

Delaware County & Municipal Police/Firefighters Pension Plan

Actuarial Valuation as of June 30, 2009

**Produced by Cheiron** 

January 2010



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January 12, 2010

Board of Pension Trustees State of Delaware McArdle Building 860 Silver Lake Boulevard, Suite 1 Dover, Delaware 19904

Dear Members of the Board:

At your request, we have conducted the annual actuarial valuation of the Delaware County & Municipal Police/Firefighters Pension Plan as of June 30, 2009. The results of the valuation are contained in this report. The purpose of the valuation is discussed in the Foreword.

This report contains information on Plan assets, as well as analyses which combine asset and liability performance and projections. The report also discloses employer contribution levels, and required disclosures under the Governmental Accounting Standards Board Statement No. 25.

Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions on which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief. The results of this report are only applicable to the employer contributions for Fiscal Year ending 2011 and rely on future plan experience conforming to the underlying assumptions. To the extent that actual plan experience deviates from the underlying assumptions, the results would vary accordingly.

We hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board, and that as Members of the American Academy of Actuaries, we meet the Qualification Standards to render the opinions contained herein.

Sincerely, Cheiron

Fiona E. Liston, FSA Consulting Actuary

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#### **FOREWORD**

Cheiron has performed the actuarial valuation of the Delaware County & Municipal Police/Firefighters Pension Plan as of June 30, 2009. The purpose of this report is to:

- 1) **Measure and disclose**, as of the valuation date, the financial condition of the Plan;
- 2) **Indicate trends** in the financial progress of the Plan:
- 3) **Determine the contribution rate** to be paid by the participating employers for Fiscal Year 2011; and
- 4) **Provide specific information** and documentation required by the Governmental Accounting Standards Board (GASB).

An actuarial valuation establishes and analyzes Plan assets and liabilities on a consistent basis, and traces the progress of both from one year to the next. It includes measurement of the Plan's investment performance as well as an analysis of actuarial liability gains and losses.

**Section I** presents a summary containing our findings and disclosing important trends experienced by the Plan in recent years.

**Section II** contains details on various asset measures, together with pertinent performance measurements

**Section III** shows similar information on Plan liabilities, measured for actuarial, accounting, and government reporting purposes.

**Section IV** develops the employer contribution rate determined using actuarial techniques.

**Section V** includes the required disclosures under GASB Statement number 25.

The appendices to this report contain a summary of the Plan's membership at the valuation date, a summary of the major provisions of the Plan, and the actuarial methods and assumptions used in the valuations.

In preparing our report, we relied without audit, on information (some oral and some written) supplied by the Office of Pension's staff. This information includes, but is not limited to, plan provisions, employee data, and financial information.

The actuarial assumptions reflect our understanding of the likely future experience of the Plan and the assumptions as a whole represent our best estimate for the future experience of the Plan. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the Plan could vary from our results.

Finally, in preparing this report, we have conformed to generally accepted actuarial principles and practices which are consistent with the Code of Professional Conduct, and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board.



### SECTION I BOARD SUMMARY

#### **General Comments**

The actuarially determined contribution rate increased from 13.70% for FY 2010 to 13.90% for FY 2011. During the year ended June 30, 2009, the Plan's assets lost 14.6% on a market value basis. However, due to the Plan's asset-smoothing technique and an accumulation of past asset gains, the return on the actuarial asset value was a positive 3.1%. This return was below the assumed rate of return of 8.0% and resulted in an actuarial loss on investments of \$5.36 million.

The Plan experienced an actuarial loss on Plan liabilities resulting from salary increases different than assumed and members retiring, terminating, and becoming disabled and dying at rates different from the actuarial assumptions. The loss increased the actuarial liability by about \$0.94 million. This type of activity is normal in the course of plan experience. The Plan will experience actuarial gains and losses over time because we cannot predict exactly how people will behave. When a plan experiences alternating gains and losses that are small compared to the total actuarial liability, then the plan's actuarial assumptions are reasonable.

As of the June 30, 2009 actuarial valuation, the Plan's unfunded actuarial liability was \$2.8 million. This is an increase from last year's unfunded actuarial liability of \$1.5 million.



### SECTION I BOARD SUMMARY

**Trends** 

#### Growth in Assets



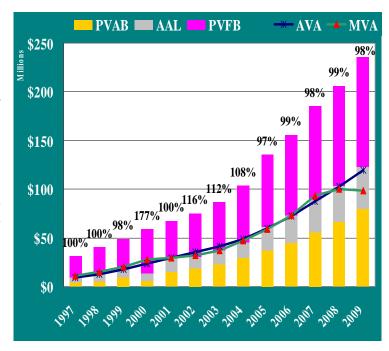
The market value of assets (MVA) decreased over the last year, returning negative 14.6%. The determination of the plan's actuarial value of assets reflects only a portion of the return below 8%.

The market value shrunk between 2008 and 2009 but the smoothing method produced an increase in the actuarial value from the previous year.

#### **Assets and Liabilities**

The three colored bars represent the three different measures of liability mentioned in this report. For funding purposes, the target amount is represented by the top of the gray bar. We compare the actuarial value of assets to this measure of liability in developing the funded percent. These are the percentages shown in the graph labels.

The amount represented by the top of the pink bars, the Present Value of Future Benefits (PVFB), is the amount needed to provide all benefits for the current participants and their beneficiaries. If the Plan had assets equal to the PVFB no contributions would, in theory, be needed for the current members.





### SECTION I BOARD SUMMARY

#### **Contribution Rates**



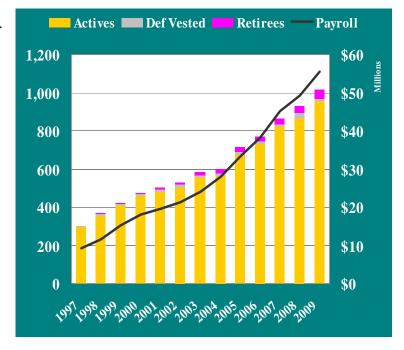
The stacked bars in this graph show the contributions made by the participating employers and the members (left hand scale). The black line shows the employer contribution rate as a percent of payroll (right hand scale).

The increase in employer contribution dollars between 2008 and 2009 represents payment of special past service by some of the participating municipalities, in addition to an increase in overall participation.

#### Participant Trends

The bars show the number of participants in each category and should be read using the left-hand scale. The black line shows the covered payroll in the plan and is read using the right-hand scale.

There has been annual growth in the number of active participants in recent years, primarily due to more municipalities electing to join this plan.

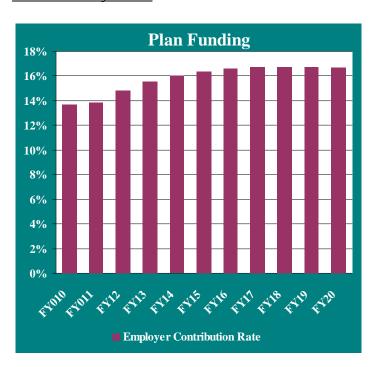




### SECTION I BOARD SUMMARY

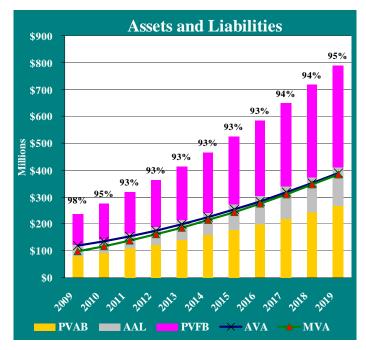
#### **Future Outlook**

#### **Base Line Projections**



These graphs show the expected progress of the Plan over the next ten years assuming the Plan's assets earn 8% on their *market value*. The chart entitled "Plan Funding" shows that the employer rate is expected to increase to 16.7% of payroll and then remain at level for the remainder of the period.

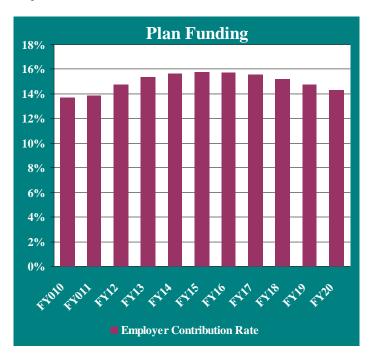
The "Assets and Liabilities" graph shows the projected funding status over the next ten years. The Plan's funded status is projected to decline by 5% without a significant correction in the markets to offset future recognition of last year's losses.





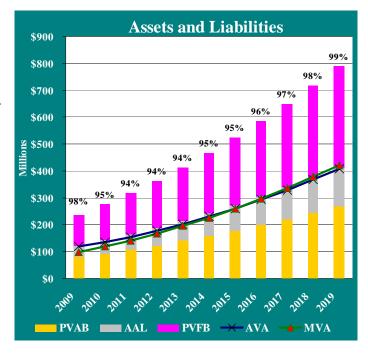
### SECTION I BOARD SUMMARY

#### Projections With Asset Returns of 9.5%



The future funding status of this Plan will be influenced by the investment earnings. These charts show what the next ten years would look like with a 9.5% annual return in each year. The Plan has earned an average 8.9% per year over the ten-year period ending June 30, 2009.

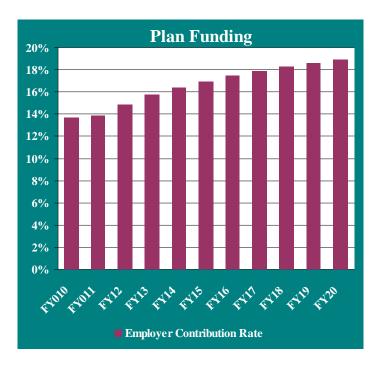
As you can see, the Plan would reach 99% funding by 2019. The contribution rate would still increase over the short term, absent a significant investment correction, but does not exceed 16% of payroll. As the 9.5% returns persist, the contribution would improve.





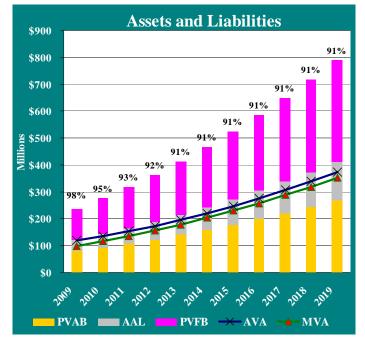
### SECTION I BOARD SUMMARY

#### Projections With Asset Returns of 6.5%



To further demonstrate how the future funding of this Plan will be driven by investment earnings, we show next the anticipated plan funding projections if the invested assets earn 6.5% per year over the entire ten-year period.

Under this scenario the employer contribution rate increases to reach almost 20% of payroll. The funding status declines but remains in excess of 90% funded.





### SECTION I BOARD SUMMARY

Delaware County & Municipal Police/Firefighters Pension Plan Summary of Principal Plan Results						
Valuation as of:	Ju	ne 30, 2008	Ju	ne 30, 2009	% Change	
Participant Counts						
Active Participants		866		954	10.16%	
Disabled Participants		9		11	22.22%	
Retirees and Beneficiaries		27		33	22.22%	
Terminated Vested Participants		17		15	(11.76%)	
Inactive Participants		12		6	<u>(50.00%)</u>	
Total		931		1,019	9.45%	
Annual Salaries of Active Members*	\$	49,327,600	\$	55,477,800	12.47%	
Annual Retirement Allowances for Retired Members and Beneficiaries	\$	899,300	\$	1,151,700	28.07%	
Assets and Liabilities						
Actuarial Accrued Liability (AAL)	\$	103,911,100	\$	122,572,800	17.96%	
Actuarial Value of Assets		102,422,600		119,711,500	<u>16.88%</u>	
Unfunded AAL		1,488,500		2,861,300	92.23%	
Funded Ratio		98.6%		97.7%		
Present Value of Accrued Benefits (PVAB)	\$	66,549,400	\$	79,956,200	20.15%	
Market Value of Assets		99,973,300		98,271,200	(1.70%)	
Unfunded PVAB		(33,423,900)		(18,315,000)	(45.20%)	
Accrued Benefit Funding Ratio		150.2%		122.9%	,	
Contributions as a Percentage of Payroll	Fisc	al Year 2010	Fisc	cal Year 2011		
Normal Cost Contribution		13.07%		13.07%		
Unfunded Actuarial Liability Contribution		0.33%		0.53%		
Administrative Expense		<u>0.30%</u>		<u>0.30%</u>		
Total State Contribution		13.70%		13.90%		

<sup>\*</sup> Assumes one year of payroll projection.



### SECTION II ASSETS

Pension Plan assets play a key role in the financial operation of the Plan and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact upon benefit levels, employer contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on Plan assets including:

- **Disclosure** of Plan assets at June 30, 2008 and June 30, 2009;
- Statement of the **changes** in market values during the year;
- Development of the **Actuarial Value of Assets**;
- An assessment of **investment performance**; and
- A projection of the Plan's expected **cashflows** for the next ten years.

#### **Disclosure**

The market value of assets represents a "snap-shot or cash-out" value which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not suitable for long-range planning.

The actuarial values are market values which have been smoothed and are the actuary's best estimate of long-term asset values. They are used for evaluating the Plan's ongoing liability to meet its obligations.

Current methods employed by this Plan set the actuarial value equal to the expected value plus 20% of the difference between the expected value of assets and the actual market value where the expected value is equal to the prior year's actuarial value, rolled forward with actual contributions and benefit payments plus interest imputed at 8%.



### SECTION II ASSETS

Changes i	n Market Values	
Value of Assets – June 30, 2008		\$ 99,973,300
Additions		
Member Contributions	\$ 3,852,600	
Employer Contributions	11,387,600	
Investment Return	(15,601,300)	
Total Additions	\$ (361,100)	
<b>Deductions</b>		
Benefit Payments	\$ 1,230,800	
Administrative Expenses	110,200	
Total Deductions	<b>\$ 1,341,000</b>	
Value of Assets – June 30, 2009		\$ 98,271,200



### SECTION II ASSETS

	Development of Actuarial Value of Assets	
1.	Actuarial Value of Assets at June 30, 2008	\$ 102,422,600
2.	Amount in (1) with interest to June 30, 2009	110,616,400
3.	Employer and member contributions for the Plan Year ended June 30, 2009	15,240,200
4.	Interest on contributions assuming payments made uniformly throughout the year to June 30, 2009 at 8.00% per year	609,600
5.	Disbursements from Trust except investment expenses, June 30, 2008 through June 30, 2009	1,341,000
6.	Interest on disbursements to June 30, 2009 at 8.00% per year	53,600
7.	Expected Actuarial Value of Assets at June 30, 2009 = $(2) + (3) + (4) - (5) - (6)$	125,071,600
8.	Actual Market Value of Assets at June 30, 2009	98,271,200
9.	Excess of (8) over (7)	(26,800,400)
10.	Actuarial Value of Assets at June 30, $2009 = (7) + 20\%$ of (9)	\$ 119,711,500

### **Actuarial Value of Assets**

The actuarial value of assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, erratic results which could develop from short-term fluctuations in the market value of assets. For this Plan, the actuarial value has been calculated by adding 20% of the difference between market value and expected value to the expected value. The above table illustrates the calculation of actuarial value of assets for the June 30, 2009 valuation.



### SECTION II ASSETS

#### **Investment Performance**

The market value of assets (MVA) returned negative 14.6% during 2009, which is less than the assumed 8% return. A return of positive 3.1% on the actuarial value of assets (AVA) is primarily the result of the asset smoothing method being utilized for the calculation of the actuarial value of assets. Since only 20% of the gain or loss from the performance of the Plan is recognized in a given year, in periods of very good performance, the AVA can lag significantly behind the MVA. In a period of negative returns, the AVA does not decline as rapidly as the MVA.

Projection of Plan's Benefit Payments								
Year Beginning July 1,	<b>Expected Benefit Payments</b>	Expected Contributions*						
2009	\$ 1,853,000	\$ 11,595,000						
2010	2,156,000	12,030,000						
2011	2,413,000	12,481,000						
2012	2,702,000	12,949,000						
2013	3,284,000	13,434,000						
2014	4,033,000	13,938,000						
2015	5,047,000	14,461,000						
2016	6,017,000	15,003,000						
2017	7,291,000	15,566,000						
2018	9,442,000	16,149,000						

Expected benefit payments are projected for the closed group valued at June 30, 2009. Projecting any farther than ten years using a closed-group would not yield reliable predictions due to the omission of new hires.

\* Expected contributions include participating employer contributions and member contributions. For illustration purposes, we have assumed the employer contribution rate will remain level and that payroll will increase at the actuarially assumed rate of 3.75% per year.



### SECTION III LIABILITIES

In this section, we present detailed information on Plan liabilities including:

- **Disclosure** of Plan liabilities at June 30, 2008 and June 30, 2009;
- Statement of **changes** in these liabilities during the year; and

#### **Disclosure**

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Benefits:** Used for analyzing the financial outlook of the Plan, this represents the amount of money needed today to fully pay off all future benefits and expenses of the Plan, assuming participants continue to accrue benefits.
- Actuarial Accrued Liability: Used for funding calculations and GASB disclosures, this
  liability is calculated taking the Present Value of Benefits and subtracting the present value
  of future Member Contributions and future Employer Normal Costs under an acceptable
  actuarial funding method. This method is referred to as the Entry Age Normal funding
  method.
- **Present Value of Accrued Liabilities:** Used for communicating the current level of liabilities, this liability represents the total amount of money needed today to fully pay off the current accrued obligations of the Plan, assuming no future accruals of benefits. These liabilities are also required for accounting purposes (FAS 35) and used to assess whether the Plan can meet its current benefit commitments.

The following table discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of Plan assets yields, for each respective type, a **net surplus** or an **unfunded liability**.



### SECTION III LIABILITIES

Liabilities/Net (Surplus)/Unfunded						
<u> </u>		une 30, 2008	June 30, 2009			
Present Value of Benefits						
Active Participant Benefits	\$	195,253,400	\$	221,786,400		
Retiree and Inactive Benefits		11,042,500		13,989,800		
Present Value of Benefits (PVB)	\$	206,295,900	\$	235,776,200		
Market Value of Assets (MVA)		99,973,300		98,271,200		
Future Member Contributions		35,709,700		39,483,000		
Future Employer Contributions		70,612,900		98,022,000		
Total Resources	\$	206,295,900	\$	235,776,200		
Actuarial Accrued Liability						
Present Value of Benefits (PVB)	\$	206,295,900	\$	235,776,200		
Present Value of Future Normal Costs (PVFNC)		66,675,100		73,720,400		
Present Value of Future Member Contributions (PVFEEC)		35,709,700		39,483,000		
Actuarial Accrued Liability (AAL=PVB-PVFNC-PVFEEC)	\$	103,911,100	\$	122,572,800		
Actuarial Value of Assets (AVA)		102,422,600		119,711,500		
Net (Surplus)/Unfunded (AAL – AVA)	\$	1,488,500	\$	2,861,300		
Present Value of Accrued Liability						
Present Value of Benefits (PVB)	\$	206,295,900	\$	235,776,200		
Present Value of Future Benefit Accruals (PVFBA)	•	139,746,500	•	155,820,000		
Present Value of Accrued Liability (PVAB=PVB-PVFBA)		66,549,400		79,956,200		
Market Value of Assets (MVA)		99,973,300		98,271,200		
Net Unfunded (PVAB – MVA)	\$	(33,423,900)	\$	(18,315,000)		



### SECTION III LIABILITIES

### **Changes in Liabilities**

Each of the Liabilities disclosed in the prior table are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in Plan assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure plan assets

In each valuation, we report on those elements of change which are of particular significance, potentially affecting the long-term financial outlook of the Plan. Below we present key changes in liabilities since the last valuation.

(In Thousands)	Present Value of Benefits		Actuarial Accrued Liability		ent Value of Accrued Liability
Liabilities June 30, 2008	\$ 206,296	\$	103,911	\$	66,549
Liabilities June 30, 2009	235,776		122,573		79,956
Liability Increase (Decrease)	29,480		18,662		13,407
Change Due to:					
PRI Increase	N/A		N/A		N/A
Actuarial (Gain)/Loss	NC*		937		NC*
Benefits Accumulated and					
Other Sources	29,480		17,725		13,407

<sup>\*</sup> NC = not calculated.



### SECTION III LIABILITIES

Actuarial Liabilities for Funding						
	June 30, 2008	June 30, 2009				
1. Actuarial Liabilities						
Retiree and Inactive Benefits	\$ 11,042,500	\$ 13,989,800				
Active Members	92,868,600	108,583,000				
Total Actuarial Liability	\$ 103,911,100	\$ 122,572,800				
2. Actuarial Value of Assets	\$ 102,422,600	\$ 119,711,500				
3. Unfunded Actuarial Liability	\$ 1,488,500	\$ 2,861,300				
4. Allocation of Unfunded Actuarial Liability Unpaid UAL from participating municipalities	\$ 183,300	\$ 483,100				
5. Net (Gain)/Loss Base for 10 Year Amort. (3-4)	\$ 1,305,200	\$ 2,378,200				



### SECTION IV CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For this Plan, the funding method employed is the **Entry Age Actuarial Cost Method**. Under this method, there are three components to the total contribution: the **normal cost rate**, the **unfunded actuarial liability rate** (UAL rate), and the **administrative expense rate**. The normal cost rate is determined in the following steps. First, for a typical new entrant an individual normal cost rate is determined by taking the value, as of entry age into the plan, of that member's projected future benefits. This value is then divided by the value, also at entry age, of the member's expected future salary. Finally, the total normal cost rate is reduced by the member contribution rate to produce the employer normal cost rate.

The unfunded actuarial liability as of each valuation date is amortized over a rolling ten year period. All payments are determined assuming total pay increases by the annual inflation rate.

The assumed administrative expense rate is 0.30% of payroll. This rate, when applied to payroll, is intended to provide an allowance above the cost of funding the benefits to pay for the expense of operating the Plan.

The table below presents and compares the employer contribution rates for the Plan for this valuation and the prior one.

Employer Contribution Rate									
	June 30, 2008	June 30, 2009							
Entry Age Normal Cost Rate	13.07%	13.07%							
Amortization Payment	0.33%	0.53%							
Expense	0.30%	0.30%							
Actuarially Determined Contribution	13.70%	13.90%							



# SECTION IV CONTRIBUTIONS

	Development of Plan Cost as of June 30, 2009								
			In Dollars	As % of Payroll					
1.	Present value of projected benefits attributable to: a. Total Normal Cost b. Expected Members Contribution c. Employer Paid Normal Cost (a) – (b)	\$ \$	11,134,300 3,883,400 7,250,900	20.07% <u>7.00%</u> 13.07%					
2.	Amortization of Unfunded Liability, less the unpaid UAL from participating municipalities	\$	295,000	0.53%					
3. 4.	Allowance for Expense  Total Employer Contribution Rate $(1) + (2) + (3)$	\$ \$	166,400 7,712,300	0.30% 13.90%					



### SECTION V ACCOUNTING STATEMENT INFORMATION

Statement No. 35 of the Financial Accounting Standards Board requires the Plan to disclose certain information regarding its funded status. Statement No. 25 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

The FASB-35 disclosures provide a quasi "snap shot" view of how the Plan's assets compare to its liabilities if contributions stopped and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if the Plan were to terminate.

The GASB-25 actuarial accrued liability is the same as the actuarial liability amount calculated for funding purposes.

Both the present value of accrued benefits (FASB-35) and the actuarial accrued liability (GASB-25) are determined assuming that the Plan is on-going and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 8% per annum.

FASB Statement No. 35 specifies that a comparison of the present value of accrued (accumulated) benefits with the market value of the assets as of the valuation date must be provided. GASB Statement No. 25 requires the actuarial accrued liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of June 30, 2006 are exhibited in Table V-1. Finally, Table V-2 reconciles the FASB-35 liabilities determined as of the prior valuation, July 1, 2008, to the liabilities as of June 30, 2009.

Tables V-3 through V-5 are exhibits to be used with the State CAFR report. Table V-3 is the Note to Required Supplementary Information, Table V-4 is a history of gains and losses in Accrued Liability, and Table V-5 is the Solvency Test which shows the portion of Accrued Liability covered by Assets.



# SECTION V ACCOUNTING STATEMENT INFORMATION

	Table V-1							
		Accounting Statement I		nation Iune 30, 2008	J	Tune 30, 2009		
A.		ASB No. 35 Basis  Present Value of Benefits Accrued and Vested to Date						
		<ul><li>a. Members Currently Receiving Payments</li><li>b. Former Vested Members</li><li>c. Active Members</li></ul>	\$	10,379,700 662,800 55,506,900	\$	13,383,000 606,800 65,966,400		
	2.	Total Present Value of Accrued Benefits $(1 (a) + 1(b) + 1(c))$	\$	66,549,400	\$	79,956,200		
	3.	Assets at Market Value		99,973,300		98,271,200		
	4.	Unfunded Present Value of Accrued Benefits $(2-3)$	\$	(33,423,900)	\$	(18,315,000)		
	5.	Ratio of Assets to Present Value of Benefits (3 / 2)		150.2%		122.9%		
В.	GA	ASB No. 25 Basis						
	1.	Actuarial Accrued Liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$	11,042,500	\$	13,989,800		
	2.	Actuarial Accrued Liabilities for current employees		92,868,600		108,583,000		
	3.	Total Actuarial Accrued Liability (1 + 2)	\$	103,911,100	\$	122,572,800		
	4.	Net Actuarial Assets available for benefits		102,422,600		119,711,500		
	5.	Unfunded Actuarial Accrued Liability (3 – 4)	\$	1,488,500	\$	2,861,300		



# SECTION V ACCOUNTING STATEMENT INFORMATION

Table V-2 Statement of Changes in Total Actuarial Present Value of All Accrued Benefits	
	 ulated Benefit tion (FASB 35)
Actuarial Present Value of Accrued Benefits at June 30, 2008	\$ 66,549,400
Increase (Decrease) During Years Attributable to:	
Passage of Time	5,274,700
Benefit Paid – FY 2009	(1,230,800)
Post-Retirement Income	0
Benefits Accrued, Other Gains/Losses	 9,362,900
Net Increase (Decrease)	13,406,800
Actuarial Present Value of Accrued Benefits at June 30, 2009	\$ 79,956,200



### SECTION V ACCOUNTING STATEMENT INFORMATION

# Table V-3 NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date July 1, 2009

Actuarial cost method Entry age

Amortization method Level percent open

Remaining amortization period Ten years

Asset valuation method 5-Year smoothed market

Actuarial assumptions:

Investment rate of return\*

Projected salary increases\*

\*Includes inflation at

Cost-of-living adjustments

8.0%

4.3%-15.7%

3.75%

ad hoc

The actuarial assumptions used have been recommended by the actuary and adopted by the Plan's Board of Trustees based on the most recent review of the Plan's experience, completed in 2004.

The rate of employer contributions to the Plan is composed of the normal cost, amortization of the unfunded actuarial accrued liability and an allowance for administrative expenses. The normal cost is a level percent of payroll cost which, along with member contributions, will pay for projected benefits at retirement for the average plan participant. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability. The allowance for administrative expenses is based upon the Plan's actual administrative expenses.



### SECTION V ACCOUNTING STATEMENT INFORMATION

Table V-4 ANALYSIS OF FINANCIAL EXPERIENCE								
Gain and Loss in Accrued Liability During Years Ended June 30 Resulting from Differences Between Assumed Experience and Actual Experience								
Gain (or Loss) for Year ending June 30,								
		(expressed in th	housands)					
Type of Activity	2006	2007	2008	2009				
Investment Income on Actuarial Assets	\$ 323	\$ 1,465	\$ (612)	\$ (5,360)				
Combined Liability Experience	23	(2,646)	851	(937)				
(Loss)/Gain During Year from Financial Experience	\$ 346	\$ (1,181)	\$ 239	\$ (6,297)				
Non-Recurring Items	$\underline{\hspace{1cm}}$ (125)		0					
Composite Gain (or Loss) During Year	\$ 221	\$ (1,181)	\$ 239	\$ (6,297)				

Table V-5 SOLVENCY TEST Aggregate Accrued Liabilities for (expressed in thousands)											
Valuation Date June 30,	M	active ember ributions		irants & eficiaries	M En Fi	Active lember uployer nanced tributions	V Re	ctuarial alue of eported	Cove	on of Accrued Lial red by Reported A	Assets
		(1)		(2)		(3)	I	Assets	(1)	(2)	(3)
2009	\$	24,808	\$	13,383	\$	84,382	\$	119,712	100%	100%	97%
2008		20,669		10,380		72,862		102,423	100%	100%	98%
2007		17,135		9,072		62,815		87,395	100%	100%	97%
2006		13,965		6,992		51,875		72,120	100%	100%	99%
2005		11,441		6,519		43,375		59,711	100%	100%	96%
2004		9,334		5,656		30,214		48,893	100%	100%	112%
2003		7,682		2,928		26,088		41,228	100%	100%	117%



# APPENDIX A MEMBERSHIP INFORMATION

# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Active Members by Age and Service as of June 30, 2009

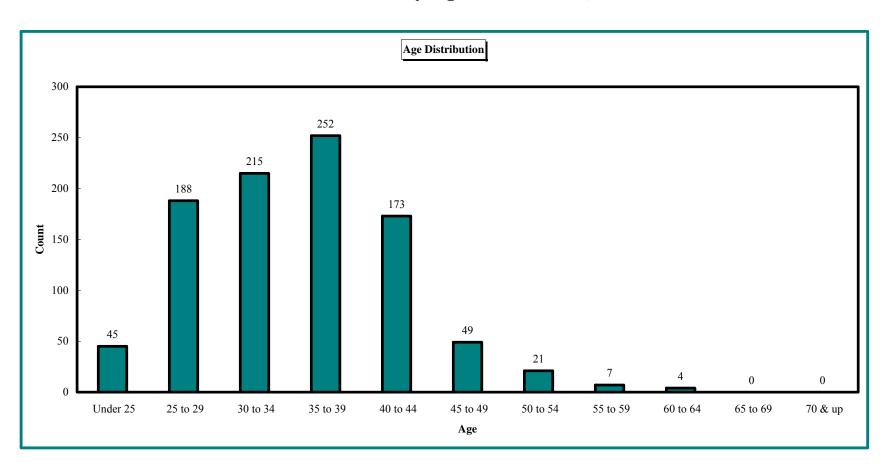
#### COUNTS BY AGE/SERVICE

					Serv	ice					
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 25	21	24	0	0	0	0	0	0	0	0	45
25 to 29	31	136	21	0	0	0	0	0	0	0	188
30 to 34	12	86	85	32	0	0	0	0	0	0	215
35 to 39	6	39	64	120	23	0	0	0	0	0	252
40 to 44	2	30	30	61	42	8	0	0	0	0	173
45 to 49	0	4	5	20	10	7	3	0	0	0	49
50 to 54	1	7	3	5	1	3	1	0	0	0	21
55 to 59	0	3	2	2	0	0	0	0	0	0	7
60 to 64	0	2	2	0	0	0	0	0	0	0	4
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	73	331	212	240	76	18	4	0	0	0	954



# APPENDIX A MEMBERSHIP INFORMATION

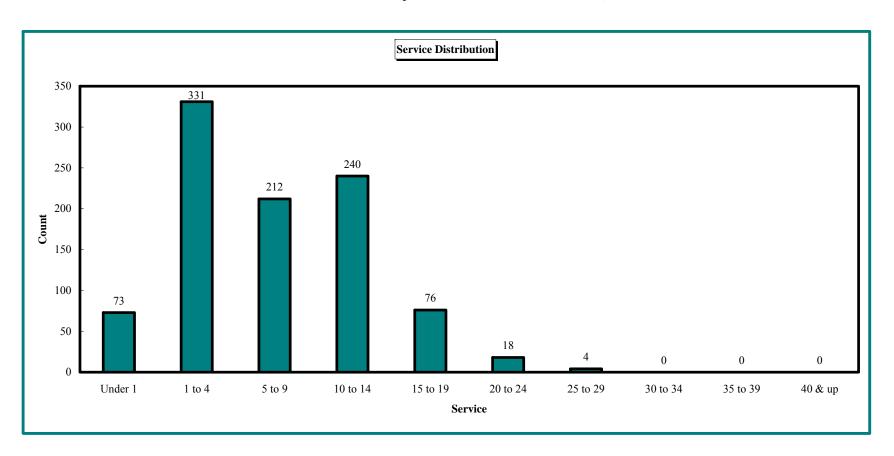
# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Active Members by Age as of June 30, 2009





# APPENDIX A MEMBERSHIP INFORMATION

# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Active Members by Service as of June 30, 2009





# APPENDIX A MEMBERSHIP INFORMATION

# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Active Members by Age and Service as of June 30, 2009

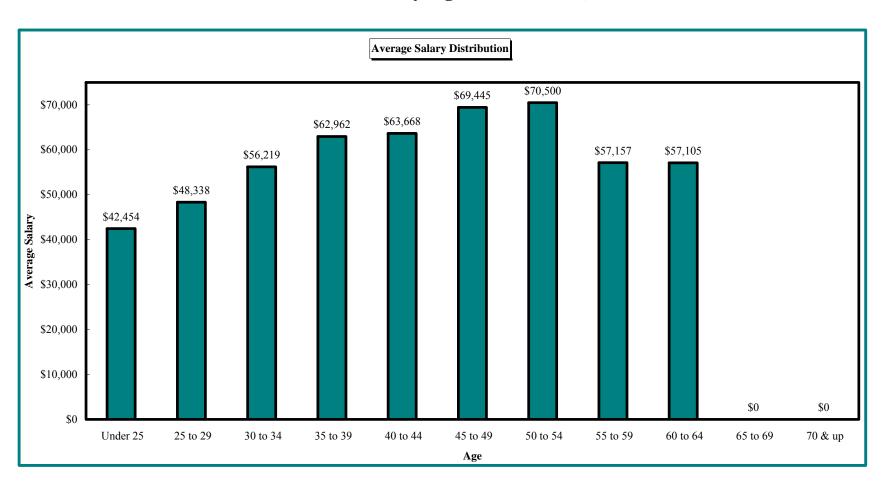
#### AVERAGE SALARY BY AGE/SERVICE

					Servic	e					
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 25	\$41,869	\$42,965	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,454
25 to 29	\$44,667	\$48,833	\$50,552	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,338
30 to 34	\$42,574	\$50,802	\$58,735	\$69,213	\$0	\$0	\$0	\$0	\$0	\$0	\$56,219
35 to 39	\$57,084	\$52,346	\$57,807	\$67,827	\$71,457	\$0	\$0	\$0	\$0	\$0	\$62,962
40 to 44	\$46,708	\$50,586	\$61,651	\$65,731	\$70,641	\$72,181	\$0	\$0	\$0	\$0	\$63,668
45 to 49	\$0	\$74,317	\$49,542	\$66,536	\$75,688	\$68,038	\$97,980	\$0	\$0	\$0	\$69,445
50 to 54	\$60,658	\$64,858	\$64,773	\$76,097	\$66,210	\$87,510	\$62,288	\$0	\$0	\$0	\$70,500
55 to 59	\$0	\$45,280	\$63,097	\$69,034	\$0	\$0	\$0	\$0	\$0	\$0	\$57,157
60 to 64	\$0	\$51,418	\$62,792	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$57,105
65 to 69	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
70 & up	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$44,814	\$50,122	\$58,005	\$67,554	\$71,494	\$73,125	\$89,057	\$0	\$0	\$0	\$58,153



# APPENDIX A MEMBERSHIP INFORMATION

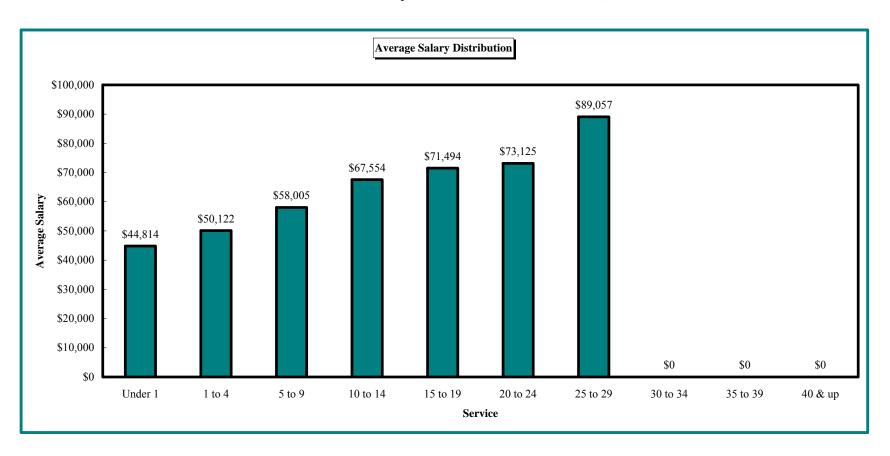
# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Active Members by Age as of June 30, 2009





# APPENDIX A MEMBERSHIP INFORMATION

# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Active Members by Service as of June 30, 2009





# APPENDIX A MEMBERSHIP INFORMATION

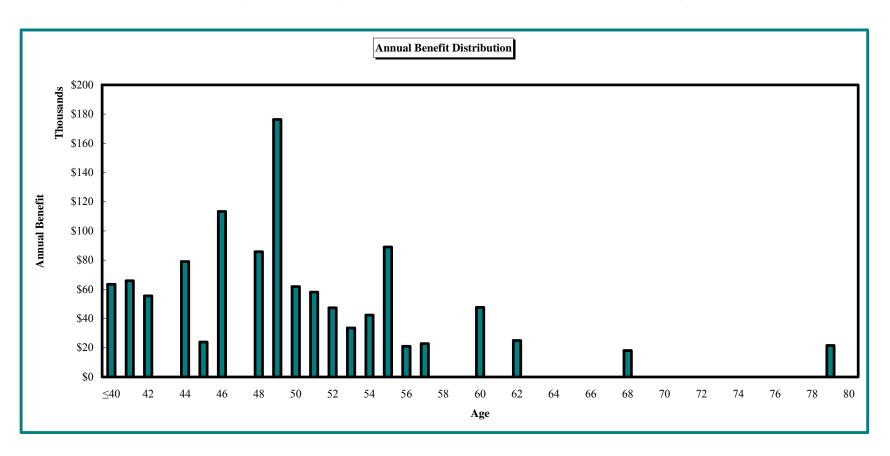
# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Retired Members, Survivors, and Disabled Members as of June 30, 2009

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	1	\$14,216	73	0	\$0
25	0	\$0	74	0	\$0
26	0	\$0	75	0	\$0
27	0	\$0	76	0	\$0
28	0	\$0	77	0	\$0
29	0	\$0	78	0	\$0
30	0	\$0	79	1	\$21,600
31	0	\$0	80	0	\$0
32	0	\$0	81	0	\$0
33	0	\$0	82	0	\$0
34	0	\$0	83	0	\$0
35	0	\$0	84	0	\$0
36	1	\$16,258	85	0	\$0
37	0	\$0	86	0	\$0
38	1	\$20,628	87	0	\$0
39	1	\$12,355	88	0	\$0
40	0	\$0	89	0	\$0
41	2	\$65,872	90	0	\$0
42	2	\$55,536	91	0	\$0
43	0	\$0	92	0	\$0
44	3	\$79,053	93	0	\$0
45	1	\$23,887	94	0	\$0
46	4	\$113,303	95	0	\$0
47	0	\$0	96	0	\$0
48	3	\$85,733	97	0	\$0
49	6	\$176,306	98	0	\$0
50	2	\$61,924	99	0	\$0
51	2	\$58,090	100	0	\$0
52	2	\$47,357	101	0	\$0
53	1	\$33,568	102	0	\$0
54	1	\$42,378	103	0	\$0
55	3	\$88,993	104	0	\$0
56	1	\$21,044	105	0	\$0
57	1	\$22,834	106	0	\$0
58	0	\$0	107	0	\$0
59	0	\$0	108	0	\$0
60	2	\$47,673	109	0	\$0
61	0	\$0	110	0	\$0
62	1	\$24,967	111	0	\$0
63	0	\$0	112	0	\$0
64	0	\$0	113	0	\$0
65	0	\$0	114	0	\$0
66	0	\$0	115	0	\$0
67	0	\$0	116	0	\$0
68	2	\$18,161	117	0	\$0
69	0	\$0	118	0	\$0
70	0	\$0	119	0	\$0
71	0	\$0	120	0	\$0
72	0	\$0			
			Totals	44	\$1,151,737



# APPENDIX A MEMBERSHIP INFORMATION

# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Retired Members, Survivors, and Disabled Members as of June 30, 2009





# APPENDIX A MEMBERSHIP INFORMATION

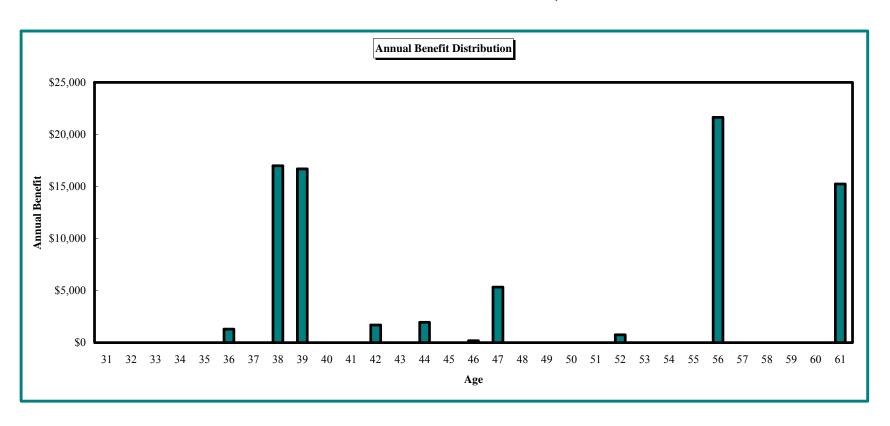
# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Vested Members as of June 30, 2009

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$0	73	0	\$0
25	0	\$0	74	0	\$0
26	0	\$0	75	0	\$0
27	0	\$0	76	0	\$0
28	0	\$0	77	0	\$0
29	0	\$0	78	0	\$0
30	0	\$0	79	0	\$0
31	0	\$0	80	0	\$0
32	0	\$0	81	0	\$0
33	0	\$0	82	0	\$0
34	0	\$0	83	0	\$0
35	0	\$0	84	0	\$0
36	1	\$1,298	85	0	\$0
37	0	\$0	86	0	\$0
38	3	\$16,987	87	0	\$0
39	2	\$16,700	88	0	\$0
40	0	\$0	89	0	\$0
41	0	\$0	90	0	\$0
42	1	\$1,698	91	0	\$0
43	0	\$0	92	0	\$0
44	1	\$1,951	93	0	\$0
45	0	\$0	94	0	\$0
46	1	\$187	95	0	\$0
47	1	\$5,331	96	0	\$0
48	0	\$0	97	0	\$0
49	0	\$0	98	0	\$0
50	0	\$0	99	0	\$0
51	0	\$0	100	0	\$0
52	1	\$756	101	0	\$0
53	0	\$0	102	0	\$0
54	0	\$0	103	0	\$0
55	0	\$0	104	0	\$0
56	2	\$21,647	105	0	\$0
57	0	\$0	106	0	\$0
58	0	\$0	107	0	\$0
59	0	\$0	108	0	\$0
60	0	\$0	109	0	\$0
61	1	\$15,243	110	0	\$0
62	1	\$8,633	111	0	\$0
63	0	\$0	112	0	\$0
64	0	\$0	113	0	\$0
65	0	\$0	114	0	\$0
66	0	\$0 \$0	115	0	\$0 \$0
67	0	\$0	116	0	\$0 \$0
68	0	\$0 \$0	117	0	\$0 \$0
69	0	\$0 \$0	118	0	\$0 \$0
70	0		119	0	\$0 \$0
71	0	\$0 \$0	120	0	\$0
72	0	\$0	Tatala	1.5	¢00.420
			Totals	15	\$90,430



# APPENDIX A MEMBERSHIP INFORMATION

# Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Vested Members as of June 30, 2009





# APPENDIX B ACTUARIAL ASSUMPTIONS AND METHODS

### A. Long-Term Assumptions Used to Determine Plan Costs and Liabilities

### 1. Demographic Assumptions

### a. Healthy Inactive Mortality

With Full Generational Mortality Improvements (Projection Scale AA)

Male: 97% of 1994 Group Annuity Mortality Table

Female: 87% of RP-2000 FW Mortality Table

		Healthy Inact Prior to	ive Mortali	ty
	Proje	ection)	Projecti	ion Scale
Age	Male	Female	Male	Female
40	0.10%	0.09%	0.80%	1.50%
45	0.15	0.14	1.30	1.60
50	0.25	0.21	1.80	1.70
55	0.43	0.30	1.90	0.80
60	0.77	0.49	1.60	0.50
65	1.41	0.79	1.40	0.50
70	2.30	1.32	1.50	0.50
75	3.61	2.24	1.40	0.80
80	6.02	3.75	1.00	0.70

### b. Healthy Active Mortality

With Full Generational Mortality Improvements (Projection Scale AA)

Male: 90% of RP-2000 RE Mortality Table Female: 80% of RP-2000 RE Mortality Table

Rates	Rates of Healthy Active Mortality						
Age	Male	Female					
20	0.03%	0.02%					
25	0.03	0.02					
30	0.04	0.02					
35	0.07	0.04					
40	0.10	0.06					
45	0.14	0.09					
50	0.19	0.13					
55	0.27	0.20					
60	0.44	0.31					



# APPENDIX B ACTUARIAL ASSUMPTIONS AND METHODS

### c. Disabled Inactive Mortality

Male: 27% of 1977 Railroad Retirement Board Disabled Mortality Female: 92% of 1981 PBGC Disabled Mortality with Social Security

Rates	Rates of Disabled Inactive Mortality						
Age	Male	Female					
20	0.74%	1.92%					
25	0.74	2.06					
30	0.78	2.36					
35	1.00	2.71					
40	1.28	3.05					
45	1.62	3.40					
50	2.01	3.78					
55	2.48	4.53					
60	3.32	6.86					

### d. Rates of Active Disability

Rates of Active Disability					
Age	Current				
20	0.02%				
25	0.02				
30	0.07				
35	0.10				
40	0.39				
45	0.78				
50	1.10				
55	1.50				

1/3 of disabilities are partial and 2/3 are total.

1/3 of disabilities are duty-related and 2/3 are non-duty related.



# APPENDIX B ACTUARIAL ASSUMPTIONS AND METHODS

### e. Termination of Employment (Prior to Normal Retirement Eligibility)

10-year Select & Ultimate tables (service-based) to age 54

SER	VICE
Select:	Rate
0-2	6.50%
3	5.00
4	4.00
5	3.50
6	3.00
7	2.50
8	2.00
9	1.50
Ultimate	0.50

### f. Retirement

Normal Retirement: 1-year Select & Ultimate (age-based) upon attaining the earlier of:

- a) Completion of 20 years of credited service, or
- b) Attainment of age 62 with ten years of credited service, including immediate retirement at 25 years of credited service

	Normal Retireme	nt
Age	Select	Ultimate
<37	17.00%	0.00%
37-49	17.00	11.00
50-54	17.00	13.50
55-59	17.00	75.00
60+	17.00	100.00



## APPENDIX B ACTUARIAL ASSUMPTIONS AND METHODS

### g. Merit/Seniority Salary Increase (in addition to across-the-board increase)

10-year Select (service-based) & Ultimate (age-based) merit tables and an annual inflation rate of 3.75% (rates shown below exclude amount for inflation).

<u>Select</u>		
Service (years)	<u>Increase</u>	
0	11.50%	
1 - 3	8.10	
4 - 9	2.50	

<u>Ultimate</u>		
<u>Age</u>	<u>Increase</u>	
<40	1.00%	
40+	0.50	

#### h. Family Composition

Female spouses are assumed to be three years younger than males.

80% are assumed married for both male and female employees.

Actual marital characteristics are used for pensioners.

Dependent children eligible for survivor benefits are assumed to have their benefits cease at age 20.

#### 2. Economic Assumptions

a.	Rate of Investment Return:	8.00%
b.	Rate of General Wage Increase:	3.75%
c.	Rate of Increase in Cost of Living:	0.00%
d.	Rate of Increase in Total Payroll	
	(for Amortization):	3.75%
e.	Administrative Expenses as a	
	Percentage of Payroll:	0.30%

### 3. Changes Since Last Valuation

None.



## APPENDIX B ACTUARIAL ASSUMPTIONS AND METHODS

#### **B.** Actuarial Methods

#### 1. Funding Method

The Entry Age Normal Actuarial Cost method is used to determine costs. Under this funding method, a normal cost rate is determined as a level percent of pay for a typical new entrant. The normal cost rate times payroll equals the normal cost. The normal cost plus member contributions will pay for projected benefits at retirement for the average plan participant.

The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability.

The portion of the actuarial accrued liability in excess of plan assets is funded according to a schedule which is intended to amortize such unfunded actuarial liability fully after a period of years. This is in addition to each year's employer normal cost. Under this cost method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability.

The unfunded actuarial liability is amortized over a rolling ten year period from each valuation date. The payments are determined assuming total pay increases by the annual inflation rate.

#### 2. Actuarial Value of Assets

For purposes of determining the State contribution rate to the plan we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

The actuarial value of assets is a weighted average giving 20% weight to the current market value and 80% weight to the prior year's actuarial value increased by expected interest and contributions and decreased by benefit payments and expenses. This is mathematically equivalent to recognizing 100% of the actuarially assumed interest rate, plus contribution, less payment each year, and 20% of the portion of each year's returns that have not already been reflected in asset values.

#### 3. Changes Since Last Valuation

None.



### APPENDIX C SUMMARY OF PLAN PROVISIONS

### 1. Membership

The plan covers an individual who is employed on a full-time basis as a police officer by a county or municipality in Delaware or an individual who is employed on a full-time basis as a uniformed firefighter by the City of Wilmington.

#### 2. Member Contributions

7% of compensation.

Interest is credited at the rate of 5% per year.

Member contributions are made through an "employer pick-up" arrangement which results in deferral of taxes on the contributions.

#### 3. Credited Service

All service as a member plus certain claimed and purchased service.

#### 4. Final Average Compensation

Final Average Compensation is the average over the highest 36 consecutive months (or shorter period of total service).

#### 5. Normal Retirement

Eligibility: (i) age 62 with five years of credited service; or (ii) any age with 20 years of credited service; or (iii) ten years of credited service when age plus service equals 75.

Benefit: 2.5% of final average compensation for each year of credited service, up to 20 years, plus 3.5% of final average compensation for each year of credited service over 20 years.

#### 6. Duty-Connected Disability Benefit

Eligibility: Disabled in the performance of his or her duties.

Benefit: If member is totally disabled: 75% of final average compensation at the time disability commenced plus 10% for each eligible dependent not to exceed 100%.

If member is partially disabled: the normal retirement benefit based on credited service at date of disability that is not less than 50% of final average compensation at the time disability commences.



### APPENDIX C SUMMARY OF PLAN PROVISIONS

### 7. Ordinary Disability

Eligibility: Five years of credited service.

Benefit: If member is totally disabled: the normal retirement benefit based on credited service at date of disability that is not less than 50% of the final average compensation at the time of disability plus 5% for each eligible dependent to a maximum of 70%.

If member is partially disabled: the normal retirement benefit based on credited service at the date of disability that is not less than 30% of final average compensation at the time of retirement

#### 8. Survivor's Benefit

Eligibility: Death while active or death after retirement.

Benefit: For eligible survivors of employees who die in active service: 50% of salary, payable to the primary survivor.

For eligible survivors of pensioners who die: 50% of the member's pension at the time of death.

Eligible survivors include: (1) widow or widower; or (2) child or children under 18, or between 18 and 22 and attending school on a full-time basis, or over 18 and permanently disabled before 18; or (3) dependent parent or parents.

#### 9. Vesting

Eligibility: Five years of credited service.

Benefit: Normal retirement benefit payable at age 62 based on final average compensation and service at date of termination. In lieu of a pension, a member may receive a refund of accumulated contributions with interest. Upon application for a refund of contributions, a member's vested right to a monthly benefit shall be forfeited.

#### 10. Withdrawal

Eligibility: Not eligible for other benefits.

Benefit: Accumulated employee contributions with interest.

#### 11. Changes Since Last Valuation

None.

