



**Delaware County &
Municipal Employees'
Pension Plan**

**Actuarial Valuation
as of June 30, 2012**

Produced by [Cheiron](#)

January 2013

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January 7, 2013

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 Employees' Pension Plan as of June 30, 2012. 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.

In preparing our report, we relied on information (some oral and some written) supplied by Office of Pension's staff. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23.

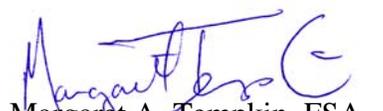
The results of this report are only applicable to the County and Municipal contributions for Fiscal Year ending 2014 and rely on future Plan experience conforming to the underlying assumptions. To the extent that actual Plan experience deviates from the underlying assumptions, the results would vary accordingly.

To the best of our knowledge, this report and its contents have 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. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for the Delaware County & Municipal Employees' Pension Plan for the purposes described herein and for the use by the Plan auditor in completing an audit related to the matters herein. This valuation report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

Sincerely,
Cheiron


Fiona E. Liston, FSA
Principal Consulting Actuary


Margaret A. Tempkin, FSA
Principal Consulting Actuary



**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

FOREWORD

Cheiron has performed the actuarial valuation of the Delaware County & Municipal Employees' Pension Plan as of June 30, 2012. 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 2014; 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 governmental 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.

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.

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

SECTION I
BOARD SUMMARY

General Comments

The actuarially determined contribution rate decreased from 6.84% for FY 2013 to 6.62% for FY 2014.

During the year ended June 30, 2012, the Plan's assets earned 1.9% on a market value basis. However, due to the Plan's asset-smoothing technique and an accumulation of past asset gains and losses, the return on the actuarial asset value was 6.86%. This return was less than the assumed rate of return of 7.50% and resulted in an actuarial loss on investments of \$137,100.

The Plan experienced an actuarial gain of \$776,000 (3.0% of total actuarial liability) on Plan liabilities resulting from salary increases different than assumed and members retiring, terminating, becoming disabled, and dying at rates different from the actuarial assumptions. 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.

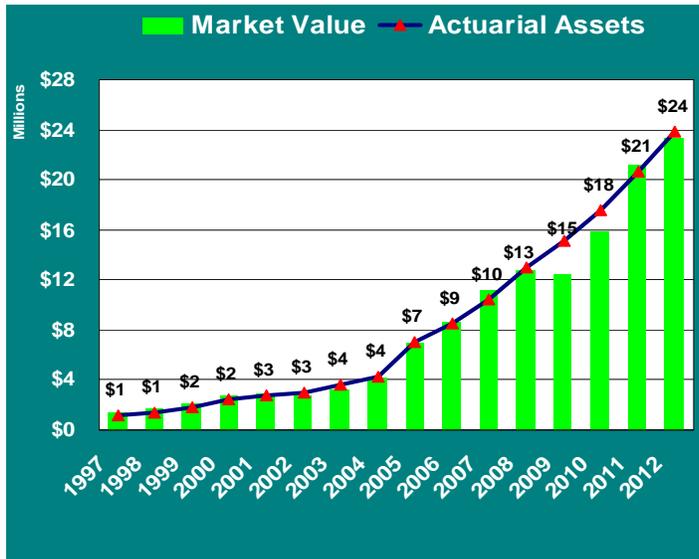
As of the June 30, 2012 actuarial valuation, the Plan's unfunded actuarial liability was \$1,337,600. This is a decrease from last year's unfunded actuarial liability of \$2,195,400.

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

SECTION I
BOARD SUMMARY

Trends

Growth in Assets



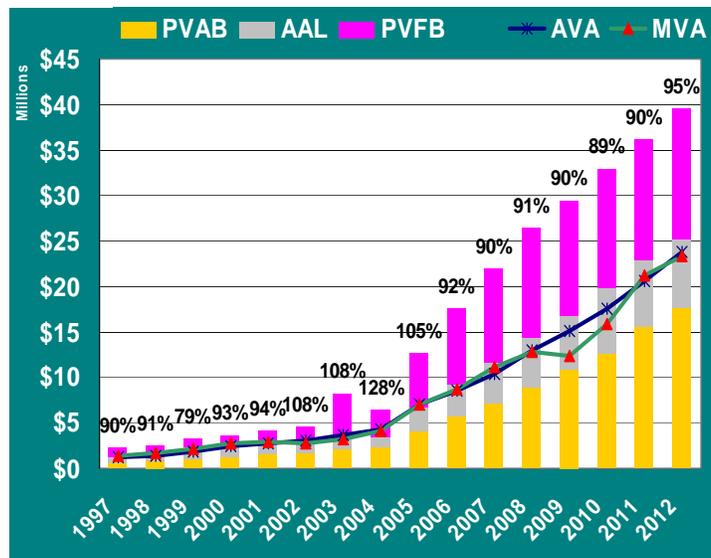
The market value of assets (MVA) returned 1.9% over the last year. The determination of the Plan's actuarial value of assets reflects only a portion of the return below 7.5% as well as the continued recognition of the 2008-2009 loss.

Over the period July 1, 1998 to June 30, 2012, the Plan's assets returned approximately 8.5% per year measured at actuarial value, compared to a valuation assumption of 7.5% per 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.

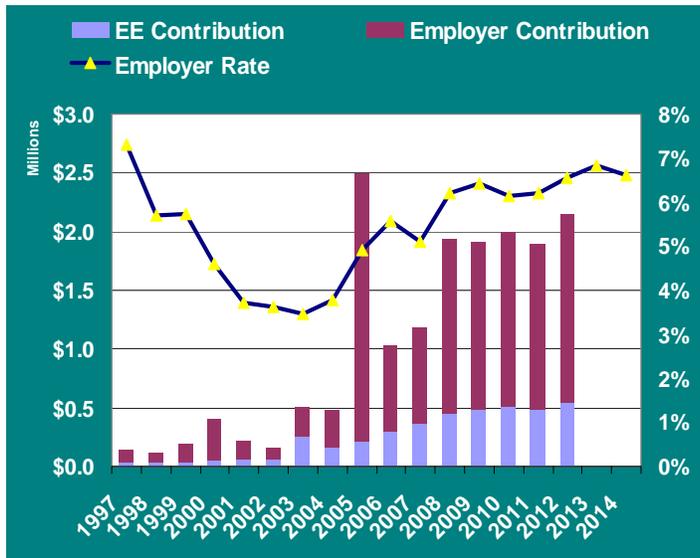
The amount represented by the top of the pink bars, the Present Value of Future Benefits (PVFB), is the amount needed to provide all benefits for the current participants and their beneficiaries. If the Plan had assets equal to the PVFB, no contributions would, in theory, be needed for the current members.



**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**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 member contribution rate is defined by law. The employer contribution rate is set by the actuarial process. When new employers opt to provide prior service, there is an assessment made at the time of entry. Some employers pay this immediately, resulting in the erratic history of dollar contributions.

Participant Trends

The graph at the right shows the rapid growth in this Plan in the early part of the decade as more employers opt to participate. Since this is a relatively young pension plan, there are still far more active participants than retirees.

The black line shows the covered compensation and is read using the right-hand scale.

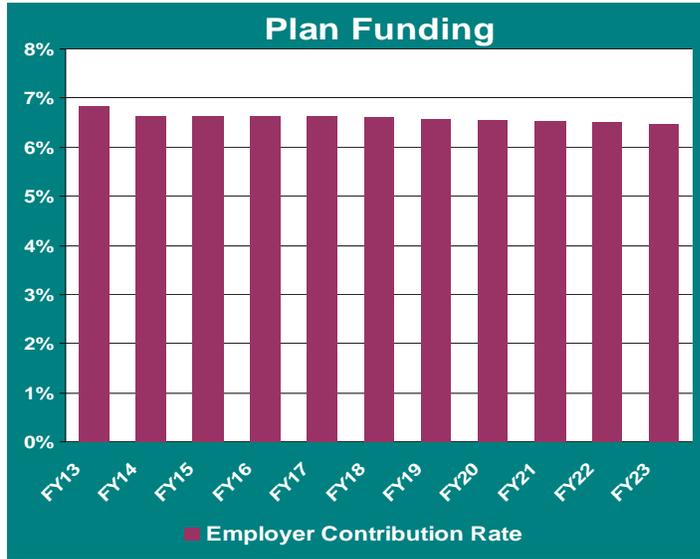


**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**SECTION I
BOARD SUMMARY**

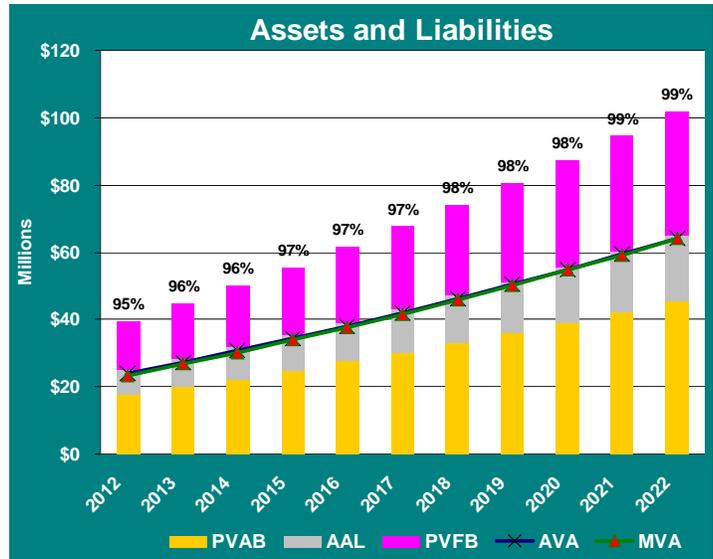
Future Outlook

Base Line Projections



These graphs show the expected progress of the Plan over the next ten years assuming the Plan's assets earn 7.5% on their *market value*. The chart entitled "Plan Funding" shows that after the increase developed in this valuation, the employer rate is expected to slowly decrease to a level of approximately 6.5% of payroll over the decade.

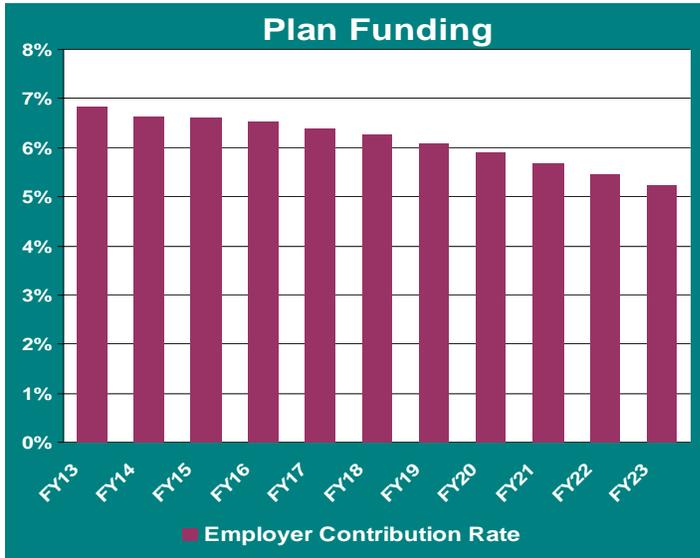
The "Assets and Liabilities" graph shows the projected funding status over the next ten years. The Plan's funded status is projected to continuously improve as the existing unfunded liability is paid off.



**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

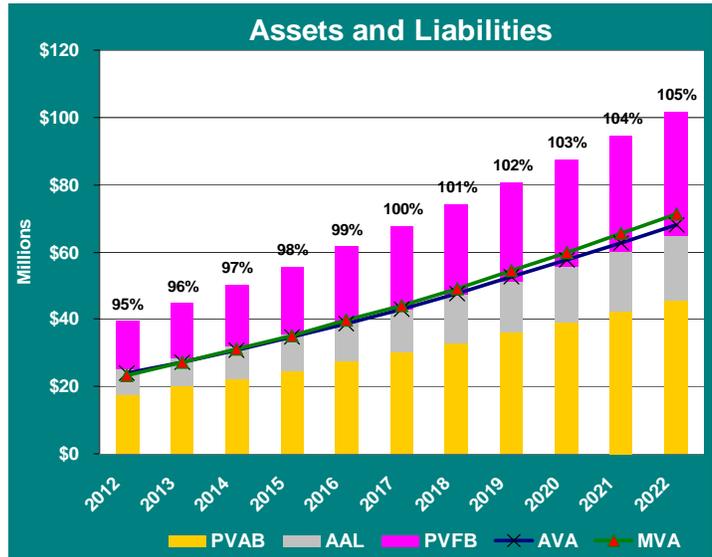
**SECTION I
BOARD SUMMARY**

Projections with Asset Returns of 9.0%



The future funding status of this Plan will be influenced by the investment earnings. Relatively minor changes in market returns can have significant effects on the Plan's status. The next two charts show what the next ten years would look like with a 9.0% annual return in each year. The Plan has earned an average 7.1% per year over the ten-year period ending June 30, 2012.

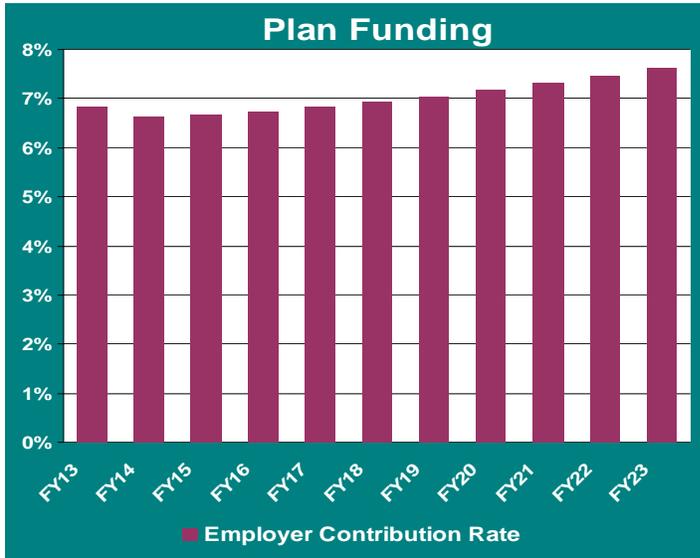
As you can see, the Plan would reach 105% funding by 2022. The contribution rate drops to below 5.25% of payroll by fiscal year 2022.



**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

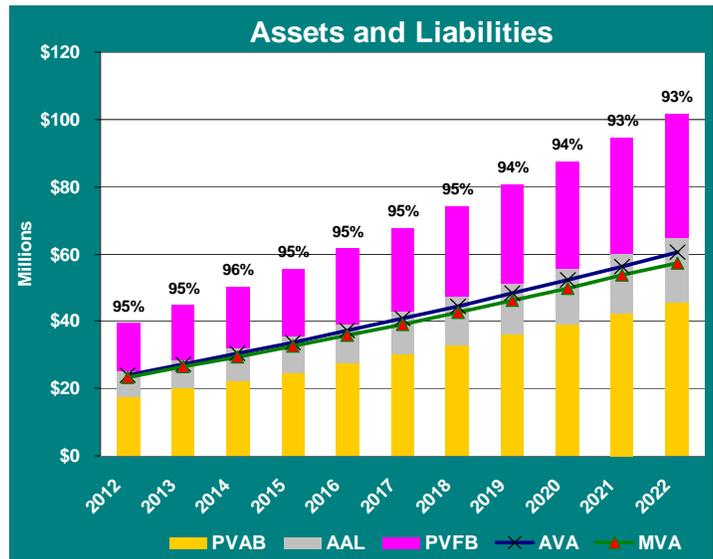
**SECTION I
BOARD SUMMARY**

Projections with Asset Returns of 6.0%



To further demonstrate how the future funding of this Plan could be impacted by investment earnings, we show the anticipated Plan funding projections if the invested assets earn 6.0% per year over the entire ten year period.

Under this scenario, the employer contribution rate increases to 7.6% of payroll as the funding level slowly decreases to 93% by 2022.



DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

SECTION I
BOARD SUMMARY

Table I-1			
Delaware County & Municipal Employees' Pension Plan			
Summary of Principal Plan Results			
Valuation as of:	June 30, 2011	June 30, 2012	% Change
<u>Participant Counts</u>			
Active Participants	454	483	6.39%
Disabled Participants	4	4	0.00%
Retirees and Beneficiaries	42	52	23.81%
Terminated Vested Participants	12	19	58.33%
Inactive Participants	18	15	(16.67%)
Total	530	573	8.11%
Annual Salaries of Active Members*	\$ 20,579,500	\$ 22,434,600	9.01%
Annual Retirement Allowances for Retired Members and Beneficiaries	\$ 323,100	\$ 398,100	23.21%
<u>Assets and Liabilities</u>			
Actuarial Accrued Liability (AAL)	\$ 22,858,900	\$ 25,188,900	10.19%
Actuarial Value of Assets	20,663,500	23,851,300	15.43%
Unfunded AAL	\$ 2,195,400	\$ 1,337,600	(39.07%)
Funded Ratio	90.4%	94.7%	
Present Value of Accrued Benefits (PVAB)	\$ 15,634,200	\$ 17,667,100	13.00%
Market Value of Assets	21,178,800	23,303,000	10.03%
Unfunded PVAB	\$ (5,544,600)	\$ (5,635,900)	1.65%
Accrued Benefit Funding Ratio	135.5%	131.9%	
<u>Contributions as a Percentage of Payroll</u>			
	Fiscal Year 2013	Fiscal Year 2014	
Normal Cost Contribution	5.45%	5.68%	
Unfunded Actuarial Liability Contribution	1.09%	0.64%	
Administrative Expense	0.30%	0.30%	
Total State Contribution	6.84%	6.62%	

* Assumes one year of payroll projection.

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**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, 2011 and June 30, 2012;
- 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 "snap-shot or cash-out" values which provide 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 7.5%.

Table II-1 Changes in Market Values	
Value of Assets – June 30, 2011	\$ 21,178,800
<u>Additions</u>	
Member Contributions	\$ 547,400
Employer Contributions	1,605,300
Investment Return	413,200
Total Additions	\$ 2,565,900
<u>Deductions</u>	
Benefit Payments	\$ 397,300
Administrative Expenses	44,400
Total Deductions	\$ 441,700
Value of Assets – June 30, 2012	\$ 23,303,000

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**SECTION II
ASSETS**

Table II-2 Development of Actuarial Value of Assets		
1.	Actuarial Value of Assets at June 30, 2011	\$ 20,663,500
2.	Amount in (1) with interest to June 30, 2012	22,213,300
3.	Employer and member contributions for the Plan Year ended June 30, 2012	2,152,700
4.	Interest on contributions assuming payments made uniformly throughout the year to June 30, 2012 at 7.50% per year	80,700
5.	Disbursements from Trust except investment expenses, July 1, 2011 through June 30, 2012	441,700
6.	Interest on disbursements to June 30, 2012 at 7.50% per year	16,600
7.	Expected Actuarial Value of Assets at June 30, 2012 = (2) + (3) + (4) – (5) – (6)	23,988,400
8.	Actual Market Value of Assets at June 30, 2012	23,303,000
9.	Excess of (8) over (7)	(685,400)
10.	Actuarial Value of Assets at June 30, 2012 = (7) + 20% of (9)	\$ 23,851,300

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, 2012 valuation.

Investment Performance

The market value of assets (MVA) returned 1.9% during 2012, which is more than the assumed 7.5% return. A return of 6.86% 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.

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

SECTION II
ASSETS

Projection of Cash Flows

Table II-3		
Year Beginning July 1,	Expected Benefit Payments	Expected Contributions*
2012	\$ 545,000	\$ 2,143,000
2013	714,000	2,162,000
2014	867,000	2,233,000
2015	1,026,000	2,305,000
2016	1,206,000	2,380,000
2017	1,403,000	2,457,000
2018	1,625,000	2,537,000
2019	1,852,000	2,620,000
2020	2,096,000	2,705,000
2021	2,360,000	2,793,000

* 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 3.25% per year.

Expected benefit payments are projected for the closed group valued at June 30, 2012. Projecting any farther than ten years using a closed-group would not yield reliable predictions due to the omission of new hires.

SECTION III LIABILITIES

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

- **Disclosure** of Plan liabilities at June 30, 2011 and June 30, 2012; and
- Statement of **changes** in these liabilities during the year.

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 (Topic No. 960) 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**.

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

**SECTION III
LIABILITIES**

**Table III-1
Liabilities/Net (Surplus)/Unfunded**

	June 30, 2011	June 30, 2012
<u>Present Value of Benefits</u>		
Active Participant Benefits	\$ 32,889,900	\$ 35,316,200
Retiree and Inactive Benefits	<u>3,327,900</u>	<u>4,243,500</u>
Present Value of Benefits (PVB)	\$ 36,217,800	\$ 39,559,700
Market Value of Assets (MVA)	\$ 21,178,800	\$ 23,303,000
Future Member Contributions	4,431,500	4,712,100
Future Employer Contributions	<u>10,607,500</u>	<u>11,544,600</u>
Total Resources	\$ 36,217,800	\$ 39,559,700
<u>Actuarial Accrued Liability</u>		
Present Value of Benefits (PVB)	\$ 36,217,800	\$ 39,559,700
Present Value of Future Normal Costs (PVFNC)	8,927,400	9,658,700
Present Value of Future Member Contributions (PVFEEC)	<u>4,431,500</u>	<u>4,712,100</u>
Actuarial Accrued Liability (AAL=PVB-PVFNC-PVFEEC)	\$ 22,858,900	\$ 25,188,900
Actuarial Value of Assets (AVA)	<u>20,663,500</u>	<u>23,851,300</u>
Net (Surplus)/Unfunded (AAL - AVA)	\$ 2,195,400	\$ 1,337,600
<u>Present Value of Accrued Liability</u>		
Present Value of Benefits (PVB)	\$ 36,217,800	\$ 39,559,700
Present Value of Future Benefit Accruals (PVFBA)	<u>20,583,600</u>	<u>21,892,600</u>
Present Value of Accrued Liability (PVAB=PVB-PVFBA)	\$ 15,634,200	\$ 17,667,100
Market Value of Assets (MVA)	\$ 21,178,800	\$ 23,303,000
Net Unfunded (PVAB - MVA)	\$ (5,544,600)	\$ (5,635,900)

**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.

Table III-2			
	Present Value of Benefits	Actuarial Accrued Liability	Present Value of Accrued Liability
Liabilities June 30, 2011	\$ 36,217,800	\$ 22,858,900	\$ 15,634,200
Liabilities June 30, 2012	39,559,700	25,188,900	17,667,100
Liability Increase (Decrease)	3,341,900	2,330,000	2,032,900
Change Due to:			
Assumption Change	N/A	N/A	N/A
Actuarial (Gain)/Loss	NC*	(776,400)	NC*
Benefits Accumulated and Other Sources	3,341,900	3,106,400	2,032,900

* NC = not calculated

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

**SECTION III
LIABILITIES**

Table III-3		
Actuarial Liabilities for Funding		
	June 30, 2011	June 30, 2012
1. Actuarial Liabilities		
Retiree and Inactive Benefits	\$ 3,327,900	\$ 4,243,500
Active Members	<u>19,531,000</u>	<u>20,945,400</u>
Total Actuarial Liability	\$ 22,858,900	\$ 25,188,900
2. Actuarial Value of Assets	\$ 20,663,500	\$ 23,851,300
3. Unfunded Actuarial Liability	\$ 2,195,400	\$ 1,337,600
4. Allocation of Unfunded Actuarial Liability		
Unpaid UAL from Participating Municipalities	\$ 384,300	\$ 173,500
5. Net Loss Base for 10 Year Amortization (3-4)	\$ 1,811,100	\$ 1,164,100

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**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 each active member 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 net unfunded actuarial liability (after subtracting payments due from municipalities paying for prior service) 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.

Table IV-1		
Employer Contribution Rate		
	June 30, 2011	June 30, 2012
Entry Age Normal Cost Rate	5.45%	5.68%
Amortization Payment	1.09%	0.64%
Expense	<u>0.30%</u>	<u>0.30%</u>
Actuarially Determined Contribution	6.84%	6.62%

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**SECTION IV
CONTRIBUTIONS**

Table IV-2 Development of Plan Cost as of June 30, 2012		
	In Dollars	As % of Payroll
1. Present value of projected benefits attributable to:		
a. Total Normal Cost	\$ 1,883,000	8.39%
b. Expected Members Contribution	<u>608,000</u>	<u>2.71%</u>
c. Employer Paid Normal Cost (a) – (b)	\$ 1,275,000	5.68%
2. Amortization of Unfunded Liability	\$ 144,200	0.64%
3. Allowance for Expense	\$ 67,300	0.30%
4. Total Employer Contribution Rate (1) + (2) + (3)	\$ 1,486,500	6.62%

SECTION V
ACCOUNTING STATEMENT INFORMATION

ASC Topic No. 960 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 ASC Topic No. 960 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 (Topic No. 960) 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 7.5% per annum.

FASB ASC Topic No. 960 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, 2012 are exhibited in Table V-1. Finally, Table V-2 reconciles the Topic No. 960 liabilities determined as of the prior valuation, July 1, 2011, to the liabilities as of June 30, 2012.

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.

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-1		
Accounting Statement Information		
	June 30, 2011	June 30, 2012
A. FASB ASC Topic No. 960 Basis		
1. Present Value of Benefits Accrued and Vested to Date		
a. Members Currently Receiving Payments	\$ 3,096,200	\$ 3,886,500
b. Former Vested Members	231,700	357,000
c. Active Members	<u>12,306,300</u>	<u>13,423,600</u>
2. Total Present Value of Accrued Benefits (1 (a) + 1(b) + 1(c))	\$ 15,634,200	\$ 17,667,100
3. Assets at Market Value	<u>21,178,800</u>	<u>23,303,000</u>
4. Unfunded Present Value of Accrued Benefits (2 – 3)	\$ (5,544,600)	\$ (5,635,900)
5. Ratio of Assets to Present Value of Benefits (3 / 2)	135.5%	131.9%
B. GASB No. 25 Basis		
1. Actuarial Accrued Liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 3,327,900	\$ 4,243,500
2. Actuarial Accrued Liabilities for current employees	<u>19,531,000</u>	<u>20,945,400</u>
3. Total Actuarial Accrued Liability (1 + 2)	\$ 22,858,900	\$ 25,188,900
4. Net Actuarial Assets available for benefits	<u>20,663,500</u>	<u>23,851,300</u>
5. Unfunded Actuarial Accrued Liability (3 – 4)	\$ 2,195,400	\$ 1,337,600

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2 Statement of Changes in Total Actuarial Present Value of All Accrued Benefits	Accumulated Benefit Obligation (FASB ASC Topic No. 960)
Actuarial Present Value of Accrued Benefits at June 30, 2011	\$ 15,634,200
Increase (Decrease) During Years Attributable to:	
Passage of Time	1,157,700
Benefit Paid – FY 2012	(397,300)
Assumption Change	0
Benefits Accrued, Other Gains/Losses	<u>1,272,500</u>
Net Increase (Decrease)	\$ 2,032,900
Actuarial Present Value of Accrued Benefits at June 30, 2012	\$ 17,667,100

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**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, 2012
Actuarial cost method	Entry age
Amortization method	Level percent open
Amortization period	Ten years
Asset valuation method	5-Year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.5%
Projected salary increases*	3.8%-11.8%
Cost-of-living adjustments	ad hoc
*Includes inflation at	3.25%

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 2011.

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 each active 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.

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

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 thousands)

Type of Activity	2007	2008	2009	2010	2011	2012
Investment Income on Actuarial Assets	\$ 196	\$ (60)	\$ (667)	\$ (440)	\$ 129	\$ (137)
Combined Liability Experience	<u>(446)</u>	<u>(613)</u>	<u>17</u>	<u>(383)</u>	<u>323</u>	<u>776</u>
(Loss)/Gain During Year from Financial Experience	\$ (250)	\$ (673)	\$ (650)	\$ (823)	\$ 452	\$ 639
Non-Recurring Items	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>(402)</u>	<u>0</u>
Composite Gain (or Loss) During Year	\$ (250)	\$ (673)	\$ (650)	\$ (823)	\$ 50	\$ 639

Table V-5
Solvency Test
Aggregate Accrued Liabilities for
(expressed in thousands)

Valuation Date June 30,	Active Member Contributions	Retirants & Beneficiaries	Active Member Employer Financed Contributions	Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets		
	(1)	(2)	(3)	(1)	(2)	(3)	
2012	\$ 3,423	\$ 3,887	\$ 17,879	\$ 23,851	100%	100%	93%
2011	3,098	3,096	16,665	20,664	100	100	87
2010	2,653	2,637	14,537	17,596	100	100	85
2009	2,172	2,091	12,524	15,074	100	100	86
2008	1,756	1,302	11,250	12,980	100	100	88
2007	1,303	1,136	9,139	10,405	100	100	87
2006	1,005	860	7,357	8,529	100	100	91

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Delaware County and Municipal Pension Plan Distribution of Active Members
by Age and Service as of June 30, 2012**

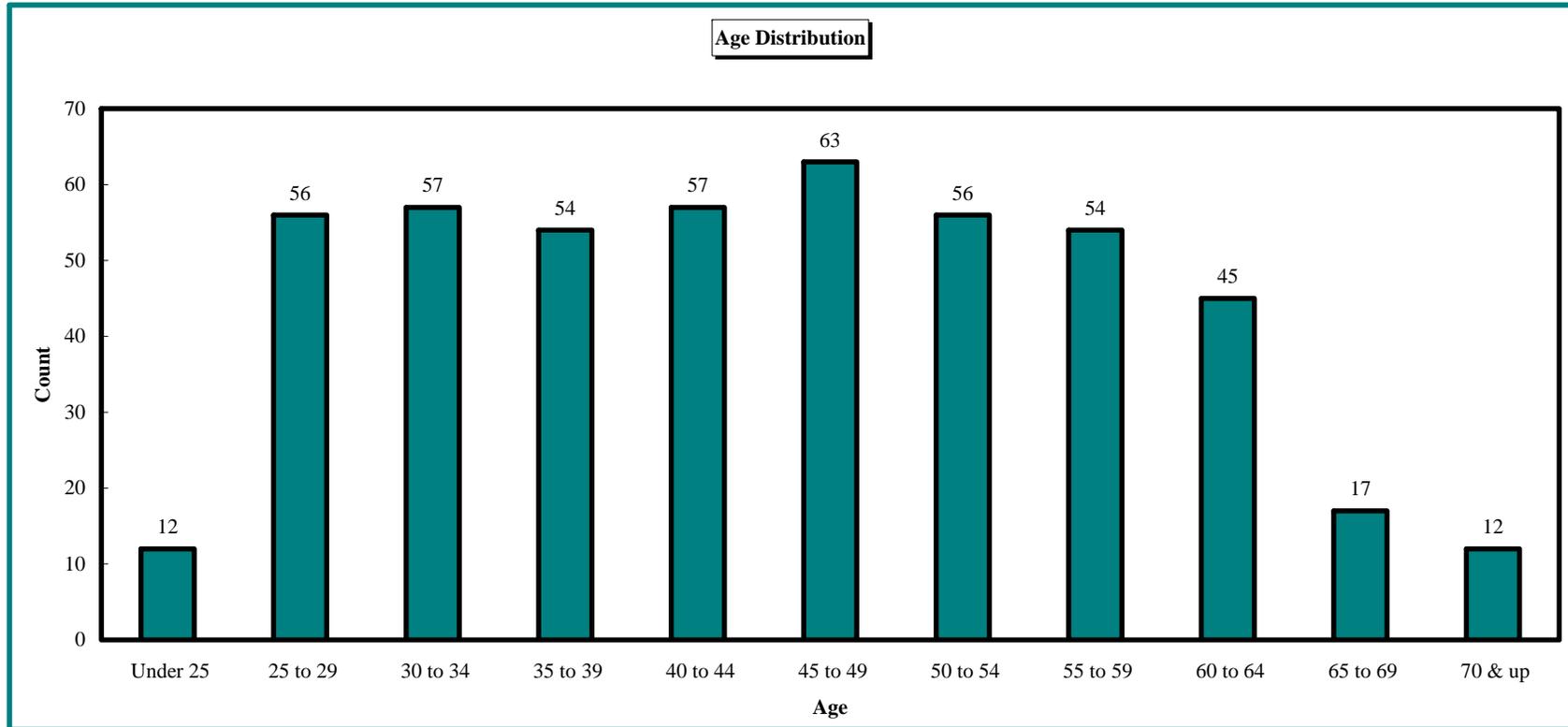
COUNTS BY AGE/SERVICE

Age	Service										Total	
	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		
Under 25	6	6	0	0	0	0	0	0	0	0	0	12
25 to 29	14	27	15	0	0	0	0	0	0	0	0	56
30 to 34	13	20	17	7	0	0	0	0	0	0	0	57
35 to 39	4	18	25	6	1	0	0	0	0	0	0	54
40 to 44	3	17	21	10	3	3	0	0	0	0	0	57
45 to 49	14	10	23	5	6	1	4	0	0	0	0	63
50 to 54	8	10	23	10	1	3	0	1	0	0	0	56
55 to 59	5	8	23	6	1	7	1	1	2	0	0	54
60 to 64	6	12	12	7	3	3	1	1	0	0	0	45
65 to 69	1	2	7	4	2	0	0	1	0	0	0	17
70 & up	2	1	4	2	1	2	0	0	0	0	0	12
Total	76	131	170	57	18	19	6	4	2	0	0	483

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

APPENDIX A
MEMBERSHIP INFORMATION

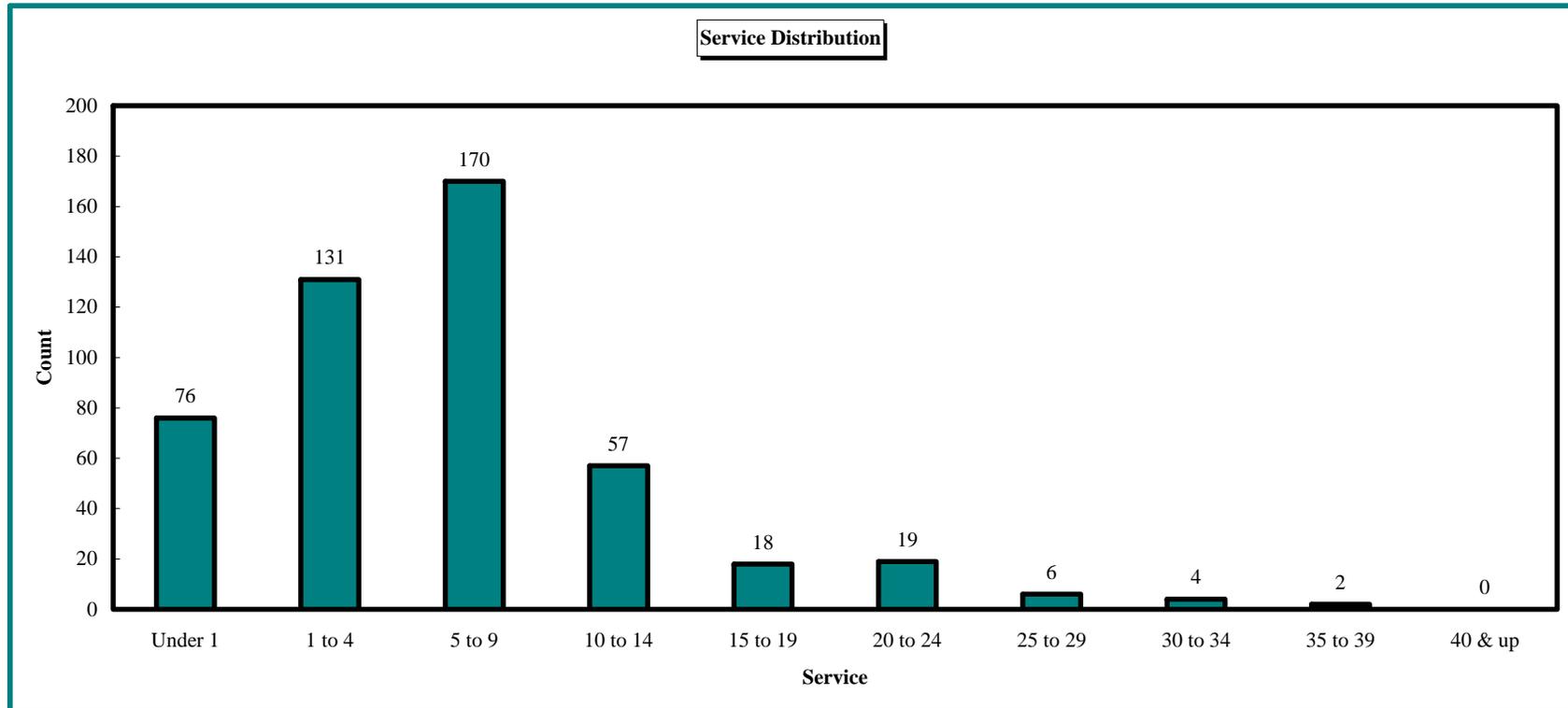
Delaware County and Municipal Pension Plan Distribution of Active Members
by Age as of June 30, 2012



DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

APPENDIX A
MEMBERSHIP INFORMATION

Delaware County and Municipal Pension Plan Distribution of Active Members
by Service as of June 30, 2012



**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Delaware County and Municipal Pension Plan Distribution of Active Members
by Age and Service as of June 30, 2012**

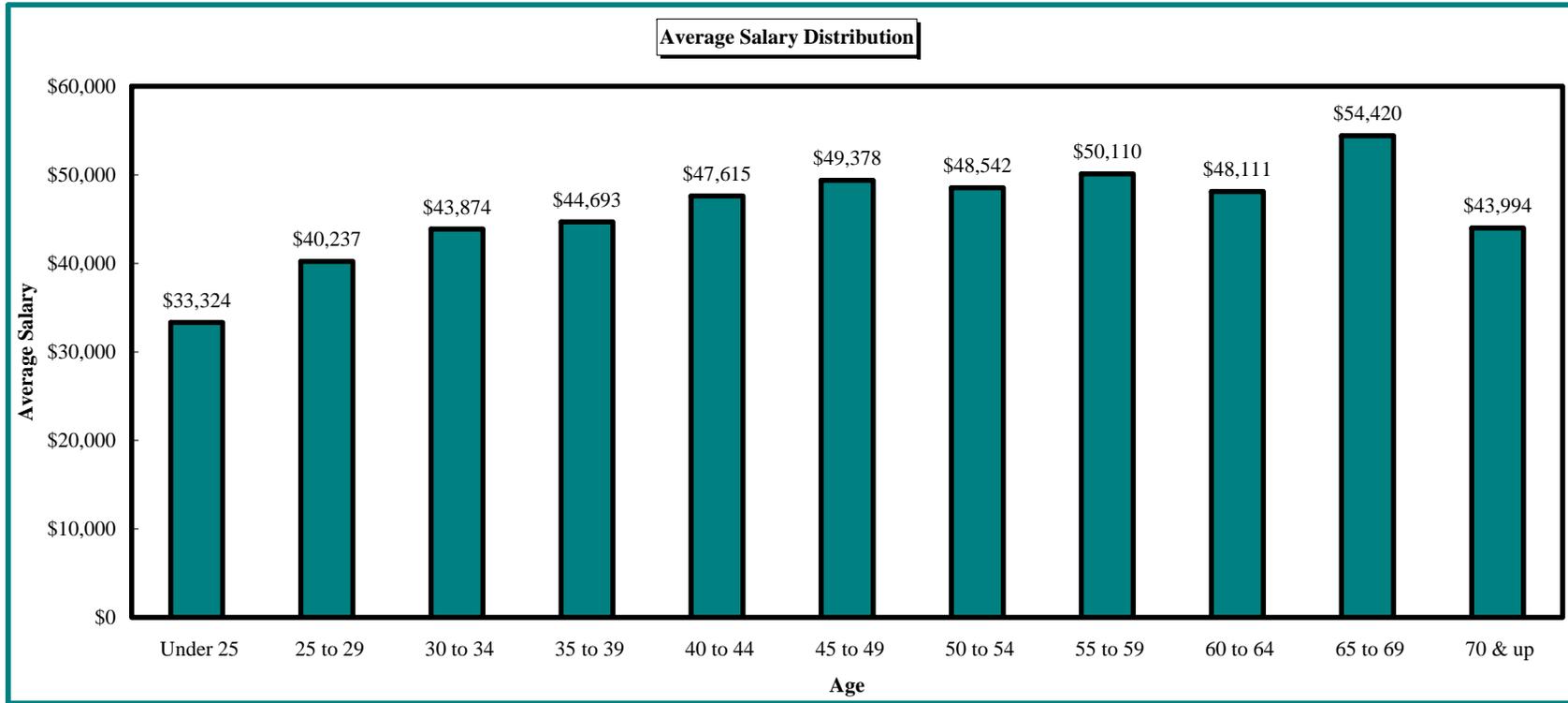
AVERAGE SALARY BY AGE/SERVICE

Age	Service										Total	
	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		
Under 25	\$34,835	\$31,812	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33,324
25 to 29	\$40,457	\$38,860	\$42,511	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,237
30 to 34	\$42,982	\$40,894	\$47,760	\$44,605	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,874
35 to 39	\$46,220	\$37,769	\$46,335	\$57,727	\$43,950	\$0	\$0	\$0	\$0	\$0	\$0	\$44,693
40 to 44	\$33,294	\$42,440	\$49,605	\$50,213	\$46,084	\$70,210	\$0	\$0	\$0	\$0	\$0	\$47,615
45 to 49	\$46,889	\$40,687	\$49,068	\$46,760	\$48,993	\$90,980	\$75,044	\$0	\$0	\$0	\$0	\$49,378
50 to 54	\$41,907	\$40,001	\$49,101	\$48,724	\$87,113	\$74,130	\$0	\$57,045	\$0	\$0	\$0	\$48,542
55 to 59	\$49,320	\$38,526	\$45,464	\$58,430	\$34,510	\$64,219	\$48,048	\$80,756	\$71,021	\$0	\$0	\$50,110
60 to 64	\$47,722	\$36,128	\$48,841	\$41,191	\$90,040	\$51,050	\$51,528	\$95,911	\$0	\$0	\$0	\$48,111
65 to 69	\$23,861	\$39,657	\$48,852	\$50,475	\$116,844	\$0	\$0	\$44,416	\$0	\$0	\$0	\$54,420
70 & up	\$39,356	\$45,548	\$38,932	\$42,527	\$58,806	\$52,040	\$0	\$0	\$0	\$0	\$0	\$43,994
Total	\$42,712	\$39,182	\$47,277	\$49,257	\$64,467	\$64,777	\$66,625	\$69,532	\$71,021	\$0	\$0	\$46,449

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

APPENDIX A
MEMBERSHIP INFORMATION

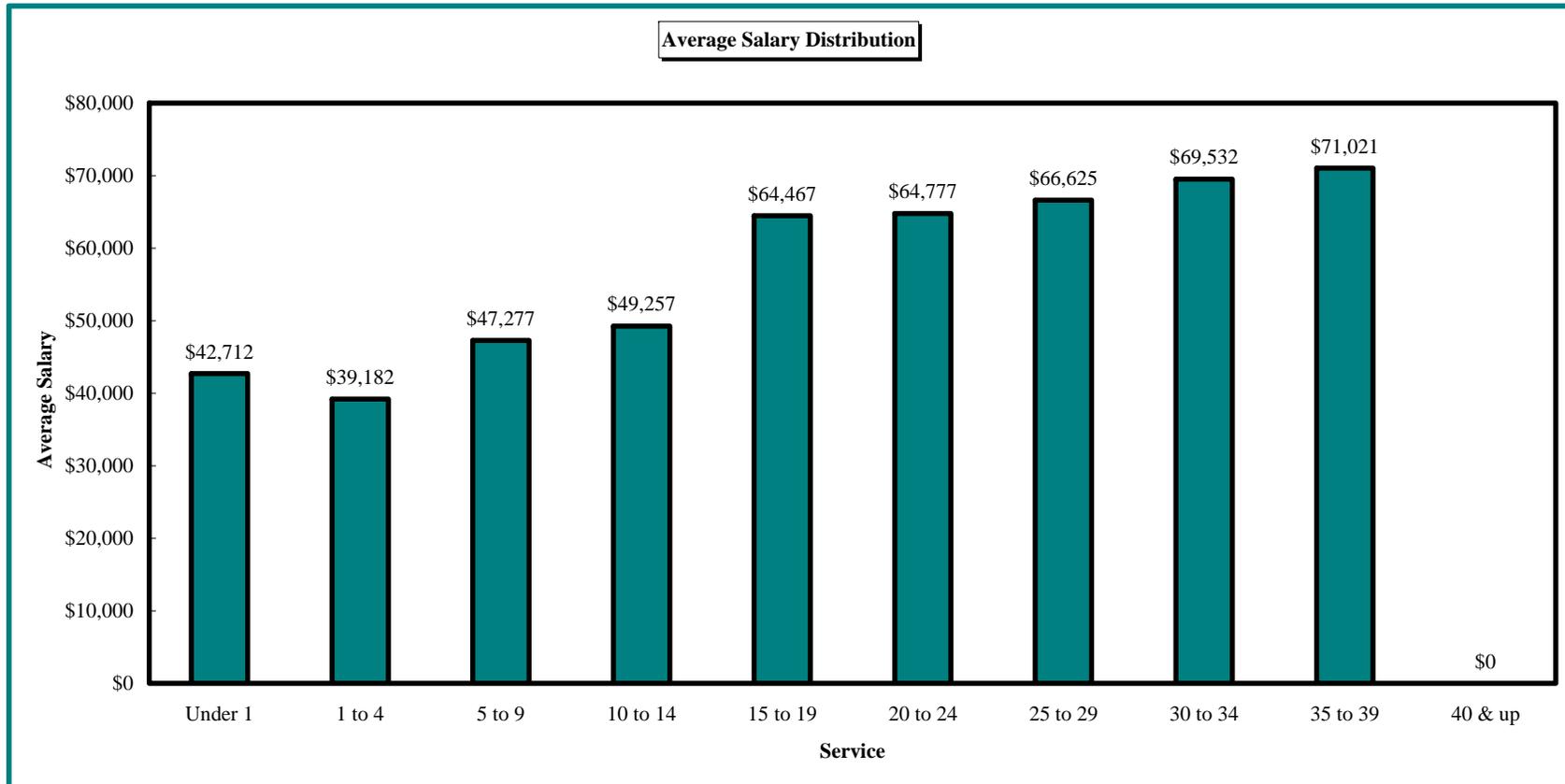
**Delaware County and Municipal Pension Plan Distribution of Active Members
by Age as of June 30, 2012**



DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

APPENDIX A
MEMBERSHIP INFORMATION

**Delaware County and Municipal Pension Plan Distribution of Active Members
by Service as of June 30, 2012**



**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**APPENDIX A
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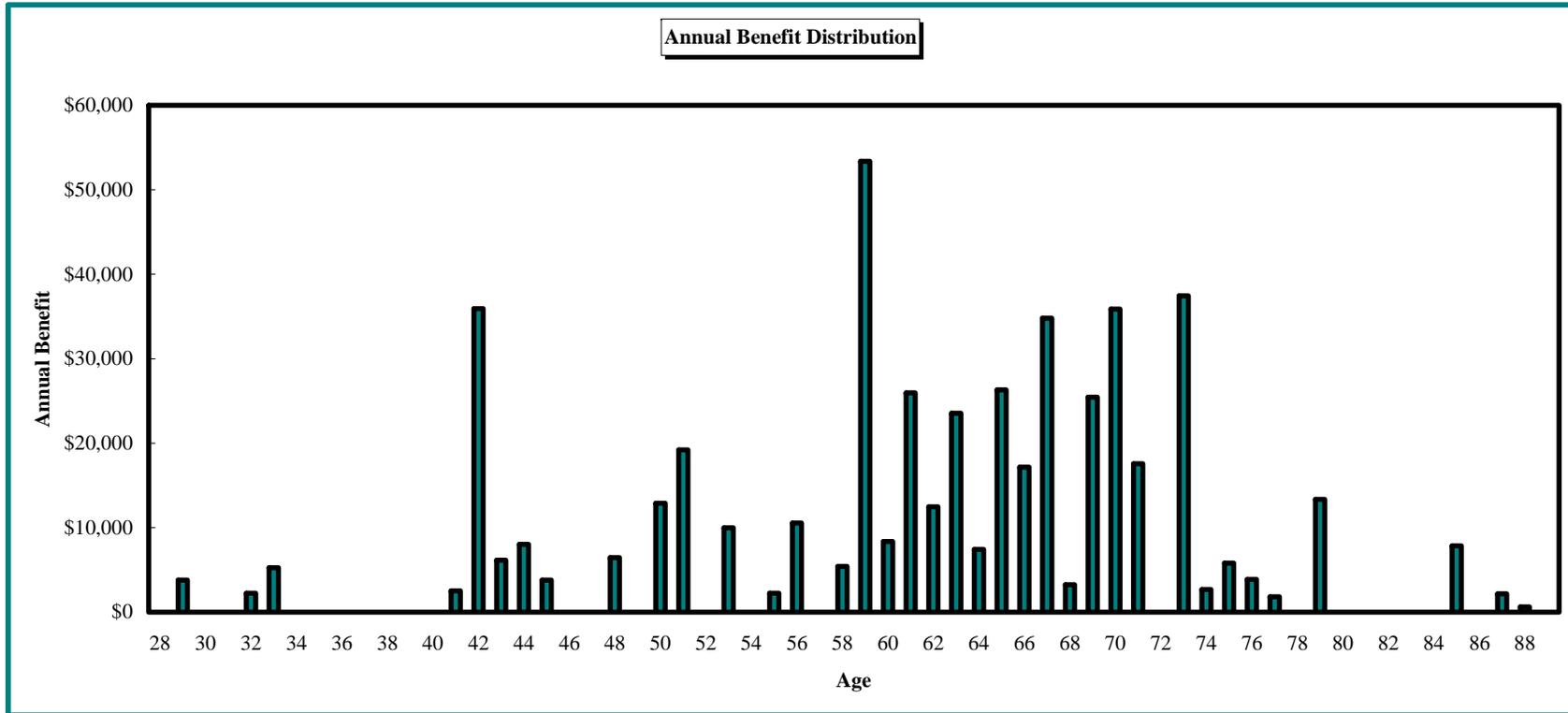
**Delaware County and Municipal Pension Plan Distribution of Retired
Members, Survivors, Disabled, and Vested Members as of June 30, 2012**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$ 0	73	5	\$ 37,456
25	0	0	74	1	2,692
26	0	0	75	1	5,813
27	0	0	76	1	3,899
28	0	0	77	1	1,815
29	1	3,794	78	0	0
30	0	0	79	2	13,337
31	0	0	80	0	0
32	1	2,236	81	0	0
33	1	5,256	82	0	0
34	0	0	83	0	0
35	0	0	84	0	0
36	0	0	85	2	7,870
37	0	0	86	0	0
38	0	0	87	1	2,180
39	0	0	88	1	619
40	0	0	89	0	0
41	1	2,520	90	0	0
42	2	35,934	91	0	0
43	1	6,168	92	0	0
44	2	8,045	93	0	0
45	1	3,780	94	0	0
46	0	0	95	0	0
47	0	0	96	0	0
48	1	6,463	97	0	0
49	0	0	98	0	0
50	2	12,895	99	0	0
51	2	19,209	100	0	0
52	0	0	101	0	0
53	3	9,984	102	0	0
54	0	0	103	0	0
55	2	2,233	104	0	0
56	2	10,558	105	0	0
57	0	0	106	0	0
58	1	5,425	107	0	0
59	3	53,357	108	0	0
60	1	8,368	109	0	0
61	2	25,981	110	0	0
62	1	12,471	111	0	0
63	3	23,546	112	0	0
64	2	7,435	113	0	0
65	4	26,323	114	0	0
66	3	17,159	115	0	0
67	6	34,796	116	0	0
68	1	3,252	117	0	0
69	4	25,450	118	0	0
70	4	35,882	119	0	0
71	3	17,552	120	0	0
72	0	0			
			Totals	75	\$501,753

DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

APPENDIX A
MEMBERSHIP INFORMATION

**Delaware County and Municipal Pension Plan Distribution of Retired
Members, Survivors, Disabled, and Vested Members as of June 30, 2012**



DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

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

1. Demographic Assumptions

a. Healthy Active and Inactive Mortality

Mortality Improvements Projected to 2015 (Projection Scale AA)

Male: RP-2000 Combined Mortality Table

Female: RP-2000 Combined Mortality Table

Rates of Healthy Active and Inactive Mortality		
Rates (With Projection Scale AA)		
Age	Male	Female
20	0.03%	0.02%
25	0.03	0.02
30	0.04	0.02
35	0.07	0.04
40	0.09	0.06
45	0.12	0.09
50	0.16	0.13
55	0.27	0.24
60	0.53	0.47
65	1.03	0.90
70	1.77	1.55
75	3.06	2.49
80	5.54	4.13
85	9.97	7.08
90	17.27	12.59

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

b. Disabled Inactive Mortality

2011 PBGC Disabled Mortality Tables, 50% Social Security Disabled / 50% Non-Social Security Disabled.

Rates of Disabled Inactive Mortality		
Age	Male	Female
40	1.97%	1.06%
45	2.22	1.24
50	2.51	1.47
55	2.88	1.79
60	3.33	2.21
65	3.91	2.77
70	4.78	3.38
75	6.39	4.53
80	8.93	6.46

c. Rates of Active Disability

Rates of Active Disability	
Age	Current
20	0.05%
25	0.05
30	0.18
35	0.27
40	0.38
45	0.46
50	0.62
55	0.95
60	1.57

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

d. Termination of Employment (Prior to Normal Retirement Eligibility)

4-year Select (age- and service based) & Ultimate (age-based) Tables

Age	Service				
	Select:	0	1	2	3
<55	25.00%	25.00%	25.00%	15.00%	4.50%
55+	12.50%	12.50%	12.50%	12.50%	0.00%

e. Retirement

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

- i. age 62 with five years of credited service
- ii. age 60 with 15 years of credited service
- iii. 30 years of credited service

Male Early Retirement	
Age	Rate
<41	0.00%
42 – 52	10.00
53 – 59	5.00
60+	0.00

Male Normal Retirement		
Age	Select	Ultimate
< 45	10.00%	0.00%
45 – 46	10.00	7.50
47 – 49	10.00	10.00
50 – 51	20.00	10.00
52	20.00	15.00
53	20.00	14.00
54	20.00	13.00
55	20.00	20.00
56 – 59	20.00	15.00
60 – 61	20.00	20.00
62	20.00	25.00
63	20.00	20.00
64	15.00	20.00
65	15.00	25.00
66 – 69	15.00	20.00
70	15.00	17.00
71	15.00	25.00
72 – 79	15.00	17.00
80	100.00	100.00

**DELAWARE COUNTY & MUNICIPAL EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2012**

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

Female Early Retirement	
Age	Rate
<41	0.00%
42 – 59	10.00

Female Normal Retirement		
Age	Select	Ultimate
<45	10.00%	0.00%
45 – 49	10.00	6.00
50 – 51	20.00	6.00
52 – 53	20.00	8.00
54	20.00	11.00
55	20.00	15.00
56	20.00	11.00
57 – 58	20.00	15.00
59 – 61	20.00	20.00
62	20.00	25.00
63	20.00	20.00
64	30.00	20.00
65	28.00	20.00
66	26.00	20.00
67 – 69	15.00	20.00
70	15.00	21.00
71 – 79	15.00	20.00
80+	100.00	100.00

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

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

30-year Service-based tables include an annual inflation rate of 3.25%.

Service	Increase
0	11.75%
1	9.75
2	7.75
3	6.25
4	6.00
5	6.00
10	4.75
15	4.75
20	4.00
30	3.75

g. Family Composition

Female spouses are assumed to be three years younger than males.
70% are assumed married for both male and female employees.
Actual marital characteristics are used for pensioners.

2. Economic Assumptions

- a. Rate of Investment Return: 7.50%
- b. Rate of General Wage Increase: 3.25%
- c. Rate of Increase in Cost-of-Living for Retirees: 0.00%
- d. Rate of Increase in Total Payroll (for Amortization): 3.25%
- 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 is determined as a level percent of pay for each active member. The normal cost rate times payroll equals the normal cost. The normal cost plus member contributions will pay for projected benefits at retirement for each active 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 net unfunded liability (after subtracting payments due from municipalities paying for prior service) is amortized over a rolling ten-year period from each valuation date. The payments are determined so that they will increase by the annual inflation rate.

2. Actuarial Value of Assets

For purposes of determining the employer 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 contributions, less payments 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

Moved from the new-entrant variation of the Entry Age Normal funding method to the individual method.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

1. Membership

The Plan covers full-time or regular part-time employees and elected or appointed officials of a county or municipality including state governmental subdivisions.

2. Member Contributions

3% of compensation which exceeds \$6,000 per annum

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 60 consecutive months (or shorter period of total service).

5. Normal Retirement

Eligibility: (i) Age 62 with five years of credited service, or (ii) age 60 with 15 years credited service, or (iii) any age with 30 years of credited service.

Benefit: 1 2/3% of final average compensation for each year of credited service.

6. Early Retirement

Eligibility: Age 55 with 15 years of credited service.

Benefit: Normal retirement benefit reduced by 0.4% for each month the member is under age 60 at the time of retirement.

7. Disability Benefit

Eligibility: Five years of credited service

Benefit: Normal retirement benefit

APPENDIX C
SUMMARY OF PLAN PROVISIONS

8. Survivor's Benefit

Eligibility: Death while active with five years of credited service or death after retirement.

Benefit: For eligible survivors of employees who die in active service: 50% of normal retirement benefit employee would have been eligible to receive at age 62.

For eligible survivors of pensioners who die: 50% of pension received immediately prior to death.

Eligible survivors include: (1) widow or widower, (2) child or children under age 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 employee contributions with interest. Upon application for a refund of contributions, a member's vested right to a monthly benefit shall be forfeited.

10. Withdrawal of Employee Contributions

Eligibility: Terminates service and is not eligible for other benefits.

Benefit: Accumulated employee contributions with interest.

11. Changes Since Last Valuation

None