

# City of Minot

## Trustees Meeting

### City Employees Pension Plan

Larry McNamara | November 15, 2022



**Gallagher**

Insurance | Risk Management | Consulting

# Plan Provisions

<b>Eligibility Requirements</b>	<p>Every full time Employee of the City of Minot (excluding all non-civil service employees) shall become a Member at the time he commences employment provided he is contributing to the fund. Plan is closed to new entrants effective January 1, 2014.</p>
<b>Normal Retirement Benefit</b>	<p>Members hired before January 1, 2004 receive the greater of (1) and (2). Members hired after December 31, 2003 and before July 6, 2010 receive (2). Members hired after July 5, 2010 receive (3):</p> <p>(1) 3.3% times Average Monthly Earnings times years of service, not to exceed 20 years</p> <p>(2) 2.5% times Average Monthly Earnings times years of service, not to exceed 30 years, plus 1.0% times Average Monthly Earnings times years of service in excess of 30 years, not to exceed 10 years</p> <p>(3) 2.3333% times Average Monthly Earnings times years of service, not to exceed 30 years, plus 0.5% times Average Monthly Earnings times years of service in excess of 30 years, not to exceed 10 years</p>
<b>Recognized Service</b>	<p>The number of years of service for determining retirement benefits will be measured in terms of years, months, and days (which often will result in a fraction).</p>
<b>Average Basic Monthly Compensation</b>	<p>For Members hired before July 6, 2010, the average of the highest 36 months (need not be consecutive) of pay within the last 120 months. For Members hired after July 5, 2010, the average of the highest 48 months (need not be consecutive) of pay within the last 120 months.</p>

<b>Normal Retirement Date</b>	<p>Vested Members who have attained age 60 are eligible for a monthly pension benefit. In addition, after December 31, 2003:</p> <ul style="list-style-type: none"> <li>• Vested Members hired before July 6, 2010 satisfying the Rule of 85 are eligible for an unreduced monthly pension benefit.</li> <li>• Vested Members hired after July 5, 2010 satisfying the Rule of 90 and who have attained age 55 are eligible for an unreduced monthly pension benefit.</li> <li>• The Rule of 85/90 is satisfied when the Member's age (measured in years, months, and days) plus the Member's total period of Membership (measured in years, months, and days) equals 85/90 years.</li> </ul>
<b>Early Retirement Date</b>	<p>Vested Members are eligible for a monthly pension commencing at age 60</p>
<b>Normal Form of Benefit</b>	<p>Married Members receive a Joint &amp; Two-Thirds to Survivor annuity. Single Members receive a Life Only annuity.</p>
<b>Vesting Schedule</b>	<p>60 months for Members hired before July 6, 2010; 120 months for Members hired after July 5, 2010</p>
<b>Employee Contributions</b>	<p>14.74% of salary</p>
<b>Cost of Living Adjustment</b>	<p>Pension payments are increased 1% annually for Members receiving pension payments who have attained age 65</p>
<b>Retiree Health Care Supplement</b>	<p>Retired Members hired before July 6, 2010 receive monthly health supplement until age 65</p>

# Summary of Participant Data

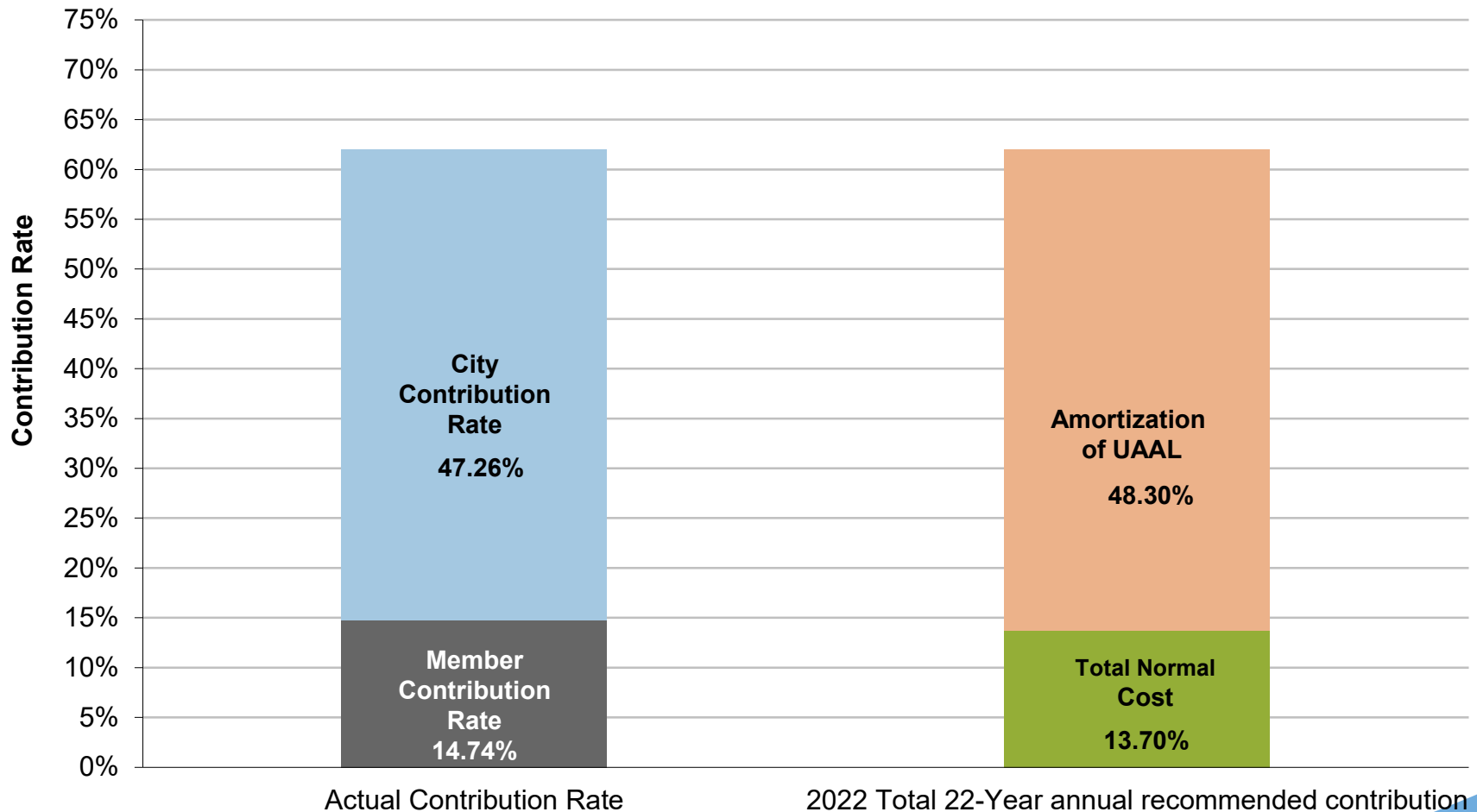
	1/1/2021	1/1/2022	Percentage Change
<b>Active Members</b>			
Number of Members	180	160	-11.1%
Average age	47.5	46.2	-2.7%
Average service	14.9	15.4	3.4%
Average base salary	\$ 73,139	\$ 74,605	2.0%
<b>Retired Members</b>			
Number of Members	281	295	5.0%
Average age	72.3	71.6	-1.0%
Average monthly benefit	\$ 2,748	\$ 2,785	1.3%
<b>Terminated Vested Members</b>			
Number of Members	28	28	0.0%
Average age	50.8	50.6	-0.4%
Average monthly benefit at Normal Retirement	\$ 2,055	\$ 2,327	13.3%
<b>Terminated Non-Vested Members due a refund</b>			
Number of Members	16	16	0.0%
Average refund due	\$ 12,080	\$ 13,450	11.3%

# Reconciliation of Assets

	<u>2021</u>	<u>2022</u>
<b>Asset Value as of Prior January 1</b>	\$ 79,109,250	\$ 88,421,158
▪ City Contributions	5,856,306	5,779,045
▪ Employee Contributions	2,015,332	1,850,074
▪ Investment Income	11,325,915	11,564,947
▪ Benefit Payments	(9,603,346)	(9,994,132)
▪ Retiree Health Care Supplement	(127,886)	(128,249)
▪ Expenses	(154,413)	(165,133)
<b>Asset Value as of January 1</b>	<u>\$ 88,421,158</u>	<u>\$ 97,327,530</u>
<b>Actual Rate of Return</b>	14.3%	13.1%
<b>Assumed Rate of Return</b>	7.5%	7.5%
<b>Excess/(Deficiency)</b>	6.8%	5.6%

# City Contribution Rate

City contribution rate of 47.26% of salary is needed to meet the 2022 22-year total annual recommended contribution (62.00% of salary).



## Accrued Liability by Participant Category

	1/1/2021	1/1/2022
Participants Receiving Benefits	\$98,045,596	\$103,753,396
Terminated Vested Participants	\$5,421,532	\$6,726,447
Terminated Non-Vested Member Refunds	\$193,287	\$215,197
Active Participants	\$45,829,455	\$42,562,869
<b>Total Participants</b>	<b>\$149,489,870</b>	<b>\$153,257,909</b>

# Net Pension Liability

	<b>As of December 31</b>		
	<b>2019</b>	<b>2020</b>	<b>2021</b>
Total Pension Liability	\$141,553,139	\$149,489,870	\$153,257,912
Plan fiduciary net position	\$79,109,250	\$88,421,158	\$97,327,530
Net pension liability (asset)	\$62,443,889	\$61,068,712	\$55,930,382
Plan fiduciary net position as a percentage of the total pension liability	56%	59%	64%
Covered-employee expected payroll	\$14,252,995	\$13,723,399	\$12,443,766
Net pension liability (asset) as a percentage of covered-employee payroll	438.1%	445.0%	449.5%



# Net Pension Liability – Discount Rate Sensitivity

As of December 31, 2021

	Baseline	Interest Rate	Baseline w/10% Asset
Market Value of Assets	\$ 97,327,530	\$ 97,327,530	\$ 87,594,777
Liabilities	\$ 153,257,909	\$ 171,093,396	\$ 153,257,909
Funded Ratio	64%	57%	57%
Interest Rate	7.50%	6.50%	7.50%

- Our estimates are based on the interest rate used for funding purposes, a 100bp decline in interest rate, as well as the impact of a 10% decrease in Plan asset values.
- The interest rate sensitivity is shown comparing the funding baseline and a funding run at 6.50%. The interest rate change of 1% changed the liabilities by 11.6%.

# Key Assumptions and Methods

## Interest Assumptions

7.5% per year

## Mortality

Mortality rates are based on the Pub-2010 and PubS-2010 Mortality Tables with Projection Scale MP-2021

## Retirement Rates

If Hired Before 7/6/2010 and meet Rule of 85		If Hired After 7/5/2010 and meet Rule of 90	
Years after Rule of 85	Rate	Years after Rule of 90	Rate
0-1	50%	0-1	50%
1-2	15%	1-2	15%
2-3	10%	2-3	10%

For participants not meeting the above criteria:

Age	City Employee	Age	Police Employee
60-65	20%	60-61	67%
66	40%	62+	100%
67	60%		
68	80%		
69+	100%		

# Key Assumptions and Methods

## Termination Rates

Age	Employees		Police	
	Male	Female	Male	Female
25-35	12%	8%	14%	14%
35-45	3%	4%	4%	10%
45-50	3%	2%	4%	10%
50-55	3%	2%	0%	0%
55+	1%	1%	0%	0%

## Salary Increase Rates

7% per year for 0-4 years of service, 4.5% per year for 5-12 years of service, 4.0% per year for 13+ years of service

## Actuarial Asset Value

Market Value with gains and losses smoothed over a 5 year period.

## Actuarial Cost Method

Entry Age Normal – Level Percent of Pay

# Key Assumptions and Methods (Cont.)

## Funding

- **Unfunded Liability Amortization** 22 years remaining as of 1/1/2022
- **Amortization Method** Level Dollar Amount

## GASB

Amortization periods:

- Differences between actual and expected non-investment experience and changes in assumptions - average future working lifetime
- Differences between actual and expected investment experience – 5 years

## City Contribution Rate

We assume that active participants will continue to contribute 14.74% of salary in all future years and that the City will contribute 46.54% of covered payroll.

# Expected Return on Assets

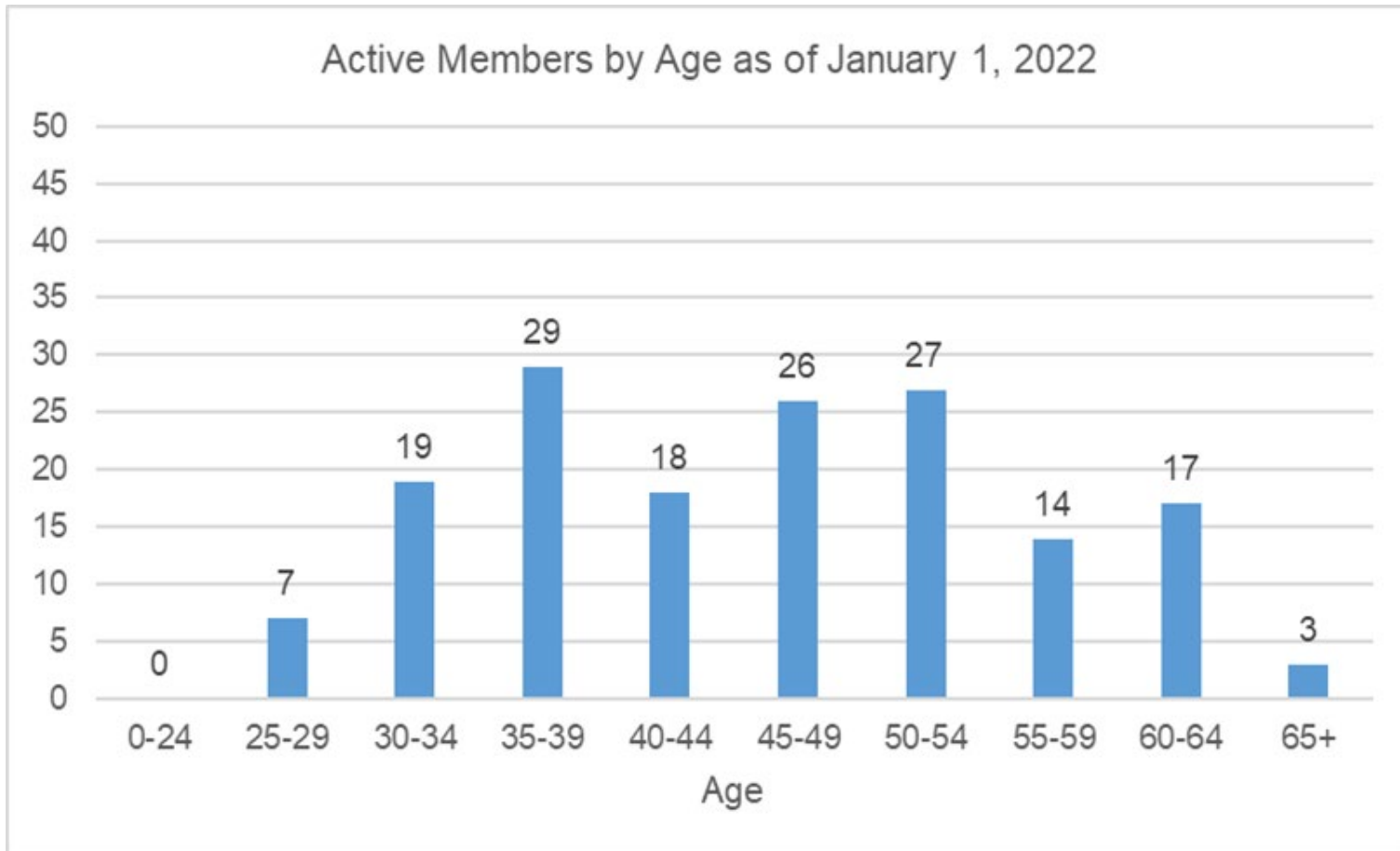
- Average 10 year return = 9.10%
- The Fund is assumed to earn 7.50% per year after administration expenses.
- Capital Market Assumptions from most investment firms, including Gallagher Financial Advisors, have dropped over the last few year
  - Market volatility and uncertainty around the economy
  - Price Earnings Ratio = Stock Price / Earnings Per Share
    - Indicates the dollar amount an investor can expect to invest in a company in order to receive \$1 of that company's earnings
    - A higher ratio signals an overvalued stock market
      - Although the P/E ratio has come down in 2022, most capital market assumptions are produced early in the year
      - Currently it is still above the historical average
  - Tight job market / Layoffs beginning
  - Federal Reserve raising interest rates

# Mortality

- Current Mortality Table: Pub-2010 and PubS-2010 Mortality Tables with Projection Scale MP-2021
- Current Projection Scale: MP-2021
- The underlying mortality table is likely to be the most recent table for several years
- The Society of Actuaries updates the projection scale annually
- Scale MP-2019 to Scale MP-2020 resulted in a decrease in pension obligations between 0.3% and 0.8%
- Scale MP-2020 to Scale MP-2021 resulted in an increase in benefit obligations between 0.2% and 0.4%
- It is common to automatically approve the most recent projection scale without going to the board

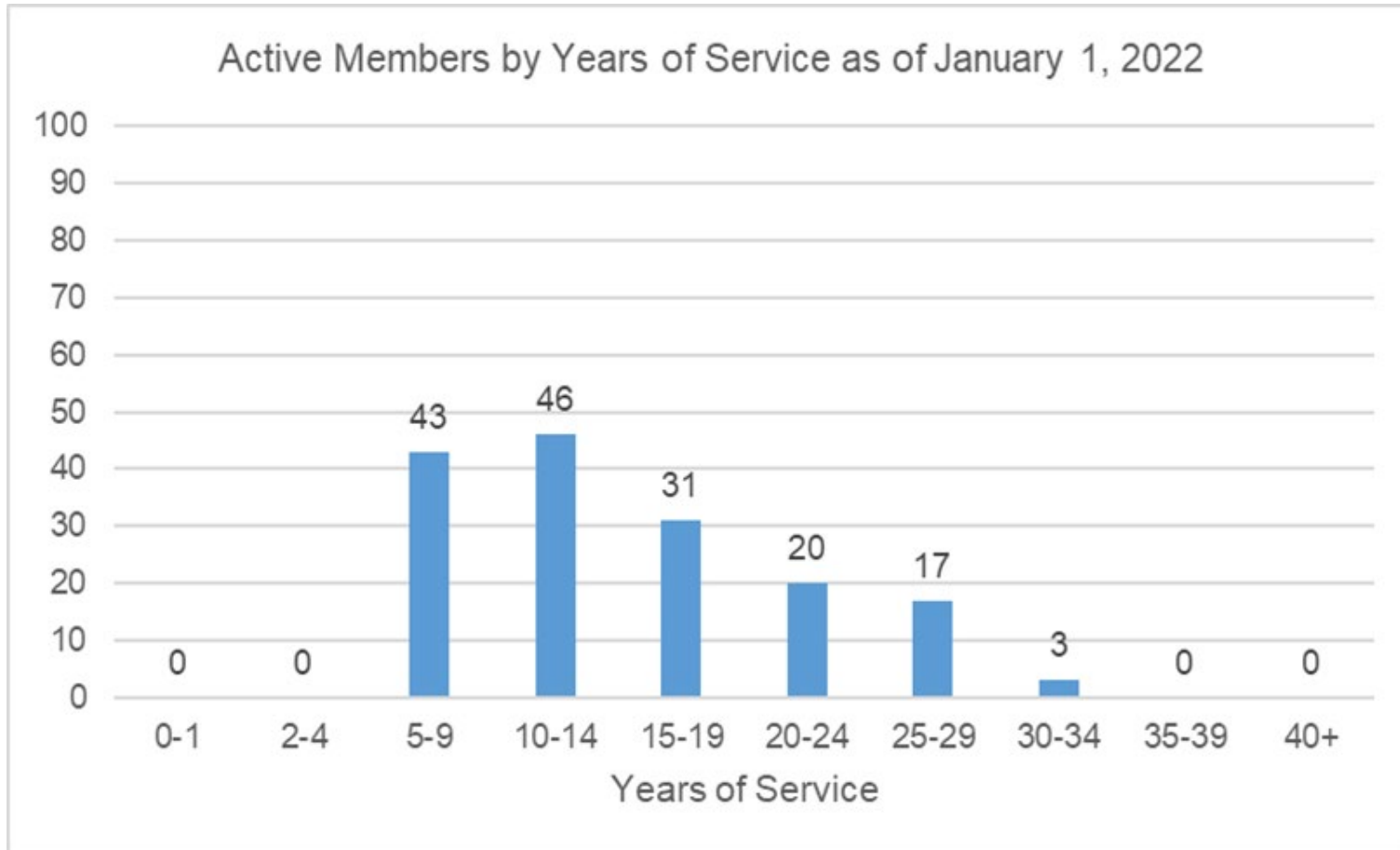
# Appendix

# Distribution of Active Plan Participants

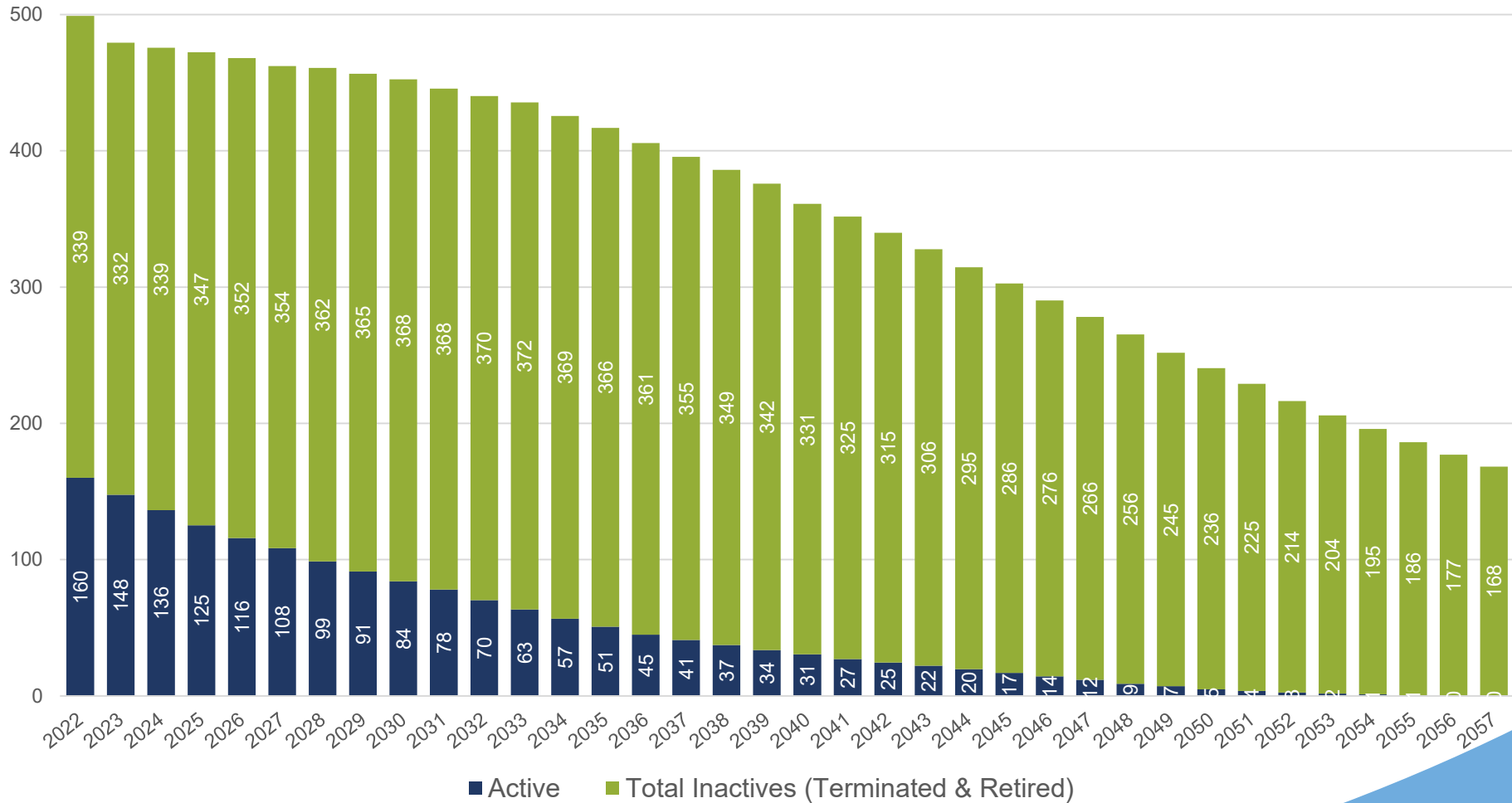




# Plan Participants



# Projected Plan Participants



# Actuarial Value of Assets

	<u>2021</u>	<u>2022</u>
<b>Asset Value as of January 1 – Market Value</b>	\$ 88,421,158	\$ 97,327,530
Deferred gains (losses)		
▪ December 31, 2017	1,053,812	N/A
▪ December 31, 2018	(3,711,352)	(1,855,676)
▪ December 31, 2019	5,564,314	3,709,543
▪ December 31, 2020	4,373,505	3,280,129
▪ December 31, 2021	<u>N/A</u>	<u>4,025,003</u>
Total Deferred gains (losses)	7,280,279	9,158,999
<b>Asset Value as of January 1 – Actuarial Value</b>	\$ 81,140,879	\$ 88,168,531

# Unfunded Liability - Funding

	1/1/2021	1/1/2022
Total Accrued Liability	\$149,489,870	\$153,257,909
Actuarial Value of Assets	\$81,140,879	\$88,168,531
Unfunded Liability	\$68,348,991	\$65,089,378

# Actuarial Certification

- The data, actuarial assumptions, actuarial methods and plan provisions used within this report are the same as those documented in our January 1, 2022 actuarial valuation report for the City of Minot Employees' Pension Plan unless otherwise noted within.
- The following information is provided in accordance with the Actuarial Standard of Practice No. 41 regarding actuarial communication.
- The values shown in this report are estimates and are based on the actuarial valuation as of January 1, 2022. The information date is January 1, 2022. We are not aware of any subsequent events since the information date which would materially impact the nature of our comments.
- Projected results will depend on a number of future factors, including demographic changes, actual investment return and contributions to the program, and future plan design decisions. Actual projected results will differ from the estimates provided here. A discussion of the risk factors impacting contribution amounts, as required under ASOP 51, is provided in these slides and in the January 1, 2022 valuation reports.
- Edwin L. McNamara, EA, FSPA, MAAA, FRM, CFA is the responsible actuary for purposes of these projections and is qualified to provide this information. We are available to answer questions regarding these projections. We are not aware of any conflicts of interest which would impair the objectivity of our work other than those (if any) specifically identified here, nor any limitations or constraints which impeded our work.

# Thank You!

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