



City of Grand Forks Pension Plan

2026 Actuarial Valuation Discussion

Deloitte Consulting LLP
April 27, 2026



Agenda

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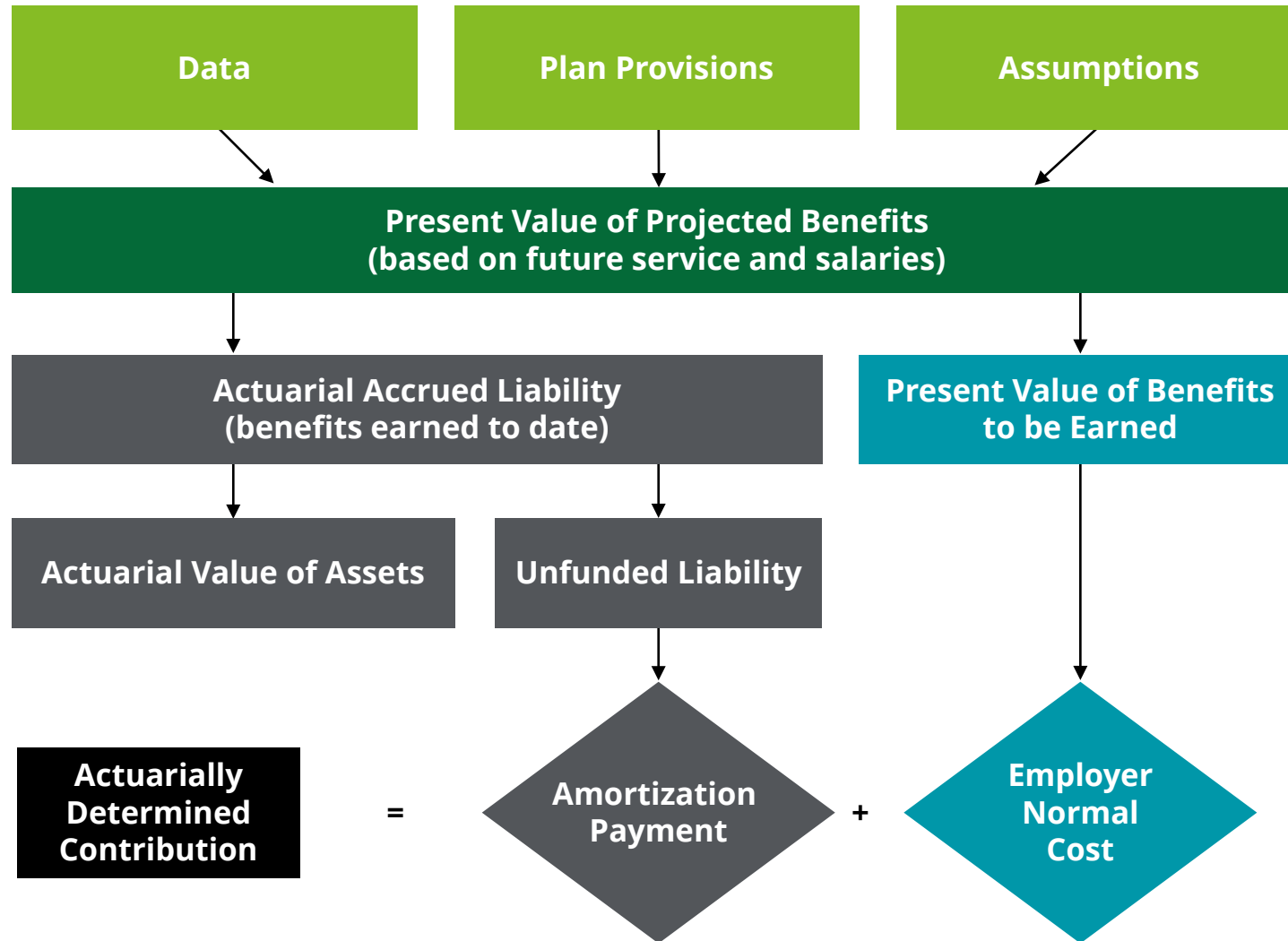
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January 1, 2026 Experience Results



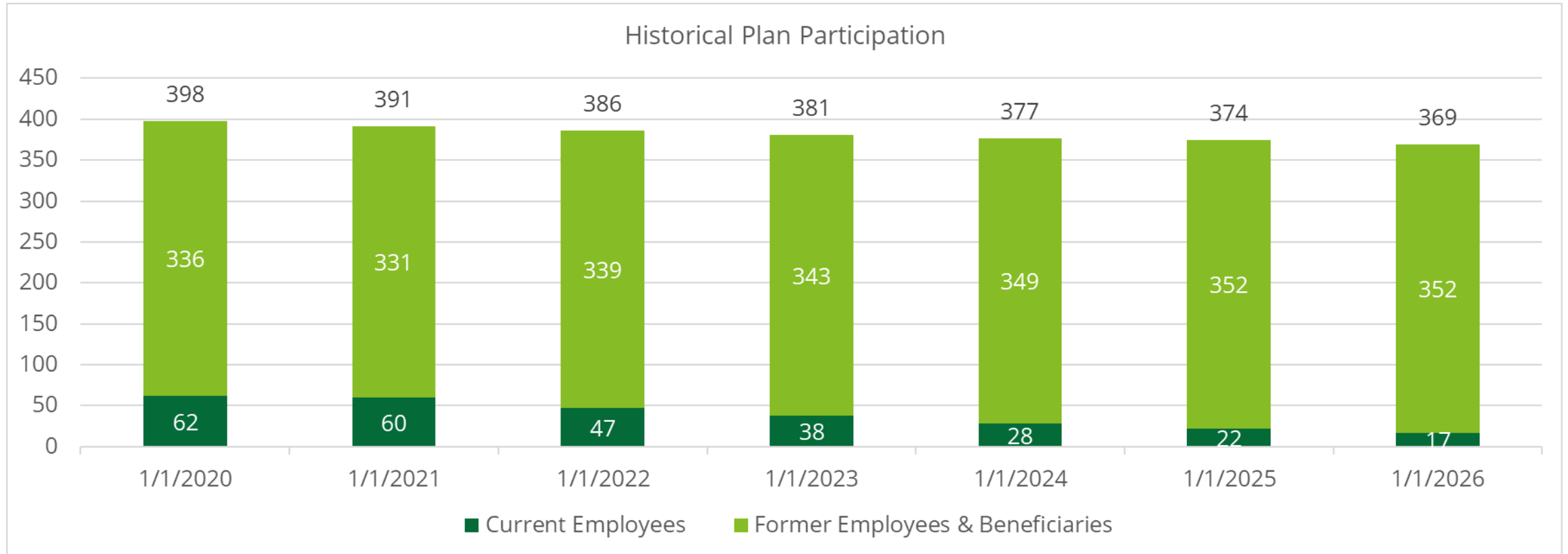
January 1, 2026 Experience Results

Development of Actuarially Determined Contribution



January 1, 2026 Experience Results

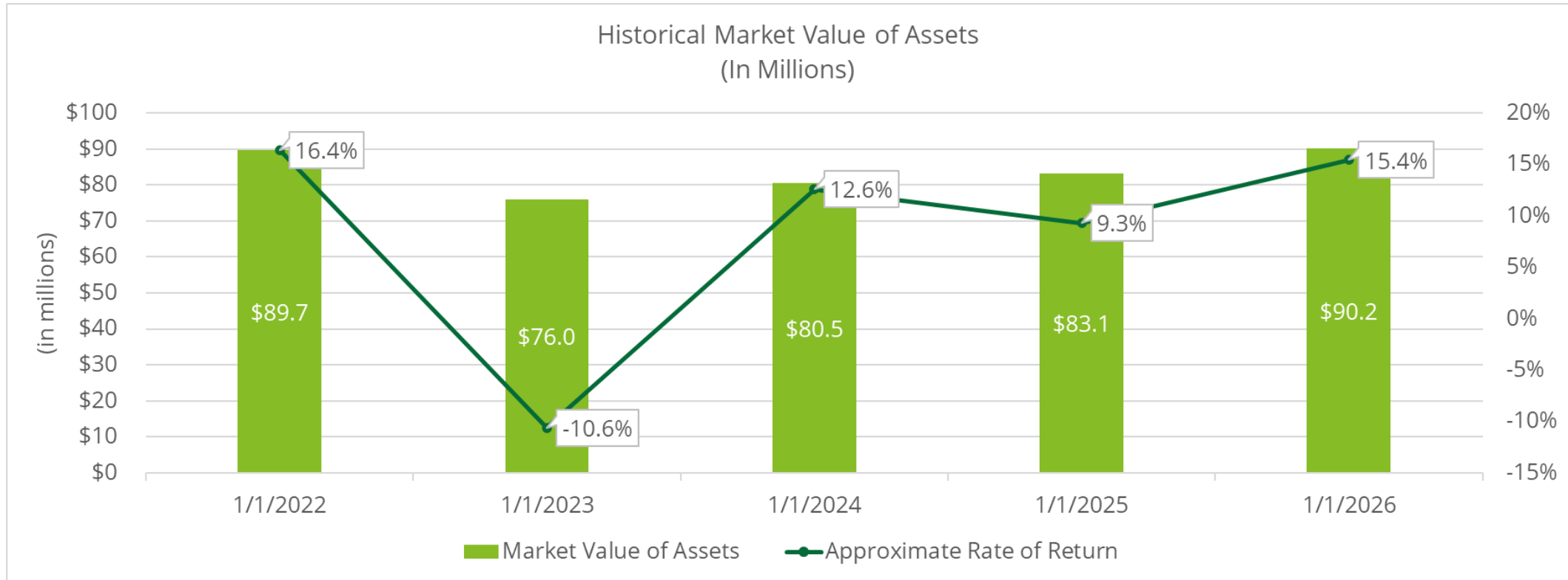
Plan Participant Experience



	1/1/2020	1/1/2021	1/1/2022	1/1/2023	1/1/2024	1/1/2025	1/1/2026
Average Expected Compensation for Current Employees	\$ 77,639	\$ 80,076	\$ 80,774	\$ 84,889	\$ 90,122	\$ 99,230	\$ 98,774
Average Annual Benefit for Former Employees Currently in Payment Status	\$ 24,141	\$ 24,161	\$ 25,370	\$ 25,895	\$ 26,369	\$ 26,995	\$ 27,782

January 1, 2026 Experience Results

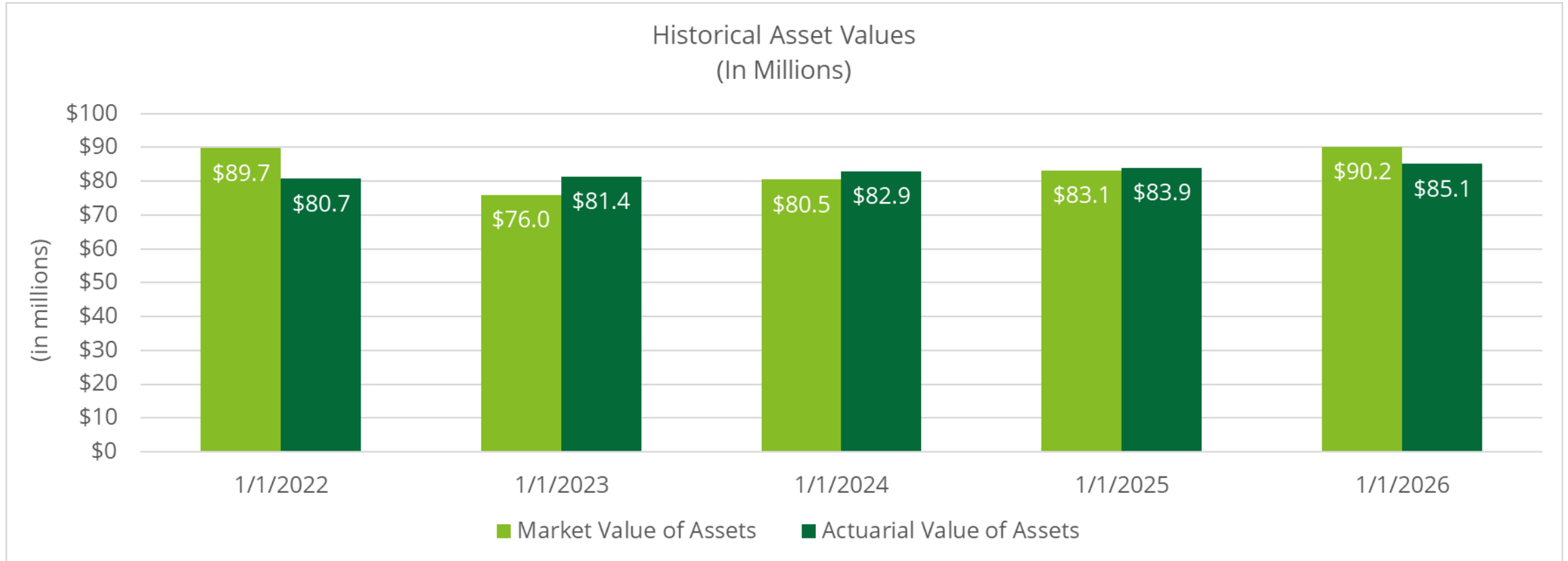
Plan Assets – Market Value



Prior Year:	2021	2022	2023	2024	2025
Employee Contributions	\$0.3	\$0.2	\$0.2	\$0.2	\$0.1
Employer Contributions	\$4.5	\$3.3	\$3.1	\$3.4	\$3.2
Benefit Payments	\$7.3	\$7.9	\$8.1	\$8.3	\$8.6
Approximate Rate of Return	16.4%	-10.6%	12.6%	9.3%	15.4%

January 1, 2026 Experience Results

Plan Assets – Actuarial Value vs. Market Value



Commentary:

- The 2025 asset gain of approximately \$6.8 million combined with the previous asset loss from 2022 and asset gains from 2023-2024 resulted in an increase in deferred gains. Due to this, the Market Value of Assets and Actuarial Value of Assets difference compared to recent years is wider.

January 1, 2026 Experience Results

Actuarial Value of Assets Development

The method used to determine the actuarial value of assets recognizes gains and losses, determined on a market value basis, over a five-year period. The table below shows the development of the actuarial value of assets as of January 1, 2026.

1. Market value of assets as of January 1, 2025		\$	83,090,379
2. Net additions (reductions)			
(i) Employer contributions	\$	3,152,985	
(ii) Employee contributions		118,401	
(iii) Benefit payments		(8,589,387)	
(iv) Actual administrative expenses		(19,999)	
(v) Total			(5,338,000)
3. Interest on (1) and (2), adjusted for timing			5,660,356
4. Expected market value of assets as of January 1, 2026: (1) + (2v) + (3)		\$	83,412,735
5. Actual Market Value of Assets as of January 1, 2026			90,246,888
6. Asset (gain)/loss in 2025: (4) - (5)	\$	(6,834,153)	
7. Asset (gain)/loss in 2024		(1,813,053)	
8. Asset (gain)/loss in 2023		(4,138,302)	
9. Asset (gain)/loss in 2022		15,460,129	
10. Unrecognized portion of prior asset gains and losses: [(6) * 0.8] + [(7) * 0.6] + [(8) * 0.4] + [(9) * 0.2]			(5,118,449)
11. Actuarial value of assets as of January 1, 2026: (5) + (10)		\$	85,128,439

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Actuarially Determined Contribution Development



Actuarially Determined Contribution Development

Mortality Assumption – Recommended Updates

Police & Firefighters

- **Recommended Update:** Update mortality rates to the sex-distinct Pub-2016 Safety Employee, Healthy Retiree, Disabled Retiree, and Contingent Survivor tables, projected generationally using mortality improvement scale MP-2021.
- **Rationale:** NDPERS does not use a separate mortality assumptions for police and firefighters. Due to a higher percentage of the City's Plan being police and firefighters, we recommend using the unadjusted PUB-2016 Safety mortality base rates. The Pub-2016 tables were released by the Retirement Plans Experience Committee ("RPEC") of the Society of Actuaries ("SOA") in May 2025 and represent the most recent complete benchmark of U.S. public pension plan mortality experience.
- **Impact:** This assumption change increases the Actuarial Liability by approximately \$48,000 (0.05% increase).

All Other Participants

- **Recommended Update:** Update mortality rates to be based on the most recent NDPERS experience study for the 5-year period of 2019 to 2024. The proposed mortality rates continue to be based on the sex-distinct Pub-2010 Safety tables with updates to the scaling factors that reflect North Dakota specific experience, projected generationally using mortality improvement scale MP-2021.
- **Rationale:** Since the City's plan is not large enough to have credible mortality experience, we recommend aligning to the NDPERS assumption for all other participants as the best assumption of North Dakota public employee mortality.
- **Impact:** This assumption change decreases the Actuarial Liability by approximately \$115,000 (0.11% decrease).

Actuarially Determined Contribution Development

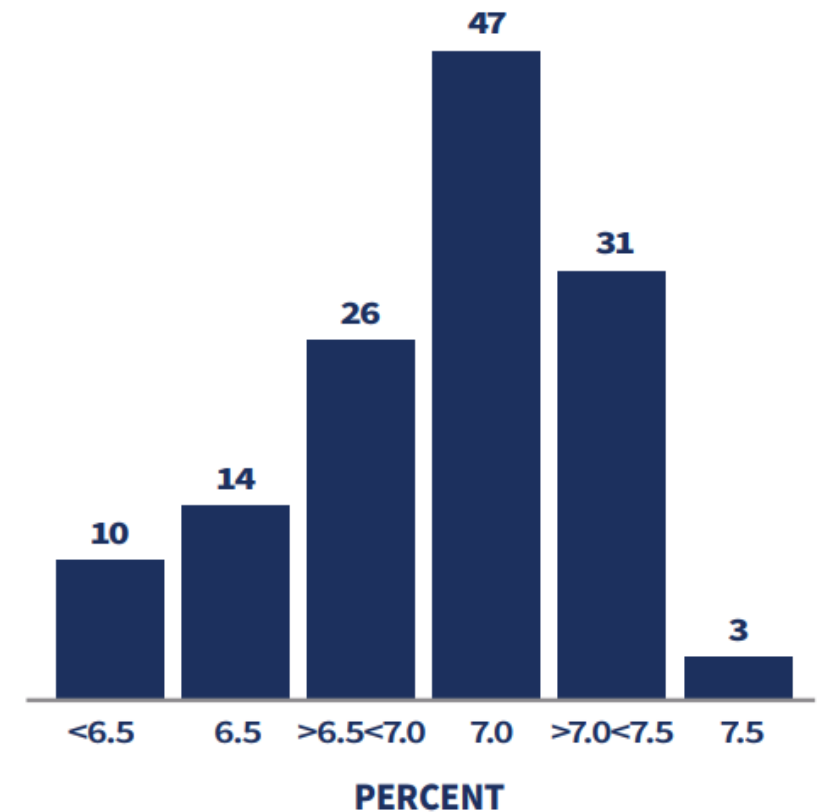
Discount Rate and Long-term Rate of Return Assumption – Considerations & Recommendations

Discount Rate and Long-term Rate of Return Assumption

- Based on the Plan's actual asset allocation as of 12/31/2025, publicly available capital market expectations, and the current long-term inflation assumption of 2.50%, the current long-term rate of return assumption of **7.00%** continues to be within a reasonable range. The capital market expectations used to perform his reasonability check were based on Horizon's Survey of 20-year Capital Market Assumptions (2025 Edition).
- As a point of reference, we completed 10,000 projections of future market behavior (Monte Carlo Simulations) based on the aforementioned inputs to assess the reasonability of the assumption. Below summarizes the estimated probability of exceeding certain annualized returns over a 20-year period:

Probabilities of Exceeding Certain Returns Over 20 Years	
7.50%	42.8%
7.25%	46.4%
7.00%	50.1%
6.75%	53.9%
6.50%	58.0%

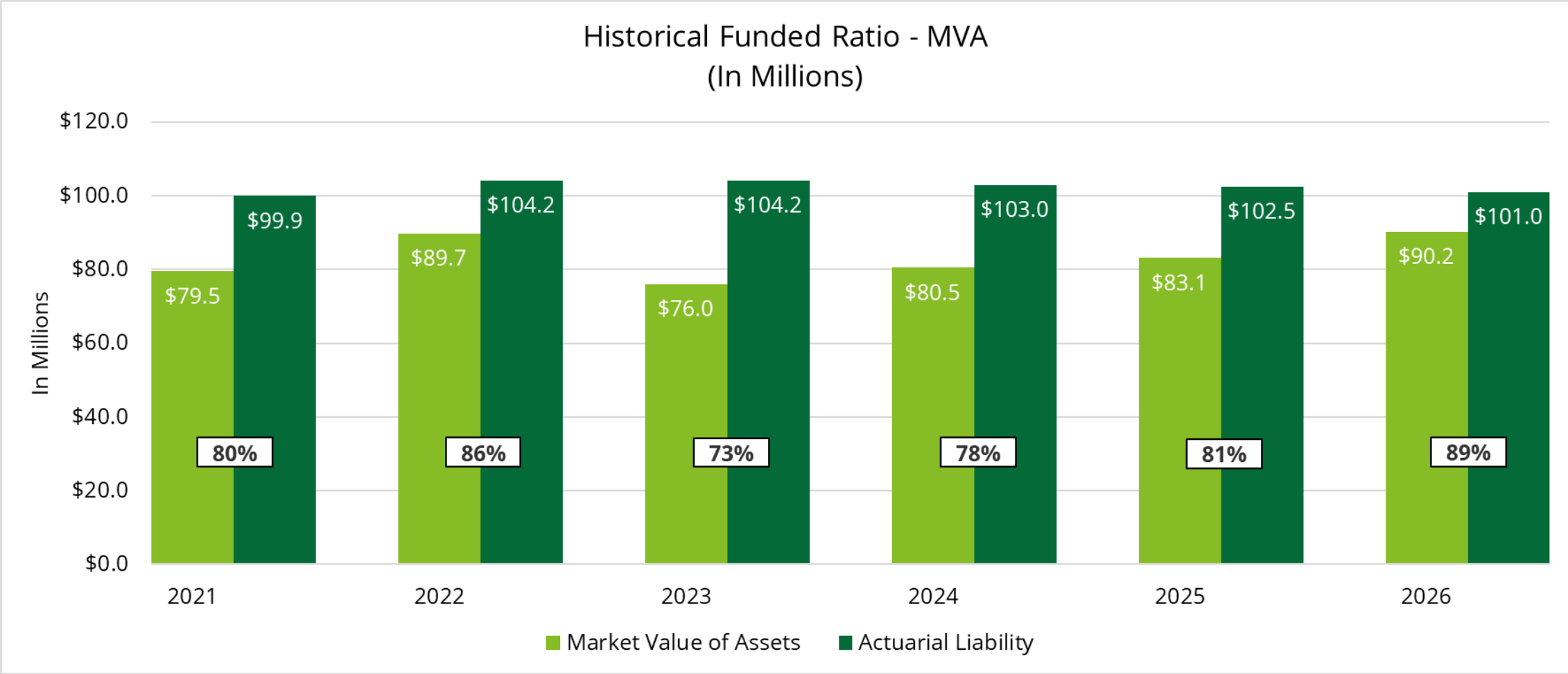
Distribution of Public Pension Investment Return Assumptions Per the National Retirement Association of Retirement Administrators (NASRA)



NASRA - April 2026

Actuarially Determined Contribution Development

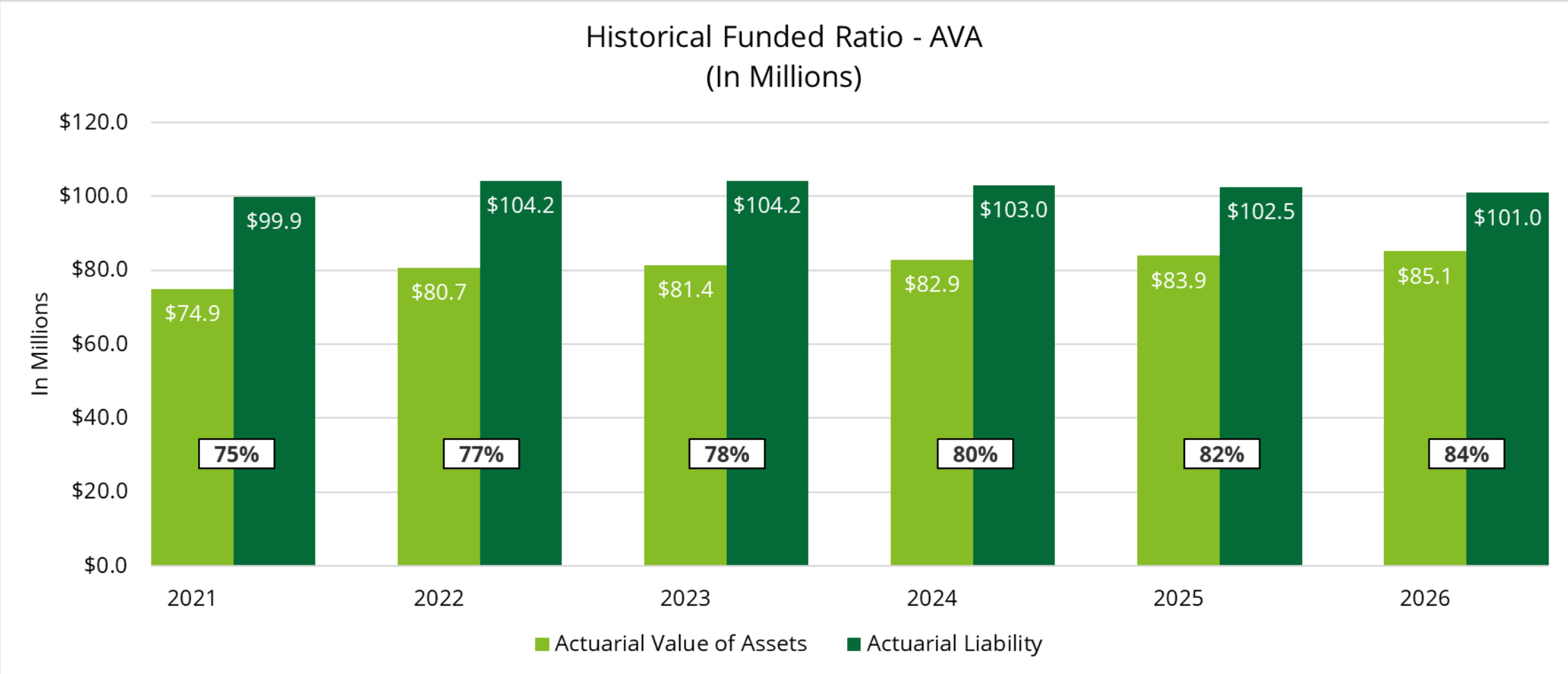
Funded Ratio – Market Value of Assets (MVA) Basis



Discount Rate Sensitivity: As a point of reference, if the Long-term Rate of Return and Discount Rate assumptions were decreased to 6.75%, the January 1, 2026 Actuarial Liability would increase by approximately \$2.0M (2.0%) to \$103.0M. The resulting MVA Funded Ratio would be 88%.

Actuarially Determined Contribution Development

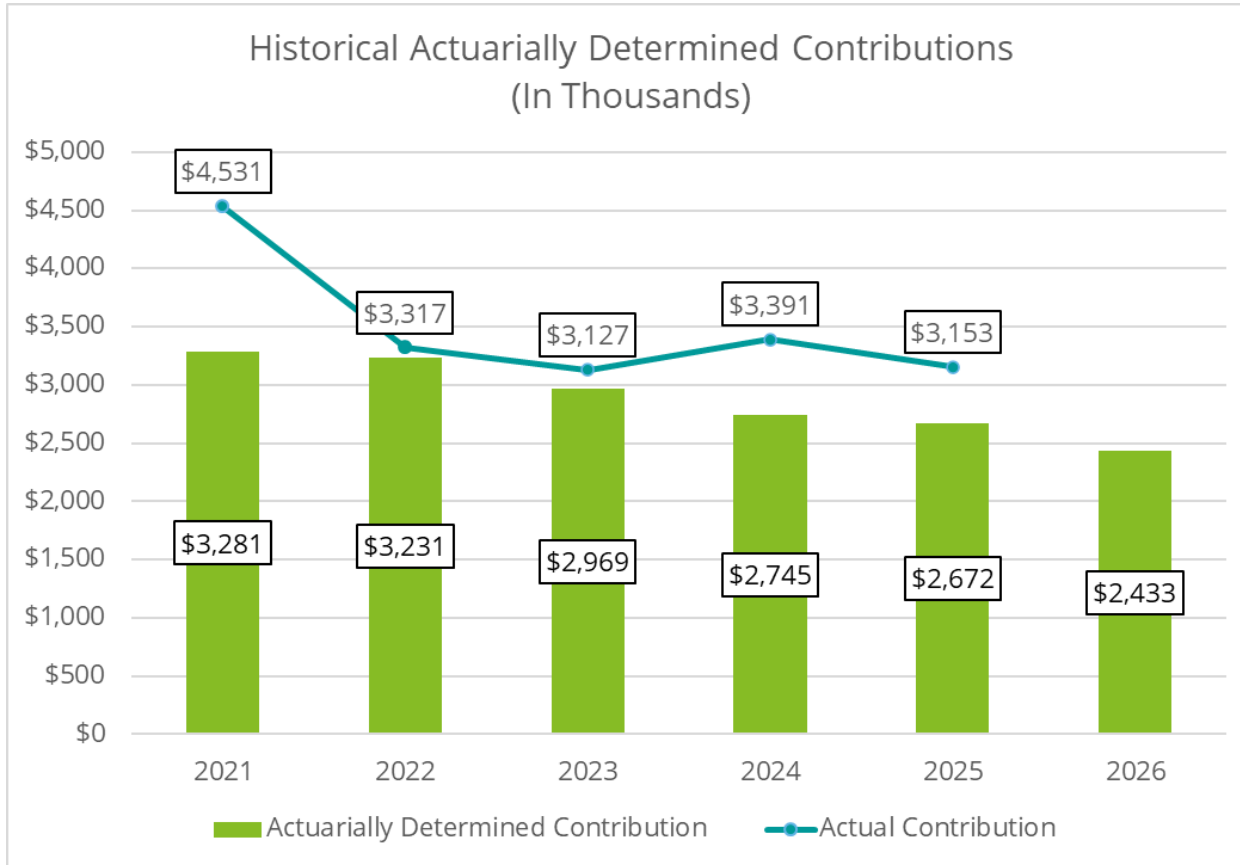
Funded Ratio – Actuarial Value of Assets (AVA) Basis



Discount Rate Sensitivity: As a point of reference, if the Long-term Rate of Return and Discount Rate assumptions were decreased to 6.75%, the January 1, 2026 Actuarial Liability would increase by approximately \$2.0M (2.0%) to \$103.0M. The resulting AVA Funded Ratio would be 83%.

Actuarially Determined Contribution Development

Historical and Current Year Calculation



Development of Actuarially Determined Contribution (ADC)	2025	2026	2026 (14-Year Option)
a) Total Normal Cost	\$283,323	\$237,630	\$237,630
b) Expected Employee Contributions	96,626	78,523	78,523
c) Employer Normal Cost [(a) - (b)]	186,697	159,107	159,107
d) Amortization Payment	2,485,325	2,273,491	1,693,714
e) Actuarially Determined Contribution [(c) + (d)]	\$2,672,022	\$2,432,598	\$1,852,821

Commentary

- The 2026 ADC decreased from the prior year due to the continued normal cost decline with fewer actives remaining in the plan, actual City contributions in 2025 exceeding the ADC, small decreases in the actuarial liability as a result of mortality assumption updates and demographic experience gains, and asset gains.
- Discount Rate Sensitivity:** If the Long-term Rate of Return and Discount Rate assumptions decreased to 6.75%, the 2026 ADC would increase to \$2,706,012 under the current policy and \$2,049,824 if extending the amortization period by 5 years.

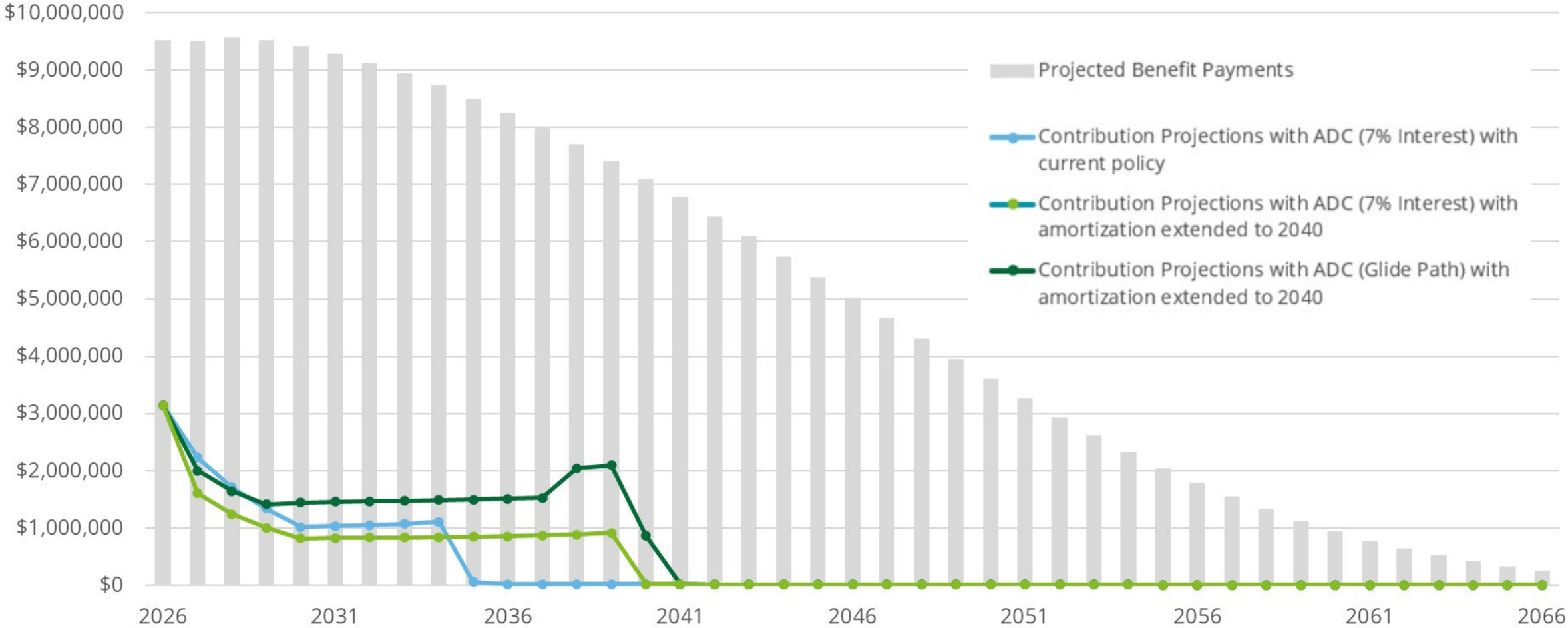
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Contribution Projections



Contribution Projections

Projected Recommended Employer Contribution Scenarios



Funding Policy Considerations

Single vs. Layers Amortization Approaches

- **A Few Key Funding Policy Objectives:** Ideally, a funding policy will help the plan with the following objectives:
 - Pay off the current or legacy unfunded actuarial liability
 - Pay off the future unfunded actuarial liability as it arises
 - Stable annual contributions that avoid unexpected disruptions in the budgeting process
- **Current Approach (single amortization period with 9 years remaining)**
 - The City's current funding policy uses a single decreasing amortization period, which supports the first objective above.
 - However, as the the amortization period continues to decrease the risk of contribution volatility increases which can potentially lead to challenges related to the second and third objectives.
- **Future Considerations (Layered approach)**
 - Good timing to align with new de-risking investment strategy (glide path) to better manage volatility
 - Layered approach able to provide more transparency on how each future gain or loss impacts contributions

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Actuarial Certification



Actuarial Certification (Page 1 of 2)

The enclosed actuarially determined contribution projections for the City of Grand Forks, North Dakota Pension Plan (the “Plan”) were performed as of January 1, 2026.

The City of Grand Forks provided the participant data, financial information, and plan descriptions used in this analysis. The actuary has analyzed the data and other information provided for reasonableness but has not independently audited the data or other information provided. The actuary has no reason to believe the data or other information provided is not complete and accurate and knows of no further information that is essential to the preparation of the actuarial analysis.

In our opinion, all costs, liabilities, rates of interest, and other factors underlying these actuarial computations have been determined on the basis of actuarial assumptions and methods, which are each reasonable (or consistent with authoritative guidance) for the purposes described herein taking into account the experience of the Plan and future expectations and which, when combined, represent our best estimate of anticipated experience under the Plan. Additionally, the combined effect of non-prescribed assumptions is not expected to have significant bias.

The participant data, financial information, plan descriptions, actuarial methods and assumptions utilized in the 2026 contribution projections are consistent with the 2026 actuarial valuation.

Actuarial Standard of Practice No. 56 – Modeling requires disclosure of certain information regarding the actuary’s use of models when issuing actuarial reports for work performed on or after October 1, 2020. For this analysis, the liability calculations were determined using industry-leading defined benefit valuation software developed and maintained by a third-party vendor. The model was designed specifically for the measurement of defined benefit pension and postretirement medical plan liabilities and the actuary has updated the applicable parameters for the specific plan provisions and assumptions selected for this analysis. A custom Excel-based model was used to calculate the projected contribution and asset balances.

Future actuarial measurements may differ significantly from the current measurements presented in this analysis 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; increases or decreases expected as part of the natural operations 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. Our scope for this actuarial analysis did not include analyzing the potential range of such future measurements, and we did not perform that analysis.

Actuarial Certification (Page 2 of 2)

The undersigned with actuarial credentials collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

This analysis was prepared solely for the benefit and internal use of the plan sponsor. This analysis is not intended for the benefit of any other party and may not be relied upon by any third party for any purpose, and Deloitte Consulting accepts no responsibility or liability with respect to any party other than the plan sponsor.

To the best of our knowledge, no employee of the Deloitte U.S. Firms is an officer or director of the employer. In addition, we are not aware of any relationship between the Deloitte U.S. Firms and the employer that may impair or appear to impair the objectivity of the work detailed in this analysis.

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