

Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Fund

Actuarial Valuation Report
for the Year Beginning January 1, 2023





April 28, 2023

Board of Trustees

Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Plan

6101 Yellowstone Road

Suite 500

Cheyenne, WY 82002

Dear Board of Trustees:

Subject: Actuarial Valuation as of January 1, 2023

We are pleased to present the report of the actuarial valuation of the Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Plan (“the Fund”) for the plan year commencing January 1, 2023. This report describes the current actuarial condition of the Fund and determines the calculated employer contribution amount (the actuarially determined contribution amount). Valuations are prepared annually, as of January 1, the first day of the Fund’s plan year.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

Financing Objectives and Funding Policy

The employee contribution amounts are specified in statute. Effective April 1, 2022, the state treasurer shall deposit into the Fund 60% of the gross tax levied upon fire insurance premiums paid to insurance companies for fire insurance in the state. The purpose of this actuarial valuation is to determine whether or not these contribution amounts are sufficient to meet the obligations of the Fund. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded ratio, based upon the assumption of no future cost-of-living adjustments as of January 1, 2023 is 82.90%. This compares to a funded ratio of 81.30% for the prior year. On a market value of assets basis, the funded ratio is 80.21% as of January 1, 2023, compared to a funded ratio of 90.16% for the prior year. The funded status alone is not appropriate for assessing the need for future contributions. The funded status is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

Benefit Provisions

This fund was established as of July 1, 2015, created under House Bill 72 of the 2015 General Session, which replaces the Volunteer Firemen's Pension Fund and the Volunteer Firefighter Emergency Medical Technician Pension Fund. The benefit provisions reflected in this valuation are those, which were in effect on January 1, 2023. W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change. Therefore, this valuation does not include any liability for future cost-of-living increases. There were no benefit changes since the prior valuation.

The benefit provisions are summarized in Appendix B of the report.

Assumptions and Methods

Actuarial assumptions and methods are set by the Board, based upon recommendations made by the plan's actuary. The current assumptions used in the actuarial valuation were adopted by the Board effective November 17, 2021 and February 17, 2022 and were first utilized with the January 1, 2022 valuation report. For a detailed description of the experience related to these assumptions, as well as the rationale for any changes, please see our latest Wyoming Retirement System Actuarial Experience Study Report that covered the five-year investigation period ending December 31, 2020. All actuarial assumptions used in this report are reasonable for the purposes of this valuation.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution amounts and funding periods. The actuarial calculations presented in the report are intended to provide information for rational decision making.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.



Assumptions and Methods (continued)

The employer contribution requirement in Table 1 of this report is determined using the actuarial assumptions and methods disclosed in Appendix A of this report. This report does not include a detailed assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the plan's financial condition.

All assumptions and methods are described in Appendix A of the report.

Data

Member data for retired, active and inactive members was supplied as of January 1, 2023 by the Fund's staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data.

Asset and financial information as of January 1, 2023 was prepared by Wyoming Retirement System and is the responsibility of management. Eide Bailly, LLP provided us the asset and financial information and will opine on Wyoming Retirement System's statements.

We are not responsible for the accuracy or completeness of the information provided by the System's staff.

Plan experience

As part of each valuation, we examine the Fund's experience relative to the assumptions. As experience in a given year deviates from the assumptions, a gain occurs if the liabilities grow slower than the assumption set anticipates and a loss occurs if the liabilities grow faster. This past fiscal year, the Fund had a total experience gain of approximately \$1.24 million, composed of a \$0.22 million investment gain, a \$0.75 million contribution gain, and a \$0.27 million liability gain. The aggregate results of these analyses are disclosed in Tables 4 and 5 under Section III of the report.



Actuarial Certification

All of the tables contained in this actuarial valuation report were prepared by Gabriel, Roeder, Smith & Company.

We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Fund as of January 1, 2023.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code and ERISA.

The undersigned are independent actuaries and consultants.

Thomas Lyle, and Dana Woolfrey are Enrolled Actuaries and Paul Wood, Thomas Lyle, and Dana Woolfrey are Members of the American Academy of Actuaries, and all three meet all the Qualification Standards of the American Academy of Actuaries.

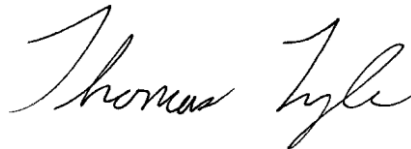
Finally, all of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

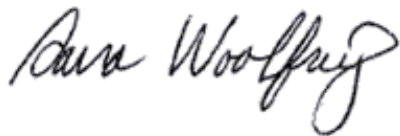
Gabriel, Roeder, Smith & Company



Paul T. Wood, ASA, FCA, MAAA
Senior Consultant



Thomas A. Lyle, FSA, FCA, EA, MAAA
Consultant



Dana Woolfrey, FSA, FCA, EA, MAAA
Senior Consultant

Table of Contents

Page

Section I — Executive Summary

Executive Summary	2
-------------------------	---

Section II — Discussion

Contribution Requirements	4
Calculation of Contribution Rates.....	5
Financial Data and Experience.....	6
Member Data.....	7
Benefit Provisions	8
Actuarial Methods and Assumptions.....	9
GASB and Funding Progress.....	10

Section III — Supporting Exhibits

Table 1A - Calculation of Employer Contribution Rate	12
Table 1B - Calculation of UAAL Amortization Payment.....	13
Table 2 - Cost Breakdown	14
Table 3 - History of Total Normal Cost	15
Table 4 - Calculation of Total Actuarial Gain/(Loss)	16
Table 5 - Change in Calculated Contribution Amount Since the Prior Valuation	17
Table 6 - Statement of Plan Net Assets	18
Table 7 - Reconciliation of Plan Net Assets	19
Table 8 - Progress of Fund Through December 31, 2022	20
Table 9 - Development of Actuarial Value of Assets	21
Table 10 - History of Investment Returns.....	22
Table 11 - Solvency Test	23
Table 12 - Schedule of Funding Progress.....	24
Table 13 - Schedule of Contributions from the Employer(s) and Other Contributing Entities	25
Table 14 - Reconciliation of Participant Data	26
Table 15 - Demographic Statistics	27
Table 16 - Distribution of Male Active Members by Age and by Years of Service	28
Table 17 - Distribution of Female Active Members by Age and by Years of Service.....	29
Table 18 - Distribution of Total Active Members by Age and by Years of Service	30



Table of Contents (continued)

	<u>Page</u>
Table 19 - Schedule of Pension Recipients Added to and Removed from Rolls.....	31
Table 20 - Retirees by Monthly Benefit and Age.....	32
Table 21 - Beneficiaries by Monthly Benefit and Age	33
Table 22 - Pensions Awarded in 2022 by Status.....	34
Table 23 - Retirees by Service at Retirement and Years Since Retirement.....	35
Table 24 - Retirees by Year of Retirement.....	36
Table 25 - Thirty Year Closed Group Projected Benefit Payments	37
Appendix A — Summary of Actuarial Assumptions and Methods.....	39-42
Appendix B — Summary of Plan Provisions	44-45
Appendix C — Risks Associated with Measuring the Accrued Liability	47-49



SECTION I

EXECUTIVE SUMMARY

Executive Summary

Item	January 1, 2023	January 1, 2022
	No COLA	No COLA
1. Contributions:		
a. Total normal cost	\$1,787,399	\$1,792,369
b. Employee contributions	(543,825)	(552,600)
c. Other expected contributions	-	-
d. Net employer normal cost	\$1,243,574	\$1,239,769
e. Amortization payment	1,680,997	1,792,548
f. Administrative expenses	110,200	97,700
g. Actuarially determined contribution	\$3,034,771	\$3,130,017
h. Estimated premium tax allocation*	(3,415,200)	(4,165,600)
i. Shortfall/(surplus)	(\$380,429)	(\$1,035,583)
2. Funding Elements:		
a. Market value of assets (MVA)	\$98,454,576	\$108,686,819
b. Actuarial value of assets (AVA)	\$101,757,644	\$97,999,632
c. Actuarial accrued liability (AAL)	\$122,744,358	\$120,546,184
d. Unfunded/(overfunded) actuarial accrued liability	\$20,986,714	\$22,546,552
3. Contributions and Ratios:		
a. Actuarially determined contribution	\$3,034,771	\$3,130,017
b. Actual contributions	N/A	3,866,570
i. Employer	N/A	-
ii. Other	N/A	3,866,570
c. Percentage contributed	N/A	123.53%
d. Funded ratio on an actuarial basis (AVA/AAL)	82.90%	81.30%
e. Funded ratio on a market basis (MVA/AAL)	80.21%	90.16%

* The premium tax for 2023 has been estimated based on the average three year inflation adjusted premium tax paid.



SECTION II

DISCUSSION

Contribution Requirements

- Exhibits throughout this report are based primarily, unless stated otherwise, on the assumption of no future cost-of-living adjustments (COLA)
- W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change. The actuarial value funded ratio is 82.90% and the market value funded ratio is 80.21%.
- The estimated State premium tax allocation is \$3.42 million this year, as estimated based on the three-year average inflation adjusted premium tax paid and the current allocation of 60%.
- There have not been any changes to the actuarial assumptions since the prior valuation. For a detailed description of the experience related to these assumptions, as well as the rationale for any changes, please see our latest Wyoming Retirement System Actuarial Experience Study Report.
- An Actuarially Determined Contribution (ADC) is calculated as part of this valuation. Because contribution amounts are set in statutes, the ADC could be thought of as a metric to which one could compare the statutory rate. The amortization payment for the purpose of calculating the ADC is based upon the following assumptions:
 - The funding period is based on a 30-year closed period for the initial base as of January 1, 2018 and 20-year closed period layers for future gains and losses.
 - Amortization payment amounts are calculated in such a way that they will remain level as a dollar amount.
 - Future growth in the number of active members is not reflected in the annual valuation.
- Pursuant Enrolled Act No. 60, there will be an appropriation of \$9.0 million to the fund in 2023.
- The calculated funding period assuming an annual contribution of 60% of the premium tax allocation that increases with inflation at 2.25% per year and the \$9.0 million allocation in 2023 is 9 years when projecting from the market value of assets.
- The calculated funding period assuming an annual contribution of 60% of the premium tax allocation that increases with inflation at 2.25% per year and the \$9.0 million allocation in 2023 is 7 years when projecting from the actuarial value of assets.
- Benefit provisions effective July 1, 2015, as authorized by new legislation in HB 72 of the 2015 General Assembly, are summarized in Appendix B.



Calculation of Contribution Amounts

The funds available to pay benefits come from two sources, contributions and investment income on those contributions (the majority of the funds available to pay benefits typically come from investment income). The Fund receives contributions from two primary sources, state contributions equal to 60% of gross fire insurance premium taxes and member contributions of \$18.75 per month per Volunteer Fire and EMT member and \$37.50 per month per search and rescue member. In addition, the prior EMT “set-aside” funds were transferred to this plan. An Actuarially Determined Contribution (ADC) is calculated as part of this valuation. Because contribution amounts are set in Statutes, the ADC could be thought of as a metric to which one could compare the Statutory rate. As shown in Table 1 under Section III of the report, the calculated employer ADC has three components:

- The normal cost (NC)
- The amortization payment
- The administrative expenses

The NC is the theoretical amount, which would be required to pay the members’ benefits if this amount had been contributed from each member’s entry date and if the fund’s experience exactly followed the actuarial assumptions. The NC is shown in Table 1 under Section III of the report.

The actuarial accrued liability (AAL) is the difference between (i) the actuarial present value of all future benefits for all current participants of the fund, including active, inactive and retired members, and (ii) the actuarial present value of future normal costs. Thus, the AAL represents the liability associated with past years. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and the actuarial value of assets (AVA). It is the shortfall/excess between the liability associated with prior years (the AAL) and the assets actually accumulated (the AVA). This shortfall/excess can arise from several sources, including actuarial gains and losses which are caused by differences between actual experience and the plan’s assumptions, changes to the plan’s actuarial assumptions, and amendments to the benefit provisions.

The amortization payment is the amount required to fund this difference. It is the amount, expressed as a level dollar amount, necessary to amortize the UAAL. Amortization bases are established each year and amortized based on the Board’s policy. The Board’s policy for purposes of calculating the ADC consists of amortizing the unfunded liability as of January 1, 2018, over a closed 30-year period with each subsequent amortization base created as a result of year to year experience changes over individual 20-year closed periods. The Executive Summary shows the Amortization Payment compared to that of last year.

Administrative expenses are the average of the actual expenses for the prior two years, with each year projected at 2.50% to the valuation date.

The ADC is calculated for the twelve-month period beginning January 1, 2023.



Financial Data and Experience

As of January 1, 2023, the Fund has a total market value of \$98 million. Financial information was received from Eide Bailly, LLP.

Table 7 under Section III of the report shows a reconciliation of the market values between the beginning and end of 2022.

During 2022, the total investment return on the market value of assets (MVA), as reported by Meketa Investment Group, Inc., was (6.99%), as shown in Table 10 under Section III of the report.

In determining the contribution rates and funded status of the Fund, an actuarial value of assets (AVA) is used rather than the market value of assets. The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (or less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

The development of the AVA is shown in Table 9 under Section III of the report. The AVA is \$102 million, compared to \$98 million last year. The AVA is 103.35% of the MVA as of December 31, 2022, compared to 90.17% last year.

In addition to the market return, Table 10 also shows the return on the actuarial value of assets for the Fund. For 2022, this return was 7.03%, which is greater than the assumed 6.80% investment return for the prior year.



Member Data

Member data as of January 1, 2023 was supplied electronically by the Fund's staff. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall.

Table 15 under Section III of the report shows the number of members by category (active, inactive, retired, etc.) along with member statistics. Tables 16 through 24 show summaries of certain historical data and include membership statistics.

Of the 2,324 active participants, 347 are eligible or will become eligible for retirement in 2023. Furthermore, there are 93 search and rescue members.



Benefit Provisions

Appendix B of the report includes a more detailed summary of the benefit provisions for the Fund. These are the benefit provisions in effect July 1, 2015, per HB 72 as passed by the Wyoming General Assembly in the 2015 general session. A brief summary is as follows:

- *Normal Retirement Eligibility*
 - Age 60 with 5 years of service
- *Normal Retirement Benefit*
 - \$16 per month for each of the first 10 years of service and \$19 per month for each year of service over 10
- *Spouse Benefits*
 - 66% of the member’s benefit payable prior to the member’s death
- *Employee Contributions* are required
 - \$18.75 per month (\$37.50 per month for search and rescue employees)
- *Post-retirement Cost-of-Living Adjustments (COLAs)*
 - W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change.



Actuarial Methods and Assumptions

Appendix A of the report includes a summary of the actuarial assumptions and methods used in this valuation. A few highlights are listed as follows:

- Costs are determined using the Entry Age Normal actuarial cost method, calculated as a level dollar amount.
- The unfunded actuarial accrued liability is amortized over an effective 27 year closed period as a level dollar amount. Future valuations will include additional amortization layers on a closed 20-year bases.
- The assumed annual investment return rate is 6.80%, with assumed inflation of 2.25%.
- Inactive vested participants are assumed to retire at normal retirement eligibility or the valuation date if already eligible to retire.
- No benefit data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.

The average future lifetime for current pensioners is 16.1 years.

The actuarial assumptions and methods were reviewed in detail as part of the 2021 Experience Study covering the five-year period ending December 31, 2020. Please see Appendix A for a summary of the assumptions.



GASB and Funding Progress

Governmental Accounting Standards Board Statement Number 67 (GASB 67) contains certain accounting requirements for the Fund. Schedules, notes and required supplementary information are provided under separate cover.



SECTION III

SUPPORTING EXHIBITS

Table 1A
Calculation of Employer Contribution Rate
(Assumes No Future Cost-Of-Living Increases)

Item	January 1, 2023	January 1, 2022
1. Employer normal cost	\$1,243,574	\$1,239,769
2. Actuarial accrued liability for active members		
a. Present value of future benefits for active members	\$51,252,061	\$50,701,176
b. Less: present value of future employer normal costs	(8,305,664)	(8,469,707)
c. Less: present value of future employee contributions	(2,907,594)	(2,996,511)
d. Actuarial accrued liability	\$40,038,803	\$39,234,958
3. Total actuarial accrued liability for:		
a. Retirees and beneficiaries	\$75,010,229	\$73,889,909
b. Disabled members	-	-
c. Inactive members	7,695,326	7,421,317
d. Active members (Item 2d)	40,038,803	39,234,958
e. Total	\$122,744,358	\$120,546,184
4. Actuarial value of assets (Table 9)	\$101,757,644	\$97,999,632
5. Unfunded actuarial accrued liability (UAAL) (Item 3e - Item 4)	\$20,986,714	\$22,546,552
6. Effective UAAL amortization period	27 years	27 years
7. Assumed payroll growth rate	0.00%	0.00%
8. Employer actuarially determined contribution (ADC)		
a. UAAL amortization payment	\$1,680,997	\$1,792,548
b. Employer normal cost	1,243,574	1,239,769
c. Administrative expenses	110,200	97,700
d. Employer Contribution (a + b + c)	\$3,034,771	\$3,130,017

Table 1B
Calculation of UAAL Amortization Payment
(Assumes No Future Cost-Of-Living Increases)

UAAL as of January 1, 2023				\$20,986,714
Total Prior Remaining Amortization Bases as of January 1, 2023				\$22,227,226
2023 Amortization Base as of January 1, 2023				(\$1,240,512)
2023 Payment (20 years, level percent of pay amortization)				(\$111,551)
		As of January 1, 2023		
Base Year	Initial Base	Remaining Base	Years Remaining	Amortization Payment
2023 Experience Gain	\$ (1,240,512)	\$ (1,240,512)	20	\$ (111,551)
2022 Experience Gain	(5,563,315)	(5,424,618)	19	(500,273)
2022 Assumption Changes	590,222	575,507	19	53,075
2021 Experience Gain	(3,357,456)	(3,186,113)	18	(302,081)
2020 Experience Loss	1,632,016	1,503,150	17	146,921
2019 Experience Loss	2,859,262	2,548,052	16	257,554
2018 Experience Loss	27,923,023	26,211,248	25	2,137,352
Total		\$ 20,986,714		\$ 1,680,997

Table 2
Cost Breakdown
(Assumes No Future Cost-Of-Living Increases)

Item	Present Value of Future Normal Costs (1)	Actuarial Accrued Liabilities (2)	Total Present Value of Benefits (3) = (1) + (2)
Age and service allowances based on total service and disability benefits likely to be rendered by present active members	\$9,564,045	\$38,175,984	\$47,740,029
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	185,194	449,399	634,593
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	1,464,019	1,413,420	2,877,439
Benefits likely to be paid to vested inactive members	-	6,994,859	6,994,859
Benefits to be paid to members due refunds	-	700,467	700,467
Benefits to be paid to current retirees, disabled members, beneficiaries, and future beneficiaries of current retirees	-	75,010,229	75,010,229
Total	\$11,213,258	\$122,744,358	\$133,957,616
Actuarial value of assets	-	\$101,757,644	\$101,757,644
Liabilities to be covered by future contributions	\$11,213,258	\$20,986,714	\$32,199,972

Table 3

History of Total Normal Cost

(Assumes No Future Cost-Of-Living Increases)

Fiscal Year Ending December 31 (1)	Total Normal Cost Per Active (2)
2016	\$540
2017	\$535
2018	\$615
2019	\$610
2020	\$621
2021	\$628
2022	\$758
2023	\$769

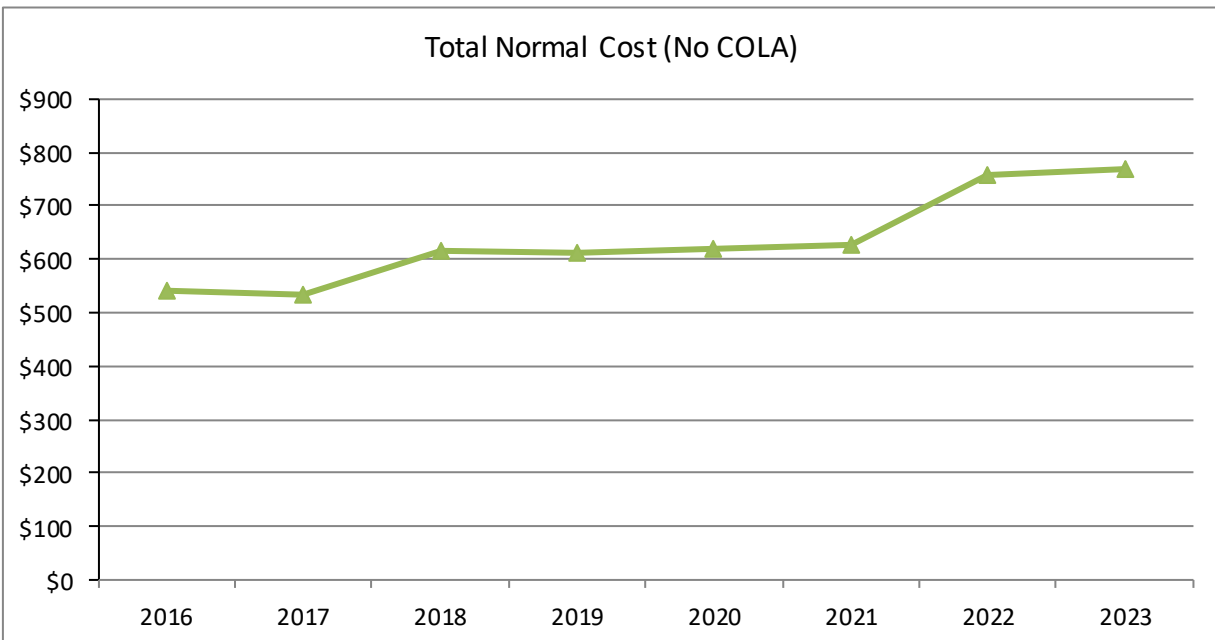


Table 4
Calculation of Total Actuarial Gain/(Loss)

Item	January 1, 2023
1. Derivation of experience gain/(loss)	
a. Unfunded actuarial accrued liability (UAAL) - previous valuation	\$22,546,552
b. Normal cost (NC) for fiscal year ending December 31, 2022	1,792,369
c. Expected administrative expenses for fiscal year ending December 31, 2022	97,700
d. Actuarially determined contribution for fiscal year ending December 31, 2022	3,682,617
e. Interest accrual:	
(i) For whole year on (a)	1,533,166
(ii) For half year on (b) + (c) - (d)	(59,944)
(iii) Total interest: (e)(i) + (e)(ii)	1,473,222
f. Change in UAAL due to programming enhancement	-
g. Change in UAAL due to assumption change	-
h. Expected UAAL current year: (a) + (b) + (c) - (d) + (e)(iii) + (f) + (g)	22,227,226
i. Actual UAAL current year	20,986,714
j. Experience gain/(loss): (h) - (i)	1,240,512
k. Experience gain/(loss) as a % of actuarial accrued liability	1.01%
2. Approximate portion of gain/(loss) due to investments (at actuarial value)	\$223,989
3. Approximate portion of gain/(loss) due to contributions and administrative expenses higher or lower than expected*	\$750,310
4. Approximate portion of gain/(loss) due to liabilities: (1)(j) - (2) - (3)	<u>\$266,213</u>
a. Age & service retirements	341,856
b. Death-in-service	(3,475)
c. Withdrawal from employment	(132,352)
d. Rehires and new hires	(161,815)
e. Death after retirement	101,010
f. Service purchases	(9,979)
g. Other	130,967
h. Other as a % of actuarial accrued liability	0.11%

**Includes \$9,979 in additional employee contributions for service purchases. These additional contributions offset the liability loss due to service purchases.*

Table 5

Change in Calculated Contribution Amount Since the Prior Valuation

Item	January 1, 2023
1. Calculated contribution amount as of January 1, 2022	\$3,130,017
2. Change in contribution amount during year	
a. Change in employer normal cost	3,805
b. Actuarial (gain) loss from investments on actuarial value of assets	(20,142)
c. Actuarial (gain) loss from liability sources	(23,939)
d. Difference between contributions made and ADC	(54,970)
e. Other changes	-
f. Total change	(\$95,246)
3. Calculated contribution amount as of January 1, 2023	\$3,034,771

Table 6
Statement of Plan Net Assets

Assets at Market Value		
Item	FYE 2022	FYE 2021
1. Cash and cash equivalents (operating cash)	\$4,977,481	\$6,731,153
2. Receivables		
a. Insurance premium tax	\$1,200,000	\$1,900,000
b. Employee contributions	36,025	40,150
c. Securities sold	42,385	102,519
d. Accrued interest and dividends	179,308	246,482
e. Currency contract receivable	5,886,660	8,502,155
f. Other	-	-
g. Rebate and fee income receivable	-	-
h. Total receivables	\$7,344,378	\$10,791,306
3. Investments, at fair value	\$97,077,686	\$105,735,921
4. Liabilities		
a. Benefits and refunds payable	(\$17,537)	(\$5,709)
b. Securities purchased	(140,959)	(368,506)
c. Administrative and consulting fees payable	(141,753)	(137,243)
d. Currency contract payable	(6,041,986)	(8,447,225)
e. Securities lending collateral	(4,602,734)	(5,612,878)
f. Total liabilities	(\$10,944,969)	(\$14,571,561)
5. Total market value of assets available for benefits	\$98,454,576	\$108,686,819

Table 7
Reconciliation of Plan Net Assets

Assets at Market Value		
Item	FYE 2022	FYE 2021
A. Market value of assets at beginning of year	\$108,686,819	\$94,891,969
B. Contribution income:		
1. Contributions		
a. Employee	\$548,347	\$556,552
b. Employer	-	-
c. Other	3,876,549	4,687,030
d. Total	\$4,424,896	\$5,243,582
2. Investment income		
a. Interest, dividends, and other income	\$1,910,598	\$1,738,276
b. Net appreciation	(8,573,110)	14,526,385
c. Investment expenses	(550,992)	(564,292)
d. Net investment income	(\$7,213,504)	\$15,700,369
3. Securities lending		
a. Gross income	\$83,461	\$10,770
b. Deductions	(73,529)	(1,613)
c. Net investment income	\$9,932	\$9,157
4. Benefits and refunds		
a. Refunds	(\$57,233)	(\$31,778)
b. Regular monthly benefits	(7,282,386)	(7,027,915)
c. Total	(\$7,339,619)	(\$7,059,693)
5. Administrative and miscellaneous expenses	(\$113,948)	(\$98,565)
C. Market value of assets at end of year	\$98,454,576	\$108,686,819

Table 8
Progress of Fund Through December 31, 2022

Plan Year Ending December 31	Employer Contributions*	Employee Contributions**	Administrative and Other Expenses	Net Investment Income***	Benefit Payments	Transfers	Actuarial Value of Assets
Total	\$28,854,721	\$3,825,368	(\$743,151)	\$45,876,883	(\$50,085,954)	-	
2015	\$2,238,612	\$417,406	(\$76,882)	\$4,356,336	(\$4,867,630)	-	\$76,097,619
2016	3,198,930	459,363	(84,357)	4,047,102	(5,541,861)	-	78,176,796
2017	3,290,994	425,592	(92,288)	5,181,716	(5,813,888)	-	81,168,922
2018	2,959,943	434,522	(94,396)	3,477,678	(6,145,822)	-	81,800,847
2019	3,118,824	437,255	(92,906)	4,770,526	(6,506,775)	-	83,527,771
2020	5,510,379	519,791	(89,809)	7,408,210	(6,810,666)	-	90,065,676
2021	4,670,469	573,113	(98,565)	9,848,632	(7,059,693)	-	97,999,632
2022	3,866,570	558,326	(113,948)	6,786,683	(7,339,619)	-	101,757,644

* Employer contributions equal to 50% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming prior to July 1, 2015, 70% of the gross premium taxes between July 1, 2015 and July 1, 2019, 80% of the gross premium taxes between July 1, 2019 and July 1, 2020, 100% between July 1, 2020 and April 1, 2022 and 60% of the gross premium taxes after April 1, 2022.

** Employee contributions may include member redeposits and member service purchase contributions

*** Net of investment expenses



Table 9
Development of Actuarial Value of Assets

Item	FYE 2022	FYE 2021
1. Actuarial value of assets, beginning of year (before corridor)	\$97,999,632	\$90,065,676
2. Market value, end of year	\$98,454,576	\$108,686,819
3. Market value, beginning of year	\$108,686,819	\$94,891,969
4. Non-investment/administrative net cash flow:		
a. Employee contributions	\$548,347	\$556,552
b. Employer contributions	-	-
c. Other contributions	3,876,549	4,687,030
d. Refund of employee accounts	(57,233)	(31,778)
e. Retirement benefits	(7,282,386)	(7,027,915)
f. Administrative and other expenses	(113,948)	(98,565)
g. Total net cash flow: [sum of (4a) through (4f)]	(\$3,028,671)	(\$1,914,676)
5. Investments and securities lending:		
a. Interest and dividends on investments	\$1,910,598	\$1,738,276
b. Gross income from securities lending	83,461	10,770
c. Fees and expenses	(624,521)	(565,905)
d. Total net income: [sum of (5a) through (5c)]	\$1,369,538	\$1,183,141
6. Investment income:		
a. Actual market return: (2) - (3) - (4g) - (5d)	(\$8,573,110)	\$14,526,385
b. Assumed rate of return	6.80%	7.00%
c. Assumed amount of return	5,919,884	5,393,417
d. Amount subject to phase-in: (6a) - (6c)	(\$14,492,994)	\$9,132,968
7. Phase-in recognition of investment income:		
a. Current year: 0.20 * (6d)	(\$2,898,599)	\$1,826,594
b. First prior year	1,826,594	558,951
c. Second prior year	558,951	1,693,646
d. Third prior year	1,693,646	(1,683,331)
e. Fourth prior year	(1,683,331)	876,214
f. Total recognition	(\$502,739)	\$3,272,074
8. Actuarial value of assets, end of year		
a. Preliminary actuarial value of assets, end of year: (1) + (4g) + (5c) + (6c) + (7f)	\$101,757,644	\$97,999,632
b. Upper corridor limit: 120% * (2)	\$118,145,491	\$130,424,183
c. Lower corridor limit: 80% * (2)	\$78,763,661	\$86,949,455
d. Actuarial value of assets, end of year	\$101,757,644	\$97,999,632
9. Difference between market and actuarial value of assets	(\$3,303,068)	\$10,687,187
10. Actuarial rate of return	7.03%	11.05%
11. Market rate of return*	-6.99%	17.19%
12. Ratio of actuarial value to market value of assets	103.35%	90.17%

* Current year market rate of return is based on unaudited data and is supplied by the plan's investment consultant.

Table 10

History of Investment Returns

Plan Year (1)	Market Value (2)	Actuarial Value (3)
2015	-0.26%	6.03%
2016	7.60%	5.44%
2017	14.20%	6.72%
2018	-3.52%	4.36%
2019	18.72%	5.94%
2020	11.03%	8.92%
2021	17.19%	11.05%
2022	-6.99%	7.03%
Average returns:		
Last five years:	6.75%	7.44%

The market returns above are gross of investment expenses and were provided by the plan's investment consultant. The actuarial returns above are based on the financial information provided by the plan's auditors.

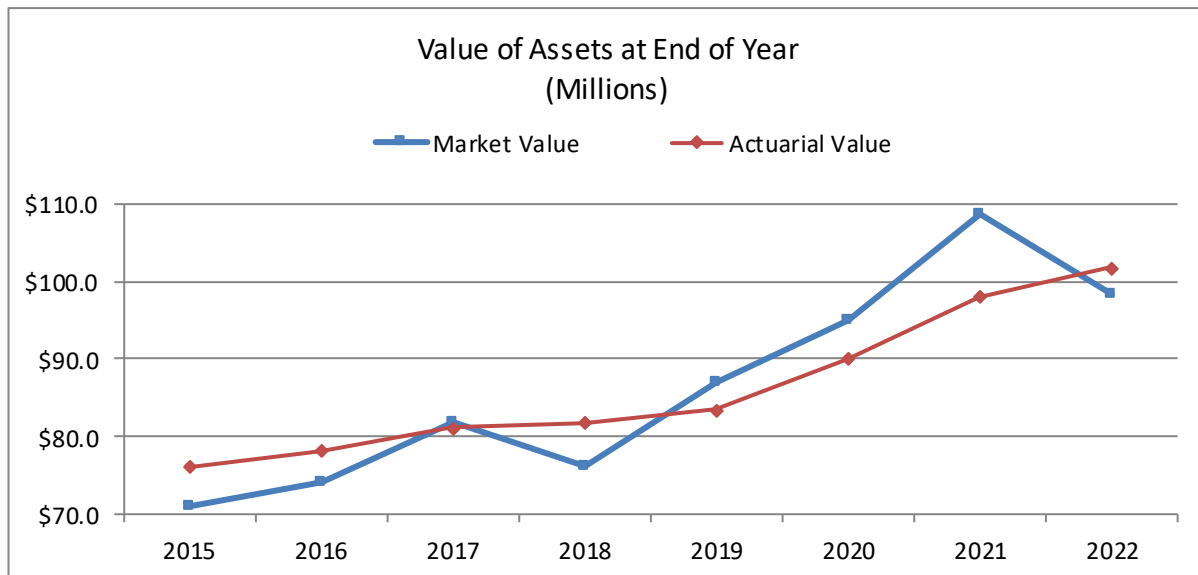


Table 11
Solvency Test

Valuation Date	Total Active Member Contributions	Inactive and Pensioner Liability	Employer Financed Active Accrued Liability	Actuarial Value of Assets	Percentage of Liabilities Covered by Assets		
					(1)	(2)	(3)
January 1	(1)	(2)	(3)				
2016	\$5,369,518	\$60,709,865	\$36,199,040	\$76,097,619	100%	100%	27.7%
2017	5,467,501	61,194,577	35,582,775	78,176,796	100%	100%	32.4%
2018	5,544,708	67,352,453	36,194,784	81,168,922	100%	100%	22.9%
2019	5,542,717	71,400,879	35,343,932	81,800,847	100%	100%	13.7%
2020	5,603,713	74,093,449	35,563,263	83,527,771	100%	100%	10.8%
2021	5,660,334	78,098,747	34,228,917	90,065,676	100%	100%	18.4%
2022	5,753,779	81,311,226	33,481,179	97,999,632	100%	100%	32.7%
2023	5,951,071	82,705,555	34,087,732	101,757,644	100%	100%	38.4%

Table 12
Schedule of Funding Progress

(1)	(2)	(3)	(4)	(5)	(6)
Valuation Date January 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) [(3) - (2)]	Funded Ratio [(2)/(3)]	UAAL per Active Member
2016	\$76,097,619	\$102,278,423	\$26,180,804	74.40%	\$11,005
2017	78,176,796	102,244,853	24,068,057	76.46%	10,374
2018	81,168,922	109,091,945	27,923,023	74.40%	12,046
2019	81,800,847	112,287,528	30,486,681	72.85%	12,990
2020	83,527,771	115,260,425	31,732,654	72.47%	13,129
2021	90,065,676	117,987,998	27,922,322	76.33%	11,678
2022	97,999,632	120,546,184	22,546,552	81.30%	9,529
2023	101,757,644	122,744,358	20,986,714	82.90%	9,030

Liabilities are calculated assuming no future cost-of-living increases.

Table 13

Schedule of Contributions from the Employer(s) and Other Contributing Entities

(1)	(2)	(3)	(4)
Fiscal Year Ending December 31	Actuarially Determined Contribution	Employer Contributions*	Percentage of Actuarially Determined Contribution Contributed [(3)/(2)]
2016	\$3,128,272	\$3,198,930	102.26%
2017	2,923,585	3,290,994	112.57%
2018	3,275,465	2,959,943	90.37%
2019	3,543,372	3,118,824	88.02%
2020	3,669,138	5,510,379	150.18%
2021	3,318,686	4,670,469	140.73%
2022	3,130,017	3,866,570	123.53%
2023	3,034,771	-	-

** 70% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming before July 1, 2019, 80% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming on or after July 1, 2019, 100% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming between July 1, 2020 and April 1, 2022, and 60% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming on or after April 1, 2022.*



Table 14
Reconciliation of Participant Data

	Active Participants	Vested Former Participants	Retired Participants	Beneficiaries	Participants Due Refunds	Total
Number as of January 1, 2022	2,366	491	1,361	285	1,795	6,298
New participants	170	-	-	-	22	192
Vested terminations	(60)	60	-	-	-	-
Retirements	(39)	(19)	58	-	-	-
Disability	-	-	-	-	-	-
Deceased with beneficiary	(1)	-	(18)	19	-	-
Deceased without beneficiary	(3)	(1)	(13)	(13)	(4)	(34)
Due refunds	(123)	-	-	-	123	-
Lump sum payoffs	(9)	(6)	-	(1)	(40)	(56)
Rehires/return to active	23	(5)	-	-	(18)	-
Certain period expired	-	-	-	-	-	-
Reclassifications	-	-	-	-	-	-
Data corrections	-	-	-	-	-	-
Number as of January 1, 2023	2,324	520	1,388	290	1,878	6,400



Table 15
Demographic Statistics

	January 1		Change
	2023	2022	
<u>Active Participants</u>			
Number	2,324	2,366	-1.8%
<i>Vested</i>	1,483	1,478	
<i>Not vested</i>	841	888	
Average age (years)	45.29	44.61	1.5%
Average service (years)	10.88	10.52	3.4%
Average entry age (years)	34.41	34.09	0.9%
Total employee contributions with interest	\$5,951,071	\$5,753,779	3.4%
Average employee contributions with interest	\$2,561	\$2,432	5.3%
<u>Vested Former Participants</u>			
Number	520	491	5.9%
Average age (years)	49.39	49.35	0.1%
Total employee contributions with interest	\$1,128,863	\$1,056,791	6.8%
Average employee contributions with interest	\$2,171	\$2,152	0.9%
<u>Retirees</u>			
Number	1,388	1,361	2.0%
Average age (years)	71.80	71.28	0.7%
Total annual benefits	\$6,445,341	\$6,288,034	2.5%
Average annual benefit	\$4,644	\$4,620	0.5%
<u>Beneficiaries</u>			
Number	290	285	1.8%
Average age (years)	74.25	73.74	0.7%
Total annual benefits	\$801,897	\$781,038	2.7%
Average annual benefit	\$2,765	\$2,740	0.9%
<u>Participants Due Refunds</u>			
Number	1,878	1,795	4.6%
Total Refunds Due	\$700,467	\$666,640	5.1%

Table 16

Distribution of Male Active Members by Age and by Years of Service

Average Age = 45.3 Average Service = 11.5

Age		Whole Years of Service at Valuation Date							
Last Birthday		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	Count	12	-	-	-	-	-	-	12
	Total Contributions	\$2,984	-	-	-	-	-	-	\$2,984
	Avg. Contributions	\$249	-	-	-	-	-	-	\$249
20-24	Count	76	5	-	-	-	-	-	81
	Total Contributions	35,287	\$6,099	-	-	-	-	-	41,386
	Avg. Contributions	464	\$1,220	-	-	-	-	-	511
25-29	Count	91	42	4	-	-	-	-	137
	Total Contributions	49,818	65,052	\$8,687	-	-	-	-	123,558
	Avg. Contributions	547	1,549	\$2,172	-	-	-	-	902
30-34	Count	103	56	31	1	-	-	-	191
	Total Contributions	62,031	86,645	76,303	\$3,258	-	-	-	228,237
	Avg. Contributions	602	1,547	2,461	\$3,258	-	-	-	1,195
35-39	Count	100	79	54	27	4	-	-	264
	Total Contributions	68,283	128,910	142,699	99,984	\$18,413	-	-	458,288
	Avg. Contributions	683	1,632	2,643	3,703	\$4,603	-	-	1,736
40-44	Count	90	64	62	53	22	2	-	293
	Total Contributions	61,057	103,463	166,759	202,449	107,559	\$12,480	-	653,767
	Avg. Contributions	678	1,617	2,690	3,820	4,889	\$6,240	-	2,231
45-49	Count	73	47	53	49	41	19	1	283
	Total Contributions	51,180	77,377	140,423	191,520	220,624	128,186	\$9,881	819,191
	Avg. Contributions	701	1,646	2,649	3,909	5,381	6,747	\$9,881	2,895
50-54	Count	40	36	35	32	43	27	20	233
	Total Contributions	31,849	58,696	91,801	124,745	226,564	183,615	170,802	888,073
	Avg. Contributions	796	1,630	2,623	3,898	5,269	6,801	8,540	3,811
55-59	Count	23	26	28	48	35	32	81	273
	Total Contributions	13,956	39,813	76,273	210,477	189,692	222,726	743,207	1,496,144
	Avg. Contributions	607	1,531	2,724	4,385	5,420	6,960	9,175	5,480
60-64	Count	30	22	19	12	14	15	14	126
	Total Contributions	20,542	34,635	52,598	49,331	71,198	107,434	87,318	423,056
	Avg. Contributions	685	1,574	2,768	4,111	5,086	7,162	6,237	3,358
65-69	Count	19	12	13	4	5	3	6	62
	Total Contributions	10,057	20,164	34,161	28,331	24,871	21,881	61,615	201,082
	Avg. Contributions	529	1,680	2,628	7,083	4,974	7,294	10,269	3,243
70 & Over	Count	10	9	1	2	-	-	-	22
	Total Contributions	7,958	12,914	2,621	3,376	-	-	-	26,870
	Avg. Contributions	796	1,435	2,621	1,688	-	-	-	1,221
Totals	Count	667	398	300	228	164	98	122	1,977
	Total Contributions	\$415,003	\$633,770	\$792,325	\$913,470	\$858,923	\$676,322	\$1,072,823	\$5,362,636
	Avg. Contributions	\$622	\$1,592	\$2,641	\$4,006	\$5,237	\$6,901	\$8,794	\$2,713



Table 17

Distribution of Female Active Members by Age and by Years of Service

Average Age = 45.3 Average Service = 7.4

Age Last Birthday		Whole Years of Service at Valuation Date							Totals
		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Less than 20	Count	5	-	-	-	-	-	-	5
	Total Contributions	\$1,378	-	-	-	-	-	-	\$1,378
	Avg. Contributions	\$276	-	-	-	-	-	-	\$276
20-24	Count	9	-	-	-	-	-	-	9
	Total Contributions	3,632	-	-	-	-	-	-	3,632
	Avg. Contributions	404	-	-	-	-	-	-	404
25-29	Count	25	5	1	-	-	-	-	31
	Total Contributions	15,594	8,738	\$2,183	-	-	-	-	26,516
	Avg. Contributions	624	1,748	\$2,183	-	-	-	-	855
30-34	Count	17	6	4	-	-	-	-	27
	Total Contributions	8,696	9,454	9,835	-	-	-	-	27,985
	Avg. Contributions	512	1,576	2,459	-	-	-	-	1,036
35-39	Count	33	11	6	1	-	-	-	51
	Total Contributions	20,760	17,060	15,943	\$3,742	-	-	-	57,505
	Avg. Contributions	629	1,551	2,657	\$3,742	-	-	-	1,128
40-44	Count	28	16	13	2	1	-	-	60
	Total Contributions	18,368	24,841	33,346	7,804	5,442	-	-	89,800
	Avg. Contributions	656	1,553	2,565	3,902	5,442	-	-	1,497
45-49	Count	15	9	4	4	-	-	-	32
	Total Contributions	10,823	14,786	10,568	19,758	-	-	-	55,935
	Avg. Contributions	722	1,643	2,642	4,940	-	-	-	1,748
50-54	Count	19	11	5	5	5	1	1	47
	Total Contributions	11,644	17,421	13,592	18,942	25,588	6,132	\$7,897	101,215
	Avg. Contributions	613	1,584	2,718	3,788	5,118	6,132	\$7,897	2,154
55-59	Count	9	8	9	8	1	-	2	37
	Total Contributions	6,840	11,156	26,127	39,360	6,847	-	18,848	109,178
	Avg. Contributions	760	1,394	2,903	4,920	6,847	-	9,424	2,951
60-64	Count	6	2	15	1	-	-	3	27
	Total Contributions	2,942	3,696	41,956	3,258	-	-	18,427	70,278
	Avg. Contributions	490	1,848	2,797	3,258	-	-	6,142	2,603
65-69	Count	3	3	7	-	-	1	1	15
	Total Contributions	1,359	4,471	20,155	-	-	6,091	8,311	40,387
	Avg. Contributions	453	1,490	2,879	-	-	6,091	8,311	2,692
70 & Over	Count	5	-	1	-	-	-	-	6
	Total Contributions	2,447	-	2,180	-	-	-	-	4,626
	Avg. Contributions	489	-	2,180	-	-	-	-	771
Totals	Count	174	71	65	21	7	2	7	347
	Total Contributions	\$104,481	\$111,623	\$175,885	\$92,864	\$37,877	\$12,223	\$53,483	\$588,435
	Avg. Contributions	\$600	\$1,572	\$2,706	\$4,422	\$5,411	\$6,111	\$7,640	\$1,696



Table 18

Distribution of Total Active Members by Age and by Years of Service

Average Age = 45.3 Average Service = 10.9

Age Last Birthday		Whole Years of Service at Valuation Date							Totals
		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Less than 20	Count	17	-	-	-	-	-	-	17
	Total Contributions	\$4,361	-	-	-	-	-	-	\$4,361
	Avg. Contributions	\$257	-	-	-	-	-	-	\$257
20-24	Count	85	5	-	-	-	-	-	90
	Total Contributions	38,919	\$6,099	-	-	-	-	-	45,018
	Avg. Contributions	458	\$1,220	-	-	-	-	-	500
25-29	Count	116	47	5	-	-	-	-	168
	Total Contributions	65,413	73,791	\$10,871	-	-	-	-	150,074
	Avg. Contributions	564	1,570	\$2,174	-	-	-	-	893
30-34	Count	120	62	35	1	-	-	-	218
	Total Contributions	70,727	96,099	86,138	\$3,258	-	-	-	256,222
	Avg. Contributions	589	1,550	2,461	\$3,258	-	-	-	1,175
35-39	Count	133	90	60	28	4	-	-	315
	Total Contributions	89,043	145,970	158,643	103,726	\$18,413	-	-	515,793
	Avg. Contributions	669	1,622	2,644	3,704	\$4,603	-	-	1,637
40-44	Count	118	80	75	55	23	2	-	353
	Total Contributions	79,425	128,304	200,105	210,253	113,001	\$12,480	-	743,567
	Avg. Contributions	673	1,604	2,668	3,823	4,913	\$6,240	-	2,106
45-49	Count	88	56	57	53	41	19	1	315
	Total Contributions	62,003	92,163	150,990	211,278	220,624	128,186	\$9,881	875,126
	Avg. Contributions	705	1,646	2,649	3,986	5,381	6,747	\$9,881	2,778
50-54	Count	59	47	40	37	48	28	21	280
	Total Contributions	43,493	76,117	105,393	143,687	252,153	189,747	178,699	989,288
	Avg. Contributions	737	1,620	2,635	3,883	5,253	6,777	8,509	3,533
55-59	Count	32	34	37	56	36	32	83	310
	Total Contributions	20,796	50,969	102,400	249,836	196,539	222,726	762,055	1,605,321
	Avg. Contributions	650	1,499	2,768	4,461	5,459	6,960	9,181	5,178
60-64	Count	36	24	34	13	14	15	17	153
	Total Contributions	23,483	38,331	94,553	52,589	71,198	107,434	105,745	493,334
	Avg. Contributions	652	1,597	2,781	4,045	5,086	7,162	6,220	3,224
65-69	Count	22	15	20	4	5	4	7	77
	Total Contributions	11,416	24,636	54,316	28,331	24,871	27,972	69,926	241,469
	Avg. Contributions	519	1,642	2,716	7,083	4,974	6,993	9,989	3,136
70 & Over	Count	15	9	2	2	-	-	-	28
	Total Contributions	10,405	12,914	4,801	3,376	-	-	-	31,496
	Avg. Contributions	694	1,435	2,401	1,688	-	-	-	1,125
Totals	Count	841	469	365	249	171	100	129	2,324
	Total Contributions	\$519,485	\$745,392	\$968,210	\$1,006,334	\$896,800	\$688,545	\$1,126,306	\$5,951,071
	Avg. Contributions	\$618	\$1,589	\$2,653	\$4,042	\$5,244	\$6,885	\$8,731	\$2,561



Table 19

Schedule of Pensions Recipients Added to and Removed from Rolls

Fiscal Year Ending December 31	Added to Rolls*		Removed from Rolls		Total		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
	Count	Annual Pension Benefits	Count	Annual Pension Benefits	Count	Annual Pension Benefits		
2014	106	\$368,168	35	\$114,448	1,251	\$4,250,343		\$3,398
2015	81	1,113,515	25	74,858	1,307	5,289,000	24.44%	4,047
2016	108	461,121	40	130,252	1,375	5,619,869	6.26%	4,087
2017	99	414,899	41	139,273	1,433	5,895,495	4.90%	4,114
2018	101	459,658	39	123,709	1,495	6,231,444	5.70%	4,168
2019	92	379,616	32	109,286	1,555	6,501,774	4.34%	4,181
2020	107	527,633	54	185,445	1,608	6,843,962	5.26%	4,256
2021	94	416,106	56	190,996	1,646	7,069,072	3.29%	4,295
2022	77	334,587	45	156,421	1,678	7,247,238	2.52%	4,319

* Added to amounts in 2015 include increased benefit amounts under the provisions of the new plan.



Table 20
Retirees by Monthly Benefit and Age

Males	Age Last Birthday						
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	1	-	-	-	1
\$50 - 99	-	2	6	1	3	1	13
\$100 - 149	-	7	13	11	13	9	53
\$150 - 199	-	2	10	29	19	23	83
\$200 - 249	-	5	19	30	20	44	118
\$250 - 299	-	8	20	22	22	21	93
\$300 - 349	-	13	19	27	27	19	105
\$350 - 399	-	17	24	38	32	13	124
\$400 & Over	-	165	222	154	73	38	652
Total	-	219	334	312	209	168	1,242
Females							
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	-	-	-	-	-
\$50 - 99	-	-	1	2	3	3	9
\$100 - 149	-	2	6	5	2	6	21
\$150 - 199	-	2	5	8	2	3	20
\$200 - 249	-	4	4	7	5	5	25
\$250 - 299	-	1	3	1	2	-	7
\$300 - 349	-	3	4	3	4	1	15
\$350 - 399	-	1	5	6	4	-	16
\$400 & Over	-	7	14	11	1	-	33
Total	-	20	42	43	23	18	146
Males & Females							
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	1	-	-	-	1
\$50 - 99	-	2	7	3	6	4	22
\$100 - 149	-	9	19	16	15	15	74
\$150 - 199	-	4	15	37	21	26	103
\$200 - 249	-	9	23	37	25	49	143
\$250 - 299	-	9	23	23	24	21	100
\$300 - 349	-	16	23	30	31	20	120
\$350 - 399	-	18	29	44	36	13	140
\$400 & Over	-	172	236	165	74	38	685
Total	-	239	376	355	232	186	1,388

Table 21
Beneficiaries by Monthly Benefit and Age

Males	Age Last Birthday								
Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	-	-	-	-	-	-	-
\$50 - 99	-	-	-	-	-	1	-	-	1
\$100 - 149	-	-	1	-	-	1	1	1	4
\$150 - 199	-	-	-	-	-	1	-	1	2
\$200 - 249	-	-	-	-	2	-	-	-	2
\$250 - 299	-	-	-	-	-	1	-	-	1
\$300 - 349	-	-	-	-	-	-	-	-	-
\$350 - 399	-	-	-	-	-	-	-	-	-
\$400 & Over	-	-	-	-	-	-	-	-	-
Total	-	-	1	-	2	4	1	2	10
Females									
Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	-	-	1	-	-	-	1
\$50 - 99	-	-	2	-	-	1	1	1	5
\$100 - 149	-	-	1	-	3	9	3	28	44
\$150 - 199	-	-	5	1	5	4	13	35	63
\$200 - 249	-	-	8	1	9	8	10	20	56
\$250 - 299	-	-	3	4	9	13	7	12	48
\$300 - 349	-	-	4	6	4	7	2	4	27
\$350 - 399	-	-	5	3	7	7	4	-	26
\$400 & Over	-	-	-	5	1	3	1	-	10
Total	-	-	28	20	39	52	41	100	280
Males & Females									
Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	-	-	1	-	-	-	1
\$50 - 99	-	-	2	-	-	2	1	1	6
\$100 - 149	-	-	2	-	3	10	4	29	48
\$150 - 199	-	-	5	1	5	5	13	36	65
\$200 - 249	-	-	8	1	11	8	10	20	58
\$250 - 299	-	-	3	4	9	14	7	12	49
\$300 - 349	-	-	4	6	4	7	2	4	27
\$350 - 399	-	-	5	3	7	7	4	-	26
\$400 & Over	-	-	-	5	1	3	1	-	10
Total	-	-	29	20	41	56	42	102	290

Table 22

Pensions Awarded in 2022 by Status

Average Age = 62.9

Males & Females	Status		
Benefit Amount	Retirees	Beneficiaries	Total
Under \$50	0	0	0
\$50-\$99	3	0	3
\$100-\$149	7	4	11
\$150-\$199	4	4	8
\$200-\$249	6	2	8
\$250-\$299	2	5	7
\$300-\$349	5	0	5
\$350-\$399	1	3	4
\$400 & over	30	1	31
Total	58	19	77
Males & Females			
Age Last Birthday	Retirees	Beneficiaries	Total
Under 50	0	0	0
50-54	0	1	1
55-59	0	3	3
60-64	39	0	39
65-69	11	5	16
70-74	7	4	11
75-79	1	0	1
80-84	0	5	5
85 & over	0	1	1
Total	58	19	77

Table 23

Retirees by Service at Retirement and Years Since Retirement

Average Service at Retirement = 20.9 Average Years Since Retirement = 10.8

Service at Retirement		Years Elapsed Since Retirement							Totals
		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Less than 5	Count	-	2	-	2	1	-	-	5
	Avg. Benefit	-	\$88	-	\$268	\$257	-	-	\$193
5-9	Count	26	51	23	6	11	5	5	127
	Avg. Benefit	\$129	\$119	\$139	\$149	\$148	\$158	\$131	\$130
10-14	Count	40	50	39	40	35	14	2	220
	Avg. Benefit	\$199	\$204	\$218	\$224	\$218	\$229	\$200	\$213
15-19	Count	35	34	49	52	27	8	2	207
	Avg. Benefit	\$305	\$304	\$307	\$303	\$303	\$296	\$272	\$304
20-24	Count	43	61	99	58	11	4	6	282
	Avg. Benefit	\$400	\$404	\$398	\$396	\$395	\$412	\$366	\$399
25-29	Count	60	98	64	35	8	11	-	276
	Avg. Benefit	\$500	\$490	\$488	\$483	\$458	\$464	-	\$489
30-34	Count	68	60	41	16	12	-	-	197
	Avg. Benefit	\$586	\$576	\$569	\$549	\$525	-	-	\$573
35 & Over	Count	47	20	5	1	1	-	-	74
	Avg. Benefit	\$675	\$662	\$629	\$669	\$720	-	-	\$669
Totals	Count	319	376	320	210	106	42	15	1,388
	Avg. Benefit	\$441	\$392	\$387	\$359	\$309	\$312	\$253	\$387



Table 24

Retirees by Year of Retirement

January 1, 2023 Total = 1,388

Year of Retirement	Count	Year of Retirement	Count
Under 1981	-	2002	33
1981	-	2003	35
1982	-	2004	35
1983	1	2005	32
1984	-	2006	43
1985	-	2007	62
1986	2	2008	46
1987	-	2009	47
1988	-	2010	60
1989	-	2011	68
1990	1	2012	96
1991	3	2013	88
1992	3	2014	82
1993	4	2015	65
1994	4	2016	72
1995	7	2017	67
1996	11	2018	84
1997	14	2019	71
1998	19	2020	79
1999	8	2021	63
2000	19	2022*	43
2001	21		

**May include retirements as of January 1, 2023*

Table 25**Thirty Year Closed Group Projected Benefit Payments**

Year Ending December 31	Actives	Retirees*	Total
2023	\$ 292,174	\$ 7,422,801	\$ 7,714,975
2024	636,466	7,362,424	7,998,890
2025	990,238	7,297,769	8,288,007
2026	1,334,965	7,218,506	8,553,470
2027	1,643,635	7,128,570	8,772,205
2028	1,933,067	7,034,092	8,967,159
2029	2,218,670	6,933,592	9,152,263
2030	2,499,298	6,817,030	9,316,328
2031	2,779,120	6,695,939	9,475,058
2032	3,051,365	6,567,431	9,618,796
2033	3,311,654	6,424,001	9,735,655
2034	3,571,966	6,267,427	9,839,393
2035	3,816,178	6,094,061	9,910,239
2036	4,049,874	5,908,950	9,958,825
2037	4,307,661	5,724,841	10,032,502
2038	4,574,018	5,525,593	10,099,611
2039	4,823,833	5,319,830	10,143,664
2040	5,070,428	5,100,230	10,170,658
2041	5,323,363	4,877,379	10,200,742
2042	5,587,842	4,643,946	10,231,787
2043	5,849,195	4,409,380	10,258,574
2044	6,086,500	4,163,393	10,249,893
2045	6,293,125	3,906,801	10,199,927
2046	6,485,502	3,648,749	10,134,252
2047	6,641,294	3,392,228	10,033,523
2048	6,774,269	3,133,173	9,907,442
2049	6,896,713	2,881,925	9,778,637
2050	6,981,696	2,639,209	9,620,906
2051	7,033,035	2,401,404	9,434,439
2052	7,065,688	2,176,941	9,242,629

* Includes Disabled Members, Beneficiaries, and Deferred Vested Members.



APPENDIX A

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the 1/1/2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1st, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level dollar amount. Under this method, the employer contribution amount is the sum of (i) the employer normal cost amount, and (ii) the amount that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, and sex. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, or survivor's benefit. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant employer contribution amount which, if applied to each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 30-year period with each subsequent amortization base created as a result of year to year experience changes over individual 20-year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.



Summary of Actuarial Assumptions and Methods (continued)

3. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

4. Economic Assumptions

Investment return: 6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses.

5. Demographic Assumptions

a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

Pub-2010 General Mortality Table, amount weighted, fully generational, projected with Scale MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Healthy Post-Retirement Mortality:

Pub-2010 General Healthy Annuitant Mortality Table, amount weighted, fully generational, projected with Scale MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 103%

Age	Pre-Retirement		Post-Retirement	
	Projected to 2023 using the MP-2020 Ultimate Scale			
	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%
25	0.02%	0.01%	0.02%	0.01%
30	0.03%	0.01%	0.03%	0.01%
35	0.04%	0.02%	0.04%	0.02%
40	0.06%	0.03%	0.06%	0.03%
45	0.08%	0.05%	0.09%	0.06%
50	0.12%	0.07%	0.25%	0.19%
55	0.18%	0.10%	0.36%	0.25%
60	0.27%	0.16%	0.52%	0.33%
65	0.39%	0.25%	0.77%	0.53%
70	0.60%	0.42%	1.30%	0.93%
75			2.29%	1.66%
80			4.13%	3.00%
85			7.67%	5.70%
90			13.51%	10.90%
95			21.73%	18.41%
100			31.36%	27.89%

Summary of Actuarial Assumptions and Methods (continued)

b. Withdrawal Rates

Age	Withdrawal	
	Male	Female
20	10.00%	10.00%
25	6.00%	6.00%
30	5.00%	5.00%
35	4.00%	4.00%
40	4.00%	4.00%
45	3.00%	3.00%
50	2.50%	2.50%
55	1.50%	1.50%
60	1.00%	1.00%

c. Retirement Rates

Age	Rates
<60	0.0%
60	55.0%
61	25.0%
62	15.0%
63	15.0%
64	15.0%
65	25.0%
66	30.0%
67	20.0%
68	20.0%
69	20.0%
70	100.0%

Summary of Actuarial Assumptions and Methods (continued)

6. Other Assumptions

- a. Percent married: 85% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Administrative expenses: Average of actual expenses for the prior two years, with each year projected at 2.50% to the valuation date.
- e. Decrement timing: Decrements of all types are assumed to occur mid-year.
- f. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- g. Incidence of contributions: Contributions are assumed to be received continuously throughout the year.
- h. Benefit service: All members are assumed to accrue one year of service each year.
- i. Premium tax allocation: Provided by staff and based on booked total premium taxes.
- j. Percent of eligible deferred vested members electing a refund: 25% of all future deferred vested members are assumed to leave their contributions in the fund and elect a deferred vested annuity payable commencing at age 60.
- k. No benefit amount data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.

APPENDIX B

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions

Covered Members

Any volunteer firefighter, EMT, or search and rescue employee for whom payments are received by the Volunteer Firefighter, EMT, and Search and Rescue pension account as prescribed in W.S. 35-9-621(e).

Service Retirement

Eligibility

Age 60 with 5 years of service.

Monthly Benefit

\$16 per month for each of the first 10 years of service and \$19 per month for each year of service over 10.

Normal Form of Payment is a 66% Joint & Survivor Annuity for married retirees and life annuity for unmarried retirees.

Any contributing member of the discontinued Volunteer Firefighter Pension Plan and the Volunteer Emergency Medical Technician Pension Plan on June 30, 2015 is grandfathered in certain provisions of the discontinued plans, including receiving the greater of the benefit under the previous plan and the service retirement benefit under this plan.

Vesting

Any member with five or more years of service who has left employment, and who has not withdrawn accumulated contributions, is eligible to receive the above benefit or can elect to receive a lump-sum refund of contributions with interest. In addition, a member with at least ten years of service may gain extra years of service by continuing to contribute, up to a maximum number of months served as an active member. A member who terminates with less than five years of service is only eligible for the lump-sum benefit.

Pre-retirement Death Benefit

Eligibility

No age or service requirements.

Monthly Benefit

Upon the death of any participating member, the board shall authorize a monthly payment to the surviving spouse of the member during the spouse's remaining lifetime of an amount equal to 66% of the amount calculated above based on actual years of service, or five years of service if greater. Benefits are also payable to children under age 21, equal to 33% of the amount calculated above, upon death of the member and spouse.



Summary of Plan Provisions (continued)

Post-retirement Death Benefit

Monthly Benefit 66% of the member's benefit payable prior to the member's death. Benefits are also payable to children under age 21, equal to 33% of the amount calculated above, upon death of the member and spouse.

Lump Sum Death Benefit

Benefit A lump sum payment of \$5,000, or \$2,500 for members who contributed \$5.00 per month before July 1, 1989, less the amount of the monthly benefits paid to the estate upon the spouse's death. For a deceased member without an eligible survivor, the greater of the deceased member's account or \$5,000 (\$2,500 for certain members) is payable to the estate of the deceased member.

Contributions

Employee \$18.75 per month for volunteer firefighters and EMT
\$37.50 per month for search and rescue members

State 60% of gross fire insurance premium taxes paid on fire insurance policies in Wyoming.

Interest 3.0% annually.

Cost-of-Living Improvements

W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change.



APPENDIX C

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on Table 1b may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.



Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution (continued)

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>January 1, 2023</u>	<u>January 1, 2022</u>
Ratio of actives to retirees and beneficiaries	0.7	0.7
Ratio of net cash flows to market value of assets	-3%	-2%
Duration of the actuarial accrued liability	12.0	12.1

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.



Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution (continued)

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability