DATE: 12/10/2024 TIME: 10:00 a.m. LOCATION: Executive Boardroom

COMMITTEE MEMBERS: Joseph Peychaud, Chair | Chadrick Kennedy | Tyler Antrup |

| Maurice Sholas, M.D., Ph.D. | Councilmember Freddie King III | Mubashir Maqbool | Jackie Shine | Dexter Joseph | Rebecca Johnsey

PENSION MEETING AGENDA

PUBLIC MEETING

All meetings are open to the public, and we encourage your attendance. Those interested can join in person or virtually.

Join In-Person: Executive Board Room, Second Floor
625 St. Joseph St., New Orleans, LA 70165

Join Virtually: https://www.swbno.org/BoardMeetings

E-Public comments will be accepted via https://www.swbno.org/BoardMeetings.
All e-public comments must be received at least 2 hours prior to the meeting. Comments will be read verbatim into the record.

I. Roll Call

II. Presentation Items

A. Employees' Retirement System of the Sewerage & Water Board of New Orleans Actuarial Experience Study For the Period from January 1, 2019 – December 31, 2023, Mitchell Bilbe, Rudd & Wisdom

B. Special Actuarial Education Presentation – Plan Amendment Considerations - Mitchell Bilbe, Rudd & Wisdom

III. Action Items

A. Resolution (R-176-2024) to Accept Actuarial Experience Study of Employees' Retirement System of the Sewerage & Water Board of New Orleans for the Period from January 1, 2019 – December 31, 2023 with the recommended assumptions being incorporated in the actuarial valuations beginning with the December 31, 2024 valuation.

B. Resolution (R -177-2024) to Accept Actuarial Recommendations Regarding Potential Amendment of Plan.

IV. Information Item

A. Rudd & Wisdom Actuarial Experience Study of Employees' Retirement System of the Sewerage & Water Board of New Orleans for the Period from January 1, 2019 – December 31, 2023 (Full Report)

DATE: 12/10/2024 TIME: 10:00 a.m. LOCATION: Executive Boardroom

COMMITTEE MEMBERS: Joseph Peychaud, Chair | Chadrick Kennedy | Tyler Antrup |

| Maurice Sholas, M.D., Ph.D. | Councilmember Freddie King III | Mubashir Maqbool | Jackie Shine | Dexter Joseph | Rebecca Johnsey

V. Public Comment

VI. Adjournment

Pension Committee Meeting:
Review of Actuarial Experience Study
For the Period From January 1, 2019 to December 31, 2023

Rudd and Wisdom, Inc.

December 10, 2024

Prepared for Sewerage & Water Board of New Orleans

Mitchell L. Bilbe, FSA, EA
Christopher S. Johnson, FSA, EA

Agenda

- Introduction to Assumptions
- Review of Actuarial Assumptions
- Review of Actuarial Methods
- Summary of Recommendations

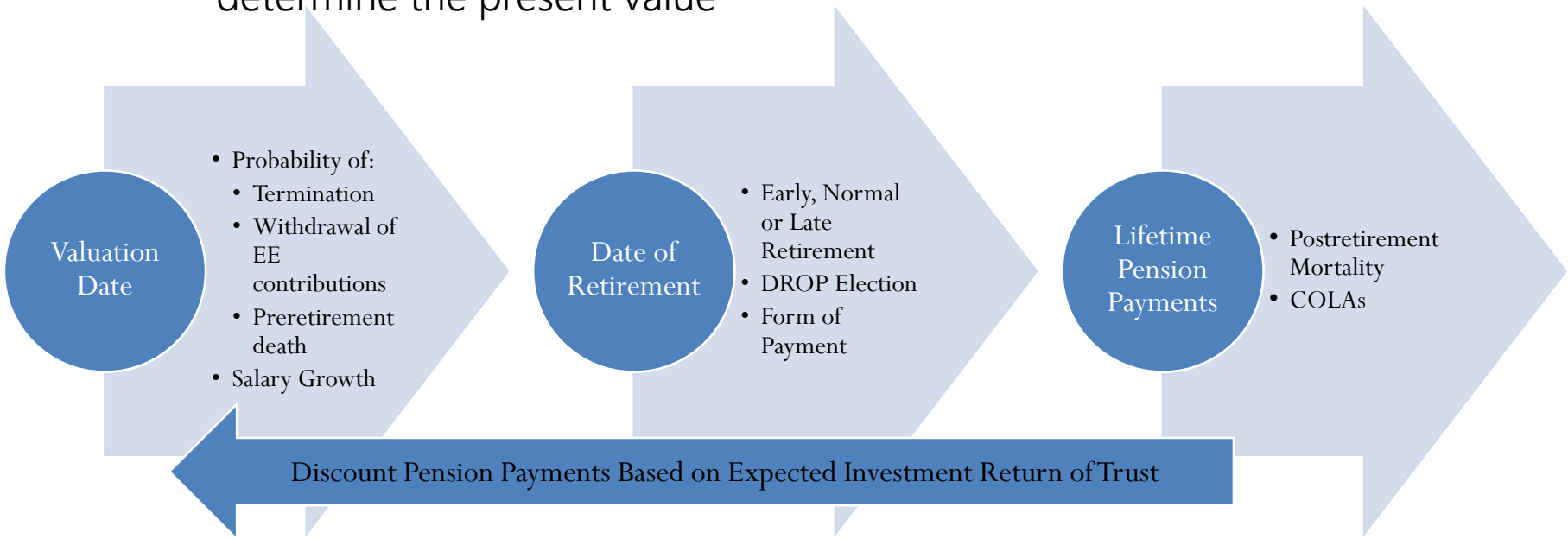
Introduction to Assumptions

Purpose of Actuarial Valuations

- Actuarial valuations involve multi-decade projections into the future using Actuarial Assumptions
  - Determine appropriate levels of funding for retirement plans
  - Model the costs of retirement plans
  - Do not determine the Ultimate Cost of the pension plan
- Ultimate Cost of Pension Plan (i.e., Cumulative Contributions)
  - Equal to total benefits and expenses paid by the plan in excess of investment returns
  - Independent of the actuarial assumptions used to value the plan
- Actuarial Assumptions are ultimately selected by Board of Trustees
  - Actuary, auditor and investment counsel provide advice

Actuarial Assumptions

- Actuarial assumptions are used to:
  - Project plan populations to expected future benefit payment dates
  - Estimate benefit amounts at each future payment date
  - Discount projected benefit amounts back to the valuation date to determine the present value



Experience Study Overview

- Purpose
  - Reduce contribution and accounting volatility due to variance between actual and assumed experience
  - Reasonable assumptions required by Actuarial Standards of Practice (ASOPs)
  - ASOP 35
    - Actuary must disclose the information and analysis used to select each significant demographic assumption
    - Actuary should include an explanation of the information and analysis that results in a change to non-prescribed assumptions
- Experience studies are recommended at least every 3 to 5 years by GFOA
- Prior study reviewed experience for 5-year period ending December 31, 2018
- Current study reviewed experience for 5-year period ending December 31, 2023
  - Compares assumed rates to actual rates over 5-year period

Review of Actuarial Assumptions

Assumptions to be Discussed

- Demographic
  - Mortality Rates and Mortality Improvement Scale
  - Termination Rates
  - Retirement Rates
  - DROP Participation Rates
  - Disability Incidence Rates
  - Post-Termination Withdrawal of Employee Contributions
  - Credited Service for Unused Leave
  - Percent Married and Spouse Age Difference
  - Form of Annuity Election

- Economic
  - General Price Inflation and COLA
  - Expected Long-Term Rate of Return on Assets (Discount Rate)
  - Compensation Increases

Demographic Assumptions
Mortality and Mortality Improvement

- Basis: Most recently published tables for Public Pension Plans from Retirement Plans Experience Committee (RPEC) of the Society of Actuaries

	Current	Recommended
Base Table	PubG-2010 multiplied by 122% for Males and 119% for Females	PubG-2010 multiplied by 121% for Males and 119% for Females
Projection Scale	MP-2019 multiplied by 86% for Males and 79% for Females	MP-2021 (or its successor) multiplied by 91% for Males and 82% for Females

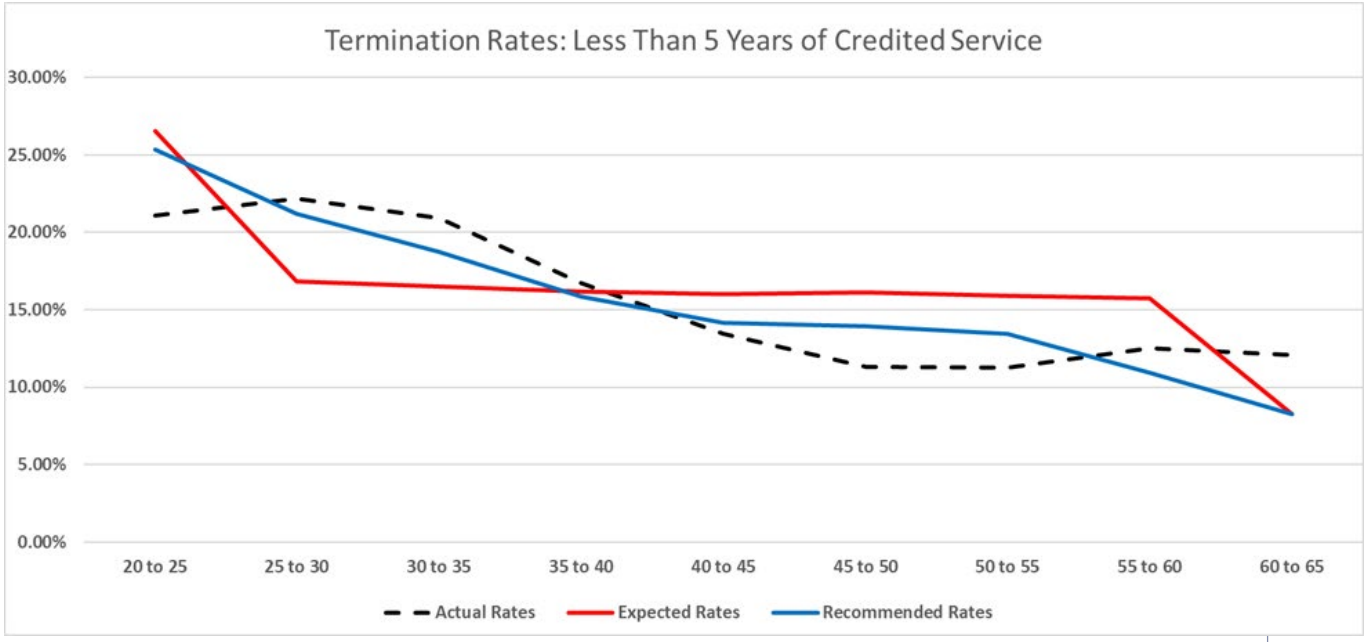
- Adjustment Factors to Base Table and Projection Scale based on comparison of:
  - Louisiana's mortality rates compared to average rates across U.S.
  - Louisiana's rates of mortality improvement compared to average across U.S.
- Mortality Improvement Projection Scale Updates
  - MP Projection Scale was updated by RPEC each year between 2019 and 2021
  - No 2022, 2023 or 2024 projection scale was issued due to the influence of COVID-19 on the dataset

Process for Demographic Assumptions

- Decrement – exit from plan population
- Review experience for each decrement (e.g., Retirement, Termination, etc.)
  - Exposures – count of the number of members over experience study period who are eligible for a certain decrement for each year they are eligible
  - Actual – count of the number of members who actually decrement
  - Compare Actual to Expected (A/E Ratio)
    - Ratio > 100% indicates that assumption is too low
    - Ratio < 100% indicates that assumption is too high
- Recommend New Assumption
  - Smooth actual observed rates for
    - Anomalies
    - Differences between future expectations and past experience
- Should produce A/E ratio closer to 100%, if appropriate

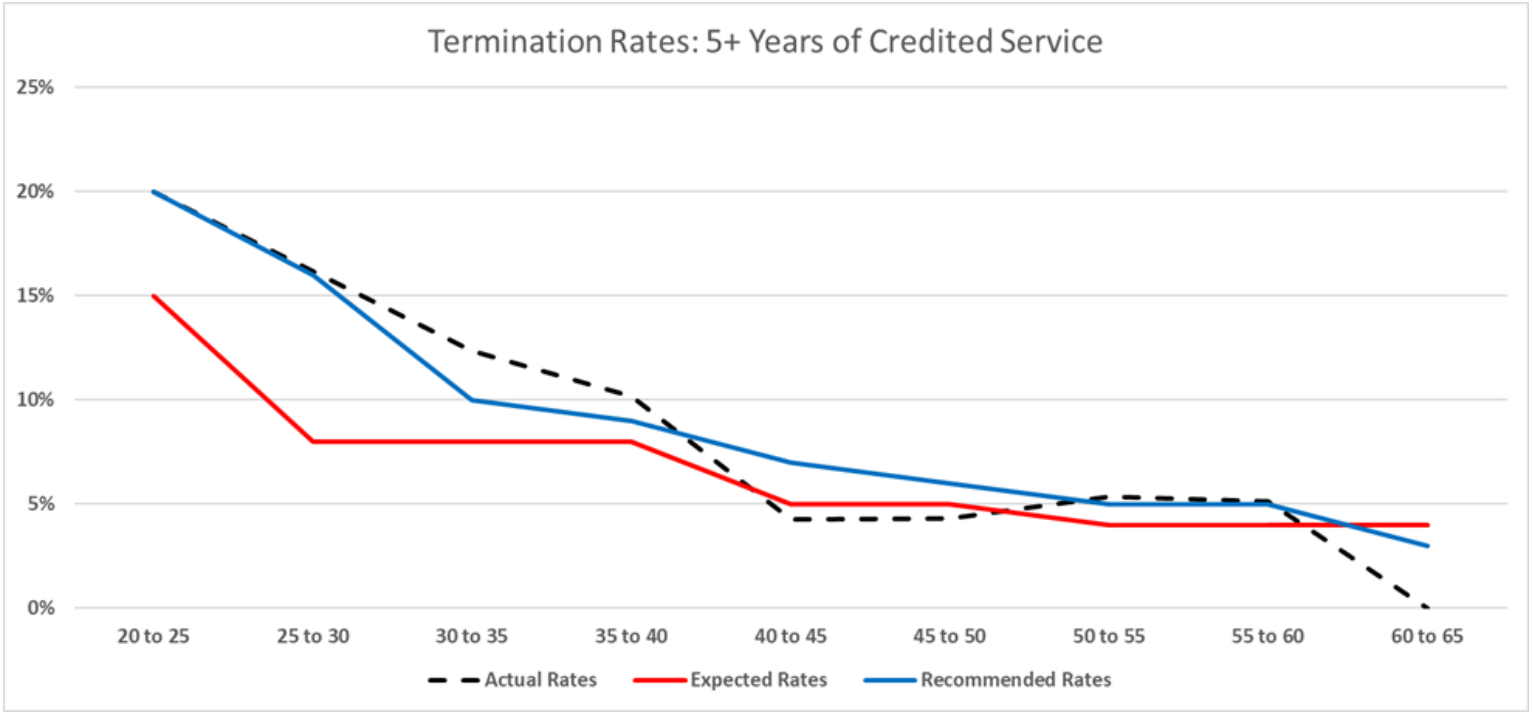
Demographic Assumptions
Termination Rates

- Basis: Tables based upon Experience Studies using Age Based Rates on a Select and Ultimate basis with:
  - Higher rates in first 5 of years of employment (Select period rates)
  - Lower Rates thereafter (Ultimate rates)
- Select Period Analysis – using 5-year Age Groups



Demographic Assumptions
Termination Rates

- Ultimate Period Analysis – using 5-year Age Groups



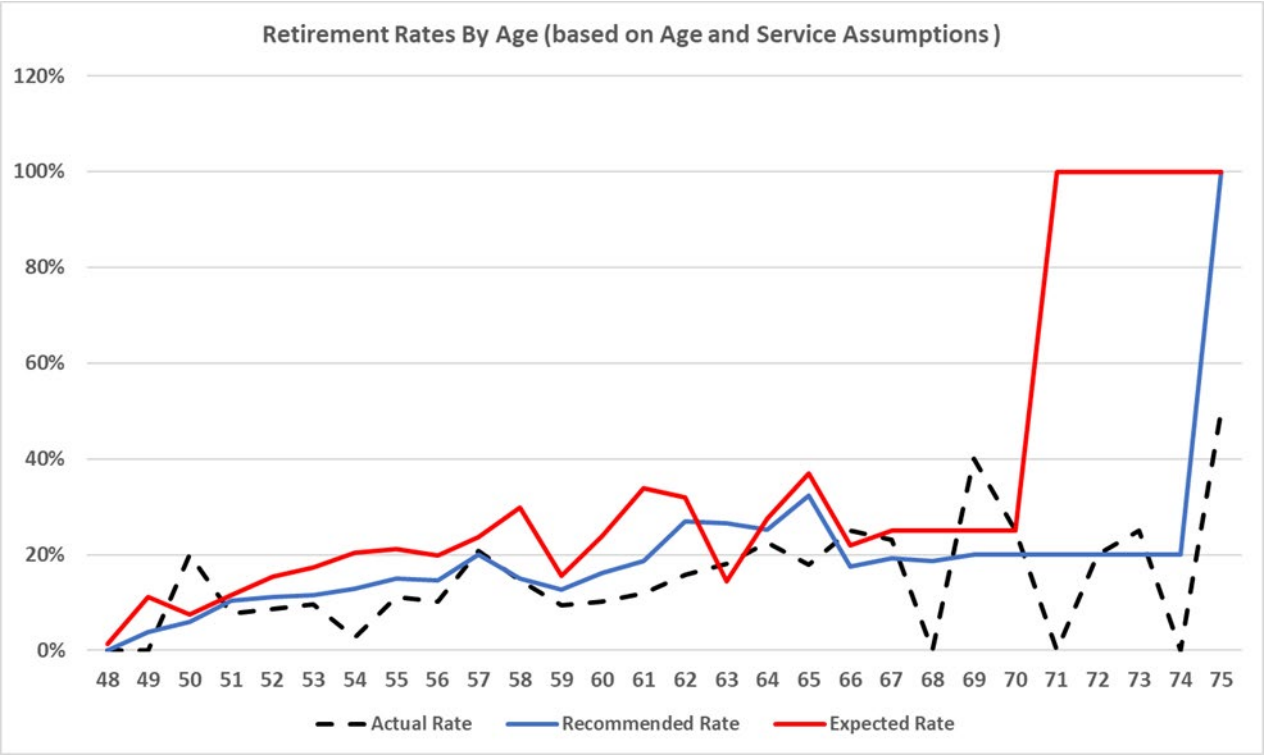
Terminations
Current Assumption versus Recommended Assumption

	Number of Terminations	
	Current Rates	Recommended Rates
Actual Number	646	646
Expected Number	592	626
Actual/Expected Ratio	109.1%	103.2%

- Rationale
  - More terminations than expected so increase termination rates
  - Normally recommend assumptions that would result in Actual/Expected ratio closer to 100%
    - Experience period includes 2020 to 2022 when turnover was higher during COVID pandemic across most employers
    - Do not assign full credibility to actual experience
    - Recommended rates still produce fewer expected terminations than actual and avoid overreacting to COVID

Demographic Assumptions
Retirement Rates

- Basis: Age and Service Tables based upon Experience Studies



- Observations:
  - Fewer actual retirements than expected at most ages
  - Current Rates stop at age 71 but several actual retirements between age 72 and 75 during exposure period

Retirements
Current Assumption versus Recommended Assumption

	Number of Retirements	
	Current Rates	Recommended Rates
Actual Number	122	122
Expected Number	220	163
Actual/Expected Ratio	55.5%	74.8%

- Rationale
  - Fewer retirements than expected so decrease rates at most ages
  - Normally recommend assumptions that would result in Actual/Expected ratio closer to 100%
    - Experience period includes 2020 to 2022 when retirements were lower during COVID pandemic across most employers
    - Do not assign full credibility to actual experience
    - Recommended rates still produce more expected retirements than actual and avoid overreacting to COVID

Demographic Assumptions
DROP Rates

- Basis: Review actual plan experience to determine portion of retiring Members electing to enter the DROP

Age at Retirement[1]	Retirements Between January 2019 and December 2023		
	Number of Retirements Electing DROP	Total Retirements	Percentage Electing DROP
< 60	34	42	81%
60-64	36	50	72%
65+	11	30	37%
Total	81	122	66%

- Recommendation: Adjust rates to reflect recent plan experience.

	Assumption for Percentage of Members who Elect a DROP upon Retirement	
Age at Retirement[1]	Current	Recommended
< 60	90%	85%
60-64	60%	70%
65+	30%	35%

[1] Age at commencement of DROP participation period.

Demographic Assumptions
Disability Rates

- Analysis
  - Far fewer disabilities than expected (3 actual disabilities over 5-year period)
  - Experience and incidence so limited as to not be fully credible
  - Recommend reducing expected number of disabilities by a factor of four

Annual Disability Retirement Rates Per 100 Members		
Age	Current Rates	Recommended Rates
20	0.088	0.022
30	0.088	0.022
40	0.240	0.060
50	0.888	0.222
55	1.520	0.380
60	2.760	0.690
65	4.080	1.020

Demographic Assumptions
Other Miscellaneous Items

- **Withdrawal of Employee Contributions**: Post-termination employees not eligible for retirement may withdraw their employee contributions – **No change recommended**
- **Credited Service for Unused Leave**: Retiring Members receive Credited Service for Unused Sick Leave and Unused Annual Leave (subject to limits) – **No change recommended**
- **Percent Married and Spouse Age Difference:** Spouses of married Members are entitled to certain death benefits - **No change recommended**
- **Form of Annuity Election:** Married Members may elect a Joint and Survivor option in lieu of a Straight Life Annuity

Assumption	Current	Recommended
Percent of Vested Terminated Members assumed to Withdraw Employee Contribution Balance	75%	75%
Credited Service for Unused Leave	0.50 years for Unused Leave	0.50 years for Unused Leave
Percent Married and Spouse Age Difference	85% Males 2 yrs older than females	85% Males 2 yrs older than females
Form of Annuity Election: Percent of Retirees Electing a Life Annuity vs. Joint and Survivor Option	75% Life Annuity 25% Joint and Survivor	80% Life Annuity 20% Joint and Survivor

Economic Assumptions
General Price Inflation and COLA

- **Inflation** – Building block for:
  - Salary Increase assumption
  - Expected Long-Term Rate of Return on Assets assumption
  - Also used to project compensation and benefit limits
  - **No recommended change**
  - Basis: Historical analysis of CPI-U combined with future expectation (longer term)

Current	Recommended
2.50%	2.50%

- **COLA** – Basis: Historical Analysis of CPI-W measure of inflation
  - Subject to a 0% to 2% corridor per terms of Rules and Regulations
  - CPI-W with the above corridor has averaged 1.55% to 1.77% over the last 20 to 45 years depending upon the length of the period studied

Current	Recommended
2.00%	1.65%

Economic Assumptions
Expected Long-Term Rate of Return on Assets (Discount Rate)

- Basis: Based on plan asset mix and expected future asset returns in each asset class
  - Investment Policy Statement was last amended in 2022 and set following target allocations for investment subaccount:

Asset Class in Hancock Whitney Subaccount	Target Allocation	Market Index Used to Develop Expected Real Return of Asset Class
U.S. Large Cap Equities	25%	Russell 1000 Index / S&P 500 Index
U.S. Mid Cap Equities	4%	Russell Mid Cap Index / S&P 400 Index
U.S. Small Cap Equities	5%	Russell 2000 Index
Non-U.S. Large Cap Equities	15%	MSCI ACWI ex USA Index / MSCI EAFE Index
Non-U.S. Small Cap Equities	3%	MSCI ACWI ex-US Small Cap / MSCI EAFE Small Cap Index
Emerging Market Equities	3%	MSCI Emerging Markets Index
Broad Fixed Income	25%	Bloomberg US Aggregate Index
Private Equity	10%	Cambridge Associates All Private Equity Index / Pitchbook All Private Equity Index
Global Infrastructure	7%	CPI + 4%
Core Real Estate	3%	NFI-ODCE Index
Total in Hancock Whitney	100%	N/A

  - Assets held in Capital One and LAMP Subaccounts which are used to pay benefits when due are invested in cash and cash equivalents.

Economic Assumptions
Expected Long-Term Rate of Return on Assets (Discount Rate)

- Methodology: Use building block approach.
  - Establish reasonable range of real returns (i.e., returns net of inflation) for each asset class
  - Select real return assumption for each asset class within each reasonable range
  - Determine weighted-expected real return based on target allocations
  - Add inflation to weighted-expected return of portfolio to determine Expected Gross Return
  - Reduce Expected Gross Return by expected investment expenses to determine final Expected Long-Term Rate of Return

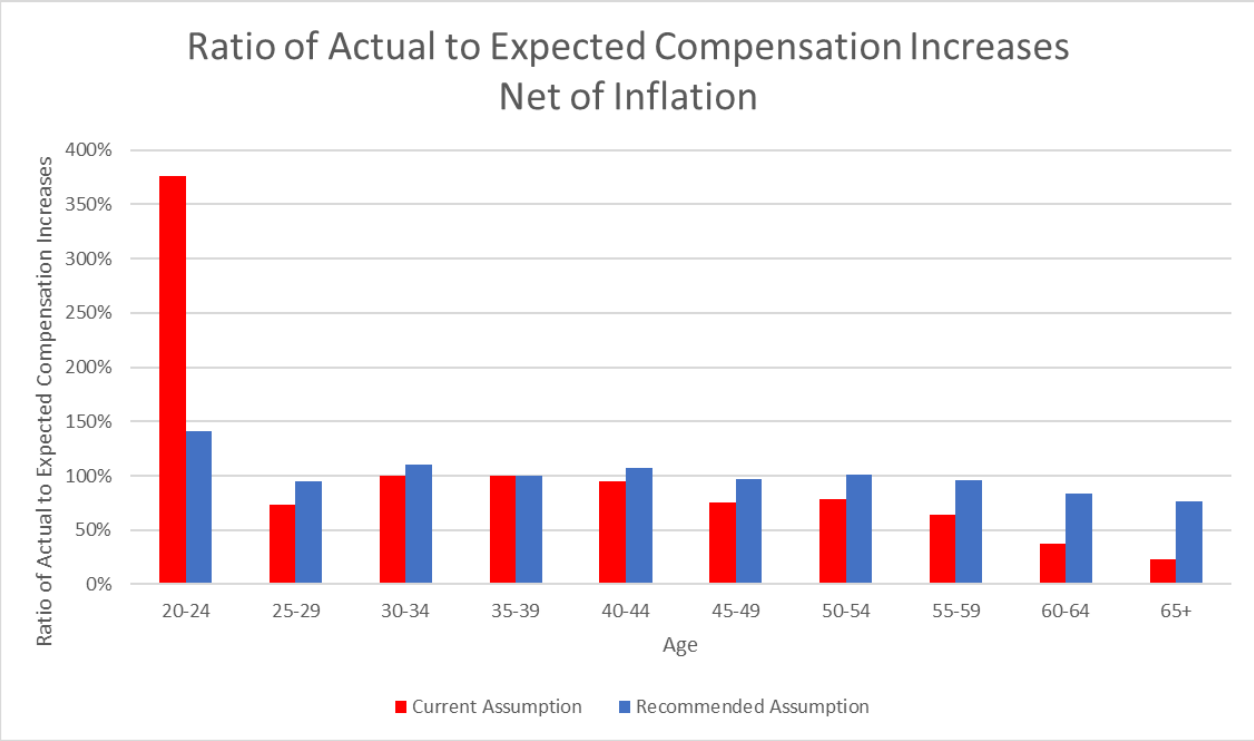
Development of Final Selected Investment Return Assumption				
	Low	Midpoint	High	Selected Assumption
Real Rate of Investment Return Assumption	3.6973%	4.9322%	6.1671%	**4.8596%**
Assumed Inflation	2.5000%	2.5000%	2.5000%	**2.5000%**
Assumed Investment Expenses	(0.3500)%	(0.3500)%	(0.3500)%	**(0.3500)%**
Investment Return Assumption	5.8473%	7.0822%	8.3171%	**7.0096%**
Final Rounded Selected Investment Return Assumption	N/A	N/A	N/A	**7.00%**

- Final Expected Long-Term Rate of Return (Discount Rate) Assumption – **No Change Recommended.**

Current	Recommended
7.00%	7.00%

Economic Assumptions
Compensation Increases

- Analysis: Compare Ratio of Actual to Expected Earnings Net of Inflation
  - Removes volatility of inflation each year



- Observations
  - Ages 20-24: Actual compensation increases were higher than expected based on the current assumption (i.e., the red bar is above 100% in the above graph)
  - Ages 25-29 and Ages above 39: Actual compensation increases were lower than expected based on the current assumption (i.e., the red bar is below 100% in the above graph)
  - Recommended Assumptions: Blue bars in graph produce closer to 100% ratios at most age bands, allowing for smoothing at older ages and mitigating recent experience below age 25

Economic Assumptions
Compensation Increases

- Recommendation: Update Annual Compensation Increase Assumption as follows:

Age	Current*	Recommended*
20-24	6.25%	12.50%
25-29	5.75%	5.00%
30-34	5.25%	5.00%
35-39	4.75%	4.75%
40-44	4.75%	4.50%
45-49	4.75%	4.25%
50-54	4.75%	4.25%
55-59	4.75%	4.00%
60-64	4.75%	3.50%
65+	4.00%	3.00%

* Rates of increase include component for assumed 2.50% inflation.

Effect of Recommended Assumptions from Experience Study[1]

	Increase/(Decrease) in Employer Contribution per Funding Policy		Increase/(Decrease) in Actuarial Accrued Liability and Funded Ratio	
	$ Millions	Percent of Earnable Compensation	$ Millions	Funded Ratio
1/1/2024 Under Current Assumptions	**$12.1**	**20.8%**	**$363.4**	**70.2%**
Effect of Mortality Rates	0.1	0.1%	0.5	(0.1)%
Effect of Retirement Rates	(0.4)	(0.8)%	(3.7)	0.7%
Effect of Termination Rates	(0.7)	(1.2)%	(2.5)	0.5%
Effect of Disability Rates	0.8	1.5%	5.0	(1.0)%
Effect of COLA Increase	(0.2)	(0.4)%	(2.1)	0.4%
Effect of Compensation Increase	(0.5)	(0.8)%	(2.1)	0.4%
Effect of Form of Payment Assumption	0.0	0.1%	0.2	0.0%
1/1/2024 Under Recommended Assumptions	**$11.2**	**19.3%**	**$358.7**	**71.1%**

[1] Based on January 1, 2024 valuation (e.g., participant census, assets and assumptions other than recommended assumptions). Effect on January 1, 2025 valuation is expected to be similar.

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Review of Actuarial Methods

Summary of Actuarial Methods

- All Methods Comply with
  - Conference of Consulting Actuaries Public Plans Community (CCA PPC) *First Edition* White Paper Recommendations
  - GFOA Best Practices
- Liabilities
  - Entry Age Normal Liability Cost Method – **No Change Recommended**
- Assets
  - 7-year Smoothed Market Value with Corridor – **No Change Recommended**
- Amortization of Unfunded Accrued Liability
  - Level Dollar Layered Amortization with new layers amortized over 15 to 25-year periods – **No Change Recommended**
- Surplus Management
  - CCA PPC *Second Edition* White Paper published in 2024
    - All Funding Policy actuarial methods comply with Second Edition
    - Second Edition recommends adding Surplus Management Methods to Funding Policies
  - SWBNO Pension Plan Funding Policy does not address Surplus
    - Plan is 70% Funded and expected to be 100% funded in 25 years
    - Add Surplus Management as an amendment to Funding Policy in next several years to comply with CCA PPC recommendations, but not urgent matter

Summary of Recommendations

Recommendations / Next Steps

- Recommendations
  - Update several assumptions to reflect results of Experience Study
    - Net Effect expected to reduce Employer Contribution in 2025 by approximately $0.9M (or 1.5% of Earnable Compensation)
  - Update Funding Policy to address Surplus Management
    - Not urgent action item but should be addressed in next several years
- Action Items
  - Board of Trustees to adopt Resolution to update Actuarial Assumptions as recommended in Experience Study
  - Rudd and Wisdom to draft amendment to Funding Policy to address Surplus Management in next several years
    - Pension Committee to review and make recommendation to BOT to adopt, if desired

Pension Committee Meeting: Overview of Plan Amendments

Rudd and Wisdom, Inc.

December 10, 2024

Prepared for

Mitchell L. Bilbe, FSA, EA
Christopher S. Johnson, FSA, EA

Plan Amendment Considerations

- Purpose of Amendment
  - Plan Design should be consistent with Employer's workforce goals for recruitment and retention
- Responsibilities of Pension Committee and BOT
  - Section 3.1 of Rules and Regulations – Pension Committee members must act solely in the interest of Plan's members and beneficiaries
  - GFOA Governance Guidance – Trustees should act in interest of all plan members and not be motivated by personal views/interests
- Funding Policy
  - Funding Priorities – fully fund the plan, pay all vested benefits, contribution stability
  - Policy states:
    - "Benefit Enhancements – Prior to adopting any amendments to the Pension Plan that materially improve plan benefits, the actuary shall provide the Board of Trustees with an analysis of the expected effect of the proposed amendment on the Pension Plan's funded ratio and the annual Actuarially Determined Contributions."
- Financing
  - Is there a separate source of funding available to pay for enhancements?
  - Would employees share cost of enhanced benefits via increased employee contributions?
- Legal

Plan Amendments Proposed by Committee Member

- August 31, 2022 letter from employee member of Pension Committee requesting 3 plan design changes:
  - Change No. 1. - Change Vesting Schedule from 5 to 10 years:

Years of Credited Service	Current Plan Vesting Percent	Proposed Plan Vesting Percent
Less than 5	0%	0%
At least 5 but less than 10	100%	0%
10 or more	100%	100%

  - Change No. 2. - Increase Benefit Accrual Factors:

Years of Credited Service	Current Plan Accrual Factor Per Year of Service	Proposed Plan Accrual Factor Per Year of Service
0 – 25	2.5%	3.0%
25+	4.0%	4.0%

  - Change No. 3 - Decrease Maximum Plan Benefit:
    - Current Max Benefit is lesser of
      - $280,000 in 2025 which is current Internal Revenue Code 415(b) dollar limit, and
      - Average of final 3-Years of high pay
    - Reduce from Current Max Benefit to $130,000
  - Design Changes were requested to be implemented retroactively

Cost Estimates

- Cost of Proposed Amendments (rough estimates)
  - Change Nos. 1 and 3 would reduce plan costs slightly
  - Change No. 2 would increase plan cost materially
  - Three amendments collectively:
    - $15M increase in Actuarial Accrued Liability
    - $2.5M increase in Employer's Annual Contribution from $12.1M to $14.6M (or from 20.8% to 25.2% of Earnable Compensation)
    - Decrease in Funded Status from 70% to 67%
- Cost Estimate assumes amendments could be implemented retroactively
  - Per legal counsel, benefit reductions (i.e., Change Nos. 1 and 3 for vesting and maximum benefits) could not be implemented retroactively
  - Need confirmation that benefit enhancements (Change No. 2 to benefit formula) could be implemented retroactively

Considerations

- Purpose of Proposed Amendments
  - What would amendments accomplish?
  - Which Members gain benefit value?
  - Which Members lose benefit value due to longer vesting and lower maximum benefits?
- SWBNO benefits nearly identical to NOMERS benefits
  - Transfers between plans governed by Reciprocity Agreement
  - Reciprocity Agreement would need to be updated to maintain parity if SWBNO benefits amended
  - Why is the proposer of the amendments comparing SWBNO to MPERS benefits?
- Longer Vesting Schedule could hurt recruitment of mid-career hires
- Lower Maximum Benefit could hurt retention of longer-serviced employees
- Would objectives of Funding Policy be in conflict with proposed amendments?
- Amendments would not benefit Current Retirees because
  - They would not receive any benefit enhancements
  - Their benefits would be less well funded following these amendments

Recommendations

- Previously put review of amendments on hold pending results of Experience Study
  - Desire to use up-to-date assumptions to price amendments
  - Experience Study did not result in material changes to assumptions or funded status of plan
  - Prior estimates of cost of amendments remain relevant
- Actuary's Recommendations
  - Do not adopt any of these amendments retroactively
    - Legal considerations
    - Reduction in Plan Funded Status below 70% not desirable
  - Amendments could be adopted prospectively, but we advise against because:
    - Vesting and Maximum benefit reductions conflict with employer's workforce goals, and
    - Prospective amendments increase cost by roughly 1.75% of Earnable Compensation (or $1,000,000 per year) and do not change ultimate benefit for full career employees
      - Ultimate benefit of 100% of Average Monthly Compensation would be achieved in 31.25 years under proposed formula instead of 34.375 years under current formula, but ultimate benefit of 100% would not change
      - Extra $1,000,000 contribution per year would be better served improving funded status absent these amendments, if employer has available funds
  - Only consider material benefit enhancements:
    - when plan is at least 80% funded and preferably at least 90% funded, or
    - if the full cost of the benefit can be funded immediately, or
    - if the increase in the Actuarially Determined Contribution (ADC) due to the amendment can be funded either:
      - without jeopardizing the ability to fund the ADC as it existed prior to the amendment, or
      - via a separate source of funding

R-176-2024

ACCEPTANCE OF THE 2024 EXPERIENCE STUDY OF RUDD & WISDOM

WHEREAS, on January 23, 2019, the Sewerage and Water Board of New Orleans ("Board") issued a Request for Proposal (RFP) to obtain actuarial consulting services to support the Employees' Retirement System and activities of the Sewerage and Water Board of New Orleans; and

WHEREAS, on March 20, 2019, the Board approved a contract with Rudd & Wisdom, and a contract between the parties was executed on April 9, 2019, and extended and amended to include continued annual valuation services and an updated Experience Study covering the period January 1, 2019, to December 31, 2023, at the request of and on behalf of the Board; and

WHEREAS, Rudd & Wisdom has prepared, completed and presented to the Board an Actuarial Experience Study of Employees' Retirement System of the Sewerage & Water Board of New Orleans for the Period from January 1, 2029 – December 31, 2023 (a copy of which is attached to this Resolution) (the "2024 Experience Study");

NOW THEREFORE, BE IT RESOLVED, the Employees' Retirement System of the Sewerage and Water Board of New Orleans accepts the 2024 Experience Study covering the period January 1, 2019, to December 31, 2023, as recommended by Rudd & Wisdom as the Retirement System's actuary, in the presentation to the Pension Committee on December 10, 2024; and

BE IT FURTHER RESOLVED, the actuarial assumptions of the 2024 Experience Study will become effective December 31, 2024.

I, Ghassan Korban, Executive Director, Sewerage and Water Board of New Orleans, do hereby certify that the above and foregoing is a true and a correct copy of a Resolution adopted at the Regular Monthly Meeting of the Board of Trustees, duly called and held, according to law, on December 18, 2024.

GHASSAN KORBAN
EXECUTIVE DIRECTOR
SEWERAGE AND WATER BOARD OF NEW ORLEANS

R-177-2024

ACCEPTANCE OF ACTUARIAL RECOMMENDATIONS REGARDING PLAN AMENDMENT CONSIDERATIONS

WHEREAS, on January 23, 2019, the Sewerage and Water Board of New Orleans ("Board") issued a Request for Proposal (RFP) to obtain actuarial consulting services to support the Employees' Retirement System and activities of the Sewerage and Water Board of New Orleans; and

WHEREAS, on March 20, 2019, the Board approved a contract with Rudd & Wisdom, and a contract between the parties was executed on April 9, 2019, and extended and amended to include continued annual valuation services and an updated Experience Study covering the period January 1, 2019, to December 31, 2023, at the request of and on behalf of the Board; and

WHEREAS, the Board requested the review and recommendation of Rudd & Wisdom regarding possible amendments to the retirement plan, including changing vesting period to ten (10) years, increasing the accrual percentage rate, and reduction of certain maximum plan benefits; and

WHEREAS, in connection with the updated Experience Study including impacts on the funded status, Rudd and Wisdom considered and provided its analysis and recommendations regarding such possible amendments including actuarial best practices;

NOW THEREFORE, BE IT RESOLVED, the Employees' Retirement System of the Sewerage and Water Board of New Orleans accepts the analyses and recommendations by Rudd & Wisdom as the Retirement System's actuary, in the presentation to the Pension Committee on December 10, 2024, regarding Plan Amendment Considerations; and

BE IT FURTHER RESOLVED, the recommendation not to pursue these three potential amendments has been accepted and carried forward, and no amendments to the plan shall be made at this time, specifically no amendments shall be made to the time for vesting, to the accrual rate, or to the maximum plan benefits.

I, Ghassan Korban, Executive Director, Sewerage and Water Board of New Orleans, do hereby certify that the above and foregoing is a true and a correct copy of a Resolution adopted at the Regular Monthly Meeting of the Board of Trustees, duly called and held, according to law, on December 18, 2024.

GHASSAN KORBAN
EXECUTIVE DIRECTOR
SEWERAGE AND WATER BOARD OF NEW ORLEANS

SEWERAGE AND WATER BOARD OF NEW ORLEANS

ACTUARIAL EXPERIENCE STUDY OF THE

EMPLOYEES' RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS

FOR THE PERIOD FROM

JANUARY 1, 2019 THROUGH DECEMBER 31, 2023

Rudd and Wisdom, Inc.

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November 27, 2024

Pension Committee
Sewerage and Water Board of New Orleans
625 St. Joseph Street
New Orleans, Louisiana 70165

Attention: Mr. E. Grey Lewis, CFO

Re: Five-Year Actuarial Experience Study

Dear Pension Committee:

Pursuant to the request of the Sewerage and Water Board of New Orleans (SWBNO), we have completed an actuarial experience study of the Employees' Retirement System of the SWBNO (the Pension Plan).

We have reviewed the experience of the participants in this plan during the five-year period from January 1, 2019 through December 31, 2023 in order to review the appropriateness of the current actuarial assumptions for future actuarial valuations and to recommend modified assumptions where appropriate. Because the covered populations in the Pension Plan and the SWBNO Employee Benefit Plan [the Other Post-Employment Benefits (OPEB) Plan] are substantially similar, many of the assumptions recommended herein will also be used in future OPEB Plan valuations.

Actuarial valuations are used to determine appropriate levels of funding and to model the costs of retirement plans, but actuarial valuations do not determine the ultimate cost of retirement plans. Instead, the ultimate cost of such a plan is equal to the total benefits and expenses paid by the plan in excess of the investment returns of the plan. Thus, the ultimate cost is independent of the actuarial assumptions used to value the plan. While the underlying actuarial assumptions that are used in an actuarial valuation cannot be relied upon as a measure of a plan's ultimate cost, the valuation and its assumptions are used to determine whether an existing funding policy can reasonably be expected to adequately finance plan benefits over a long period of time. A new funding policy should be recommended for consideration whenever a valuation would indicate that the current policy may be inadequate. The accuracy and usefulness of actuarial valuations are dependent upon the use of actuarial assumptions that will reasonably reflect the plan's future experience as it unfolds over a long period of time.

This report documents our analysis and presents our recommendations for new actuarial assumptions. In addition, this report illustrates the effects of the proposed assumption changes on the plan liabilities and employer contribution amounts shown in the most recent Pension Plan actuarial valuation.

This report also reviews actuarial methods used in the development of the Pension Plan's Funding Policy Contribution and makes recommendations to modify certain methods where appropriate.

We look forward to discussing this report with you.

Sincerely,

Mitchell L. Bilbe, F.S.A.

Christopher S. Johnson, F.S.A.

Brandon L. Fuller, F.S.A.

MLB/CSJ/BLF:nm

Enclosures

cc: Stephanie Chambliss
Ghassan Korban
Courtney Reed

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ACTUARIAL EXPERIENCE STUDY

OF THE

EMPLOYEES' RETIREMENT SYSTEM OF THE

SEWERAGE AND WATER BOARD OF NEW ORLEANS

FOR THE PERIOD FROM

JANUARY 1, 2019 THROUGH DECEMBER 31, 2023

TABLE OF CONTENTS

Section I – Certification of Actuarial Experience Study

At the request of the Sewerage and Water Board of New Orleans (SWBNO), we have performed an actuarial experience study of the Employees' Retirement System of the Sewerage and Water Board of New Orleans for the 5-year period ending December 31, 2023. The purpose of this report is to evaluate the appropriateness of the current actuarial assumptions and funding methods and to recommend new assumptions and methods, if appropriate.

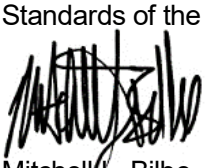
We have based the actuarial experience study on current employee, former employee and retiree data as of December 31, 2023 and each of the five preceding annual actuarial valuation dates as provided by the Sewerage and Water Board of New Orleans. We have evaluated the actuarial methods and assumptions described in Section III of this report.

To the best of our knowledge, all employees eligible to participate in the plan and all other individuals who had a remaining vested benefit under the plan as of each of the annual valuation dates have been included in the experience study.

The plan sponsor remains solely responsible for the accuracy and comprehensiveness of the data provided. However, to the best of our knowledge, no material biases exist with respect to any imperfections in the data provided by the above sources. To the extent any imperfections exist in service or compensation records, we have relied on best estimates provided by the employer. We have not audited the data provided, but have reviewed it for reasonableness and consistency relative to previously provided information.

To the best of our knowledge, the actuarial information supplied in this report is complete and accurate. In our opinion the recommended assumptions are reasonably related to the experience of the plan and to reasonable expectations. The assumptions represent a reasonable estimate of anticipated experience of the plans over the long-term future, and their selection complies with the applicable actuarial standards of practice.

We hereby certify that we are members of the American Academy of Actuaries who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.



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Section II – Executive Summary

A. Scope and Purpose

This actuarial experience study has been conducted in order to review the continued appropriateness of assumptions to be used in future actuarial valuations of the Employees' Retirement System of the Sewerage and Water Board of New Orleans (the Pension Plan). Because the covered populations in the Pension Plan and the Sewerage and Water Board of New Orleans Employee Benefit Plan [the Other Post-Employment Benefits (OPEB) Plan] are substantially similar, many of the assumptions recommended herein will also be used in the future OPEB Plan valuations. In addition, this study reviews the Pension Plan's current funding policy and recommends the consideration of an adjustment to one aspect of the policy.

Actual plan experience over the five-year period from January 1, 2019 to December 31, 2023 has been reviewed in order to evaluate the following assumptions:

Assumption	Purpose
1. Retirement Rates	Estimate incidence of retirement at various retirement age and service eligibilities
2. DROP Participation	Estimate portion of retiring population that will elect to commence DROP Participation and continue employment for one to five years
3. Termination Rates	Estimate timing of employment termination prior to retirement eligibility for both voluntary and involuntary terminations
4. Withdrawal of Employee Contributions	Estimate likelihood of withdrawing employee contribution account balance following a vested termination and thus foregoing future retirement benefits
5. Disability Rates	Estimate incidence of disability at various ages
6. Mortality Rates	Estimate survival rates for purposes of death benefits and for purposes of projecting lifetime(s) over which benefits are paid
7. Credited Service for Unused Leave	Estimate amount of Unused Sick Leave and Unused Annual Leave at retirement for purposes of increased Credited Service for both benefit amounts and retirement eligibility
8. Other Demographic Assumptions	Estimate the assumed spousal age difference and the assumed form of payment that is elected upon retirement
9. Inflation / COLA	Estimate price inflation which is a component of the Compensation Increase assumption and the Investment Return assumption and estimate the annual Cost of Living Adjustment assumption which is related to inflation
10. Compensation Increases	Estimate future compensation increases for projecting benefit accruals at future decrement dates
11. Investment Return	Estimate long-term rate of return on Pension Plan assets which is used to discount the plan's expected benefit payments

The above assumptions form the basis for actuarial valuations which are used to determine appropriate levels of funding and to model the costs of retirement plans, but it is important to remember that actuarial valuations do not determine the ultimate cost of retirement plans. The ultimate cost of a retirement plan is equal to the total benefits and expenses paid by the plan in excess of the investment returns of the plan. Thus, the ultimate cost is independent of the actuarial assumptions used to value the plan.

While the underlying actuarial assumptions that are used in an actuarial valuation cannot be relied upon to measure a plan's ultimate cost, the valuation and its assumptions are used to determine whether an existing funding policy can reasonably be expected to adequately finance plan benefits over a long period of time. A new funding policy should be recommended for consideration whenever a valuation would indicate that the current policy may be inadequate. The accuracy and usefulness

of actuarial valuations are dependent upon the use of actuarial assumptions that will reasonably reflect the plan's future experience as it unfolds over a long period of time.

Accordingly, we recommend updating several assumptions, and we recommend considering an adjustment to the Pension Plan's funding policy. However, the adjustment to the funding policy is for purposes of addressing how the employer contributions will be determined once the plan is fully funded, which is not expected for roughly 25 years assuming 7% annual asset returns. **Thus, there is no immediate need to address any changes to the funding policy.**

B. Recommendations

The table below provides a general description of our recommended changes. Details for each assumption and each funding policy method can be found in Section III and Section IV of this report. We consider the recommended changes to be reasonable and appropriate for the Pension Plan (and OPEB Plan, where applicable) for the long-term future and each recommendation complies with applicable actuarial standards of practice.

Assumption/Funding Policy Method	Recommendation	Additional Details
1. Retirement Rates	Continue to assume gradual rates of retirement based on age and service but assume retirements occur later on average than current assumption.	See Section III.A.
2. DROP Participation	Continue to assume age graded DROP Participation elections but, relative to current assumption, assume fewer retirees elect DROP participation prior to age 60 and more elect DROP participation after age 60.	See Section III.B.
3. Termination Rates	Continue to assume select and ultimate rates of termination but adjust rates in aggregate to increase the expected total number of terminations.	See Section III.C.
4. Withdrawal of Employee Contributions	No change recommended.	See Section III.D.
5. Disability Rates	Assume lower rates of disability.	See Section III.E.
6. Mortality Rates	Update adjustment factors to Pub-2010 mortality tables and adjustment factors to projection scale to reflect Louisiana's higher mortality rates than the national average. Also update mortality projection scale to most recently published scale.	See Section III.F.
7. Credited Service for Unused Leave	No changes recommended.	See Section III.G.
8. Other Demographic Assumptions	Update assumed form of payment to reflect fewer members electing Joint and Survivor options.	See Section III.H.
9. Inflation / COLA	No change to recommended inflation, but reduce assumed COLA to better reflect 0% annual floor and 2% annual cap.	See Section III.I.
10. Compensation Increases	Continue to assume age graded compensation increases but change assumptions in most age bands to reflect recent plan experience.	See Section III.J.
11. Investment Return	No change recommended.	See Section III.K.
12. Actuarial Cost Method (for Pension Plan Funding Policy)	No change recommended.	See Section IV.C.1.
13. Asset Smoothing (for Pension Plan Funding Policy)	No change recommended.	See Section IV.C.2.
14. Actuarially Determined Contribution (for Pension Plan Funding Policy)	No change recommended.	See Section IV.C.3.
15. Amortization of Unfunded Accrued Liability (for Pension Plan Funding Policy)	No change recommended.	See Section IV.C.4.

The above assumptions and methods are recommended to the Board of Trustees. However, the decision to adopt any of these recommended changes rests with the Board of Trustees in accordance

with Section 3.6(c) of the Rules and Regulations of the Employees' Retirement System of the Sewerage and Water Board of New Orleans.

C. Effect on Actuarial Valuations

If adopted in advance of the December 31, 2024 valuations, the recommended assumptions and funding policy methods, as applicable, will initially be used for the December 31, 2024 accounting actuarial valuations for the Pension and OPEB Plans as well as the January 1, 2025 actuarial funding valuation for the Pension Plan. The effect of the recommended changes is summarized in the table below based on the most recent Pension Plan valuation (i.e., the January 1, 2024 valuation). The effects on the January 1, 2025 funding valuation are expected to be similar in magnitude.

Assumption/ Funding Policy Method	Pension Plan Funding Valuation Results as of January 1, 2024[2]			
	Increase/(Decrease) in Funding Policy Contribution		Increase/(Decrease) in Entry Age Normal Actuarial Accrued Liability	
	$ Millions	% of Earnable Compensation	$ Millions	Funded Ratio
1. Retirement Rates	$ (0.4)	(0.8%)	$ (3.7)	0.7%
2. DROP Participation	0.0	0.0%	0.0	0.0%
3. Termination Rates	(0.7)	(1.2%)	(2.5)	0.5%
4. Withdrawal of Employee Contributions[1]	-	-	-	-
5. Disability Rates	0.8	1.5%	5.0	(1.0%)
6. Mortality Rates	0.1	0.1%	0.5	(0.1%)
7. Credited Service for Unused Leave[1]	-	-	-	-
8. Other (i.e., spouse age difference, form of payment)	0.0	0.1%	0.2	0.0%
9. Inflation/COLA	(0.2)	(0.4%)	(2.1)	0.4%
10. Compensation Increases	(0.5)	(0.8%)	(2.1)	0.4%
11. Investment Return[1]	-	-	-	-
12. Subtotal for Assumption Changes	**$ (0.9)**	**(1.5%)**	**$ (4.7)**	**0.9%**
13. Actuarial Cost Method[1]	-	-	-	-
14. AVA Smoothing Period[1]	-	-	N/A	-
15. AVA Corridor[1]	-	-	N/A	-
16. UAL Amortization Period[1]	-	-	N/A	N/A
17. Subtotal for Method Changes	**$ 0.0**	**0.0%**	**N/A**	**0.0%**
18. Total	**$ (0.9)**	**(1.5%)**	**$ (4.7)**	**0.9%**

January 1, 2024 Valuation Results	Pension Plan Funding Valuation Results as of January 1, 2024[2]			
	Funding Policy Contribution		Entry Age Normal Actuarial Accrued Liability	
	$ Millions	% of Earnable Compensation	$ Millions	Funded Ratio
1. Results Prior to Recommended Changes	$ 12.1	20.8%	$ 363.4	70.2%
2. Effect of Recommended Changes [Row 18. in table above]	(0.9)	(1.5%)	(4.7)	0.9%
3. Results After Recommended Changes [1. + 2.]	**$ 11.2**	**19.3%**	**$ 358.7**	**71.1%**

[1] No changes are recommended for these assumptions or methods.
[2] If adopted in advance of the January 1, 2025 valuation, the new assumptions and methods, as applicable, would first apply to the January 1, 2025 funding valuation. These results are presented as an estimate of the effects on the January 1, 2025 valuation.

See Section IV of this report for a discussion of funding methods and Section IV.C.5. for considerations that do not affect the valuation at this time.

D. Implementation

Should the Board decide to adopt the recommended assumptions presented in this report, the next steps are as follows:

a. The Board adopts the recommended assumptions with or without modification.

b. Rudd and Wisdom reflects the newly adopted assumptions and funding methods, as applicable, in future actuarial valuations beginning with the December 31, 2024 accounting valuations and the January 1, 2025 funding valuation.

Should the Board decide to amend the Funding Policy at this time[1] to address an eventual plan surplus (see Section IV.C.5. of this report for details), the next steps would be as follows:

a. The Board or the Pension Committee authorizes Rudd and Wisdom to draft an amendment to the Funding Policy and to educate the Pension Committee and the Board regarding the effect of the proposed changes.

b. The Board adopts the amendment to the Funding Policy.

c. Rudd and Wisdom implements the amended Funding Policy once the plan is fully funded.

[1] The recommended adjustment to the funding policy is for purposes of addressing how the employer contributions will be determined once the plan is fully funded which is not expected for roughly 25 years assuming 7% annual asset returns. **Thus, there is no immediate need to address any changes to the funding policy, but SWBNO may wish to consider amending the funding policy in advance of the next experience study (i.e., in the next five years) to ensure that this matter is addressed in advance of when this situation arises.**

Section III – Actuarial Assumptions for Actuarial Valuations

A. Retirement

Under the current provisions of the Pension and OPEB Plans, pension participants (i.e., Members) may elect to terminate employment and begin receiving retirement benefits at ages that cover a relatively broad range, provided certain minimum periods of service have been completed. As an alternative to terminating and commencing immediate retirement benefits, Members who meet these age and service eligibility conditions can choose to remain employed and commence accumulating pension benefits in a DROP account for a period of up to 5 years, upon completion of which the member would terminate, receive their DROP account and commence receiving their annuity. (See Section III.B. of this report for additional details regarding DROP benefits.) Members are eligible for retirement benefits (including DROP benefits) and OPEB benefits provided they meet one of the following five eligibility criteria:

Eligibility for Retirement Benefits			
Eligibility Criteria Description	Age	Years of Credited Service	Age + Credited Service
a) Normal Retirement	65	5	n/a
b) Early Retirement	60	5	n/a
c) Service Retirement	n/a	30	n/a
d) Rule of 80 Retirement	n/a	n/a	80 Years
e) Late Retirement	70	n/a	n/a

For Members who meet any of the above retirement eligibility conditions, Unreduced Early Retirement benefits equal to the full amount of the Retirement Allowance under the Pension Plan are available if the Member:

1) is age 62, or
2) has 30 years of Credited Service, or
3) the sum of their age and years of Credited Service is at least 80 years (i.e., Rule of 80)

Reduced Early Retirement benefits are equal to the Retirement Allowance determined at the Early Retirement Date reduced 3% for each year a Member's age at Early Retirement precedes age 62. Reduced Early Retirement benefits are available if the Member is:

1) age 60 with less than 30 years of Credited Service, or
2) age 60 but the sum of age and years of Credited Service is less than 80 years

The current Retirement Rates are based on age and service and were developed based on the prior experience study for the 5-year period ending December 31, 2018. The table includes rates from ages 48 to 71 over service periods up to 30+ years of service. These rates reflect the various eligibility criteria based on age and service. In general, higher rates are used at the first age/service combination that satisfies a given retirement criteria with reduced rates in the immediately following years. See Appendix 1 for a complete description of this current assumption.

The appropriateness of the current assumed retirement rates is tested by calculating the ratios of the number of actual retirements to the number of expected retirements (A/E ratio) based on the currently assumed rates. The A/E ratios in Figure 1 below indicate how different the actual retirement experience was compared to the expected experience. An A/E ratio greater than 100% indicates that there were more retirements than expected, while a ratio under 100% means there were fewer retirements than expected according to the current assumption.

Figure 1: Retirement Rate Study (January 2019 – December 2023)

Age Group	Actual Retirements	Expected Retirements - Current Rates	A/E (Actual to Expected Ratio)
45-49	0	0.50	0%
50-54	9	18.90	48%
55-59	33	54.68	60%
60-64	50	90.80	55%
65-69	25	34.40	73%
70+	5	21.00	24%
Total	122	220.28	55%

This same information is shown for each age in the graph below.

Figure 2: Actual versus Expected Retirements by Age

Observations from Figures 1 and 2:

- At most ages there were fewer actual retirements than were expected during the exposure period.
- There were five (5) actual retirements between ages 70 and 75.

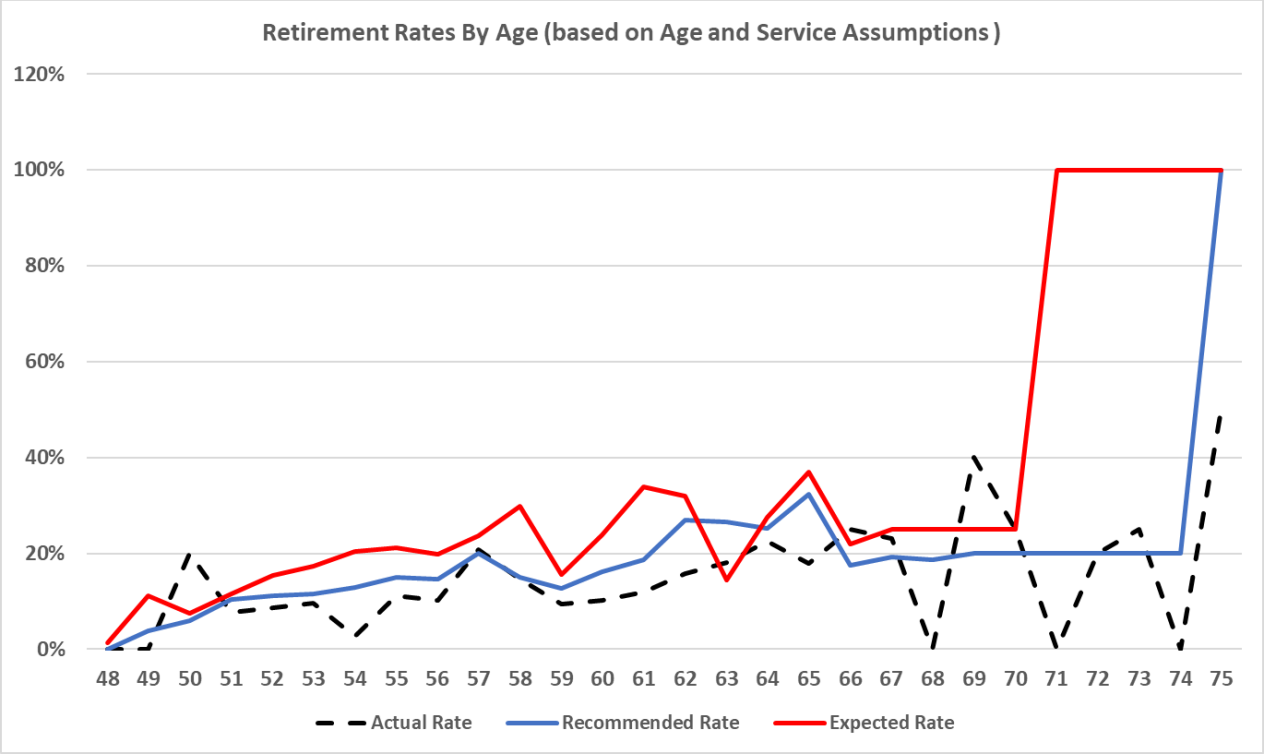
The above figures are a simplified representation of the assumed versus actual retirements based solely on age at retirement. As discussed above, most of the retirement eligibility criteria are based on a combination of age and service.

Because the Actual to Expected Ratio is 55%, the assumed retirement rates should be adjusted to reduce the number of expected retirements to better fit the actual experience of the plan. However, during 2020 to 2022 retirement plans generally experienced fewer retirements than normal, as many individuals faced uncertainty during the COVID-19 pandemic and were reluctant to retire during that period. Given this general experience, we do not recommend assigning full credibility to the retirement experience during the last 5 years. Accordingly, we do not believe that the updated assumptions should produce an Actual to Expected Ratio close to 100% but rather should fall approximately halfway between the 55% ratio produced by the current assumptions and 100%.

We recommend the rates shown in Appendix 1 as the actuarial assumption for retirement rates for future Pension Plan and OPEB Plan actuarial valuations. These rates reflect the same age and service structure as the current assumption but reflect lower rates at most age/service combinations. In addition, the recommended rates are extended from age 71 to age 75 to reflect plan experience that shows some individuals are retiring after age 71.

Illustrating actual and expected retirements by age and service does not lend itself to a simple graph so we have illustrated the rates by age by summing the retirements across all service amounts which produces an average rate across all service amounts at each age.

Figure 3: Recommended Retirement Rates Relative to Actual and Expected Rates



We tested the fit of the recommended rates using ratios of actual to expected retirements based on these new retirement rates. The new rates produce 163 expected retirements (as compared to the 122 actual retirements shown in Figure 1) and bring the A/E ratios closer to 75% overall. These rates also reflect the overall pattern of rates based on both age and service.

Figure 4: Number of Retirements – Actual versus Expected based on Current and Recommended Rates

	Number of Retirements	
	Current Rates	Recommended Rates
Actual Number	122	122
Expected Number	220	163
Actual/Expected Ratio	55.5%	74.8%

B. DROP Participation

The Pension Plan offers a Deferred Retirement Option Plan (DROP) in which a Member who is eligible for retirement benefits may elect to participate in the DROP for up to five years. A member who makes this election continues to work for the duration of DROP participation, but during this time their retirement annuity is deposited into a DROP account. The amount of their annuity is determined based upon their Credited Service and earnings history at the start of the DROP period and there are no Cost-of-Living Adjustments (COLAs) during the DROP period. At the end of the DROP period the member retires from employment and receives a one-time payment equal to their DROP account including investment earnings thereon, and then they commence regular bi-weekly annuity payments and are eligible for COLAs thereafter. They also become eligible to commence OPEB benefits at the end of the DROP period.

The current actuarial assumptions were developed based on the actuarial experience study for the 5-year period ending December 31, 2018.

Figure 5: Current DROP Election Assumptions

Age at Retirement[1]	Assumed Percentage of Members who Elect a DROP upon Retirement
< 60	90%
60-64	60%
65+	30%

[1] Age at commencement of DROP participation period.

All Members assumed to elect the DROP are also assumed to elect a 5-year DROP participation period.

Actual plan experience during 2019 to 2023 shows that 66% of retirees elected the DROP, where the likelihood of a retiree electing the DROP decreased with age as shown in the table below.

Figure 6: DROP Retirement Election Study (January 2019 – December 2023)

Age at Retirement[1]	Retirements Between January 2019 and December 2023		
	Number of Retirements Electing DROP	Total Retirements	Percentage Electing DROP
< 60	34	42	81%
60-64	36	50	72%
65+	11	30	37%
Total	81	122	66%

[1] Age at commencement of DROP participation period.

Based on the experience illustrated above, we recommend adjusting the age-based DROP elections for retiring members. We further recommend continuing to assume that a 5-year DROP participation period will be utilized by all Members who are assumed to elect the DROP.

Figure 7: Recommended DROP Election Assumptions

Age at Retirement[1]	Recommended Assumption for Percentage of Members who Elect a DROP upon Retirement
< 60	85%
60-64	70%
65+	35%

[1] Age at commencement of DROP participation period.

C. Termination

Another important actuarial assumption for the Pension and OPEB Plans is the assumption of termination of employment with SWBNO for reasons other than death, disability or retirement.

Pension Plan Members must become vested in order to be eligible for employer-provided benefits upon their retirement. The Pension Plan vesting schedule is as follows:

Years of Credited Service	Vesting Percent
Less than 5	0%
5 or more	100%

Members who terminate prior to becoming 100% vested must receive a distribution of their accumulated contributions within five years of their termination of employment.

The termination assumption uses a schedule of assumed termination rates to recognize that some of the employees will terminate before they are eligible to receive retirement benefits.

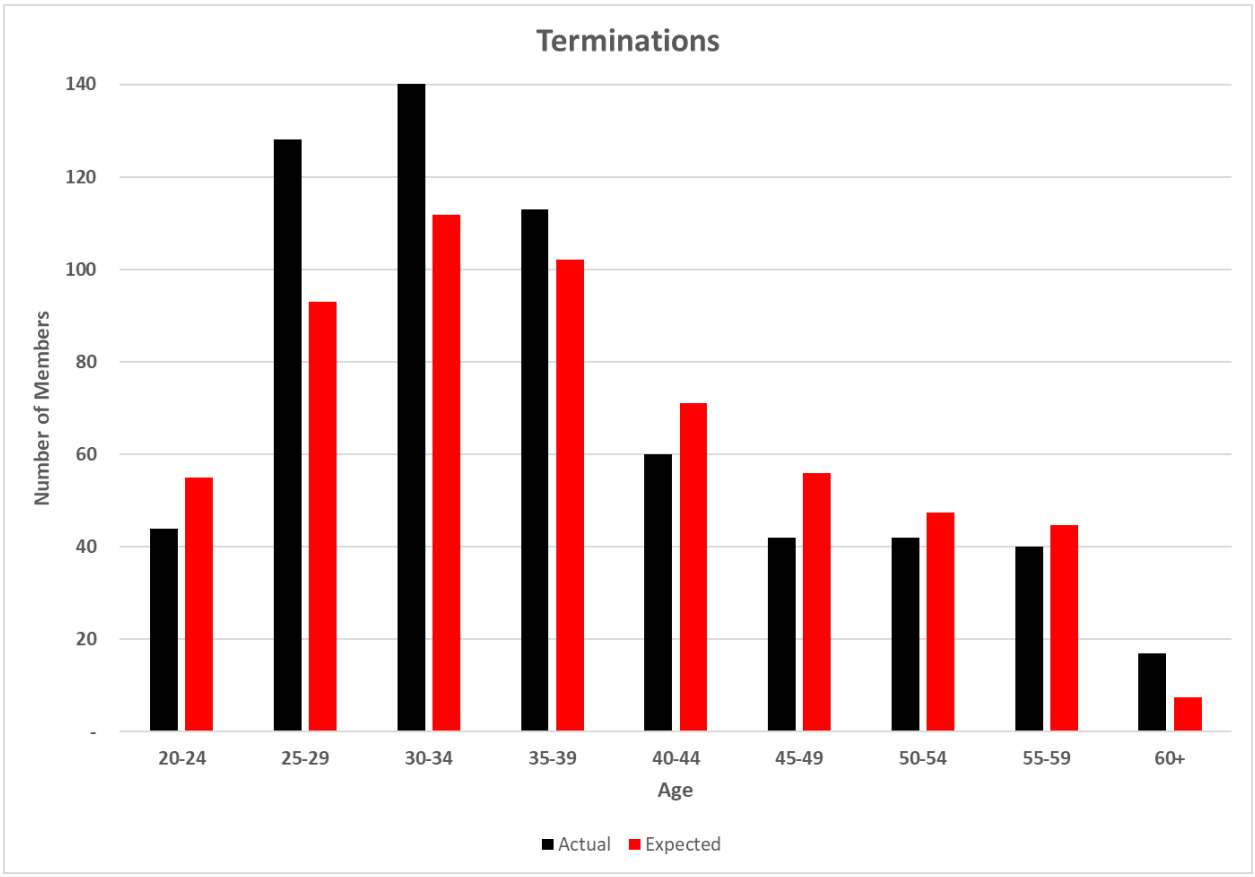
Application of the termination rates to the employee population in a Pension Plan valuation allows the actuary to calculate the actuarial present value of the benefit payments which will be made to those employees who will eventually qualify for death, disability or retirement benefits at a later date provided that they are vested at the time of termination and they do not withdraw their employee contribution

balances. For purposes of the OPEB Plan, employees who terminate prior to retirement eligibility are not eligible to receive OPEB plan benefits at any future date.

If the assumed termination rates are too low, it will be assumed that more employees will work until retirement eligibility and will qualify for benefits than will actually be the case, and the normal cost and the actuarial liability will be overstated. Conversely, if the assumed termination rates are too high, the normal cost and the actuarial liability will be understated since it will be assumed that fewer employees will qualify for retirement benefits than will actually be the case.

We studied the termination experience among SWBNO employees during the five-year period from January 1, 2019 to December 31, 2023. During this period, 646 employees terminated employment for reasons other than death, disability, or retirement. The appropriateness of the currently assumed termination rates was tested by calculating ratios of the number of actual terminations to the number of expected terminations (A/E ratio) based on the currently assumed rates. The current assumed termination rates are age-based rates with a 5-year service-based select and ultimate structure. During the select period (i.e., Credited Service less than 5 years), the assumed rates of termination are higher for fewer years of service, as well as higher at younger ages. During the ultimate period (i.e., Credited Service in excess of 5 years), the assumed rates of termination are lower than during the select period. See Appendix 2 for a complete table of the current assumed rates of termination.

Figure 8: Actual versus Expected Terminations by Age (January 2019 through December 2023)



Observations from Figure 8:

- There were fewer actual terminations than expected in the five-year age bands below age 25 and from ages 40 to 59 during the exposure period.
- There were more actual terminations than expected in the five-year age bands from ages 25 to 39 and above age 59 during the exposure period.

Before establishing recommended termination rates, we further analyzed the termination data to investigate whether or not the termination patterns continued to illustrate a pattern that varied by Credited Service.

The three tables below indicate the "fit" for each age/service group as well as in the aggregate.

Figure 9A: Actual Terminations by Years of Credited Service

Age	Years of Credited Service						
	<1	1-2	2-3	3-4	4-5	5+	Total
<20	1.00	-	-	-	-	-	1.00
20-24	16.00	15.00	6.00	5.00	1.00	1.00	44.00
25-29	24.00	40.00	27.00	12.00	9.00	16.00	128.00
30-34	17.00	31.00	21.00	23.00	12.00	46.00	150.00
35-39	11.00	16.00	17.00	16.00	12.00	41.00	113.00
40-44	9.00	16.00	10.00	6.00	6.00	13.00	60.00
45-49	4.00	5.00	7.00	6.00	5.00	15.00	42.00
50-54	3.00	8.00	6.00	6.00	1.00	18.00	42.00
55-59	-	12.00	6.00	2.00	8.00	12.00	40.00
60+	3.00	5.00	4.00	5.00	2.00	7.00	26.00
Total	88.00	148.00	104.00	81.00	56.00	169.00	646.00

Figure 9B: Expected Terminations by Years of Credited Service based on Current Assumptions

Age	Years of Credited Service						
	<1	1-2	2-3	3-4	4-5	5+	Total
<20	0.90	0.25	-	-	-	-	1.15
20-24	18.90	19.25	9.25	5.25	1.50	0.75	54.90
25-29	19.50	26.46	21.42	9.46	8.25	7.92	93.01
30-34	18.00	24.30	20.16	10.89	8.69	29.84	111.88
35-39	13.50	18.18	19.80	9.79	8.47	32.32	102.06
40-44	11.00	14.76	14.22	8.03	7.81	15.20	71.02
45-49	7.25	10.80	10.26	5.61	4.62	17.40	55.94
50-54	6.25	9.36	8.46	4.62	5.17	13.48	47.34
55-59	5.50	9.72	9.54	5.39	5.06	9.40	44.61
60+	2.10	3.00	3.40	1.40	0.04	0.00	9.94
Total	102.90	136.08	116.51	60.44	49.61	126.31	591.85

Figure 9C: A/E (Ratio of Actual to Expected Terminations) by Years of Credited Service

Age	Years of Credited Service						
	<1	1-2	2-3	3-4	4-5	5+	Total
<20	111%	0%					87%
20-24	85%	78%	65%	95%	67%	133%	80%
25-29	123%	151%	126%	127%	109%	202%	138%
30-34	94%	128%	104%	211%	138%	154%	134%
35-39	81%	88%	86%	163%	142%	127%	111%
40-44	82%	108%	70%	75%	77%	86%	84%
45-49	55%	46%	68%	107%	108%	86%	75%
50-54	48%	85%	71%	130%	19%	134%	89%
55-59	0%	123%	63%	37%	158%	128%	90%
60+	143%	167%	118%	357%	5000%		262%
Total	86%	109%	89%	134%	113%	134%	109%

Observations from Figures 9A - 9C:

- Terminations in the first five years of employment occur at higher rates than terminations occurring after five years of employment.
- The A/E ratios for all but the first year and the third year of employment are generally too high (i.e., there were more actual terminations than expected).
- The A/E ratios in the first year and third year of employment are generally too low (i.e., there were fewer actual terminations than expected).

Based on the actual termination rates, we developed preliminary recommended rates of termination that would more closely fit the experience of the five-year study period based on age and service. We tested the fit of these preliminary rates using ratios of actual to expected terminations and made additional adjustments to arrive at the recommended rates which bring the ratios closer to 100% and retain a consistent overall pattern of rates. However, during 2020 to 2022 turnover was generally higher than normal at most employers due to reduced demand and productivity due to the COVID-19 pandemic. Given this general experience, we do not recommend assigning full credibility to the termination experience during the last 5 years. Accordingly, we do not believe that the updated assumptions should produce an Actual to Expected Ratio of 100% but rather should fall between the 109% produced by the current assumptions and 100%.

We recommend the termination rates shown in Appendix 2 for future Pension Plan and OPEB Plan actuarial valuations.

Figures 10A and 10B below illustrate a comparison of the recommended termination rates to the actual termination rates and the current assumed rates.

Figure 10A: **Recommended Termination Rates for Members with less than 5 Years of Credited Service Relative to Actual and Expected Rates**

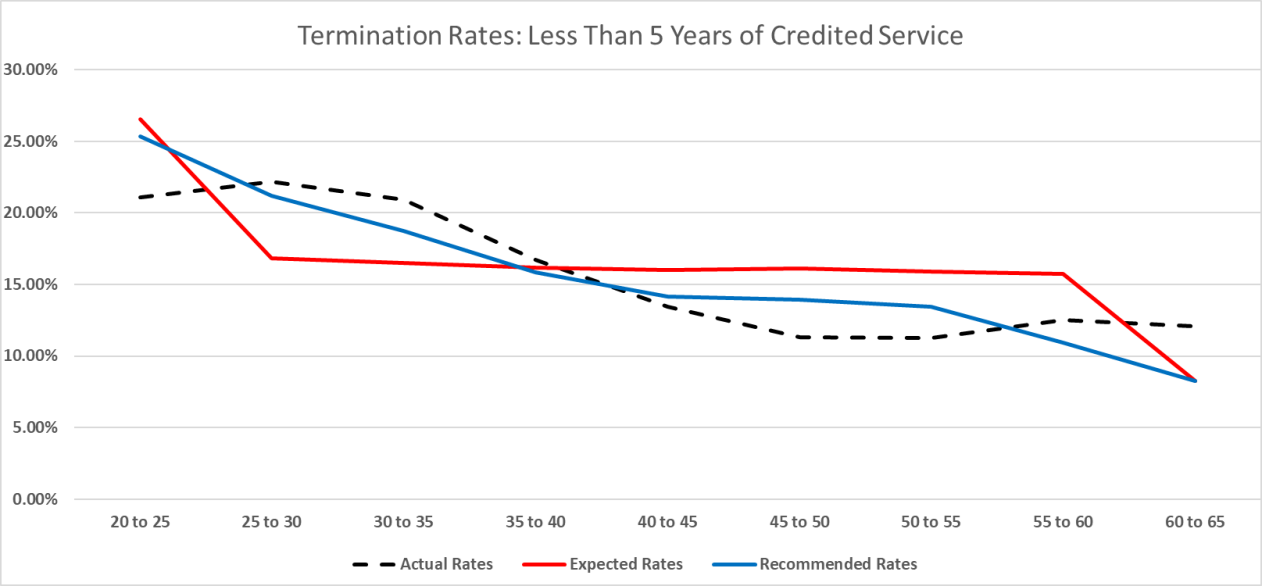
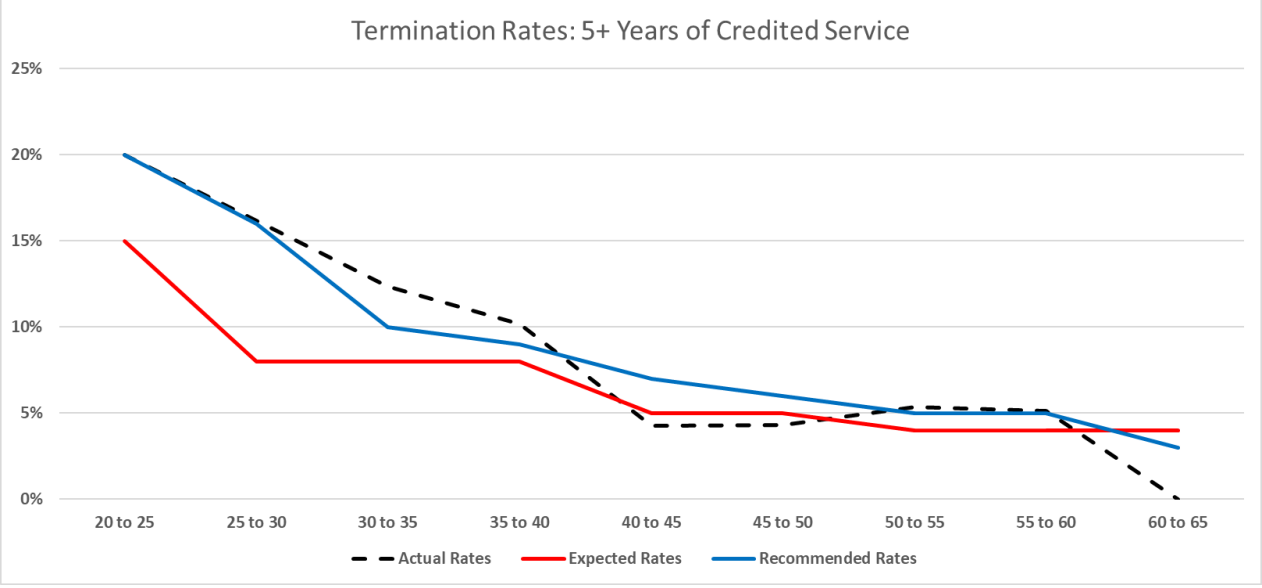


Figure 10B: **Recommended Termination Rates for Members with 5+ Years of Credited Service Relative to Actual and Expected Rates**



The resulting aggregate expected number of terminations is 626 using the recommended assumptions which compares to the actual number of terminations of 646; this would produce an A/E ratio of 103% as shown in Figure 11 below.

Figure 11: Number of Terminations – Actual versus Expected based on Current and Recommended Rates

	Number of Terminations	
	Current Rates	Recommended Rates
Actual Number	646	646
Expected Number	592	626
Actual/Expected Ratio	109.1%	103.2%

D. Withdrawal of Employee Contributions

If a Member terminates employment prior to retirement eligibility with at least five years of Credited Service, then the Member is vested in their Pension Plan benefit. If the employee does not withdraw their employee contribution account balance, then the member is eligible to receive their Retirement Allowance when they reach their retirement eligibility age.

The Withdrawal of Employee Contributions assumption is used to estimate the portion of terminating vested members who will withdraw their account balance and forfeit their rights to future Pension Plan benefits. (Non-vested terminating members must withdraw their accumulated contributions within five years of their termination of employment.)

The current assumption assumes that 75% of terminated vested Members will withdraw their account balances. Actual experience from 2019 to 2023 indicates that 66% (i.e., 110 out of 168) of vested terminated employees withdrew their balances prior to reaching retirement age. **Accordingly, we recommend that this assumption remain unchanged (i.e., assume 75% of terminated vested Members will withdraw their account balances).**

E. Disability

If a Member incurs a condition which is determined to be a permanent and total disability that prohibits a Member from doing their job (subject to the conditions further enumerated in the Rules and Regulations of the Retirement System) and the Member has at least 10 years of Credited Service at the time of the disability, they shall be entitled to a disability retirement benefit payable immediately upon their disability retirement date.

The five-year experience study allowed us to compare the actual number of disabilities incurred during the study period with the expected number according to the current assumed disability rates, which are a function of age. The comparison of the actual number of disabilities to the expected number of disabilities was 3 to 46.4 for the five years ending December 31, 2023, which produces an A/E (actual to expected) ratio of 6%, indicating that the current disability rates are high compared to the actual experience.

Even though the number of actual disabilities was very small compared to the assumed number of disability retirements, disabilities do not typically follow the same more predictable patterns of other decrements like termination rates and retirement rates because they are mostly related to accidents and medical conditions that are shock events. Thus, we do not believe the disability rates should be fully adjusted to reflect the actual experience over this 5-year period due to the small sample size and the nature of this decrement. We made a similar recommendation in the prior experience study and given the low number of eight (8) actual disabilities over the last 10 years, we recommend a larger move towards

recognizing this experience than the conservative recommendation in the prior experience study. Using the recommended assumptions produces an aggregate expected number of disabilities of 11.6 which compares to the actual number of disability retirements of 3; this would produce an A/E ratio of 26% but it still allows room for variations in the number of actual disabilities. We recommend re-evaluating this assumption in five years. If the A/E ratio remains low over the next five years, then we would recommend continuing to assign higher credibility to actual experience and consider reducing the disability rates again at that point.

We recommend the disability rates shown in Appendix 3 as the actuarial assumption for disability rates for future Pension Plan and OPEB Plan actuarial valuations.

F. Mortality

The mortality assumption is used to project the expected lifetime for each Member to determine the period over which retirement benefits are expected to be paid as annuities.

In order for a plan to develop a mortality table based solely on the plan's own experience it must be large enough to have at least 1,000 deaths at each age and gender. The Society of Actuaries' Credibility Educational Resource for Pension Actuaries published a paper called the Application of Credibility Theory to Mortality Assumption in August 2017 which describes a Limited Fluctuation Credibility Theory (LFCT) approach to adjusting a published mortality table by a factor based on a plan's own experience. Per this paper, for plans that have at least 1,082 deaths in aggregate, a custom mortality table can be developed by multiplying the mortality rates in a published table by the ratio of actual to expected deaths. However, during the period from January 2019 to December 2023, the Pension Plan only had 149 deaths of non-disabled annuitants. Accordingly, the Pension Plan is not large enough for its actual mortality experience to be the basis of the mortality assumption.

For a plan of this size, it is standard practice to use a published mortality table that is considered appropriate for a retirement plan. Through the years there have been a number of major mortality studies for the purpose of developing a published mortality table or set of mortality tables. One of the common findings of these studies is that mortality rates in the United States have gradually become lower over extended periods of time, often referred to as improvement in mortality (i.e., people are living longer). Therefore, a newer set of mortality tables is usually considered more appropriate for valuing a pension plan than an older set of tables.

In January of 2019, the Society of Actuaries (SOA) published the Pub-2010 Public Retirement Plans Mortality Tables Report. This report is the result of a comprehensive study of the mortality experience of public pension systems across the United States, where such experience comes from calendar years 2008-2013. The report published mortality tables for three different classes of employees, Teachers, Public Safety and General Employees, as well as tables for Retirees, Disabled Retirees and Contingent Survivors. Each of the Employee tables are subdivided into Above-Median Income, Below-Median Income and a Total Dataset, and furthermore subdivided into amount-weighted tables or headcount-weighted tables, where amount-weighted should be used when the benefits are tied to compensation. Similarly, the Retiree tables are divided into Above and Below Median based on benefit amount. The report indicates that the mortality tables should be projected with an appropriate mortality improvement projection scale.

There was insufficient credible data in this study to develop separate mortality tables by geographic region. However, Section 4.4.6 of the report noted that mortality in the South region was higher than any other region. Furthermore, the U.S. Department of Health and Human Services' Centers for Disease Control (CDC) and Prevention published Volume 68, Number 9 of its "National Vital Statistics Reports" in June 2019 which indicates that death rates in Louisiana are higher than U.S. average death rates.

In order to recognize the higher mortality in the South region, and in particular Louisiana's higher mortality, we have applied the Society of Actuaries' LFCT approach by substituting Louisiana's mortality experience for that of the Pension Plan to derive adjustment factors for these new mortality tables.

The Pub-2010 Public Mortality tables report was published shortly before the prior experience study was completed. As a result, the Pub-2010 tables with modifications to reflect the higher death rates in Louisiana were adopted by the Board. **The current mortality assumptions are:**

- **Employees –** Use the amount-weighted General Employee Table (i.e., PubG-2010) multiplied by 122% for Males and 119% for Females
- **Healthy Retirees –** Use the General Table for Healthy Retirees (i.e., PubG-2010) multiplied by 122% for Males and 119% for Females
- **Disabled Retirees –** Use the General Table for Disabled Retirees (i.e., PubG-2010) multiplied by 122% for Males and 119% for Females
- **Contingent Survivors –** Use the General Table for Contingent Survivors (i.e., PubG-2010) multiplied by 122% for Males and 119% for Females

The above base mortality tables are subject to mortality improvement projection under **Scale MP-2019 adjusted by multiplying the Male factors by 86% and the Female factors by 79%**, in order to reflect Louisiana's slower rate of mortality improvement than the United States in the aggregate.

The above adjustment factors were developed in the prior experience study by comparing Louisiana's death rates and mortality improvement to the same information for the United States in aggregate by reviewing statistics published by the CDC for the period from 1999 to 2017.

There have not been any comprehensive mortality studies published with respect to Public Pension Plans since the Pub-2010 Public Retirement Plans Mortality Tables Report was published in 2019. Therefore, we recommend continuing to use these base mortality tables.

Prior to 2022, the SOA's Retirement Plans Experience Committee (RPEC) updated the MP scale each year to reflect additional mortality improvement data, but the SOA has not updated the MP scale since 2021 due to the effects of COVID-19. Per the SOA's RPEC 2024 Mortality Improvement Update report, "The COVID-19 pandemic—which began in 2020—led to a sharp increase in mortality rates. These mortality rates have declined significantly since the onset of the pandemic, but emerging data reflecting U.S. mortality through June of 2024 suggests that there is still a small amount of excess mortality for the 65+ population—around 2.5%, according to RPEC's updated analysis." Furthermore, the report states, "While the worst effects of the pandemic on mortality have subsided, there is not yet sufficient post-pandemic data upon which to develop an updated MP scale. Therefore, RPEC will not release a new scale in 2024."

As such, we recommend updating the Mortality Projection Scale from MP-2019 to MP-2021 to reflect the most recently published projection scale. We also recommend that the use of the MP-2021 scale be updated in future valuations to reflect the most recently published MP-20xx table, in the event the RPEC publishes a new table in advance of the performance of the annual valuation.

We also recommend applying updated adjustment factors to the mortality tables and to the projection scale in order to reflect more recent data published by the CDC. The following table shows CDC statistics from 1999 to 2019. Although the CDC has also published statistics for 2020, 2021 and 2022, consistent with the SOA's practice of not updating the MP projection scale since the onset of the COVID-19 pandemic, in this analysis we are not including CDC statistics for years after 2019 due to the effects of COVID-19.

Figure 12: U. S. Death Rates published by the CDC in National Vital Statistics Report

Year	Age-Adjusted Mortality Rate				Year-Over-Year Age-Adjusted Mortality Improvement Rate			
	Louisiana		United States		Louisiana		United States	
	Male	Female	Male	Female	Male	Female	Male	Female
1999	1,264.5	846.7	1,067.0	734.0	-	-	-	-
2000	1,233.6	839.2	1,053.8	731.4	-2.44%	-0.89%	-1.24%	-0.35%
2001	1,234.7	847.3	1,035.4	725.6	0.09%	0.97%	-1.75%	-0.79%
2002	1,225.5	843.7	1,030.6	723.6	-0.75%	-0.42%	-0.46%	-0.28%
2003	1,224.6	853.5	1,010.3	715.2	-0.07%	1.16%	-1.97%	-1.16%
2004	1,195.0	830.7	973.3	690.5	-2.42%	-2.67%	-3.66%	-3.45%
2005	1,229.1	865.3	971.9	692.3	2.85%	4.17%	-0.14%	0.26%
2006	1,160.4	803.4	943.5	672.2	-5.59%	-7.15%	-2.92%	-2.90%
2007	1,117.1	790.4	922.9	658.1	-3.73%	-1.62%	-2.18%	-2.10%
2008	1,130.5	800.3	918.8	659.9	1.20%	1.25%	-0.44%	0.27%
2009	1,086.8	763.3	890.9	636.8	-3.87%	-4.62%	-3.04%	-3.50%
2010	1,081.6	760.1	887.1	634.9	-0.48%	-0.42%	-0.43%	-0.30%
2011	1,054.3	750.9	875.3	632.4	-2.52%	-1.21%	-1.33%	-0.39%
2012	1,069.5	759.1	865.1	624.7	1.44%	1.09%	-1.17%	-1.22%
2013	1,065.1	759.0	863.6	623.5	-0.41%	-0.01%	-0.17%	-0.19%
2014	1,060.3	758.1	855.1	616.7	-0.45%	-0.12%	-0.98%	-1.09%
2015	1,046.2	730.7	863.2	624.2	-1.33%	-3.61%	0.95%	1.22%
2016	1,034.6	731.9	861.0	617.5	-1.11%	0.16%	-0.25%	-1.07%
2017	1,052.5	738.0	864.5	619.7	1.73%	0.83%	0.41%	0.36%
2018	1,037.3	730.5	855.5	611.3	-1.44%	-1.02%	-1.04%	-1.36%
2019	1,021.6	717.7	846.7	602.7	-1.51%	-1.75%	-1.03%	-1.41%
Average	1,125.0	786.7	926.5	659.4	-1.04%	-0.79%	-1.14%	-0.97%
Ratio of Louisiana Avg. to U.S. Avg.	**121.4%**	**119.3%**	N/A	N/A	**91.0%**	**81.6%**	N/A	N/A
Ratio of Louisiana in 2019 to U.S. in 2019	120.7%	119.1%	N/A	N/A	N/A	N/A	N/A	N/A

Observations from Figure 12:

- Louisiana's Male and Female mortality rates are approximately 121% and 119% higher, respectively, than their United States counterparts in 2019.
- Louisiana's annual average mortality improvement rates from 1999 to 2019 for Males and Females are approximately 91% and 82%, respectively, of their United States counterparts for the same period.

We recommend maintaining the current base mortality assumption of Pub-2010 mortality tables as follows but changing the adjustment factors based on recent mortality experience in Louisiana as compared to the experience of the entire U.S.:

- **Employees – Use the amount-weighted General Employee Table (i.e., PubG-2010) multiplied by 121% for Males and 119% for Females**
- **Healthy Retirees – Use the General Table for Healthy Retirees (i.e., PubG-2010) multiplied by 121% for Males and 119% for Females**
- **Disabled Retirees – Use the General Table for Disabled Retirees (i.e., PubG-2010) multiplied by 121% for Males and 119% for Females**
- **Contingent Survivors – Use the General Table for Contingent Survivors (i.e., PubG-2010) multiplied by 121% for Males and 119% for Females**

Lastly, in conjunction with the recommendation of the Pub-2010 report and the applicable Actuarial Standard of Practice for selecting mortality assumptions, **we recommend using the current standard for mortality improvement projection under Scale MP-2021 (or its successor in effect at the time each future valuation is performed). However, in recognition of Louisiana's slower rate of mortality improvement than the United States in the aggregate, we recommend adjusting Scale MP-2021 by multiplying the Male factors by 91% and the Female factors by 82%.**

The table below compares the recommended mortality assumption with the current mortality assumption by illustrating the remaining years of life expectancy for some representative ages during retirement, both male and female. As you can see from the table, the changes in mortality assumption will result in essentially no change in the expected payout periods for monthly benefits for males and a slight reduction in the expected payout periods for monthly benefits for females.

Figure 13: Remaining Life Expectancy of a Healthy Retiree

Gender	Age on January 1, 2024	Remaining Years of Life Expectancy		
		PubG-2010[1] Projected with Scale MP-19[2] (Current)	PubG-2010[3] Projected with Scale MP-21[4] (Recommended)	Change [(Recommended) – (Current)]
Male	50	33.0	33.1	0.1
	55	28.3	28.3	0.0
	60	23.7	23.7	0.0
	65	19.3	19.3	0.0
	70	15.2	15.2	0.0
Female	50	36.1	36.0	-0.1
	55	31.3	31.2	-0.1
	60	26.5	26.4	-0.1
	65	21.9	21.8	-0.1
	70	17.5	17.4	-0.1

1 Male rates multiplied by 122% and female rates multiplied by 119%.
2 Male rates multiplied by 86% and female rates multiplied by 79%.
3 Male rates multiplied by 121% and female rates multiplied by 119%.
4 Male rates multiplied by 91% and female rates multiplied by 82%.

G. Credited Service for Unused Leave

Under the Pension Plan, Credited Service is granted for Unused Leave at the time of retirement for purposes of computing the Retirement Allowance and satisfying eligibility requirements for Retirement benefits, but not for purposes of satisfying Vesting requirements. Unused Leave is granted as follows:

a. Unused Sick Leave: A Member shall receive Credited Service for Unused Sick Leave on a proportional basis where one year of Credited Service is granted for each 250 days of Unused Sick Leave. In applying for a Retirement Allowance, a Member shall be required to use all of his Unused Sick Leave towards meeting the eligibility requirements of the Credited Service component of the Retirement Allowance condition of 80 years based on the sum of age and years of Credited Service.

b. Unused Annual Leave: A Member shall receive Credited Service for Unused Annual Leave subject to a maximum of 111 days of unused leave provided the Member is Vested prior to including this service. Credit is granted on a proportional basis where one year of Credited Service is granted for each 250 days of Unused Annual Leave.

Members retiring during the period of the prior experience study were granted an average of 131 days of Credited Service for Unused Sick Leave and Unused Annual Leave combined, which converts to 0.524 (i.e., 131 / 250) years of Credited Service.

Based on the above, the current assumption is that Credited Service is assumed to increase by 0.50 years for Unused Leave at the time a Member is within one year of retirement eligibility. This assumption accelerates the assumed retirement date for some Members and also increases the Credited Service used in projecting the Retirement Allowance for all retiring Members. As of this writing, we have been unable to obtain comparable information for the 5-year period ending December 31, 2023. **As such, we recommend no change to this assumption.**

In addition, a Member may purchase Credited Service in the following situations subject to limitations imposed under the Rules and Regulations of the Retirement System:

a. Military Service;

b. Transfers Between Retirement Systems [pursuant to Louisiana Revised Statutes (La. R.S.) 11:141-43 to the extent it does not conflict with La. R.S. 11:3822];

c. Repayment After Reemployment for former Members, who previously received a distribution of their Accumulated Contributions and become reemployed; and

d. Hurricane Katrina for any Member placed on disaster leave by the Employer beginning October 1, 2005 due to Hurricane Katrina and who returned to work prior to April 1, 2006.

With respect to the purchase of Credited Service that is permitted under the limited circumstances described above (i.e., for Military Service, Transfers, repayment of distributions and Hurricane Katrina leave), SWBNO reports to us information regarding service purchases in the annual actuarial valuation data in the year following their occurrence. We do not expect the purchase of Credited Service to materially affect the results of the actuarial valuations.

Therefore, consistent with the recommendation from our prior experience study, we continue to recommend that the Credited Service purchases be reflected as they occur rather than make a new assumption to estimate their occurrence for these limited circumstances.

H. Other Demographic Assumptions

The following are recommendations for additional demographics.

1. Spouse Age Difference:

The spouse age difference is used in the determination of death benefit values and certain payment form options for retired members. Under the current assumptions, female spouses are assumed to be two years younger than their male counterparts. Historically, SWBNO has not stored spouse data electronically. We have worked with the Benefits Department to obtain spousal age data but only 21 actual spouse dates of birth are available at this time. Based solely on these 21 individuals, the male spouses are 2.8 years older than female spouses on average. We do not believe the size of this group is material enough to justify assigning significant credibility to this experience. As such, **we recommend no change to this assumption.** This assumption does not materially affect the Retirement Plan results. We will continue to work with the Benefits Department so that additional spousal age data should be available at the time the next experience study is performed.

2. Form of Payment:

In addition to the normal form of a straight life annuity (i.e., an annuity paid during the member's life that ceases upon the member's death), Pension Plan Members have several optional joint and survivor forms of actuarially equivalent monthly retirement benefits from which to select. The current assumption is that 75% of Members who are married will elect a straight life annuity at retirement and 25% will elect a Joint and Survivor annuity (without Pop-up) with a 50% continuation percentage. Figure 14 illustrates the number of Members who elected a straight life annuity or an optional joint and survivor form of annuity based on retirements that occurred between January 2019 and December 2023.

Figure 14: Form of Annuity Election for Retirements (January 2019 to December 2023)

Elected Form of Payment	Number of Retirees	Percent Elected
Straight Life Annuity	109	83.8%
Joint and Survivor*	21	16.2%
Total	130	100.0%

* The average Joint and Survivor percentage elected by these members was 45%.

Furthermore, the data provided does not indicate if the retirees who elected Straight Life Annuities are married or single. Currently, 85% of Members are assumed to be married at retirement. Since marital data on Members electing Straight Life Annuities is not currently available, we will continue to use the 85% married assumption. If we assume 85% of new retirees are married, then 111 of the 130 members who retired between January 2019 and December 2023 would be assumed to be married. Thus, of the assumed married retirees, 21 out of 111, or 19%, elected a Joint and Survivor option.

We recommend assuming that 80% of the retiring members who are married elect a Straight Life Annuity and the remaining 20% elect a Joint and Survivor option (without Pop-up) with a 50% continuation percentage.

I. Inflation / COLA

Inflation is a building block component of both the Compensation Increase assumption and the Investment Return assumption. These two economic assumptions should be consistent with each other and contain the same assumed rate of inflation. In addition, the Inflation assumption forms the basis for the annual Cost of Living Adjustment (COLA) assumption and is used to project the Earnable Compensation limit under Internal Revenue Code (IRC) §401(a)(17) and the benefit limitations under IRC §415(b). The current annual inflation assumption is 2.50%.

The most widely recognized measure of inflation is the Consumer Price Index for Urban Consumers (CPI-U). The table below shows the average annual increase in the CPI-U for periods of varying duration.

Figure 15: 55-Year History of the Average Annual Increase in CPI-U from December to December

Period	Number of Years in Period	Geometric Average Annual Increase
1968-2023	55	4.00%
1973-2023	50	3.86%
1978-2023	45	3.41%
1983-2023	40	2.81%
1988-2023	35	2.71%
1993-2023	30	2.51%
1998-2023	25	2.54%
2003-2023	20	2.58%
2008-2023	15	2.55%
2013-2023	10	2.79%

Over the long-term (i.e., 30 to 55 years), the CPI-U has averaged an annual increase of 2.51% to 4.00%. However, in recent past experience (i.e., 10 to 25 years), the CPI-U has averaged an annual increase of 2.54% to 2.79%. Because the Pension Plan valuation projects benefit payments over 70 years into the future, long-term expected trends should be emphasized while giving reasonable weight to recent past experience. **Accordingly, we recommend continuing to utilize an annual inflation assumption of 2.50% which is at the lower end of the long-term range.** The IRC §401(a)(17) and IRC §415(b) limitations will be projected to increase annually at the 2.50% annual inflation assumption.

The Retirement Allowance for Members over age 65 is subject to a COLA each January based on the change in inflation for the 12-month period ending in August of the preceding year as measured under the Consumer Price Index for Urban Wage Earners (CPI-W). If the change in the CPI is negative or zero, then no COLA is given; otherwise, if the CPI increase exceeds 2%, then the COLA is limited to 2%. The COLA is not compounded annually. The current annual COLA assumption is 2.00%.

The table below shows the average annual increase in the CPI-W, reflecting a corridor of 0% to 2% each year, for periods of varying duration.

Figure 16: 45-Year History of the Average Annual Increase in CPI-W from August to August where CPI-W is subjected to a Corridor from 0% to 2% Each Year

Period	Number of Years in Period	Average Annual Increase
1978-2023	45	1.77%
1983-2023	40	1.74%
1988-2023	35	1.72%
1993-2023	30	1.67%
1998-2023	25	1.63%
2003-2023	20	1.55%
2008-2023	15	1.41%
2013-2023	10	1.46%

Over the long-term (i.e., 30 to 45 years), the CPI-W has averaged an annual increase (subject to a 0% to 2% corridor) of 1.67% to 1.77%. In recent past experience (i.e., 10 to 25 years), the CPI-W has averaged an annual increase (subject to a 0% to 2% corridor) of 1.41% to 1.63%. Because the Pension Plan valuation projects benefit payments over 70 years into the future, long-term expected trends should be emphasized while giving reasonable weight to recent past experience. **Accordingly, we recommend utilizing an annual COLA increase assumption of 1.65% which is at the low end of the long-term range.**

J. Compensation Increases

When the actuarial cost method for a pension plan requires projection of future retirement benefits that are a function of future earnings, it is necessary to project the current earnings of the individual plan participants for each future year in which they will accrue benefit credits to be financed by the employer. In the actuarial valuation for the Pension Plan, the Entry Age Normal actuarial cost method requires such a projection of future earnings. Salaries are projected through a compensation increase assumption that ideally should reflect the anticipated effect of (1) merit, promotion, and longevity increases and (2) general wage increases, which consist of price inflation increases and increases in excess of price inflation generally referred to as productivity increases.

The general wage increase assumption is the larger part of each annual increase assumed at most ages. The exceptions are for the first few years of employment at the younger ages. While the actual general wage increase for any year will vary from employer to employer, the average annual general wage increase for the long-term future should be influenced by competitive pressures from other employers in the region. The Merit, Promotion, and Longevity (MPL) component is usually the smaller part of each annual increase assumed. The actual MPL increases will vary from employee to employee; so, the assumed MPL increases are expected averages over a working career for each age.

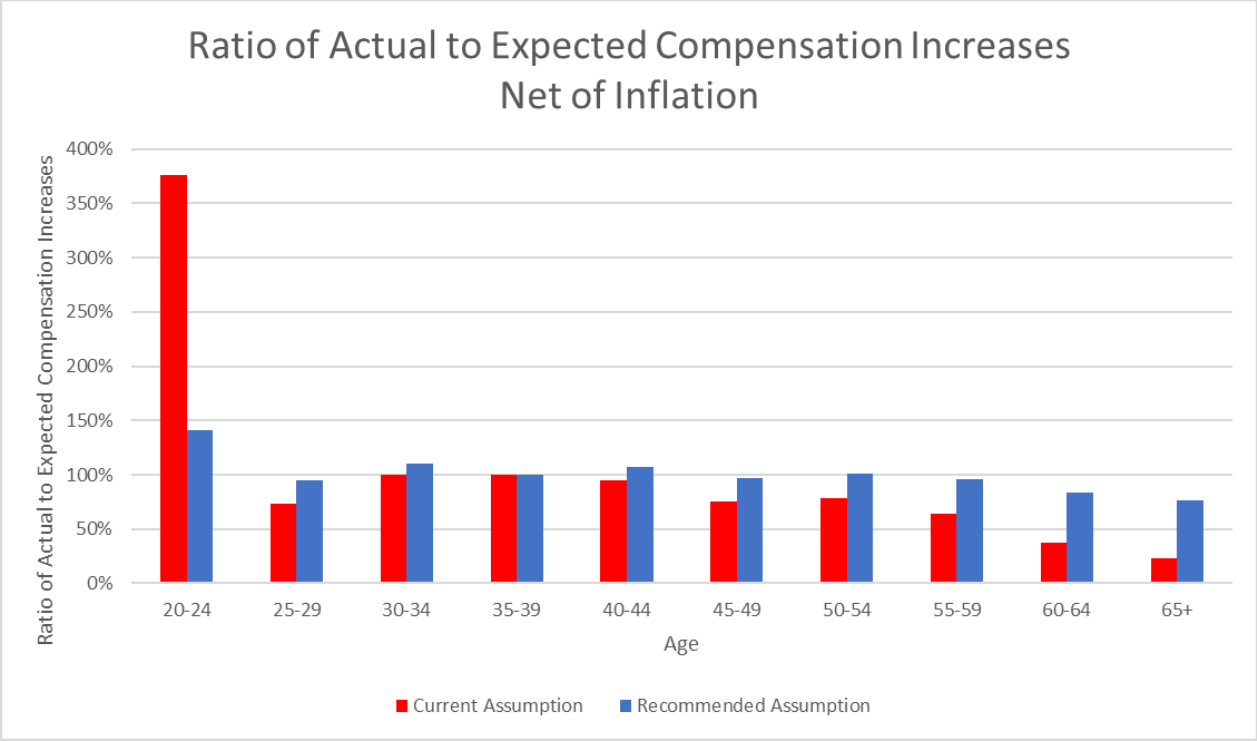
We have not studied the SWBNO salary experience with the purpose of determining actual productivity increases or real increases in earnings separate from MPL increases. Productivity salary increases would be very difficult to isolate among SWBNO participants because we only have data on the total salary increase, if any. Even though we would expect different levels of salary increases over several years, the salary levels of SWBNO employees over the long term must be reasonably competitive with applicable private and public sector businesses and industries that experience productivity gains and pass some part of them to their employees in salary increases.

For this current experience study of salary increases, we included up to six years of annual payrate increases per participant. Each annual payrate was categorized by age group and the compensation increase rate for each age was determined net of actual inflation. We then compared the actual compensation increase rates for each age group to the current rates in order to see the underlying patterns of compensation increases during that period.

Based on the comparisons to the current assumed rates, we recommend adjustments to the compensation increase assumption for most age groups based upon the actual experience (net of inflation) demonstrated by the Members. Those recommended increases are then adjusted by assumed inflation to determine the final recommended compensation increase assumption. Since it is important for the inflationary component of the compensation assumption to be consistent with the inflationary component of the investment return assumption, the assumed annual increase in compensation due to price inflation is 2.50%. (See Section III.I. of this report for additional details.)

Figure 17 below shows the ratio of actual earnings net of inflation to expected earnings under both the current assumption and the recommended assumption for all employees in five-year age bands. This ratio is an indicator of the fit of the assumed compensation increases to the actual compensation increases over the exposure period. A ratio of 100% indicates alignment between the assumption and the actual experience.

Figure 17: Ratio of Actual to Expected Earnings Net of Inflation under the Current Assumption and Recommended Assumption for All Employees



Observations from Figure 17:

- Actual compensation increases were higher than expected based on the current assumption (i.e., the red bar is above 100% in the above graph) in the youngest five-year age band (i.e., ages 20-24) during the exposure period.

- Actual compensation increases were lower than expected based on the current assumption (i.e., the red bar is below 100% in the above graph) in the age 25-29 age band and the five-year age bands above age 39 during the exposure period.

- Recommended compensation increases below age 25 are more than double the assumption for any other age band, but this assumption is still low relative to the actual experience of this age group which experienced 14% increases (net of inflation) during the exposure period.

- Recommended compensation increases from ages 25 to 59 yield approximately the same compensation increases that the plan actually experienced during the exposure period while smoothing out some anomalies.

- Recommended compensation increases above age 59 are slightly higher than actual experience during the exposure period and are designed to smooth the volatility experienced by this group which is small relative to the other age bands.

We recommend the compensation increase assumption shown in Figure 18 and reproduced in Appendix 4 that was developed from the five-year experience study for future actuarial valuations of the Pension Plan.

Figure 18: Current and Recommended Compensation Increase Assumptions

Age	Current Average Annual Increase[1]	Recommended Average Annual Increase[1]
20 - 24	6.25%	12.50%
25 - 29	5.75	5.00
30 - 34	5.25	5.00
35 - 39	4.75	4.75
40 - 44	4.75	4.50
45 - 49	4.75	4.25
50 - 54	4.75	4.25
55 - 59	4.75	4.00
60 - 64	4.75	3.50
65+	4.00	3.00

[1] Includes 2.50% inflation component.

K. Investment Return

The current investment return assumption established by the employer is 7.00% per year net of investment-related expenses. The SWBNO Employees' Retirement System Investment Policy Statement (IPS) was amended in 2022 after the last experience study was completed. At that time, we reviewed the changes to the IPS and did not recommend a change to the investment return assumption, and the employer elected to continue to use the 7.00% assumption. We have updated our review of this assumption, for purposes of this current experience study to reflect current investment statistics and information, and this section describes our independent analysis used in this assessment.

A building-block method is used to assess the reasonableness of the Investment Return assumption. There are three components to the investment return assumption: (1) the rate of inflation, (2) the real rate of return (net of inflation) and (3) investment-related expenses. Each component represents the

annual average rate expected over the long-term future. While this is a theoretical approach, it provides a reasonable basis for the selection and/or analysis of an investment return assumption.

In the building-block method, historical markets are studied and long-term historical relationships between equities and fixed-income are preserved consistent with the widely accepted capital market principle that assets with higher volatility generate a greater return over the long run. The long-term portfolio return is established via a building block approach with proper consideration of diversification and rebalancing. Next, best-estimate ranges of expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. The ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by an asset allocation percentage which is based on the nature and mix of current and expected plan investments. This weighted-return is then increased by expected inflation and reduced by assumed investment expenses.

Pension Trust Fund assets are held in three different accounts: Hancock Whitney for the investment managers to invest, CapitalOne for the payment of benefits, and LAMP for DROP members to accumulate DROP payments during their DROP Participation period. Historically, approximately 95.5% of total trust assets are invested in the Hancock Whitney account with the remaining 4.5% of assets split between the CapitalOne and LAMP accounts.

The IPS establishes the guidelines for the investment of the assets held in the Hancock Whitney subaccount of the Trust Fund. Per the IPS as amended February 16, 2022, the target asset allocation and the associated market index used as the stated benchmark for each asset class have been used to develop the expected real return assumption as follows:

Figure 19: Target Asset Allocation for Hancock Whitney Subaccount per the SWBNO Employees' Retirement System Investment Policy Statement

Asset Class in Hancock Whitney Subaccount	Target Allocation	Market Index Used to Develop Expected Real Return of Asset Class
U.S. Large Cap Equities	25.00%	Russell 1000 Index / S&P 500 Index
U.S. Mid Cap Equities	4.00%	Russell Mid Cap Index / S&P 400 Index
U.S. Small Cap Equities	5.00%	Russell 2000 Index
Non-U.S. Large Cap Equities	15.00%	MSCI ACWI ex USA Index / MSCI EAFE Index
Non-U.S. Small Cap Equities	3.00%	MSCI ACWI ex-US Small Cap / MSCI EAFE Small Cap Index
Emerging Market Equities	3.00%	MSCI Emerging Markets Index
Broad Fixed Income	25.00%	Bloomberg US Aggregate Index
Private Equity	10.00%	Cambridge Associates All Private Equity Index / Pitchbook All Private Equity Index
Global Infrastructure	7.00%	CPI + 4%
Core Real Estate	3.00%	NFI-ODCE Index
Total in Hancock Whitney	**100.00%**	**N/A**

Figure 20: Asset Allocation for CapitalOne and LAMP Subaccounts

Asset Class in Capital One and LAMP Subaccounts	Target Allocation	Market Index Used to Develop Expected Real Return of Asset Class
Cash and Cash Equivalents	100.00%	3-month T-Bills

These above indices have the following historical annual real returns (i.e., the return after removing the effect of inflation as measured by CPI-U):

Figure 21: Geometric Average Annual Real Returns of Market Indices

Geometric Average Annual Real Return											
Period	Number of Years	Russell 1000 Index	Russell Mid Cap Index	Russell 2000 Index	MSCI EAFE Index	MSCI ACWI ex USA Small Cap	MSCI Emerging Markets Index	S&P Developed REIT Index[1]	CPI + 4%[2]	Cambridge Associates All Private Equity Index	3-month T-Bills
1979-2023	45	8.28%	9.07%	7.30%	5.15%	-	-	-	4.00%	-	-
1984-2023	40	8.25%	8.60%	6.16%	5.61%	-	-	-	4.00%	-	0.61%
1989-2023	35	7.92%	8.43%	6.44%	2.39%	-	5.88%	-	4.00%	-	0.16%
1994-2023	30	7.48%	7.89%	5.90%	3.06%	-	2.24%	5.77%	4.00%	-	-0.15%
1999-2023	25	5.05%	6.59%	5.24%	2.29%	5.00%	5.20%	5.78%	4.00%	10.23%	-0.69%
2004-2023	20	7.01%	7.06%	5.39%	3.41%	5.14%	4.51%	4.26%	4.00%	11.69%	-1.15%
2009-2023	15	11.19%	10.75%	8.53%	4.76%	6.99%	4.27%	6.66%	4.00%	14.07%	-1.68%
2014-2023	10	8.77%	6.46%	4.25%	1.94%	2.45%	0.25%	3.16%	4.00%	12.31%	-1.55%

[1] Used as a reasonable market index in place of the NFI-ODCE Index.
[2] CPI + 4% is the benchmark used to measure the Global Infrastructure Fund per the IPS. However, CPI+4% has a real return of 4% once CPI is removed from the gross return.

Based on these historical returns for periods of 20 years or more, the following reasonable real return ranges have been developed giving more weight to longer periods of return:

Figure 22: Reasonable Real Investment Return Assumptions for Asset Classes

Reasonable Real Investment Return Assumptions				
Asset Class	**Low**	**Midpoint**	**High**	**Selected Assumption**
U.S. Large Cap Equities	5.05%	6.67%	8.28%	6.50%
U.S. Mid Cap Equities	6.59%	7.83%	9.07%	7.75%
U.S. Small Cap Equities	5.24%	6.27%	7.30%	6.25%
Non-U.S. Large Cap Equities	2.29%	3.95%	5.61%	4.00%
Non-U.S. Small Cap Equities	5.00%	5.07%	5.14%	5.00%
Emerging Market Equities	2.24%	4.06%	5.88%	4.00%
Broad Fixed Income	0.57%	1.95%	3.32%	2.00%
Private Equity	10.25%	11.00%	11.75%	10.25%
Global Infrastructure	4.00%	4.00%	4.00%	4.00%
Core Real Estate	4.26%	5.02%	5.78%	4.75%
Cash and Cash Equivalents	-1.15%	-0.27%	0.61%	0.50%

Figures 23 and 24 illustrate how the target allocation of each asset class is multiplied by the real rate of return for each asset class to determine the total expected real rate of return of each subaccount:

Figure 23: Development of Real Rate of Investment Return Assumption for Hancock Whitney Subaccount based on Target Allocation

Asset Class in Hancock Whitney Subaccount	Investment Policy Statement Target Allocation (A)	Selected Real Rate of Investment Return Assumption (B)	Target Allocation Real Rate of Investment Return Assumption (A) x (B)
U.S. Large Cap Equities	25.00%	6.50%	1.6250%
U.S. Mid Cap Equities	4.00%	7.75%	0.3100%
U.S. Small Cap Equities	5.00%	6.25%	0.3125%
Non-U.S. Large Cap Equities	15.00%	4.00%	0.6000%
Non-U.S. Small Cap	3.00%	5.00%	0.1500%
Emerging Market Equities	3.00%	4.00%	0.1200%
Broad Fixed Income	25.00%	2.00%	0.5000%
Private Equity	10.00%	10.25%	1.0250%
Global Infrastructure	7.00%	4.00%	0.2800%
Core Real Estate	3.00%	4.75%	0.1425%
Total Hancock Whitney	100.00%	N/A	5.0650%

Figure 24: Development of Real Rate of Investment Return Assumption for CapitalOne and LAMP Subaccounts

Asset Class in Capital One and LAMP Subaccounts	Investment Policy Statement Target Allocation (A)	Selected Real Rate of Investment Return Assumption (B)	Target Allocation Real Rate of Investment Return Assumption (A) x (B)
Cash and Cash Equivalents	100.00%	0.50%	0.5000%

Using the same approach for the Low, Midpoint and High assumption for each asset class and the target allocation percentages of the fund, the following real return range of assumptions and the final assumption have been developed for the expected range of long-term real return of the fund:

Figure 25: Reasonable Total Trust Portfolio Real Investment Return Assumption

Reasonable Total Trust Portfolio Real Investment Return Assumptions (Before Expenses)				
	Low	Midpoint	High	Selected Assumption
Weighted Return for Hancock Whitney Subaccounts	3.9258%	5.1775%	6.4291%	5.0650%
Weighted Return for CapitalOne/LAMP Subaccounts	-1.1515%	-0.2728%	0.6058%	0.5000%
Weighted-Return of Trust (95.5% x Hancock Whitney + 4.5% x CapitalOne/LAMP)	**3.6973%**	**4.9322%**	**6.1671%**	**4.8596%**

The final Investment Return assumption is based upon the building-block method which combines the Inflation assumption with the Real Investment Return assumption offset by assumed investment expenses as shown below:

Figure 26: Final Investment Return Assumption

Development of Final Selected Investment Return Assumption				
	Low	Midpoint	High	Selected Assumption
Real Rate of Investment Return Assumption	3.6973%	4.9322%	6.1671%	**4.8596%**
Assumed Inflation	2.5000%	2.5000%	2.5000%	**2.5000%**
Assumed Investment Expenses	(0.3500)%	(0.3500)%	(0.3500)%	**(0.3500)%**
Investment Return Assumption	5.8473%	7.0822%	8.3171%	**7.0096%**
Final Rounded Selected Investment Return Assumption	N/A	N/A	N/A	**7.00%**

Based on our review, we believe that 7.00% is a reasonable Investment Return assumption. Our analysis rounds down the sum of the individual components from 7.0096% to 7.00%. Therefore, **we recommend the assumed Investment Return assumption net of investment-related expenses for use in future Pension Plan actuarial valuations remain at 7.00%.** This assumption should not carry with it pressure to meet that assumption by changing the quality of fixed income investments or by increasing the asset allocation of equity investments or real estate or alternative strategies. It should be considered as a long-term annual average, not as a minimum rate for each future year in the establishment of investment policy.

Section IV – Pension Plan Funding Policy

A. Background

The Funding Policy determines the manner in which plan liabilities and assets are measured for purposes of determining the annual contributions to the Pension Plan. Typically, funding policies require the annual Normal Cost (i.e., the present value of the current year benefit accruals) plus a portion of the Unfunded Actuarial Accrued Liability (UAAL or UAL) (i.e., the excess of Plan Liabilities over Plan Assets) to be funded via an amortization payment.

The Conference of Consulting Actuaries Public Plans Community (CCA PPC) published the Actuarial Funding Policies and Practices for Public Pension Plans in October 2014. This publication is a "white paper" that develops principal elements and parameters of actuarial funding policy for U.S. public pension plans. The guidance offered in the white paper "is not intended to supplant or replace the applicable Actuarial Standards of Practice (ASOPs)" and is "nonbinding and advisory only", but is intended as advice to actuaries and retirement boards in setting funding policy.

The white paper develops a Level Cost Allocation Model (LCAM) that recommends actuarial funding methods for measuring both plan liabilities and plan assets, as well as recommends amortization periods for funding the UAAL.

In August 2024, the CCA PPC published the Second Edition of the white paper "to preserve and enhance the ongoing relevance and credibility of the white paper." The Second Edition white paper recommendations are discussed further below.

B. Current Funding Policy

The current Funding Policy uses the following methodologies which comport with the recommendations of the CCA PPC white paper:

1. **Cost Method** - Plan Liabilities are determined using the **Entry Age Normal** actuarial cost method. This method funds each individual's benefits over their career as a level percent of pay.

2. **Asset Method** –The Actuarial Value of Assets (AVA) is equal to the fair value adjusted by deferred recognition of asset gains and losses over a seven-year period. The asset gains/(losses) are equal to the excess/(shortfall) of actual market value over/(under) expected market value determined using the assumed investment return of 7.00%. The asset gains/(losses) are determined at the end of the year in which they occur. These gains/(losses) are recognized one-seventh (1/7) each year over the next seven (7) years beginning in the year in which the gain or loss occurs. The AVA is subject to a 30% corridor such that the fair value adjusted by the deferred asset gains and losses will not be less than 70% nor greater than 130% of the fair value of assets.

3. **Actuarially Determined Contribution (ADC)** – The annual Total Contribution is an actuarially determined amount expressed as a percentage of Earnable Compensation based on the Normal Cost and an amortization of the Unfunded Accrued Liability (UAL) of the Retirement System determined in accordance with the stand-alone Funding Policy for the Plan; the Employer's Contribution percentage is equal to the Total Contribution percentage offset by the Employee Contribution percentage determined in accordance with the stand-alone Funding Policy for the Plan.

4. **Amortization Method** – The UAL is determined as the difference between the Plan Liabilities and Plan Assets. A closed period, layered amortization method is used to amortize the UAL as follows:

Source of UAL Amortization Layers	UAL Amortization Period[1]
Actuarial Experience Gain/Loss	25 years
Assumption and Method Changes	25 years
Plan Amendments	15 years
Transition to New Policy	29 years[2]

[1] Determined as a Level Dollar amount using a Closed Period.
[2] Transition to new funding policy occurred on January 1, 2021. 26 years remain as of January 1, 2024.

C. Recommendations Regarding Funding Policy

1. **Cost Method** – The Second Edition white paper LCAM recommends using the Entry Age Normal Cost method that the employer is presently using under its funding policy. **We recommend no change to this cost method.**

2. **Asset Method –** The Second Edition white paper LCAM recommends that deferrals based on total return gain/loss relative to assumed earnings rate be used over a period of 5 or fewer years without a corridor or with a corridor for periods longer than 5 years. **We recommend no change to the asset method** which follows the recommended methodology for developing gains/losses under the white paper and uses a corridor of 70% / 130% that is within the bounds recommended by the white paper.

3. **Actuarially Determined Contribution (ADC)** – **We recommend no change to the employer's determination of the ADC**, which is the sum of the plan's Normal Cost plus the amortization of the layers of the UAL as level dollar amounts based on the periods shown in the table in item C.4. below, where the resultant sum is expressed as a percentage of estimated Earnable Compensation for the calendar year containing the valuation date.

4. **Amortization Method** – The Second Edition white paper LCAM generally recommends level percentage of compensation amortization instead of level dollar amortization as shown in the middle column of the table below. In addition, the white paper LCAM recommends a multiple layer amortization by source method. The plan's current funding policy uses closed amortization periods using level dollar amortization as shown in the right-hand column below.

Source of Amortization Layer	Second Edition White Paper Recommended Closed Amortization Period as Level Percent[1]	SWBNO Pension Plan Current Funding Policy Closed Amortization Period as Level Dollar
Actuarial Experience Gain/Loss	15 to 20 years	**25 years**
Assumption and Method Changes	20 to 25 years	**25 years**
Plan Amendments	10 to 15 years [2]	**15 years**
Transition to New LCAM Policy	Up to 30 years	**29 years**

[1] The Second Edition white paper indicates that "level dollar may be appropriate for sponsors and plans that are particularly averse to future cost increases, e.g., utilities setting rates for current rate payers." Furthermore, the white paper states "level dollar is generally faster amortization than level percent of pay so longer periods may be reasonable."

[2] The Second Edition white paper recommends that Plan Amendments be amortized over the actual remaining active future service for amendments affecting active members (where 15 years can be used as an approximation) or over actual remaining retiree life expectancy for amendments affecting inactive members (where 10 years can be used as an approximation).

We recommend no change to the employer's amortization method since it comports with the white paper and utilizes the flexibility permitted by the white paper.

5. **Surplus Methods** – The Second Edition white paper LCAM provides strategies of how to manage employer contributions at the time the plan achieves full funding. These strategies include avoiding partial or full contribution holidays when the plan is fully funded (i.e., avoiding contributions that are less than Normal Cost) in some circumstances. The white paper offers several strategies to consider when developing a funding policy for a fully funded plan. **We recommend that the Funding Policy be amended to address how the plan will be funded once a surplus position is achieved. However, since the plan is likely several years away from achieving full funding (i.e., roughly 25 years assuming 7% annual asset returns), there is no immediate need to address this issue.** With that said, SWBNO may wish to consider amending the funding policy in advance of the next experience study (i.e., in the next five years) to ensure that this matter is addressed in advance of when this situation arises.

Section V – Comparison of Current and Recommended Assumptions and Methods on the January 1, 2024 Actuarial Valuation

	Current Assumptions and Methods		Recommended Assumptions and Methods	
	Amount	As a % of Payroll	Amount	As a % of Payroll
1. **Projected Participant Compensation for Current Plan Year**	$ 58,080,995		$ 58,080,995	
2. **Present Value of Future Benefits**	$ 408,131,591		$ 399,665,791	
3. **Accrued Liability**	$ 363,399,484		$ 358,708,226	
4. **Actuarial Value of Assets**	$ 255,102,121		$ 255,102,121	
5. **Unfunded Accrued Liability (UAL) (Item 3. – Item 4.)**	$ 108,297,363		$ 103,606,105	
6. **Present Value of Future Normal Costs (Item 2. – Item 3.)**	$ 44,732,107		$ 40,957,565	
7. **Normal Cost at Beginning of Year**	$ 6,465,558		$ 5,982,145	
8. **Total Funding Policy Annual Actuarially Determined Contribution (ADC)**				
a. Normal Cost[1]	$ 6,688,025	11.515%	$ 6,187,979	10.654%
b. Level Dollar Amortization of UAL[1,2]	8,886,783	15.301%	8,497,613	14.631%
c. Total Annual ADC	$ 15,574,808	26.816%	$ 14,685,592	25.285%
9. **Employee Funding Policy Annual Contribution (Item 1. x 6%)**	$ 3,484,860	6.000%	$ 3,484,860	6.000%
10. **Employer Funding Policy Annual ADC (Item 8.c. – Item 9.)**	$ 12,089,948	20.816%	$ 11,200,732	19.285%

[1] Includes interest to the middle of the year to reflect payment of contributions throughout the year.
[2] Calculated using the amortization method described in Section IV.B.

Appendix 1 – Retirement Rates

A. Current Retirement Rates Assumption

Employee Members are assumed to retire in accordance with the annual rates illustrated below.

Attained Age	Retirements per 100 Members (Credited Service)												
	<5	5 - 19	20	21	22	23	24	25	26	27	28	29	30+
45													
46													
47													
48													5
49													15
50													15
51												15	15
52											25	15	15
53										35	25	15	15
54									35	35	15	15	15
55								50	35	35	18	18	18
56							50	50	50	18	18	18	18
57						50	50	20	20	20	20	20	20
58					50	50	30	30	30	30	30	30	30
59				50	50	25	25	25	25	25	25	25	25
60		25	50	50	25	25	25	25	25	25	25	25	25
61		35	50	35	35	35	35	35	35	35	35	35	35
62		35	35	35	35	35	35	35	35	35	35	35	35
63		15	15	15	15	15	15	15	15	15	15	15	15
64		30	30	30	30	30	30	30	30	30	30	30	30
65		40	40	40	40	40	40	40	40	40	40	40	40
66		25	25	25	25	25	25	25	25	25	25	25	25
67		25	25	25	25	25	25	25	25	25	25	25	25
68		25	25	25	25	25	25	25	25	25	25	25	25
69		25	25	25	25	25	25	25	25	25	25	25	25
70		25	25	25	25	25	25	25	25	25	25	25	25
71	100	100	100	100	100	100	100	100	100	100	100	100	100

B. Recommended Retirement Rates Assumption

Employee Members are assumed to retire in accordance with the annual rates illustrated below.

Attained Age	Retirements per 100 Members (Credited Service)												
	<5	5 - 19	20	21	22	23	24	25	26	27	28	29	30+
45													
46													
47													
48													5
49													5
50													15
51												15	15
52											15	15	10
53										20	20	10	10
54									20	20	10	10	10
55								20	20	15	15	15	15
56							20	20	15	15	15	15	15
57						35	35	18	18	18	18	18	18
58					30	30	15	15	15	15	15	15	15
59				45	45	20	20	20	20	20	20	20	20
60		17.5	45	45	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
61		20	20	20	20	20	20	20	20	20	20	20	20
62		30	30	30	30	30	30	30	30	30	30	30	30
63		27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
64		27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
65		35	35	35	35	35	35	35	35	35	35	35	35
66		20	20	20	20	20	20	20	20	20	20	20	20
67		20	20	20	20	20	20	20	20	20	20	20	20
68		20	20	20	20	20	20	20	20	20	20	20	20
69		20	20	20	20	20	20	20	20	20	20	20	20
70		20	20	20	20	20	20	20	20	20	20	20	20
71		20	20	20	20	20	20	20	20	20	20	20	20
72		20	20	20	20	20	20	20	20	20	20	20	20
73		20	20	20	20	20	20	20	20	20	20	20	20
74		20	20	20	20	20	20	20	20	20	20	20	20
75	100	100	100	100	100	100	100	100	100	100	100	100	100

Appendix 2 – Termination Rates

A. Current Termination Rates Assumption

The active members are assumed to terminate their employment for causes other than death, disability or retirement in accordance with annual rates as illustrated below.

Rate of Decrement Due to Termination Per 100 Members						
	Years of Credited Service					
Age	<1	1-2	2-3	3-4	4-5	5+
<25	30	25	25	25	25	15
25-29	25	18	18	11	11	8
30-34	25	18	18	11	11	8
35-39	25	18	18	11	11	8
40-44	25	18	18	11	11	5
45-49	25	18	18	11	11	5
50-54	25	18	18	11	11	4
55-59	25	18	18	11	11	4
60+	10	10	10	4	4	4

B. Recommended Termination Rates Assumption

The active members are assumed to terminate their employment for causes other than death, disability or retirement in accordance with annual rates as illustrated below.

Rate of Decrement Due to Termination Per 100 Members						
	Years of Credited Service					
Age	<1	1-2	2-3	3-4	4-5	5+
<25	30	25	22	20	20	20
25-29	30	22	22	17	14	14
30-34	25	20	18	17	14	10
35-39	23	15	15	15	14	9
40-44	23	15	15	12	9	7
45-49	20	15	15	12	9	6
50-54	18	15	15	12	9	5
55-59	12	12	11	11	9	5
60+	10	10	10	4	4	3

Appendix 3 – Disability Rates

A. Current Disability Rates Assumption

Active members are expected to become disabled as defined under the plan in accordance with annual rates as illustrated below.

Annual Disability Retirement Rates Per 100 Members	
Age	**Rate**
20	0.088
30	0.088
40	0.240
50	0.888
55	1.520
60	2.760
65	4.080

B. Recommended Disability Rates Assumption

Active members are expected to become disabled as defined under the plan in accordance with annual rates as illustrated below.

Annual Disability Retirement Rates Per 100 Members	
Age	**Rate**
20	0.022
30	0.022
40	0.060
50	0.222
55	0.380
60	0.690
65	1.020

Appendix 4 – Compensation Increases

A. Current Compensation Increase Assumption

The increase in the levels of participant compensation is assumed to increase in accordance with annual rates as illustrated below.

Annual Compensation Increases*	
Age	**Rate**
20 - 24	6.25%
25 - 29	5.75
30 - 34	5.25
35 - 39	4.75
40 - 44	4.75
45 - 49	4.75
50 - 54	4.75
55 - 59	4.75
60 - 64	4.75
65+	4.00

* Includes a 2.50% inflation component.

B. Recommended Compensation Increase Assumption

The increase in the levels of participant compensation is assumed to increase in accordance with annual rates as illustrated below.

Annual Compensation Increases*	
Age	**Rate**
20 - 24	12.50%
25 - 29	5.00
30 - 34	5.00
35 - 39	4.75
40 - 44	4.50
45 - 49	4.25
50 - 54	4.25
55 - 59	4.00
60 - 64	3.50
65+	3.00

* Includes a 2.50% inflation component.

Appendix 5 – Summary of All Other Assumptions and Methods

A. Mortality Rates

1. Current Assumption

a. Pre-retirement Mortality: Amount-weighted General Employee Table (i.e., PubG-2010) multiplied by 122% for Males and 119% for Females projected using Scale MP-2019 mortality improvement rates with Male projection factors multiplied by 86% and Female projection factors multiplied by 79%

b. Post-retirement Mortality:

i. Healthy Retirees: General Table for Healthy Retirees (i.e., PubG-2010) multiplied by 122% for Males and 119% for Females projected using Scale MP-2019 mortality improvement rates with Male projection factors multiplied by 86% and Female projection factors multiplied by 79%

ii. Disabled Retirees: General Table for Disabled Retirees (i.e., PubG-2010) multiplied by 122% for Males and 119% for Females projected using Scale MP-2019 mortality improvement rates with Male projection factors multiplied by 86% and Female projection factors multiplied by 79%

iii. Contingent Survivors: General Table for Contingent Survivors (i.e., PubG-2010) multiplied by 122% for Males and 119% for Females projected using Scale MP-2019 mortality improvement rates with Male projection factors multiplied by 86% and Female projection factors multiplied by 79%

2. Recommended Assumption

a. Pre-retirement Mortality: Amount-weighted General Employee Table (i.e., PubG-2010) multiplied by 121% for Males and 119% for Females projected using Scale MP-2021 (or its successor) mortality improvement rates with Male projection factors multiplied by 91% and Female projection factors multiplied by 82%

b. Post-retirement Mortality:

i. Healthy Retirees: General Table for Healthy Retirees (i.e., PubG-2010) multiplied by 121% for Males and 119% for Females projected using Scale MP-2021 (or its successor) mortality improvement rates with Male projection factors multiplied by 91% and Female projection factors multiplied by 82%

ii. Disabled Retirees: General Table for Disabled Retirees (i.e., PubG-2010) multiplied by 121% for Males and 119% for Females projected using Scale MP-2021 (or its successor) mortality improvement rates with Male projection factors multiplied by 91% and Female projection factors multiplied by 82%

iii. Contingent Survivors: General Table for Contingent Survivors (i.e., PubG-2010) multiplied by 121% for Males and 119% for Females projected using MP-2021 (or its successor) mortality improvement rates with Male projection factors multiplied by 91% and Female projection factors multiplied by 82%

B. DROP Participation

1. Current Assumption

Active members are assumed to elect to participate in the DROP in accordance with the rates illustrated below.

Age at Retirement[1]	Percentage of Members who Elect a DROP upon Retirement
< 60	90%
60-64	60%
65+	30%

[1] Age at commencement of DROP participation period.

All Members assumed to elect the DROP are also assumed to elect a 5-year DROP participation period.

2. Recommended Assumption

Active members are assumed to elect to participate in the DROP in accordance with the rates illustrated below.

Age at Retirement[1]	Percentage of Members who Elect a DROP upon Retirement
< 60	85%
60-64	70%
65+	35%

[1] Age at commencement of DROP participation period.

All Members assumed to elect the DROP are also assumed to elect a 5-year DROP participation period.

C. Withdrawal of Employee Contributions

1. Current Assumption

75% of participants terminating with a vested right are assumed to withdraw their accumulated contributions upon termination, while 25% are assumed to retain their vested deferred benefits by leaving contributions on deposit.

2. Recommended Assumption (No Change)

75% of participants terminating with a vested right are assumed to withdraw their accumulated contributions upon termination, while 25% are assumed to retain their vested deferred benefits by leaving contributions on deposit.

D. Credited Service for Unused Leave

1. Current Assumption

Credited Service is assumed to increase by 0.50 years for Unused Leave at the time a Member is within one year of retirement eligibility.

2. Recommended Assumption (No Change)

Credited Service is assumed to increase by 0.50 years for Unused Leave at the time a Member is within one year of retirement eligibility.

E. Spousal Age Difference

1. Current Assumption

Female spouses are assumed to be two years younger than their male counterparts.

2. Recommended Assumption (No Change)

Female spouses are assumed to be two years younger than their male counterparts.

F. Form of Payment

1. Current Assumption

75% of the retiring members who are married elect a Life Annuity and the remaining 25% elect a Joint and Survivor option with a 50% continuation percentage.

2. Recommended Assumption

80% of the retiring members who are married elect a Life Annuity and the remaining 20% elect a Joint and Survivor option with a 50% continuation percentage.

G. Inflation and COLA

1. Current Assumption

2.50% per annum for inflation and 2.00% per annum for COLA.

2. Recommended Assumption

2.50% per annum for inflation and 1.65% per annum for COLA.

H. Investment Return

1. Current Assumption

7.00% (net of investment-related expenses) per annum.

2. Recommended Assumption (No Change)

7.00% (net of investment-related expenses) per annum.

I. Actuarial Methods

See Section IV of this report.

Appendix 6 – Comparison of Assumptions with Select Members of LAPERS

LAPERS Member	Valuation Report	Investment Rate of Return, Net of Investment Expenses (Discount Rate)	Inflation	Mortality Assumption for Annuitants	Funded Ratio as of Valuation Date
City of Alexandria Employees' Retirement System	12/31/2023	5.80%	2.20%	Amount-weighted PubG-2010 Table for Healthy Retirees multiplied by 125% for Males and 120% for Females with Full Generational Projection using Scale MP-2020	93.6%
City of New Orleans Employees' Retirement System	1/1/2023	7.25%	(Not included in report)	Amount-weighted PubG-2010 Table for Healthy Retirees with Full Generational Projection using Scale MP-2020	58.8%
Clerks' of Court Retirement and Relief Fund	6/30/2023	6.55%	2.40%	Amount-weighted PubG-2010 Table for Healthy Retirees multiplied by 120% for Males and 120% for Females with Full Generational Projection using Scale MP-2019	81.5%
Employees' Retirement System of the City of Baton Rouge and Parish of East Baton Rouge	1/1/2023	7.00%	2.25%	RP-2006 Blue Collar Annuitant Mortality Table Projected back to 2001, Generational using Projection Scale MP-2018	66.2%
Louisiana State Employees' Retirement System	6/30/2024	7.25%	2.40%	Amount-weighted PubG-2010 Table (2010 rates used for 2020 base year) for Healthy Retirees multiplied by 121.5% for Males and 127.7% for Females with Full Generational Projection using Scale MP-2021	71.4%
Municipal Employees' Retirement System	6/30/2023	6.85%	2.50%	Amount-weighted PubG-2010(B) Table for Below-Median Income Healthy Retirees multiplied by 120% for Males and 120% for Females with Full Generational Projection using Scale MP-2018	76.5% (Plan A) and 77.8% (Plan B
Parochial Employees' Retirement System	12/31/2023	6.40%	2.30%	Amount-weighted PubG-2010 Table for Healthy Retirees multiplied by 130% for Males and 125% for Females with Full Generational Projection using Scale MP-2021	102.9% (Plan A) and 104.3% (Plan B)
Teachers' Retirement System of Louisiana	6/30/2024	7.25%	2.40%	Amount-weighted PubT-2010(B) Table for Below-Median Income Healthy Retirees multiplied by 117.3% for Males and 125.8% for Females with Full Generational Projection using Scale MP-2021	77.6%