OMAHA SCHOOL EMPLOYEES RETIREMENT SYSTEM

FOUR YEAR EXPERIENCE STUDY FOR PERIOD ENDING DECEMBER 31, 2024

SUBMITTED: JANUARY 20, 2026

TABLE OF CONTENTS

CavMac
Actuarial Consulting Services

January 20, 2026

Public Employees Retirement Board
Nebraska Public Employees Retirement System
Post Office Box 94816
Lincoln, NE 68509

Dear Members of the Board:

It is a pleasure to submit this report of our investigation of the experience of the Omaha School Employees Retirement System (OSERS) for the period of January 1, 2021 through December 31, 2024.

The purpose of this report is to present the results of our review of the actuarial methods and assumptions used in the OSERS actuarial valuation. With the approval of the recommendations in this report by the Public Employees Retirement Board (Board), these assumptions and methods will be used in the January 1, 2026 actuarial valuation. This report includes discussion of our recommended changes from the prior assumptions that are intended to better anticipate the emerging experience for OSERS. Actual future experience, however, may still differ from these assumptions. As the plan's actuary, our responsibility is to make recommendations for assumption and method changes. Ultimately the Board has the authority to decide whether or not to adopt the recommendations.

In preparing this report, we relied, without audit, on information supplied by the System for the annual actuarial valuations. If any data or other information is inaccurate or incomplete, our analysis and recommendation may be impacted and a revised report may need to be issued. It is worth noting that the valuation data was first provided by staff of the Nebraska Public Employees Retirement System (NPERS) for the January 1, 2025 actuarial valuation which potentially could have impacted the decrements occurring during calendar year 2024.

The current study period included several years during or right after the COVID pandemic which almost certainly influenced both demographic experience and economic forecasts, at least in the short term. Consequently, the observed patterns and trends are unlikely to be reliable as long-term trends. As a result, no significant changes to the assumptions were recommended in this experience study as the results were assigned low credibility. Where we observed consistent patterns in the prior and current study period, small incremental changes were considered.

We hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial

Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries. In particular, we have prepared the assumptions developed in this report in keeping with our understanding of Actuarial Standards of Practice No. 27 (Selection of Assumptions for Measuring Pension Obligations).

In order to prepare the results in this study we have utilized actuarial models that were developed for to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results. Future actuarial results may differ significantly from the results in this report due to factors such as the following: Plan experience differing from that anticipated by the assumptions, changes to economic or demographic assumptions, end of an amortization period or changes to the plan provisions or applicable law.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We would like to acknowledge the help given by NPERS' staff in the preparation of the data for this investigation.

We, Patrice A. Beckham, Brent A. Banister, and Aaron Chochon are members of the American Academy of Actuaries, Enrolled Actuaries and the Society of Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

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Consulting Actuary

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SECTION 1 – INTRODUCTION

The purpose of an actuarial valuation is to provide a timely best estimate of the ultimate costs of a retirement system. Actuarial valuations of the Omaha School Employees Retirement System (OSERS or the System) are prepared annually to determine the actuarial contribution rate to fund the System on an actuarial reserve basis, i.e. the current assets plus future contributions, along with investment earnings will be sufficient to provide the benefits promised by the System. The valuation requires the use of certain assumptions with respect to the occurrence of future events, such as rates of death, disability, termination of employment, retirement age and salary changes to estimate the obligations of the System.

The basic purpose of an experience study is to determine whether the actuarial assumptions currently in use align with the actual emerging experience of the plan and to review if there have been any changes in expectations of future plan experience. This information, along with the professional judgment of the Board, its advisor, and the actuary, is used to evaluate the appropriateness of continued use of the current actuarial assumptions. When analyzing experience and assumptions, it is important to recognize that actual experience is reported in the short term while assumptions are intended to be long-term estimates of experience. Therefore, actual experience is expected to vary from study period to study period, without necessarily indicating a change in assumptions is needed.

At the request of the Board, Cavanaugh Macdonald Consulting, LLC (CavMac), has performed a study of the experience of OSERS, for the four-year period ending December 31, 2024. This report presents the results, analysis, and resulting recommendations of our study. It is anticipated that the changes, if approved by the Board, will first be reflected in the January 1, 2026 actuarial valuation.

These assumptions have been developed in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the applicable Actuarial Standards of Practice adopted by the Actuarial Standards Board (ASB). While the recommended assumptions represent our best estimate of future experience, there are other reasonable assumption sets that could be supported by the results of this experience study. Those other sets of reasonable assumptions could produce liabilities and costs that are either higher or lower.

Our Philosophy

Similar to an actuarial valuation, the calculation of actual and expected experience is a fairly mechanical process, and differences between actuaries in this area are generally minor. However, the setting of assumptions differs, as it is more art than science. In this report, we have recommended changes to certain assumptions. To explain our thought process, we offer a brief summary of our philosophy:

- **Don't Overreact**: When we see significant changes in experience, we generally do not adjust our rates to reflect the entire difference. We will typically recommend rates somewhere between the old rates and the new experience. If the experience during

the next study period shows the same result, we will probably recognize the trend at that point in time or at least move further in the direction of the observed experience. On the other hand, if experience returns closer to its prior level, we will not have overreacted, possibly causing volatility in the actuarial contribution rates.

- **Anticipate Trends**: If there is an identified trend that is expected to continue, we believe that this should be recognized. An example is the retiree mortality assumption. It is an established trend that people are living longer. Therefore, we believe the best estimate of liabilities in the valuation should reflect the expected increase in life expectancy.

- **Simplify**: In general, we attempt to identify which factors are significant and eliminate or ignore the ones that do not materially improve the accuracy of the liability projections.

SCOPE OF THIS REPORT

The actuarial valuation utilizes various actuarial methods and two different types of assumptions: economic and demographic. Economic assumptions are related to the general economy and its impact on the System. Demographic assumptions are based on the emergence of the specific experience of the System's members.

All of the major actuarial assumptions that will be used in the January 1, 2026 Actuarial Valuation have been reviewed in this Study. The remainder of this report is divided as follows:

SECTION 2 EXECUTIVE SUMMARY
SECTION 3 ACTUARIAL METHODS
SECTION 4 ECONOMIC ASSUMPTIONS
SECTION 5 DEMOGRAPHIC ASSUMPTIONS
SECTION 6 MORTALITY
SECTION 7 RETIREMENT
SECTION 8 TERMINATION OF EMPLOYMENT

Actuarial Methods

The actuarial methods outlined in the Funding Policy include:

- Entry age normal cost method
- Expected + 25% asset smoothing method
- Layered amortization of UAAL, with payments as a level percent of payroll, over closed 25-year periods.

We find these actuarial methods to be reasonable and we recommend they be retained. Having said that, we recognize that the Board may wish to use an asset smoothing method that is consistent with the methodology used by the Nebraska Public Employees Retirement System, the closed five-year asset smoothing method. That method is commonly used by public plans and meets actuarial standards, so such a change would be acceptable to CavMac if that is the Board's decision. In addition, given trends in the industry, guidance from the Government Finance Officers Association (GFOA), recent guidance from the Actuarial Standards Board about amortization periods, and the desire to fund the System with fixed contribution rates, the current amortization period for new bases of 25 years is reasonable but on the long end of the range. An amortization period of 20 years would conform better to best practices in the industry, but would also introduce more volatility in the actuarial contribution rate and, therefore, any additional District contribution.

Economic Assumptions

The following set of economic assumptions is recommended:

	Current Assumptions	Proposed Assumptions
Price Inflation	2.35%	2.35%
Investment Return	7.00%	7.00%*
General Wage Growth	2.85%	2.95%
Payroll Growth	2.85%	2.85%

* An investment return assumption of 6.75% would also be considered reasonable and provide a small margin for adverse deviation.

The Nebraska Investment Council (NIC) is responsible for investing the trust funds for both the OSERS and NPERS plans. Until very recently, the long-term asset allocation for both OSERS and NPERS was the same. The current investment return assumption for OSERS was lowered from 7.50% to 7.00% in the last experience study and was consistent with the investment return

assumption adopted by NPERS at the time. The change was phased in over four years with the final step in the January 1, 2025 actuarial valuation.

In February 2025, the PERB voted to lower the investment return assumption for the NPERS plans from 7.00% to 6.75% (inflation of 2.35% and real return of 4.40%), based on the findings and recommendations in the quadrennial experience. In order to provide a smoother cost pattern for NPERS plans, the PERB elected to phase in the assumption change over a four-year period.

As a result of Aon's most recent asset-liability study in 2025, the asset allocation for the NPERS Schools, Judges, State and County plans is slightly more conservative than the asset allocation for NPERS State Patrol and OSERS due to their current funded status. The current investment policy allocates a larger portion of the trust towards return-seeking investments for NPERS State Patrol and OSERS (80% versus 70%) in order to reach full funding status. In the past, the recommendation for the investment return assumption for OSERS was consistent with NPERS due to the same asset allocation and investment professionals.. However, now that the current investment strategy for OSERS differs from NPERS, as a whole, and OSERS' current funded status is much lower than the plans covered by NPERS, we recommend the current investment return assumption 7.00% be retained. However, if the PERB believes or prefers that the investment return assumption should be consistent between NPERS and OSERS, 6.75% is also a reasonable assumption.

Although we have recommended a specific set of economic assumptions, we recognize there are other sets of economic assumptions which are also reasonable for purposes of funding OSERS. Some actuaries (and/or boards) might be more risk averse and desire a greater degree of conservatism, while others are more risk tolerant and would choose less cautious assumptions. Actuarial Standards of Practice allow for this difference in approach and perspective, as long as the assumptions are reasonable and consistent.

Demographic Assumptions

Based on the observed data, recognition of the potential impact of COVID on the study period, and the resulting analysis, the recommended changes to the current demographic assumptions are:

- Change the mortality assumption to the recently published mortality table for public plans: the Pub-2016 General Employees Median Mortality Table. Generational mortality improvements will be modeled using the current NPERS projection scale.

- Modify the retirement rates for both Certificated and Classified members

- Modify the termination of employment rates for both Certificated and Classified members

Given the proposed change mortality assumption and potential change to the investment return assumption, the Board may want to revisit the definition of actuarial equivalence used to develop the actuarial factors for optional forms of payment used for members hired on or after July 1, 2018.

Financial Impact

The financial impact of the proposed assumption changes is based on the results of the most recent actuarial valuation, performed as of January 1, 2025. While the actual results for the January 1, 2026 valuation will vary, we expect the change, as a percentage of liabilities and normal cost, to be comparable. The results are shown on the following page.

Estimate of Financial Impact of Assumption Changes
Based on January 1, 2025 Valuation

Dollars In Thousands

	Baseline (Current Assumptions)	Assumption Changes (7.00%)	Assumption Changes (6.75%)
1. Actuarial Accrued Liability	$2,938,452	$2,920,137	$3,009,223
2. Actuarial Value of Assets	1,753,983	1,753,983	1,753,983
3. Unfunded Actuarial Accrued Liability (UAAL) (1) – (2)	$1,184,469	$1,166,154	$1,255,240
4. Funded Ratio (2) / (1)	59.69%	60.07%	58.29%
5. Normal Cost Rate	12.94%	12.81%	13.61%
6. Administrative Expenses	0.24%	0.24%	0.24%
7. UAAL Payment	15.87%	15.62%	16.39%
8. Actuarial Contribution Rate (5) + (6) + (7)	29.05%	28.67%	30.24%
9. Statutory Contribution Rate	21.66%	21.66%	21.66%
10. Contribution Shortfall/(Surplus) (8) – (9)	7.39%	7.01%	8.58%
11. Additional District Contribution	$ 36,424	$ 34,584	$ 42,313

Note: Numbers may not add due to rounding.

SECTION 3 – ACTUARIAL METHODS

This section describes the actuarial methods that are used to determine the actuarial required contribution rate of the System. These methods are part of the Funding Policy adopted by the Board in 2019 and currently in use.

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Expected + 25% Method
Amortization Method	Layered amortization with payments as level percent of payroll
Amortization Period	25 years, closed for each layer

ACTUARIAL COST METHOD

The systematic financing of a pension plan requires that contributions be made in an orderly fashion while a member is actively employed, so that the accumulation of these contributions, together with investment earnings should be sufficient to provide promised benefits and cover administration expenses. The actuarial valuation is the process used to determine when money should be contributed; i.e., as part of the budgeting process.

The actuarial valuation will not impact the amount of benefits paid or the actual cost of those benefits. In the long run, actuaries cannot change the costs of the pension plan, regardless of the funding method used or the assumptions selected. However, the choice of actuarial methods and assumptions **will** influence the incidence of costs.

The valuation or determination of the present value of all future benefits to be paid by the System reflects the assumptions that best seem to describe anticipated future experience. The choice of a funding method does not impact the determination of the present value of future benefits. The funding method determines only the incidence or allocation of cost. In other words, the purpose of the funding method is to allocate the present value of future benefits determination into annual costs. In order to do this allocation, it is necessary for the funding method to "break down" the present value of future benefits into two components: (1) that which is attributable to the past (2) and that which is attributable to the future. The excess of that portion attributable to the past over the plan assets is then amortized over a period of years. Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability". The portion of the present value of future benefits allocated to the future is commonly known as the "present value of future normal costs", with the specific piece of it allocated to the current year being called the "normal cost". The difference between the plan assets and actuarial accrued liability is called the "unfunded actuarial accrued liability".

Two key points should be noted. First, there is no single "correct" funding method. Second, the allocation of the present value of future benefits, and hence cost, to the past for amortization and

to the future for annual normal cost payments is not necessarily in a one-to-one relationship with service credits earned in the past and future service credits to be earned.

There are various actuarial cost methods, each of which has different characteristics, advantages and disadvantages. However, Governmental Accounting Standard Board Statement Numbers 67 and 68 require that the Entry Age Normal cost method be used for financial reporting. Most systems do not want to use a different actuarial cost method for funding and financial reporting. In addition, the Entry Age Normal method has been the most common funding method for public systems for many years. This is the cost method currently used by OSERS.

The rationale of the Entry Age Normal (EAN) cost method is that the cost of each member's benefit is determined to be a level percentage of his salary from date of hire to the end of his employment with the employer. This level percentage multiplied by the member's annual salary is referred to as the normal cost and is that portion of the total cost of the employee's benefit which is allocated to the current year. The portion of the present value of future benefits allocated to the future is determined by multiplying this percentage times the present value of the member's assumed earnings for all future years including the current year. The Entry Age Normal actuarial accrued liability is then developed by subtracting from the present value of future benefits that portion of costs allocated to the future. To determine the unfunded actuarial accrued liability, the value of plan assets is subtracted from the Entry Age Normal actuarial accrued liability. The current year's cost to amortize the unfunded actuarial accrued liability is developed by applying an amortization factor.

It is to be expected that future events will not occur exactly as anticipated by the actuarial assumptions in each year. Actuarial gains/losses from experience under this actuarial cost method can be directly calculated and are reflected as a decrease/increase in the unfunded actuarial accrued liability. Consequently, the gain/loss results in a decrease/increase in the amortization payment, and therefore the contribution rate.

Considering that the Entry Age Normal cost method is the most commonly used cost method by public plans, that it develops a normal cost rate that tends to be stable and less volatile, and is the required cost method under calculations required by Governmental Accounting Standard Numbers 67 and 68, **we recommend the Entry Age Normal actuarial cost method be retained.**

ACTUARIAL VALUE OF ASSETS

In preparing an actuarial valuation, the actuary must assign a value to the assets of the fund. An adjusted market value is often used to smooth out the volatility that is reflected in the market value of assets. This is because most employers would rather have annual costs remain relatively smooth, as a percentage of payroll or in actual dollars, as opposed to a cost pattern that is extremely volatile.

The actuary does not have complete freedom in assigning this value. The Actuarial Standards Board also has basic principles regarding the calculation of a smoothed asset value, Actuarial Standard of Practice No. 44 (ASOP 44), *Selection and Use of Asset Valuation Methods for Pension Valuations.*

ASOP 44 provides that the asset valuation method should bear a reasonable relationship to the market value. Furthermore, the asset valuation method should be likely to satisfy both of the following:

- Produce values within a reasonable range around market value, AND
- Recognize differences from market value in a reasonable amount of time.

In lieu of both of the above, the standard will be met if either of the following requirements is satisfied:

- There is a sufficiently narrow range around the market value, OR
- The method recognizes differences from market value in a sufficiently short period.

These rules or principles prevent the asset valuation methodology from being used to manipulate annual funding patterns. No matter what asset valuation method is used, it is important to note that, like a cost method or actuarial assumptions, the asset valuation method does not affect the true cost of the plan; it only impacts the incidence of cost.

OSERS values assets, for actuarial valuation purposes, based on the principle that the difference between actual and expected investment returns should be subject to partial recognition to smooth out fluctuations in the total return achieved by the fund from year to year. This philosophy is consistent with the long-term nature of a retirement system. Under this method, the actuarial value of the assets is the expected value of assets plus 25% of the difference between market value and expected value, where the expected value is last year's actuarial value, contributions and benefit payments all accumulated at the actuarial investment return assumption. This is mathematically equivalent to using a weighted average of 75% of the expected value and 25% of actual market value.

The current asset valuation method for OSERS also includes what is known as a "corridor", which provides that once the initial determination of the actuarial value of assets is made it is compared to a corridor around market value (80% of market value to 120% of market value). If the initial actuarial value lies outside the corridor, the final actuarial value of assets is set equal to the corresponding corridor value. For example, if the initial calculation of the actuarial value of assets is 132% of market value, the actuarial value is set equal to 120% of market value. We believe the corridor is necessary to ensure actuarial standards are met.

OSERS' funded status is often compared to the Nebraska School Retirement System (NPERS School). The NPERS School system uses a different asset valuation method which recognizes

the dollar amount of the difference between the actual investment return and the assumed investment return on the market value of assets equally over a closed five-year period. This is a very common methodology used by public plans and it also meets actuarial standards under ASOP 44.

The purpose of an asset valuation method is to "smooth out" the volatility that occurs in the measurement of assets using pure market value. We believe the current method has provided the desired smoothing of asset experience and complies with actuarial standards of practice. It also converges back to market value of assets more quickly when there are returns both below and above the assumed return. T**he current asset valuation method is effective at smoothing the volatility in market value returns, however we recognize that the Board may prefer to use the NPERS School methodology to provide consistency of results. Either method will provide the desired smoothing of actual investment experience and is acceptable under actuarial standards of practice so the decision is based on the Board's goals and objectives.**

AMORTIZATION OF UAAL

As described earlier, actuarial accrued liability is the portion of the actuarial present value of future benefits that are not included in future normal costs. Thus it represents the liability that, in theory, should have been funded through normal costs for past service. Unfunded actuarial accrued liability (UAAL) exists when the actuarial accrued liability exceeds the actuarial value of plan assets. These deficiencies can result from (i) plan improvements that have not been completely paid for, (ii) experience that is less favorable than expected, (iii) assumption changes that increase liabilities, or (iv) contributions that are less than the actuarial contribution rate. If the actuarial value of assets (AVA) exceeds the actuarial accrued liability (AAL), "surplus" exists.

There are a variety of different methods that can be used to amortize the UAAL. **Each method results in a different payment stream and, therefore, has cost implications.** For each methodology, there are three characteristics:

- The period over which the UAAL is amortized,
- The rate at which the amortization payment increases, and
- The number of components of UAAL (separate amortization bases).

Amortization Period: The amortization period can be either closed or open. If it is a closed amortization period, the number of years remaining in the amortization period declines by one in each future valuation. Alternatively, if the amortization period is an open or rolling period, the amortization period does not decline but is reset to the same number each year. This approach, which essentially "refinances" the System's debt (UAAL) every year, is infrequently used given recent trends in the industry.

The length of the amortization period has also changed over the last decade, particularly for systems using the level percent of payroll payment methodology (see below). Based on the professional guidance of actuaries and accountants, the recommended period for actuarial gains/losses is 15 to 20 years and for assumption changes 20-25 years. The goal is to better match the expected working lifetime of the membership at the time the amortization base is created.

Amortization Payment: The level dollar amortization method is similar to the method in which a home owner pays off a mortgage. The liability, once calculated, is financed by a constant fixed dollar amount, based on the amortization period until the liability is extinguished. This results in the liability steadily decreasing while the payments, though remaining level in dollar terms, in all probability decrease as a percentage of payroll. (Even if a plan sponsor's population is not growing, inflationary salary increases will usually be sufficient to increase the aggregate covered payroll).

The rationale behind the level percentage of payroll amortization method is that since normal costs are calculated to be a constant percentage of pay, the unfunded actuarial accrued liability should be paid off in the same manner. In addition, most public retirement systems are financed with contributions that are a level percent of covered payroll. When this method of amortizing the unfunded actuarial accrued liability is adopted, the initial amortization payments are lower than they would be under a level dollar amortization payment method, but the payments increase at a fixed rate each year so that ultimately the annual payment far exceeds the level dollar payment. The expectation is that total payroll will increase at the same rate so that the amortization payments will remain constant, as a percentage of payroll. In the initial years, the level percentage of payroll amortization payment may be less than the interest accruing on the unfunded actuarial accrued liability meaning that even if there are no experience losses, the dollar amount of the unfunded actuarial accrued liability will increase (called negative amortization). This is particularly true if the plan sponsor is paying off the unfunded actuarial accrued liability over a long period, such as 30 years.

Amortization Bases: The UAAL can either be amortized as one single amount or as components or "layers", each with a separate amortization base, payment and period. If the UAAL is amortized as one amount, the UAAL is recalculated each year in the valuation and experience gains/losses or other changes in the UAAL are folded into the single UAAL amortization base. The amortization payment is then the total UAAL divided by an amortization factor for the applicable amortization period.

If separate amortization bases are maintained, the UAAL is composed of multiple amortization bases, each with its own payment schedule and remaining amortization period. In each valuation, the unexpected change in the UAAL is established as a new amortization base over the appropriate amortization period beginning on that valuation date. The UAAL is then the sum of all of the outstanding amortization bases on the valuation date and the UAAL payment is the sum of all of the amortization payments on the existing amortization bases. This approach provides

transparency in that the current UAAL is paid off over a fixed period of time and the remaining components of the UAAL are clearly identified in each valuation. Adjustments to the UAAL in future years are also separately identified in each future year. One downside of this approach is that it can create some discontinuities in contribution rates when UAAL layers/components are fully paid off. If this occurs, it likely would be far in the future, with adequate time to address any adjustments needed.

Current OSERS Actuarial Amortization Method: The current amortization method used by OSERS includes an initial amortization base (reestablished in 2019) with payments over a closed 30-year period, determined as a level percentage of payroll. A new base is created each year that includes all of the unanticipated changes in the UAAL for the year. These new bases are amortized in a consistent timeframe and basis. In the last experience study, the amortization period for new bases was changed from 30 years to 25 years, effective with the January 1, 2022 actuarial valuation. If the plan has a total UAAL of $0 or less (i.e. actuarial assets exceed actuarial liability), all of the amortization bases are eliminated and the net surplus of assets over liability is amortized over 25 years.

The Actuarial Standards Board recently released a new version of *Actuarial Standard of Practice Number 4, Measuring Pension Obligations and Determining Pension Plan Costs* which for the first time includes guidance on the selection of an amortization method. It states that the actuary should select an amortization method for each amortization base that is expected to produce payments that fully amortize the amortization base within a reasonable time period or reduce the outstanding balance by a reasonable amount each year. The current version of ASOP 4 suggests the actuary consider the following in determining a reasonable time period or reasonable amortization amount:

a. whether the amortization period is open or closed;
b. Source of the amortization base;
c. anticipated pattern of amortization payments, including the length of time until payments exceed nominal interest on the outstanding balance;
d. whether the base is positive or negative;
e. duration of the actuarial accrued liability;
f. average remaining working lifetime of active members; and
g. funded status of the plan or period to insolvency.

Given the funding policy of OSERS and the goal of funding with fixed contribution rates, an argument can be made for using an amortization period on the longer end of the reasonable range. However, amortizing the UAAL as a level percentage of payroll creates a pattern of contributions that is back-end loaded, i.e., payments are much higher in the latter part of the amortization period. This contribution pattern results in “negative amortization” wherein the dollar amount of the UAAL increases for several years because the dollar amount of the amortization payment is less than the interest on the UAAL. The period of time the plan experiences negative amortization is dependent on the investment return assumption and the payroll growth assumption. The reduction to both of these assumptions over the last few experience studies has

helped reduce the number of years of negative amortization and the resulting growth in the dollar amount of UAAL. With an amortization period of 25 years, the dollar amount of the UAAL is not expected to be lower than the initial amount for 6 years under current actuarial assumptions.

Given trends in the industry, guidance from the Government Finance Officers Association (GFOA), recent guidance from the Actuarial Standards Board about amortization periods, and the desire to fund the plan with fixed contribution rates, **the current amortization period for new bases of 25 years is reasonable.** An amortization period of 20 years would conform better to best practices in the industry but would also introduce more volatility in the actuarial contribution rate and, therefore, any additional District contribution.

Under the layered amortization method, there are other considerations that can create volatility or discontinuity in contribution rates. These can be addressed by combining amortization bases or synchronizing the amortization periods to smooth out the UAAL contribution rate in future years. It is extremely difficult to write these discretionary decisions in statute or policy. We believe the PERB has the authority to make decisions on combining, offsetting, or synchronizing existing UAAL amortization bases for OSERS. As the need arises to make these decisions, we will discuss it with the PERB and make an appropriate recommendation.

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SECTION 4 – ECONOMIC ASSUMPTIONS

Economic assumptions include price inflation, general wage increase/wage inflation (the across-the-board portion of salary increases), payroll growth, the long-term investment return, salary increase for individual members, and the cost-of-living adjustment assumptions. Unlike demographic assumptions, economic assumptions do not lend themselves to analysis based solely upon internal historical patterns, because economic assumptions are influenced more by external forces which are difficult to accurately predict over the long term. The investment return and salary increase assumptions are generally selected on the basis of expectations in an inflation-free environment and then increased by the long-term expectation for price inflation, referred to as the "building block" approach.

Sources of data considered in the analysis and selection of the economic assumptions included:

- Historical observations of price and wage inflation statistics and investment returns.
- The 2025 Social Security Trustees Report.
- Future expectations of the Nebraska Investment Council (NIC) and their consultant (Aon Consulting), along with the expectations of other investment consultants (2025 Horizon Actuarial Survey).
- U. S. Department of the Treasury bond rates.
- Forecasts from various sources including the Congressional Budget Office, Federal Reserve Bank and the Survey of Professional Forecasters.
- Assumptions used by other large public retirement systems, based on the Public Fund Survey, published by the National Association of State Retirement Administrators.

ACTUARIAL STANDARD OF PRACTICE NUMBER 27

Actuarial Standards of Practice are issued by the Actuarial Standards Board to provide guidance to actuaries with respect to certain aspects of performing actuarial work. Actuarial Standard of Practice (ASOP) No. 27, *Selection of Assumptions for Measuring Pension Obligations*, provides actuaries with guidance regarding the selection of assumptions for measuring pension obligations. Because no one knows what the future holds, an actuary must use professional judgment to estimate possible future economic outcomes, based on a mixture of past experience, future expectations, and professional judgment. Our analysis of the expected rate of return, as well as all other economic assumptions, was performed following the guidance in ASOP 27.

Due to the application of ASOP 27, it may be informative for others to be aware of the basic content of ASOP 27. The standard applies to the selection of all actuarial assumptions – both economic and demographic – to measure obligations under any defined benefit pension plan that is not a social insurance program (e.g., Social Security).

With respect to relevant data for selecting economic assumptions, the standard recommends the actuary review appropriate recent and long-term historical economic data but advises the actuary not to give undue weight to recent experience. Furthermore, it advises the actuary to consider that some historical economic data may not be appropriate for use in developing assumptions for future periods due to changes in the underlying environment. In addition, with respect to any

particular valuation, each economic assumption should be consistent with all other economic assumptions over the measurement period.

ASOP 27 recognizes that economic data and analyses are available from a variety of sources, including representatives of the plan sponsor, investment advisors, economists, and other professionals. The actuary is permitted to incorporate the views of experts, but the selection or advice must reflect the actuary's professional judgment.

ASOP 27 requires the actuary to select a "reasonable" assumption. For this purpose, an assumption is deemed reasonable if it has the following characteristics:

a. it is appropriate for the purpose of the measurement;
b. it reflects the actuary's professional judgment;
c. it takes into account historical and current economic data that is relevant as of the measurement date;
d. it reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and
e. it has no significant bias (i.e., it is neither significantly optimistic nor pessimistic), except when provisions for adverse deviation or plan provisions that are difficult to measure are included.

The standard goes on to discuss a "range of reasonable assumptions" which in part states "the actuary should also recognize that different actuaries will apply different professional judgment and may choose different reasonable assumptions. As a result, a range of reasonable assumptions may develop both for an individual actuary and across actuarial practice."

The remaining section of this report will address the relevant types of economic assumptions used in the actuarial valuations to determine the obligations of the Omaha School Employees Retirement System. In our opinion, the economic assumptions proposed in this report have been developed in accordance with ASOP No. 27.

SECTION 4 – ECONOMIC ASSUMPTIONS

The following table summarizes the current and proposed economic assumptions:

	Current Assumptions	Proposed Assumptions
Price Inflation	2.35%	2.35%
Real Rate of Return	4.65%	4.65%*
Investment Return	7.00%	7.00%*
Productivity	0.50%	0.60%
General Wage Growth	2.85%	2.95%
Payroll Growth	2.85%	2.85%
Cost-of-Living Adjustment**	1.50%	1.50%
Interest Credit Rate on Contributions	2.35%	2.35%

* A 6.75% investment return assumption with a 4.40% real rate of return would also be reasonable and would provide a small margin for adverse deviation.

** Assumption is 1.00% for members hired on or after July 1, 2013.

PRICE INFLATION

Use in the Valuation: Price inflation is typically measured by the annual increase in the Consumer Price Index (CPI). This assumption underlies most of the other economic assumptions, either directly or indirectly. The current assumption for price inflation, 2.35% per year, was reduced from 2.75% in the prior experience study.

Future price inflation is used directly in developing the actuarial assumption for cost-of-living increases since they are based on the change in the Consumer Price Index (CPI). Inflation is used indirectly in the development of the assumptions for investment return, general wage increase, individual salary increases, payroll growth, and the interest crediting rate for employee contributions. Under ASOP 27, the price inflation assumption must be consistent among all economic assumptions.

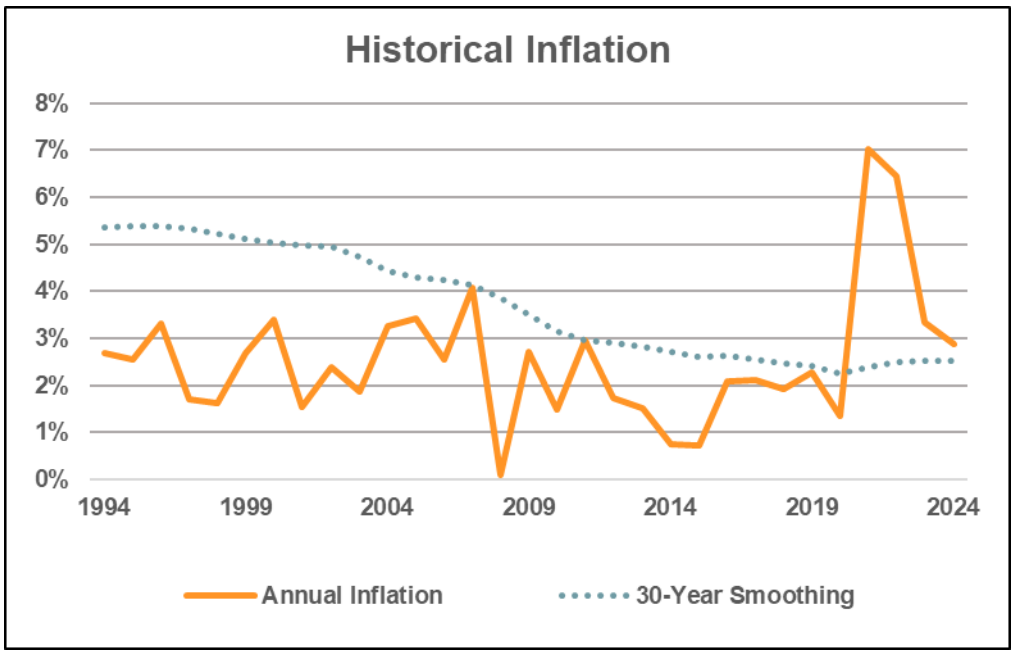
Past Experience: Although economic activities, in general, and inflation in particular, do not lend themselves to prediction solely on the basis of historical analysis, historical patterns and long-term trends are factors to be considered in developing the inflation assumption. The Consumer

Price Index, US City Average, All Urban Consumers, CPI-U, has been used as the basis for reviewing historical levels of price inflation. The following table provides historical annualized rates of the CPI-U over periods ending December 31st.

Period	Number of Years	Annualized Rate of Inflation
1974 – 2024	50	3.68%
1984 – 2024	40	2.78%
1994 – 2024	30	2.52%
2004 – 2024	20	2.56%
2014 - 2024	10	3.00%

Historical averages are heavily dependent on the period selected. For example, the period of high inflation from 1973 to 1981 has a significant impact on the averages over periods which include these years. Over more recent periods (last 20 to 30 years) measured from December 31, 2024, the average annual rate of increase in the CPI-U has been closer to the current assumption of 2.35%, but still above it.

The following graph illustrates the historical annual change in price inflation, measured as of December 31 for each of the last 30 years, as well as the thirty-year rolling average.



While inflation has been relatively low for most of the last 30+ years, the recent brief spike is a reminder that there can be unexpected changes.

Forecasts Implied from the Bond Market

Additional information to consider in formulating this assumption is obtained from measuring the spread on Treasury Inflation Protected Securities (TIPS) and from the prevailing economic forecasts. The spread between the nominal yield on treasury securities (bonds) and the inflation indexed yield on TIPS of the same maturity is referred to as the "breakeven rate of inflation" and represents the bond market's expectation of inflation over the period to maturity.

The table below provides the calculation of the breakeven rate of inflation as of December 31, 2024.

Years to Maturity	Nominal Bond Yield	TIPS Yield	Breakeven Rate of Inflation
5	4.38%	2.00%	2.38%
10	4.58	2.24	2.34
20	4.86	2.41	2.45
30	4.78	2.48	2.30

As this data indicates, the bond market is anticipating inflation of 2.3% to 2.5% for both the short and long term. The bond market expectations may be heavily influenced by the expectations of actions by the Federal Reserve Bank. We note that these measures can change significantly over a period of just a few months.

Forecasts from the Social Security Administration

Although many economists forecast lower inflation than the assumptions used by retirement systems, they are generally looking at a shorter time horizon (10 years) than is appropriate for a pension valuation. To consider a longer, similar time frame, we looked at the expected increase in the CPI by the Office of the Chief Actuary for the Social Security Administration. In the most recent report (June 2025), the projected average annual increase in the CPI over the next 75 years was estimated to be 2.4%, under the intermediate (best estimate) cost assumption. The range of price inflation used in the Social Security 75-year modeling, which includes a low and a high-cost scenario, in addition to the intermediate cost projection, was 1.8% to 3.0%.

Congressional Budget Office

The report of the Congressional Budget Office, *"The Budget and Economic Outlook: 2025 to 2035"*, reflects CBO's expectations of average annual price inflation of 2.2% for the CPI-U over the next ten years.

Forecasts from Investment Consulting Firms and Other Professionals

In setting their capital market assumptions, most investment consulting firms use an inflation assumption. The 2025 capital market assumptions for the NIC's investment consultant, Aon Consulting, include a 30-year forecast of inflation of 2.30%.

Horizon Actuarial Services, LLC publishes a survey of capital market assumptions obtained from various investment consultants. The 2025 Horizon Survey, published in August of 2025, includes the assumptions, including the expected rate of inflation, for twenty-seven advisors who develop longer-term assumptions (20 years or more). The Survey showed a range of expected inflation for the next 20 years for these consultants of 2.2% to 2.7%, with a median of 2.4%. Inflation over a shorter time horizon (and including another 14 consultants), for the next 10 years, was a very similar range of 2.0% to 2.9%, with a median of 2.4%.

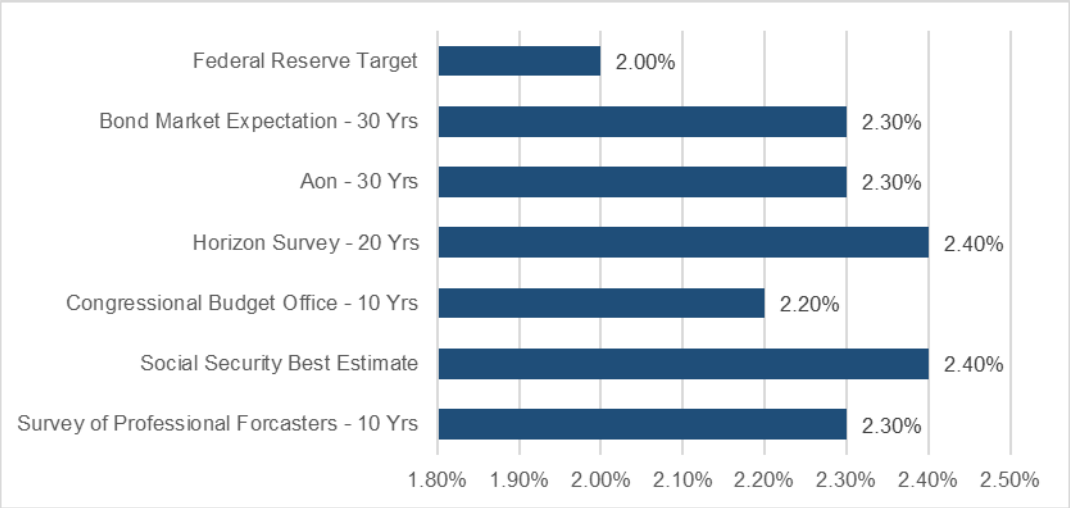
Another source to consider in setting this assumption is a quarterly survey of the Society of Professional Forecasters that is conducted by the Philadelphia Federal Reserve of economists. Their first quarter of 2025 forecast was for inflation over the next ten years (2025 to 2034) to average 2.30%.

Forecasts from Peer System Comparison

While we do not recommend the selection of any assumption based on what other systems use, it does provide another set of relevant information to consider. Based on the Public Plan Database (a survey of over 130 state and local retirement systems maintained by a collaboration between the Center for Retirement Research at Boston College, the Center for State and Local Government Excellence, and the National Association of State Retirement Administrators), the average inflation assumption for governmental plans is 2.46%. This data is largely based on actuarial valuations prepared with measurement dates in 2023. Based on our experience, we believe the inflation assumption has been steady for most systems over the last few years.

Recommendation

The following graph provides a comparison of the current levels of expected inflation.



Over the past three experience studies, the inflation assumption has been lowered significantly to its current level of 2.35%. Given the various forward-looking expectations for inflation discussed above, we are recommending the **current inflation assumption of 2.35% be retained.**

Consumer Price Inflation	
Current Assumption	2.35%
Recommended Assumption	2.35%

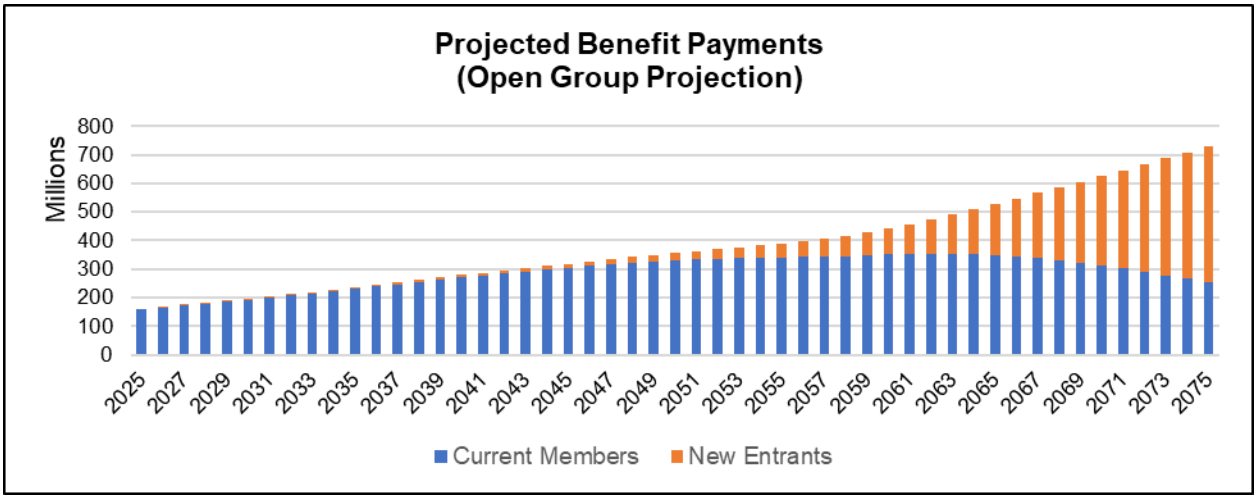
INVESTMENT RETURN

Use in the Valuation: The investment return assumption reflects the anticipated returns on the current and future assets. It is one of the primary determinants in the allocation of the expected cost of the System's benefits, providing a discount of the estimated future benefit payments to reflect the time value of money. Generally, the investment return assumption should be set with consideration of the asset allocation policy, expected long-term real rates of return on the specific asset classes, the underlying price inflation rate, and investment expenses.

The current investment return assumption was lowered from 7.50% to 7.00% in the last experience study with the change phased in over four years. The investment return assumption is net of investment-related expenses. This assumption is for the nominal rate of return and is composed of two components. The first component is price inflation (as previously discussed, this assumption is currently 2.35%). Any excess return over price inflation is referred to as the real rate of return. The current assumption for the real rate of return, which is heavily driven by the system's asset allocation and capital market assumptions, is 4.65%.

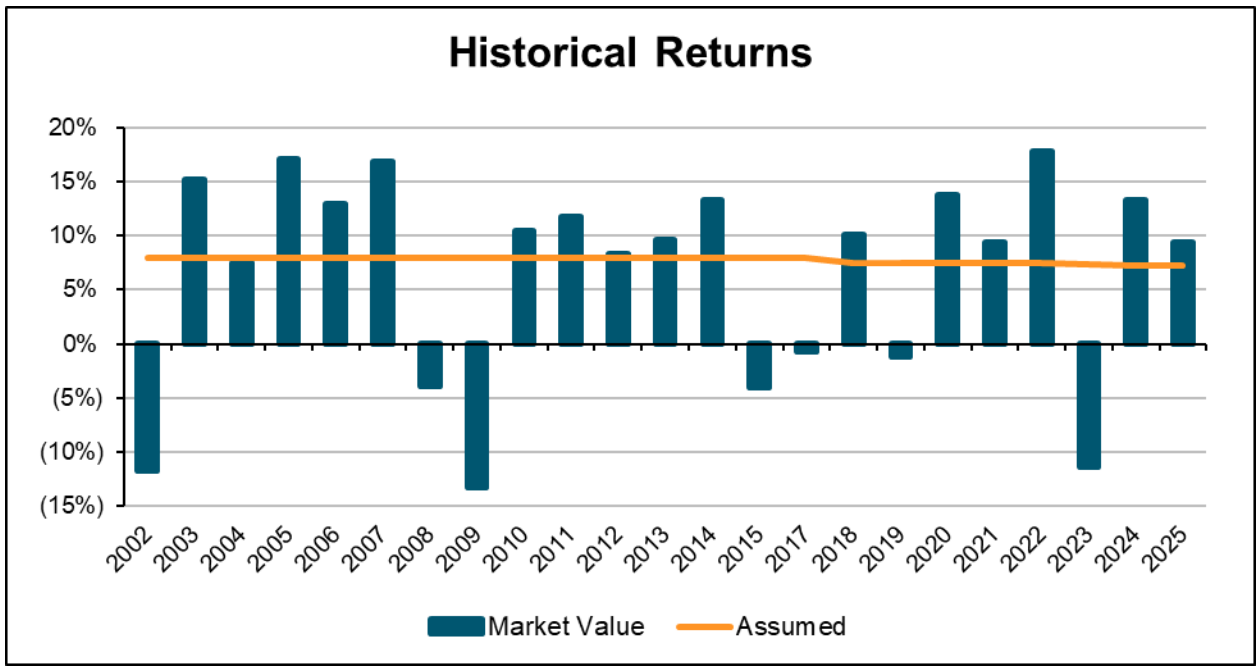
Long Term Perspective

Because the economy is constantly changing, assumptions about what may occur in the near term are volatile. Asset managers and investment consultants usually focus on this near-term horizon in order to make prudent choices regarding how to invest the trust funds. For actuarial calculations, we typically consider very long periods of time. For example, a newly hired employee who is 25 years old may work for 35 years, to age 60, and live another 30 years, to age 90 (or longer). The retirement system would receive contributions for the first 35 years and then pay out benefits for the next 30 years. During the entire 65-year period, the system is investing assets related to the member. For such a typical career employee, more than one-half of the investment income earned on assets accumulated to pay benefits is received after the employee retires. In addition, in an open, ongoing system like OSERS, the stream of benefit payments is continually increasing as new hires replace current members who leave covered employment due to death, termination of employment, and retirement. This difference in the time horizon used by actuaries and investment consultants is frequently a source of debate and confusion when setting economic assumptions. The following graph illustrates the long duration of the expected benefit payments as of January 1, 2025.



OSERS Historical Returns

One of the inherent problems with analyzing historical data is that the results can look significantly different depending on the timeframe used, especially if the year-to-year results vary widely. In addition, the asset allocation can also impact the investment returns so comparing results over long periods when different asset allocations were in place may not be meaningful. This is particularly true for OSERS because the Nebraska Investment Council assumed responsibility for investing OSERS' assets in 2017. Nonetheless, the following graph shows the actual returns for the OSERS portfolio for the last 23 years.



Annualized Returns Through 12/31/24			
5-Year Return:	7.2%	20-Year Return:	6.6%
10-Year Return:	5.3%		

Forward Looking Analysis

Because the economy is constantly changing, assumptions about what may occur in the near term are volatile. Asset managers and investment consultants usually focus on this near-term horizon so as to make prudent choices regarding how to invest the trust funds, i.e., asset allocation. For actuarial calculations, we typically consider very long periods of time as some current employees will be receiving benefit payments more than 60 years from now.

We believe the most appropriate analysis to consider in setting the investment return assumption is to model the future expected returns, given the System's target asset allocation and forward-looking capital market assumptions. However, we are trained as actuaries and not as investment professionals. ASOP 27 provides that the actuary may rely on outside experts in setting economic assumptions. OSERS' assets are held and invested by the NIC who relies on a variety of internal experts and external consultants to assist with investing the funds. As part of their duties, the NIC has its investment consultant, Aon Consulting, periodically perform asset-liability studies, along with comprehensive reviews of the expected return of the various asset classes in which the OSERS portfolio is invested. The most recent study was completed in August of 2025. We believe it is appropriate for us to consider the results of Aon's work as one key factor in assessing expected future returns.

Our forward-looking analysis is based on the current target asset allocation for OSERS, determined in the Asset/Liability Study performed in August of 2025. The asset allocation is shown in the following table:

Asset Class	Long Term Policy Allocation
US Equities	24.0%
Non-US Equities	11.5%
Global Equities	22.0%
RS Fixed Income	10.0%
Core Bonds	20.0%
Private Equity	5.0%
Real Estate	5.5%
Infrastructure	2.0%
Total Fund	100.0%

Using OSERS' new target asset allocation and Aon's 30-year forecast of capital market assumptions, the median nominal return over the next 30 years is 7.11%. **Note that Aon's assumptions are as of March 31, 2025.** While the range of potential results is very high over shorter periods, the range narrows considerably over time. Over a 30-year time span, the results indicate there is a 25% chance that returns will be below 5.67% and a 25% chance they will be above 8.57%, as shown in the table below. In other words, there is a 50% chance the compound return will be between 5.67% and 8.57% over the next 30 years. This also means there is just over a 50% chance of meeting or exceeding the current assumed rate of return of 7.0%, based on Aon's assumptions.

Percentile Distribution	30-Year Return
5th	3.63%
25th	5.67%
50th	7.11%
75th	8.57%
95th	10.70%

Although it is interesting to consider the probability of reaching the nominal expected return, the investment return assumption is developed using the "building block" approach which considers both the price inflation and real return assumption individually. The current nominal assumed rate of return is composed of a price inflation assumption of 2.35% and a real rate of return of 4.65%. In Aon's 2025 capital market assumptions, the inflation assumption was 2.30% over the 30-year period, slightly lower than the current assumption. Given the 7.11% expected nominal return, it implies an expected real rate of return of 4.81%, very close to the current real rate of return of 4.65%.

We also recognize that there can be differences of opinion among investment professionals regarding future return expectations. Horizon Actuarial Services prepares an annual study in which they survey various investment advisors (41 were included in the 2025 study) and provide ranges of results as well as averages. This information provides an additional perspective on what a broad group of investment experts anticipate for future investment returns. We perform our analysis of the expected return using the median return for each asset class in the Horizon Survey as another factor to consider in setting the investment return assumption. The 20-year expected return, using the median capital market assumptions for each asset class, was 7.22%. Median inflation assumption in the Horizon Survey was 2.4%, resulting in an expected real rate of return of 4.82%. The expected real returns of 4.71% and 4.82%, using Aon's and Horizon's capital market assumptions, are consistent and close to the current assumption (4.65%).

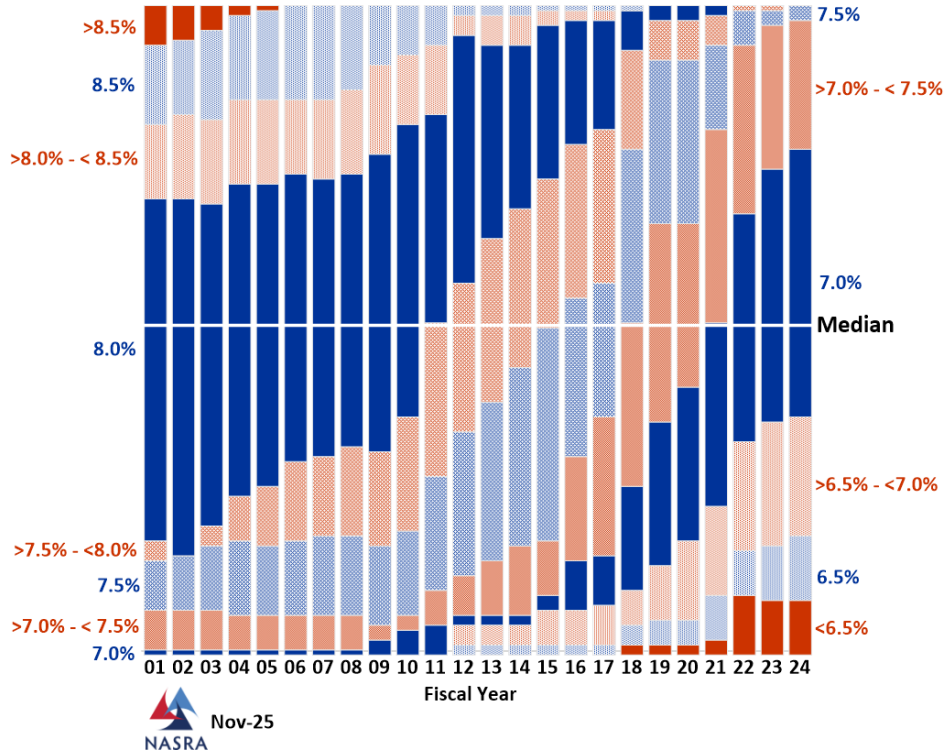
Given the uncertainty of capital market assumptions over a twenty to thirty-year period, we cannot rely too heavily on the current set of assumptions. In addition, most investment consultants update their capital market assumption at least annually, and more commonly each quarter, while an experience study is performed only every four years. Consequently, we are also hesitant to base our assumption solely on the most recent quarterly estimate from the investment consultants because the goal is to have consistency and stability in this assumption as much as possible.

Peer System Comparison

While we do not recommend the selection of an investment return assumption be based on the assumptions used by other systems, it does provide another set of relevant information to consider as long as we recognize that asset allocation and board risk perspective varies from system to system. The following graph shows the change in the distribution of the investment return assumption from fiscal year 2001 through 2024 for the 130+ large public retirement systems included in the National Association of State Retirement Administrators (NASRA) Public Fund Survey. The assumed rate of return is heavily influenced by the asset allocation of the system, so comparisons must be made cautiously.

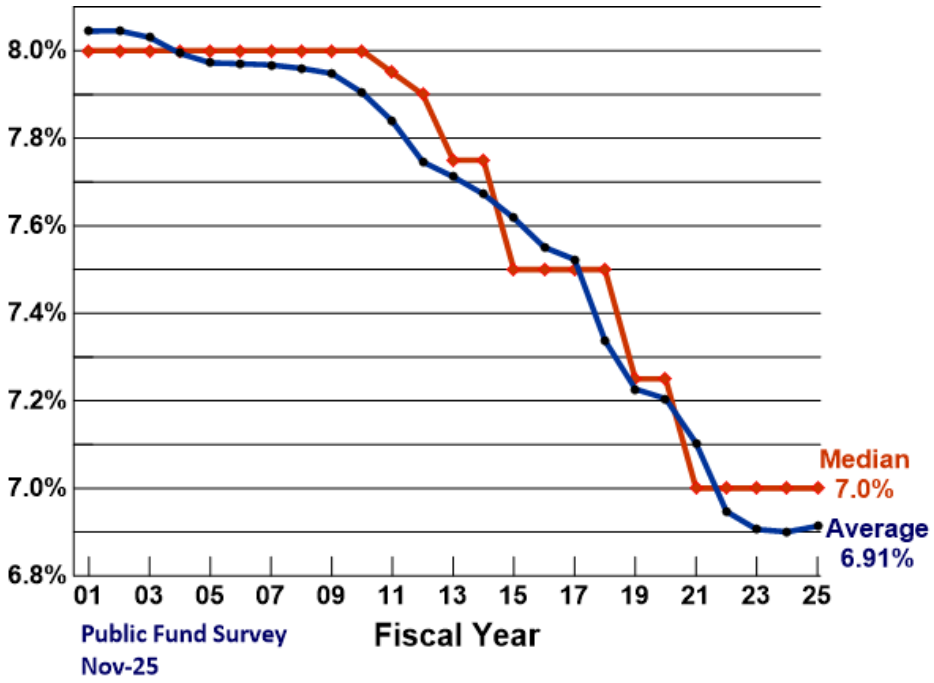
The trends observed in the data are far more valuable than the absolute return data. As the graph below indicates, the investment return assumptions used by public plans have decreased materially since FY 2011.

Change in distribution of investment return assumptions, FY 01 to present



The graph illustrates how the median investment return assumption has declined from 8.0% in the first half of this period to 7.0%.

The following graph is based on the same data as the prior graph but shows only the median investment return assumption used by the systems in the Public Fund Survey.



We might also note that the average real rate of return in the NASRA Survey is 4.41% compared to OSERS' current real return of 4.65% although asset allocations vary from one system to another, so the value of direct comparisons is somewhat limited.

Recommendation for Investment Return Assumption:

When the last experience study was performed for the Nebraska Public Employees Retirement System in 2025, the recommendation was to lower the investment return assumption to 6.75% given the plans were well funded and in a position to manage the impact of a lower investment return assumption. The lower investment return assumption of 6.75% increased the probability of meeting or exceeding the expected return,thereby reducing the magnitude of future actuarial losses on investment experience and the increases to contribution rates that would follow. After the experience study was performed, Aon prepared an Asset/Liability Study and the NIC adopted a different asset allocation for the School, Judges, State and County Plans which has a lower allocation to return-seeking assets (70%) and, therefore, a slightly lower expected return (still above 6.75%). However, the NIC adopted an asset allocation with 80% return-seeking assets for OSERS, as noted earlier, at their August meeting.

We would note that OSERS is not in a strong funded position and has a contribution shortfall between the actuarial contribution rate and the statutory contribution rates, resulting in a significant additional contribution from the School District each year to meet the actuarial funding requirements (required by statute). This has occurred in the last nine years and is expected to continue for the foreseeable future even if all assumptions are met. It is clear that OSERS is not in the same funded position as the other NPERS retirement plans and, therefore, may merit different considerations and approaches. In addition, due to OSERS' current funded status, it is

reasonable to expect their asset allocation will be more heavily weighted towards return-seeking assets than NPERS plans for the foreseeable future.

By actuarial standards we are required to maintain a long-term perspective in setting all assumptions, including the investment return assumption. Given the PERB is the governing board for both NPERS and OSERS, there may be a desire to have a consistent investment return assumption for both. In the past, the long-term asset allocation has been the same for OSERS and NPERS, but recently the NIC adopted a different investment strategy for OSERS, with a higher percentage of return-seeking assets. Given the differences between OSERS and NPERS, **we recommend the current investment return assumption 7.00% be retained**. However, if the Board wishes to prioritize a consistent investment return assumption between NPERS and OSERS, we believe 6.75% is also a reasonable assumption. Based on the Aon's current capital market assumptions, the lower investment return assumption of 6.75% increases the probability of meeting or exceeding the investment return assumption from 50% to 55%, providing a small margin for adverse deviation.

Investment Return	
Current Assumption	7.00%
Recommended Assumption	7.00%*

* A 6.75% investment return assumption would also be reasonable.

INVESTMENT AND ADMINISTRATIVE EXPENSES

The OSERS trust fund pays expenses related to the administration of the System in addition to member benefits, so an assumption must be made about such expenses. Investment consulting firms, including Aon, typically issue reports that describe their capital market assumptions, which are net of investment-related expenses. Therefore, no direct adjustment to the expected return is necessary to account for investment-related expenses. Active management strategies are used by the NIC and by many other retirement systems with the expectation that they will result in investment returns sufficiently above passive index funds to at least cover the increased investment fees. We have assumed that active management strategies would result in the same returns, net of investment expenses, as passive management strategies.

For OSERS, an explicit administrative expense charge is added to the normal cost rate as part of the actuarial required contribution rate. This amount is set in the experience study and remains level until it is reevaluated in the next study. Over the four-year study period, actual expenses varied for each group. In setting this assumption, we ignored the outlier year of 2024 and based our recommendation on the remaining years of experience.

Plan	Admin Expenses	Actual Payroll	Admin Expense (% of Pay)
2021	$952,326	$377,207,229	0.25%
2022	1,155,025	545,231,503	0.21%
2023	903,317	438,654,121	0.21%
2024	2,887,563	465,550,757	0.62%

The average over this period was 0.32% of payroll. However, the administrative expenses in calendar year 2024 include a significant amount for the transition of administrative services to NPERS. It is unlikely future administrative expenses will be at this level so we did not consider calendar year 2024 in our analysis. Given the experience in the other three years, we believe the current assumption remains reasonable.

Our recommendation is to retain the current assumption of 0.24% of covered payroll in the actuarial contribution rate for administrative expenses until the next experience study. Note that actual administrative expenses are directly paid by the trust fund each year so the recommended approach closely models the actual practice.

COST OF LIVING ADJUSTMENTS

OSERS' plan design includes an annual COLA based on actual inflation up to 1.5% (members hired prior to July 1, 2013) or 1.0% (members hired on or after July 1, 2013). Based on the inflation assumption of 2.35% and the expected variability, the assumption for members hired before July 1, 2013 is 1.5% and the assumption for those hired after July 1, 2013 is 1.0%.

GENERAL WAGE INCREASE (GENERAL WAGE INFLATION)

Background: The general wage increase assumption represents the real wage growth over time in the general economy. Another way to think about this assumption is it anticipates how much the pay scales themselves will change from year to year. It does not necessarily indicate how much the pay increases received by individual members will be (the individual salary increase assumption) or how the total covered payroll may change (the payroll growth assumption).

General wage inflation can be thought of as the "across the board" rate of salary increases and is composed of the price inflation assumption combined with an assumption for the real rate of wage increase. In constructing the individual salary increase assumption, the general wage inflation assumption is further combined with an assumption for service-based salary increases (called a merit scale). The individual salary increase assumption is discussed later in this report. Given the current price inflation assumption of 2.35%, the current wage growth assumption of 2.85% implies an assumed real rate of wage increase or real wage growth assumption of 0.50%.

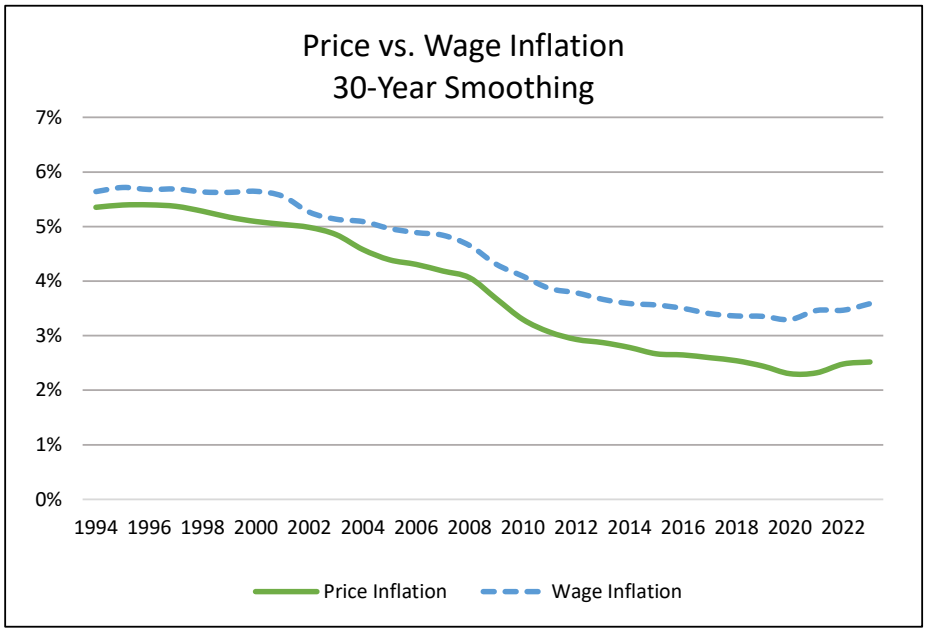
The following table shows the compounded wage growth over various periods, along with the comparable price inflation rate for the same period. The differences represent the real wage growth rate. Note that there is a delay in the date the national average wage data for the prior year is released. Therefore, the most recent data available was for 2023.

Years	Period	General Wage Inflation	CPI Increase	Real Wage Inflation
2013-2023	10	4.03%	2.79%	1.24%
2003-2023	20	3.41%	2.58%	0.83%
1993-2023	30	3.59%	2.51%	1.08%
1983-2023	40	3.76%	2.81%	0.95%
1973-2023	50	4.44%	3.86%	0.58%

Because the National Average Wage is based on all wage earners in the country who are covered by Social Security, it can be influenced by the mix of jobs (full-time vs. part-time, manufacturing vs. service, etc.) as well as by changes in some segments of the workforce that are not seen in all segments (e.g. regional changes or growth in computer technology). Furthermore, if compensation is shifted between wages and benefits, the wage index would not accurately reflect increases in total compensation. OSERS' membership is composed exclusively of governmental employees working in the Omaha metro area, whose wages and benefits are somewhat linked as a result of the state and local economy, funding allocations, and governing policies. Because the competition for workers can, in the long term, extend across industries and geography, the broad national earnings growth will have some impact on OSERS members. In the shorter term, however, the wage inflation of OSERS employees and the nation may be less directly correlated.

Compensation data gathered and compiled by the Bureau of Labor and Statistics indicates that those working in public employment are receiving larger increases in total compensation than salary increases. In other words, benefits are becoming a larger percentage of total compensation. This seems to be particularly true in retirement systems covering school employees. To the extent we expect this trend to continue, it would support a lower general wage increase assumption for those in public employment compared to private employment.

The difference between wage and price inflation over rolling 30-year periods is shown in the following graph:



Over the last 30 years, the real wage increase, as measured by the increase in the National Average Wage Index, has been about 1.0% per year on average.

Forecasts of Future Wages: The wage index used for the historical analysis is projected forward by the Office of the Chief Actuary of the Social Security Administration in their 75-year projections. In the June 2025 Trustees Report, the annual increase in the National Average Wage Index under the intermediate cost assumption (best estimate) was 3.53%, 1.13% higher than the Social Security Administration's intermediate inflation assumption of 2.40% per year. The range of the assumed real wage growth in the 2025 Trustees report was 0.53% to 1.73% per year.

Based on data available and our professional judgment, **we recommend that the long-term assumed real wage increase assumption be increased from 0.50% to 0.60% per year. When coupled with the price inflation assumption of 2.35%, the resulting recommendation for the general wage increase assumption is 2.95%.**

PAYROLL GROWTH

The payment on the unfunded actuarial accrued liability is determined as a level percent of payroll. Therefore, an assumption regarding future annual increases in covered payroll is required. The wage inflation assumption is most commonly used for this purpose. The current assumption of 2.85% is the same as the general wage increase/wage inflation assumption.

The current payroll growth assumption also reflects the assumption that there will be no future growth or decline in number of active members. With no assumed change in the size of the active membership, future salary growth due only to general wage increases is anticipated. If increases should occur not only because of wage increases but also because of additional active members, there will be a larger pool of covered payroll over which to spread the payment on the unfunded actuarial accrued liability, which would result in lower UAAL payments as a percent of payroll. The uncertainties in light of current conditions in public employment and the national economy in general, along with actual experience, argue against anticipating any increase or decrease in active membership for funding purposes.

We prefer to keep a small margin for adverse deviation in this assumption, so we are recommending the payroll growth assumption, used to amortize the UAAL, remain 2.85%.

TOTAL SALARY INCREASE

Estimates of future salaries are based on assumptions for two types of increases:

- Increases in the general wage level of the membership, which are directly related to price and wage inflation.
- Increases in each individual's salary due to promotion or longevity (often called a merit scale), and

Our recommended general wage increase assumption is 2.95% (2.35% inflation and 0.60% real wage growth). Therefore, the merit salary scale will be added to the 2.95% general wage increase assumption to develop the total individual salary increase assumption.

As noted above, future salary increases are the result of two components. Actual salary experience is reported in total, rather than by components, so the experience study reviewed total salary increases for the study period. In our study, we compared individual salary increases for any member active in any two consecutive periods (e.g. 2020 and 2021, 2021 and 2022, etc.). The average actual increase during this period was 8.63% for Certificated members while the expected increase was 4.73%. The actual increase for Classified members was 11.48% while the expected increase was 4.16%. Clearly, salary increases during the study period were well above the current assumption. However, it's important to note that salary increases during this period were unusually high for many employers – both public and private – in the wake of the COVID pandemic due to factors such as high inflation and a tight labor market. Actuarial assumptions are forward-looking and long-term in nature. With that in mind, we assigned very little credibility to recent salary experience when evaluating the long-term salary increase assumption.

The following table shows the salary experience by year for durations 1 through 30 for the current study period:

2021 – 2024 SALARY EXPERIENCE						
	Certificated			Classified		
Year	Actual	Expected	A/E Ratio	Actual	Expected	A/E Ratio
2021	7.76%	4.76%	163%	14.15%	4.15%	341%
2022	11.88%	4.76%	250%	18.49%	4.12%	449%
2023	8.97%	4.71%	190%	12.50%	4.14%	302%
2024	6.02%	4.71%	128%	5.56%	4.21%	132%
Total	8.63%	4.73%	182%	11.48%	4.16%	276%

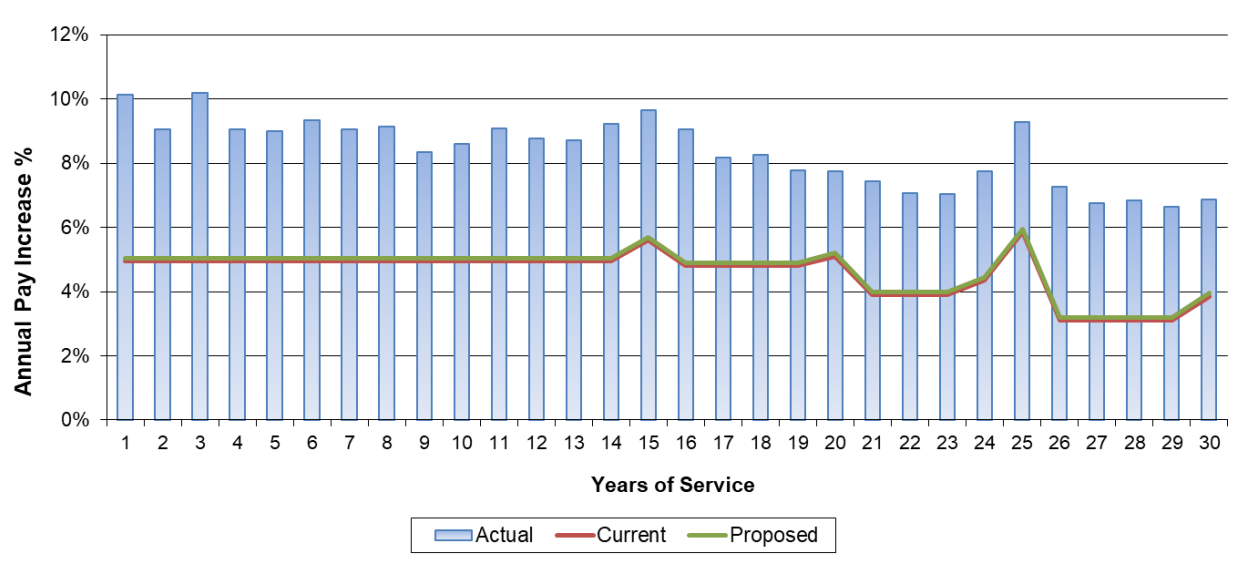
Since price and wage inflation are a component of the salary increase assumption, we would expect actual salary increases to be higher than the current assumption when actual price and wage inflation is higher than the assumption. During the study period, price inflation was around 4.9%, compared to the current assumption of 2.35%, and the increase in the national average wage index was 5.9% compared to the current assumption of 2.85%. As illustrated in the table above, the actual increases were 3.90% higher than expected for Certificated and 7.32% higher than expected for Classified. This indicates there were additional factors contributing to the large salary increases beyond economic conditions, but a key question is to what extent can we reasonably expect those factors to continue into the future. It seems unlikely that salary increases can continue at their recent pace and, in fact, appear to have begun normalizing in 2025.

As a result of adjusting the general wage increase assumption from 2.85% to 2.95%, the individual salary increase assumption will be higher than the current assumption by 0.10% at all durations. **However, given the unusual period of time in this study period we are not recommending any change to the merit salary increase assumption for Certificated or Classified members**. We will continue to monitor the salary increase assumption in future studies.

Certificated Members

Beginning with the 2017 experience study, the contracts with the Omaha Education Association (OEA) have been reviewed to identify the various components of salary increases including adjustment of the salary grids from year to year, salary increases due to movement through the various steps (based on years of experience and additional college credits toward a master's or higher degree). The contracts also reveal salary increases applicable to the Long Service Increment (LSI) pay. Long service increments of certain dollar amounts for members of the OEA are granted at durations 15, 20, 25, 30, 35 and 40 years. Our assumption reflects this pattern of LSI increases as well as other salary increases expected to occur for active members.

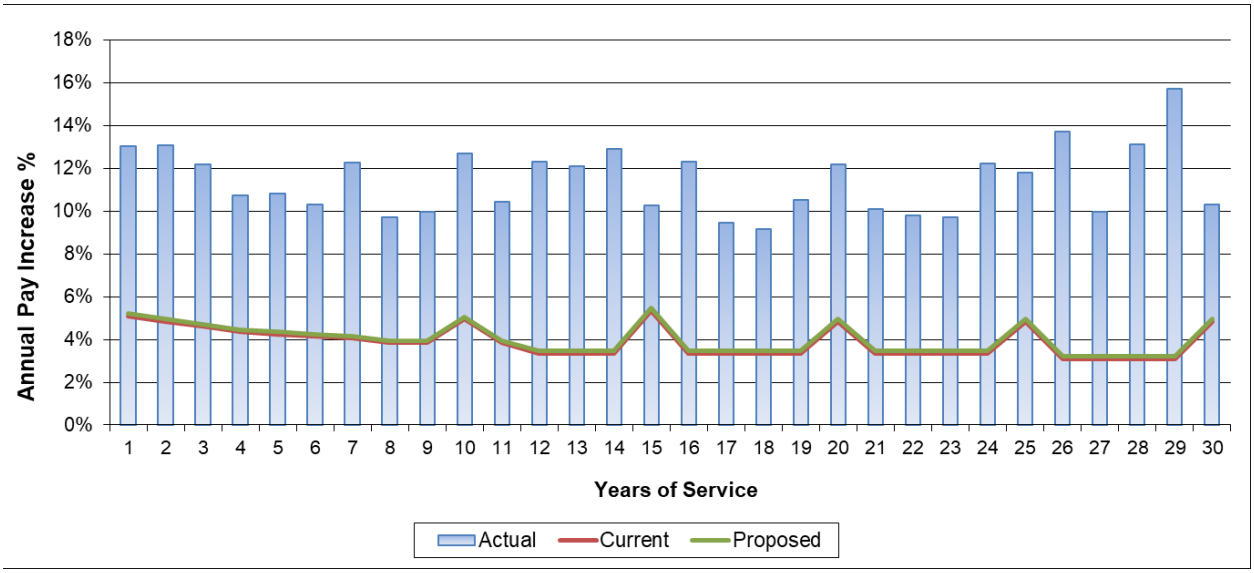
The following graph for durations 1 through 30 shows the current assumption (red line) and the proposed assumption (green line) for the total individual salary increase assumption for certificated members. Note this assumption includes the general wage increase assumption which is 2.85% for the current assumption and 2.95% for the proposed assumption. Both assumptions are lower than the actual wage inflation in the general economy and also that observed in the OSERS data. The aggregate expected salary increase under the proposed assumption is 4.83% so the A/E ratio is 178% (actual 8.63% divided by expected of 4.83%).



Classified Members

The long service increments for classified members occur upon completion of 10, 15, 20, 25, and 30 years of service. This pattern has been historically evident in the salary data and the current assumption is designed to anticipate "spikes" at those durations (see graph below).

We focused on experience for durations 1 through 30 as there was limited data for durations beyond 30. The following graph shows the current assumption (red line) and the proposed assumption (green line) for the total individual salary increase assumption for classified members. Note this assumption includes the general wage increase assumption which is 2.85% for the current assumption and 2.95% for the proposed assumption. Both assumptions are lower than the actual wage inflation in the general economy and also that observed in the OSERS data. The aggregate expected salary increase under the proposed assumption is 4.26% so the A/E ratio is 269% (actual 11.48% divided by expected of 4.26%).



INTEREST CREDITS ON ACCOUNT BALANCES

Member contribution balances are credited with interest each September 1. The rate is set in state statute and is "a rate equal to the daily treasury yield curve for one-year treasury securities, as published by the Secretary of the Treasury of the United States."

In the past, the interest crediting rate has been set equal to the price inflation assumption. We believe this is a reasonable long-term assumption and **recommend retaining the current assumption of 2.35%.**

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SECTION 5 – DEMOGRAPHIC ASSUMPTIONS

As discussed earlier in this report, Actuarial Standard of Practice No. 27 (ASOP 27) provides guidance to actuaries regarding the selection of actuarial assumptions for measuring pension obligations. The standard states that a reasonable assumption is one that is expected to appropriately model the contingency being measured and is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

The actuary should follow the following steps in selecting the demographic assumptions:

1. Identify the types of assumptions. Types of demographic assumptions include but are not limited to retirement, mortality, termination of employment, disability, election of optional forms of payment, administrative expenses, family composition, and treatment of missing or incomplete data. The actuary should consider the purpose and nature of the measurement, the materiality of each assumption, and the characteristics of the covered group in determining which types of assumptions should be incorporated into the actuarial model.

2. Consider the relevant assumption universe. The relevant assumption universe includes experience studies or published tables based on the experience of other representative populations, the experience of the plan sponsor, the effects of plan design, and general trends.

3. Consider the assumption format. The assumption format includes whether assumptions are based on parameters such as gender, age or service. The actuary should consider the impact the format may have on the results, the availability of relevant information, the potential to model anticipated plan experience, and the size of the covered population.

4. Select the specific assumptions. In selecting an assumption the actuary should consider the potential impact of future plan design as well as the factors listed above.

5. Evaluate the reasonableness of the selected assumption. The assumption should be expected to appropriately model the contingency being measured. The assumption should not be anticipated to produce significant actuarial gains or losses.

ASOP 27 General Considerations and Application: Each individual demographic assumption should satisfy the criteria of ASOP 27. In selecting demographic assumptions, the actuary also considers: the internal consistency between the assumptions, materiality, cost effectiveness, and the combined effect of all assumptions. At each measurement date the actuary should consider whether the selected assumptions continue to be reasonable, but the actuary is not required to perform a complete assumption study at each measurement date. In addition, ASOP 27 requires the actuary to include a specific assumption with respect to expected mortality improvements after the measurement date. In our opinion, the demographic assumptions recommended in this report have been developed in accordance with ASOP 27.

SECTION 5 – DEMOGRAPHIC ASSUMPTIONS

Overview of Analysis: The purpose of a study of demographic experience is to compare what actually happened to the individual members of the System during the study period (January 1, 2021 through December 31, 2024) with what was expected to happen based on the actuarial assumptions. Four years is a relatively short observation period for experience given the assumptions are being set with a long-term time horizon in mind. Therefore, we have considered the results of the prior Experience Study when practical to do so.

It takes a fair amount of data to provide experience study results that are credible for demographic assumptions. Because the membership or certain subsets of the membership are relatively small, some assumptions have been selected based more on our professional judgment of reasonable future outcomes than actual experience. Furthermore, a single study period is a relatively short observation period, particularly given the size of OSERS' membership. Therefore, the System's size limits assigning full credibility to the findings, particularly when the total group is split into subsets such as certificated/classified and/or male/female. Our recommendations were made, taking these factors into account.

Studies of demographic experience generally involve three steps:

- First, the number of members changing membership status, called decrements, during the study is tabulated by age, duration, gender, group, and membership class as appropriate (active, retired, etc.).

- Next, the number of members expected to change status is calculated by multiplying certain membership statistics, called exposure, by the expected rates of decrement.

- Finally, the number of actual decrements is compared with the number of expected decrements. The comparison is called the actual to expected ratio (A/E Ratio) and is expressed as a percentage.

In general, if the actual experience differs significantly from the overall expected results, or if the pattern of actual decrements, or rates of decrement, by age, sex, or duration deviates significantly from the expected pattern, new assumptions are considered. Recommended revisions are normally not an exact representation of the experience during the observation period. Judgment is required to anticipate future experience from past trends and current evidence, including a determination of the amount of weight (credibility) to assign to the most recent experience.

In our analysis, we use a methodology to analyze the experience that we call a "liability-weighted approach". The relative liability of the member is approximated by using the member's compensation and years of service to estimate the benefit level. The exposure and actual occurrences are then multiplied by the benefit level to provide the liability-weighted experience. (For retiree mortality, the weight is simply the benefit amount.) This approach is particularly insightful when analyzing experience in a non-homogenous group. While we reviewed experience on both a count and liability-weighted basis, we have generally found the liability-weighted experience to be a better basis for setting assumptions. Therefore, in most situations we assign

more credibility to the liability-weighted results in evaluating experience and developing new assumptions, if necessary.
Revised rates of decrement are tested by recalculating the expected number of decrements during the study period, with results shown as revised A/E Ratios.

ASOP 27 states that the actuary should use professional judgment to estimate possible future outcomes based on past experience and future expectations, and select assumptions based upon application of that professional judgment. The actuary should select reasonable demographic assumptions in light of the particular characteristics of the defined benefit plan that is the subject of the measurement. A reasonable assumption is one that is expected to appropriately model the contingency being measured and is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

	Recommended Revisions	
	Certificated	Classified
Mortality	Yes	Yes
Retirement	Yes	Yes
Termination of Employment	Yes	Yes
Probability of Refund	No	No

Because much of the past 4 years of experience overlapped the worldwide COVID pandemic, we recognize that the actual demographic experience captured in this study may be influenced by the presence of the disease, by decisions the employer made to manage their workforce through this period, and by choices employees made in response to actual or perceived changes in the world around them. Further, it is possible that some of these changes will reflect a new reality and continue to appear in future years, while other changes will likely revert back to the previous norms rapidly. Consequently, we believe caution is warranted in this study before making any significant changes based on the recent data only.

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SECTION 6 – MORTALITY

One of the most important demographic assumptions in the valuation is mortality because it projects the length of time benefits are expected to be paid to current and future retirees and beneficiaries. If members live longer than expected, the true cost of future benefit obligations will be greater than stated.

Over the last few generations, rates of mortality have been declining, meaning people are generally living longer. Furthermore, the experience of large, public retirement systems that include school employees indicate that school groups, and teachers in particular, continue to exhibit better mortality than the average working population.

There are distinct differences in the mortality rates of males and females, healthy retired members, disabled retired members and non-retired members. Because of those differences in mortality, these groups are studied separately.

The Society of Actuaries periodically publishes mortality tables derived from large, national studies. In recent years, they have tended to publish families of tables, allowing actuaries to select a table that is based on a subset of data most similar to the population the actuary is modeling. In early 2019, the Society released its first set of mortality tables based solely on public plan data. This family of tables, called the Pub-2010 tables, included tables based not only on the gender and status factors already noted, but also on the type of membership (teachers, public safety, and general government), as well as further breakdowns based on those members who were above or below the median benefit amounts. Because most other recent families of tables had excluded public sector data, the Pub-2010 tables proved quite helpful when valuing the benefits for public retirement systems like OSERS. Furthermore, when the Pub-2010 tables were published, the Society indicated they would publish new studies on the mortality experience of public retirement systems approximately every five years. In May 2025, the Society published the Pub-2016 mortality tables, which represent the first update to the Pub-2010 tables.

Actuaries sometimes use various adjustments to these standard mortality tables in order to match the observed mortality rates of a specific retirement system. One of the most common adjustments is an age adjustment that can be either a “set back” or a “set forward”. A one-year age set back treats all members as if they were one year younger than their actual age when applying the rates in the mortality table. For example, a one year set back would treat a 61-year-old retiree as if he will exhibit the mortality of a 60-year-old in the standard mortality table. Another adjustment that can be used is to “scale” a mortality table by multiplying the probabilities of death by factors less than one (to reflect better mortality) or factors greater than one (to reflect poorer mortality). Scaling factors can be applied to an entire table or a portion of the table. Of course, if necessary, actuaries may use both methods to develop an appropriate table to model the mortality of the specific plan population although scaling requires a sufficient amount of data to produce credible results. Thus, it is not an appropriate method for developing the OSERS’ mortality assumption.

SECTION 6 – MORTALITY

An important note in the examination of mortality is that there is a tendency for better mortality to be observed in the portion of the population with higher benefits than in the portion with lower benefits. Because the goal of an actuarial valuation is to model the expected benefit payments to be provided by a system, actuaries will often analyze mortality experience on a benefit-weighted basis rather than simply considering headcounts (number of members dying). This benefit-weighted approach is typically used in the development of standard mortality tables, and so it makes sense to use a consistent basis to evaluate how a mortality table fits the actual experience of a group.

ASOP 27 requires the actuary to make a specific recommendation with respect to future improvements in mortality although it does not require that an actuary assume there will be future improvements. There have been significant improvements in longevity in the past, although the impact of COVID on mortality improvements has led to more uncertainty about the degree of improvement in the future and how it might unfold. We believe it is prudent to anticipate that mortality will continue to improve to some degree in the future. Therefore, we believe it is appropriate to reflect some future mortality improvement as part of the mortality assumption.

The current, and our preferred approach, is referred to as generational mortality and it directly anticipates future improvements in mortality by using a different set of mortality rates for each year of birth, with the rates for later years of birth assuming lower mortality than the rates for earlier years of birth. The varying mortality rates by year of birth create a series of tables that contain "built-in" mortality improvements, e.g., a member who turns age 65 in 2045 has a longer life expectancy than a member who turns age 65 in 2025. When using generational mortality, the A/E ratios for the observed experience are set near 100% as future mortality improvements will be reflected directly in the actuarial valuation process. OSERS has used a generational approach for mortality for many years.

The table below shows life expectancy at age 65 based on the Pub-2016 General Members Median Employees Mortality Table with generational mortality improvements, an indication of how long a new retiree would expect to receive monthly payments, at various points in time.

	Life Expectancy	
Year	Male	Female
2026	21.4	23.7
2046	22.6	24.9
2066	23.7	26.0

Life expectancy at age 65 in years

We would note that there is a wide range of opinions with respect to future expectations of mortality and the underlying assumptions regarding mortality improvement reflect some

subjectivity. However, most public plan actuaries are in agreement that some improvement is likely to occur. The real question is how much it will improve and how rapidly.

Reliable statistical analysis of mortality requires very large data sets. Because of the size of OSERS, there is insufficient data to perform any fully credible analysis. To improve the credibility of our analysis, we aggregated the four years of data from the prior study with the current study period for a total of eight years. Changes in mortality tend to unfold slowly so aggregating the data increased the size of the data, allowing variations due to the size of the group to average out over the study period. In addition, using eight years of data allows us to include the impact of the COVID pandemic in our analysis without assigning too much weight to that experience.

The valuation currently uses generational mortality with separate mortality assumptions for male and female members. The Pub-2010 General Members Median Mortality Tables for Males and Females, is used to predict the probability of death in each future year. Projection Scale MP-2019 with ultimate improvement rates reduced by a factor of 25% is used to anticipate mortality improvements in future years.

In examining the results of the Experience Study, if the A/E Ratio is greater than 100% the assumptions have predicted fewer deaths than actually occurred (generally resulting in an actuarial gain) and with an A/E Ratio less than 100% the assumptions have predicted more deaths than have actually occurred (generally resulting in an actuarial loss). Since generational mortality is being used, the A/E Ratio should be around 100% as mortality improvements in future years are directly reflected in the valuation process by projecting lower mortality rates.

Healthy Retiree Mortality – Males: The following table shows the exposures, actual deaths, and expected deaths during the current study period for the key retirement ages of 60 to 85, where the largest exposures are found. The actual to expected ratio (A/E ratio) under the current assumption for each year in the experience study, on both a count and benefit-weighted basis, is also shown. The variation from year to year is evident; however, this is not unexpected given the size of the group and the impact of the pandemic.

				A/E Ratio	
	Exposure	Actual	Expected	Count	Weighted
2021	1,170	35	29	121%	111%
2022	1,175	38	29	131%	112%
2023	1,183	31	30	103%	104%
2024	1,196	38	31	123%	126%
Total	**4,724**	**142**	**119**	**119%**	**113%**

The A/E ratio for males in the prior study, using the current assumption, was 100%. The current experience study indicates that the current assumption for male retirees is predicting too few

deaths on both a count and a benefit-weighted basis, i.e., the A/E ratio is greater than 100%. Mortality changes do not tend to unfold quickly so we are skeptical of the findings and don't want to assign too much credibility to the results. This is particularly relevant when considering the COVID pandemic likely had a significant impact on retiree mortality experience during this period. By aggregating the current study period results with the prior study period results, we will recognize the actual data for the current period without over-weighting it and possibly over adjusting the assumption. Over the combined eight-year period, the A/E ratio on a count basis is 107% and on a benefit-weighted basis it is 100%.

Healthy Retiree Mortality – Females: The following chart shows the exposures, actual deaths, and expected deaths for ages 60 to 85, during the current study period. The actual to expected ratio under the current assumption for each year in the experience study on both a count and benefit-weighted basis is also shown. As was observed for males, the experience varies significantly from year to year although the size of the female group is larger than the males. Again, this variation is to be expected given the relatively small size of the group.

				A/E Ratio	
	Exposure	Actual	Expected	Count	Weighted
2021	3,079	57	48	119%	121%
2022	3,160	57	51	112%	108%
2023	3,219	57	53	108%	98%
2024	3,268	66	56	118%	109%
Total	**12,726**	**237**	**208**	**114%**	**108%**

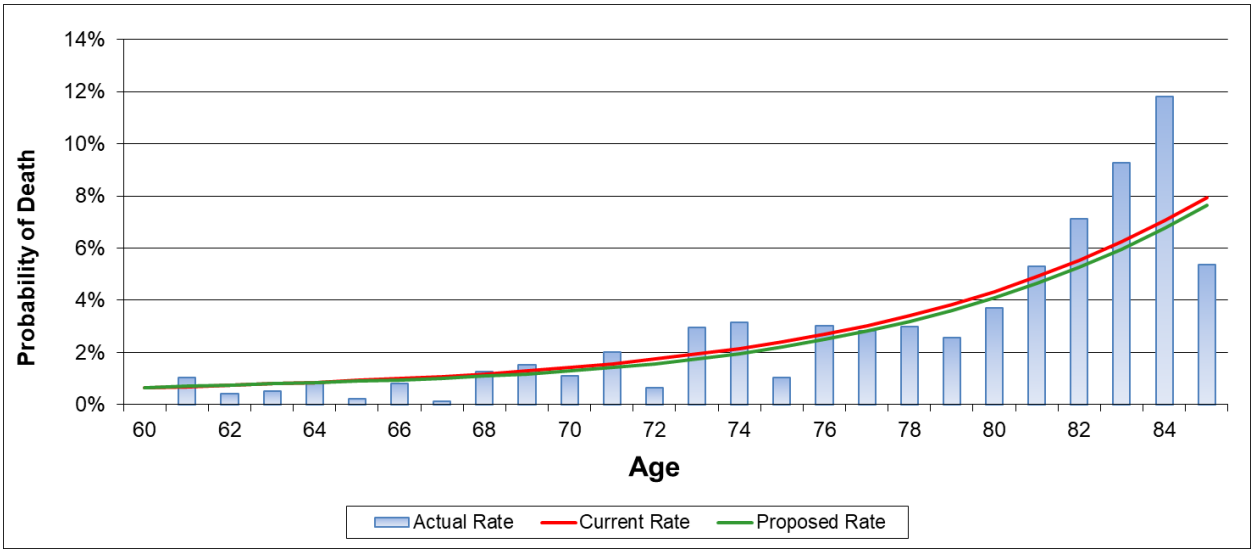
The A/E ratio for females in the prior study, using the current assumption, was 102%. However, in this study period, the experience indicates that the current assumption anticipated fewer deaths than actually occurred for female retirees on both a count and benefit-weighted basis, i.e., the A/E ratio is greater than 100%. The results on a benefit-weighted basis indicate that almost 10% more liability was released due to retiree deaths than was expected which produces actuarial gains (lower liability than expected). We aggregated the current and prior study period results to increase the credibility of the data for reasons discussed earlier for the male group. Over the combined eight-year period, the A/E ratio on a count basis is 111% and, on a benefit-weighted basis it is 102%.

As mentioned earlier, in May 2025 the Society of Actuaries published the updated set of mortality tables based solely on public plan data, the Pub-2016 mortality tables. These tables are the first update to the Pub-2010 tables. They do not represent significant changes to the mortality rates found in the Pub-2010 Mortality Tables. We prefer to use the more recent mortality tables for OSERS since the credibility of the data is limited due to the size of the group. **The Pub-2016 General Members Median Retiree Mortality Table provided a good fit**

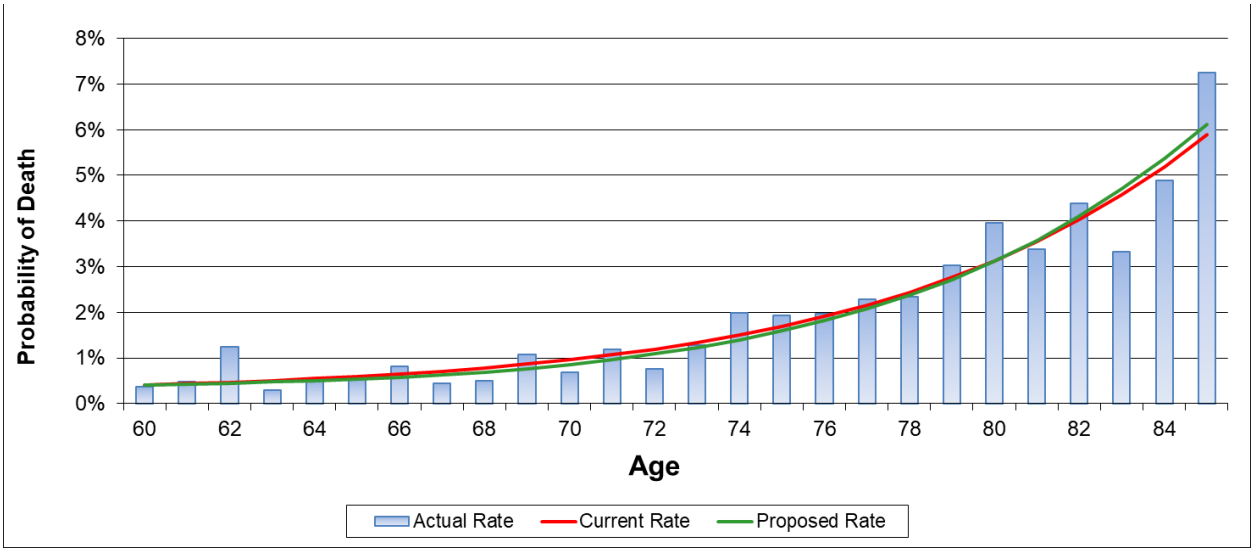
to the observed data so we are recommending this assumption for both male and female retiree mortality.

Graphs of the actual and expected rates under both the current and proposed mortality assumption for males and females are shown below:

Male Mortality Experience



Female Mortality Experience



As shown above, the changes in the mortality rates in the proposed assumption (green line) for both males and females are relatively small.

The Pub-2016 standard mortality table proved to be a good fit overall to the actual experience over the past eight years from ages 60 to 85 as shown below:

	A/E Ratio	
	Count Basis	Benefit-Weighted
Males	115%	107%
Females	115%	106%

As the table above indicates, the A/E ratio for males increased from 100% to 107% under the proposed assumption, while the female A/E ratio for females increased from 102% to 106%. While the preference is for the A/E ratio to move closer to 100% under the proposed assumption, considering the impact that COVID had on mortality rates during this eight-year period it's not unreasonable to adopt a mortality assumption that models fewer deaths in the future compared to the study period (i.e., an A/E ratio above 100%). Furthermore, as mentioned earlier, deriving a mortality assumption requires a massive amount of data. Due to the limited size of the OSERS population, the mortality experience lacks sufficient credibility to demonstrate that the difference in A/E ratios is statistically significant relative to the proposed mortality table.

Healthy Retiree Mortality- Projected Mortality Improvement

With generational mortality, once the base mortality rates are set by selecting a mortality table that fits the actual experience during the study period, future mortality improvements must be addressed by selecting a mortality improvement scale to anticipate changes in the mortality rates in future years.

Prior to COVID, the Society of Actuaries (SOA) published a mortality improvement scale every year (called the Scale MP-YYYY) along with a tool to permit actuaries to modify the standard projection scale if desired. However, the long-term impact on mortality improvement due to COVID is difficult to predict and will require many years of mortality data. As a result, the SOA has not published an updated Scale MP-YYYY since MP-2021.

During the prior experience study, OSERS adopted the mortality improvement scale that was previously adopted by NPERS during their 2020 experience study. The NPERS mortality improvement scale was a customized projection scale that generally reflects 75% of the ultimate improvement in the MP-2019 Scale published by the SOA. In the experience study performed for the Nebraska Public Employees Retirement System in 2024, the actuary recommended retaining the current mortality improvement scale and the Public Employees Retirement Board (PERB) approved keeping it. Based on the data available for OSERS, the current projection scale continues to be a good fit for the improvements observed in the data during the current experience study.

SECTION 6 – MORTALITY

We recommend the mortality assumptions be set to the Pub-2016 General Members Median Retiree Mortality Table with generational mortality improvements anticipated using the current projection scale.

Beneficiaries: The mortality of beneficiaries applies to the survivors of members who receive a joint and survivor option. There are fewer members receiving benefits under the joint and survivor options which can produce more volatility in the observed mortality rates. Based on the limited data, **we recommend using the Pub-2016 General Members Median Contingent Survivor Mortality Table with generational mortality improvements anticipated using the current projection scale for beneficiaries.**

Post-retirement Mortality for Disabled Members: The valuation assumes that disabled members, in general, will not live as long as retired members who met the regular service retirement eligibility. In addition, future life expectancies for disabled members are not expected to increase as significantly as the future life expectancies for healthy retirees.

Because of the limited number of exposures and deaths for disabled members, it makes sense to use the standard disabled table that is the companion to the retiree mortality table. **We recommend the Pub-2016 Non-Safety Disabled Retiree Mortality Table be used without generational improvement.**

Active Members: This assumption predicts eligibility for active member death benefits prior to retirement, rather than the expected lifetime for pension payments. In smaller groups like OSERS, the mortality rates for active members are often set by using a consistent basis as is used for healthy retirees. Given the low probability of death while active, the results cannot be credible on their own without much larger numbers of employees than are in OSERS. We prefer to keep the mortality assumption for active and retired members on a consistent basis. **Therefore, we recommend the active member mortality be set to the Pub-2016 General Members Median Employees Mortality Table for males and females with generational mortality improvements anticipated using the current projection scale.**

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SECTION 7 - RETIREMENT

The valuation uses several different assumptions to anticipate when retirement benefits will commence for active members. One of the most significant factors affecting retirement patterns is, not surprisingly, the provisions governing when a member is eligible to retire. Additionally, provisions regarding eligibility for special benefits, subsidies, options, or any other special features may also influence retirement patterns.

The Omaha School Employees Retirement System currently contains four separate "tiers" of benefits. Tier membership is determined by the member's date of participation:

Benefit Tier	Membership Date
1	Prior to 7/1/2013
2	On/after 7/1/2013 and before 7/1/2016
3	On/after 7/1/2016 and prior to 7/1/2018
4	On/after 7/1/2018

A comparison of the eligibility criteria for early retirement (reduced benefits) and normal retirement (unreduced benefits) is shown in the table below. Unreduced benefits are also payable upon attainment of the Rule of 85 (age and years of service add to at least 85).

	Tier 1	Tier 2	Tier 3	Tier 4
Reduced Retirement	Age 55/10 YOS	Age 55/10 YOS	Age 60/5 YOS	Age 60/5 YOS
Unreduced Retirement	35 YOS 62 and 10 YOS 65 and 5 YOS	35 YOS 62 and 10 YOS 65 and 5 YOS	65 and 5 YOS	65 and 5 YOS
Rule of 85	Age 55	Age 55	Age 55	Age 60

YOS = Years of service

Eligibility requirements for retirement changed for Tiers 3 and 4, as noted above. Because Tiers 3 and 4 were implemented within the past ten years, it will be many years before sufficient retirement experience for those tiers is available. Therefore, the recommended retirement rates for those tiers are based solely on our professional judgment.

For this discussion, the focus is on the type of retirement a member is eligible to receive. Early retirement is the term used when the amount of the accrued benefit is reduced by an early retirement factor to reflect the longer expected payment period. Unreduced retirement occurs when such a factor is not applied. Currently, there are separate retirement rates for certificated and classified members, based on early or unreduced retirement benefits (including Rule of 85). For those eligible for unreduced retirement benefits, a different set of retirement rates apply in the first year of eligibility, called the "select" retirement rates. The retirement rates that apply after the initial year of eligibility are referred to as the "ultimate" retirement assumption.

SECTION 7 - RETIREMENT

A summary of the actual and expected retirement experience at key ages during the study period for Tier 1 and Tier 2 members is shown in the following tables.

Early Retirement

	Certificated					Classified				
Plan				A/E Ratio					A/E Ratio	
Year	Exp.	Actual	Expected	Count	Weighted	Exp.	Actual	Expected	Count	Weighted
2021	259	22	19	116%	121%	255	17	9	189%	149%
2022	260	22	19	116%	100%	221	11	8	138%	144%
2023	214	20	15	133%	145%	229	4	8	50%	61%
2024	236	7	16	44%	46%	236	9	8	113%	95%
Total	969	71	70	101%	101%	941	41	34	121%	106%

First Eligible Retirement (Select)

	Certificated					Classified				
Plan				A/E Ratio					A/E Ratio	
Year	Exp.	Actual	Expected	Count	Weighted	Exp.	Actual	Expected	Count	Weighted
2021	77	18	25	72%	86%	73	10	12	83%	63%
2022	64	22	19	116%	111%	89	10	14	71%	59%
2023	74	24	23	104%	98%	78	8	12	67%	55%
2024	55	8	18	44%	42%	53	5	8	63%	38%
Total	270	72	85	85%	83%	293	33	47	70%	54%

Ultimate Retirement

	Certificated					Classified				
Plan				A/E Ratio					A/E Ratio	
Year	Exp.	Actual	Expected	Count	Weighted	Exp.	Actual	Expected	Count	Weighted
2021	216	61	60	102%	99%	290	66	64	103%	132%
2022	218	67	61	110%	98%	283	49	69	71%	97%
2023	160	42	44	95%	86%	328	60	75	80%	96%
2024	176	35	46	76%	81%	335	51	76	67%	71%
Total	770	205	210	98%	91%	1,236	226	284	80%	94%

A more detailed discussion of our findings is included below.

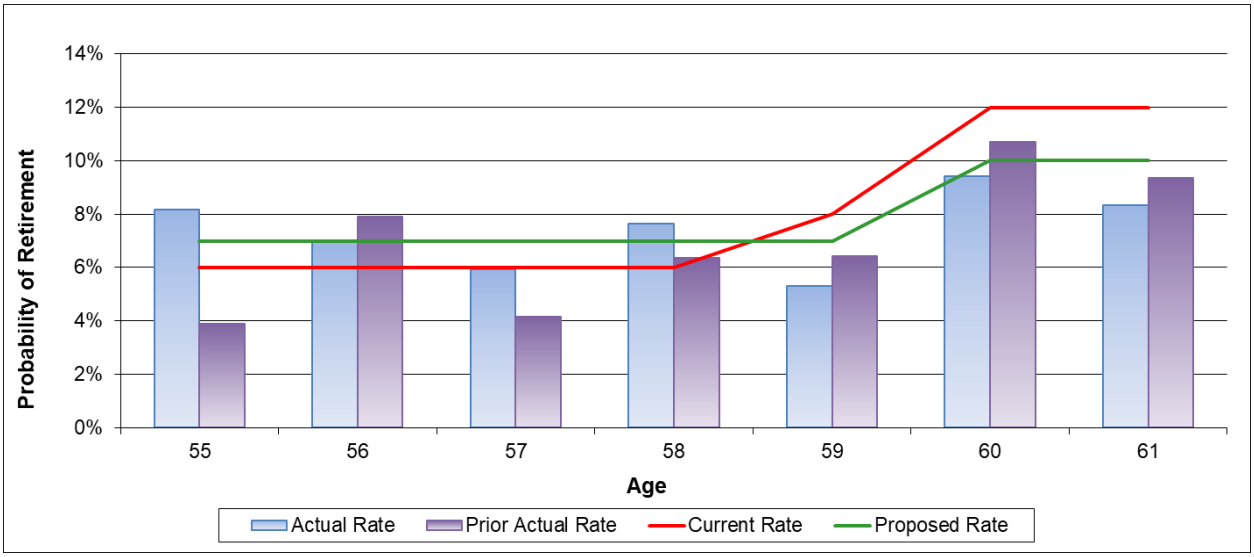
Certificated Retirement Experience

The following table is a summary of the actual service retirements in each category for certificated members for calendar years 2021 through 2024:

Retirements Observations				
Reduced Benefits	Actual	Expected	A/E Ratio Count	A/E Ratio Weighted
Early	71	70	101%	101%
Unreduced Benefits:	72	85	85%	83%
Select (First Eligible)				
Ultimate	205	210	98%	91%

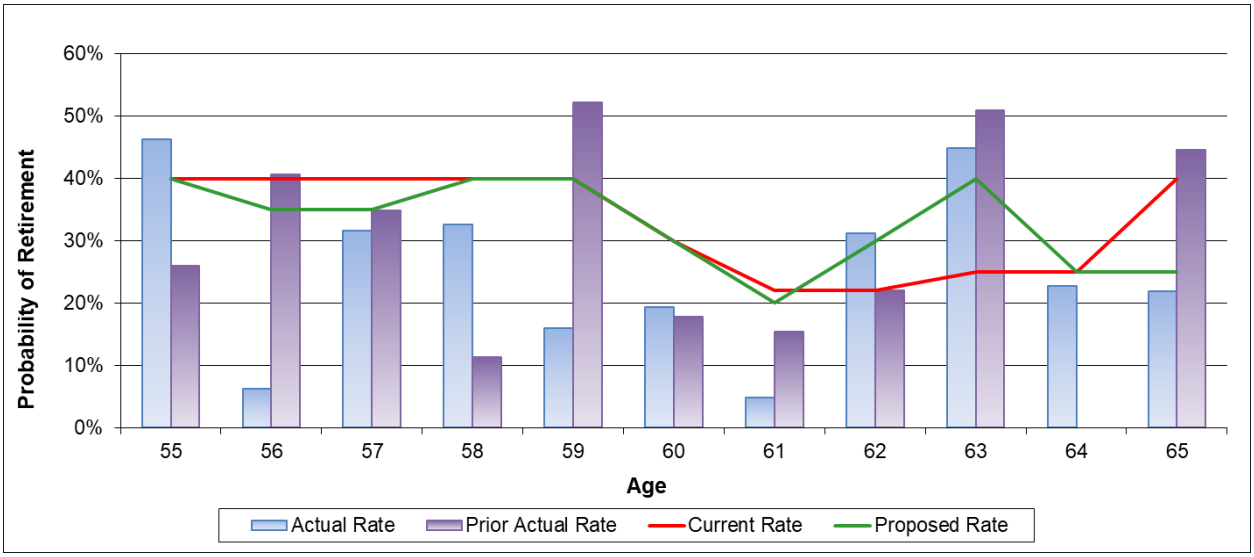
The number of early retirements was very close to expected as indicated by A/E ratios near 100%, on both a count and weighted basis. While the number of unreduced retirements was relatively close to expected, as indicated in the previous table, there were fewer members who retired when they first became eligible for unreduced retirement benefits than expected compared to those who retired after their first year of eligibility for unreduced retirement than expected. Using the current assumption, the A/E ratio in the current study is 83%. We also considered the retirement experience from the prior study period (A/E ratio of 81%) and, as a result, are recommending several changes to the retirement assumptions for certificated members.

Certificated Early Retirement



The current assumption provides for an A/E ratio very close to 100% on both a count basis and a liability-weighted basis. However, after observing consistent retirement patterns over both the current and the prior experience studies, we believe the "fit" could be improved. As a result, we are recommending small increases to retirement rates below age 59 and small decreases for ages 59 and above. The resulting A/E ratio is 96% on a liability-weighted basis.

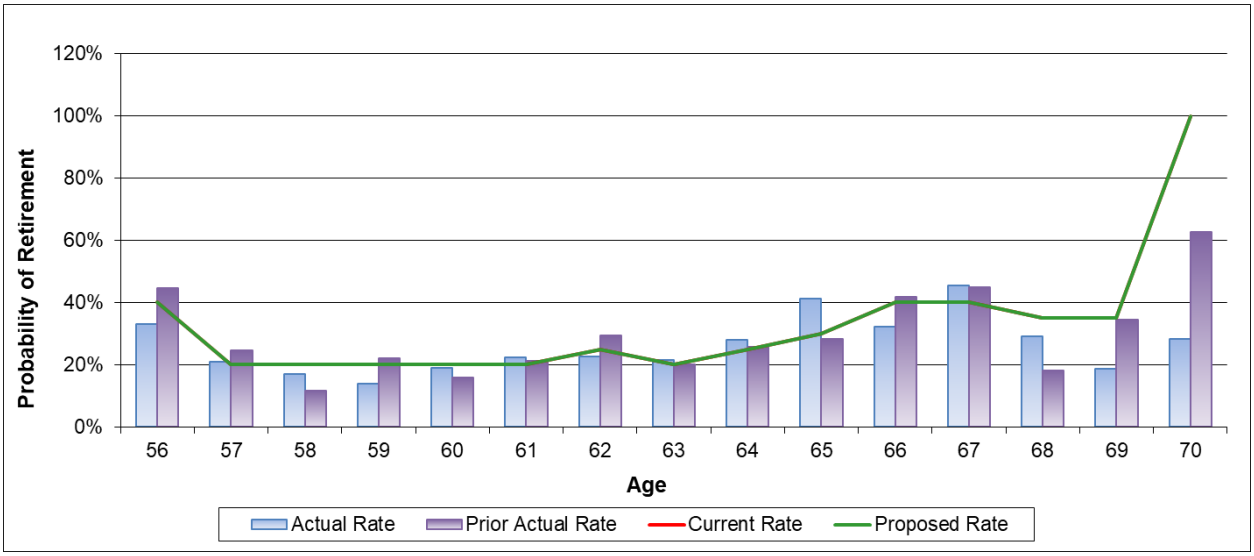
Certificated First Eligible Retirement (Select)



The actual retirement experience at first eligible age for unreduced retirement benefits was quite different than observed in the last study at several ages. The A/E ratio in the current study is 83% on a liability-weighted basis indicating much lower retirement experience than was expected by

the current assumption. We are hesitant to fully reflect the rates observed in the current study period given the small size of the exposure and the potential influence that COVID had on member behavior during this period. Therefore, we recommend partially reflecting the experience in the current study period, focusing on ages where the experience from both the current and the prior studies were more consistent. The A/E ratio using the proposed assumption is 84% on a liability-weighted basis.

Certificated Ultimate Retirement



The A/E ratio with the current assumption is 91% on a liability-weighted basis, compared to a 99% A/E ratio in the prior study. As stated earlier, we do not wish to assign too much weight to the experience during the current study period and the pattern of experience still appears to fit the current assumption well. Therefore, we are not recommending any change to this assumption at this time. We will continue to monitor the ultimate retirement assumption in future studies.

The following table summarizes the resulting A/E ratios using the recommended assumptions:

Certificated Experience

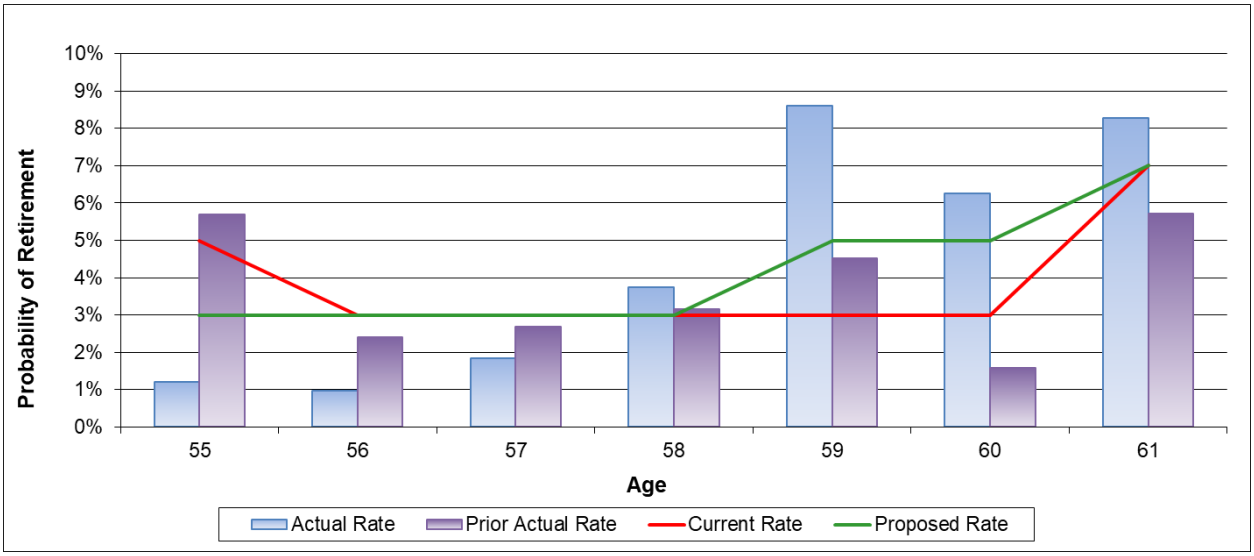
	A/E Ratio			
	Current		Proposed	
Assumption	Count	Weighted	Count	Weighted
Early	101%	101%	99%	96%
Select	85%	83%	85%	84%
Ultimate	98%	91%	98%	91%

Classified Retirement Experience

The following table is a summary of the actual service retirements in each category for classified members for calendar years 2021 through 2024:

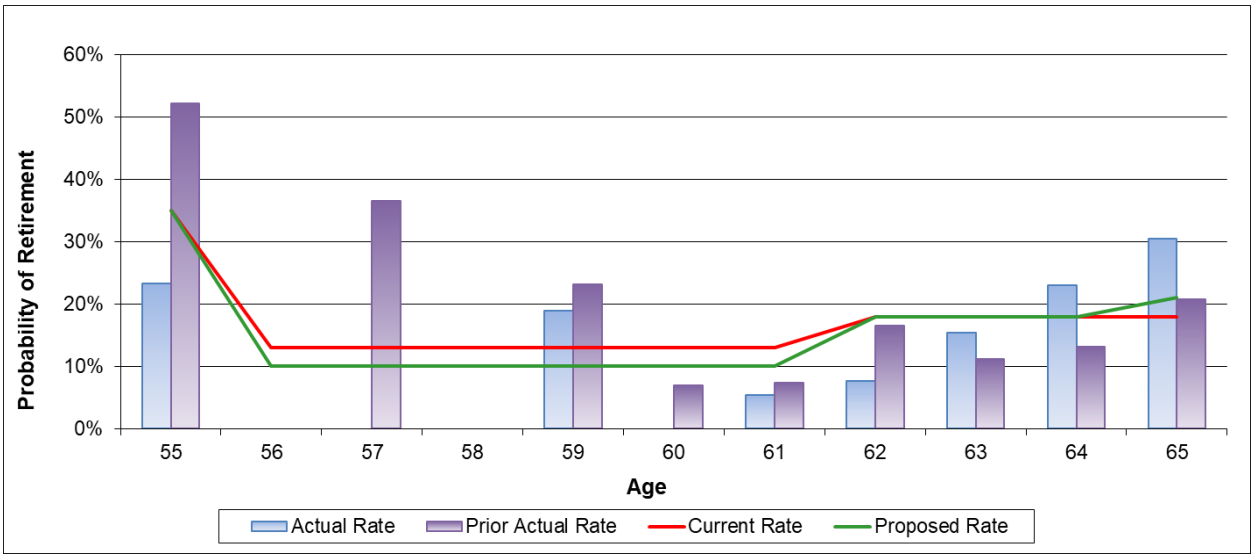
Retirements Observations				
	Actual	Expected	A/E Ratio Count	A/E Ratio Weighted
Early (Reduced)	41	34	121%	106%
Select (First Eligible)	33	47	70%	54%
Ultimate	226	284	80%	94%

Classified Early Retirement



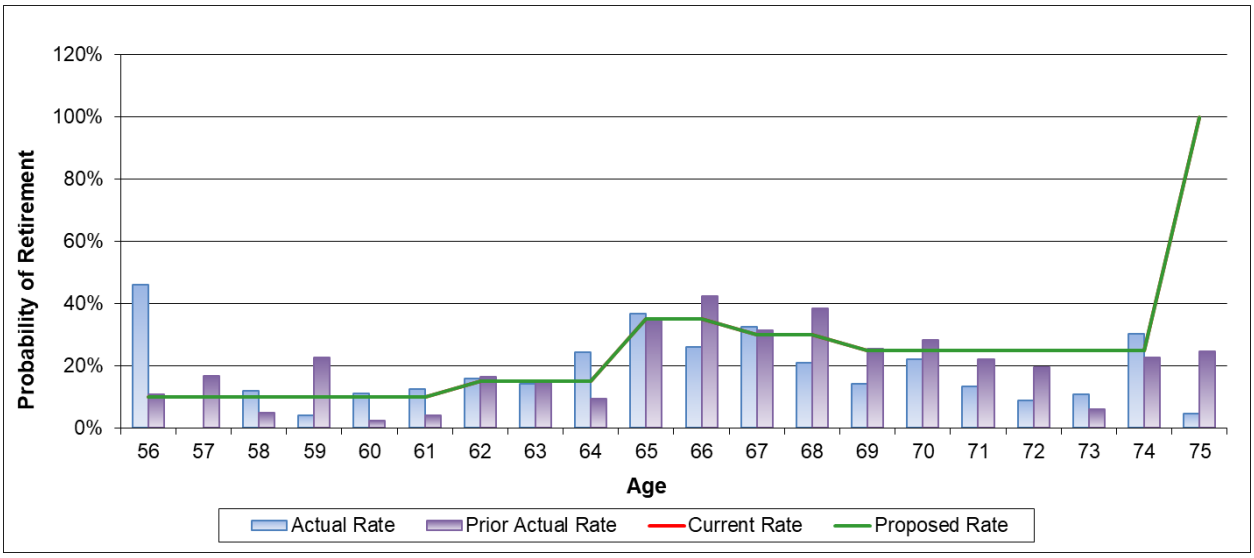
The A/E ratio with the current assumption is 106% on a liability-weighted basis, compared to 97% in the prior study. While the A/E ratio shows that, overall, early retirement behavior for classified members has been close to expectations, we believe the "fit" could be improved. Therefore, we are recommending minor adjustments to the early retirement rates at ages 55, 59 and 60. The resulting A/E ratio is 100% on a liability-weighted basis.

Classified First Eligible Retirement (Select)



The A/E ratio with the current assumption is 54% on a liability-weighted basis, compared to an A/E ratio of 101% in the prior study. For the same reasons mentioned in earlier discussion for the Certificated group, we are hesitant to fully reflect the retirement experience observed in the current study. Therefore, we recommend only minor adjustments which partially reflect the experience in the current study period as shown in the graph above**.** The A/E ratio, using the proposed assumption, improves the A/E ratio to 61% on a liability-weighted basis.

Classified Ultimate Retirement



The A/E ratio with the current assumption is 94% on a liability-weighted basis, compared to a 97% A/E ratio in the prior study. As stated earlier, we do not wish to give too much weight to the experience during the current study and the pattern of experience still appears to fit the current assumption well. Therefore, we are not recommending any changes to this assumption at this point. We will continue to monitor the ultimate retirement assumption in future studies.

Classified Experience

	A/E Ratio			
	Current		Proposed	
Assumption	Count	Weighted	Count	Weighted
Early	121%	106%	114%	100%
Select	70%	54%	77%	61%
Ultimate	80%	94%	80%	94%

Inactive Vested Members: The current assumption is that inactive vested members will retire at the first retirement date at which they are eligible for unreduced benefits. Due to the limited number of exposure, actual analysis was not performed. This is a reasonable expectation and **we recommend the current assumption be retained.**

MISCELLANEOUS ASSUMPTIONS

Here we discuss the relatively minor assumptions that are used in the valuation process. For convenience, we have included the discussion for each of these assumptions here.

Disability Retirement

Another ancillary benefit the System provides to members is a disability benefit. Typically, the number of disability retirements a plan experiences is heavily dependent upon the membership type, and such occurrences are typically rare for school employees. Currently, no disability retirements are assumed to occur in the future.

Looking at the data for the current study period, there was only one member who became disabled during 2021, while there were no disabilities for plan years 2022 through 2024. Given the rarity of occurrence, **we recommend that the current disability assumption be retained.**

Marriage Assumption

The current assumption is that 85% of members are married. This assumption is used to value the pre-retirement death benefit which varies with marital status (which has minor cost implications). The census data provided to us for the annual valuation does not include marital status. Beneficiary information is only reported for those retirees who are receiving a joint and survivor form of payment. With data supplied in this manner, there is no fully credible way to review this assumption. However, the impact of this assumption is quite small and the use of 85% marriage assumption is within the range of common marriage assumptions for public retirement systems. **Therefore, we recommend retaining the current assumption.**

Age of Beneficiary

The current assumption is that males are three years older than females. There is insufficient data to assess this assumption, but the current assumption is a standard assumption used in actuarial valuation for pension plans. **Therefore, it is reasonable and we recommend it be retained.**

Pop-up Benefit Load

At retirement, OSERS members can elect to receive their monthly benefit under an optional form of payment, which is actuarially reduced from the normal form of payment (a lifetime annuity with 60 guaranteed monthly payments). The actuarial factors used to calculate these benefit reductions are updated periodically. One option is to receive the retirement benefit as a 100% Joint and Survivor benefit with a “pop-up” provision. Under this payment form, if a member’s joint annuitant predeceases them, then their benefit amount will “pop up” to the amount payable under the plan’s normal form of payment.

We do not currently receive sufficient data to directly value the pop-up benefit for current retirees, and so an assumption is necessary to estimate the increased benefit. The current assumption is that benefit amounts will increase by 10% if an eligible retiree's beneficiary predeceases them. After reviewing the most recent factors at key retirement ages (62 to 67) and spousal age difference (0 to 3 years), **we recommend that the current assumption of a 10% load be retained.**

Inactive Vested Load

When vested members terminate, they have the option to either receive a refund of their accumulated contribution balance or wait until they are retirement eligible to commence annuity payments. Even if these members do not receive a refund of their contributions immediately, they still have the option to take a refund at any time before retirement. However, if such members do not elect to receive a refund of their contributions, then there is an implicit assumption that they will not receive any benefits until they are eligible for retirement. Because the accumulated contribution balance may be higher than the value of the accrued benefit for some of these members, there is currently a 5% load applied to liability for inactive vested benefits.

Our analysis shows that about 5% of inactive vested members elected to receive a refund of contributions during the current study period. Given the low rate of refunds for this group, it may be reasonable to reduce or even eliminate this load. However, given the potential impact of the COVID pandemic and the small amount of conservatism provided, **we recommend the current assumption of 5% be retained and reevaluated in the next experience study.**

Definition of Actuarial Equivalence for Factors

Given we are recommending a change to the mortality assumption in this experience study, the Board may want to consider updating the definition of actuarial equivalence for members hired on or after July 1, 2018, depending on the magnitude of the impact on optional forms of payment. Changing factors now would reduce the amount of any actuarial gains/losses resulting from members electing an optional form of payment at retirement. However, because we are only recommending a minor change to the mortality assumption, the impact may be too small to justify the administrative resources necessary to implement the new factors.

For OSERS, the definition of actuarial equivalence only affects the amount of benefit received if a member elects to receive payment under an optional form of benefit. The benefit formula (Final Average Salary x Years of Service x Multiplier) determines the amount of the benefit payable under the normal form of payment, a five-years certain and life annuity. Optional forms of payment are based on this benefit amount multiplied by an optional form factor.

The definition of "actuarial equivalence" for members hired prior to July 1, 2018 is defined in statute. State Statutes 79-978(3)(ii) sets out the definition: "For members hired before July 1, 2018, a unisex mortality table using twenty-five percent of the male mortality and seventy-five

percent of the female mortality from the 1994 Group Annuity Mortality Table with a One Year Setback and using an interest rate of eight percent compounded annually." This actuarial equivalent basis in statute for members who were hired before July 1, 2018 remains in place. However, the Board now determines the assumptions for determining actuarial equivalence for optional forms of payment for members hired after June 30, 2018. This section covers the recommended assumptions for actuarial equivalent basis for post June 30, 2018 members.

There are three primary assumptions that create the actuarial equivalent basis for the actuarial factors:

(1) Mortality assumption,
(2) Interest rate (investment return assumption),
(3) Cost of living adjustment (if the adjustment is variable).

Our recommendation for each assumption is discussed below.

Mortality

A gender-neutral mortality assumption is needed to comply with legal requirements. In addition, the mortality tables used in the valuation are "generational" meaning that the probabilities of death decrease slightly in each future year, which would result in different life expectancies each year and a change to the actuarial equivalent factors, if used. Rather than update actuarial factors each year, it is common practice to project the mortality rates to a specific year in the future and then use that single set of mortality rates for actuarial equivalent purposes.

Our approach in this study is consistent with the last experience study. To determine the unisex blend of male and female mortality rates, the male/female split of liability for those members nearing retirement was studied. We further examined the actual election patterns of recent retirees for optional forms of payment by gender to determine if any adjustment was needed to reflect different utilization of joint and survivor benefits. For joint and survivor payment forms, the opposite gender blend is used for the mortality assumption of the joint annuitant.

Our analysis showed that the current unisex blend of 25% male/75% female for members who elected to receive an optional form of payment. However, when we look at recent experience for joint and survivor payment forms versus the 10-year certain and life, we see that male members disproportionately choose to receive a joint and survivor payment form. Therefore, we recommend separate unisex mortality blends for joint and survivor payment forms versus the 10-year certain and life benefit.

The following mortality assumption is recommended **if** the Board wishes to adopt new assumptions for the definition of "actuarial equivalent":

- 10-Year Certain and Life: Valuation mortality table, projected to 2040 using the mortality projection scale, with a 25% male/75% female blend.
- Joint and Survivor: Valuation mortality table, projected to 2040 using the mortality projection scale, with a 35% male/65% female blend.

COLA Assumption

The statutory plan provisions include an automatic 1% COLA (not to exceed CPI). Given the price inflation assumption used for funding purposes, the full 1% COLA is assumed. While there is a provision for an additional discretionary COLA when certain funding-related criteria are met, there is no specific adjustment made to the COLA funding assumption. Therefore, we recommend using the 1% COLA assumption for the definition of actuarial equivalence.

Investment Return (Interest Rate) Assumption

If the Board chooses to adopt the lower investment return assumption of 6.75%, the actuarial equivalent basis for factors for members who were hired on/after July 1, 2018 should be updated to reflect that change. The optional form factors are calculated by dividing the annuity factor for the normal form of payment by the annuity factor for the optional form of payment. Because the change in the underlying actuarial assumptions impacts both annuity factors in the same direction but not by the same magnitude, the cost impact is somewhat mitigated.

SECTION 8 – TERMINATION OF EMPLOYMENT (WITHDRAWAL)

Not all active members on the valuation date are expected to continue working until retirement. Therefore, a termination of employment assumption is used to anticipate the probability that a member will leave covered employment at any given service level. In analyzing the actual results, the number of terminations includes all members reported to have terminated employment. Some of these members subsequently receive refunds of their contributions, some return to active membership and some leave their contributions with the System until retirement and receive a monthly benefit. Explicit assumptions are made regarding the elections made by such terminated vested members. Non-vested members are assumed to elect a refund of their employee contribution account balance.

This section of the report summarizes the results of our study of terminations of employment for reasons other than death, retirement, or disability. Rates of termination can vary by both age and years of service. In general, rates of termination tend to be highest at younger ages and in the early years of employment. There may also be differences in termination patterns between males and females so gender-specific rates are studied.

The current termination of employment assumption is a service-based assumption with employees with lower years of service exhibiting higher incidences of termination than the rates for employees with more years of service. Separate male and female termination rates for classified members are used in the valuation process, but one set of rates is used for all certificated members (both male and female).

Certificated Members

A summary of the experience in the current study period for durations 1 through 25 is displayed in the following table:

Termination Experience – All Certificated

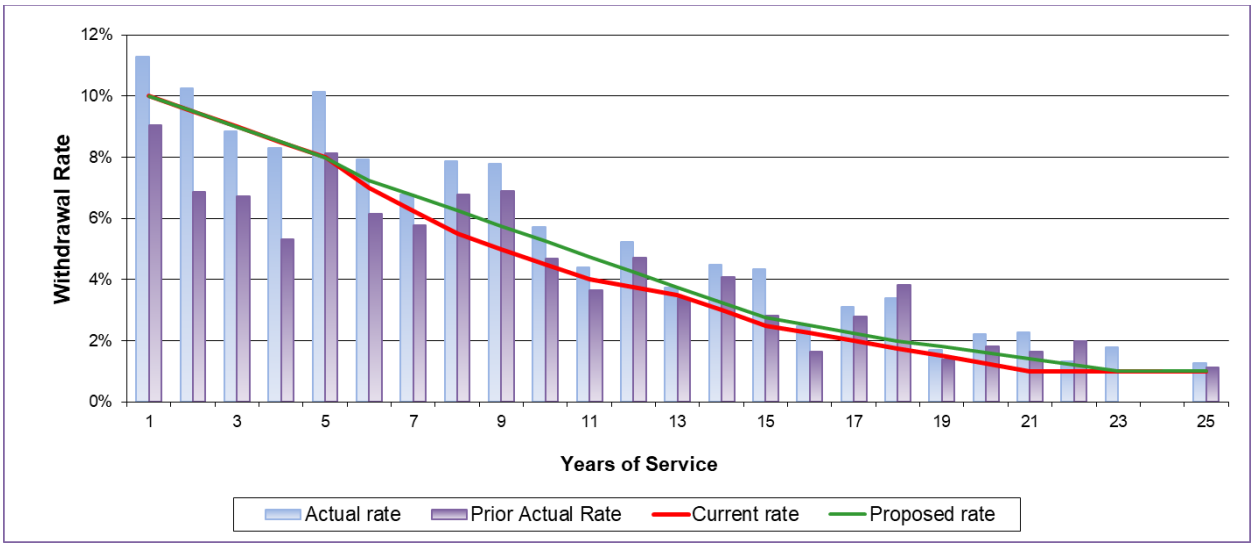
				A/E Ratio	
	Exposures	**Actual**	**Expected**	**Count**	**Weighted**
Calendar Year 2021	3,963	412	222	185%	210%
Calendar Year 2022	3,841	577	215	268%	286%
Calendar Year 2023	3,277	436	176	248%	278%
Calendar Year 2024	3,075	270	166	163%	140%
Total	**14,156**	**1,695**	**779**	**218%**	**229%**

As the table above illustrates, the actual number of terminations far exceeded expectations during this period, both on a count basis and a liability-weighted basis. Specifically, the A/E ratios for plan years 2022 and 2023 were exceptionally high. This is not surprising given that the study period coincides with the aftermath of the COVID pandemic, which significantly disrupted school operations. Many retirement systems covering teachers and school employees experienced elevated employee turnover due to pandemic-related stress, health and safety concerns,

childcare responsibilities, and increased workload demands associated with remote and hybrid instruction. While some of these effects persisted into 2023–2024, available data and emerging national trends suggest that termination rates are beginning to normalize as labor markets stabilize and pandemic-related pressures recede. For these reasons, we do not believe the elevated termination rates observed during this study period are representative of long-term experience.

In light of these extraordinary events, we analyzed the System's termination experience by combining data from the prior study and the current study to result in more credible data. In addition, due to the extreme nature of the System's experience during 2022 and 2023, these two years were excluded from our analysis. Furthermore, we are not recommending material changes to the underlying termination assumptions at this time, but we do believe that termination rates will be somewhat higher in the future. As the graph below shows, the A/E ratio for this period under the current assumption is 129% on a liability-weighted basis. The proposed changes partially reflect observed experience, lowering the A/E ratio to 118%. Future experience studies will continue to monitor actual behavior as conditions stabilize and more post-pandemic data becomes available.

Termination Rates: Certificated Males and Females



We reviewed the results for the certificated group separately by male and female, as well in aggregate, and there was not a major difference between the termination patterns for males and females. We continue to recommend one assumption be used for the certificated group. For the classified group, separate assumptions are currently used based on gender and the experience again supports that approach.

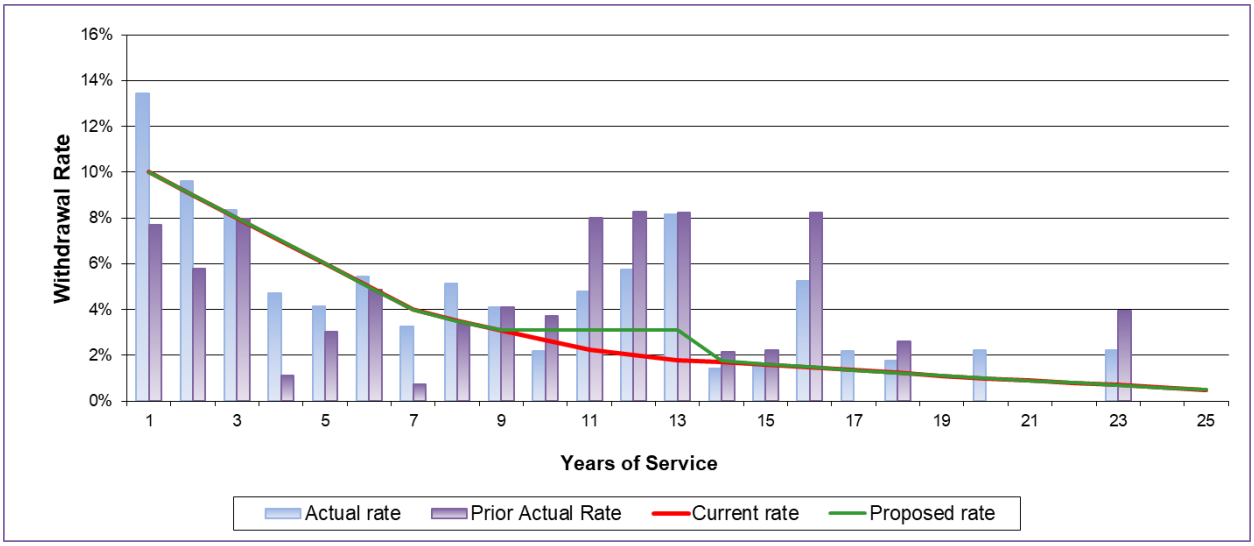
Classified Members

Termination Experience – Classified Males					
				A/E Ratio	
	Exposures	Actual	Expected	Count	Weighted
Calendar Year 2021	518	90	32	285%	213%
Calendar Year 2022	492	74	31	242%	160%
Calendar Year 2023	604	68	38	179%	156%
Calendar Year 2024	656	52	42	124%	88%
Total	**2,270**	**284**	**142**	**200%**	**143%**

Similar to what we saw with the Certificated group, the actual number of terminations far exceeded expectations during this period, both on a count basis and a liability-weighted basis. This termination pattern is not typical and we are hesitant to rely too heavily on the data in this observation period. As a result, we are recommending few and small changes to the Classified Males assumption in this study, partially reflecting the results in the current and prior studies but trying not to over adjust. When more post-COVID information is available in the next experience study, additional adjustments can be made if necessary.

The current and recommended assumptions for termination of employment for classified Males is shown in the graph below. Under the proposed assumption, the A/E ratio on a liability-weighted basis improves from 119% to 115%.

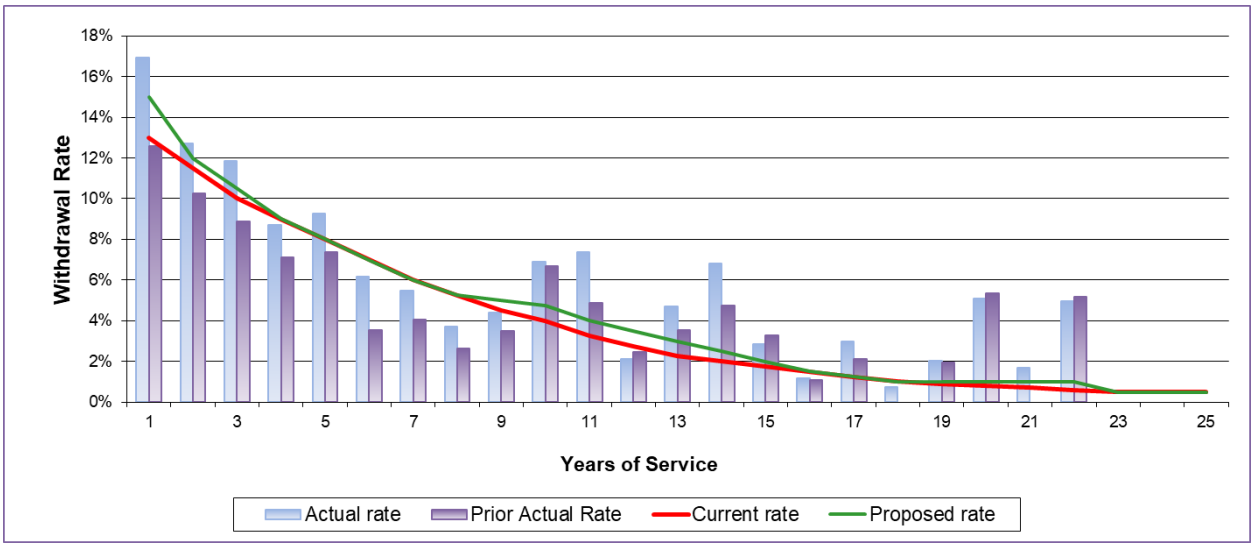
Termination Rates: Classified Males



Termination Experience – Classified Females					
				A/E Ratio	
	Exposures	Actual	Expected	Count	Weighted
Calendar Year 2021	1,053	208	85	245%	239%
Calendar Year 2022	1,016	200	85	236%	222%
Calendar Year 2023	1,170	151	98	154%	121%
Calendar Year 2024	1,196	122	103	119%	125%
Total	**4,435**	**681**	**371**	**184%**	**162%**

Similar to what we saw with Classified Males and Certificated members, the actual number of terminations far exceeded expectations during this period, both on a count basis and a liability-weighted basis. This termination pattern is not typical and we are hesitant to rely too heavily on the data in this observation period. As a result, we are recommending relatively minor changes to the Classified Females assumption in this study, partially reflecting the results in the current and prior studies, but trying not to over adjust. When more post-COVID information is available in the next experience study, additional adjustments can be made if necessary. Under the proposed assumption, the A/E ratio on a liability-weighted basis improves from 125% to 117%.

Termination Rates: Classified Females



The A/E ratios using the recommended assumptions are summarized below. As discussed earlier, the recommended assumptions rely on the liability-weighted analysis.

	A/E Ratio	
	Count	Weighted
Certificated	113%	118%
Classified – Males	127%	115%
Classified – Females	119%	117%

VESTED MEMBER ELECTION OF REFUND/DEFERRED BENEFIT

Some members who terminate active employment elect to receive a distribution of their member account balance. Currently, we assume that all non-vested members receive a refund of their account balance at the time of termination because that is the only benefit they are owed. In addition, we assume a certain proportion of terminating vested members also elect a distribution of their member account balance, thus forfeiting the right to receive a monthly benefit in the future.

Currently, separate assumptions are used for each group based on how much service the member has earned. For the certificated group, 80% of terminating members are assumed to elect a deferred benefit if they have less than 15 years of service at termination versus 90% if they have 15 or more years of service. For the classified group, 65% are assumed to elect a deferred benefit if they have less than 11 years of service versus 75% if they have 11 or more years of service.

The following table shows the number of vested members who terminated and elected to leave their funds with the System during the study period.

	Election of Deferred Benefit			
	Actual	Terminations	Percent	Assumption
Certificated				
- **Less than 15 YOS**	548	674	81%	80%
- **15 or More YOS**	175	206	85%	90%
- **Total**	723	880	82%	82%
Classified				
- **Less than 11 YOS**	106	168	63%	65%
- **11 or More YOS**	60	84	71%	75%
- **Total**	166	252	66%	68%

As shown in the above table, the current assumption closely modeled actual experience during the experience study period. **Therefore, we are recommending the current assumption be retained**.

Investment Return Assumption:	7.00% per annum, compounded annually, net of investment expenses.
Inflation (CPI):	2.35% compounded annually.
Interest Rate Credited on Employee Contributions:	2.35% compounded annually.
Total Payroll Growth:	2.85% compounded annually.
Mortality Rates:	Active members use the Pub-2010 General Members (Median) Employee Mortality Table projected generationally using MP-2019 modified to 75% of the ultimate rates. Retirees use the Pub-2010 General Members (Median) Retiree Mortality Table projected generationally using MP-2019 modified to 75% of the ultimate rates. Beneficiaries use the Pub-2010 General Members (Median) Contingent Survivor Mortality Table projected generationally using MP-2019 modified to 75% of the ultimate rates. Disabled retirees use the Pub-2010 Non-Safety Disabled Retiree Mortality Table, without generational improvement.
Disability:	None assumed.
Termination of Employment: (prior to retirement eligibility)	Illustrative rates of termination are as follows:

Certificated:

Duration	Percent Terminating Rate
1	10.00%
5	8.00
10	4.50
15	2.50
20	1.25
25	1.00
30	0.75

Classified:

Duration	Percent Terminating Male	Female
1	10.00%	13.00%
5	6.00	8.00
10	2.65	4.00
15	1.60	1.75
20	1.00	0.80
25	0.50	0.50
30	0.50	0.50

Retirement Rates: Early retirement rates are assumed to occur according to the schedule illustrated below:

Became members before July 1, 2016

Certificated: Age	Early	**Classified:** Age	Early
55	6%	55	5%
56	6	56	3
57	6	57	3
58	6	58	3
59	8	59	3
60	12	60	3
61	12	61	7

Became members on or after July 1, 2016

Certificated: Age	Early	**Classified:** Age	Early
60	12%	60	3%
61	12	61	7
62	12	62	7
63	12	63	7
64	12	64	7

Unreduced retirement rates are assumed to occur according to the schedule illustrated below:

Became members before July 1, 2018

Certificated:

Age	1st Year Eligible	Ultimate
55	40%	
56	40	40%
57	40	20
58	40	20
59	40	20
60	30	20
61	22	20
62	22	25
63	25	20
64	25	25
65	40	30
66	40	40
67	40	40
68	40	35
69	100	35
70	100	100

Classified:

Age	1st Year Eligible	Ultimate
55	35%	
56	13	10%
57	13	10
58	13	10
59	13	10
60	13	10
61	13	10
62	18	15
63	18	15
64	18	15
65	18	35
66	18	35
67	18	30
68	18	30
69	18	25
70	100	25
71	100	25
72	100	25
73	100	25
74	100	25
75	100	100

Members hired on or after July 1, 2018

Certificated:

Age	1st Year Eligible	Ultimate
60	40%	
61	22	20%
62	22	25
63	25	20
64	25	25
65	40	30
66	40	40
67	40	40
68	40	35
69	100	35
70	100	100

Classified:

Age	1st Year Eligible	Ultimate
60	30%	
61	13	10%
62	18	15
63	18	15
64	18	15
65	18	35
66	18	35
67	18	30
68	18	30
69	18	25
70	100	25
71	100	25
72	100	25
73	100	25
74	100	25
75	100	100

Deferred vested members are assumed to retire at first unreduced retirement age.

Salary Scale:

Salaries are assumed to increase according to the schedule illustrated below:

Duration	Annual Salary Increase Certificated	Classified
0	4.95%	6.25%
1	4.95	5.10
2	4.95	4.85
3	4.95	4.60
4	4.95	4.35
5	4.95	4.25
6	4.95	4.15
7	4.95	4.05
8-9	4.95	3.85
10	4.95	4.95
11	4.95	3.85
12-14	4.95	3.35
15	5.60	5.35
16-19	4.80	3.35
20	5.10	4.85
21-23	3.90	3.35
24	4.35	3.35
25	5.85	4.85
26-29	3.10	3.10
30	3.85	4.85
31-34	3.10	2.85
35	3.85	3.35
36-39	2.85	2.85
40	3.60	3.85
41+	2.85	2.85

Pre-Retirement Survivor Annuity:

It is assumed that females are three years younger than males, and that 85% of members are married.

Probability of Electing a Refund:

The proportion of terminating vested members electing a refund of member contributions:

20% for Certificated members with less than 15 years of service
10% for Certificated members with 15 or more years of service
35% for Classified members with less than 11 years of service
25% for Classified members with 11 or more years of service

Cost of Living Adjustments:

1.5% if became member before 7/1/2013
1.0% if became member on or after 7/1/2013

Inactive Vested Load:

A 5% load on deferred monthly benefits is included to reflect that some inactive vested members' account balances are greater than the present value of their deferred benefit.

APPENDIX A – CURRENT ASSUMPTIONS AND METHODS

Administrative Expense:	0.24% of payroll
Pop-up Benefit:	If a retired member has elected to receive a "pop-up" benefit, their benefit amount is assumed to increase by 10% in the event their beneficiary predeceases them.
Decrement Timing:	Middle of year
Valuation Salary Methodology:	Salaries for first year members are annualized by NPERS and reflected in the Calculated Salary field in the census data. This is used in the valuation process for new active members. For continuing active members, the Accumulated Salary field from the census data, presenting the actual salary earned in the prior fiscal year, is used in the valuation process. Salaries are assumed to increase by 2.0% for members who have not yet finalized their contract negotiations as of the valuation date.

APPENDIX B – PROPOSED ASSUMPTIONS AND METHODS

Investment Return Assumption:	7.00% per annum, compounded annually, net of investment expenses.
Inflation (CPI):	2.35% compounded annually.
Interest Rate Credited on Employee Contributions:	2.35% compounded annually.
Total Payroll Growth:	2.85% compounded annually.
Mortality Rates:	Active members use the Pub-2016 General Members (Median) Employee Mortality Table projected generationally using MP-2019 modified to 75% of the ultimate rates. Retirees use the Pub-2016 General Members (Median) Retiree Mortality Table projected generationally using MP-2019 modified to 75% of the ultimate rates. Beneficiaries use the Pub-2016 General Members (Median) Contingent Survivor Mortality Table projected generationally using MP-2019 modified to 75% of the ultimate rates. Disabled retirees use the Pub-2016 Non-Safety Disabled Retiree Mortality Table, without generational improvement.
Disability:	None assumed.
Termination of Employment: (prior to retirement eligibility)	Illustrative rates of termination are as follows:

Certificated:

Duration	Percent Terminating Rate
1	10.00%
5	8.00
10	5.25
15	2.75
20	1.60
25	1.00
30	0.75

Classified:

	Percent Terminating	
Duration	Male	Female
1	10.00%	15.00%
5	6.00	8.00
10	3.10	4.75
15	1.60	2.00
20	1.00	1.00
25	0.50	0.50
30	0.50	0.50

Retirement Rates: Early retirement rates are assumed to occur according to the schedule illustrated below:

Became members before July 1, 2016

Certificated:		**Classified:**	
Age	Early	Age	Early
55	7%	55	3%
56	7	56	3
57	7	57	3
58	7	58	3
59	7	59	5
60	10	60	5
61	10	61	7

Became members on or after July 1, 2016

Certificated:		**Classified:**	
Age	Early	Age	Early
60	10%	60	5%
61	10	61	7
62	10	62	7
63	10	63	7
64	10	64	7

Unreduced retirement rates are assumed to occur according to the schedule illustrated below:

Became members before July 1, 2018

Certificated:

Age	1st Year Eligible	Ultimate
55	40%	
56	35	40%
57	35	20
58	40	20
59	40	20
60	30	20
61	20	20
62	30	25
63	40	20
64	25	25
65	25	30
66	40	40
67	40	40
68	40	35
69	100	35
70	100	100

Classified:

Age	1st Year Eligible	Ultimate
55	35%	
56	10	10%
57	10	10
58	10	10
59	10	10
60	10	10
61	10	10
62	18	15
63	18	15
64	18	15
65	21	35
66	21	35
67	21	30
68	21	30
69	21	25
70	100	25
71	100	25
72	100	25
73	100	25
74	100	25
75	100	100

Members hired on or after July 1, 2018

Certificated:

Age	1st Year Eligible	Ultimate
60	40%	
61	20	20%
62	30	25
63	40	20
64	25	25
65	25	30
66	40	40
67	40	40
68	40	35
69	100	35
70	100	100

Classified:

Age	1st Year Eligible	Ultimate
60	30%	
61	10	10%
62	18	15
63	18	15
64	18	15
65	21	35
66	21	35
67	21	30
68	21	30
69	21	25
70	100	25
71	100	25
72	100	25
73	100	25
74	100	25
75	100	100

Deferred vested members are assumed to retire at first unreduced retirement age.

Salary Scale:

Salaries are assumed to increase according to the schedule illustrated below:

Duration	Annual Salary Increase Certificated	Classified
0	5.05%	6.35%
1	5.05	5.20
2	5.05	4.95
3	5.05	4.70
4	5.05	4.45
5	5.05	4.35
6	5.05	4.25
7	5.05	4.15
8-9	5.05	3.95
10	5.05	5.05
11	5.05	3.95
12-14	5.05	3.45
15	5.70	5.45
16-19	4.90	3.45
20	5.20	4.95
21-23	4.00	3.45
24	4.45	3.45
25	5.95	4.95
26-29	3.20	3.20
30	3.95	4.95
31-34	3.20	2.95
35	3.95	3.45
36-39	2.95	2.95
40	3.70	3.95
41+	2.95	2.95

Pre-Retirement Survivor Annuity:

It is assumed that females are three years younger than males, and that 85% of members are married.

Probability of Electing a Refund:

The proportion of terminating vested members electing a refund of member contributions:

20% for Certificated members with less than 15 years of service
10% for Certificated members with 15 or more years of service
35% for Classified members with less than 11 years of service
25% for Classified members with 11 or more years of service

Cost of Living Adjustments:

1.5% if became member before 7/1/2013
1.0% if became member on or after 7/1/2013

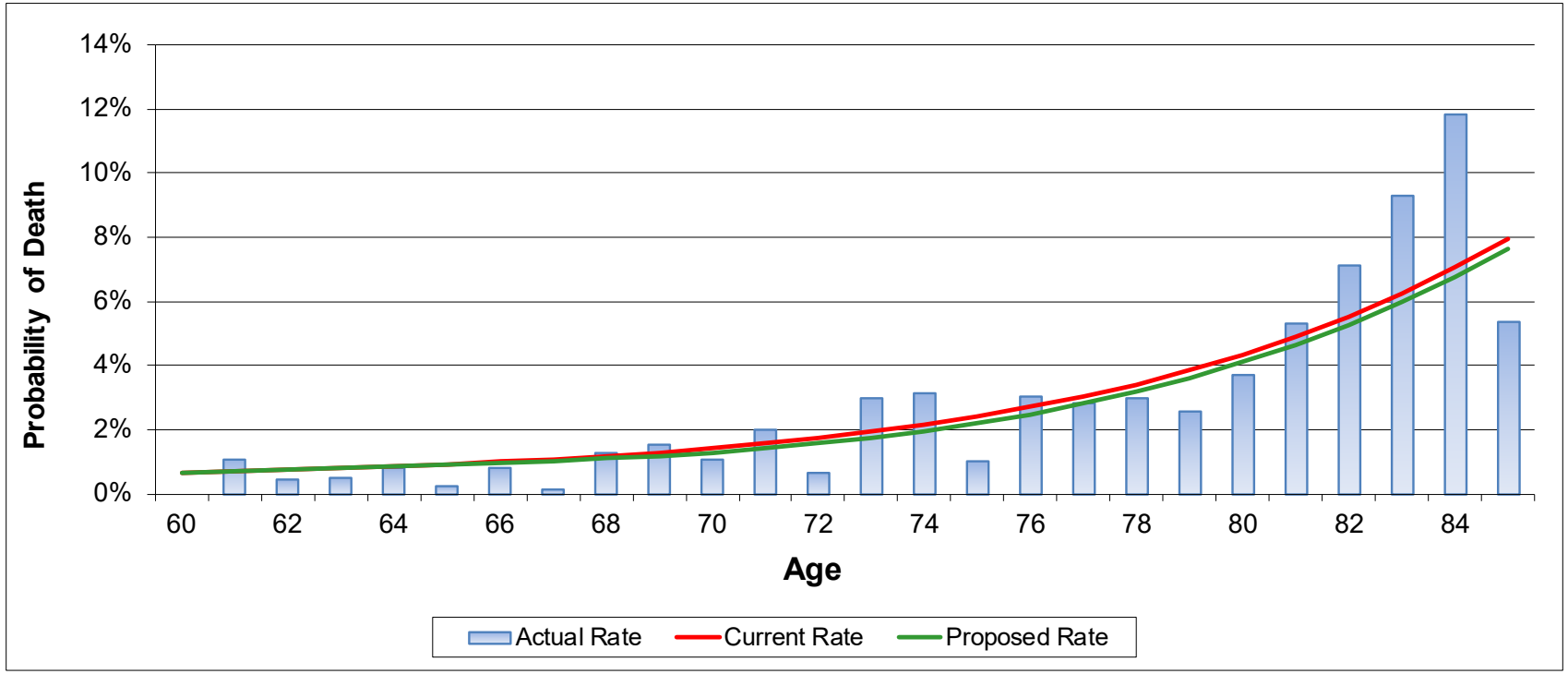
Inactive Vested Load:

A 5% load on deferred monthly benefits is included to reflect that some inactive vested members' account balances are greater than the present value of their deferred benefit.

APPENDIX B – PROPOSED ASSUMPTIONS AND METHODS

Administrative Expense:	0.24% of payroll
Pop-up Benefit:	If a retired member has elected to receive a "pop-up" benefit, their benefit amount is assumed to increase by 10% in the event their beneficiary predeceases them.
Decrement Timing:	Middle of year
Valuation Salary Methodology:	Salaries for first year members are annualized by NPERS and reflected in the Calculated Salary field in the census data. This is used in the valuation process for new active members. For continuing active members, the Accumulated Salary field from the census data, presenting the actual salary earned in the prior fiscal year, is used in the valuation process. Salaries are assumed to increase by 2.0% for members who have not yet finalized their contract negotiations as of the valuation date.

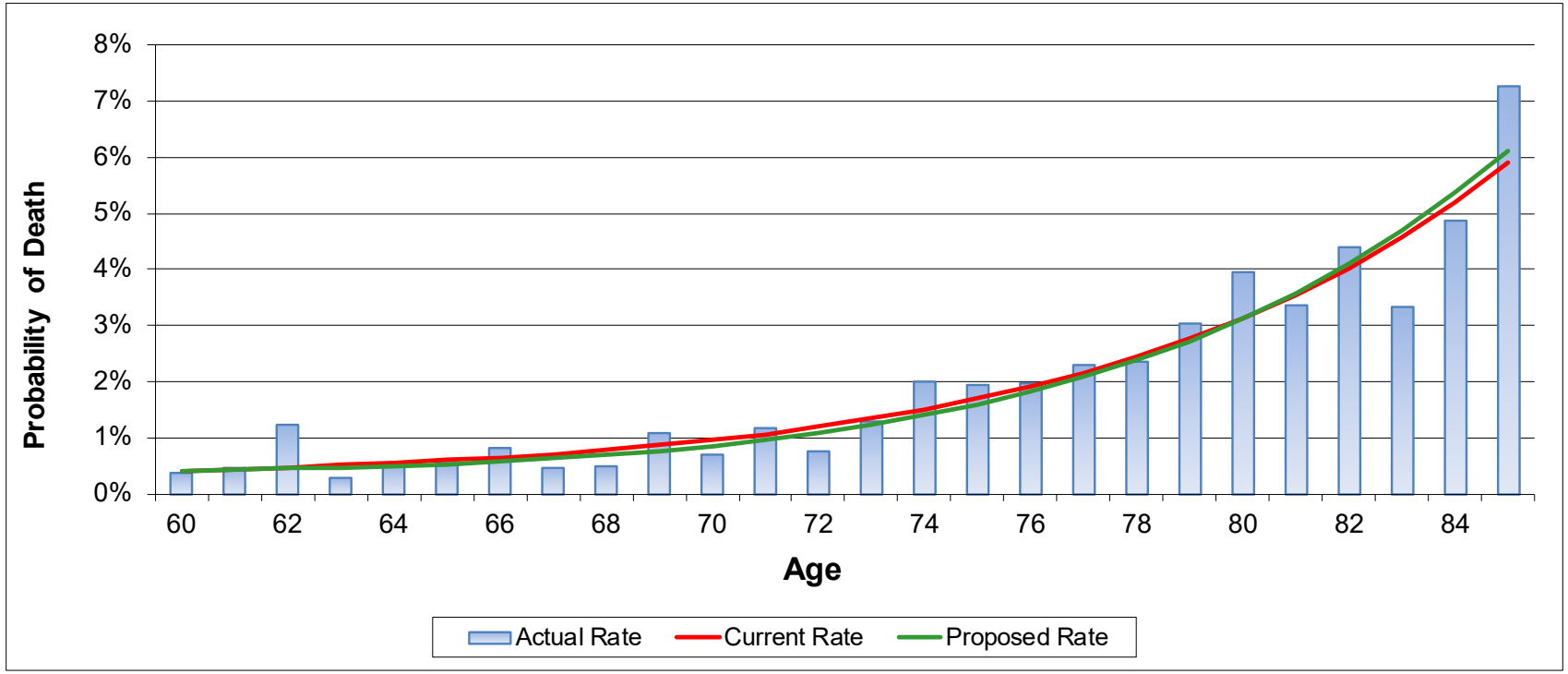
Omaha School Employees' Retirement System
Experience Study 2021-2024
Exhibit C-1
Probability of Death - Healthy Retirees
OSERS Males



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	552,680	551,535	515,645
Actual/Expected		100%	107%

Note: Analysis combines data from previous experience study

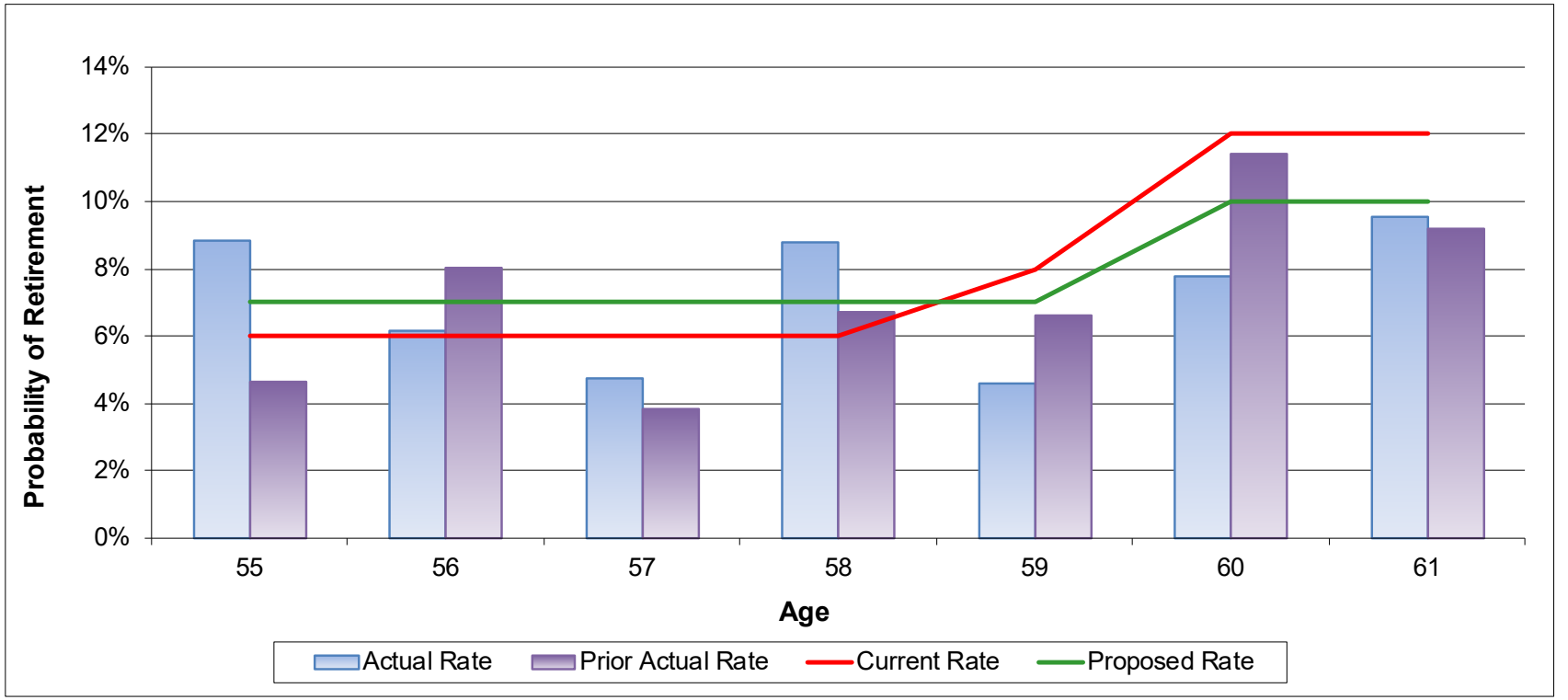
Omaha School Employees' Retirement System
Experience Study 2021-2024
Exhibit C-2
Probability of Death - Healthy Retirees
OSERS Females



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	786,895	773,638	742,055
Actual/Expected		102%	106%

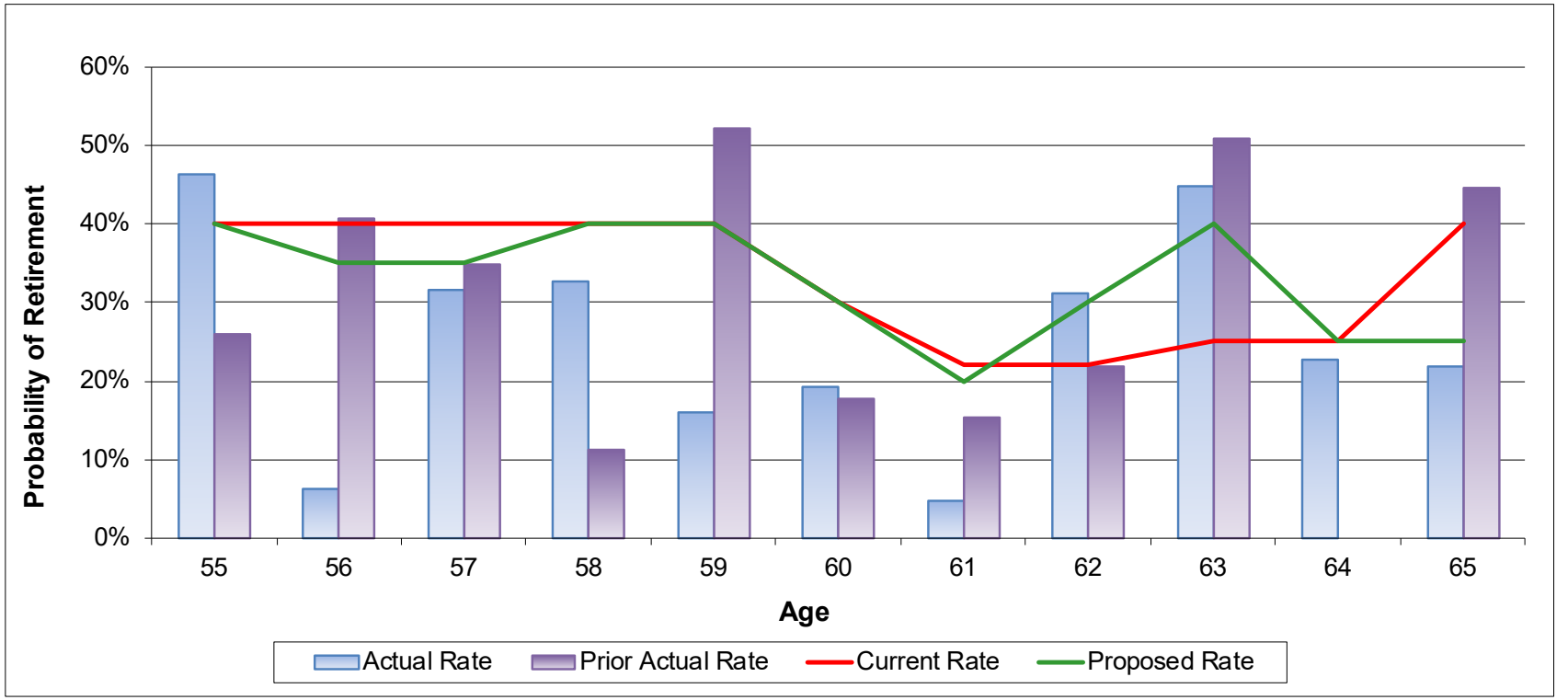
Note: Analysis combines data from previous experience study

Omaha School Employees' Retirement System
Experience Study 2021-2024
Exhibit C-3
Retirement Rates
Certificated - Early



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	98	97	102
Actual/Expected		101%	96%

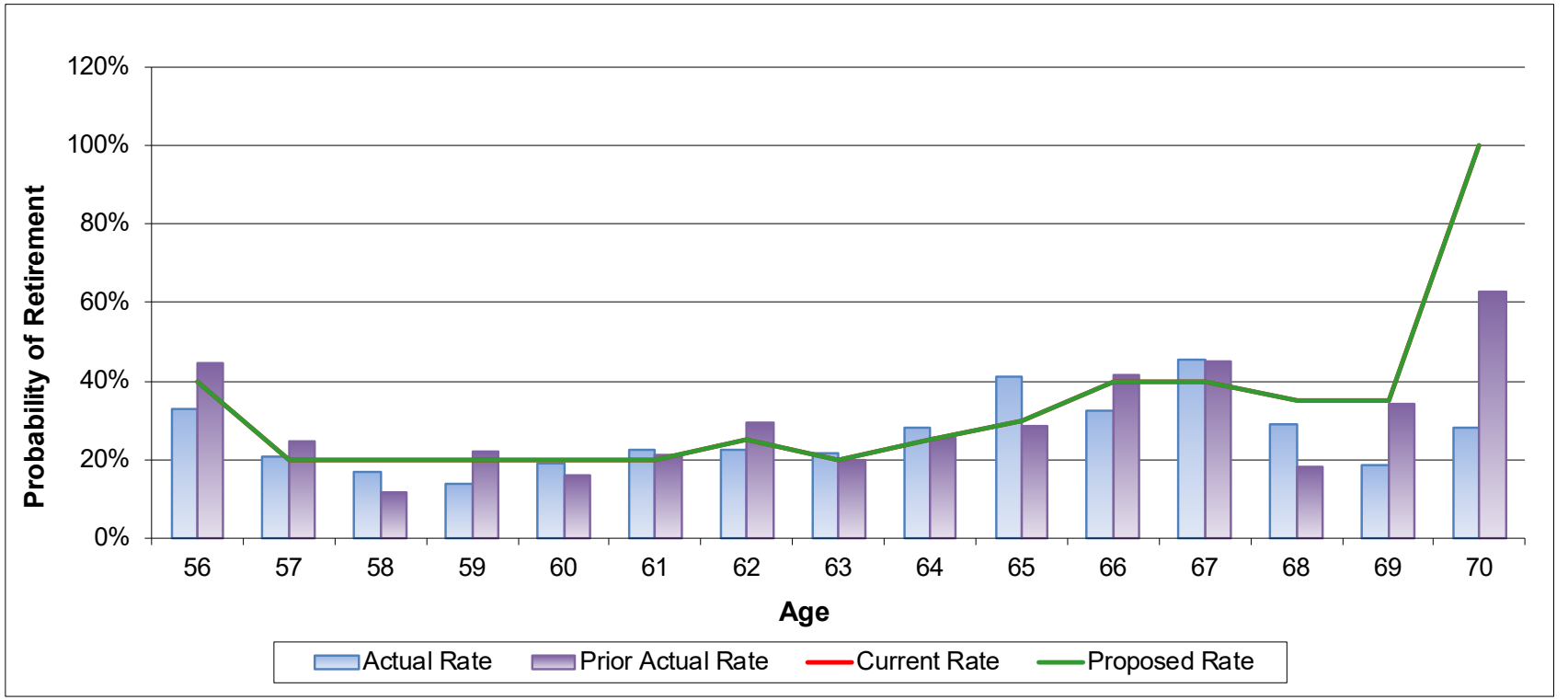
Omaha School Employees' Retirement System
Experience Study 2021-2024
Exhibit C-4
Retirement Rates
Certificated - Select



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	139	167	165
Actual/Expected		83%	84%

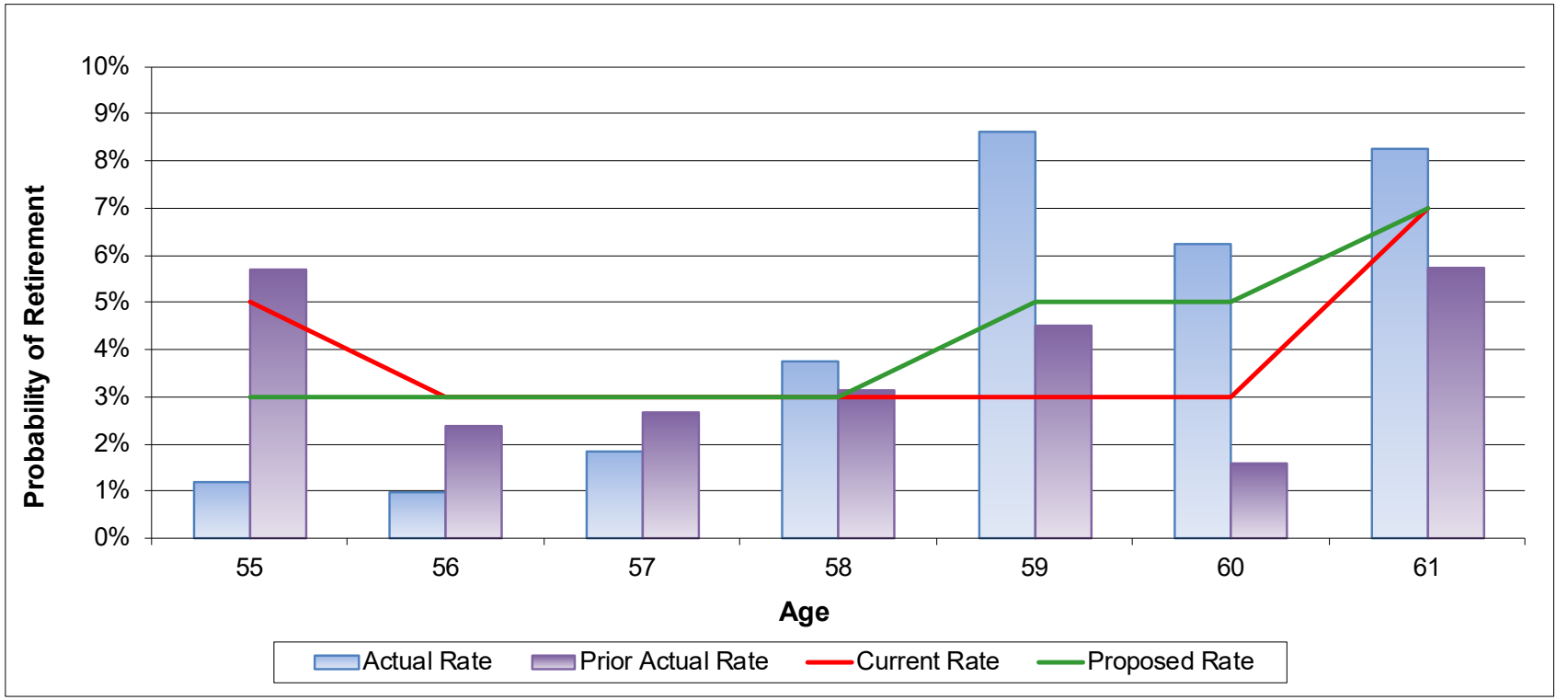
Omaha School Employees' Retirement System

Experience Study 2021-2024
Exhibit C-5
Retirement Rates
Certificated - Ultimate



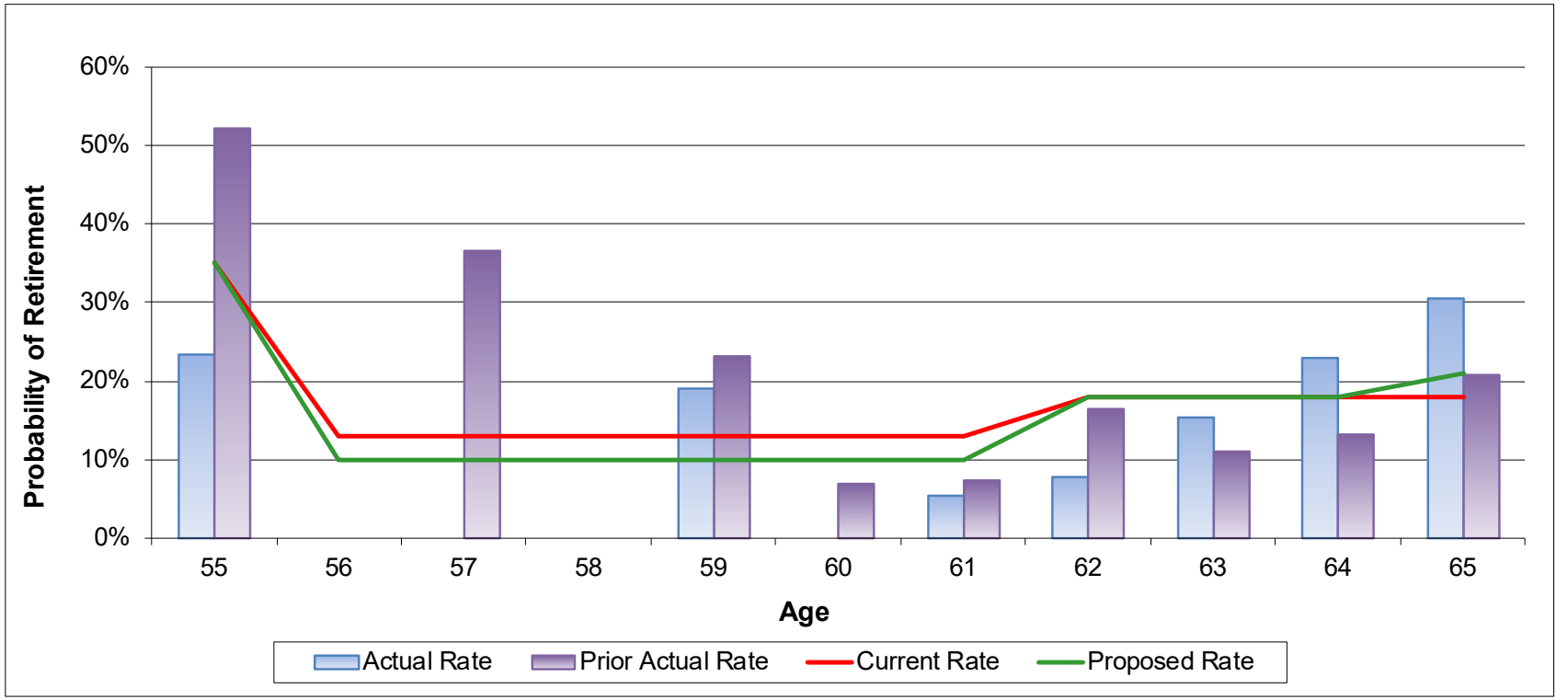
	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	400	438	438
Actual/Expected		91%	91%

Omaha School Employees' Retirement System
Experience Study 2021-2024
Exhibit C-6
Retirement Rates
Classified - Early



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	28	26	28
Actual/Expected		106%	100%

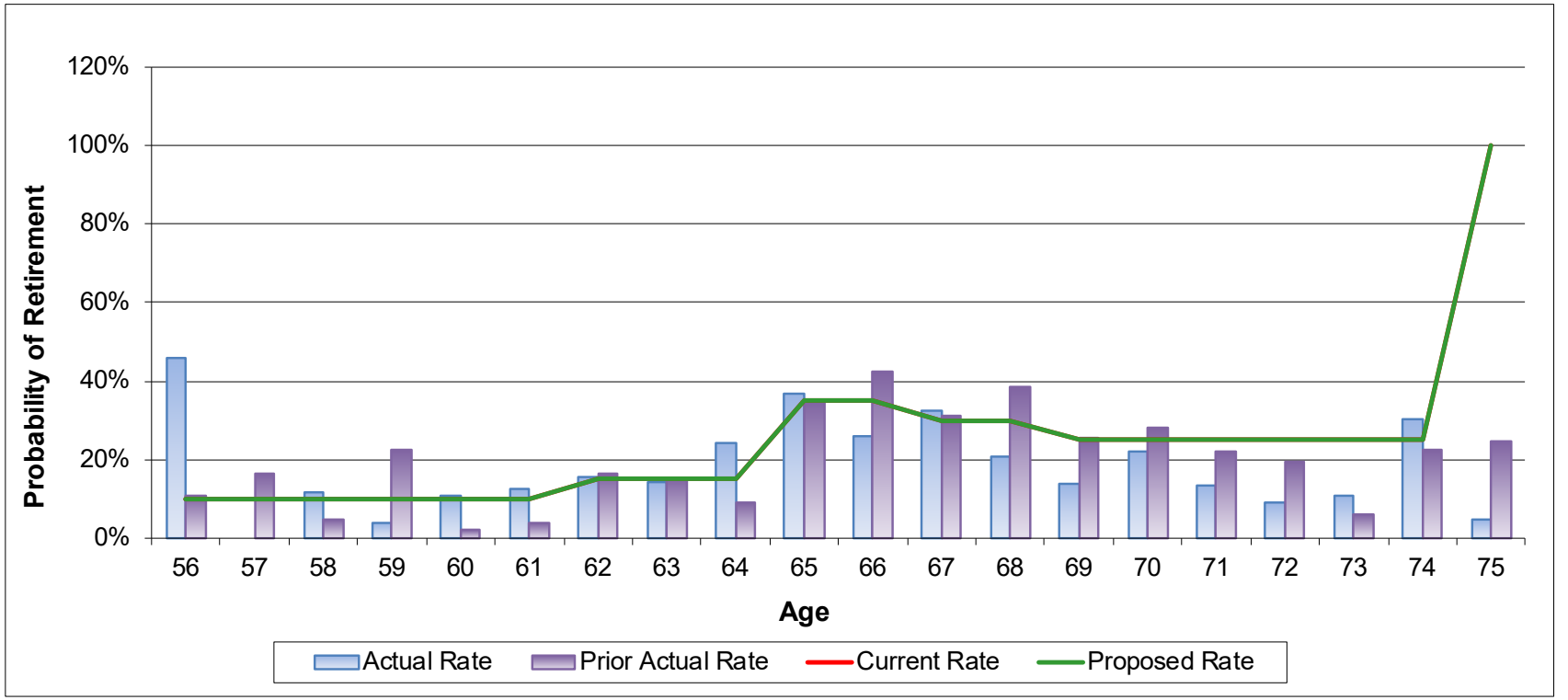
Omaha School Employees' Retirement System
Experience Study 2021-2024
Exhibit C-7
Retirement Rates
Classified - Select



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	17	31	28
Actual/Expected		54%	61%

Omaha School Employees' Retirement System

Experience Study 2021-2024
Exhibit C-8
Retirement Rates
Classified - Ultimate



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	224	237	237
Actual/Expected		94%	94%

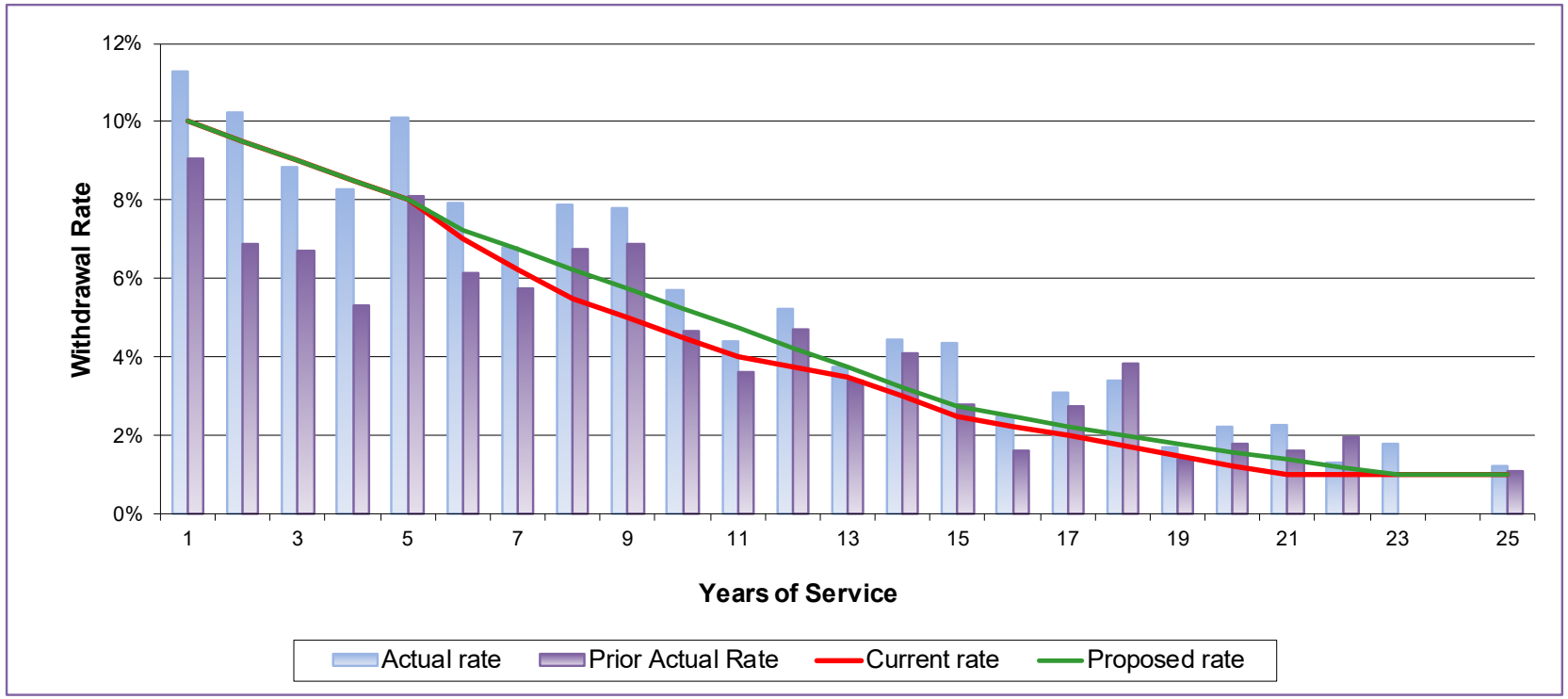
Omaha School Employees' Retirement System

Experience Study 2021-2024

Exhibit C-9

Rate of Termination of Employment

Certificated



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	561	435	476
Actual/Expected		129%	118%

Note: Analysis combines data from previous experience study

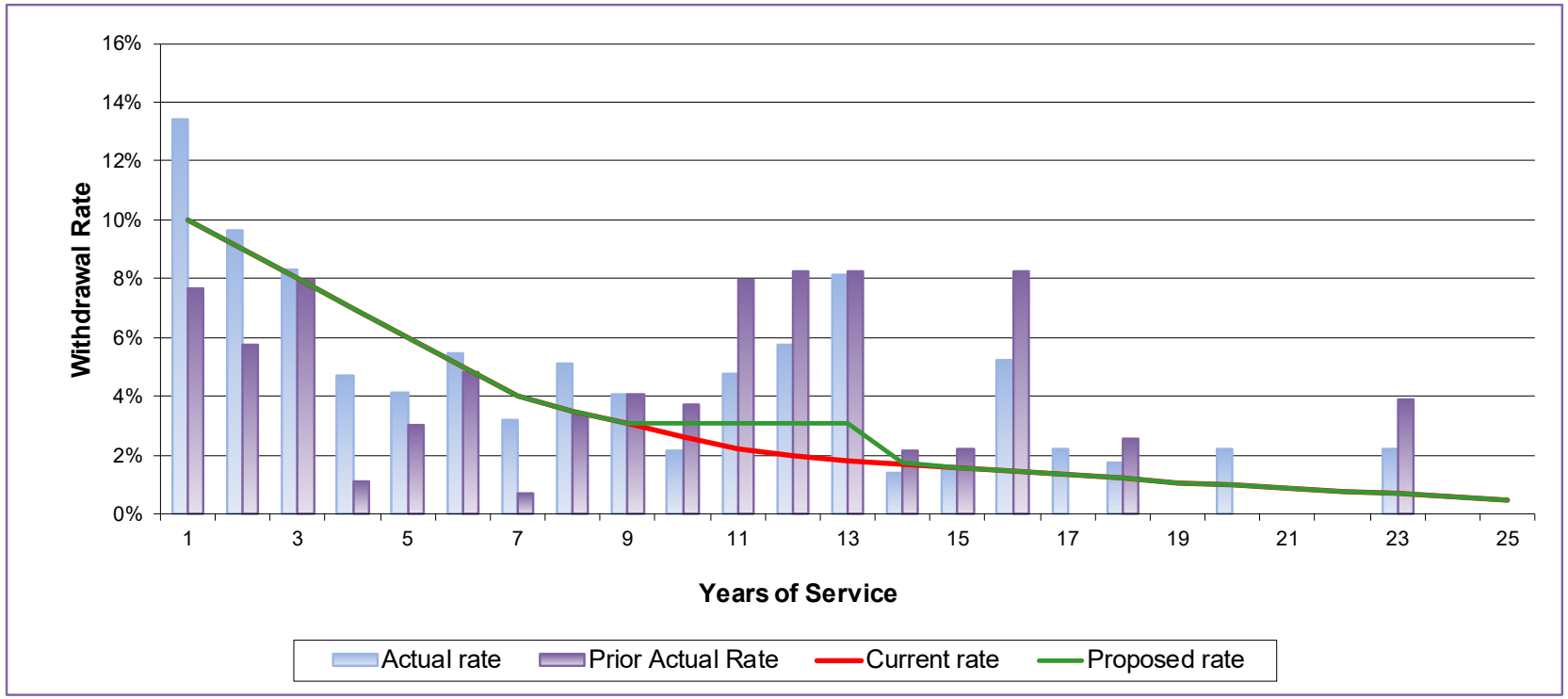
Omaha School Employees' Retirement System

Experience Study 2021-2024

Exhibit C-10

Rate of Termination of Employment

Classified - Males



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	35	29	30
Actual/Expected		119%	115%

Note: Analysis combines data from previous experience study

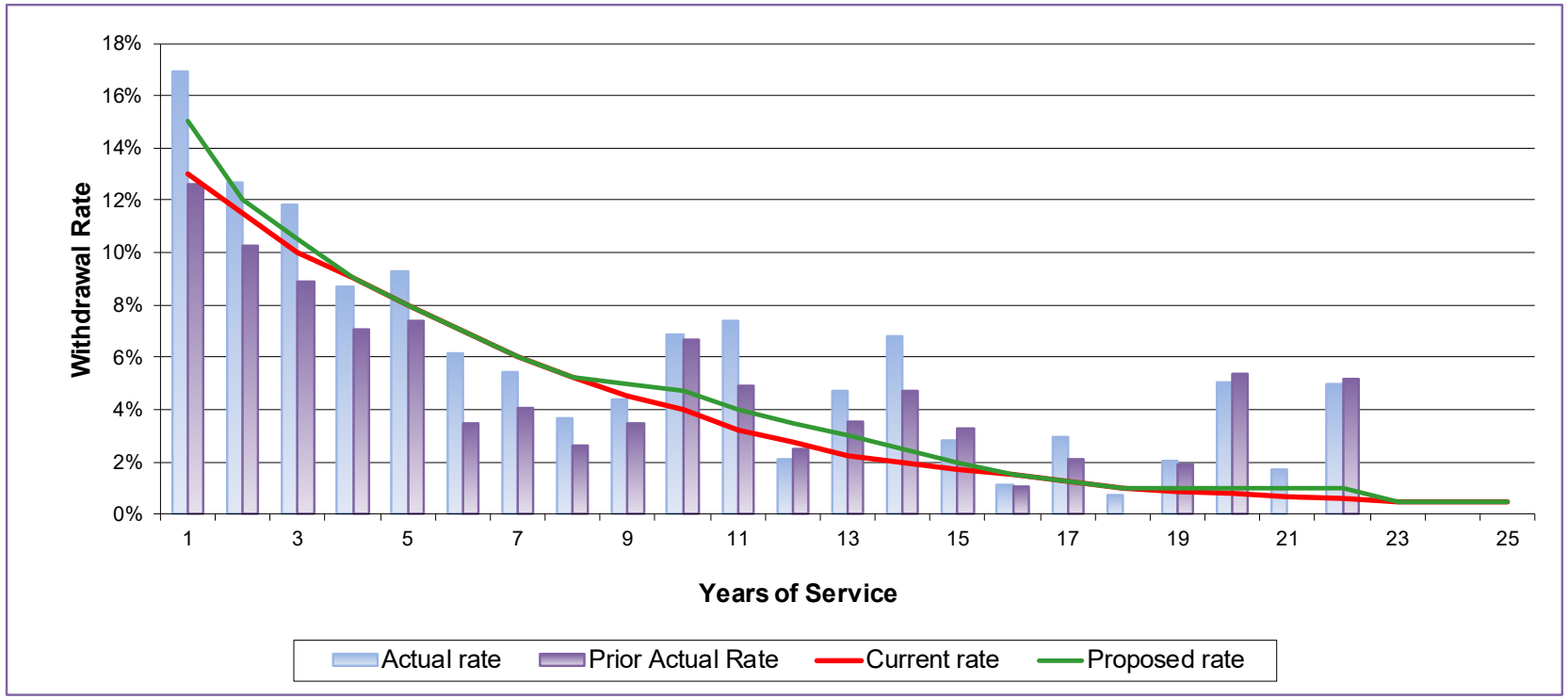
Omaha School Employees' Retirement System

Experience Study 2021-2024

Exhibit C-11

Rate of Termination of Employment

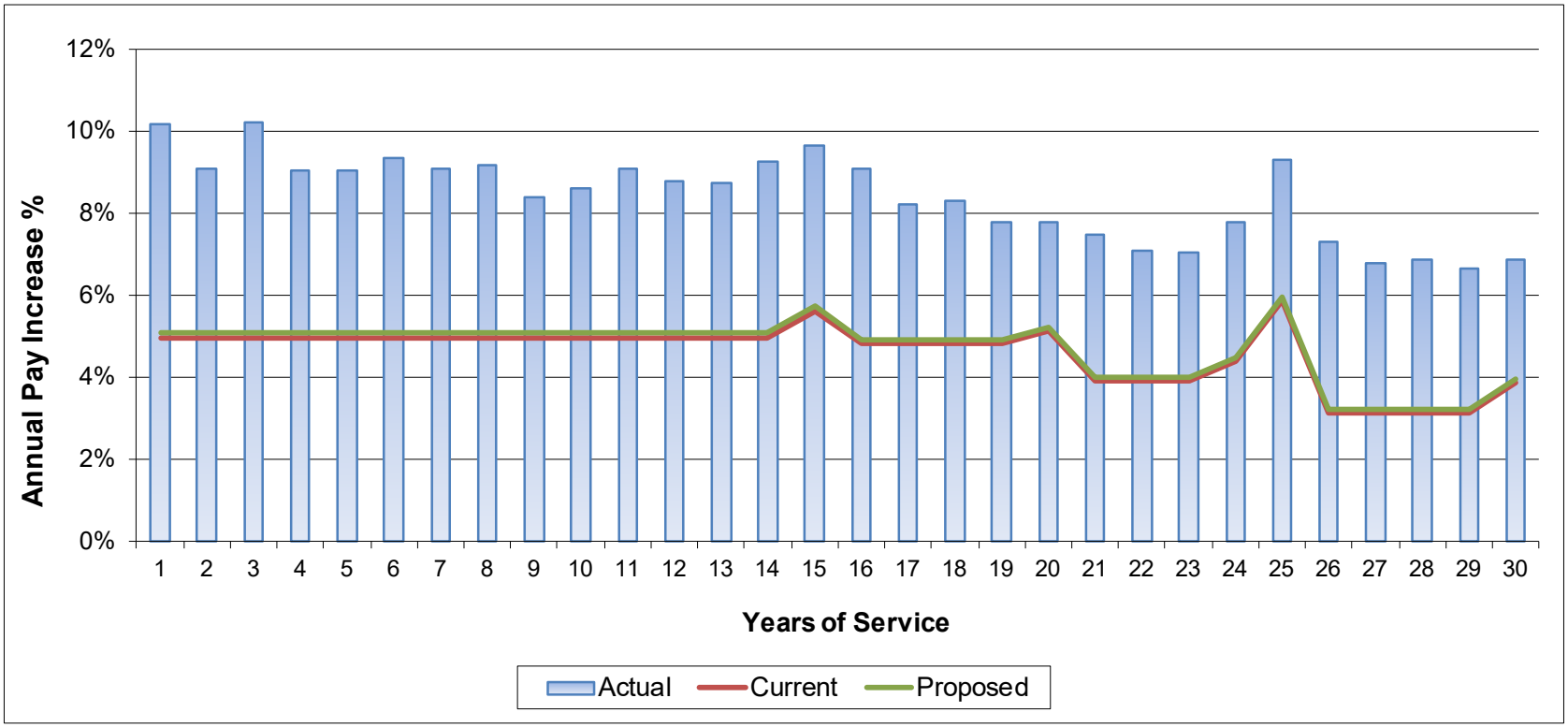
Classified - Females



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Weighted Count	63	50	54
Actual/Expected		125%	117%

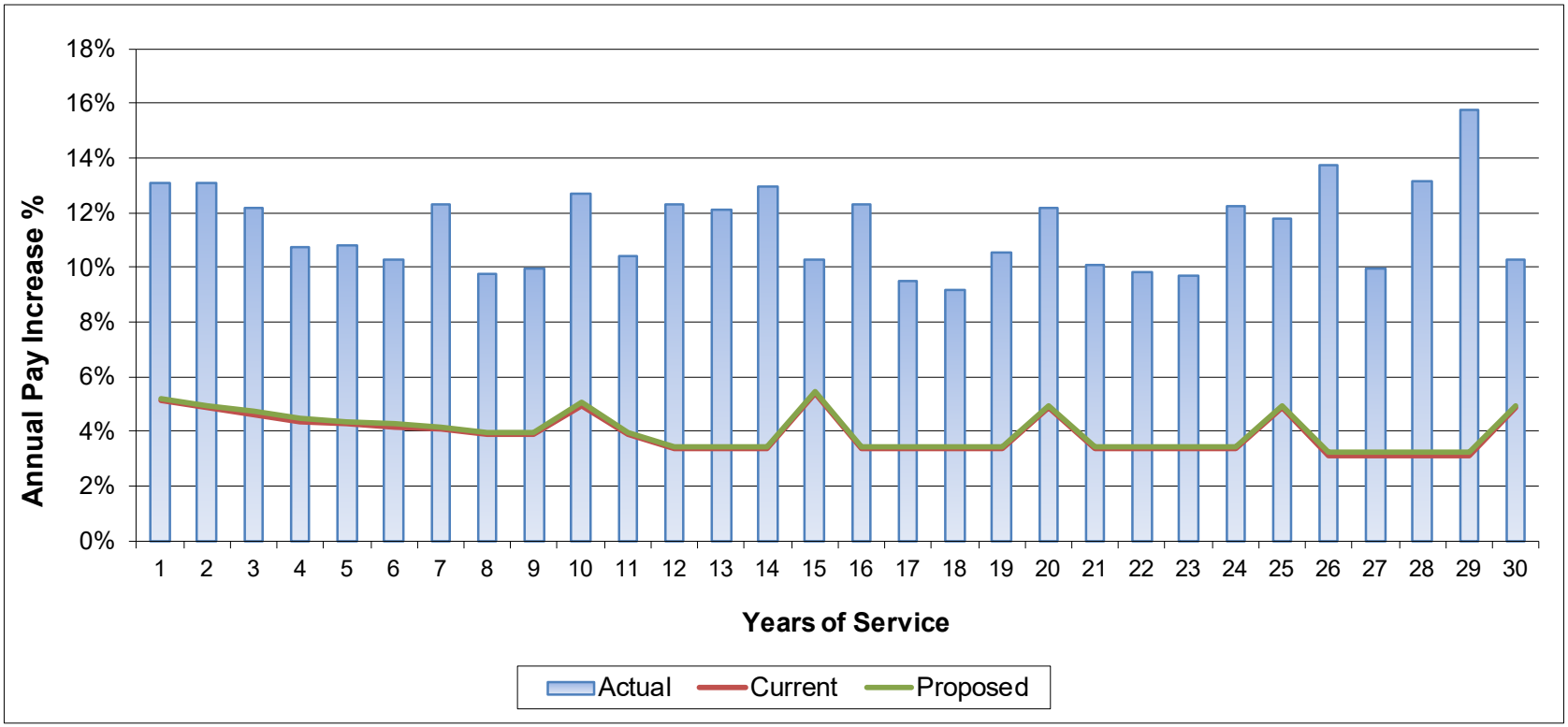
Note: Analysis combines data from previous experience study

Omaha School Employees' Retirement System
Experience Study 2021-2024
Exhibit C-12
Total Salary Scale
Certificated



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Average Increase	8.63%	4.73%	4.83%
Actual/Expected		182%	178%

Omaha School Employees' Retirement System
Experience Study 2021-2024
Exhibit C-12
Total Salary Scale
Classified



	Actual	Expected - Current Assumptions	Expected - Proposed Assumptions
Average Increase	11.48%	4.16%	4.26%
Actual/Expected		276%	269%

Data Summary D-1
Probability of Death - Healthy Retirees
Males

Age	Exposure	Actual Deaths	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
60	303,870	-	0.000%	1,939	0.638%	1,971	0.649%
61	376,511	3,918	1.041%	2,594	0.689%	2,630	0.698%
62	431,113	1,857	0.431%	3,202	0.743%	3,224	0.748%
63	563,839	2,880	0.511%	4,498	0.798%	4,487	0.796%
64	644,020	5,347	0.830%	5,521	0.857%	5,442	0.845%
65	726,200	1,668	0.230%	6,704	0.923%	6,506	0.896%
66	933,492	7,595	0.814%	9,317	0.998%	8,899	0.953%
67	1,039,388	1,193	0.115%	11,268	1.084%	10,576	1.018%
68	1,201,629	15,011	1.249%	14,208	1.182%	13,144	1.094%
69	1,280,423	19,572	1.529%	16,593	1.296%	15,150	1.183%
70	1,335,246	14,495	1.086%	19,044	1.426%	17,222	1.290%
71	1,305,843	26,205	2.007%	20,542	1.573%	18,503	1.417%
72	1,306,136	8,529	0.653%	22,771	1.743%	20,499	1.569%
73	1,328,607	39,418	2.967%	25,721	1.936%	23,220	1.748%
74	1,318,145	41,354	3.137%	28,452	2.158%	25,826	1.959%
75	1,242,169	12,854	1.035%	29,964	2.412%	27,384	2.205%
76	1,152,134	34,858	3.025%	31,135	2.702%	28,672	2.489%
77	1,054,040	29,805	2.828%	31,982	3.034%	29,679	2.816%
78	944,621	28,279	2.994%	32,241	3.413%	30,149	3.192%
79	919,042	23,660	2.574%	35,335	3.845%	33,262	3.619%
80	824,645	30,490	3.697%	35,768	4.337%	33,835	4.103%
81	711,564	37,699	5.298%	34,847	4.897%	33,083	4.649%
82	601,905	42,953	7.136%	33,316	5.535%	31,703	5.267%
83	545,711	50,668	9.285%	34,097	6.248%	32,525	5.960%
84	445,670	52,695	11.824%	31,412	7.048%	30,074	6.748%
85	366,232	19,677	5.373%	29,065	7.936%	27,982	7.640%
	22,902,196	552,680	2.413%	551,535	2.408%	515,645	2.252%

Data Summary D-2
Probability of Death - Healthy Retirees
Females

Age	Exposure	Actual Deaths	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
60	1,128,798	4,159	0.368%	4,627	0.506%	4,920	0.405%
61	1,323,825	6,271	0.474%	5,807	0.548%	6,297	0.433%
62	1,449,312	18,043	1.245%	6,820	0.594%	7,773	0.464%
63	1,750,783	5,069	0.290%	8,893	0.644%	9,750	0.501%
64	1,937,006	9,828	0.507%	10,623	0.699%	11,758	0.542%
65	2,197,498	11,844	0.539%	13,083	0.760%	13,623	0.591%
66	2,592,588	21,078	0.813%	16,814	0.826%	17,054	0.647%
67	2,837,709	12,667	0.446%	20,125	0.901%	19,180	0.711%
68	2,966,975	14,613	0.493%	23,145	0.984%	20,962	0.786%
69	3,049,298	33,057	1.084%	26,301	1.077%	22,713	0.874%
70	3,236,345	22,432	0.693%	30,975	1.181%	23,935	0.975%
71	3,056,713	36,065	1.180%	32,628	1.299%	23,782	1.092%
72	3,002,822	22,756	0.758%	35,870	1.430%	24,715	1.226%
73	2,870,615	36,744	1.280%	38,480	1.577%	24,467	1.379%
74	2,623,881	52,095	1.985%	39,557	1.742%	22,628	1.553%
75	2,338,777	45,214	1.933%	39,718	1.927%	24,370	1.751%
76	2,125,344	41,791	1.966%	40,697	2.133%	25,901	1.973%
77	1,855,048	42,448	2.288%	40,096	2.364%	26,571	2.226%
78	1,563,566	36,673	2.345%	38,188	2.626%	27,263	2.512%
79	1,458,373	44,052	3.021%	40,285	2.921%	28,023	2.836%
80	1,316,207	52,162	3.963%	41,176	3.256%	27,830	3.207%
81	1,195,250	40,325	3.374%	42,390	3.637%	30,969	3.629%
82	1,052,996	46,225	4.390%	42,371	4.070%	31,223	4.111%
83	949,516	31,517	3.319%	43,371	4.561%	30,659	4.660%
84	860,010	41,962	4.879%	44,618	5.120%	31,399	5.286%
85	796,779	57,804	7.255%	46,980	5.755%	30,941	5.999%
	51,536,036	786,895	1.527%	773,638	1.519%	568,707	1.372%

Data Summary D-3
Retirement Rates
Certificated - Early
(Liability Weighted)

Age	Exposure	Actual Retirements	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
55	386	34	8.837%	23.2	6.000%	27.0	7.000%
56	279	17	6.183%	16.7	6.000%	19.5	7.000%
57	222	11	4.724%	13.3	6.000%	15.6	7.000%
58	155	14	8.779%	9.3	6.000%	10.9	7.000%
59	142	7	4.605%	11.4	8.000%	9.9	7.000%
60	132	10	7.759%	15.8	12.000%	13.2	10.000%
61	60	6	9.567%	7.2	12.000%	6.0	10.000%
	1,377	98	7.120%	97.0	7.043%	102.1	7.418%

Data Summary D-4
Retirement Rates
Certificated - Select
(Liability Weighted)

Age	Exposure	Actual Retirements	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
55	154	71	46.359%	61.7	40.000%	61.7	40.000%
56	42	3	6.272%	16.6	40.000%	14.6	35.000%
57	50	16	31.556%	20.2	40.000%	17.7	35.000%
58	40	13	32.583%	16.1	40.000%	16.1	40.000%
59	22	3	15.959%	8.8	40.000%	8.8	40.000%
60	29	6	19.316%	8.7	30.000%	8.7	30.000%
61	78	4	4.805%	17.1	22.000%	15.5	20.000%
62	63	20	31.236%	13.8	22.000%	18.8	30.000%
63	2	1	44.854%	0.6	25.000%	1.0	40.000%
64	5	1	22.747%	1.1	25.000%	1.1	25.000%
65	6	1	21.875%	2.3	40.000%	1.5	25.000%
	490	139	28.321%	166.9	34.049%	165.3	33.709%

Data Summary D-5
Retirement Rates
Certificated - Ultimate
(Liability Weighted)

Age	Exposure	Actual Retirements	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
56	122	40	33.024%	48.6	40.000%	48.6	40.000%
57	117	24	20.801%	23.4	20.000%	23.4	20.000%
58	156	26	16.906%	31.3	20.000%	31.3	20.000%
59	148	21	13.897%	29.6	20.000%	29.6	20.000%
60	131	25	18.892%	26.2	20.000%	26.2	20.000%
61	122	27	22.416%	24.3	20.000%	24.3	20.000%
62	194	44	22.531%	48.4	25.000%	48.4	25.000%
63	178	38	21.538%	35.7	20.000%	35.7	20.000%
64	134	37	27.959%	33.4	25.000%	33.4	25.000%
65	104	43	41.291%	31.1	30.000%	31.1	30.000%
66	76	25	32.352%	30.4	40.000%	30.4	40.000%
67	50	23	45.570%	19.8	40.000%	19.8	40.000%
68	43	13	29.163%	15.2	35.000%	15.2	35.000%
69	35	7	18.753%	12.3	35.000%	12.3	35.000%
70	28	8	28.200%	28.0	100.000%	28.0	100.000%
	1,637	400	24.435%	437.8	26.740%	437.8	26.740%

Data Summary D-6
Retirement Rates
Classified - Early
(Liability Weighted)

Age	Exposure	Actual Retirements	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
55	127	2	1.203%	6.3	5.000%	3.8	3.000%
56	131	1	0.978%	3.9	3.000%	3.9	3.000%
57	120	2	1.847%	3.6	3.000%	3.6	3.000%
58	115	4	3.737%	3.4	3.000%	3.4	3.000%
59	106	9	8.621%	3.2	3.000%	5.3	5.000%
60	96	6	6.248%	2.9	3.000%	4.8	5.000%
61	44	4	8.271%	3.1	7.000%	3.1	7.000%
	738	28	3.797%	26.4	3.581%	27.9	3.783%

DataSummaryD-7
Retirement Rates
Classified-Select
(Liability Weighted)

Age	Exposure	Actual Retirements	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
55	6	1	23.303%	2.0	35.000%	2.0	35.000%
56	6	-	0.000%	0.7	13.000%	0.6	10.000%
57	11	-	0.000%	1.5	13.000%	1.1	10.000%
58	11	-	0.000%	1.4	13.000%	1.1	10.000%
59	14	3	18.967%	1.8	13.000%	1.4	10.000%
60	14	-	0.000%	1.9	13.000%	1.4	10.000%
61	69	4	5.430%	9.0	13.000%	6.9	10.000%
62	50	4	7.708%	9.1	18.000%	9.1	18.000%
63	5	1	15.334%	0.9	18.000%	0.9	18.000%
64	7	2	23.043%	1.3	18.000%	1.3	18.000%
65	9	3	30.527%	1.6	18.000%	1.9	21.000%
	202	17	8.297%	31.1	15.383%	27.6	13.661%

Data Summary D-8
Retirement Rates
Classified - Ultimate
(Liability Weighted)

Age	Exposure	Actual Retirements	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
56	9	4	45.941%	0.9	10.000%	0.9	10.000%
57	21	-	0.000%	2.1	10.000%	2.1	10.000%
58	39	5	11.863%	3.9	10.000%	3.9	10.000%
59	46	2	4.099%	4.6	10.000%	4.6	10.000%
60	57	6	10.937%	5.7	10.000%	5.7	10.000%
61	81	10	12.542%	8.1	10.000%	8.1	10.000%
62	146	23	15.798%	21.8	15.000%	21.8	15.000%
63	167	24	14.292%	25.0	15.000%	25.0	15.000%
64	159	39	24.434%	23.9	15.000%	23.9	15.000%
65	115	42	36.713%	40.4	35.000%	40.4	35.000%
66	74	19	25.886%	26.1	35.000%	26.1	35.000%
67	60	19	32.390%	18.0	30.000%	18.0	30.000%
68	36	8	20.900%	10.9	30.000%	10.9	30.000%
69	32	4	14.021%	8.0	25.000%	8.0	25.000%
70	31	7	22.178%	7.8	25.000%	7.8	25.000%
71	20	3	13.333%	5.0	25.000%	5.0	25.000%
72	24	2	8.913%	6.1	25.000%	6.1	25.000%
73	19	2	10.881%	4.6	25.000%	4.6	25.000%
74	12	4	30.317%	2.9	25.000%	2.9	25.000%
75	11	1	4.664%	11.3	100.000%	11.3	100.000%
	1,161	224	19.290%	237.2	20.434%	237.2	20.434%

Data Summary D-9
Rate of Termination of Employment
Certificated
(Liability Weighted)

Duration	Exposure	Actual Terminations	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
1	94	11	11.289%	9.4	10.000%	9.4	10.000%
2	193	20	10.253%	18.3	9.500%	18.3	9.500%
3	264	23	8.860%	23.7	9.000%	23.7	9.000%
4	324	27	8.294%	27.6	8.500%	27.6	8.500%
5	380	38	10.127%	30.4	8.000%	30.4	8.000%
6	382	30	7.941%	26.7	7.000%	27.7	7.250%
7	397	27	6.782%	24.8	6.250%	26.8	6.750%
8	418	33	7.875%	23.0	5.500%	26.1	6.250%
9	465	36	7.790%	23.2	5.000%	26.7	5.750%
10	474	27	5.715%	21.3	4.500%	24.9	5.250%
11	546	24	4.400%	21.9	4.000%	26.0	4.750%
12	624	33	5.219%	23.4	3.750%	26.5	4.250%
13	648	24	3.750%	22.7	3.500%	24.3	3.750%
14	697	31	4.470%	20.9	3.000%	22.6	3.250%
15	712	31	4.351%	17.8	2.500%	19.6	2.750%
16	716	18	2.481%	16.1	2.250%	17.9	2.500%
17	772	24	3.099%	15.4	2.000%	17.4	2.250%
18	819	28	3.405%	14.3	1.750%	16.4	2.000%
19	860	15	1.702%	12.9	1.500%	15.5	1.800%
20	782	17	2.228%	9.8	1.250%	12.5	1.600%
21	774	18	2.275%	7.7	1.000%	10.8	1.400%
22	688	9	1.335%	6.9	1.000%	8.3	1.200%
23	590	11	1.795%	5.9	1.000%	5.9	1.000%
24	534	0	0.000%	5.3	1.000%	5.3	1.000%
25	549	7	1.256%	5.5	1.000%	5.5	1.000%
	13,699	561	4.098%	434.9	3.175%	476.0	3.474%

Data Summary D-10
Rate of Termination of Employment
Classified - Males
(Liability Weighted)

Duration	Exposure	Actual Terminations	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
1	12	2	13.439%	1.2	10.000%	1.2	10.000%
2	37	4	9.630%	3.3	9.000%	3.3	9.000%
3	42	3	8.339%	3.3	8.000%	3.3	8.000%
4	45	2	4.698%	3.1	7.000%	3.1	7.000%
5	51	2	4.143%	3.0	6.000%	3.0	6.000%
6	51	3	5.455%	2.6	5.000%	2.6	5.000%
7	46	1	3.243%	1.8	4.000%	1.8	4.000%
8	48	2	5.140%	1.7	3.500%	1.7	3.500%
9	49	2	4.105%	1.5	3.100%	1.5	3.100%
10	27	1	2.190%	0.7	2.650%	0.8	3.100%
11	29	1	4.794%	0.6	2.250%	0.9	3.100%
12	37	2	5.752%	0.7	2.000%	1.1	3.100%
13	35	3	8.150%	0.6	1.800%	1.1	3.100%
14	39	1	1.435%	0.7	1.700%	0.7	1.750%
15	39	1	1.639%	0.6	1.600%	0.6	1.600%
16	40	2	5.233%	0.6	1.500%	0.6	1.500%
17	41	1	2.204%	0.6	1.350%	0.6	1.350%
18	28	0	1.754%	0.3	1.250%	0.3	1.250%
19	45	0	0.000%	0.5	1.100%	0.5	1.100%
20	38	1	2.245%	0.4	1.000%	0.4	1.000%
21	37	0	0.000%	0.3	0.900%	0.3	0.900%
22	32	0	0.000%	0.3	0.800%	0.3	0.800%
23	31	1	2.246%	0.2	0.700%	0.2	0.700%
24	29	0	0.000%	0.2	0.600%	0.2	0.600%
25	22	0	0.000%	0.1	0.500%	0.1	0.500%
	926	35	3.746%	29.0	3.136%	30.3	3.270%

Data Summary D-11
Rate of Termination of Employment
Classified - Females
(Liability Weighted)

Duration	Exposure	Actual Terminations	Actual Rate	Current Expected	Current Rate	Proposed Expected	Proposed Rate
1	22	4	16.917%	2.9	13.000%	3.4	15.000%
2	49	6	12.695%	5.7	11.500%	5.9	12.000%
3	55	6	11.846%	5.5	10.000%	5.7	10.500%
4	63	5	8.700%	5.6	9.000%	5.6	9.000%
5	59	5	9.267%	4.7	8.000%	4.7	8.000%
6	61	4	6.147%	4.2	7.000%	4.2	7.000%
7	58	3	5.464%	3.5	6.000%	3.5	6.000%
8	65	2	3.693%	3.4	5.250%	3.4	5.250%
9	66	3	4.381%	3.0	4.500%	3.3	5.000%
10	55	4	6.896%	2.2	4.000%	2.6	4.750%
11	51	4	7.379%	1.6	3.250%	2.0	4.000%
12	50	1	2.133%	1.4	2.750%	1.7	3.500%
13	51	2	4.722%	1.1	2.250%	1.5	3.000%
14	50	3	6.808%	1.0	2.000%	1.3	2.500%
15	48	1	2.859%	0.8	1.750%	1.0	2.000%
16	55	1	1.168%	0.8	1.500%	0.8	1.500%
17	54	2	2.967%	0.7	1.250%	0.7	1.250%
18	50	0	0.751%	0.5	1.000%	0.5	1.000%
19	47	1	2.026%	0.4	0.900%	0.5	1.000%
20	38	2	5.086%	0.3	0.800%	0.4	1.000%
21	36	1	1.707%	0.3	0.700%	0.4	1.000%
22	26	1	4.966%	0.2	0.600%	0.3	1.000%
23	21	0	0.000%	0.1	0.500%	0.1	0.500%
24	20	0	0.000%	0.1	0.500%	0.1	0.500%
25	9	0	0.000%	0.0	0.500%	0.0	0.500%
	1,159	63	5.425%	50.2	4.329%	53.7	4.635%

Data Summary D-12
Total Salary Scale
Certificated

Duration	Initial Salary (Millions)	Subsequent Salary (Millions)	Actual Rate	Current Expected (Millions)	Current Rate	Proposed Expected (Millions)	Proposed Rate
1	50.5	55.6	10.15%	53.0	4.95%	53.0	5.05%
2	46.0	50.1	9.07%	48.3	4.95%	48.3	5.05%
3	43.8	48.3	10.18%	46.0	4.95%	46.0	5.05%
4	39.8	43.4	9.04%	41.8	4.95%	41.8	5.05%
5	40.1	43.7	9.01%	42.1	4.95%	42.2	5.05%
6	39.6	43.3	9.34%	41.5	4.95%	41.6	5.05%
7	37.8	41.3	9.06%	39.7	4.95%	39.8	5.05%
8	36.8	40.2	9.14%	38.7	4.95%	38.7	5.05%
9	31.1	33.7	8.36%	32.6	4.95%	32.6	5.05%
10	26.4	28.6	8.59%	27.7	4.95%	27.7	5.05%
11	25.2	27.5	9.09%	26.5	4.95%	26.5	5.05%
12	27.3	29.7	8.76%	28.7	4.95%	28.7	5.05%
13	30.0	32.6	8.71%	31.5	4.95%	31.5	5.05%
14	34.8	38.1	9.22%	36.6	4.95%	36.6	5.05%
15	39.1	42.9	9.64%	41.3	5.60%	41.4	5.70%
16	40.4	44.1	9.05%	42.4	4.80%	42.4	4.90%
17	38.2	41.3	8.17%	40.1	4.80%	40.1	4.90%
18	34.5	37.4	8.27%	36.2	4.80%	36.2	4.90%
19	33.9	36.5	7.77%	35.5	4.80%	35.5	4.90%
20	33.1	35.7	7.75%	34.8	5.10%	34.8	5.20%
21	34.7	37.3	7.45%	36.0	3.90%	36.1	4.00%
22	34.0	36.4	7.07%	35.3	3.90%	35.4	4.00%
23	29.7	31.8	7.03%	30.9	3.90%	30.9	4.00%
24	26.0	28.1	7.76%	27.2	4.35%	27.2	4.45%
25	20.2	22.1	9.30%	21.4	5.85%	21.4	5.95%
26	16.8	18.0	7.28%	17.3	3.10%	17.3	3.20%
27	15.0	16.0	6.76%	15.4	3.10%	15.5	3.20%
28	12.2	13.1	6.85%	12.6	3.10%	12.6	3.20%
29	10.4	11.1	6.64%	10.7	3.10%	10.7	3.20%
30	7.5	8.0	6.87%	7.7	3.85%	7.8	3.95%
	935.0	1,015.7	8.63%	979.3	4.73%	980.2	4.83%

Data Summary D-13
Total Salary Scale
Classified

Duration	Initial Salary (Millions)	Subsequent Salary (Millions)	Actual Rate	Current Expected (Millions)	Current Rate	Proposed Expected (Millions)	Proposed Rate
1	31.6	35.8	13.05%	33.2	5.10%	33.3	5.20%
2	25.9	29.3	13.07%	27.2	4.85%	27.2	4.95%
3	20.8	23.3	12.19%	21.8	4.60%	21.8	4.70%
4	20.5	22.7	10.73%	21.4	4.35%	21.4	4.45%
5	17.6	19.5	10.83%	18.4	4.25%	18.4	4.35%
6	15.0	16.5	10.30%	15.6	4.15%	15.6	4.25%
7	13.0	14.6	12.26%	13.5	4.05%	13.6	4.15%
8	12.5	13.7	9.73%	13.0	3.85%	13.0	3.95%
9	10.9	12.0	9.98%	11.3	3.85%	11.3	3.95%
10	8.9	10.0	12.71%	9.3	4.95%	9.3	5.05%
11	7.8	8.7	10.42%	8.1	3.85%	8.2	3.95%
12	8.1	9.1	12.29%	8.3	3.35%	8.4	3.45%
13	8.7	9.8	12.11%	9.0	3.35%	9.0	3.45%
14	9.1	10.3	12.92%	9.4	3.35%	9.4	3.45%
15	10.5	11.6	10.25%	11.0	5.35%	11.1	5.45%
16	8.7	9.8	12.32%	9.0	3.35%	9.0	3.45%
17	9.9	10.9	9.46%	10.3	3.35%	10.3	3.45%
18	9.0	9.8	9.16%	9.3	3.35%	9.3	3.45%
19	6.5	7.1	10.51%	6.7	3.35%	6.7	3.45%
20	7.3	8.2	12.17%	7.7	4.85%	7.7	4.95%
21	6.6	7.2	10.10%	6.8	3.35%	6.8	3.45%
22	6.1	6.7	9.81%	6.3	3.35%	6.3	3.45%
23	6.6	7.2	9.72%	6.8	3.35%	6.8	3.45%
24	5.1	5.7	12.22%	5.3	3.35%	5.3	3.45%
25	5.0	5.6	11.78%	5.2	4.85%	5.2	4.95%
26	3.4	3.9	13.70%	3.5	3.10%	3.5	3.20%
27	2.6	2.9	9.96%	2.7	3.10%	2.7	3.20%
28	1.8	2.0	13.12%	1.9	3.10%	1.9	3.20%
29	2.0	2.3	15.73%	2.1	3.10%	2.1	3.20%
30	1.5	1.6	10.29%	1.5	4.85%	1.5	4.95%
	303.0	337.8	11.48%	315.6	4.16%	315.9	4.26%