

# EDWARDSVILLE POLICE PENSION FUND

## Actuarial Valuation

*As of May 1, 2026*
*Statutory Minimum Required Contribution*

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

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November 5, 2026

Edwardsville Police Pension Fund
Re: Actuarial Valuation Report for Statutory Minimum Required Contribution

Dear Board,

This report details the annual actuarial valuation of the Edwardsville Police Pension Fund as of May 1, 2026.

The valuation was performed to measure the plan's liability and funding levels and to determine the actuarially appropriate funding requirements for the fiscal year beginning May 1, 2026. This report was prepared for use by the Board. Use of the results for other purposes may not be applicable and could produce significantly different results.

**DATA AND ASSUMPTIONS**

In preparing this report, we have relied on personnel information supplied by the local Board. Asset information and financial reports were prepared by the auditors of the Police Officers' Pension Investment Fund. Plan design information is as defined in Article 3 of the Illinois Pension Code. In our opinion, the assumptions used in the valuation, as adopted by the Police Officers' Pension Investment Fund, represent reasonable expectations of anticipated fund experience. Other sets of assumptions and methods could also be reasonable and could produce materially different results. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

**DISCLOSURES AND LIMITATIONS**

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such 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); and changes in plan provisions or applicable law. Due to the limited scope of this report, we did not provide an analysis of these potential differences.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

**ACTUARIAL CERTIFICATION**

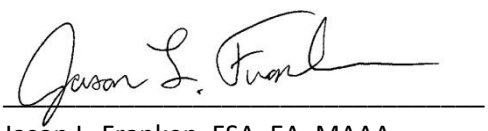
The valuation has been conducted in accordance with all applicable laws and regulations, as well as generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice (ASOPs) as issued by the Actuarial Standards Board; specifically No. 6 for Measuring Retiree Group Benefit Obligations/No. 4 for Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, No. 23 for Data Quality, No. 27 Selection of Assumptions for Measuring Pension Obligations, No. 44, Selection and Use of Asset Valuation Methods for Pension Valuations, and No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations.

The Minimum Required Contribution set forth in this report has been prescribed by the Illinois Pension Code and does not necessarily represent the approach recommended by either the actuary (for a reasonable actuarially determined contribution under Actuarial Standard of Practice No. 4) or the Police Officers' Pension Investment Fund.

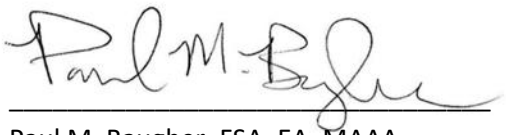
The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on this report has any direct financial interest or indirect material interest in the plan sponsor, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Edwardsville Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

Respectfully submitted,
Foster & Foster, Inc.



Jason L. Franken, FSA, EA, MAAA



Paul M. Baugher, FSA, EA, MAAA

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# SUMMARY

The regular annual actuarial valuation of the Edwardsville Police Pension Fund, performed as of May 1, 2026, has been completed and the results are presented in this report. The contribution requirements are as follows:

| Valuation Date | May 1, 2026 |
|---|---|
| Total Statutory Contribution | $ 2,531,569 |
| Member Contributions (Est.) | (458,870) |
| Statutory Minimum Required Contribution [1] | $ 2,072,699 |

[1] This calculation is determined in accordance with Section 3-125 of the Illinois Pension Code. This report should not be relied upon for purposes other than determining the current tax levy required under the Illinois Pension Code. The assumptions have been set based on expectations for all Article 3 funds in the State of Illinois. The actuarial methods are prescribed by the Illinois Pension Code and do not necessarily represent the approach recommended by either the actuary or the Police Officers' Pension Investment Fund.

# CHANGES SINCE PRIOR VALUATION

### PLAN CHANGES

There were no plan changes since the prior valuation.

### ACTUARIAL ASSUMPTION/METHOD CHANGES SINCE PRIOR VALUATION

There were no assumption changes since the prior valuation.

There were no method changes since the prior valuation.

# PRINCIPAL VALUATION RESULTS

| Valuation Date | May 1, 2026 |
|---|---|
| **A. PARTICIPANT DATA** | |
| Actives | 42 |
| Service Retirees | 27 |
| Beneficiaries | 5 |
| Disability Retirees | 0 |
| Terminated Vested Due Future Annuity | 2 |
| Terminated with Accumulated Contributions in Fund | 10 |
| Total | 86 |
| Total Annual Payroll | 4,335,557 |
| Annual Rate of Payments to: | |
| Service Retirees | 2,125,650 |
| Beneficiaries | 289,423 |
| Disability Retirees | 0 |
| Terminated Vested Due Future Annuity | 54,749 |
| **B. ASSETS** | |
| Actuarial Value (AVA) | 35,470,977 |
| Market Value (MVA) | 41,375,798 |
| **C. LIABILITIES** | |
| Present Value of Benefits (PVB) | |
| Actives | |
| Retirement Benefits | 25,471,732 |
| Death Benefits | 284,926 |
| Disability Benefits | 2,035,576 |
| Terminated Vested Benefits | 1,092,551 |
| Service Retirees | 33,095,092 |
| Beneficiaries | 2,036,720 |
| Disability Retirees | 0 |
| Terminated Vested Due Future Annuity | 1,027,636 |
| Terminated with Accumulated Contributions in Fund | 172,375 |
| Total | 65,216,608 |

| Valuation Date | May 1, 2026 |
|---|---|
| **C. LIABILITIES (CONTINUED)** | |
| Accrued Liability (AL) | |
| Actives | |
| Retirement Benefits | 16,718,271 |
| Death Benefits | 162,737 |
| Disability Benefits | 1,161,613 |
| Terminated Vested Benefits | 620,909 |
| Service Retirees | 33,095,092 |
| Beneficiaries | 2,036,720 |
| Disability Retirees | 0 |
| Terminated Vested Due Future Annuity | 1,027,636 |
| Terminated with Accumulated Contributions in Fund | 172,375 |
| Total | 54,995,353 |
| Normal Cost | |
| Normal Cost (Retirement) | 888,088 |
| Normal Cost (Death) | 18,087 |
| Normal Cost (Disability) | 110,787 |
| Normal Cost (Terminated Vested) | 77,186 |
| Total | 1,094,148 |
| Unfunded Actuarial Accrued Liability (UAAL = AL - AVA) [1] | 19,524,376 |
| Funded Ratio (AVA / AL) | 64.5% |
| **D. AMORTIZATION PAYMENT** | |
| Total Accrued Liability | 54,995,353 |
| 90% Funded Ratio Target | 49,495,818 |
| Actuarial Value of Assets | 35,470,977 |
| Liabilities Subject to Amortization over 14 Years | 14,024,841 |
| Amortization Payment, Beginning of Year | 1,254,352 |

[1] The unfunded actuarial accrued liability reflects a liability loss of $677,255 and an asset gain of $672,478 as of the measurement date.

| Valuation Date | May 1, 2026 |
|---|---|

**E. STATUTORY MINIMUM REQUIRED CONTRIBUTION [1]**

| | |
|---|---|
| Normal Cost, Including Expense Load [2] | $ 1,191,921 |
| Payment Required to Amortize UAAL Over 14 Years [2] | 1,339,648 |
| Total Statutory Contribution | $ 2,531,569 |
| Expected Member Contributions [2] | (458,870) |
| Statutory Minimum Required Contribution | $ 2,072,699 |

[1] This calculation is determined in accordance with Section 3-125 of the Illinois Pension Code. This report should not be relied upon for purposes other than determining the current tax levy required under the Illinois Pension Code. The assumptions have been set based on expectations for all Article 3 funds in the State of Illinois. The actuarial methods are prescribed by the Illinois Pension Code and do not necessarily represent the approach recommended by either the actuary or the Police Officers' Pension Investment Fund.

[2] Includes one year of interest.

# PROJECTION OF BENEFIT PAYMENTS[1]

| Year | Payments for Current Actives | Payments for Current Non-Actives | Total Payments |
|---|---|---|---|
| 2027 | 98,768 | 2,565,811 | 2,664,579 |
| 2028 | 227,542 | 2,492,899 | 2,720,441 |
| 2029 | 365,159 | 2,538,762 | 2,903,921 |
| 2030 | 509,076 | 2,582,728 | 3,091,804 |
| 2031 | 649,600 | 2,619,605 | 3,269,205 |
| 2032 | 784,924 | 2,656,046 | 3,440,970 |
| 2033 | 930,157 | 2,691,930 | 3,622,087 |
| 2034 | 1,078,638 | 2,719,382 | 3,798,020 |
| 2035 | 1,221,391 | 2,741,728 | 3,963,119 |
| 2036 | 1,352,201 | 2,758,362 | 4,110,563 |
| 2037 | 1,496,155 | 2,768,845 | 4,265,000 |
| 2038 | 1,646,396 | 2,772,964 | 4,419,360 |
| 2039 | 1,790,424 | 2,770,748 | 4,561,172 |
| 2040 | 1,936,204 | 2,762,437 | 4,698,641 |
| 2041 | 2,094,659 | 2,748,443 | 4,843,102 |
| 2042 | 2,267,398 | 2,729,318 | 4,996,716 |
| 2043 | 2,451,626 | 2,705,639 | 5,157,265 |
| 2044 | 2,636,199 | 2,677,983 | 5,314,182 |
| 2045 | 2,832,853 | 2,646,935 | 5,479,788 |
| 2046 | 3,032,569 | 2,613,030 | 5,645,599 |
| 2047 | 3,225,529 | 2,576,754 | 5,802,283 |
| 2048 | 3,383,799 | 2,538,377 | 5,922,176 |
| 2049 | 3,521,671 | 2,497,912 | 6,019,583 |
| 2050 | 3,689,858 | 2,455,015 | 6,144,873 |
| 2051 | 3,874,151 | 2,409,053 | 6,283,204 |
| 2052 | 4,026,683 | 2,359,167 | 6,385,850 |
| 2053 | 4,172,010 | 2,304,386 | 6,476,396 |
| 2054 | 4,348,907 | 2,243,730 | 6,592,637 |
| 2055 | 4,516,761 | 2,176,281 | 6,693,042 |
| 2056 | 4,644,180 | 2,101,331 | 6,745,511 |
| 2057 | 4,742,120 | 2,018,406 | 6,760,526 |
| 2058 | 4,820,184 | 1,927,316 | 6,747,500 |
| 2059 | 4,951,746 | 1,828,220 | 6,779,966 |
| 2060 | 5,069,895 | 1,721,675 | 6,791,570 |
| 2061 | 5,133,639 | 1,608,622 | 6,742,261 |
| 2062 | 5,164,163 | 1,490,451 | 6,654,614 |
| 2063 | 5,171,153 | 1,368,903 | 6,540,056 |
| 2064 | 5,157,272 | 1,245,855 | 6,403,127 |
| 2065 | 5,124,531 | 1,123,300 | 6,247,831 |
| 2066 | 5,071,762 | 1,003,161 | 6,074,923 |

[1] This illustrates the projection of future benefit payments for the population as it exists on the valuation date without consideration for future hires.

# ASSET INFORMATION

| Fiscal Year End | April 30, 2026 |
|---|---|
| **CHANGE IN MARKET VALUE OF ASSETS** | |
| Market Value of Assets as of April 30, 2025 | 32,562,398 |
| Benefit payments during fiscal year 2026 | (2,562,663) |
| Administrative expense during fiscal year 2026 | (54,550) |
| Total contributions during fiscal year 2026 | 2,331,350 |
| Contributions Less Benefit Payments & Administrative Expenses | (285,863) |
| Actual Net Investment Earnings | 9,099,263 |
| Market Value of Assets as of April 30, 2026 | 41,375,798 |
| **ACTUARIAL VALUE OF ASSETS** | |
| Market Value of Assets | 41,375,798 |
| (Gains)/Losses Not Yet Recognized | (5,904,821) |
| Actuarial Value of Assets | 35,470,977 |
| **DEVELOPMENT OF INVESTMENT GAIN/LOSS** | |
| Expected Investment Earnings | 2,204,524 |
| Actual Net Investment Earnings | 9,099,263 |
| Actuarial Investment Gain/(Loss) | 6,894,739 |

**GAINS/(LOSSES) NOT YET RECOGNIZED**

| Fiscal Year Ending | Gain/(Loss) | Amounts Not Yet Recognized by Valuation Year | | | |
|---|---|---|---|---|---|
| | | 2026 | 2027 | 2028 | 2029 |
| 2023 | (1,803,529) | (360,706) | 0 | 0 | 0 |
| 2024 | 666,180 | 266,472 | 133,236 | 0 | 0 |
| 2025 | 805,440 | 483,264 | 322,176 | 161,088 | 0 |
| 2026 | 6,894,739 | 5,515,791 | 4,136,843 | 2,757,896 | 1,378,948 |
| | | | | | |
| Total | | 5,904,821 | 4,592,255 | 2,918,984 | 1,378,948 |

# ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions shown below were adopted by the Board September 9, 2022 following a 2022 review of plan experience.

| | |
|---|---|
| Interest Rate | 6.80% per year compounded annually, net of investment related expenses. |
| Mortality Rate | ***Active Lives:***<br>PubS-2010 Employee mortality, unadjusted, with generational improvements with most recent projection scale (currently Scale MP-2021). 10% of active deaths are assumed to be in the line of duty.<br><br>***Inactive Lives:***<br>PubS-2010 Healthy Retiree mortality, adjusted by a factor of 1.150 for male retirees and unadjusted for female retirees, with generational improvements with most recent projection scale (currently Scale MP-2021).<br><br>***Beneficiaries:***<br>PubS-2010 Survivor mortality, unadjusted for male beneficiaries and adjusted by a factor of 1.150 for female beneficiaries, with generational improvements with most recent projection scale (currently Scale MP-2021).<br><br>***Disabled Lives:***<br>PubS-2010 Disabled mortality, adjusted by a factor of 1.080 for male disabled members and unadjusted for female disabled members, with generational improvements with most recent projection scale (currently Scale MP-2021).<br><br>The mortality assumptions sufficiently accommodate anticipated future mortality improvements. |

Retirement Age

| % Retiring During Year (Tier 1) | | % Retiring During Year (Tier 2) | |
|---|---|---|---|
| Age | Rate | Age | Rate |
| 50-54 | 20% | 50-54 | 5% |
| 55-62 | 25% | 55 | 40% |
| 63 | 33% | 56-62 | 25% |
| 64 | 40% | 63 | 33% |
| 65-69 | 55% | 64 | 40% |
| 70+ | 100% | 65-69 | 55% |
| | | 70+ | 100% |

Disability Rate

Sample rates included in table below. 60% of the disabilities are assumed to be in the line of duty.

| % Becoming Disabled During Year | |
|---|---|
| Age | Rate |
| 20 | 0.000% |
| 25 | 0.029% |
| 30 | 0.133% |
| 35 | 0.247% |
| 40 | 0.399% |
| 45 | 0.561% |
| 50 | 0.675% |
| 55 | 0.855% |
| 60 | 1.093% |

Termination Rate

See table below.

| % Terminating During Year | | | |
|---|---|---|---|
| Service | Rate | Service | Rate |
| 0 | 13.00% | 8 | 3.00% |
| 1 | 8.00% | 9 | 2.50% |
| 2 | 7.00% | 10 | 2.25% |
| 3 | 6.00% | 11 | 2.00% |
| 4 | 5.00% | 12 | 1.75% |
| 5 | 4.50% | 13 | 1.50% |
| 6 | 4.00% | 14+ | 1.25% |
| 7 | 3.50% | | |

| | |
|---|---|
| Salary Increases | See table below. |

| Salary Scale | |
|---|---|
| Service | Rate |
| 0 | 11.00% |
| 1 | 9.50% |
| 2 | 8.00% |
| 3 | 7.50% |
| 4 | 7.00% |
| 5 | 6.00% |
| 6 | 5.00% |
| 7-11 | 4.00% |
| 12-29 | 3.75% |
| 30+ | 3.50% |

| | |
|---|---|
| Inflation | 2.50%. |
| Cost-of-Living Adjustment | Tier 1: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.<br><br>Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement. |
| Marital Status | 80% of Members are assumed to be married. |
| Spouse's Age | Males are assumed to be three years older than females. |
| Funding Method | Projected Unit Credit Cost Method. |
| Actuarial Asset Method | Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. |

| | |
|---|---|
| Funding Policy Amortization Method | The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2040. The initial amortization amount is 90% of the Accrued Liability less the Actuarial Value of Assets. |
| Payroll Growth | 3.00% per year. |
| Administrative Expenses | Administrative expenses will be estimated as 2% of the fund's total normal cost. |

# PLAN PROVISIONS

| | |
|---|---|
| Article 3 Pension Fund | The Plan is established and administered as prescribed by "Article 3. Police Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code. |
| Plan Administration | The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:<br><br>a.) Two members appointed by the Municipality,<br>b.) Two active Members of the Police Department elected by the Membership, and<br>c.) One retired Member of the Police Department elected by the Membership. |
| Credited Service | Complete years of service as a sworn police officer employed by the Municipality. |
| Normal Retirement | |
| Date | **Tier 1**: Age 50 and 20 years of Credited Service.<br><br>**Tier 2:** Age 55 and 10 years of Credited Service. |
| Benefit | **Tier 1**: 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is $1,000 per month.<br><br>**Tier 2**: 2.50% per year of service times the average salary for the 48 consecutive months of service within the last 60 months of service in which the total salary was the highest prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is $1,000 per month.<br><br>For Tier 2 participants, the salary is capped at a rate of $106,800 as of 2011, indexed annually at a rate of CPI-U, but not to exceed 3.00%. |

| | |
|---|---|
| Form of Benefit | **Tier 1:** For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member's benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.<br><br>**Tier 2**: Same as above, but with 66 2/3% of benefit continued to spouse. |

Early Retirement

| | |
|---|---|
| Date | **Tier 1**: Age 60 and 8 years of Credited Service.<br><br>**Tier 2:** Age 50 and 10 years of Credited Service. |
| Benefit | **Tier 1**: Normal Retirement benefit with no minimum.<br><br>**Tier 2**: Normal Retirement benefit, reduced 6.00% for each year before age 55, with no minimum benefit. |
| Form of Benefit | Same as Normal Retirement. |

Disability Benefit

| | |
|---|---|
| Eligibility | Total and permanent as determined by the Board of Trustees. |
| Benefit Amount | A maximum of:<br><br>a.) 65% of salary attached to the rank held by Member on last day of service, and;<br>b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.<br><br>For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service. |

| | |
|---|---|
| Cost-of-Living Adjustment | **Tier 1:**<br><br>*Retirees:* An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.<br><br>*Disabled Retirees*: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.<br><br>**Tier 2**: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later. |
| Pre-Retirement Death Benefit | |
| Service Incurred | 100% of salary attached to rank held by Member on last day of service. |
| Non-Service Incurred | A maximum of:<br>a.) 54% of salary attached to the rank held by Member on last day of service, and;<br>b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.<br><br>For non-service deaths with less than 10 years of service, a refund of member contributions is provided. |
| Vesting (Termination) | |
| Vesting Service Requirement | **Tier 1:** 8 years.<br><br>**Tier 2**: 10 years. |

| | |
|---|---|
| Non-Vested Benefit | Refund of Member Contributions. |
| Vested Benefit | Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (4-year final average salary for Tier 2) times creditable service. |

Contributions

| | |
|---|---|
| Employee | 9.91% of Salary. |
| Municipality | Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability. |

# SUPPLEMENTARY INFORMATION

## GLOSSARY

| | |
|---|---|
| Total Annual Payroll | The projected annual rate of pay for the fiscal year following the valuation date of all covered members. |
| Present Value of Benefits | The single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations. |
| Accrued Actuarial Liability | Determined according to the plan's actuarial cost method. This amount represents the portion of the anticipated future benefits allocated to years prior to the valuation date. |
| Normal (Current Year's) Cost | The current year's cost for benefits yet to be funded. |
| Market Value of Assets | The fair market value of plan assets as of the valuation date. This amount may be adjusted to produce an Actuarial Value of Assets for plan funding purposes. |
| Actuarial Value of Assets | The asset value used in the valuation to determine contribution requirements. It represents the plan's Market Value of Assets, with adjustments according to the Actuarial Asset Method. These adjustments produce a "smoothed" value that is likely to be less volatile from year to year than the Market Value of Assets. |
| Unfunded Accrued Liability | The excess of the Accrued Actuarial Liability over the Actuarial Value of Assets. |

| | |
|---|---|
| Statutory Minimum Required Contribution | The amount equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability to achieve a 90% funding target by 2040. The required amount is adjusted for interest to year-end. |
| Projected Unit Credit Actuarial Cost Method (Level Percent of Compensation) | The method used to determine statutory minimum required contributions under the Plan. The use of this method involves the systematic funding of the Normal Cost (described above) and the Unfunded Accrued (Past Service) Liability. The actuarial accrued liability is the present value of accrued benefits, using projected salary for active Plan Participants. |

## DISCUSSION OF RISK

Actuarial Standard of Practice No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined using various actuarial assumptions. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll increases less than the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial

consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

**IMPACT OF PLAN MATURITY ON RISK**

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, closed plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature closed plans with a substantial inactive liability. Similarly, mature closed plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

**METRICS TO HELP ASSESS RISK**

Below are descriptions of some metrics that can be used to help assess risk. The table at the end of this section provides these metrics for the fund.

- Support Ratio: The support ratio is determined as the ratio of active to inactive members. This metric speaks to the maturity of the plan, with a low ratio indicating a more mature plan.

- Asset Volatility Ratio: The asset volatility ratio is determined as the ratio of the Market Value of Assets to Total Payroll. It is a measure of the impact of investment volatility on employer contributions which are paid as a percentage of payroll. Although Market Value of Asset growth that exceeds payroll growth may contribute to the financial stability of the plan, the amortization of changes in these higher asset values have a greater impact on contribution volatility as this ratio increases.

- Accrued Liability (AL) Ratio: The accrued liability ratio is the proportion of Total Accrued Liability attributable to inactive members. A higher ratio indicates a more mature plan. Mature plans will see increased risk since losses due to lower than expected investment returns or demographic factors will need to be made up for over a shorter time horizon than would be needed for a less mature plan.

- Funded Ratio: The funded ratio is determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability. This ratio generally reflects the financial health of the plan but should not be considered in isolation since it is very sensitive to changes in actuarial methods and assumptions.

- Net Cash Flow Ratio: The net cash flow ratio is determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets. Mature plans paying substantial retirement benefits resulting in small positive or negative cash flows may be more sensitive to near term investment volatility.

**LOW DEFAULT RISK OBLIGATION MEASURE**

Actuarial Standard of Practice No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, was revised as of December 2021 to include a "low-default-risk obligation measure" (LDROM). This liability measure is consistent with the determination of the actuarial accrued liability shown on page 8 in terms of member data, plan provisions, and assumptions/methods except that the interest rate is tied to low-default-risk fixed income securities. The S&P Municipal Bond 20 Year High Grade Rate Index (daily rate closest to, but not later than, the measurement date) was selected to represent a current market rate of low risk but longer-term investments that could be included in a low-risk asset portfolio. The interest rate used in this valuation was 4.42%, resulting in an LDROM of $78,828,917. The LDROM should not be considered the "correct" liability measurement; it simply shows a possible outcome if the Board elected to hold a very low risk asset portfolio. Given that plan benefits are paid over time through the combination of contributions and investment returns, prudent investments selected by the Board help to balance asset accumulation through these two sources.

It is important to note that the actuary has identified the risks in this section as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

## PLAN MATURITY MEASURES AND OTHER RISK METRICS

| | May 1, 2026 |
|---|---|
| **SUPPORT RATIO** | |
| Total Actives | 42 |
| Total Inactives | 44 |
| Actives / Inactives | 95.5% |
| **ASSET VOLATILITY RATIO** | |
| Market Value of Assets (MVA) | 41,375,798 |
| Total Annual Payroll | 4,335,557 |
| MVA / Total Annual Payroll | 954.3% |
| **ACCRUED LIABILITY (AL) RATIO** | |
| Inactive Accrued Liability | 36,331,823 |
| Total Accrued Liability | 54,995,353 |
| Inactive AL / Total AL | 66.1% |
| **FUNDED RATIO** | |
| Actuarial Value of Assets (AVA) | 35,470,977 |
| Total Accrued Liability | 54,995,353 |
| AVA / Total Accrued Liability | 64.5% |
| **NET CASH FLOW RATIO** | |
| Net Cash Flow [1] | (285,863) |
| Market Value of Assets (MVA) | 41,375,798 |
| Ratio | -0.7% |

[1] Determined as total contributions minus benefit payments and administrative expenses.