



Registers of Deeds' Supplemental Pension Fund of North Carolina

Principal Results of Actuarial Valuation as of December 31, 2022

October 26, 2023, Board of Trustees Meeting

Michael Ribble, FSA, EA, MAAA, FCA

Elizabeth Wiley, FSA, EA, MAAA, FCA

Valuation results

Summary of results

The table below provides a summary of the results developed in this valuation compared to the prior valuation.

Valuation Results as of	12/31/2022	12/31/2021
Active Members		
Number*	100	100
Active Deferred*	4	1
Reported Compensation	\$ 7,901,629	\$ 7,414,958
Valuation Compensation**	\$ 8,500,689	\$ 7,904,484
Retired Members and Survivors of Deceased Members		
Currently Receiving Benefits		
Number	101	103
Annual Allowances	\$ 1,816,650	\$ 1,852,650
Assets		
Actuarial Value (AVA)	\$ 52,148,376	\$ 53,061,996
Market Value	\$ 45,186,118	\$ 52,740,361
Actuarial Accrued Liability (AAL)	\$ 33,460,759	\$ 33,768,153
Unfunded Accrued Liability (AAL-AVA)	\$ (18,687,617)	\$ (19,293,843)
Funded Ratio (AVA/AAL)***	155.8%	157.1%

*As of the valuation date, there were 100 members serving as Register of Deeds (RODS). Four former RODS are active employee in the Local Governmental Employees' Retirement System (LGERS) and consequently are ineligible to receive a benefit from RODSPF until retirement from LGERS.

**The Funded Ratio on a Market Value of Assets basis is 135.0% and 156.2% at December 31, 2022 and 2021, respectively.

A detailed summary of the membership data used in this valuation is provided in Section 2 and Appendix A.

RODSPF continues to be a very well funded plan.

Actual contributions to support the Fund are equal to 1.5% of the monthly receipts collected pursuant to Article 1 of Chapter 161 of the General Statutes (about \$1.0 million for calendar year 2022). This level of funding has resulted in the high funded ratio of this plan.

The decrease in the funded ratio as of December 31, 2022 is primarily due to lower than expected asset returns for the year.

Valuation results

Actuarially Determined Employer Contributions

The table below provides a summary of the Actuarially Determined Employer Contribution (ADEC) for FYE June 30, 2025 and 2024.

Contributions for Fiscal Year Ending	6/30/2025	6/30/2024
Actuarially Determined Employer Contribution:		
Normal Cost	\$ 1,326,228	\$ 1,263,263
Accrued Liability	<u>(1,326,228)</u>	<u>(1,263,263)</u>
Total	\$ 0	\$ 0
Liquidation Period	19 Years	21 Years

If the actuarially determined employer contribution (ADEC) is based on 12-year amortization of the unfunded accrued liability, the ADEC is less than \$0, which is not a permissible result.

Therefore, the accrued liability contribution has been set such that the total employer ADEC equals \$0.

A detailed summary of the membership data used in this valuation is provided in Section 2 and Appendix F.

Certification

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: fund experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law. Such changes in law may include additional costs resulting from future legislated benefit improvements or cost-of-living pension increases or supplements, which are not anticipated in the actuarial valuation. Because of limited scope, Buck performed no analysis of the potential range of such future differences, except for some limited analysis in financial projections or required disclosure information. Information contained in our report for plan years from December 31, 2017, to December 31, 2020, is based on valuations performed by the prior actuarial firm.

The purpose of this presentation is to provide a summary of the actuarial valuation results to the Board at the October 26, 2023 meeting attended by the actuaries. Use of this report for any other purposes may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of this presentation for that purpose. This presentation should not be provided without a copy of the full valuation report. Because of the risk of misinterpretation of actuarial results, you should ask Buck, A Gallagher Company (Buck) to review any statement you wish to make on the results contained in this presentation. Buck will not accept any liability for any such statement made without prior review.

This presentation is considered part of the annual actuarial valuation report. Please see below for full description of data, actuarial assumptions and methods, plan provisions, and other applicable disclosures.

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.

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

Elizabeth A. Wiley, FSA, EA, MAAA, FCA





Registers of Deeds' Supplemental Pension Fund

Report on the Actuarial Valuation
Prepared as of December 31, 2022

October 2023

October 13, 2023

Board of Trustees
North Carolina Local Governmental
Employees' Retirement System
3200 Atlantic Avenue
Raleigh, NC 27604

Members of the Board:

We submit herewith our report on the actuarial valuation of the Registers of Deeds' Supplemental Pension Fund (referred to as "RODSPF" or the "Fund"), prepared as of December 31, 2022. The report has been prepared in accordance with North Carolina General Statute 161-50. Information contained in our report for plan years from December 31, 2017, to December 31, 2020, is based on valuations performed by the prior actuarial firm.

The primary purpose of the valuation report is to determine the required employer contribution rates, to describe the current financial condition of the Fund, and to analyze changes in such condition. Use of this report for any other purposes or by anyone other than North Carolina Retirement Systems Division (RSD) and Department of State Treasurer staff may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. The attached pages should not be provided without a copy of this cover letter. Because of the risk of misinterpretation of actuarial results, you should ask Buck, A Gallagher Company (Buck) 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.

The valuation is based upon membership data and financial information as furnished by RSD and the Financial Operations Division and as summarized in this report. Although we reviewed for reasonableness and consistency with the prior valuation, these elements have not been audited by Buck and we cannot certify as to the accuracy and completeness of the data supplied. Sometimes assumptions are made by Buck to interpret membership data that is imperfect. The valuation is also based on benefit and contribution provisions as presented in this report. If you have reason to believe that the plan provisions are incorrectly described that important plan provisions relevant to this valuation are not described, or that conditions have changed since the calculations were made, you should contact the authors of this actuarial report prior to relying on this information.

The valuation is further based on the actuarial valuation assumptions, approved by the Board of Trustees, as presented in this report. We believe that these assumptions are reasonable and comply with the Actuarial Standards of Practice ("ASOPs") 27 and 35 and the requirements of Governmental Accounting Standards Board (GASB) Statement No. 67. We prepared this valuation in accordance with the requirements of this standard and in accordance with all applicable ASOPs.

The assumptions used for the December 31, 2022, actuarial valuation are based on the experience study prepared as of December 31, 2019 and adopted by the Board of Trustees on January 28, 2021. All assumptions are discussed annually with the appropriate parties, and actuarial gain/loss experience is reviewed during each valuation, to see if any changes are needed. 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. All assumptions represent an estimate of future experience.

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 Board's selection of the investment return assumption, the signing actuaries have used economic information and tools provided by Buck's Financial Risk Management ("FRM") practice. 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 the investment return assumption 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 actuaries' analysis, including consistency with other assumptions used in the valuation the percentiles generated by the spreadsheet described above and review of actuarial gain/loss experience, the actuaries believe the assumptions, in the actuaries' professional judgment, are reasonable for the purpose of the measurement.

Where presented, references to "funded ratio" and "unfunded actuarial accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented may be appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities. In various places in the report the results also show funded ratios and unfunded liabilities based upon varying sets of assumptions as well as market values of assets as that is required for certain disclosure information required per accounting rules or statutes. Where this has been done it has been clearly indicated.

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. In addition to the spreadsheet model discussed above, 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.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: fund experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law. Such changes in law may include additional costs resulting from future legislated benefit improvements or cost-of-living pension increases or supplements, which are not anticipated in the actuarial valuation. Because of limited scope, Buck performed no analysis of the potential range of such future differences, except for some limited analysis in financial projections or required disclosure information.

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.

Respectfully submitted,



Michael A. Ribble, FSA, EA, MAAA, FCA
Principal, Retirement Actuary
Buck, A Gallagher Company



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

Table of Contents

Section 1: Principal Results

Table 1 - Summary of Principal Results	1
--	---

Section 2: Membership Data

Table 2 - Active Member Data	3
------------------------------------	---

Table 3 - Data for Members Currently Receiving Benefits	3
---	---

Section 3: Asset Data

Table 4 - Market Value of Assets	4
--	---

Table 5 - Allocation of Investments by Category of the Market Value of Assets	4
---	---

Table 6 - Development of the Actuarial Value of Assets	5
--	---

Section 4: Valuation Comments	6
-------------------------------------	---

Section 5: Liability Results

Table 7 - Liability Summary	7
-----------------------------------	---

Table 8 - Reconciliation of Unfunded Actuarial Accrued Liability	7
--	---

Section 6: Risk	8
-----------------------	---

Appendices

Appendix A - Detailed Tabulations of Member Data	9
--	---

Appendix B - Summary of Main Plan Provisions.....	11
---	----

Appendix C - Actuarial Assumptions and Methods	12
--	----

Section 1: Principal Results

This report, prepared as of December 31, 2022, presents the results of the actuarial valuation of the system. For convenience of reference, the principal results of the valuation and a comparison with the results of the previous valuation are summarized below.

Table 1: Summary of Principal Results

Valuation Results as of	12/31/2022	12/31/2021
Active Members		
Number*	100	100
Active Deferred*	4	1
Reported Compensation	\$ 7,901,629	\$ 7,414,958
Valuation Compensation**	\$ 8,500,689	\$ 7,904,484
Retired Members and Survivors of Deceased Members Currently Receiving Benefits		
Number	101	103
Annual Allowances	\$ 1,816,650	\$ 1,852,650
Assets		
Actuarial Value (AVA)	\$ 52,148,376	\$ 53,061,996
Market Value	\$ 45,186,118	\$ 52,740,361
Actuarial Accrued Liability (AAL)	\$ 33,460,759	\$ 33,768,153
Unfunded Accrued Liability (AAL-AVA)	\$ (18,687,617)	\$ (19,293,843)
Funded Ratio (AVA/AAL)***	155.8%	157.1%
Contributions for Fiscal Year Ending	6/30/2025	6/30/2024
Actuarially Determined Employer Contribution:		
Normal Cost	\$ 1,326,228	\$ 1,263,263
Accrued Liability****	<u>(1,326,228)</u>	<u>(1,263,263)</u>
Total	\$ 0	\$ 0
Liquidation Period	19 Years	21 Years

* As of the valuation date, there were 100 members serving as registers of deeds. Four former registers of deeds are active employees in the Local Governmental Employees' Retirement System (LGERs) and consequently are ineligible to receive a benefit from the RODSPF until retirement from LGERs.

** Reported compensation adjusted to reflect the assumed rate of pay increase prior to the valuation date.

*** The Funded Ratio on a Market Value of Assets basis is 135.0% at December 31, 2022.

**** If the actuarially determined employer contribution (ADEC) is based on 12-year amortization of the unfunded actuarial accrued liability, the ADEC is less than \$0, which is not a permissible result. Therefore, the accrued liability contribution has been set such that the total employer ADEC equals \$0.

Section 1: Principal Results (continued)

- Tables summarizing the membership of the Fund as of the valuation date are shown in Section 2.
- Asset information, including the development of the actuarial value of assets, is shown in Section 3.
- Comments on the valuation results are provided in Section 4.
- A summary of the liability results of the valuation and comments on the experience and actuarial gains/losses during the valuation year are provided in Section 5.
- Comments on risks to the fund are provided in Section 6.
- Appendix A provides detailed tabulations of the membership of the Fund as of the valuation date.
- Appendix B gives a summary of the benefit and contribution provisions of the Fund.
- Appendix C outlines the full set of actuarial assumptions and methods employed.

Section 2: Membership Data

Data regarding the membership of the system for use as a basis for the valuation were furnished by the RSD office. The following tables summarize the membership of the system as of December 31, 2022 upon which the valuation was based.

Table 2: Active Member Data

Group	Member Count*	Average Age	Average Service	Reported Compensation
Males	25	54.67	16.78	\$ 2,205,980
Females	79	58.12	20.86	5,695,649
Total	104	57.29	19.88	\$ 7,901,629

* As of the valuation date, there were 100 members serving as registers of deeds. Four former registers of deeds are active employees in the Local Governmental Employees' Retirement System (LGERS) and consequently are ineligible to receive a benefit under the RODSPF until retirement from LGERS.

Table 3: Data for Members Currently Receiving Benefits

Group	Member Count	Average Age	Annual Retirement Allowances
Males	13	73.84	\$ 234,000
Females	88	73.47	1,582,650
Total	101	73.52	\$ 1,816,650

Section 3: Asset Data

Assets are held in trust and are invested for the exclusive benefit of plan members. The tables below provide the details of the Market Value of Assets for the current year's valuations.

Table 4: Market Value of Assets

Asset Data as of	12/31/2022	12/31/2021
Beginning of Year Market Value of Assets	\$ 52,740,361	\$ 54,335,380
Employer Contributions	1,041,096	1,213,547
Benefit Payments and Administrative Expenses	(1,833,034)	(1,863,456)
Investment Income	<u>(6,762,305)</u>	<u>(945,110)</u>
Net Increase/(Decrease)	(7,554,243)	(1,595,019)
End of Year Market Value of Assets	\$ 45,186,118	\$ 52,740,361
Estimated Net Investment Return on Market Value	-12.92%	-1.75%

The following table shows an allocation of investments by category for the Registers of Deeds' Supplemental Pension Fund as of December 31, 2022.

Table 5: Allocation of Investments by Category for the Registers of Deeds' Supplemental Pension Fund as of December 31, 2022

Cash and Receivables	0.0%
Fixed Income (LTIF)	99.8%
Public Equity	0.0%
Other*	<u>0.2%</u>
Total	100.0%

Section 3: Asset Data

The following table shows an allocation of investments by category for the Registers of Deeds' Supplemental Pension Fund as of December 31, 2022.

Table 6: Development of the Actuarial Value of Assets

Asset Data as of	12/31/2022
Beginning of Year Market Value of Assets	\$ 52,740,361
Contributions	\$ 1,041,096
Benefit Payments	(1,833,034)
Net Cash Flow	\$ (791,938)
Expected Investment Return	\$ 1,570,420
Expected End of Year Market Value of Assets	\$ 53,518,843
End of Year Market Value of Assets	\$ 45,186,118
Excess of Market Value over Expected Market Value of Assets	\$ (8,332,725)
80% of 2022 Asset Gain/(Loss)	\$ (6,666,180)
60% of 2021 Asset Gain/(Loss)	(1,539,297)
40% of 2020 Asset Gain/(Loss)	766,292
20% of 2019 Asset Gain/(Loss)	476,927
Total Deferred Asset Gain/(Loss)	\$ (6,962,258)
Preliminary End of Year Actuarial Value of Assets	\$ 52,148,376
Final End of Year Actuarial Value of Assets (not less than 80% and not greater than 120% of Market Value)	\$ 52,148,376
Estimated Net Investment Return on Actuarial Value	(0.23%)
Estimated Net Investment Return on Market Value	(12.92%)

Commentary: The actuarial value of assets smooths investment gains/losses resulting in less volatility in the employer contribution. The asset valuation method recognizes asset returns in excess of or less than the expected return on the market value of assets over a five-year period.

The return on market value of assets in 2022 was -12.92%. The asset valuation method will spread the recognition of this loss over the next five years, which resulted in an actuarial value of asset return for calendar year 2022 of -0.23% and a recognized asset loss of \$1.7 million during 2022.

Section 4: Valuation Comments

Section 5 of this report presents a summary of the results of the valuation, including present and prospective assets and liabilities of the Fund as of December 31, 2022.

The results of the valuation show that the Fund has total prospective liabilities of \$41,277,985 of which \$22,044,499 is for the prospective benefits payable on account of retired members currently receiving benefits and \$19,233,486 is for the prospective benefits payable on account of present active members. No terminated vested members were reported for this valuation. From these liabilities subtracting the present value of future normal cost contributions of \$7,817,226, leaves \$33,460,759 as the actuarial accrued liability (AAL). The Fund has present assets of \$52,148,376 resulting in an unfunded actuarial accrued liability (UAAL) equal to \$(18,687,617).

The valuation indicates that employer normal cost for the year totals \$1,326,228, which is the annual cost of benefits accruing in the current year under the actuarial funding method, and also includes the amount required for administrative expenses. The payment required to amortize the UAAL is \$(1,326,228), resulting in an actuarially determined contribution of \$0 for fiscal year ending June 30, 2025.

Section 5: Liability Results

The following table summarizes the results of the valuation.

Table 7: Liability Summary

Valuation Results as of	12/31/2022
1. Present Value of Future Benefits	
a. Members Currently Receiving Benefits	\$ 22,044,499
b. Active Members	19,233,486
c. Total Present Value of Future Benefits	\$ 41,277,985
2. Present Value of Future Normal Contributions	\$ 7,817,226
3. Actuarial Accrued Liability (AAL): (1c) - (2)	\$ 33,460,759
4. Actuarial Value of Assets	52,148,376
5. Unfunded Actuarial Accrued Liability (UAAL): (3) - (4)	\$ (18,687,617)

The following table shows a detailed reconciliation of the change in unfunded actuarial accrued liability since the prior valuation.

Table 8: Reconciliation of Change Unfunded Actuarial Accrued Liability Since the Prior Valuation (in millions)

Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2021	\$ (19.3)
Normal Cost during 2022 (including Admin Expenses)	1.3
Reduction due to Actual Contributions during 2022	(1.0)
Interest on UAAL, Normal Cost, and Contributions	(0.6)
Asset (Gain)/Loss	1.7
Actuarial Accrued Liability (Gain)/Loss	(0.8)
Impact of Assumption Changes	0.0
Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2022	\$ (18.7)

Commentary: During 2022, demographic experience decreased the UAAL by \$0.8 million. However, less than expected asset return increased the UAAL by \$1.7 million, for a net experience loss of \$0.9 million. Contributions in excess of the actuarially determined employer contribution for the year decreased the UAAL by \$1.0 million.

Section 6: Risk

Measuring pension obligations and actuarially determined contributions requires the use of assumptions regarding future economic and demographic experience. Whenever assumptions are made about future events, there is risk that actual experience will differ from expected. Actuarial valuations include the risk that actual future measurements will deviate from expected future measurements due to actual experience that is different than the actuarial assumptions. The primary areas of risk in this actuarial valuation are:

- Investment Risk – the potential that investment returns will be different than expected.
- Longevity and Other Demographic Risks – the potential that mortality or other demographic experience will be different than expected.
- Interest Rate Risk – To the extent market rates of interest affect the expected return on assets, there is a risk of change to the discount rate which determines the present value of liabilities and actuarial valuation results.
- Contribution Risk – The potential that actual contributions are different than the actuarially determined contributions.

Annual actuarial valuations are performed for RSD, which re-measure the assets and liabilities and compute a new actuarially determined contribution. RSD also has experience studies performed every five years to analyze the discrepancies between actuarial assumptions and actual experience and determine if the actuarial assumptions need to be changed. Annual actuarial valuations and periodic experience studies are practical ways to monitor and reassess risk.

Appendix A: Detailed Tabulations of Member Data

The Number and Average Reported Compensation of Active Members Distributed by Age and Service as of December 31, 2022

Age	Years of Service										Total	
	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	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	1	0	0	0	0	0	0	0	0	1
	0	0	76,665	0	0	0	0	0	0	0	0	76,665
35 to 39	0	0	1	0	0	0	0	0	0	0	0	1
	0	0	73,036	0	0	0	0	0	0	0	0	73,036
40 to 44	0	1	1	2	0	1	0	0	0	0	0	5
	0	66,990	52,445	97,004	0	64,726	0	0	0	0	0	75,634
45 to 49	0	1	1	2	2	5	0	0	0	0	0	11
	0	65,967	66,510	64,714	75,670	66,510	0	0	0	0	0	67,800
50 to 54	0	0	3	1	5	6	4	2	0	0	0	21
	0	0	67,020	56,792	96,582	72,089	83,084	90,718	0	0	0	80,337
55 to 59	0	2	3	2	3	3	3	4	1	0	0	21
	0	105,207	65,938	64,503	71,040	71,526	67,184	105,091	82,643	0	0	79,500
60 to 64	0	3	2	1	5	2	1	1	3	0	0	18
	0	64,099	85,012	119,843	64,626	58,622	66,687	73,781	95,492	0	0	74,971
65 to 69	0	0	1	2	4	2	0	3	2	2	2	16
	0	0	91,127	74,547	64,011	75,219	0	84,281	91,217	85,955	0	78,368
70 & Up	0	0	0	1	2	1	0	1	1	0	0	6
	0	0	0	82,139	69,090	164,017	0	78,005	64,958	0	0	87,883
Total	0	7	13	11	21	20	8	11	7	2	0	100
	0	76,524	71,437	78,210	74,511	73,804	75,072	91,494	88,073	85,955	0	77,609

Table excludes four former registers of deeds who are active employees in the Local Governmental Employees' Retirement System (LGERS) and consequently are ineligible to receive a benefit under the RODSPF until retirement from LGERS.

Appendix A: Detailed Tabulations of Member Data (continued)

Number and Annual Retirement Allowances of Retired Members and Survivors of Deceased Members Distributed by Age as of December 31, 2022

Age	Men		Women	
	Number	Allowances	Number	Allowances
52			1	\$18,000
54			1	\$18,000
56			2	\$36,000
58	1	\$18,000		
59			1	\$18,000
60			1	\$18,000
61			1	\$18,000
63			2	\$36,000
64	1	\$18,000	2	\$36,000
65			2	\$36,000
66			5	\$90,000
67			5	\$90,000
68			1	\$18,000
69	1	\$18,000	4	\$72,000
70	2	\$36,000	5	\$90,000
71			3	\$54,000
72			2	\$36,000
73	1	\$18,000	7	\$126,000
74	1	\$18,000	5	\$90,000
75	1	\$18,000	5	\$90,000
76	1	\$18,000	4	\$72,000
77			6	\$108,000
78			3	\$54,000
80			2	\$36,000
81	1	\$18,000	1	\$18,000
82	2	\$36,000	3	\$52,650
83			3	\$54,000
84			3	\$54,000
86			1	\$18,000
87	1	\$18,000	1	\$18,000
89			1	\$18,000
90			2	\$36,000
93			2	\$36,000
97			1	\$18,000
Total	13	\$234,000	88	\$1,582,650

Appendix B: Summary of Main Plan Provisions

The Registers of Deeds' Supplemental Pension Fund was established October 1, 1987 for all county registers of deeds who are retired from the Local Governmental Employees' Retirement System or an equivalent locally sponsored plan.

Benefits

Service Retirement Pension

Conditions for Pension

Retirement from the Local Governmental Employees' Retirement System or equivalent locally sponsored plan with 10 or more years of service as a register of deeds.

Amount of Pension

For Registers of Deeds who began service before September 10, 2009, the benefit payable for the life of the member only, equal to 75% of the equivalent annual salary immediately preceding retirement computed on the latest monthly base rate. Maximum benefit is \$1,500 per month.

For Registers of Deeds who began service September 10, 2009 or later, the benefit is minimum of A or B:

A = 75% of equivalent annual salary immediately preceding retirement computed on the latest monthly base rate minus maximum pension from LGERS or equivalent locally sponsored plan.

B = \$1,500 per month.

Deferred Vested Retirement Pension

Conditions for Pension

Separation from service after completing at least 10 years of service as a register of deeds.

Amount of Pension

Service Retirement Allowance described above commencing upon retirement with the Local Governmental Retirement System.

Contributions

Employer Contributions

1.5% of the monthly receipts collected pursuant to Article 1 of Chapter 161 of the General Statutes.

Employee Contributions

None.

Changes Since Prior Valuation

None.

Appendix C: Actuarial Assumptions and Methods

Assumptions are based on the experience investigation prepared as of December 31, 2019 and adopted by the Board of Trustees on January 28, 2021 for use beginning with the December 31, 2020 annual actuarial valuation.

Interest Rate

3.00% per annum, compounded annually.

Inflation

2.50% per annum, compounded annually.

Real Wage Growth

0.75% per annum.

Payroll Growth:

3.25% per annum.

Separations From Active Service

Representative values of the assumed rates of separation from active service are as follows:

Annual Rate of Withdrawal		
Service	Male	Female
0	.1100	.1100
1	.1750	.1750
2	.1500	.1550
3	.1250	.1300
4	.1050	.1150

Appendix C: Actuarial Assumptions and Methods (continued)

Age	Withdrawal and Vesting*		Annual Rates of Base Mortality**		Disability	
	Male	Female	Male	Female	Male	Female
25	.1200	.1750	.00028	.00009	.0004	.0005
30	.0750	.1100	.00036	.00015	.0005	.0005
35	.0550	.0900	.00047	.00023	.0005	.0005
40	.0550	.0700	.00066	.00036	.0010	.0005
45	.0425	.0500	.00098	.00056	.0020	.0015
50	.0425	.0450	.00149	.00083	.0030	.0030
55	.0425	.0450	.00219	.00123	.0050	.0045
60	.0425	.0450	.00319	.00186	.0065	.0045
65			.00468	.00296		
69			.00646	.00442		

* These rates apply only after five years of membership in the system.

** Base mortality rates as of 2010.

Retirements

Representative values of the assumed rates of retirement from active service are as follows:

Service - Males							
Age	5	10	15	20	25	30	35
50				0.030	0.055	0.400	0.400
55				0.030	0.055	0.250	0.250
60	0.080	0.070	0.070	0.075	0.200	0.225	0.225
65	0.250	0.250	0.275	0.325	0.300	0.300	0.300
70	0.200	0.250	0.200	0.275	0.300	0.300	0.300
75	0.250	0.200	0.300	0.275	0.300	0.300	0.300

Service - Females							
Age	5	10	15	20	25	30	35
50				0.035	0.050	0.450	0.450
55				0.050	0.055	0.300	0.300
60	0.080	0.090	0.070	0.100	0.250	0.250	0.250
65	0.250	0.250	0.350	0.350	0.350	0.390	0.300
70	0.200	0.250	0.225	0.300	0.200	0.250	0.250
75	0.200	0.200	0.225	0.300	0.200	0.250	0.250

Appendix C: Actuarial Assumptions and Methods (continued)

Salary Merit Increases

Total assumed salary increases are these merit rates added to the wage inflation assumption of 3.25% (2.50% price inflation plus 0.75% real wage growth). Representative values of the assumed annual rates of salary merit increases are as follows:

Service	Annual Rate of Salary Increase
0	5.00%
5	2.70
10	1.73
15	1.08
20	0.69
25	0.55
30	0.55
35	0.00
40	0.00
45	0.00
50	0.00

Mortality Assumption

All mortality rates use Pub-2010 amount-weighted tables.

Deaths After Retirement

Representative values of the assumed post-retirement mortality rates as of 2010 prior to any mortality improvements are as follows:

Age	Annual Rates of Death after Retirement			
	Retirees (Healthy at Retirement)		Retirees (Disabled at Retirement)	
	Male	Female	Male	Female
55	.00477	.00286	.02355	.01692
60	.00684	.00384	.02785	.01914
65	.01064	.00613	.03524	.02178
70	.01828	.01063	.04599	.02706
75	.03227	.01883	.06347	.03718
80	.05810	.03360	.09259	.05517

Deaths After Retirement (Healthy Members at Retirement)

Mortality rates are based on the General Mortality Table for Retirees. Rates for male members are first Set Forward 2 years, then are multiplied by 96% for ages under 81, and increase until reaching 100% at age 85 and above. Rates for female members are 100% for ages under 92 and increase until reaching 110% at age 94 and above. Because the retiree tables have no rates prior to age 50, the General Mortality Table for Employees is used for ages less than 50.

Appendix C: Actuarial Assumptions and Methods (continued)

Deaths After Retirement (Survivors of Deceased Members)

Mortality rates are based on the Below- median Teachers Mortality Table for Contingent Survivors. Rates for male members are Set Forward 3 years. Rates for female members are Set Forward 1 year. Because the contingent survivor tables have no rates prior to age 45, the Below-median Teachers Mortality Table for Employees is used for ages less than 45.

Death After Retirement (Disabled Members at Retirement)

Mortality rates are based on the General Mortality Table for Disabled Retirees. Rates for General Employee male members are Set Forward 3 years. Rates for General Employee female members are Set Back 1 year.

Deaths Prior to Retirement

Mortality rates for General Employees are based on the General Mortality Table for Employees.

Mortality Projection (Non-Disabled)

All mortality rates are projected from 2010 using generational improvement with Scale MP-2019.

Missing Gender Code

For members reported on the data without a gender code, we use the prior year's code where available or assign a code based on inspection.

Timing of Assumptions

All withdrawals, deaths, disabilities, retirements and salary increases are assumed to occur July 1 of each year. The timing of retirement changes from mid-year to beginning of year at and after the 100% retirement age.

Age and Service Rounding

For valuation purposes, age and service as of the valuation date for each individual have been rounded to the nearest integer.

Administrative Expenses

Assumed to be 0.40% of payroll and added to normal cost.

Reported Compensation

Calendar year compensation as furnished by the system's office.

Appendix C: Actuarial Assumptions and Methods (continued)

Valuation Compensation

Reported compensation adjusted to reflect the assumed rate of pay as of the valuation date and the probability of decrement during the year.

Actuarial Cost Method

Entry age normal cost method.

Asset Valuation Method

Actuarial value, as developed in Appendix B. The actuarial value of assets is based upon a smoothed market value method. Under this method, asset returns in excess of or less than the expected return on market value of assets will be reflected in the actuarial value of assets over a five-year period. The calculation of the Actuarial Value of Assets is based on the following formula:

$$MV - 80\% \times G/(L)_1 - 60\% \times G/(L)_2 - 40\% \times G/(L)_3 - 20\% \times G/(L)_4$$

MV = the market value of assets as of the valuation date

$G/(L)_i$ = the asset gain or (loss) for the i-th year preceding the valuation date

Changes in Assumptions and Methods Since Prior Valuation

The assumptions and methods used for the December 31, 2022 actuarial valuation are based on the experience study prepared as of December 31, 2019 and adopted by the Board of Trustees on January 28, 2021. No changes have been made since the prior valuation.