

City of Dover, Delaware

Police Pension Plan

Actuarial Valuation
July 1, 2005

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This report presents the City of Dover Police Pension Plan actuarial valuation results as of July 1, 2005. The annual costs presented are based upon generally accepted actuarial assumptions and methods.

Summary of findings

The following summary illustrates the plan costs in dollar amounts and as percentages of valuation payroll.

	Dollar Amount	Percentage of Payroll
City contribution necessary to provide for normal cost plus amortize the unfunded accrued liability over 20 years.	\$560,638	N/A

City costs reflect a \$5,906,582 unfunded as of July 1, 2005. This has been amortized over 19 years with \$551,707 annual payments.

Costs are determined for the pension benefits payable to the closed group of the one remaining police officer hired prior to September 1, 1982 and still active on July 1, 2005 and 46 current pensioners and beneficiaries receiving benefits under the Plan.

Since only one active member remains, the actuarial assumptions for active members were simplified. This had no material impact on plan liabilities.

City costs may be reduced by Delaware insurance tax proceeds received from the State.

Analysis of findings

The following table compares the current cost components with those of the preceding valuation:

	July 1, 2004	July 1, 2005
City Normal Cost		
Dollar amount	\$8,081	\$8,931
Percent of payroll	12.66%	13.58%
Unfunded actuarial liability	\$5,757,959	\$5,906,582
City Amortization Payment		
Amortization payment	\$525,405	\$551,707
Percent of payroll	N/A	N/A
Total City Cost		
Dollar amount	\$533,486	\$560,638
Percent of payroll	N/A	N/A

The principal plan experiences impacting the unfunded liability were investment earnings less than expected, a data correction picking up a new retiree who had been unrecognized deferred vested participant, and a liability loss due to fewer deaths than expected. Also, the State contribution to the Plan was less than anticipated.

The Plan's funding percentage has increased slightly from 67.26% to 66.91%.

The impact of these factors was as follows:

	Unfunded Actuarial Liability
July 1, 2004	\$5,757,959
Expected decrease	(\$132,963)
Excess contribution	(\$347,483)
Data correction	\$158,110
Investment loss	\$133,477
Liability loss	<u>\$337,482</u>
July 1, 2005	\$5,906,582

This section presents the determination of plan costs. Cost estimates are calculated on the aggregate entry age actuarial cost method basis.

Derivation of normal cost

The normal cost is obtained in three steps as follows:

- The single sum value of all future pension payments to be made under the plan is determined, and from such value is subtracted the sum of:
 - Unfunded actuarial accrued liability,
 - Fund assets, and
 - Net present value of future employee contributions;
- The remainder is divided by the present worth of compensation expected to be paid during future years of work to normal retirement age of the participants included in the valuation, to obtain an accrual rate per dollar of such compensation;
- The total normal cost is obtained by multiplying the accrual rate by the annual compensation of active participants under normal retirement age.

Derivation of unfunded actuarial accrued liability

The actuarial accrued liability is determined as the sum of all normal costs which would have accumulated if the assumed normal cost had always been contributed in the past and the actuarial assumptions had been exactly realized. The unfunded actuarial accrued liability is determined by subtracting the current fund assets from the actuarial accrued liability.

Derivation of recommended contribution

The recommended City contribution is the amount which will fund the current year's normal cost plus amortize the unfunded actuarial accrued liability over 30 years beginning on July 1, 1994 but not less than 15 years. In order to comply with the requirements for the Government Accounting Standards Board (GASB) statements for closed plans, amortization payments will remain level, rather than increase. As of July 1, 2005, there are 19 years remaining.

The derivation of the cost components is shown on the following table:

Determination of costs

1. Number of participants		
a. Actives	1	
b. Nonactives and beneficiaries	<u>46</u>	
c. Total		47
2. Payroll of included future benefits		\$65,745
3. Present value of future benefits		\$17,861,930
4. Actuarial accrued liability		\$17,850,795
5. Market value of assets		\$11,944,213
6. Unfunded actuarial accrued liability (4) – (5)		\$5,906,582
7. Present value of future normal costs (3) – (4)		\$11,135
8. Present value of future employee contributions		\$2,464
9. Present value of future City normal costs (7) – (8)		\$8,671
10. Present value of future payroll of participants under retirement age		\$63,830
11. Normal cost accrual rate (9) ÷ (10)		.135844
12. Payroll of included employees under assumed retirement age		\$65,745
13. City normal cost (11) × (12)		\$8,931

City contribution necessary to provide for the normal cost plus amortize the unfunded actuarial accrued liability over 19 years with level payments.

14. Normal cost		\$8,931
15. Amortization of unfunded liability (19 years)		<u>\$551,707</u>
16. Total (14) + (15)		\$560,638

The supplementary statistics and financial data gathered during the course of the actuarial valuation are presented for the City of Dover Police Pension Plan.

A. Summary of statistics relative to participants and beneficiaries

	July 1, 2004	July 1, 2005
Active Participants		
Number	1	1
Average age (weighted by salary)	51.10	52.10
Average service (weighted by salary)	23.33	24.33
Average rate of pay	\$63,830	\$65,745
Retired and Dependent Participants		
Number	43	44
Average monthly pension	\$2,376	\$2,391
Disabled Participants		
Number	2	2
Average monthly pension	\$2,017	\$2,058
Deferred Vested Participants		
Number	0	0
Average monthly pension	\$0	\$0

B. Statement of receipts and disbursements for the years ending June 30, 2004 and June 30, 2005

	Year Ending	
	June 30, 2004	June 30, 2005
Balance at beginning of year	\$11,660,850	\$11,829,963
Non-investment receipts		
City contributions	\$108,312	\$102,695
Employee contributions	\$5,114	\$2,859
State insurance tax precedes	\$359,663	\$749,440
Miscellaneous income	<u>\$0</u>	<u>\$4,285</u>
Total	\$473,089	\$859,279
Disbursements		
Benefit payments	\$1,256,533	\$1,294,679
Employee contribution refunds	\$0	\$0
Expenses	<u>\$12,039</u>	<u>\$15,430</u>
Total	\$1,268,572	\$1,310,109
Investment income		
Dividends and interest	\$325,047	\$414,544
Net appreciation in fair value	\$726,745	\$187,646
Investment expenses	<u>\$(87,196)</u>	<u>\$(37,110)</u>
Total	\$964,596	\$565,080
Balance at end of year	\$11,829,963	\$11,944,213
Approximate yield on investments after expenses	8.56%	4.87%

Participation

Policemen hired prior to September 1, 1982, who work at least 30 hours per week, are eligible to participate.

Average earnings

Average earnings is the average of the basic salary for the three years prior to termination.

Employee contributions

Participants are required to contribute 4% of salary.

Continuous service

Continuous service is uninterrupted service from the most recent date of hire. If a participant terminates and is reemployed, his prior service is credited at one-half value, but not more than five years.

Normal retirement benefit

- **Eligibility** A participant may retire on the first of the month following the completion of 20 years of credited service.
- **Amount** The retirement benefit payable monthly is equal to 2½% of average earnings for each year of continuous service. The maximum benefit is 62½% of average earnings.

Late retirement benefit

- **Eligibility** A participant may work beyond his normal retirement date, but not later than the earlier of:
 - (i) the first of the month following completion of 25 years of continuous service;
 - (ii) the first of the month following his attainment of age 55

With the written consent from the Chief of Police and the participant, a retirement may be deferred up to the age of 60 years.

- **Amount** The annual benefit payable monthly is calculated using the normal retirement formula.

Disability retirement benefit – Duty-connected

- **Eligibility** A participant who is totally or partially disabled while in the performance of his duties is eligible for a service disability benefit.
- **Amount** The total duty-connected disability benefit payable monthly is equal to 75% of the monthly rate of earnings at the time of disability.

The partial duty-connected disability benefit is the accrued benefit at date of disability not less than 50% of average earnings.

- **Duration of payments** Duty-connected total disability benefits continue until the death or recovery of the participant. If the disabled member reaches normal retirement date, the benefit is reduced by one-third.

Duty-connected partial disability benefits continue until the participant ceases to be eligible or dies.

Disability retirement benefit – Ordinary

- **Eligibility** A participant who is totally or partially disabled, is not eligible for duty-connected disability and has completed 10 years of continuous service, shall be eligible for a disability benefit.
- **Amount** The benefit is the accrued benefit at date of disability.
- **Duration of payments** Ordinary disability benefits continue until the participant ceases to be eligible or dies.
- **Offsets to disability pension** None.

Deferred vested benefit

- **Eligibility** If a participant terminates after completing 15 years of service, he will be eligible for a deferred benefit commencing at age 60.
- **Amount** The benefit is the accrued benefit at date of termination.

A participant may elect to receive his accumulated contributions with interest in lieu of the vested benefit payable.

Non-vested termination benefits

If a participant terminates and has not completed 15 years of service, his accumulated contributions plus interest credited to the date of termination will be paid.

Death benefit – Service related death

- **Eligibility** The eligible survivor(s) of a participant who dies in the performance of his duties is (are) eligible for a death benefit.
- **Amount** The benefit payable monthly is equal to 75% of the participant's rate of earnings at the time of his death.

Death benefit – Non-service related death

- **Eligibility** If a participant dies after completing 10 years of continuous service, his eligible survivor(s) will receive a death benefit.
- **Amount** The benefit payable monthly is equal to the participant's accrued benefit at date of death. The maximum benefit is 25% of the participant's average earnings at date of death.
- **Form of payment** The benefit is payable monthly for the life of the spouse, or until remarriage. Benefits to children cease upon the attainment of age 18. The excess of the participant's contributions over the benefits paid to survivors is payable to the named beneficiary, if any, or the estate of the participant.

Post retirement increases

Following retirement, benefits are increased 2% per year, compounded.

Employee data

The employee data used in the determination of cost estimates consist of pertinent information supplied by the City of Dover, Delaware with respect to active employees, pensioners and beneficiaries, and deferred vested participants.

Valuation date

July 1, 2005

Actuarial cost method

The actuarial valuation has been completed using the aggregate entry age actuarial cost method.

Annual probability of severance

- **Retirement** The employee is assumed to retire upon completion of 25 years service.
- **Pre-retirement Severance** None
- **Post-retirement Mortality** Mortality is assumed to follow the 1983 Group Annuity Mortality Table for males and females. Disabled life mortality is based on the Social Security experience table.

Salary scale

It has been assumed that salaries will increase at the rate of 4.5% per annum.

Post-retirement benefit increases

It is assumed that benefits will increase 2% per year after retirement.

Rate of investment return

An average net rate of 7.5% per annum (after investment expenses are deducted) is assumed as the annual rate of investment return (including appreciation and depreciation, realized and unrealized).

Family make-up

It has been assumed that 80% of participants who die prior to normal retirement date are married and that wives are 4 years younger than husbands.

Valuation of assets

Market Value

Statement Number 25 of the Governmental Accounting Standards Board (GASB 25) is effective for plan years beginning after June 15, 1996.

The objective of GASB 25 is to provide a standard for disclosing pension information for the financial reports of governmental pension plans. The financial report should include two financial statements and two required schedules of historical information. The financial statements and required schedules are:

- *A statement of plan net assets* including information about plan assets and liabilities at the reporting date. This information is shown in the Plan Assets section of the report.
- *A statement of changes in plan net assets* including receipts and disbursements. This information is also contained in the Plan Assets section of the report.
- *A schedule of funding progress* including historical information about the actuarially determined funded status of the plan and the progress made in accumulating sufficient assets. This information should be provided for each of the past six plan years. For the transition year and the following five years the schedules should show information for the current year and as any prior years as available. This schedule is shown below.
- *A schedule of employer contributions* including historical trend information about the Annual Required Contributions (ARC) and the contributions made by the employer in relation to the ARC.

Schedule of funding progress

Valuation Date	Plan Assets ¹	Actuarial Accrued Liability	Unfunded Accrued Liability (Surplus)	Funded Ratio	Payroll	Unfunded as a Percent of Payroll ²
July 1, 1996	\$10,991,640	\$14,435,661	\$3,444,021	76.14%	\$856,654	402.03%
July 1, 1998	\$14,704,970	\$15,310,072	\$605,102	96.05%	\$462,976	130.70%
July 1, 2000	\$17,148,626	\$16,659,729	(\$488,894)	102.93%	\$298,678	(163.69%)
July 1, 2002	\$16,640,675	\$17,480,732	\$840,057	95.19%	\$138,353	N/A ²
July 1, 2003	\$11,660,850	\$17,492,167	\$5,831,317	66.66%	\$138,353	N/A ²
July 1, 2004	\$11,829,963	\$17,587,922	\$5,757,959	67.26%	\$63,830	NA ²
July 1, 2005	\$11,944,213	\$17,850,795	\$5,906,582	66.91%	\$65,745	NA ²

¹The July 1, 2002 value is at adjusted market value. All others are market value.

²Percentages are not meaningful due to the closed group with only one remaining active participant.

This report fairly represents the actuarial position of the City of Dover, Delaware Police Pension Plan as of July 1, 2005 according to generally accepted actuarial principles consistent with the previous valuation. In our opinion, the methods and assumptions used in preparing the liabilities and costs are in the aggregate reasonably related to past plan experience and to reasonable expectations and represent our best estimate of anticipated future plan experience.

PIKE ASSOCIATES

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Washington, DC

JANUARY 16, 2006

Date