TOWN OF BERLIN POLICE BENEFIT FUND

ACTUARIAL VALUATION REPORT

JULY 1, 2023

Table of Contents

Report Prepared By:

Richard S. Sych Senior Vice President, Retirement Services 860.856.2112 rich.sych@usi.com	Laura J. Hanson Team Leader, Actuarial Specialist 860.856.2054 laura.hanson@usi.com	Rebecca Lunt Senior Actuarial Associate 860.856.2133 becca.lunt@usi.com

Executive Summary

	July 1, 2023
Number of members	
Active employees	35
Terminated vested members	0
Retired, disabled and beneficiaries	0
Total	35
Covered employee payroll	3,237,354
Average plan salary	92,496
Actuarial present value of future benefits	22,324,141
Actuarial accrued liability	7,285,776
Plan assets	
Market value of assets	5,114,751
Actuarial value of assets	5,114,751
Unfunded accrued liability	2,171,025
Funded ratio	70.2%
Actuarially determined employer contribution (ADEC)	
Fiscal year ending	2024
ADEC	938,978
Fiscal year ending	2025
ADEC	985,927

Valuation Results and Highlights

Purpose of the Valuation

The purpose of the valuation is to develop the Actuarially Determined Employer Contribution (ADEC).

The ultimate cost of a pension plan is based primarily on the level of benefits promised by the plan. The pension fund's investment earnings serve to reduce the cost of plan benefits and expenses. Thus,

Ultimate cost = Benefits Paid + Expenses Incurred – Investment Return – Employee Contributions

The actuarial cost method distributes this ultimate cost over the working lifetime of current plan participants. By means of this budgeting process, costs are allocated to both past and future years, and a cost is assigned to the current year. The current year's allocated cost, or normal cost, is the building block upon which the actuarially determined employer contribution is developed. The July 1, 2023 valuation produces the contributions for the fiscal years ending 2024 and 2025.

Information Available in the Valuation Report

The Executive Summary is intended to emphasize the notable results of the valuation from the perspective of the Plan Sponsor. Supporting technical detail is documented in Results of the Valuation, Supporting Exhibits and Description of Actuarial Methods and Assumptions. A concise summary of the principal provisions of the Plan is outlined in Summary of Plan Provisions.

Changes Reflected in the Valuation

None.

Cash Contribution for Fiscal Years Ending 2024 and 2025

The Town cost is:	2024 Fiscal Year	2025 Fiscal Year
	$938,978	$985,927

Asset Experience During Period Under Review

The plan's assets provided the following rates of return during the past two fiscal years:

	2022 Fiscal Year	2023 Fiscal Year
Market Value Basis	0.0%	0.0%

The Market Value of assets is used to determine plan contributions.

Assessment and Measurement of Risks

Financial Significance of Plan

It is important to understand the size of the pension plan compared to the size of the sponsor of that plan. Additional pension contributions may be required at inopportune times for the plan sponsor. In general, a plan sponsor with assets or revenue that are much larger than the liabilities in its pension plans will be better able to withstand increases in required pension contributions.

Plan Maturity Measurements

	July 1, 2023
Duration of benefit payments using an investment rate of return of 5.00%	32.6 years

• A higher duration will occur if the plan's percentage of members in pay status decreases. A plan with a higher duration will have a liability that is more sensitive to changes in the investment return assumption.

	July 1, 2023	July 1, 2022
Ratio of market value of assets to covered payroll	1.6	N/A

• A higher ratio is more typical of relatively mature plans with a larger percentage of inactive members and may cause more potential contribution volatility as pension fund assets fluctuate.

Risks to Assess

Overriding Minimum Contribution

	Fiscal Year Ending 2024
Actuarially determined employer contribution (ADEC)	938,978
Overriding minimum contribution (OMC)*	627,082
Surplus (deficit) - ADEC vs. OMC	311,896

• A deficit suggests that a plan's current funding policy contribution approach may result in little to no progress being made towards: (1) reducing the plan's unfunded liability; and (2) increasing the plan's funded ratio in the near-term.

** As defined in "Public Pension Plan Funding Policy" (Society of Actuaries, 2010).*

Estimated Impact of a 5% Reduction in Market Value of Assets

	Fiscal Year Ending 2024	Fiscal Year Ending 2025
Increase in actuarially determined employer contribution (ADEC)	33,119	34,775
• Plans would generally be subject to a larger amortization payment if the market value of assets were 5% smaller. As a result, the ADEC would generally be higher for up to 10 years.		

Each of these additional contributions will continue for up to 10 years.

Low-Default-Risk Obligation Measure

	July 1, 2022
Low-default-risk obligation measure (LDROM)*	9,592,395
Total actuarial accrued liability (AAL) for all members**	7,285,776
Difference between LDROM and AAL	2,306,619
• This exhibit illustrates the impact on the ongoing funding liability if the plan decided to invest completely in low-default-risk securities.	

** The LDROM discount rate is 3.65%. The discount rate used for this purpose is equal to the published Bond Buyer GO 20-Bond Municipal Index effective as of June 30, 2023. Other than the discount rate, the assumptions and methods are consistent with those used in the actuarial valuation. The disclosure of the LDROM is for illustrative purposes and does not necessarily imply that the associated discount rate should be used for funding purposes.*

*** The discount rate used in the valuation is 5.00%.*

Historical Results

Valuation Year Beginning	Investment Return Assumption	Annual Effective Rate of Return on Market Value of Assets	Market Value of Assets as a % of Actuarial Accrued Liability	Benefit Payments as a % of Market Value of Assets
2023	5.00%	N/A	70.2%	N/A

Implications of Contribution Allocation Procedure or Funding Policy

I have assessed the impact of the funding policy on the anticipated employer contributions and the plan's funded status. The funding policy is described in the Description of Actuarial Methods section of this report.

I have estimated the approximate length of time before the unfunded accrued liability, if any, will become fully amortized. The period is estimated to be 2 years. Subsequent to the end of this period, the future anticipated employer contributions will be the corresponding annual normal costs.

I have assessed whether the funding policy will be sufficient to cover future benefit payments and administrative expenses. The current funding policy is anticipated to cover these costs indefinitely.

Certification

This report presents the results of the July 1, 2023 Actuarial Valuation for Town of Berlin Police Benefit Fund (the Plan) for the purpose of estimating the funded status of the Plan and determining the Actuarially Determined Employer Contribution (ADEC) for the fiscal years ending June 30, 2024 and June 30, 2025. This report may not be appropriate for any other purpose.

The valuation has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with all applicable Actuarial Standards of Practice.

I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan.

In preparing this valuation, I have relied on employee data provided by the Plan Sponsor, and on asset and contribution information provided by the Trustee. I have audited neither the employee data nor the financial information, although I have reviewed them for reasonableness.

The results in this valuation report are based on the Plan as summarized in the *Summary of Plan Provisions* section of this report and the actuarial assumptions and methods detailed in the *Description of Actuarial Methods and Assumptions* section of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, 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 this report, an analysis of the potential range of such future measurements has not been performed.

I have no relationship with the employer or the Plan that would impair, or appear to impair, my objectivity in performing the work presented in this report. I am a member of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.

Richard S. Sych

Richard S. Sych, FSA, FCA, MAAA,
Enrolled Actuary 23-05065

May 7, 2024

Development of Unfunded Accrued Liability and Funded Ratio

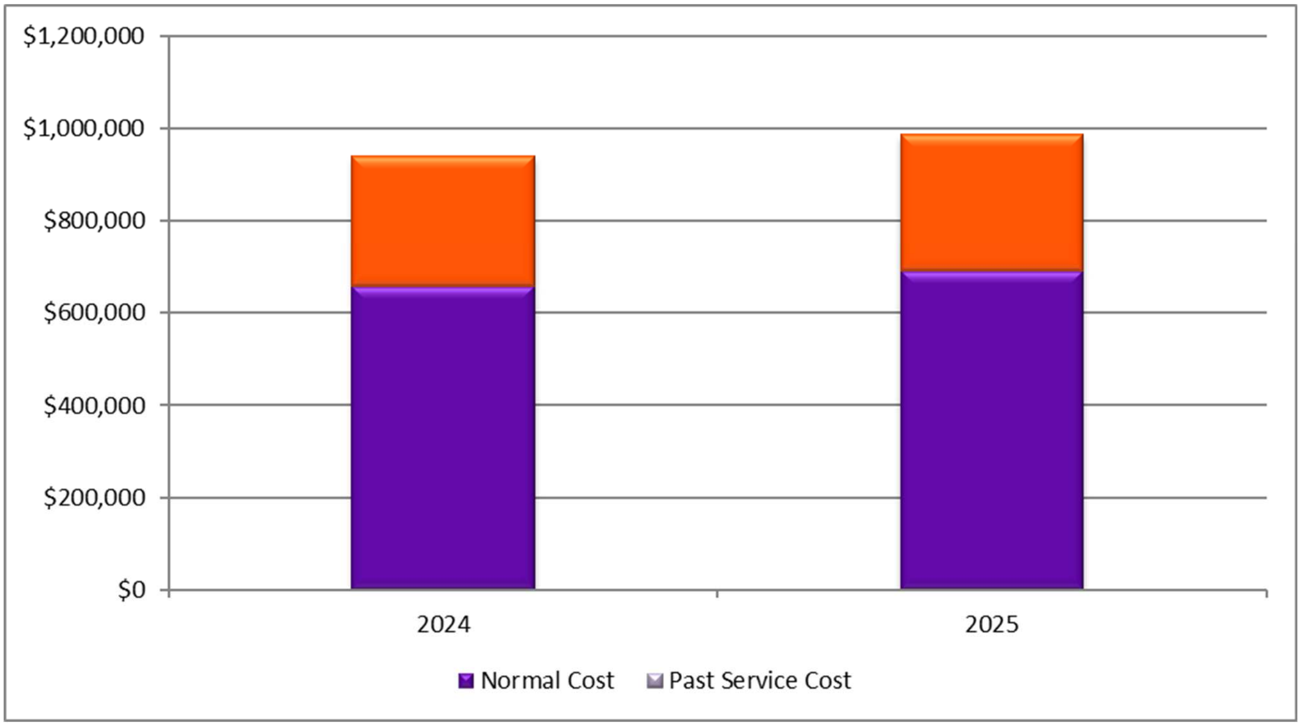
	July 1, 2023
Actuarial accrued liability for inactive members	
Retired, disabled and beneficiaries	$0
Terminated vested members	0
Total	0
Actuarial accrued liability for active employees	7,285,776
Total actuarial accrued liability	7,285,776
Actuarial value of assets	5,114,751
Unfunded accrued liability	2,171,025
Funded ratio	70.2%

Actuarial Accrued Liability vs. Market Value of Assets

Determination of Normal Cost and Actuarially Determined Employer Contribution

	July 1, 2023	
	Cost	Percent of payroll
Gross normal cost	$876,775	27.1%
Estimated employee contributions	(250,279)	-7.7%
Town's normal cost	626,496	19.4%
Amortization of unfunded accrued liability	267,769	8.2%
Contribution before adjustment as of the valuation date	894,265	27.6%
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	3,237,354	
Fiscal year ending	2024	
Adjustment for interest	44,713	
Actuarially determined employer contribution	938,978	
Fiscal year ending	2025	
Adjustment for interest	46,949	
Actuarially determined employer contribution	985,927	

Actuarially Determined Employer Contribution



Development of Asset Values

Summary of Fund Activity	
1. Beginning market value of assets July 1, 2022	
Trust assets	$0
Accrued contribution	0
Benefits payable	0
Administrative expenses payable	0
Net total	0
2. Contributions	
Town contributions during year	0
Employee contributions during year	0
Change in accrued contribution	5,114,751
Total for plan year	5,114,751
3. Disbursements	
Benefit payments during year	0
Administrative expenses during year	0
Change in benefits payable	0
Change in administrative expenses payable	0
Total for plan year	0
4. Net investment return	
Interest and dividends	0
Change in accrued income	0
Realized and unrealized gain / (loss)	0
Investment-related expenses	0
Total for plan year	0
5. Ending market value of assets July 1, 2023	
Trust assets	0
Accrued contribution	5,114,751
Benefits payable	0
Administrative expenses payable	0
Net total: (1) + (2) - (3) + (4)	5,114,751
6. Approximate rate of return	0.0%

Amortization of Unfunded Liability

Schedule of Amortization Bases				
	Date established	**Amortization installment**	**Years remaining**	**Present value of remaining installments as of July 1, 2023**
2023 base	July 1, 2023	267,769	10	2,171,025

Equivalent single amortization period 10 years

Member Data

The data reported by the Plan Sponsor for this valuation includes 35 active employees who met the Plan's minimum age and service requirements as of July 1, 2023.

Member Data				
	Active	**Terminated vested**	**Members in pay status**	**Total**
Total members July 1, 2022	0	0	0	0
Adjustments	0	0	0	0
Retirements	0	0	0	0
Disabilities	0	N/A	0	0
Terminations				
Vested	0	0	N/A	0
Non-vested	0	0	N/A	0
Deaths				
With death benefit	0	0	0	0
Without death benefit	0	0	0	0
Transfers	0	0	N/A	0
Rehires	0	0	N/A	0
New beneficiaries	N/A	N/A	0	0
New entrants	+35	N/A	N/A	+35
Total members July 1, 2023	35	0	0	35

Member Data			
	Active	Terminated vested	Members in pay status
Average age			
July 1, 2023	36.5	N/A	N/A
Average service			
July 1, 2023	7.3	N/A	N/A
Covered employee payroll			
July 1, 2023	3,237,354	N/A	N/A
Total annual benefits			
July 1, 2023	N/A	N/A	N/A

Description of Actuarial Methods

Asset Valuation Method

Plan Assets equal the Market Value of assets.

Actuarial Cost Method

Changes in Actuarial Cost Method: None.

Description of Current Actuarial Cost Method: Entry Age Normal (level percentage of salary)

Normal Cost: Under this method, the total normal cost is the sum of amounts necessary to fund each active member's normal retirement benefit if paid annually from entry age to assumed retirement age. Entry age is the age at which the employee would have been first eligible for the plan, if it had always been in effect. The normal cost for each participant is expected to remain a level percentage of the employee's salary. The normal cost for the plan is the difference between the total normal cost for the year and the anticipated member contributions for that year.

Past Service Liability: The present value of future benefits that relates to service before the valuation date is the total past service liability. The unfunded past service liability is the difference between the total past service liability and any assets (including accumulated member contributions). Unfunded accrued liabilities as of July 1, 2023 were amortized over a closed 10-year period. Future changes in the unfunded accrued liability will be amortized separately, assuming a new 10-year amortization each valuation.

Experience Gains and Losses: All experience gains and losses (the financial effect of the difference between the actual experience during the prior period and the result expected by the actuarial assumptions for that prior period) appear directly in the past service liability and are amortized at the same rate the plan is amortizing the remaining unfunded past service liability.

Description of Actuarial Assumptions

Changes in Actuarial Assumptions

The valuation reflects changes in the actuarial assumptions listed below. (The assumptions used before and after these changes are more fully described in the next section.)

- None

The assumptions indicated were changed to represent the Enrolled Actuary's current best estimate of anticipated experience of the plan.

Investment rate of return (net of investment-related and administrative expenses)

5.00%.

Rate of compensation increase (including inflation)

3.25%.

The plan does not have statistically credible data on which to form a rate of compensation increase assumption. The assumption is based on input from the plan sponsor regarding future expectations, as well as knowledge that police generally earn higher annual percentage increases than all other employees.

Inflation

2.40%.

This assumption is consistent with the Social Security Administration's current best estimate of the ultimate long-term (75-year horizon) annual percentage increase in CPI, as published in the 2023 OASDI Trustees Report.

Mortality

Pub-2010 Public Retirement Plans Amount-Weighted Mortality Tables for Public Safety Employees, projected to the valuation date with Scale MP-2021.

Mortality Improvement

Projected to date of decrement using Scale MP-2021 (generational).

We have selected this mortality assumption because it is based on a recently published public retirement mortality study released by the Society of Actuaries.

Retirement age

Current Police:

Years of Service	Rate
25	10%
26	10%
27	10%
28	10%
29	10%
30+	100%

All others: 100% at age 65.

The actuarial assumption in regards to rates of retirement shown above are based on standard tables modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor. The plan does not have sufficiently credible data on which to perform an experience study, however we reviewed the available experience and reflected it in the assumptions.

Termination prior to retirement

None.

Disability

1985 Pension Disability Study Class 1 Unisex Table.

The actuarial assumptions in regards to rates of decrement shown above are based on standard tables modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor. The plan does not have sufficiently credible data on which to perform an experience study, however we reviewed the available experience and reflected it in the assumptions.

Administrative expenses

Currently, administrative expenses are not paid out of plan assets.

Cost of living increases

2.00% per year.

Percent of active employees married

85%.

Spouse’s age

Husbands are assumed to be 3 years older than wives.

Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan. It is not intended to be, nor should it be interpreted as a complete statement of all plan provisions. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Plan identification

Single-employer pension plan.

Effective Date

July 1, 2023.

Plan year

July 1st to June 30th

Eligibility

Employees hired after July 1, 2023 are eligible to participate on his or her date of hire. Employees who were hired or rehired prior to July 1, 2023 and who were actively employed on July 1, 2023 are eligible to participate if he or she ceased participation in the Berlin Defined Contribution Plan and contributed the buy-in amount calculated by the Town. Their participation in the plan is effective August 30, 2023. Employees participating in the Berlin Defined Benefit Plan are not eligible for this plan.

Years of Participation (for vesting)

All years that an employee is a participant in the plan.

Years of Credited Service (for benefit accrual)

All years of service where the participant made contributions plus any years service that may have been bought back (if applicable). No period of service is counted toward credited service for any periods where employee contributions were refunded. Credited Service is calculated as each whole year of service and fractions based on completed months of service, beginning at date of hire.

Compensation

Base salary, including holiday pay, but excluding any overtime pay, bonuses, and other forms of additional compensation.

Average Earnings

Highest average of any three consecutive plan years. Participants employed for a period of less than three plan years will have their compensation averaged over the entire period of his or her employment.

Normal Retirement

Eligibility: The first day of the month coinciding with or next following the earlier of: (a) age 55 and 10 years of service; or (b) 25 years of service.

Benefit: (A) plus (B) where:

(A) 2.0% times Average Earnings times Years of Credited Service (max 20 years); plus, if applicable;

(B) 2.5% times Average Earnings times Years of Credited Service in excess of 20 years, but less than or equal to 30 Years of Credited Service.

Termination benefit

For participants hired on or after July 1, 2023, return of employee contributions with interest (if less than 10 years of service at termination). If at least 10 years of service, benefit is equal to Normal Retirement Benefit with accrued service and earnings to date of termination. For participants hired prior to July 1, 2023, return of employee contributions and transferred employer contributions (if any) with interest (if less than 5 years of service at termination). If at least 5 years of service, benefit is equal to Normal Retirement Benefit with accrued service and earnings to date of termination.

Normal Form of Benefit

Straight Life Annuity.

Optional Forms

100%, 75%, and 50% joint and survivor annuity, or life annuity guaranteed for the first ten years.

Actuarial Equivalence for optional forms

Interest: 6%.

Mortality: Pub-2010 Public Retirement Plans Amount-Weighted Mortality Tables for Public Safety Employees.

Early Retirement

Age 45 and 10 Years of Credited Service.

Benefit: Actuarially reduced normal retirement benefit to reflect early retirement.

Late Retirement

A participant's late retirement benefit is based on their Years of Credited Service and Average Earnings as of their date of termination. No actuarial increase is applied.

Death Benefit

The refund of employee contributions and transferred employer contributions (if any) plus interest. If the death is work-related, the surviving spouse will receive the deceased participant's rate of pay at his or her date of death, through his or her Normal Retirement Date. At Normal Retirement Date, the surviving spouse will receive the accrued benefit that the participant would have been entitled to if he or she had continued to work until his or her Normal Retirement Date.

Disability

Eligibility: Permanently disabled in the line of duty prior to his or her Normal Retirement Date.

Benefit: 60% of Average Earnings as of date of disability reduced by worker’s compensation and any other disability benefits received. This benefit is payable until Normal retirement date or until ceases to be disabled.

Employee Contributions

Police: 8% of earnings.

Credited Interest

Interest is credited based on the plan's annual rate of return.

Vesting

100% after 10 Years of Credited Service for participants hired on or after July 1, 2023. 100% after 5 Years of Participation for participants hired prior to July 1, 2023.