



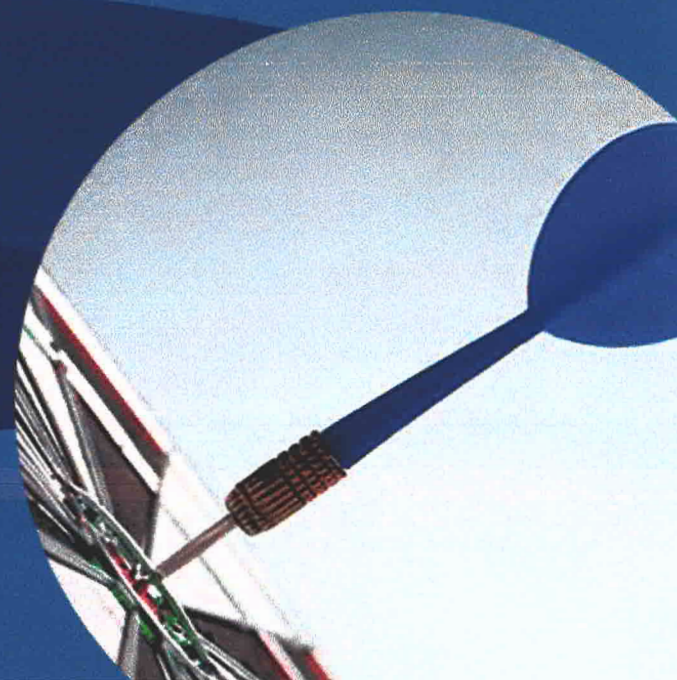
# CITY OF LONGMONT General Employees' Retirement Plan

## Preliminary Actuarial Valuation Results as of January 1, 2021

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August 11, 2021

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# Actuarial Valuation – Purpose

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- Actuarial Valuation
  - Prepared as of January 1, 2021
    - Member data
    - Financial data
    - Benefit and contribution provisions
    - Actuarial assumptions and methods
  - Purposes:
    - Measure the actuarial liabilities
    - Determine adequacy of current contributions
    - Provide other information for reporting for accounting and CAFR
    - Explain changes in actuarial condition of the Plan



# Member Statistics

- Average active member is around age 46 with 10 years of service and earns approximately \$76,000 annually
- Average retiree, beneficiary, and disabled member is around age 71 and receives a pension benefit of approximately \$22,400 annually

	2020	2021	Change
<b>Active Members</b>			
Count	693	709	2.3%
Average Age	46.1	46.3	0.2
Average Service	<u>9.8</u>	<u>9.6</u>	<u>(0.2)</u>
Average Hire Age	36.3	36.5	0.2
Payroll	\$49.9 million	\$54.1 million	8.3%
Average Pay	\$72,073	\$76,305	5.9%
<b>Retirees, Beneficiaries and Disabled Members</b>			
Count	402	427	6.2%
Average Age	71.0	71.3	0.2
Average Annual Benefit	\$21,866	\$22,444	2.6%





# Market Value of Assets (in millions)

- Return on market value of 16.1% (dollar-weighted rate of return)
- Contribution rates historically set at a level to at least meet the actuarially determined contribution.
  - Current employer contributions of 8.0% of pay
  - Tier 1 employee contributions of 6.0% of pay
  - Tier 2 employee contributions of 5.0% of pay

	2020*	2021*
Market Value Beginning of Year	\$142.6	\$166.9
1. Contributions		
a. Contributions from Employer	\$3.6	\$5.0
b. Contributions from Plan Members	2.5	2.8
c. Total	\$6.1	\$7.8
2. Net Investment Income		
a. Interest and Dividends	\$4.9	\$4.8
b. Realized Gain and Unrealized Appreciation	22.4	22.2
c. Total	27.3	27.0
d. Investment Expenses	(0.2)	(0.2)
e. Net Investment Income	\$27.0	\$26.8
3. Benefit Payments and Refunds	\$(8.7)	\$(9.5)
4. Administrative Expenses	(0.1)	(0.2)
Market Value End of Year	\$166.9	\$191.8

\*Numbers may not add due to rounding



# Actuarial Value of Assets

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- All actuarial calculations are based on actuarial value of assets, not market value
  - Actuarial value reflects 20% of the difference between last year's expected return on market and the actual return and includes application of the 80%/120% corridor
- Actuarial value of assets is now \$177.5 million, compared to \$163.4 million last year
- Return on Actuarial Value of Assets was 9.8% in calendar year 2020, compared to the 7.5% assumption, resulting in an investment return gain
- Deferred gains of \$14.3 million will contribute to decreases to the future contribution requirements

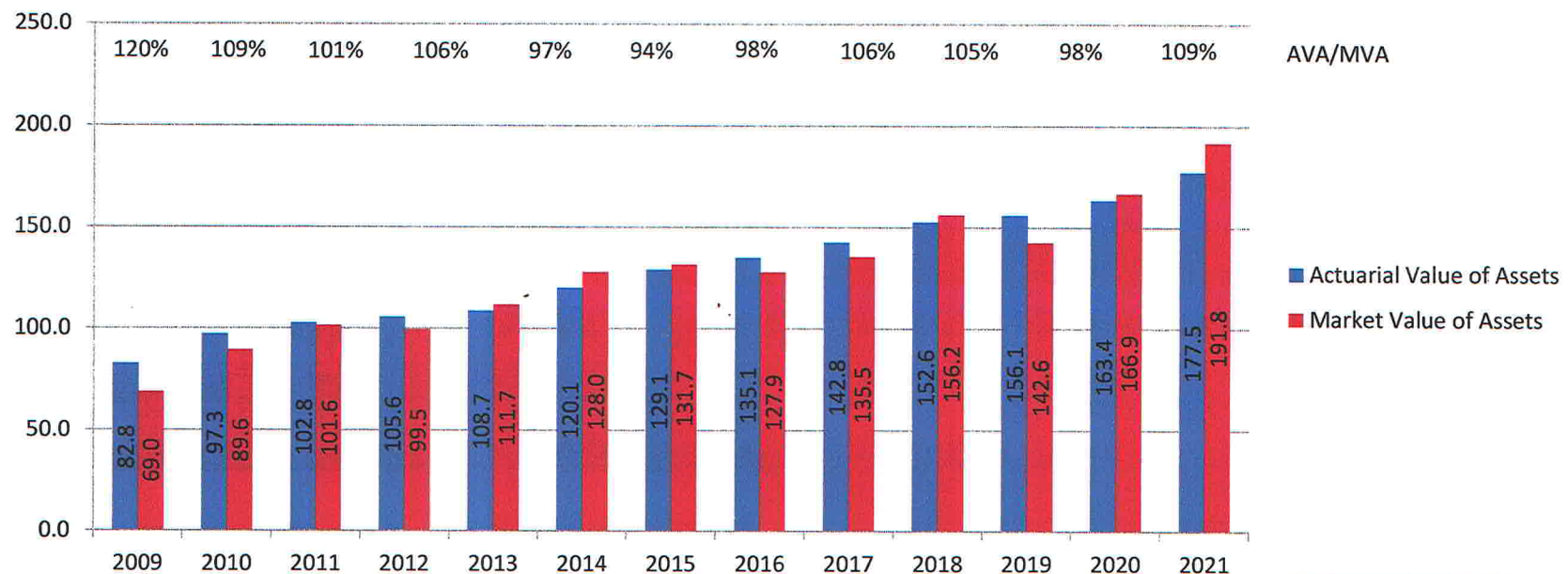
Actuarial Value of Assets:	\$177.5M
Deferred Gains:	<u>14.3M</u>
Market Value of Assets:	\$191.8M



# Market and Actuarial Value of Assets

- Actuarial Value of Assets as percent of Market Value of Assets shown at top of chart
- Actuarial value is 93% of fair market value in 2021; in 2009, it was 120% of fair market value
- \$14.3 million in deferred gains, not yet recognized in the actuarial value

**Asset Values (in millions)**

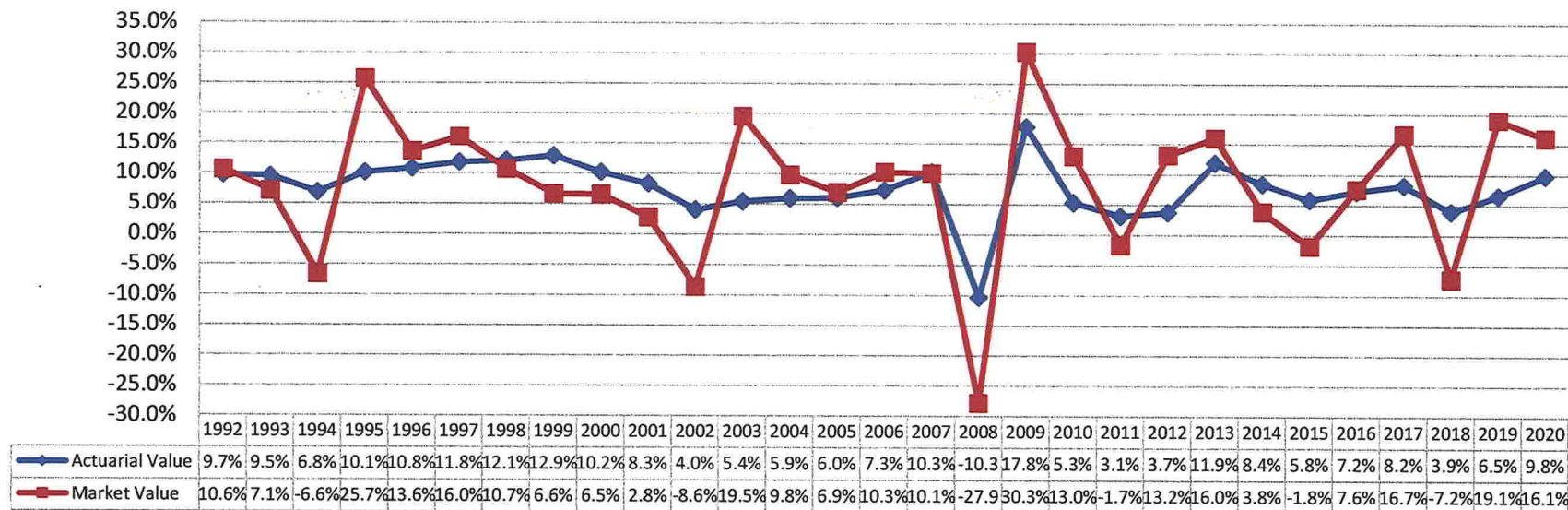




# Average Annual Rates of Return

- Actuarial value smoothes market volatility
- 8.2% average return in market value since 1992
- 7.7% average return in actuarial value since 1992
- 7.5% current assumed rate of return

**Annual Rates of Return**

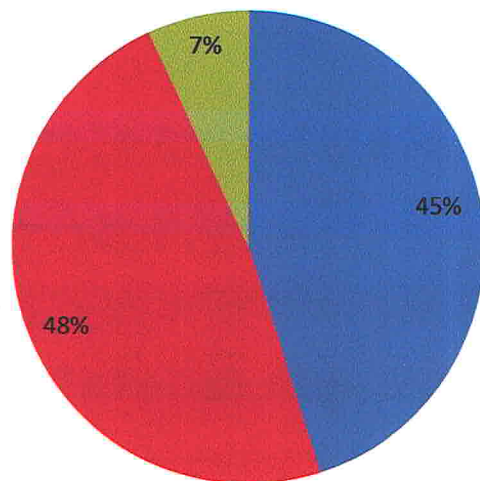


# Actuarial Accrued Liability

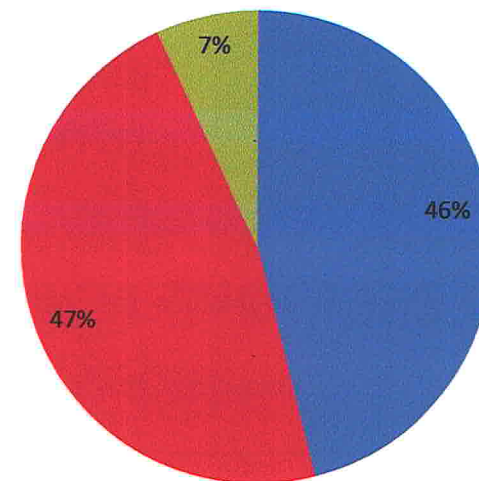
## *Baseline Assumptions (7.50%)*

- Actuarial accrued liability increased from 2020 to 2021, growing more than expected
- Liability (gain)/losses
  - Total liability losses of approximately \$2.1 million of which, \$2.1 million came from higher than expected salary increases
- Plan maturing with more retiree liability as percent of total

**2021 - \$197.3M**



**2020 - \$186.0M**



■ Active  
■ Receiving  
■ Deferred

■ Active  
■ Receiving  
■ Deferred





# (Gains)/Losses Summary

*Baseline Assumptions (7.50%)*

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- Actuarial (gains)/losses due to:
  - Investment return on AVA (\$3.77) million
  - Liabilities and other \$2.14 million
- Total (gains)/losses are (\$1.63) million
- Salary increases were higher than expected
- Investment returns were higher than expected
- Gains decreased actuarially determined contribution



# Actuarial Valuation – Assumptions

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- Discount Rate: 7.50%
- Mortality Assumption: RP2000 with generational mortality approach, projected with Scale AA
- Actuarially Determined Contributions based on a level percent of pay basis with an initial period of 24 years as of January 1, 2021
  - Aligns better with the Board's contribution policy
- Uses an open group projection to determine the adequacy of the employer and employee contributions
  - As of January 1, 2022, an increase in employer contribution rate from 8.4% to 9.0% and an increase in the employee contribution rate from 6.0% and 5.0% to 6.6% and 5.6%, respectively, for tier 1 and tier 2 employees
- Preliminary results on the next few slides explore the impact of changing two major assumptions
  - Mortality Assumption: Pub-10 with generational mortality approach, projected with Scale MP-20
  - Discount Rate: 7.25% or 7.00%



# Discount Rate Assumption

- Current position of Public Pension Plan Return assumptions compiled by NASRA
  - Average: 7.11%
  - Median: 7.00%
- A look at a few comparable plans:

Plan	Discount Rate Assumption	Funded Ratio	Measurement Date
<b>City of Longmont General Employees Retirement Plan</b>	7.50%	90.00%	12/31/2020
Adams County Retirement Plan	7.25%	54.03%	12/28/2020
Arapahoe County Retirement Plan	7.25%	60.55%	12/29/2020
City of Aurora General Employees' Retirement Plan Colorado	7.00%	92.30%	12/31/2020
City of Englewood Nonemergency Employees Retirement Plan	6.00%	77.30%	12/31/2019
City of Phoenix Employees' Retirement System	7.00%	63.69%	6/30/2020
Denver Employees Retirement Plan	7.50%	61.70%	12/31/2020
El Paso County Retirement Plan	7.00%	62.80%	12/30/2020
Employees' Retirement Plan of the Denver Board of Water Commissioners	6.50%	84.40%	12/31/2020
Retirement Plan for Employees of the Board of Water Works of Pueblo	7.50%	78.70%	12/31/2020
State of Wyoming Retirement System - Public Employees	7.00%	74.76%	12/31/2020
The Pueblo County Officers and Employees Pension Plan	7.50%	59.21% *	12/31/2019
Tucson Supplemental Retirement System	7.00%	73.30%	6/30/2020
Weld County Retirement Plan	6.50%	107.58% *	12/31/2019

\*Funded Ratio for these plans is expressed as Market Value of Assets, all others are expressed as Actuarial Value of Assets.

- Lowering the discount rate will improve the likelihood of achieving the assumption as well as funding goals under the current contribution rates





# Mortality Assumption

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- The current table and projection scale is becoming out of date
- The auditors are taking notice
- The current table are doing an adequate job at modeling mortality up to this point, but the updated new tables would do a much better job going forward
- Recommending Pub-10 with generational mortality approach, projected with Scale MP-20



# Actuarial Valuation – Assumptions

## *Funded Status*

	Actuarial Valuation as of			
	January 1, 2021	January 1, 2021	January 1, 2021	January 1, 2021
<b>Discount Rate</b>	<b>7.50%</b>	<b>7.50%</b>	<b>7.25%</b>	<b>7.00%</b>
<b>Mortality Assumption</b>	<b>RP2000</b>	<b>Pub-10</b>	<b>Pub-10</b>	<b>Pub-10</b>
<b>Summary of Assets, Liabilities and Funded Status</b>				
1. Plan Assets on Valuation Date				
a. Actuarial Value	\$ 177,525,794	\$ 177,525,794	\$ 177,525,794	\$ 177,525,794
b. Market Value	\$ 191,793,268	\$ 191,793,268	\$ 191,793,268	\$ 191,793,268
2. Actuarial Accrued Liability (Valuation Basis)	\$ 197,285,600	\$ 203,321,034	\$ 208,898,311	\$ 214,726,011
a. Funded Ratio - Actuarial Value	90.0%	87.3%	85.0%	82.7%
b. Funded Ratio - Market Value	97.2%	94.3%	91.8%	89.3%
3. Projected Date of Full Funding <sup>(1)</sup>	2025	2028	2033	2045

<sup>(1)</sup> Based on an open group projection assuming an increase in employer contribution rate from 8.4% to 9.0% as of January 1, 2022 and an increase in the employee contribution rate from 6.0% and 5.0% to 6.6% and 5.6% respectively for tier 1 and tier 2 employees.



# Actuarial Valuation – Assumptions

## *Actuarially Determined Contribution*

	Actuarial Valuation as of							
	January 1, 2021		January 1, 2021		January 1, 2021		January 1, 2021	
Discount Rate	7.50%		7.50%		7.25%		7.00%	
Mortality Assumption	RP2000		Pub-10		Pub-10		Pub-10	
	Amount	% of Covered Payroll	Amount	% of Covered Payroll	Amount	% of Covered Payroll	Amount	% of Covered Payroll
Summary of Actuarially Determined Contribution								
1. Annual Covered Payroll for Members Included in Valuation <sup>(1)</sup>	\$ 53,473,600	N/A	\$ 53,473,600	N/A	\$ 53,473,600	N/A	\$ 53,473,600	N/A
2. Total Normal Cost	\$5,331,059	10.0%	\$5,490,610	10.3%	\$5,765,773	10.8%	\$6,059,481	11.3%
3. Amortization of Unfunded Actuarial Liability <sup>(2)</sup>	1,673,611	3.1%	1,644,335	3.1%	1,955,430	3.7%	2,266,466	4.2%
4. Administrative Expenses	151,600	0.3%	151,600	0.3%	151,600	0.3%	151,600	0.3%
5. Total Actuarially Determined Contribution (2. + 3. + 4.)	\$ 7,156,270	13.4%	\$ 7,286,545	13.6%	\$ 7,872,803	14.7%	\$ 8,477,547	15.9%
6. Estimated Member Contribution <sup>(3)</sup>	2,886,101	5.4%	2,886,101	5.4%	2,886,101	5.4%	2,886,101	5.4%
7. Actuarially Determined Employer Contribution (5. - 6.)	\$ 4,270,169	8.0%	\$ 4,400,444	8.2%	\$ 4,986,702	9.3%	\$ 5,591,446	10.5%

<sup>(1)</sup> Reflects compensation for current plan year for members under the age at which 100% of members are assumed to retire.

<sup>(2)</sup> Beginning January 1, 2021, the Unfunded Actuarial Accrued Liability is amortized over an initial period of 24 years as a level percent of pay. Each new amortization base in following years will be amortized over an initial closed period of 20 years.

<sup>(3)</sup> 6.0% of Covered Payroll for Tier 1 members and 5.0% of Covered Payroll for Tier 2 members.

- Even though the Actuarially Determined Contribution may be greater than the currently scheduled increase in employer and employee contributions, open group projections indicate the plan should be fully funded within a reasonable period of time
- The main reason for this is that there a significant amount of deferred asset gains in the actuarial value of assets that will be recognized over the next four years





# Actuarial Valuation – Assumptions

## *Projected Funded Status - Table*

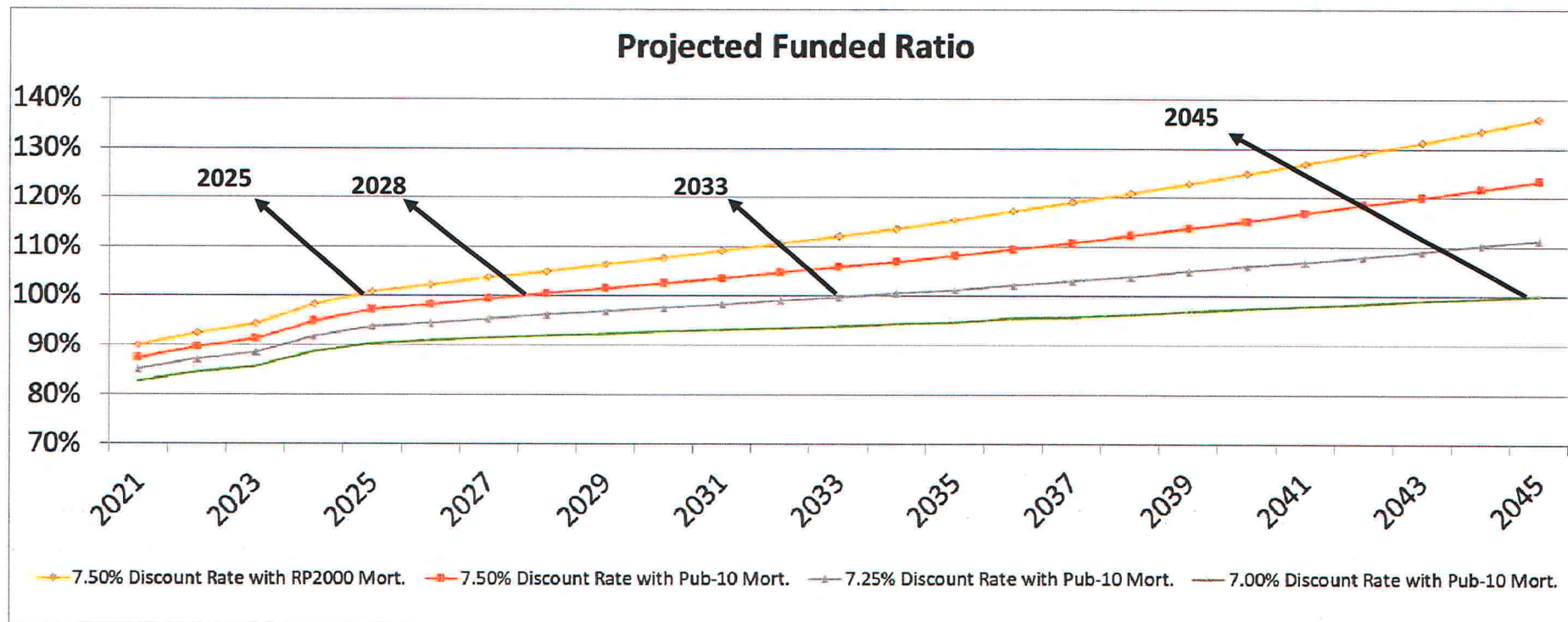
Valuation as of January 1, 2021 - Projected Funded Ratio								
Investment Return	7.50%		7.50%		7.25%		7.00%	
Mortality	RP2000		Pub-10		Pub-10		Pub-10	
January 1,	AVA Funded Ratio	MVA Funded Ratio	AVA Funded Ratio	MVA Funded Ratio	AVA Funded Ratio	MVA Funded Ratio	AVA Funded Ratio	MVA Funded Ratio
2021	90%	97%	87%	94%	85%	92%	83%	89%
2022	93%	98%	90%	95%	87%	92%	85%	90%
2023	94%	99%	91%	96%	88%	93%	86%	90%
2024	98%	100%	95%	97%	92%	94%	89%	90%
2025	101%	101%	97%	98%	94%	94%	90%	91%
2030	108%	108%	102%	102%	98%	97%	93%	93%
2035	115%	115%	108%	108%	101%	101%	95%	95%
2040	125%	125%	115%	115%	106%	106%	97%	97%
2045	136%	136%	123%	123%	111%	111%	100%	100%

Projections include an increase in employer contribution rate from 8.4% to 9.0% and an increase in the employee contribution rate from 6.0% and 5.0% to 6.6% and 5.6%, respectively, for tier 1 and tier 2 employees as of January 1, 2022



# Actuarial Valuation – Assumptions

## *Projected Funded Status - Chart*



# Valuation Summary

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- Plan is well funded relative to many of its peers
- Scheduled contribution increases, strong asset returns, and strengthened assumptions result in the projected full funding date in 2045
- Questions?

