

August 31, 2023

Mr. Thomas Causey
Executive Director
State of North Carolina
Department of State Treasurer
Retirement Systems Division
3200 Atlantic Avenue
Raleigh, NC 27604

Local Governmental Employees' Retirement System GASB 67 Disclosures for Fiscal Year Ending June 30, 2023 Based on Valuation Date of December 31, 2022

Dear Mr. Causey:

We have prepared the required accounting information for Governmental Accounting Standards Board (GASB) Statement No. 67 for the North Carolina Local Governmental Employees' Retirement System for fiscal year ending June 30, 2023 based on a valuation date of December 31, 2022.

GASB Statement No. 67

GASB Statement No. 67 set forth certain items of information to be disclosed in the financial statements of the Plan.

1. One such item is a distribution of the number of employees by type of membership, as follows:

Number of Active and Retired Participants as of 12/31/2022	
Retired members and survivors of deceased members currently receiving benefits	82,466
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	101,818
Active members	<u>135,706</u>
Total membership	319,990

2. Following is the schedule of changes in Net Pension Liability.

Schedule of Changes in Net Pension Liability as of June 30, 2023									
Total Pension Liability									
Service Cost	\$ 917,160,000								
Interest	2,312,550,000								
Changes in Benefit Terms	0								
Differences between Expected and Actual Experience	885,328,000								
Changes of Assumptions	0								
Benefits Payments, including Refund of Member Contributions	(1,865,415,000)								
Net Change in Total Pension Liability	\$ 2,249,623,000								
Total Pension Liability – Beginning of Year	\$ 35,578,561,000								
Total Pension Liability – End of Year	\$ 37,828,184,000								
Plan Fiduciary Net Position									
Employer Contributions	\$ 1,050,570,000								
Member Contributions	524,830,000								
Net Investment Income	1,561,729,000								
Benefit Payments, including Refund of Member Contributions	(1,865,415,000)								
Administrative Expenses	(6,407,000)								
Other	2,657,000								
Net Change in Plan Fiduciary Net Pension	\$ 1,267,964,000								
Plan Fiduciary Net Position – Beginning of Year	\$ 29,937,133,000								
Plan Fiduciary Net Position – End of Year	\$ 31,205,097,000								

Net Pension L	Net Pension Liability/(Asset)										
	June 30, 2023	June 30, 2022									
Total Pension Liability	\$ 37,828,184,000	\$ 35,578,561,000									
Plan Fiduciary Net Position	31,205,097,000	29,937,133,000									
Net Pension Liability/(Asset)	\$ 6,623,087,000	\$ 5,641,428,000									
Plan Fiduciary Net Pension as a Percentage of the Total Pension Liability/(Asset)	82.49%	84.14%									

3. Following is the sensitivity of the net pension liability to changes in the discount rate.

Sensitivity of the	Net Pension Liability	et Pension Liability to Changes in Discount Rate							
	1% Decrease	Current	1% Increase						
Discount Rate	5.50%	6.50%	7.50%						
Net Pension Liability/(Asset)	\$11,474,238,000	\$6,623,087,000	\$2,629,165,000						

- 4. The discount rate used to measure the total pension liability was 6.50%. The projection of cash flows used to determine the discount rate assumed that for fiscal years ending 2023 through 2027, System contributions will follow the Employer Contribution Rate Stabilization Policy as adopted by the Board of Trustees on April 29, 2021, and amended on January 27, 2022, and "direct-rate smoothing" as adopted by the Board of Trustees on January 28, 2021. It is assumed that for fiscal years 2028 and beyond, System contributions will be based on the actuarially determined contribution rates with a minimum employer contribution rate of 6.00% of payroll in accordance with G.S. 128-30(d)(10). Investment earnings are based on actual returns through June 30, 2023, and on the assumed investment rate of return thereafter. In addition, future administrative expenses are assumed equal to 0.13% of projected pay for general employees and firefighters, but no less than a flat rate per active and in-pay general employee or firefighter member equal to \$27.00 in 2022 and increased by 2.5% per year thereafter. Based on those assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Please see Appendix A for additional detail.
- 5. Methods and assumptions used to calculate the actuarially determined contribution rate are as follows.

Valuation Date	12/31/2022
Actuarial Cost Method	Entry Age
Amortization Method	Level dollar closed
Amortization Period	12-year closed period
Asset Valuation Method	Asset returns in excess of or less than the expected return on market value of assets reflected over a five-year period (not greater than 120% of market value and not less than 80% of market value)
Actuarial Assumptions:	
Investment Rate of Return* Projected Salary Increases**	6.50% 3.25% - 8.25%
*Includes Inflation of **Includes Inflation and Productivity of	2.50% 3.25%
Cost-of-living Adjustments	N/A

The June 30, 2023, total pension liability was determined by an actuarial valuation as of December 31, 2022, based on the assumptions adopted by the Board of Trustees on January 28, 2021, which are based on the experience study prepared as of December 31, 2019, including a discount rate of 6.50%. The economic assumptions with respect to investment yield, salary increase, and inflation have been based upon a review of the existing portfolio structure as well as recent and anticipated experience.

The plan sponsor selected the assumptions used for the accounting results in this letter. We believe that these assumptions are reasonable and comply with the Actuarial Standards of Practice ("ASOPs") 27 and 35 and the requirements of GASB Statement No. 67. We prepared this letter in accordance with the requirement of this standard.

ASOPs 27 and 35 ask the actuary to disclose the information and analysis used to support the actuary's determination that the assumptions selected by the plan sponsor do not significantly conflict with what, in the actuary's professional judgment, are reasonable for the purpose of the measurement. In the case of the plan sponsor's selection of expected return on assets ("EROA"), the signing actuaries have used economic information and tools provided by the Financial Risk Management ("FRM") practice at Buck, A Gallagher Company (Buck). A spreadsheet tool created by the FRM team converts averages, standard deviations, and correlations from Buck's Capital Markets Assumptions ("CMA") that are used for stochastic forecasting into approximate percentile ranges for the arithmetic and geometric average returns. It is intended to suggest possible reasonable ranges for EROA without attempting to predict or select a specific best estimate rate of return. It takes into account the duration (horizon) of investment and the target allocation of assets in the portfolio to various asset classes. Based on the actuary's analysis, including consistency with other assumptions used in the valuation and the percentiles generated by the spreadsheet described above, the actuary believes the EROA, in the actuary's professional judgment, is reasonable for the purpose of the measurement.

The June 30, 2023 total pension liability is based on the same plan provisions as used in the previous valuation. To the extent there have been changes to LGERS provisions enacted by the legislature, they have been reviewed with staff of the Retirement Systems Division and were not considered material to the current valuation. To the extent the legislature enacts additional legislation that has a material impact on the valuation, revised GASB 67 disclosures may be required.

Full summaries of the plan provisions used in the previous valuation and for the June 30, 2023, total pension liability were provided in October 2022 in the "Report on the Actuarial Valuation of the North Carolina Local Governmental Employees' Retirement System Prepared as of December 31, 2021".

The actuarial cost method used to develop the total pension liability is the Entry Age Normal Cost Method, as required by GASB Statement No. 67.

The results of this letter are based upon participant data supplied by the Retirement Systems Division and unaudited financial data supplied by the Financial Operations Division. Buck reviewed the data for reasonableness and consistency with data for the prior valuation but performed no audit of the data. The results of this letter are dependent on the accuracy of the data.

The primary purpose of the letter is to provide information that the Office of the State Controller (OSC) requires for its Annual Comprehensive Financial Report. This letter may also be used in conjunction with other materials for purposes of the pension plan audit. Use of the letter for any other purposes or by anyone other than OSC and its auditors may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the letter for that purpose. Because of the risk of misinterpretation of actuarial

results, you should ask us to review any statement you wish to make on the results contained in this report. Buck will not accept any liability for any such statement made without prior review by Buck.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Buck performed no analysis of the potential range of such future differences.

Actuarial Standard of Practice No. 56 ("ASOP 56") provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Buck uses third-party software in the performance of annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the Plan using data and assumptions as of the measurement date under the accounting rules specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies applicable accounting rules to the liabilities derived and other inputs, such as Plan assets and contributions, to generate many of the exhibits found in this report. Buck has an extensive review process whereby the results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other accounting outputs and the internal model are similarly reviewed in detail and at a high level for accuracy, reasonability, and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. The review is performed by experts within the company who are familiar with applicable accounting rules as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked and reviewed by multiple experts within the company who are familiar with the details of the required changes.

Where presented, references to "net pension liability" and "fiduciary net position as a percentage of the total pension liability" may be appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the Fund if the Fund were to settle (i.e., purchase annuities to cover) any portion of its liabilities.

This report was prepared under our supervision and in accordance with all applicable Actuarial Standards of Practice. We are Fellows of the Society of Actuaries, Enrolled Actuaries, Members of the American Academy of Actuaries, and Fellows of the Conference of Consulting Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. We are available to discuss this report with you at your convenience.

Please let us know if you require additional information.

Sincerely,

Buck, A Gallagher Company

Michael A. Ribble, FSA, EA, MAAA, FCA

Principal, Retirement Actuary

Elizabeth A. Wiley, FSA, EA, MAAA, FCA Senior Consultant. Retirement Actuary

Elizabeth O. Wiley

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Appendix A
Table 1 – Projection of Fiduciary Net Positions
(\$ in Thousands)

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2058 30,845,433 3,149 3,519,913 3,281 1,892,452 29,	220,989
2059 29,220,989 2,312 2,312 3,396,991 3,175 1,790,747 27,	616,194
2060 27,616,194 1,694 1,694 3,271,013 3,071 1,690,429 26,	035,927
2061 26,035,927 1,239 1,239 3,143,036 2,972 1,591,778 24,	184,175
2062 24,484,175 903 903 3,013,960 2,876 1,495,025 22,	964,170
2063 22,964,170 656 656 2,802,318 2,782 1,402,982 21,	563,364
2064 21,563,364 476 476 2,676,012 2,689 1,315,961 20,	201,576
2065 20,201,576 344 344 2,550,132 2,598 1,231,467 18,	381,001
	603,546
	370,876
	184,433
2069 15,184,433 87 87 2,058,023 2,224 921,090 14,	045,450
	954,972
	913,858
2072 11,913,858 27 27 1,708,861 1,934 719,676 10,	

Appendix A
Table 1 – Projection of Fiduciary Net Positions (continued)
(\$ in Thousands)

Calendar Year	Beginning Fiduciary Position	Member Contributions	Em ploye Contributi		P	Benefit ayments	nistrative penses	estment arnings	Ending Fiduciary Position
2073	\$ 10,922,793	\$ 17	\$	17	\$	1,597,526	\$ 1,837	\$ 658,822	\$ 9,982,286
2074	9,982,286	11		11		1,489,059	1,739	601,161	9,092,671
2075	9,092,671	6		6		1,383,648	1,641	546,712	8,254,106
2076	8,254,106	4		4		1,281,471	1,543	495,474	7,466,574
2077	7,466,574	2		2		1,182,698	1,446	447,449	6,729,883
2078	6,729,883	1		1		1,087,485	1,350	402,613	6,043,663
2079	6,043,663	1		1		995,985	1,256	360,938	5,407,362
2080	5,407,362	0		0		908,342	1,163	322,385	4,820,242
2081	4,820,242	0		0		824,699	1,072	286,900	4,281,371
2082	4,281,371	0		0		745,188	984	254,421	3,789,620
2083	3,789,620	0		0		669,930	899	224,867	3,343,658
2084	3,343,658	0		0		599,027	817	198,149	2,941,963
2085	2,941,963	0		0		532,565	739	174,169	2,582,828
2086	2,582,828	0		0		470,601	664	152,809	2,264,372
2087	2,264,372	0		0		413,167	594	133,950	1,984,561
2088	1,984,561	0		0		360,263	528	117,455	1,741,225
2089	1,741,225	0		0		311,859	466	103,189	1,532,089
2090	1,532,089	0		0		267,889	409	91,003	1,354,794
2091	1,354,794	0		0		228,249	357	80,750	1,206,938
2092	1,206,938	0		0		192,799	309	72,273	1,086,103
2093	1,086,103	0		0		161,365	266	65,427	989,899
2094	989,899	0		0		133,741	226	60,057	915,989
2095	915,989	0		0		109,696	192	56,024	862,125
2096	862,125	0		0		88,976	161	53,187	826,175
2097	826,175	0		0		71,315	134	51,416	806,142
2098	806,142	0		0		56,438	111	50,590	800,183
2099	800,183	0		0		44,068	91	50,599	806,623
2100	806,623	0		0		33,924	74	51,344	823,969
2101	823,969	0		0		25,729	59	52,733	850,914
2102	850,914	0		0		19,214	47	54,692	886,345
2103	886,345	0		0		14,123	37	57,159	929,344
2104	929,344	0		0		10,216	30	60,080	979,178
2105	979,178	0		0		7,273	23	63,414	1,035,296
2106	1,035,296	0		0		5,098	18	67,130	1,097,310
2107	1,097,310	0		0		3,524	14	71,211	1,164,983
2108	1,164,983	0		0		2,407	11	75,646	1,238,211
2109	1,238,211	0		0		1,630	9	80,432	1,317,004
2110	1,317,004	0		0		1,100	7	85,570	1,401,467
2111	1,401,467	0		0		743	5	91,072	1,491,791
2112	1,491,791	0		0		506	4	96,950	1,588,231
2113	1,588,231	0		0		349	4	103,225	1,691,103
2114	1,691,103	0		0		245	3	109,914	1,800,769
2115	1,800,769	0		0		175	2	117,043	1,917,635
2116	1,917,635	0		0		128	2	124,643	2,042,148
2117	2,042,148	0		0		94	2	132,737	2,174,789
2118	2,174,789	0		0		70	1	141,359	2,316,077
2119	2,316,077	0		0		52	1	150,544	2,466,568
2120	2,466,568	0		0		38	1	160,326	2,626,855
2121	2,626,855	0		0		28	1	170,745	2,797,571
2122	2,797,571	0		0		20	0	181,841	2,979,392

Appendix A

Table 2 – Actuarial Present Values of Projected Benefit Payments
(\$ in Thousands)

(ψσα	,				Present	Value of Benef	t Payments
Calendar Year	Beginning Fiduciary Position	Benefit Payments	Funded Benefit Payments	Unfunded Benefit Payments	Funded Payments at 6.50%	Unfunded Payments at 3.65%	Using Single Discount Rate of 6.50%
2023	\$ 29,655,408	\$ 1,953,241	\$ 1,953,241	\$ 0	\$ 1,892,697	\$ 0	\$ 1,892,697
2024	31,834,640		2,051,354	0	1,866,449	0	1,866,449
2025	33,255,701		2,151,405	0	1,838,011	0	1,838,011
2026	34,643,394	2,252,443	2,252,443	0	1,806,884	0	1,806,884
2027	36,025,118		2,353,805	0	1,772,953	0	1,772,953
2028	37,479,265	, ,	2,462,356	0	1,741,518	0	1,741,518
2029	39,032,638		2,574,631	0	1,709,789	0	1,709,789
2030	40,597,011	2,685,158	2,685,158	0	1,674,356	0	1,674,356
2031	42,077,754		2,793,112	0	1,635,372	0	1,635,372
2032	43,454,599		2,896,774	0	1,592,551	0	1,592,551
2033	44,706,810		2,998,910	0	1,548,077	0	1,548,077
2034	45,815,220		3,101,840	0	1,503,484	0	1,503,484
2035	46,798,270		3,203,912	0	1,458,178	0	1,458,178
2036	47,630,868	3,302,675	3,302,675	0	1,411,387	0	1,411,387
2037	48,373,467	3,399,651	3,399,651	0	1,364,159	0	1,364,159
2038	48,991,961	3,491,774	3,491,774	0	1,315,610	0	1,315,610
2039	49,428,239	3,576,007	3,576,007	0	1,265,114	0	1,265,114
2040	49,712,554	3,654,093	3,654,093	0	1,213,840	0	1,213,840
2041	49,806,774	3,730,424	3,730,424	0	1,163,564	0	1,163,564
2042	49,674,702	3,805,998	3,805,998	0	1,114,683	0	1,114,683
2043	49,356,113	3,872,088	3,872,088	0	1,064,825	0	1,064,825
2044	48,901,578	3,927,623	3,927,623	0	1,014,176	0	1,014,176
2045	48,313,078	3,979,279	3,979,279	0	964,802	0	964,802
2046	47,591,686	4,027,455	4,027,455	0	916,885	0	916,885
2047	46,735,851	4,069,717	4,069,717	0	869,959	0	869,959
2048	45,746,202	4,102,719	4,102,719	0	823,487	0	823,487
2049	44,624,367	4,122,207	4,122,207	0	776,900	0	776,900
2050	43,378,926	4,127,928	4,127,928	0	730,496	0	730,496
2051	42,020,606	4,123,196	4,123,196	0	685,126	0	685,126
2052	40,557,219	4,095,916	4,095,916	0	639,054	0	639,054
2053	39,006,682	4,036,031	4,036,031	0	591,278	0	591,278
2054	37,403,756	3,954,017	3,954,017	0	543,909	0	543,909
2055	35,772,985	3,858,121	3,858,121	0	498,326	0	498,326
2056	34,129,295	3,752,205	3,752,205	0	455,066	0	455,066
2057	32,483,858	3,638,812	3,638,812	0	414,379	0	414,379
2058	30,845,433	3,519,913	3,519,913	0	376,375	0	376,375
2059	29,220,989	3,396,991	3,396,991	0	341,062	0	341,062
2060	27,616,194	3,271,013	3,271,013	0	308,370	0	308,370
2061	26,035,927	3,143,036	3,143,036	0	278,221	0	278,221
2062	24,484,175	3,013,960	3,013,960	0	250,512	0	250,512
2063	22,964,170	2,802,318	2,802,318	0	218,705	0	218,705
2064	21,563,364		2,676,012	0	196,101	0	196,101
2065	20,201,576		2,550,132	0	175,471	0	175,471
2066	18,881,001	2,425,070	2,425,070	0	156,681	0	156,681
2067	17,603,546		2,301,163	0	139,601	0	139,601
2068	16,370,876		2,178,719	0	124,106	0	124,106
2069	15,184,433		2,058,023	0	110,076	0	110,076
				_			
2070	14,045,450	1,939,323	1,939,323	0	97,397	0	97,397
2070	14,045,450 12,954,972		1,939,323 1,822,864	0	97,397 85,960	0	97,397 85,960

Appendix A

Table 2 – Actuarial Present Values of Projected Benefit Payments (continued)
(\$ in Thousands)

.	,								Present	Valu	e of Benefi	it Payı	ments
Calendar Year	Beginn Fiducia Positio	ary	F	Benefit Payments	F	Funded Benefit Payments	nfunded Benefit ayments	Pa	Funded ayments at 6.50%		Infunded yments at 3.65%		ing Single ount Rate of 6.50%
2073	\$ 10,922		\$	1,597,526	\$	1,597,526	\$ 0	\$	66,419	\$	0	\$	66,419
2074		2,286		1,489,059		1,489,059	0		58,131		0		58,131
2075	9,092			1,383,648		1,383,648	0		50,719		0		50,719
2076		4,106		1,281,471		1,281,471	0		44,107		0		44,107
2077	•	5,574		1,182,698		1,182,698	0		38,223		0		38,223
2078	•	9,883		1,087,485		1,087,485	0		33,000		0		33,000
2079	•	3,663		995,985		995,985	0		28,379		0		28,379
2080	•	7,362		908,342		908,342	0		24,302		0		24,302
2081	•),242		824,699		824,699	0		20,718		0		20,718
2082	4,28			745,188		745,188	0		17,578		0		17,578
2083		9,620		669,930		669,930	0		14,838		0		14,838
2084	•	3,658		599,027		599,027	0		12,458		0		12,458
2085	•	1,963		532,565		532,565	0		10,400		0		10,400
2086	•	2,828		470,601		470,601	0		8,629		0		8,629
2087	•	1,372		413,167		413,167	0		7,113		0		7,113
2088	1,984			360,263		360,263	0		5,824		0		5,824
2089	1,74	1,225		311,859		311,859	0		4,734		0		4,734
2090	1,532	2,089		267,889		267,889	0		3,818		0		3,818
2091	1,354	1,794		228,249		228,249	0		3,055		0		3,055
2092	1,206	5,938		192,799		192,799	0		2,423		0		2,423
2093	1,086	5,103		161,365		161,365	0		1,904		0		1,904
2094	989	9,899		133,741		133,741	0		1,482		0		1,482
2095	915	5,989		109,696		109,696	0		1,141		0		1,141
2096	862	2,125		88,976		88,976	0		869		0		869
2097	826	5,175		71,315		71,315	0		654		0		654
2098		5,142		56,438		56,438	0		486		0		486
2099	800	0,183		44,068		44,068	0		356		0		356
2100	806	5,623		33,924		33,924	0		258		0		258
2101		3,969		25,729		25,729	0		183		0		183
2102	850),914		19,214		19,214	0		129		0		129
2103	886	5,345		14,123		14,123	0		89		0		89
2104	929	9,344		10,216		10,216	0		60		0		60
2105	979	9,178		7,273		7,273	0		40		0		40
2106	1,035	5,296		5,098		5,098	0		27		0		27
2107		7,310		3,524		3,524	0		17		0		17
2108		1,983		2,407		2,407	0		11		0		11
2109		3,211		1,630		1,630	0		7		0		7
2110		7,004		1,100		1,100	0		4		0		4
2111		1,467		743		743	0		3		0		3
2112	1,491			506		506	0		2		0		2
2113		3,231		349		349	0		1		0		1
2114		1,103		245		245	0		1		0		1
2115		0,769		175		175	0		1		0		1
2116		7,635		128		128	0		0		0		0
2117		2,148		94		94	0		0		0		0
2118		1,789		70		70	0		0		0		0
2119		5,077		52		52	0		0		0		0
2120		5,568		38		38	0		0		0		0
2121		5,855		28		28	0		0		0		0
2122	2,797	7,571		20		20	0		0		0		0