



June 10, 2024

Mr. Doug Anderson, Executive Director
Public Employees Retirement Association of Minnesota
60 Empire Drive, Suite 300
Saint Paul, Minnesota 55103

Re: Proposed Assumption Changes – PERA PEPFP

Dear Mr. Anderson:

Enclosed is a supplemental actuarial valuation showing the estimated impact of changing the actuarial assumptions of the Public Employees Police and Fire Plan of the Public Employees Retirement Association (PERA PEPFP). Unless noted otherwise and to the best of our knowledge and belief, the calculations were completed in accordance with the requirements of Minnesota Statutes, Section 356.215, and the requirements of the Standards for Actuarial Work established by the Legislative Commission on Pensions and Retirement (LCPR).

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; 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. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

This report should not be relied on for any purpose other than the purpose described in the primary communication. This report is intended for use by the PERA Board and staff and may be provided to other parties only in its entirety and only with permission of the Board. GRS is not responsible for unauthorized use of this report. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The valuation was based upon information furnished by PERA, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. The signing actuaries are independent of the plan sponsor.

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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.

Please call if you have any questions regarding the calculations enclosed.

Sincerely,
Gabriel, Roeder, Smith & Company

Bonita J. Wurst

Bonita J. Wurst, ASA, EA, FCA, MAAA

Sheryl Christensen

Sheryl L. Christensen, FSA, EA, FCA, MAAA

BJW/SLC:sc
Enclosures

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PERA Public Employees Police and Fire Plan Executive Summary

Requested By: Mr. Doug Anderson, Executive Director
Public Employees Retirement Association

Date: June 10, 2024

Submitted By: Bonita J. Wurst, ASA, EA, FCA, MAAA
Sheryl L. Christensen, FSA, EA, FCA, MAAA
Gabriel, Roeder, Smith & Company

The purpose of this report is to evaluate the impact of proposed changes in actuarial assumptions for the Public Employees Police and Fire Plan. Please see our draft report, *Public Employees Police and Fire Plan of Minnesota Fund 4-Year Experience Study*, dated June 6, 2024, for a full description of the proposed changes.

Bonita J. Wurst and Sheryl L. Christensen are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. In addition, GRS meets the requirements of “approved actuary” under Minnesota Statutes 356.215, Subdivision 1, Paragraph (c).

The date of the valuation was June 30, 2023. This means that the results of the supplemental valuations indicate what the June 30, 2023 valuation would have shown if the proposed assumptions had been in effect on that date. Supplemental valuations do **not** predict the result of future actuarial valuations. Rather, supplemental valuations give an indication of the probable long-term cost of the **assumption change only** without comment on the complete end result of the future valuations.

Unless noted otherwise, actuarial assumptions and methods were consistent with those used in the regular actuarial valuation of the PERA PEPFP on the valuation date as prescribed by Minnesota Statutes Section 356.215, the requirements of the Standards for Actuarial Work established by the Legislative Commission on Pensions and Retirement (LCPR) and the Board of Trustees for the June 30, 2023 PERA PEPFP Valuation.

Results in this report are shown on an Actuarial Value of Assets (AVA) basis.

PERA Public Employees Police and Fire Plan Calculations as of June 30, 2023

A brief summary of the data, as of June 30, 2023, used in this valuation is presented below:

Active Members			
Number	Projected Annual Earnings	Average in Years	
		Age	Service
11,635	\$1,205,147,000*	39.8	11.7

* Prior to assumption changes.

Retired Members		Deferred Vested Members		Non-Vested Members	
Number	Average Annual Benefits	Number	Average Annual Benefits**	Number	Average Member Contributions**
12,601	\$54,165	1,966	\$26,517	941	\$3,997

** Reflects 33% Combined Service Annuity load for Deferred Vested members and 2% Combined Service Annuity load for Non-Vested members.

PERA Public Employees Police and Fire Plan Calculations as of June 30, 2023

Our draft report, the *PERA Public Employees Police and Fire Plan of Minnesota 4-Year Experience Study*, dated June 6, 2024, contained several recommended changes to demographic assumptions, including changes to retirement, withdrawal and disability rates, the assumed age difference for retirees and their spouse and form of payment elections.

Present Demographic Assumptions: See the *Public Employees Police and Fire Plan Actuarial Valuation Report as of July 1, 2023*, dated December 7, 2023, for a complete description of the present demographic assumptions.

Proposed Demographic Assumptions: Please see our experience study report noted above for a full description of the proposed assumptions:

- Merit and Seniority:
 - Adjustments resulting in proposed merit and seniority rates that are, in total, approximately 31 basis points lower than that anticipated by the current rates.
- Retirement:
 - Increase the rate of assumed unreduced retirement (i.e., Normal Retirement) before age 65.
 - Reduce early retirement rates at ages 50 and 51 and increase early retirement rates at ages 53 and 54.
- Withdrawal:
 - Increase the assumed rates of withdrawal (termination of membership before eligible to retire) at most years prior to year 22 with more significant adjustment in the first two years.
- Disability:
 - Higher rates of disability.
- Mortality:
 - Continued use of the Pub-2010 General mortality table with future improvement projected using Scale MP-2021. Rates for healthy male retirees are multiplied by a factor of 1.01 and rates for disabled male retirees are multiplied by a factor of 1.17.
- Marriage:
 - Lower percent married assumption for females from 70% to 65%.
- Form of Payment:
 - Minor changes to form of payment assumptions.
- Missing Participant Data:
 - Minor changes to the assumptions made with respect to missing participant data.

PERA Public Employees Police and Fire Plan

Step 1 – Change Mortality Assumptions

Calculations as of June 30, 2023

Actuarial Statement

The financial effect of the proposal is shown below:

	Valuation Baseline	Update Mortality	Change from Baseline
Normal Cost Rate, % of Pay	23.26%	23.22%	-0.04%
Amortization of Unfunded Accrued Liability, % of Pay	8.50%	8.26%	-0.24%
Expenses, % of Pay	0.11%	0.11%	0.00%
Total Required Contribution, % of Pay	31.87%	31.59%	-0.28%
Actuarial Accrued Liability, 000s	\$12,765,798	\$12,719,070	\$(46,728)
Funded Ratio, AVA Basis	87.0%	87.3%	0.3%

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PERA Public Employees Police and Fire Plan

Step 2 – Change Retirement Assumptions

Calculations as of June 30, 2023

Actuarial Statement

The financial effect of the proposal is shown below:

	Valuation Baseline	Updates From Step 1 plus Retirement Rate Changes	Change from Baseline
Normal Cost Rate, % of Pay	23.26%	23.58%	0.32%
Amortization of Unfunded Accrued Liability, % of Pay	8.50%	8.69%	0.19%
Expenses, % of Pay	0.11%	0.11%	0.00%
Total Required Contribution, % of Pay	31.87%	32.38%	0.51%
Actuarial Accrued Liability, 000s	\$12,765,798	\$12,802,563	\$36,765
Funded Ratio, AVA Basis	87.0%	86.7%	(0.3%)

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PERA Public Employees Police and Fire Plan

Step 3 – Change Withdrawal Rates, Marriage, Form of Payment, and Missing Participant Data Assumptions

Calculations as of June 30, 2023

Actuarial Statement

The financial effect of the proposal is shown below:

	Valuation Baseline	Updates From Step 2 plus Withdrawal and Other Miscellaneous Assumption Changes	Change from Baseline
Normal Cost Rate, % of Pay	23.26%	23.35%	0.09%
Amortization of Unfunded Accrued Liability, % of Pay	8.50%	8.70%	0.20%
Expenses, % of Pay	0.11%	0.11%	0.00%
Total Required Contribution, % of Pay	31.87%	32.16%	0.29%
Actuarial Accrued Liability, 000s	\$12,765,798	\$12,805,418	\$39,620
Funded Ratio, AVA Basis	87.0%	86.7%	(0.3%)

PERA Public Employees Police and Fire Plan Step 4 – Change Disability Assumptions Calculations as of June 30, 2023

Actuarial Statement

The financial effect of the proposal is shown below:

	Valuation Baseline	Updates From Step 3 plus Disability Rate Changes	Change from Baseline
Normal Cost Rate, % of Pay	23.26%	26.69%	3.43%
Amortization of Unfunded Accrued Liability, % of Pay	8.50%	8.66%	0.16%
Expenses, % of Pay	0.11%	0.11%	0.00%
Total Required Contribution, % of Pay	31.87%	35.46%	3.59%
Actuarial Accrued Liability, 000s	\$12,765,798	\$12,797,324	\$31,526
Funded Ratio, AVA Basis	87.0%	86.8%	(0.2%)

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PERA Public Employees Police and Fire Plan Step 5 – Change Merit and Seniority Rates Calculations as of June 30, 2023

Actuarial Statement

The financial effect of the proposal is shown below:

	Valuation Baseline	Updates From Step 4 plus Merit and Seniority Rate Changes	Change from Baseline
Normal Cost Rate, % of Pay	23.26%	26.22%	2.96%
Amortization of Unfunded Accrued Liability, % of Pay	8.50%	8.64%	0.14%
Expenses, % of Pay	0.11%	0.11%	0.00%
Total Required Contribution, % of Pay	31.87%	34.97%	3.10%
Actuarial Accrued Liability, 000s	\$12,765,798	\$12,788,403	\$22,605
Funded Ratio, AVA Basis	87.0%	86.8%	(0.2%)

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PERA Public Employees Police and Fire Plan
Step 1-5 – All Changes
Calculations as of June 30, 2023

	Valuation Baseline	Update Mortality	Update Retirement Rates	Update Withdrawal Rates and Other Miscellaneous Assumptions	Update Disability Rates	Update Merit and Seniority Rates
Normal Cost Rate, % of Pay	23.26%	23.22%	23.58%	23.35%	26.69%	26.22%
Amortization of Unfunded Accrued Liability, % of Pay	8.50%	8.26%	8.69%	8.70%	8.66%	8.64%
Expenses, % of Pay	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%
Total Required Contribution, % of Pay	31.87%	31.59%	32.38%	32.16%	35.46%	34.97%
Actuarial Accrued Liability, 000s	\$12,765,798	\$12,719,070	\$12,802,563	\$12,805,418	\$12,797,324	\$12,788,403
Funded Ratio, AVA Basis	87.0%	87.3%	86.7%	86.7%	86.8%	86.8%

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PERA Public Employees Police and Fire Plan Calculations as of June 30, 2023

Comments

Comment 1 — The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon plan provisions that are outlined in this report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the author(s) of this report prior to relying on information in the report.

Comment 2 — If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the author(s) of this report prior to making such decision.

Comment 3 — In the event that more than one change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

Comment 4 — The reader of this report should keep in mind that actuarial calculations are mathematical estimates based on current data and assumptions about future events (which may or may not materialize). Please note that actuarial calculations can and do vary from one valuation year to the next, sometimes significantly if the group valued is very small (less than 30 lives). As a result, the cost impact of a benefit change may fluctuate over time, as the demographics of the group changes.

Comment 5 — We have provided this analysis in the same format as that used when plan or assumption changes are considered by the Trustees. For any legislative proposals, it may be necessary to follow-up with a more in-depth analysis to comply with the Standards for Actuarial Work. We will provide the additional information upon request.

Comment 6 — The assumption changes may result in a change to the plan's actuarially equivalent factors. An update to these factors has not been reflected in this study.

Comment 7 — All calculations reflect an amortization date of June 30, 2049.