape is positioned in the bottom right corner, extending towards the center. To its left, there are several overlapping shapes in various shades of gray and white, creating a layered, architectural effect. The top half of the image is a solid, medium-gray color.

Appendix

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Comparison of Participant Demographic Information

The active participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

	As of June 30, 2020	As of June 30, 2022
Active Participants	42	43
Retired Participants	5	3
Averages for Active		
Age	45.3	47.5
Service	13.2	14.5
Averages for Inactive		
Age	60.9	60.7

Appendix

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

Detailed Actuary's Notes

There have been no substantive plan provision changes since the last valuation, which was for the fiscal year ending June 30, 2021.

Per capita costs for 2022 were updated, resulting in a slight increase in liabilities. The updated census data as of June 30, 2022 that was utilized in the valuation resulted in an increase in liabilities.

The following assumptions have been updated since the prior valuation:

1. The mortality assumption has been updated from the SOA MP-2019 mortality improvement scale to the SOA MP-2021 improvement scale. The base mortality tables are unchanged. The impact of this change is a slight increase in liabilities for the City.
2. The termination and payroll growth assumptions have been updated to follow the MERS Actuarial Valuation as of December 31, 2020. The net impact of these changes is an increase in liabilities.
3. Health care trend rates have been updated to an initial rate of 7.50% decreasing by 0.50% per year to an ultimate rate of 4.50%. This change caused a slight increase in liabilities for the City.

Appendix

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

PA 202 Uniform Assumption Disclosures

The information presented below is for the purposes of filing Form No. 5572 under PA 202 uniform assumption requirements. Per regulation, Form No. 5572 must be filed no later than six months after the end of the fiscal year. Governmental fund revenues are not shown below and should be determined by the City. Refer to the Michigan Department of Treasury website for additional information.

Form 5572 Line	Description	City of South Lyon
Line 28	Actuarial Value of Assets as of June 30, 2022	\$194,765
Line 29	Actuarial Accrued Liability as of June 30, 2022	\$665,897
Line 31	Actuarially Determined Contribution (ADC) for fiscal year ending June 30, 2022	\$62,421

Line 31 (Actuarially Determined Contribution) was calculated using level dollar amortization with a 6.85% discount rate. The amortization period is a closed, 26-year period.

Under PA 202 requirements, uniform assumption setting is mandated in reporting of liabilities, assets, and ADC. The following is a description of the PA 202 uniform assumption guidance and final assumption used for the City for purposes of calculating the figures above.

Assumption	Uniform Assumption Guidance	City Assumption
Investment Rate of Return	Maximum of 6.85%	6.85% (for funding/ADC purposes)
Discount Rate	Blended discount rate calculated per GASB 74/75: <ul style="list-style-type: none"> Maximum of 6.85% where plan assets are sufficient to make projected benefit payments 2.16% for periods where assets are insufficient to make projected benefit payments 	6.85% (for calculation of the OPEB liability)
Salary Increase	Minimum of 3.00% or based on actuarial experience study within the past 5 years	Same as GASB 74/75 valuation
Mortality Table	A version of Pub-2010 with Scale MP-2020 generational mortality improvement or based on an actuarial experience study conducted within the past 5 years	Same PUB-2010 tables as GASB 74/75 valuation with Scale MP-2020 generational mortality improvement
Amortization Period	Maximum closed period of 27 years for Retiree Health Care Systems	For FY 2021/22, 27 years on a closed period basis
Asset Valuation	Market Value as reported on Financial Statements	Same as GASB 74/75 valuation
Healthcare Inflation	Non-Medicare: Initial rate of 7.25% decreasing 0.25% per year to a 4.50% long-term rate Medicare: Initial rate of 5.50% decreasing 0.25% per year to a 4.50% long-term rate	Same as PA 202 uniform assumption

Appendix

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

New Entrant Normal Cost Exhibit

Normal Cost was calculated for those employees hired after June 30, 2018, as shown below:

	FYE 6/30/2022
Normal Cost	6,257

The above Normal Cost was calculated using the City's actuarial assumptions shown in the "Actuarial Methods and Assumptions" section of the report.

GLOSSARY

The background features a series of overlapping, semi-transparent geometric shapes. A large, solid red shape is positioned in the bottom right corner. To its left, there are several overlapping shapes in various shades of gray and white, creating a layered, architectural effect. The top half of the image is a solid, medium-gray color.

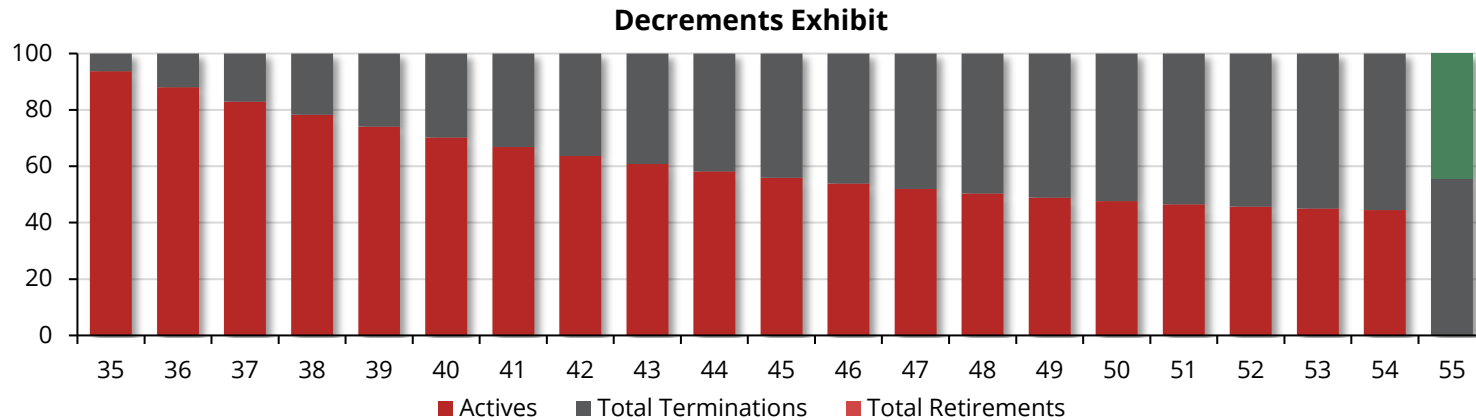
Glossary – Decrements Exhibit

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.43 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

Age	# Remaining Employees	# of Terminations per Year ²	# of Retirements per Year	Total Decrements
35	100.000	6.276	0.000	6.276
36	93.724	5.677	0.000	5.677
37	88.047	5.136	0.000	5.136
38	82.911	4.648	0.000	4.648
39	78.262	4.209	0.000	4.209
40	74.053	3.814	0.000	3.814
41	70.239	3.456	0.000	3.456
42	66.783	3.131	0.000	3.131
43	63.652	2.835	0.000	2.835
44	60.817	2.564	0.000	2.564
45	58.253	2.316	0.000	2.316

Age	# Remaining Employees	# of Terminations per Year	# of Retirements per Year	Total Decrements
46	55.938	2.085	0.000	2.085
47	53.853	1.866	0.000	1.866
48	51.987	1.656	0.000	1.656
49	50.331	1.452	0.000	1.452
50	48.880	1.253	0.000	1.253
51	47.627	1.060	0.000	1.060
52	46.567	0.877	0.000	0.877
53	45.690	0.707	0.000	0.707
54	44.983	0.553	0.000	0.553
55	44.430	0.000	44.430	44.430



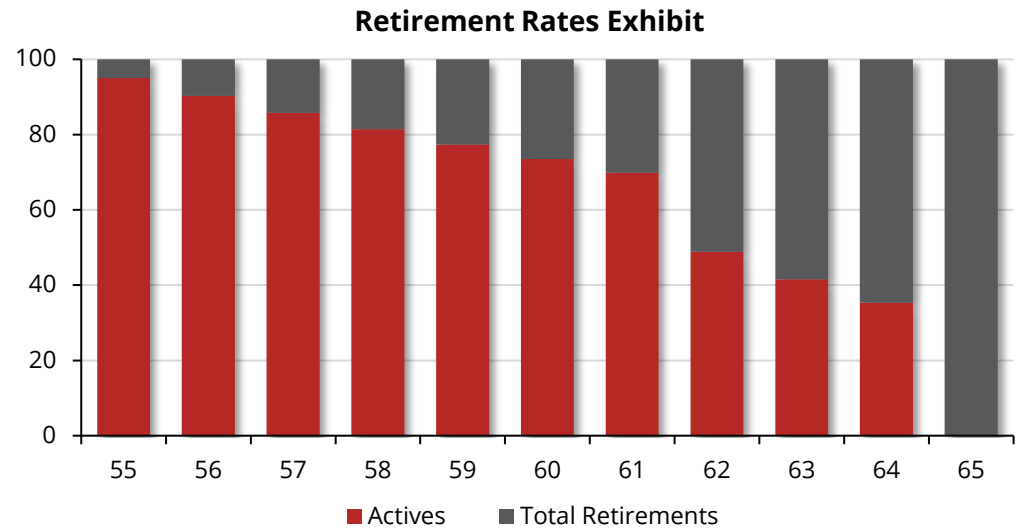
² The above rates are illustrative rates and are not used in our GASB calculations.

Glossary – Retirement Rates Exhibit

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

Age	Active Employees BOY	Annual Retirement Rates*	# Retirements per Year	Active Employees EOY
55	100.000	5.0%	5.000	95.000
56	95.000	5.0%	4.750	90.250
57	90.250	5.0%	4.513	85.738
58	85.738	5.0%	4.287	81.451
59	81.451	5.0%	4.073	77.378
60	77.378	5.0%	3.869	73.509
61	73.509	5.0%	3.675	69.834
62	69.834	30.0%	20.950	48.884
63	48.884	15.0%	7.333	41.551
64	41.551	15.0%	6.233	35.318
65	35.318	100.0%	35.318	0.000



* The above rates are illustrative rates and are not used in our GASB calculations.

Glossary – Definitions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

GASB 75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
2. **Actuarial Cost Method** – A procedure for determining the Actuarial Present Value of Future Benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Service Cost and a Total OPEB Liability.
3. **Actuarially Determined Contribution** - A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.
4. **Actuarial Present Value** – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
 - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
 - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
 - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
5. **Deferred Outflow / (Inflow) of Resources** – represents the following items that have not been recognized in the OPEB Expense:
 - a. Differences between expected and actual experience of the OPEB plan
 - b. Changes in assumptions
 - c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)
6. **Explicit Subsidy** – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
7. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the Total OPEB Liability.

Glossary – Definitions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

8. **Healthcare Cost Trend Rate** – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
9. **Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
10. **OPEB** – Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
11. **OPEB Expense** – Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.
12. **Pay-as-you-go** – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
13. **Per Capita Costs** – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
14. **Present Value of Future Benefits** – Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.
15. **Real Rate of Return** – the rate of return on an investment after adjustment to eliminate inflation.

Glossary – Definitions

City of South Lyon GASB 74/75 Valuation for Fiscal Year Ending June 30, 2022

16. **Select and Ultimate Rates** – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% select rates, and 7% is the ultimate rate.
17. **Service Cost** – The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.
18. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.
19. **Total OPEB Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).