

**Delaware State Employees'  
Pension Plan**

**Actuarial Valuation  
as of June 30, 2010**

**Produced by [Cheiron](#)**

**December 2010**

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December 30, 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 State Employees' Pension Plan as of June 30, 2010. 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.

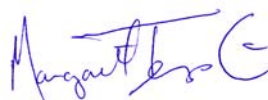
Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions on which our findings are based. Those comments are the basis for our certification 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 State contribution for Fiscal Year ending 2012 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



Margaret A. Tempkin, FSA  
Consulting Actuary



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**FOREWORD**

Cheiron has performed the actuarial valuation of the Delaware State Employees' Pension Plan as of June 30, 2010. 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 State for Fiscal Year 2012; 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 State 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.

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

SECTION I  
BOARD SUMMARY

**General Comments**

The actuarially determined contribution rate increased from 7.40% for FY 2011 to 8.4% for FY 2012. During the year ended June 30, 2010, the Plan's assets made 14.4% on a market value basis. However, due to the Plan's asset-smoothing technique which recognizes only a portion of the gains and losses, the return on the actuarial asset value was 4.6%. This return was below the assumed rate of return of 8.0% and resulted in an actuarial loss on investments of \$225 million.

The plan also experienced an actuarial gain 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. The gain reduced the actuarial liability by \$34 million (0.5% of total actuarial liability). 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.

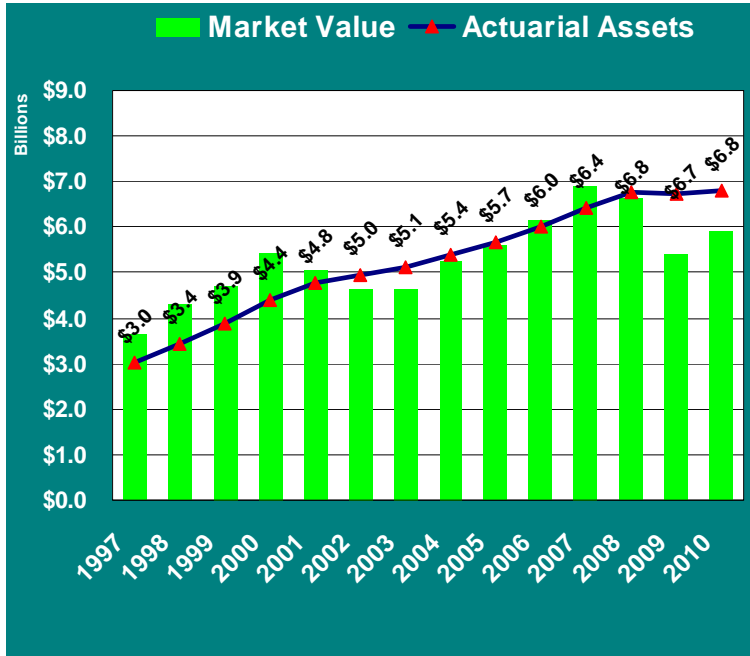
As of the June 30, 2010 actuarial valuation, the Plan's unfunded actuarial liability was \$287 million. This is a increase from last year's unfunded actuarial liability of \$83 million.

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

SECTION I  
BOARD SUMMARY

Trends

Growth in Assets



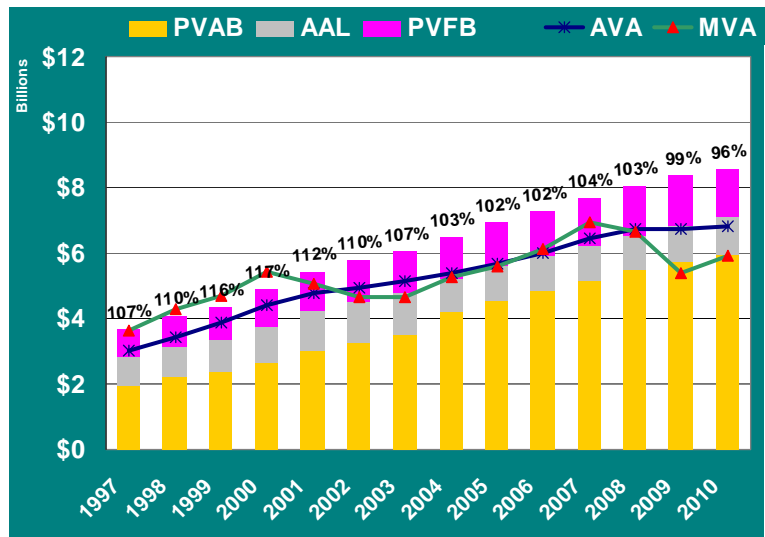
The market value of assets (MVA) returned 14.4% over the last year. The determination of the plan's actuarial value of assets reflects only a portion of the return above 8%, so an additional recognition of the 2008-2009 losses dampened the impact on the actuarial assets.

Over the period July 1, 1997 to June 30, 2010 the Plan's assets returned approximately 9.0% per year measured at actuarial value, compared to a valuation assumption of 8% 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.

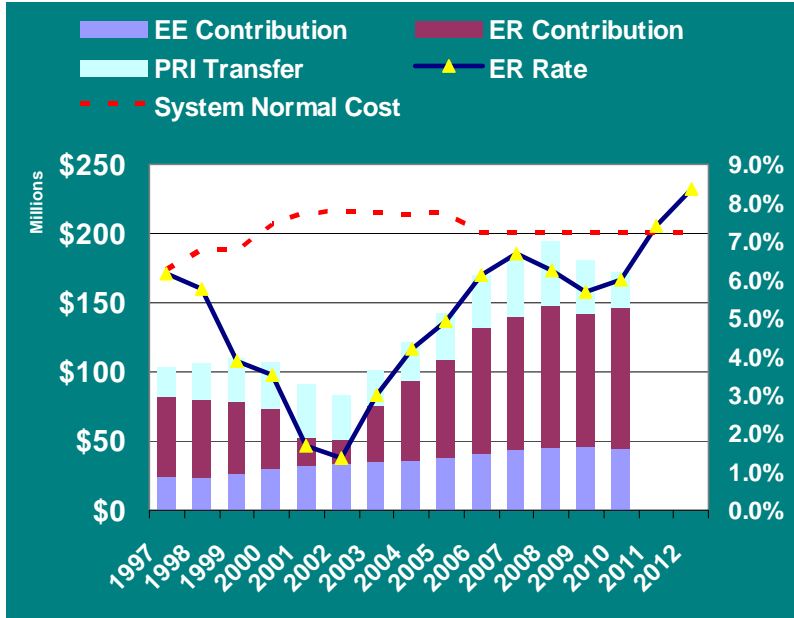
The amount represented by the top of the pink bars, the Present Value of Future Benefits (PVFB), is the amount needed to provide all benefits for the current participants and their beneficiaries. If the Plan had assets equal to the PVFB no contributions would, in theory, be needed for the current members.



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**SECTION I  
BOARD SUMMARY**

Contribution Rates



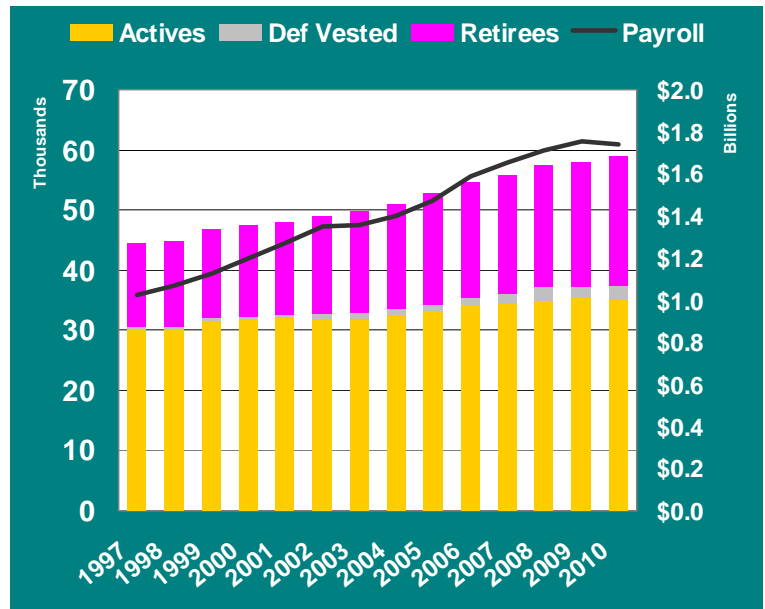
The stacked bars in this graph show the contributions made by the State, the PRI Fund, and the members (left hand scale). The black line shows the State contribution rate as a percent of payroll (right hand scale).

The member contribution rate is set by State law, depending on which plan the member participates in. The State contribution rate is set by the actuarial process and PRI Fund transfers depend on the increase granted. Please note there is a lag in the rate shown. For example, the 2010 value is the rate prepared by the 2008 valuation and implemented for the period July 1, 2009 to June 30, 2010.

Participant Trends

The bars show the number of participants in each category and should be read using the left-hand scale. As with any maturing fund, this plan continues to show growth in the number of retired members. The active-to-inactive ratio has decreased from 2.1 actives to each inactive in 1997 to 1.5 actives for each inactive today.

The black line shows the covered payroll in the Plan and is read using the right-hand scale.

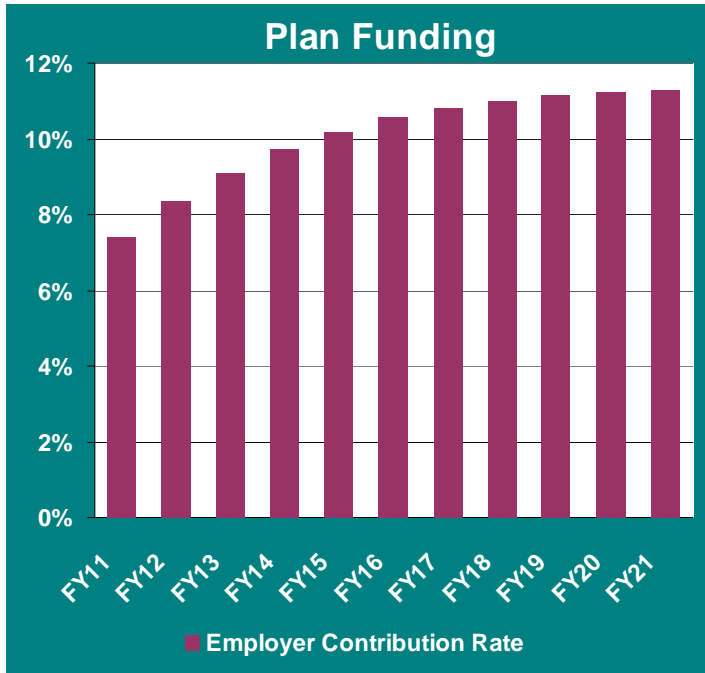


**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**SECTION I  
BOARD SUMMARY**

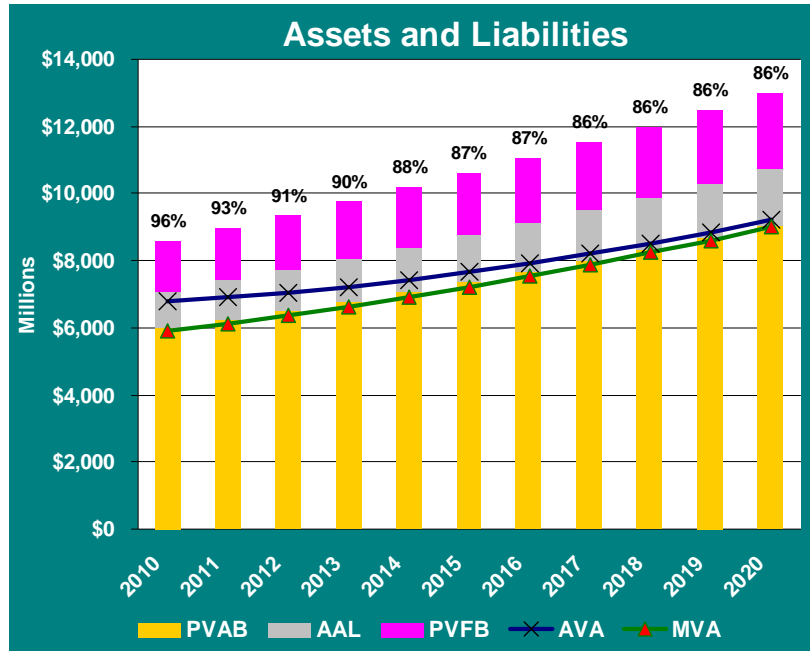
**Future Outlook**

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 State rate is expected to increase over the next 10 years to around 11.3% of payroll if excluded investment losses are recognized by the smoothing method, without further market correction.

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 10% without continued significant correction in the markets to offset the 2008-2009 losses.

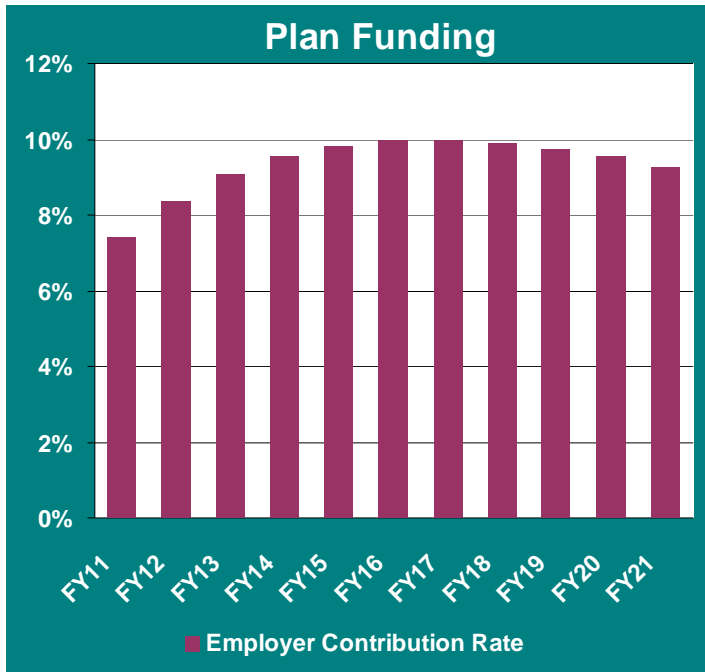




**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

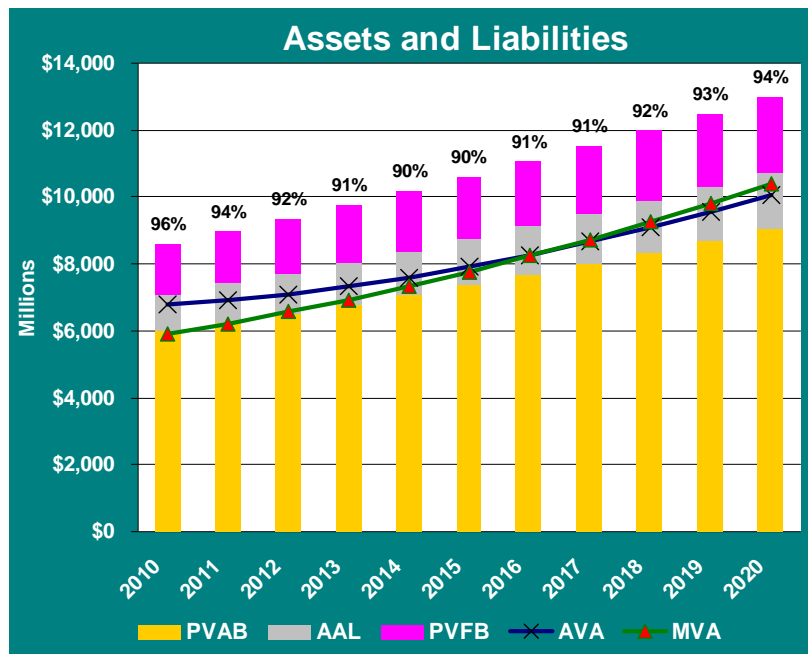
**SECTION I  
BOARD SUMMARY**

Projections With Asset Returns of 9.5%



The future funding status of this Plan will be impacted by investment earnings. These two charts show what the next ten years would look like with a 9.5% annual return in each year. The State contribution rate continues to increase, but caps out at 10% of payroll.

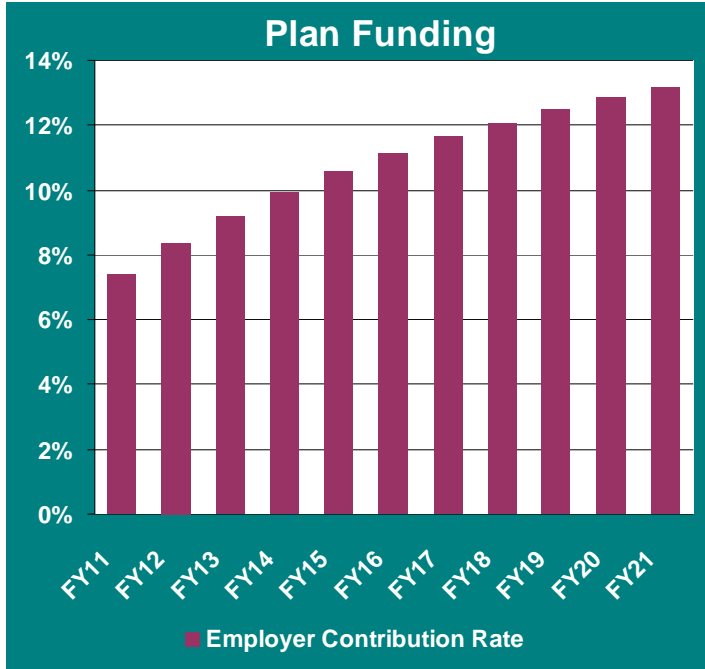
As you can see, the Plan would reach 94% funding by 2020; an improvement over the projected funded level of 86% shown on the previous page.



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

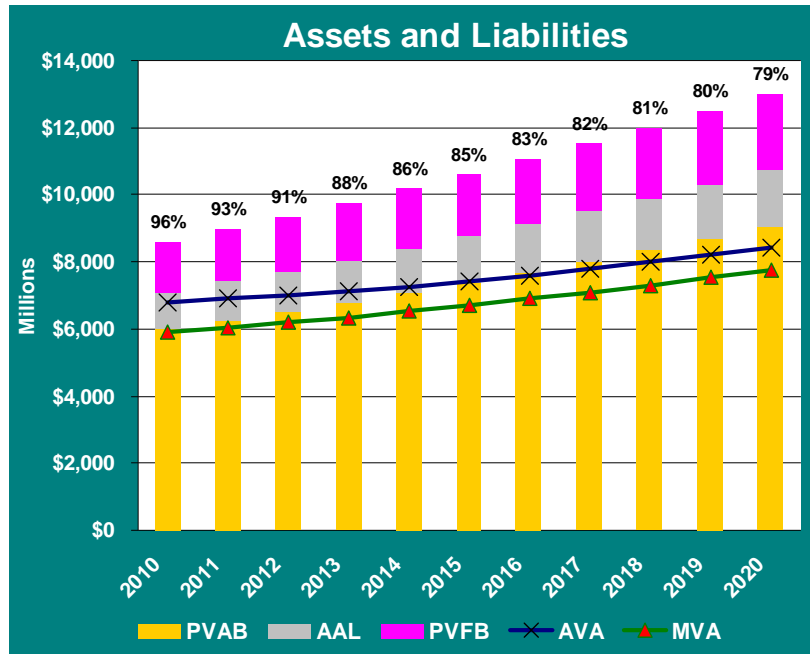
**SECTION I  
BOARD SUMMARY**

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 the anticipated plan funding projections if the invested assets earn 6.5% per year over the entire ten-year period. This would mean that all remaining investment losses from last year will be recognized, plus additional losses will accrue annually as returns miss the 8% mark.

Under this scenario the State's contribution rate increases to 13% of payroll and the funding status declines to less than 80% by 2020.



DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

SECTION I  
BOARD SUMMARY

<b>Delaware State Employees' Pension Plan Summary of Principal Plan Results</b>			
<b>Valuation as of:</b>	<b>June 30, 2009</b>	<b>June 30, 2010</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Active Participants	35,430	35,217	(0.60%)
Disabled Participants	2,063	1,983	(3.88%)
Retirees and Beneficiaries	18,686	19,589	4.83%
Terminated Vested Participants	1,466	1,800	22.78%
Inactive Participants	833	851	2.16%
LTD Participants	341	400	17.30%
<b>Total</b>	<b>58,819</b>	<b>59,840</b>	1.74%
Annual Salaries of Active Members*	\$ 1,753,129,100	\$ 1,740,622,400	(0.71%)
Annual Retirement Allowances for Retired Members and Beneficiaries	\$ 374,950,000	\$ 403,090,900	7.51%
<b><u>Assets and Liabilities</u></b>			
Actuarial Accrued Liability (AAL)	\$ 6,827,006,000	\$ 7,096,326,300	3.94%
Actuarial Value of Assets	6,744,049,900	6,808,957,400	0.96%
Unfunded AAL	\$ 82,956,100	\$ 287,368,900	246.41%
Funded Ratio	98.8%	96.0%	
Present Value of Accrued Benefits (PVAB)	\$ 5,718,520,500	\$ 5,978,137,200	4.54%
Market Value of Assets	5,392,659,700	5,909,159,600	9.58%
Unfunded PVAB	\$ 325,860,800	\$ 68,977,600	(78.83%)
Accrued Benefit Funding Ratio	94.3%	98.8%	
<b><u>Contributions as a Percentage of Payroll</u></b>			
	<b>Fiscal Year 2011</b>	<b>Fiscal Year 2012</b>	
Normal Cost Contribution	6.85%	6.85%	
Unfunded Actuarial Liability Contribution	0.20%	1.17%	
Administrative Expense	0.35%	0.35%	
Total State Contribution	7.40%	8.37%	

\* Assumes one year of payroll projection.

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

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, State 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, 2009 and June 30, 2010;
- 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 to avoid overreacting to any one market event. 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. 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%.

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

SECTION II  
ASSETS

<b>Changes in Market Values</b>		
<b>Value of Assets – June 30, 2009</b>		<b>\$ 5,392,659,700</b>
<b><u>Additions</u></b>		
Member Contributions	\$ 44,915,500	
Employer Contributions	101,456,600	
PRI Fund Transfer	26,116,300	
Investment Return	<u>756,564,400</u>	
<b>Total Additions</b>	<b>\$ 929,052,800</b>	
<b><u>Deductions</u></b>		
Benefit Payments	\$ 407,176,800	
Administrative Expenses	<u>5,376,100</u>	
<b>Total Deductions</b>	<b>\$ 412,552,900</b>	
<b>Value of Assets – June 30, 2010</b>		<b>\$ 5,909,159,600</b>

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**SECTION II  
ASSETS**

<b>Development of Actuarial Value of Assets</b>		
1.	Actuarial Value of Assets at June 30, 2009	\$ 6,744,049,900
2.	Amount in (1) with interest to June 30, 2010	7,283,573,900
3.	Employer, PRI and member contributions for the Plan Year ended June 30, 2010	172,488,400
4.	Interest on contributions assuming payments made uniformly throughout the year to June 30, 2010 at 8.00% per year	6,899,500
5.	Disbursements from Trust except investment expenses, June 30, 2009 through June 30, 2010	412,552,900
6.	Interest on disbursements to June 30, 2010 at 8.00% per year	16,502,100
7.	Expected Actuarial Value of Assets at June 30, 2010 = (2) + (3) + (4) – (5) – (6)	7,033,906,800
8.	Actual Market Value of Assets at June 30, 2010	5,909,159,600
9.	Excess of (8) over (7)	(1,124,747,200)
10.	Actuarial Value of Assets at June 30, 2010 = (7) + 20% of (9)	\$ 6,808,957,400

**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, 2010 valuation.

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**SECTION II  
ASSETS**

**Investment Performance**

The market value of assets (MVA) returned 14.4% during 2010, which is less than the assumed 8% return. A return of 4.60% 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.

<b>Projection of Plan's Benefit Payments</b>		
<b>Year Beginning July 1,</b>	<b>Expected Benefit Payments</b>	<b>Expected Contributions*</b>
2010	\$ 418,273,000	\$ 206,821,000
2011	435,017,000	200,594,000
2012	452,810,000	208,116,000
2013	472,528,000	215,920,000
2014	493,468,000	224,017,000
2015	515,942,000	232,418,000
2016	539,489,000	241,134,000
2017	564,165,000	250,176,000
2018	590,018,000	259,558,000
2019	616,417,000	269,291,000

\* Expected contributions include State Contributions, Member Contributions, and PRI Transfers. For illustration purposes, we have assumed the State Contribution rate will remain level and that payroll will increase at the actuarially assumed rate of 3.75% per year.

Expected benefit payments are projected for the closed group valued at June 30, 2010. 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, 2009 and June 30, 2010; 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 STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

**SECTION III  
LIABILITIES**

<b>Liabilities/Net (Surplus)/Unfunded</b>	<b>June 30, 2009</b>	<b>June 30, 2010</b>
<b><u>Present Value of Benefits</u></b>		
Active Participant Benefits	\$ 4,660,619,100	\$ 4,623,050,700
Retiree and Inactive Benefits	3,688,257,200	3,968,295,300
<b>Present Value of Benefits (PVB)</b>	<b>\$ 8,348,876,300</b>	<b>\$ 8,591,346,000</b>
Market Value of Assets (MVA)	\$ 5,392,659,700	\$ 5,909,159,600
Future Member Contributions	430,732,000	426,894,100
Future State Contributions & PRI Fund Transfers	2,525,484,600	2,255,292,300
<b>Total Resources</b>	<b>\$ 8,348,876,300</b>	<b>\$ 8,591,346,000</b>
<b><u>Actuarial Accrued Liability</u></b>		
Present Value of Benefits (PVB)	\$ 8,348,876,300	\$ 8,591,346,000
Present Value of Future Normal Costs (PVFNC)	1,091,138,300	1,068,125,600
Present Value of Future Member Contributions (PVFEEC)	430,732,000	426,894,100
<b>Actuarial Accrued Liability (AAL=PVB-PVFNC-PVFEEC)</b>	<b>6,827,006,000</b>	<b>7,096,326,300</b>
Actuarial Value of Assets (AVA)	6,744,049,900	6,808,957,400
<b>Net (Surplus)/Unfunded (AAL - AVA)</b>	<b>\$ 82,956,100</b>	<b>\$ 287,368,900</b>
<b><u>Present Value of Accrued Liability</u></b>		
Present Value of Benefits (PVB)	\$ 8,348,876,300	\$ 8,591,346,000
Present Value of Future Benefit Accruals (PVFBA)	2,630,355,800	2,613,208,800
<b>Present Value of Accrued Liability (PVAB=PVB-PVFBA)</b>	<b>5,718,520,500</b>	<b>5,978,137,200</b>
Market Value of Assets (MVA)	5,392,659,700	5,909,159,600
<b>Net Unfunded (PVAB - MVA)</b>	<b>\$ 325,860,800</b>	<b>\$ 68,977,600</b>

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**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.

<b>(In Millions)</b>	<b>Present Value of Benefits</b>	<b>Actuarial Accrued Liability</b>	<b>Present Value of Accrued Liability</b>
Liabilities June 30, 2009	\$ 8,349	\$ 6,827	\$ 5,719
Liabilities June 30, 2010	8,591	7,096	5,978
Liability Increase (Decrease)	242	269	259
Change Due to:			
PRI Increase	0	0	0
Actuarial (Gain)/Loss	NC *	(34)	NC *
Benefits Accumulated and Other Sources	242	303	259

\* NC = not calculated.

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**SECTION III  
LIABILITIES**

<b>Actuarial Liabilities for Funding</b>		
	<b>June 30, 2009</b>	<b>June 30, 2010</b>
1. Actuarial Liabilities		
Retiree and Inactive Benefits	\$ 3,688,257,200	\$ 3,968,295,300
Active Members	<u>3,138,748,800</u>	<u>3,128,031,000</u>
<b>Total Actuarial Liability</b>	<b>\$ 6,827,006,000</b>	<b>\$ 7,096,326,300</b>
2. Actuarial Value of Assets	\$ 6,744,049,900	\$ 6,808,957,400
3. Unfunded Actuarial Liability	\$ 82,956,100	\$ 287,368,900
4. Outstanding PRI Transfers/(1 – 5 years)	\$ 36,878,100	\$ 13,477,600
<b>5. Net (Gain)/Loss Base for 20 Year Amortization (3-4)</b>	<b>\$ 46,078,000</b>	<b>\$ 273,891,300</b>

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**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 UAL rate is calculated by amortizing all UAL (except for the present value of scheduled PRI transfers) over an open 20 year period. All payments are determined assuming total pay increases by the annual inflation rate of 3.75%.

The assumed administrative expense rate is 0.35% 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.

<b>Employer Contribution Rate</b>		
	<b>June 30, 2009</b>	<b>June 30, 2010</b>
Entry Age Normal Cost Rate	6.85%	6.85%
Amortization Payment Expense	0.20%	1.17%
	<u>0.35%</u>	<u>0.35%</u>
Actuarially Determined Contribution	7.40%	8.37%

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**SECTION IV  
CONTRIBUTIONS**

<b>Development of Plan Cost as of June 30, 2010</b>		
	<b>In Dollars</b>	<b>As % of Payroll</b>
1. Present value of projected benefits attributable to:		
a. Total Normal Cost	\$ 166,925,600	9.59%
b. Expected Members Contribution	<u>47,693,000</u>	<u>2.74%</u>
c. Employer Paid Normal Cost (a) – (b)	\$ 119,232,600	6.85%
2. Amortization of Unfunded Liability	\$ 20,352,100	1.17%
3. Allowance for Expense	\$ 6,092,200	0.35%
4. Total Employer Contribution Rate (1) + (2) + (3)	\$ 145,676,900	8.37%

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**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 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 8% 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, 2010 are exhibited in Table V-1. Finally, Table V-2 reconciles the Topic No. 960 liabilities determined as of the prior valuation, July 1, 2009, to the liabilities as of June 30, 2010.

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 STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

**SECTION V**  
**ACCOUNTING STATEMENT INFORMATION**

<b>Table V-1</b>		
<b>Accounting Statement Information</b>		
	<b>June 30, 2009</b>	<b>June 30, 2010</b>
<b>A. FASB ASC Topic No. 960 Basis</b>		
1. Present Value of Benefits Accrued and Vested to Date		
a. Members Currently Receiving Payments	\$ 3,608,849,500	\$ 3,873,285,500
b. Former Vested Members (and LTDs)	79,407,700	95,009,800
c. Active Members	<u>2,030,263,300</u>	<u>2,009,841,900</u>
2. Total Present Value of Accrued Benefits (1 (a) + 1(b) + 1(c))	\$ 5,718,520,500	\$ 5,978,137,200
3. Assets at Market Value	<u>5,392,659,700</u>	<u>5,909,159,600</u>
4. Unfunded Present Value of Accrued Benefits (2 – 3)	\$ 325,860,800	\$ 68,977,600
5. Ratio of Assets to Present Value of Benefits (3 / 2)	94.3%	98.8%
<b>B. GASB No. 25 Basis</b>		
1. Actuarial Accrued Liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 3,688,257,200	\$ 3,968,295,300
2. Actuarial Accrued Liabilities for current employees	<u>3,138,748,800</u>	<u>3,128,031,000</u>
3. Total Actuarial Accrued Liability (1 + 2)	\$ 6,827,006,000	\$ 7,096,326,300
4. Net Actuarial Assets available for benefits	<u>6,744,049,900</u>	<u>6,808,957,400</u>
5. Unfunded Actuarial Accrued Liability (3 – 4)	\$ 82,956,100	\$ 287,368,900

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**SECTION V  
ACCOUNTING STATEMENT INFORMATION**

<b>Table V-2 Statement of Changes in Total Actuarial Present Value of All Accrued Benefits (in millions)</b>	
	<b>Accumulated Benefit Obligation (FASB 35)</b>
Actuarial Present Value of Accrued Benefits at June 30, 2009	\$ 5,719
Increase (Decrease) During Years Attributable to:	
Passage of Time	441
Benefit Paid – FY 2010	(407)
Disability Carveout	0
PRI	0
Benefits Accrued, Other Gains/Losses	<u>225</u>
Net Increase (Decrease)	259
Actuarial Present Value of Accrued Benefits at June 30, 2010	\$ 5,978



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**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, 2010
Actuarial cost method	Entry age
Amortization method	Open
Remaining amortization period	20 years
Asset valuation method	5-Year smoothed market
Actuarial assumptions:	
Investment rate of return*	8.0%
Projected salary increases*	4.3%-10.1%
*Includes inflation at	3.75%
Cost-of-living adjustments	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.

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

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	2005	2006	2007	2008	2009	2010
Investment Income on Actuarial Assets	\$ (12,887)	\$ 33,600	\$ 120,673	\$ (27,225)	\$ (337,848)	\$ (224,949)
Combined Liability Experience	<u>(15,530)</u>	<u>(44,930)</u>	<u>(19,423)</u>	<u>(44,449)</u>	<u>31,060</u>	<u>34,271</u>
(Loss)/Gain During Year from Financial Experience	\$ (24,417)	\$ (11,330)	\$ 101,250	\$ (71,674)	\$ (306,788)	\$ (190,678)
Non-Recurring Items	<u>244</u>	<u>1,923</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Composite Gain (or Loss) During Year	\$ (28,173)	\$ (9,407)	\$ 101,250	\$ (71,674)	\$ (306,788)	\$ (190,678)

**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)
2010	\$ 527,578	\$ 3,873,286	\$ 2,695,462	\$ 6,808,957	100%	100%	89%
2009	508,790	3,608,850	2,709,366	6,744,050	100%	100%	97%
2008	470,813	3,390,993	2,688,050	6,751,949	100%	100%	108%
2007	444,376	3,182,382	2,581,267	6,437,916	100%	100%	109%
2006	434,605	2,982,471	2,483,996	5,998,746	100%	100%	104%
2005	414,001	2,702,359	2,456,359	5,660,057	100%	100%	104%

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Delaware State Employees' Pension Plan Distribution of Active Members  
by Age and Service as of June 30, 2010**

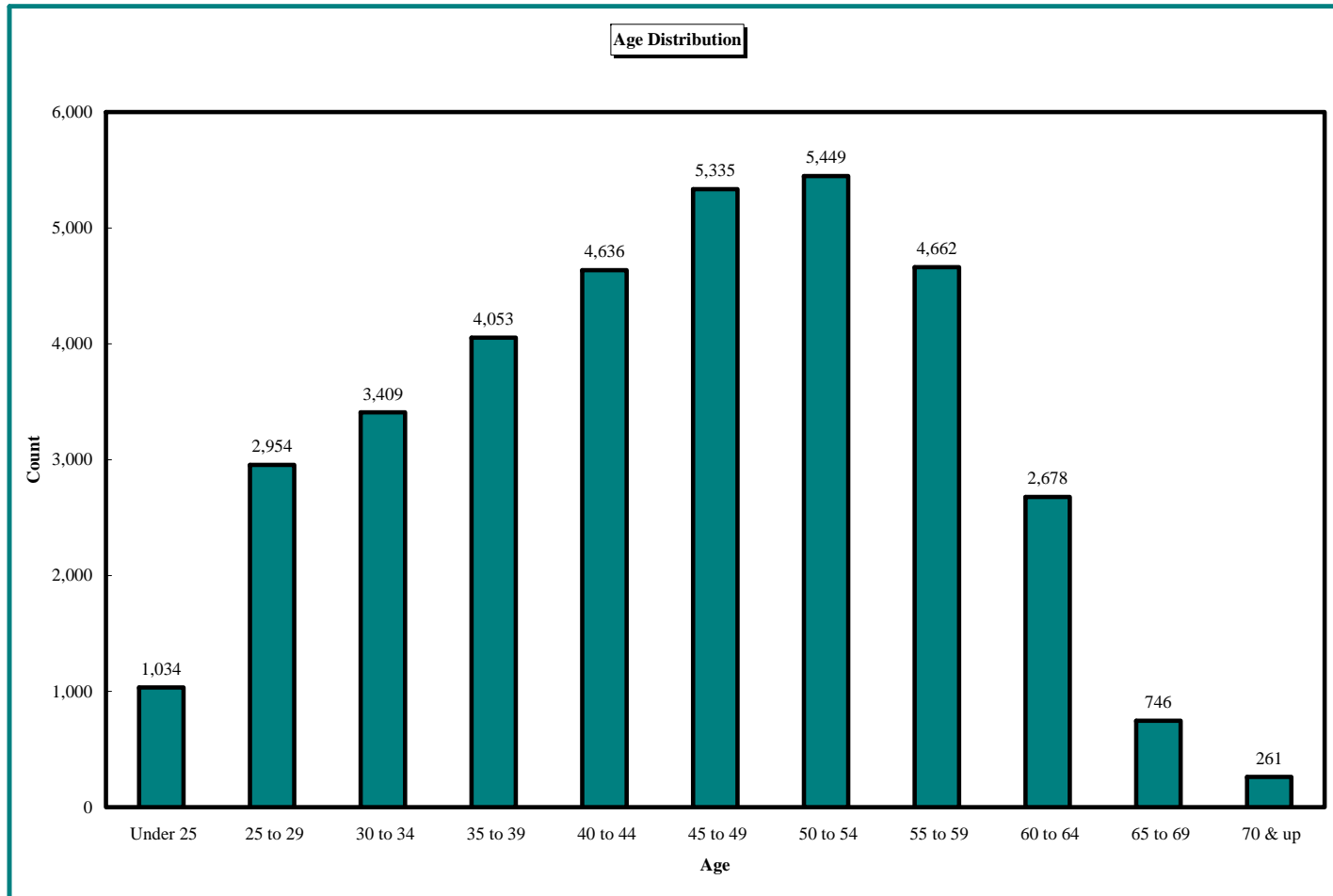
**COUNTS BY AGE/SERVICE**

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	464	545	25	0	0	0	0	0	0	0	1,034
25 to 29	439	1,836	660	19	0	0	0	0	0	0	2,954
30 to 34	241	1,255	1,425	478	10	0	0	0	0	0	3,409
35 to 39	253	1,093	1,163	1,221	299	24	0	0	0	0	4,053
40 to 44	264	1,086	1,085	967	837	378	19	0	0	0	4,636
45 to 49	218	1,030	1,187	1,002	748	828	301	21	0	0	5,335
50 to 54	190	821	1,002	1,071	790	744	564	255	12	0	5,449
55 to 59	109	617	737	787	778	677	456	355	141	5	4,662
60 to 64	50	385	440	474	431	359	216	151	128	44	2,678
65 to 69	17	117	164	119	100	96	56	34	22	21	746
70 & up	6	45	60	51	31	22	14	15	6	11	261
<b>Total</b>	<b>2,251</b>	<b>8,830</b>	<b>7,948</b>	<b>6,189</b>	<b>4,024</b>	<b>3,128</b>	<b>1,626</b>	<b>831</b>	<b>309</b>	<b>81</b>	<b>35,217</b>

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
MEMBERSHIP INFORMATION

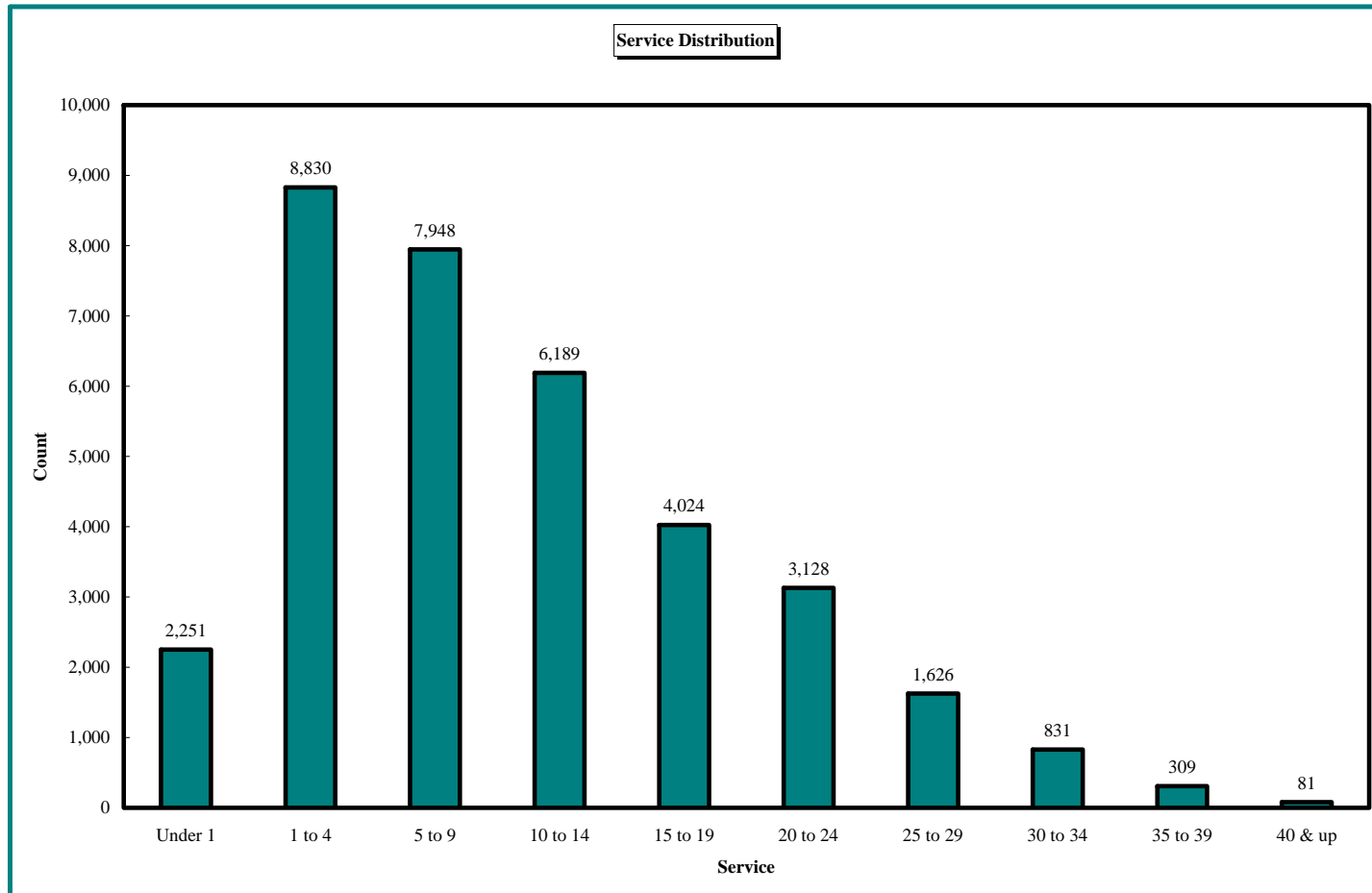
Delaware State Employees' Pension Plan Distribution of Active Members  
by Age as of June 30, 2010



DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
MEMBERSHIP INFORMATION

Delaware State Employees' Pension Plan Distribution of Active Members  
by Service as of June 30, 2010



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**APPENDIX A  
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**Delaware State Employees' Pension Plan Distribution of Active Members  
by Age and Service as of June 30, 2010**

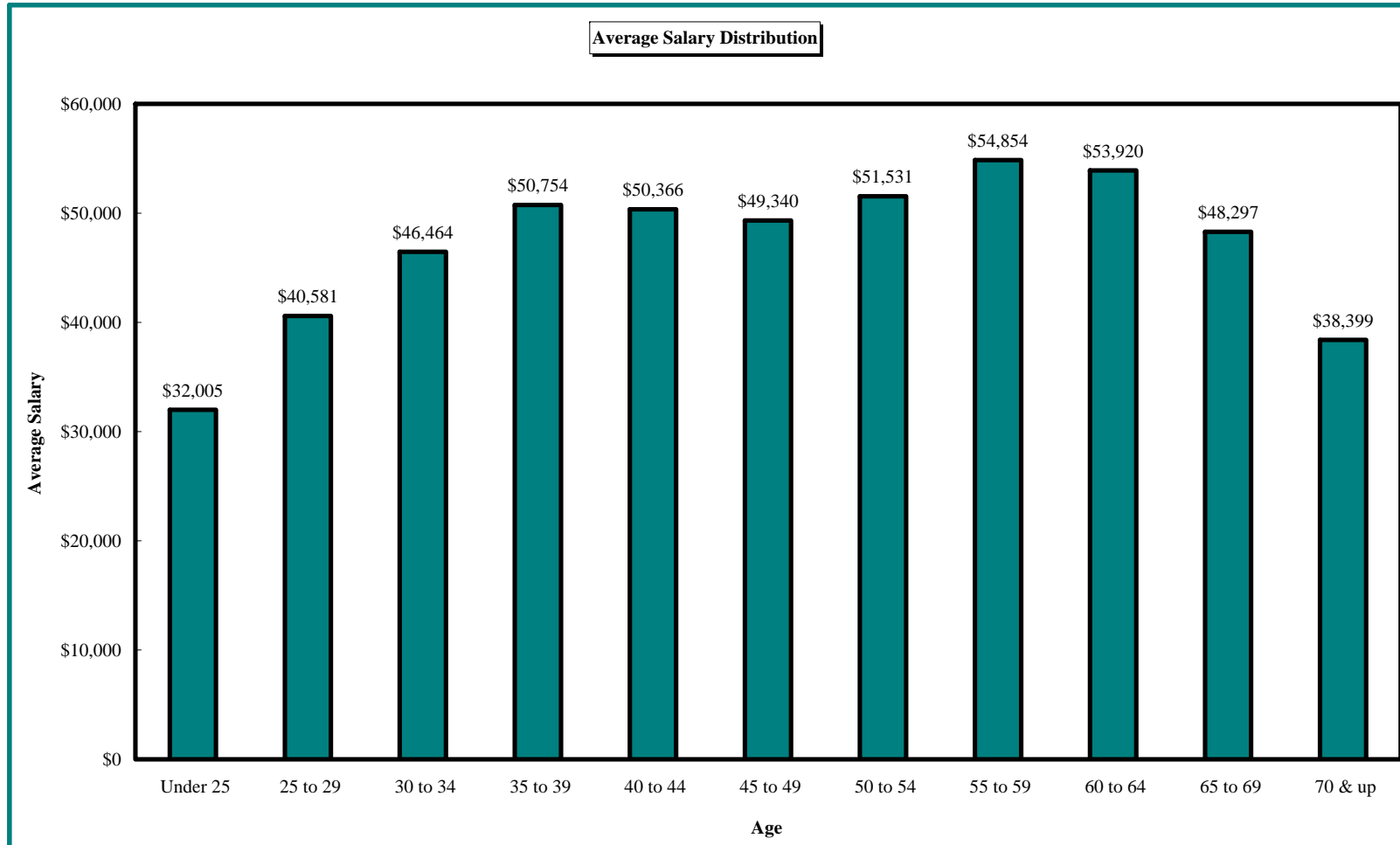
**AVERAGE SALARY BY AGE/SERVICE**

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	\$26,862	\$36,389	\$31,899	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$32,005
25 to 29	\$31,194	\$41,306	\$44,868	\$38,520	\$0	\$0	\$0	\$0	\$0	\$0	\$40,581
30 to 34	\$29,473	\$42,696	\$50,279	\$53,344	\$56,445	\$0	\$0	\$0	\$0	\$0	\$46,464
35 to 39	\$31,163	\$44,040	\$50,644	\$59,315	\$58,129	\$40,939	\$0	\$0	\$0	\$0	\$50,754
40 to 44	\$27,192	\$41,235	\$48,367	\$54,795	\$64,510	\$55,941	\$49,022	\$0	\$0	\$0	\$50,366
45 to 49	\$29,108	\$39,672	\$45,856	\$49,636	\$57,428	\$60,817	\$58,305	\$47,271	\$0	\$0	\$49,340
50 to 54	\$30,494	\$40,698	\$46,657	\$50,097	\$55,920	\$59,428	\$63,790	\$62,886	\$64,844	\$0	\$51,531
55 to 59	\$33,146	\$42,801	\$47,544	\$51,250	\$57,363	\$59,818	\$66,635	\$69,772	\$69,527	\$50,462	\$54,854
60 to 64	\$36,517	\$42,856	\$47,487	\$50,313	\$56,499	\$56,960	\$62,193	\$68,237	\$77,174	\$66,245	\$53,920
65 to 69	\$22,243	\$31,245	\$40,713	\$44,527	\$52,416	\$53,711	\$69,693	\$72,913	\$78,557	\$71,988	\$48,297
70 & up	\$15,136	\$23,771	\$27,214	\$33,037	\$51,124	\$52,038	\$66,408	\$52,288	\$72,057	\$60,716	\$38,399
<b>Total</b>	<b>\$29,485</b>	<b>\$41,232</b>	<b>\$47,667</b>	<b>\$52,706</b>	<b>\$58,369</b>	<b>\$58,806</b>	<b>\$63,414</b>	<b>\$66,625</b>	<b>\$73,205</b>	<b>\$66,009</b>	<b>\$49,430</b>

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
MEMBERSHIP INFORMATION

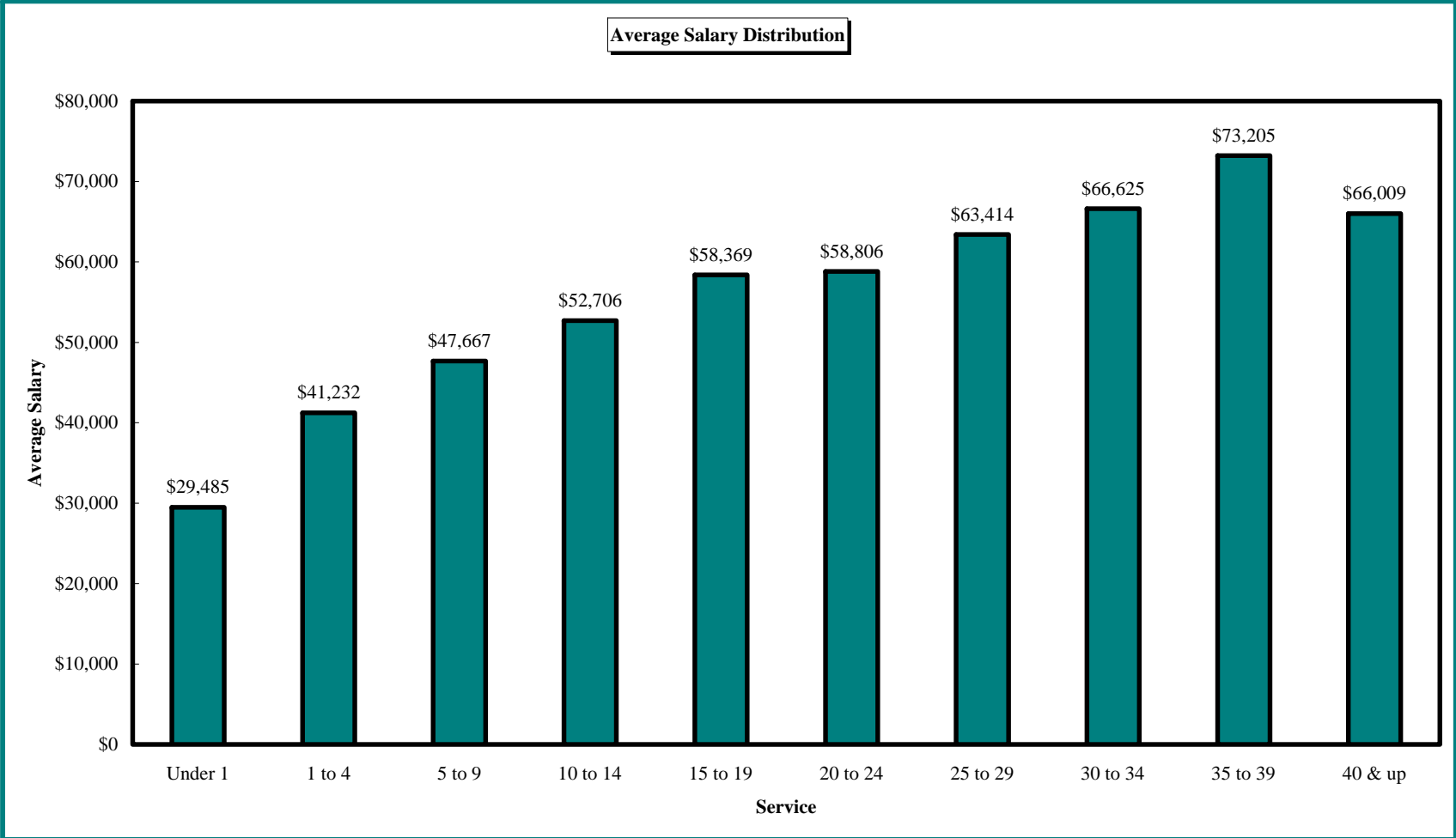
**Delaware State Employees' Pension Plan Distribution of Active Members  
by Age as of June 30, 2010**



DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
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**Delaware State Employees' Pension Plan Distribution of Active Members  
by Service as of June 30, 2010**





**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**APPENDIX A  
MEMBERSHIP INFORMATION**

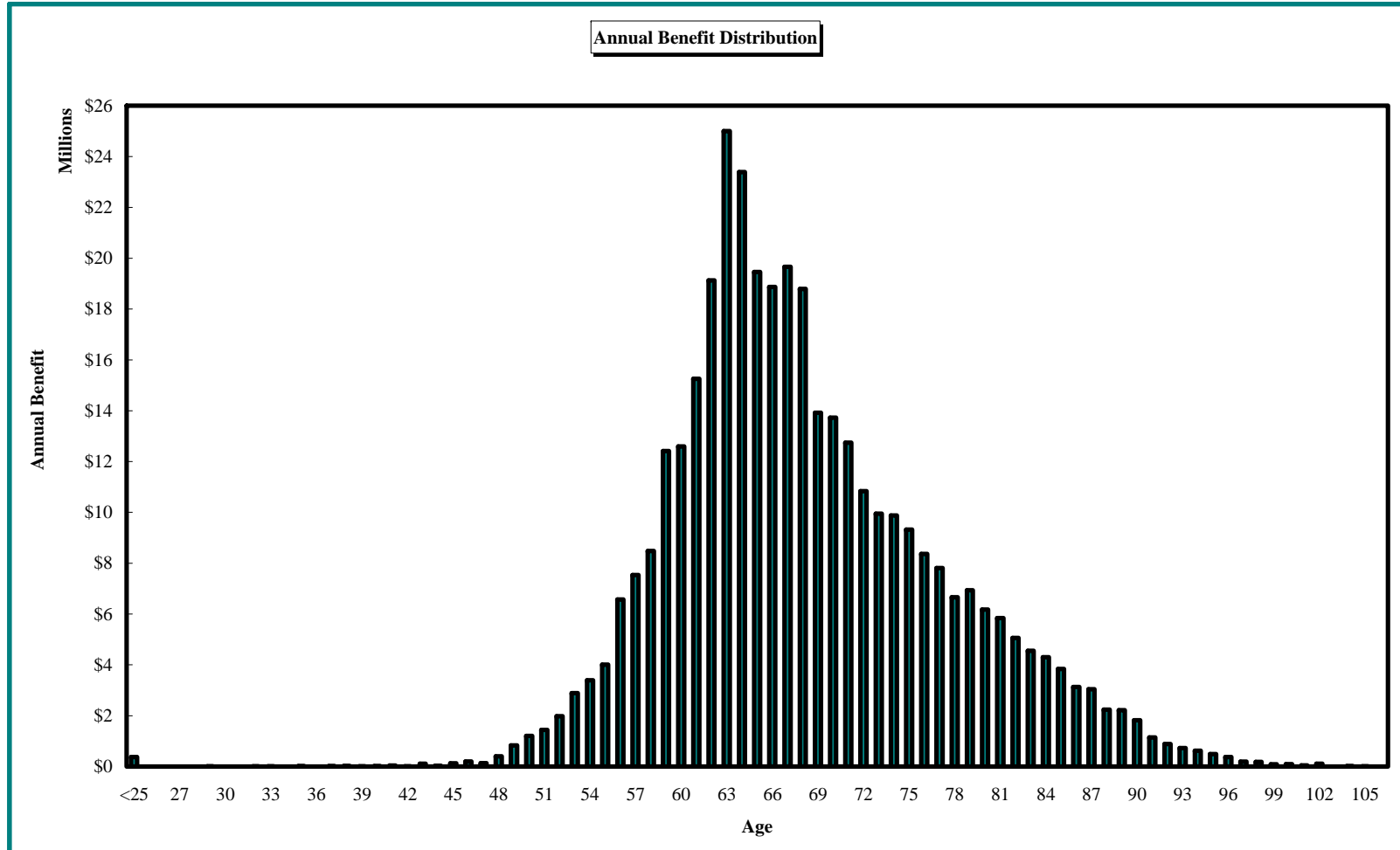
**Delaware State Employees' Pension Plan Distribution of Retired  
Members and Survivors as of June 30, 2010**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	53	\$374,991	73	584	\$9,950,894
25	0	\$0	74	559	\$9,881,471
26	0	\$0	75	588	\$9,317,870
27	0	\$0	76	572	\$8,366,977
28	0	\$0	77	541	\$7,808,633
29	1	\$7,174	78	517	\$6,660,949
30	0	\$0	79	526	\$6,932,165
31	1	\$1,829	80	490	\$6,173,854
32	2	\$9,313	81	452	\$5,836,159
33	2	\$4,976	82	404	\$5,057,661
34	1	\$1,634	83	420	\$4,553,235
35	1	\$14,405	84	378	\$4,300,780
36	1	\$3,572	85	352	\$3,843,994
37	2	\$13,652	86	293	\$3,130,573
38	3	\$18,940	87	298	\$3,038,337
39	1	\$8,001	88	230	\$2,238,591
40	2	\$13,424	89	231	\$2,214,437
41	6	\$34,242	90	208	\$1,821,215
42	3	\$6,095	91	132	\$1,143,065
43	10	\$113,436	92	114	\$886,973
44	5	\$30,954	93	78	\$728,820
45	10	\$125,026	94	68	\$623,267
46	15	\$197,013	95	55	\$489,987
47	13	\$129,543	96	44	\$378,008
48	24	\$401,866	97	26	\$189,695
49	46	\$830,901	98	21	\$185,453
50	68	\$1,204,740	99	11	\$87,556
51	66	\$1,439,797	100	12	\$92,091
52	89	\$1,981,279	101	6	\$42,703
53	123	\$2,889,943	102	8	\$111,246
54	133	\$3,391,894	103	0	\$0
55	153	\$4,006,792	104	2	\$15,219
56	239	\$6,574,980	105	1	\$8,796
57	257	\$7,538,895	106	0	\$0
58	315	\$8,486,700	107	0	\$0
59	422	\$12,414,238	108	0	\$0
60	437	\$12,597,414	109	0	\$0
61	534	\$15,251,326	110	0	\$0
62	654	\$19,128,705	111	0	\$0
63	946	\$24,997,979	112	0	\$0
64	909	\$23,393,742	113	0	\$0
65	756	\$19,455,228	114	0	\$0
66	759	\$18,869,407	115	0	\$0
67	845	\$19,663,830	116	0	\$0
68	828	\$18,792,780	117	0	\$0
69	685	\$13,916,654	118	0	\$0
70	689	\$13,730,505	119	0	\$0
71	655	\$12,745,909	120	0	\$0
72	604	\$10,835,242			
			<b>Totals</b>	<b>19,589</b>	<b>\$381,759,640</b>

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
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Delaware State Employees' Pension Plan Distribution of Retired Members and Survivors  
as of June 30, 2010



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**APPENDIX A  
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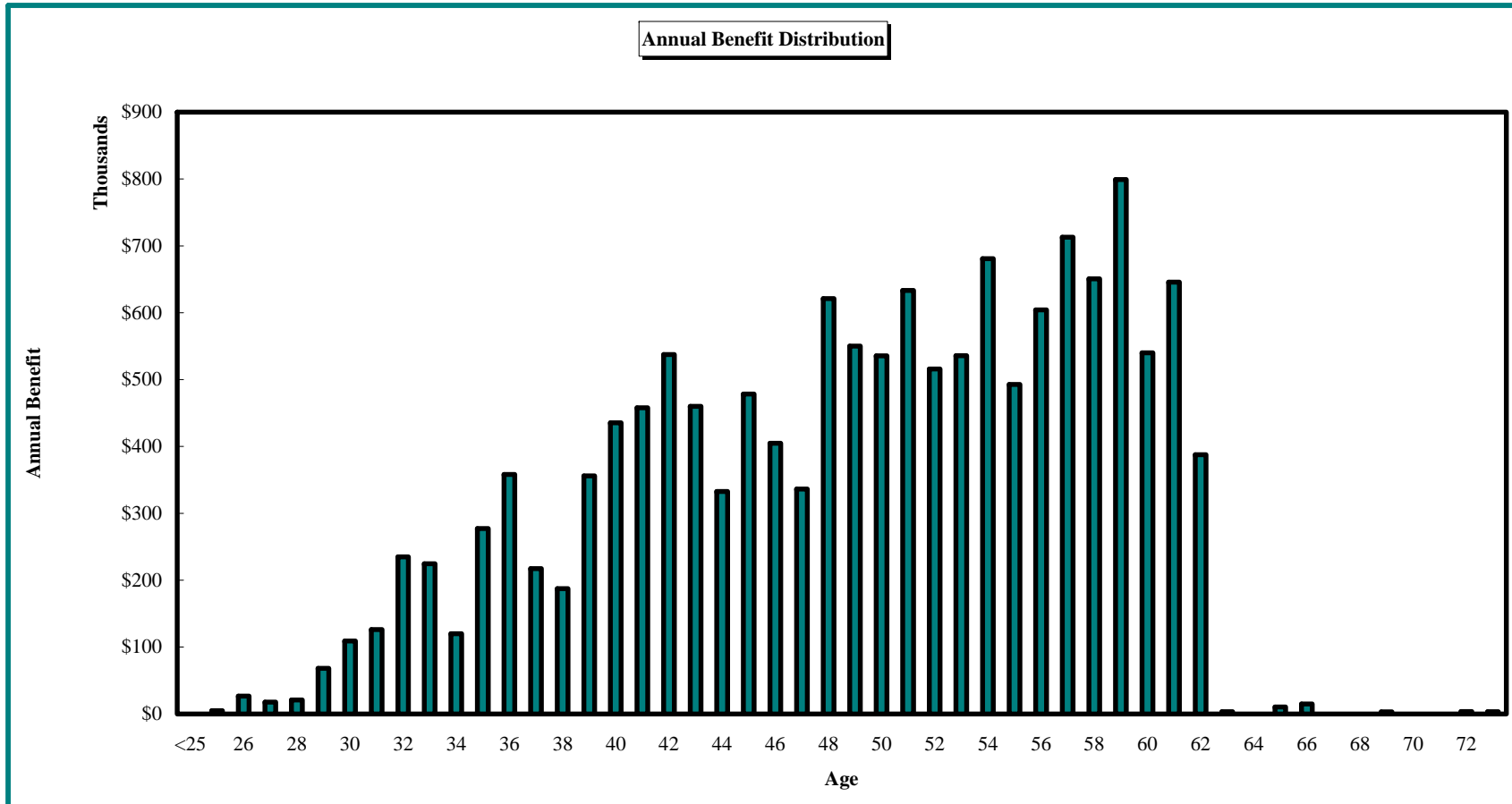
**Delaware State Employees' Pension Plan Distribution of Vested Members  
as of June 30, 2010**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$0	73	1	\$3,260
25	2	\$4,884	74	0	\$0
26	3	\$26,790	75	0	\$0
27	4	\$17,719	76	0	\$0
28	6	\$20,938	77	0	\$0
29	11	\$68,265	78	0	\$0
30	21	\$109,006	79	0	\$0
31	25	\$125,917	80	0	\$0
32	35	\$234,964	81	0	\$0
33	32	\$224,557	82	0	\$0
34	23	\$119,992	83	0	\$0
35	42	\$277,412	84	0	\$0
36	47	\$358,193	85	0	\$0
37	38	\$217,408	86	0	\$0
38	39	\$187,349	87	0	\$0
39	44	\$355,926	88	0	\$0
40	48	\$435,397	89	0	\$0
41	63	\$457,761	90	0	\$0
42	66	\$537,498	91	0	\$0
43	51	\$459,943	92	0	\$0
44	46	\$332,859	93	0	\$0
45	61	\$478,388	94	0	\$0
46	47	\$404,957	95	0	\$0
47	40	\$336,252	96	0	\$0
48	72	\$621,272	97	0	\$0
49	70	\$549,996	98	0	\$0
50	53	\$535,591	99	0	\$0
51	66	\$633,370	100	0	\$0
52	55	\$515,878	101	0	\$0
53	54	\$535,800	102	0	\$0
54	71	\$681,012	103	0	\$0
55	55	\$492,730	104	0	\$0
56	73	\$604,353	105	0	\$0
57	71	\$712,884	106	0	\$0
58	78	\$650,533	107	0	\$0
59	87	\$799,217	108	0	\$0
60	69	\$539,929	109	0	\$0
61	72	\$645,626	110	0	\$0
62	51	\$387,663	111	0	\$0
63	1	\$3,250	112	0	\$0
64	0	\$0	113	0	\$0
65	3	\$10,234	114	0	\$0
66	1	\$14,714	115	0	\$0
67	0	\$0	116	0	\$0
68	0	\$0	117	0	\$0
69	1	\$3,011	118	0	\$0
70	0	\$0	119	0	\$0
71	0	\$0	120	0	\$0
72	2	\$3,501			
			Totals	1,800	\$14,736,198

DELAWARE STATE EMPLOYEES' PENSION PLAN  
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APPENDIX A  
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Delaware State Employees' Pension Plan Distribution of Vested Members  
as of June 30, 2010



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**APPENDIX A  
MEMBERSHIP INFORMATION**

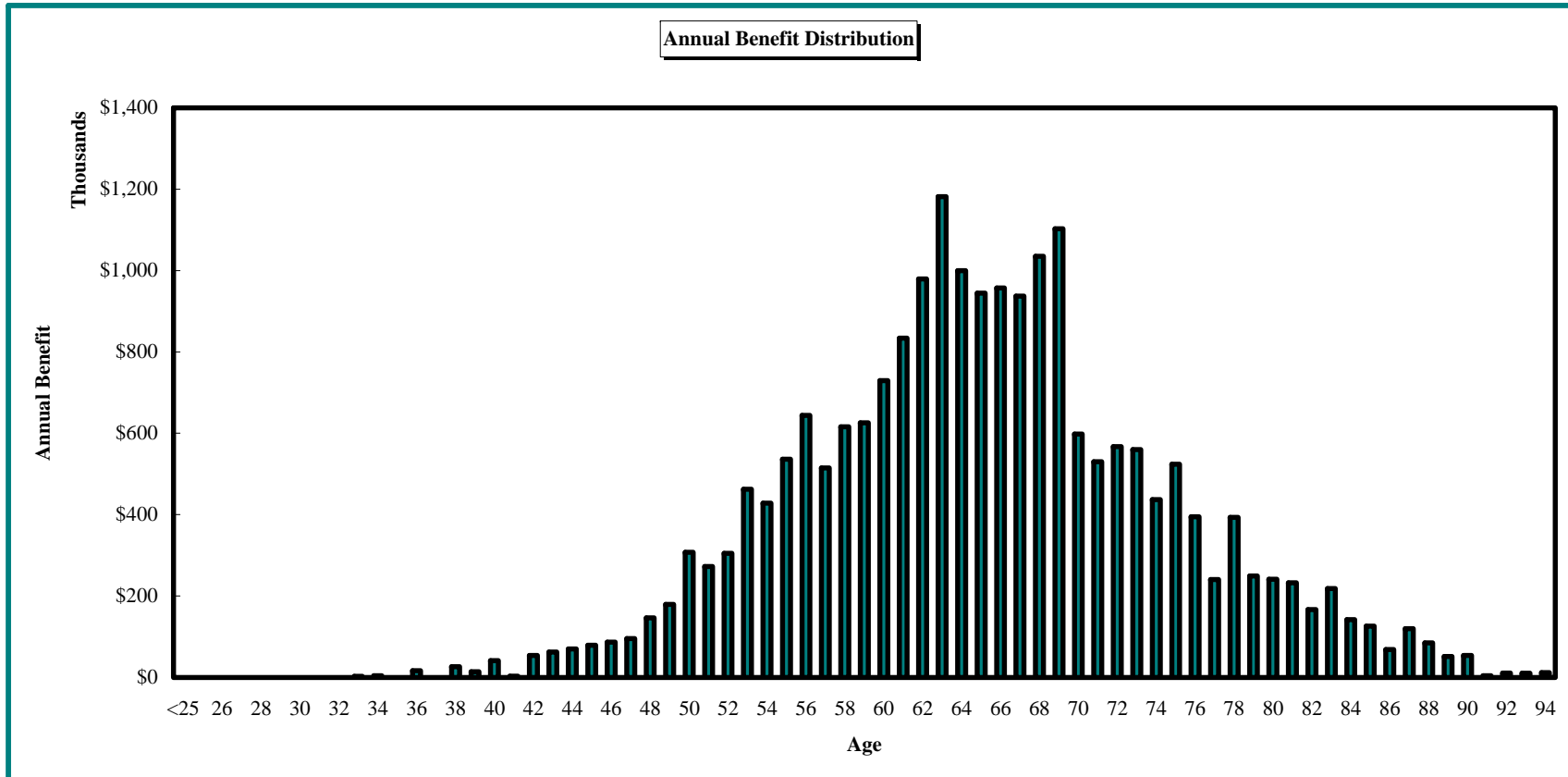
**Delaware State Employees' Pension Plan Distribution of Disabled Members  
as of June 30, 2010**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$0	73	54	\$559,881
25	0	\$0	74	41	\$437,065
26	0	\$0	75	50	\$523,968
27	0	\$0	76	40	\$394,850
28	0	\$0	77	32	\$240,773
29	0	\$0	78	38	\$393,550
30	0	\$0	79	23	\$249,226
31	0	\$0	80	29	\$241,366
32	0	\$0	81	28	\$232,230
33	1	\$2,663	82	25	\$166,463
34	1	\$4,017	83	26	\$218,697
35	0	\$0	84	19	\$141,830
36	2	\$16,507	85	18	\$126,007
37	0	\$0	86	11	\$68,291
38	3	\$25,974	87	18	\$119,719
39	3	\$14,110	88	12	\$84,653
40	7	\$41,082	89	8	\$51,542
41	1	\$2,977	90	10	\$53,880
42	6	\$54,059	91	1	\$4,339
43	10	\$62,029	92	2	\$10,725
44	11	\$69,942	93	2	\$10,244
45	12	\$79,099	94	2	\$12,051
46	14	\$86,740	95	0	\$0
47	11	\$95,463	96	0	\$0
48	19	\$146,478	97	0	\$0
49	22	\$179,689	98	0	\$0
50	29	\$307,764	99	0	\$0
51	30	\$272,845	100	0	\$0
52	27	\$304,983	101	0	\$0
53	39	\$462,592	102	0	\$0
54	46	\$428,644	103	0	\$0
55	56	\$536,319	104	0	\$0
56	59	\$643,690	105	0	\$0
57	49	\$514,759	106	0	\$0
58	56	\$616,229	107	0	\$0
59	54	\$625,793	108	0	\$0
60	59	\$729,101	109	0	\$0
61	75	\$833,768	110	0	\$0
62	81	\$979,518	111	0	\$0
63	88	\$1,181,264	112	0	\$0
64	76	\$999,947	113	0	\$0
65	78	\$944,423	114	0	\$0
66	65	\$957,240	115	0	\$0
67	80	\$937,015	116	0	\$0
68	84	\$1,034,603	117	0	\$0
69	82	\$1,102,601	118	0	\$0
70	45	\$598,004	119	0	\$0
71	56	\$530,506	120	0	\$0
72	57	\$567,458			
			Totals	1,983	\$21,331,248

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
MEMBERSHIP INFORMATION

**Delaware State Employees' Pension Plan Distribution of Disabled Members  
as of June 30, 2010**



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Delaware State Employees' Pension Plan Distribution of Disabled Members  
as of June 30, 2010**

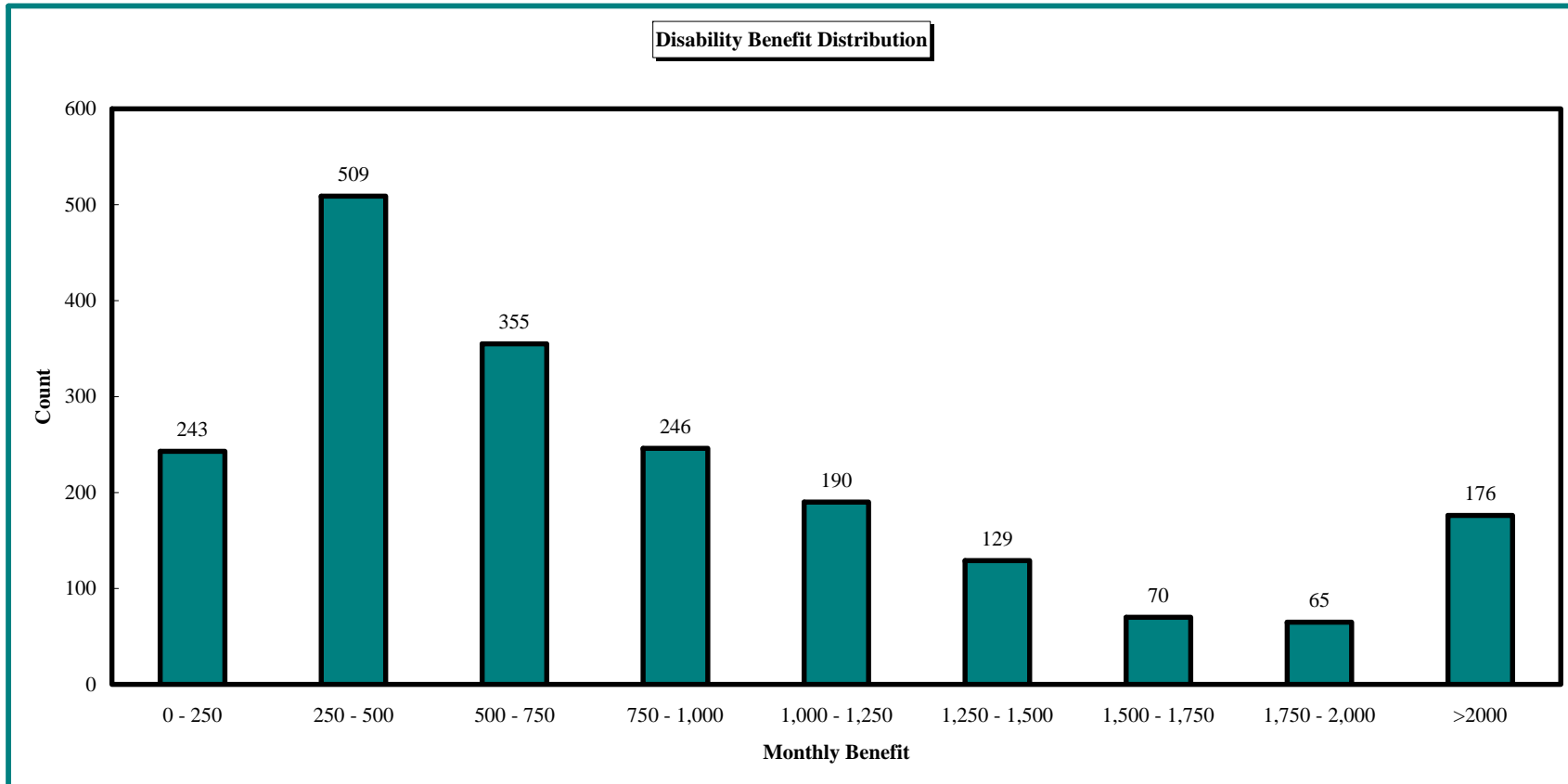
**COUNTS BY BENEFIT/SERVICE**

Monthly Benefit										Total
	0 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	
0 - 250	0	196	38	8	1	0	0	0	0	243
250 - 500	2	202	216	72	13	4	0	0	0	509
500 - 750	1	32	133	127	52	9	1	0	0	355
750 - 1,000	0	8	39	97	73	23	6	0	0	246
1,000 - 1,250	0	1	20	66	72	25	6	0	0	190
1,250 - 1,500	0	0	12	26	37	39	11	3	1	129
1,500 - 1,750	0	0	2	11	24	26	6	1	0	70
1,750 - 2,000	0	0	1	6	24	21	9	4	0	65
>2000	0	0	1	7	30	69	47	18	4	176
<b>Total</b>	<b>3</b>	<b>439</b>	<b>462</b>	<b>420</b>	<b>326</b>	<b>216</b>	<b>86</b>	<b>26</b>	<b>5</b>	<b>1,983</b>

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
MEMBERSHIP INFORMATION

**Delaware State Employees' Pension Plan Distribution of Disabled Members  
as of June 30, 2010**

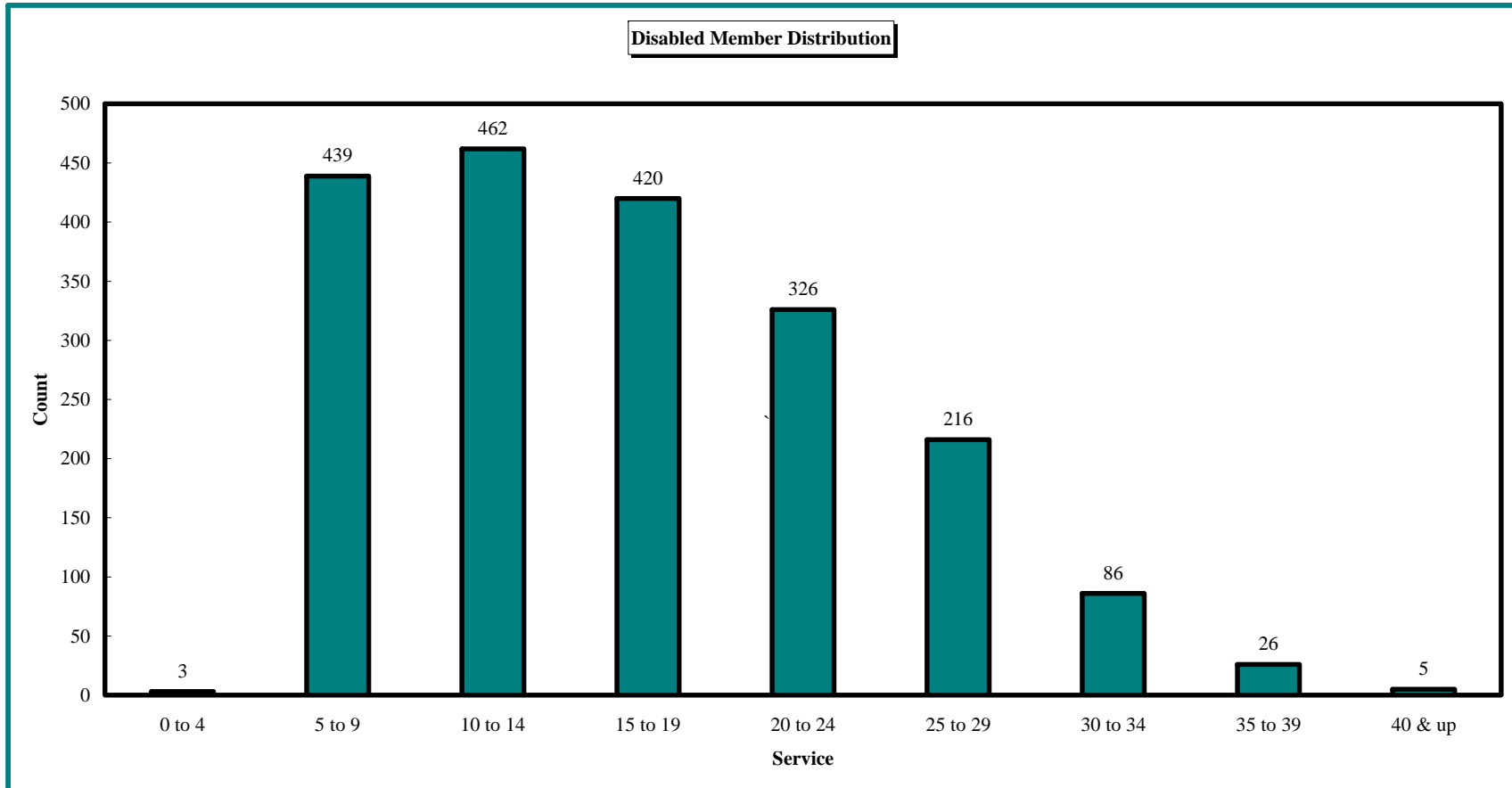




DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
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**Delaware State Employees' Pension Plan Distribution of Disabled Members  
as of June 30, 2010**



**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

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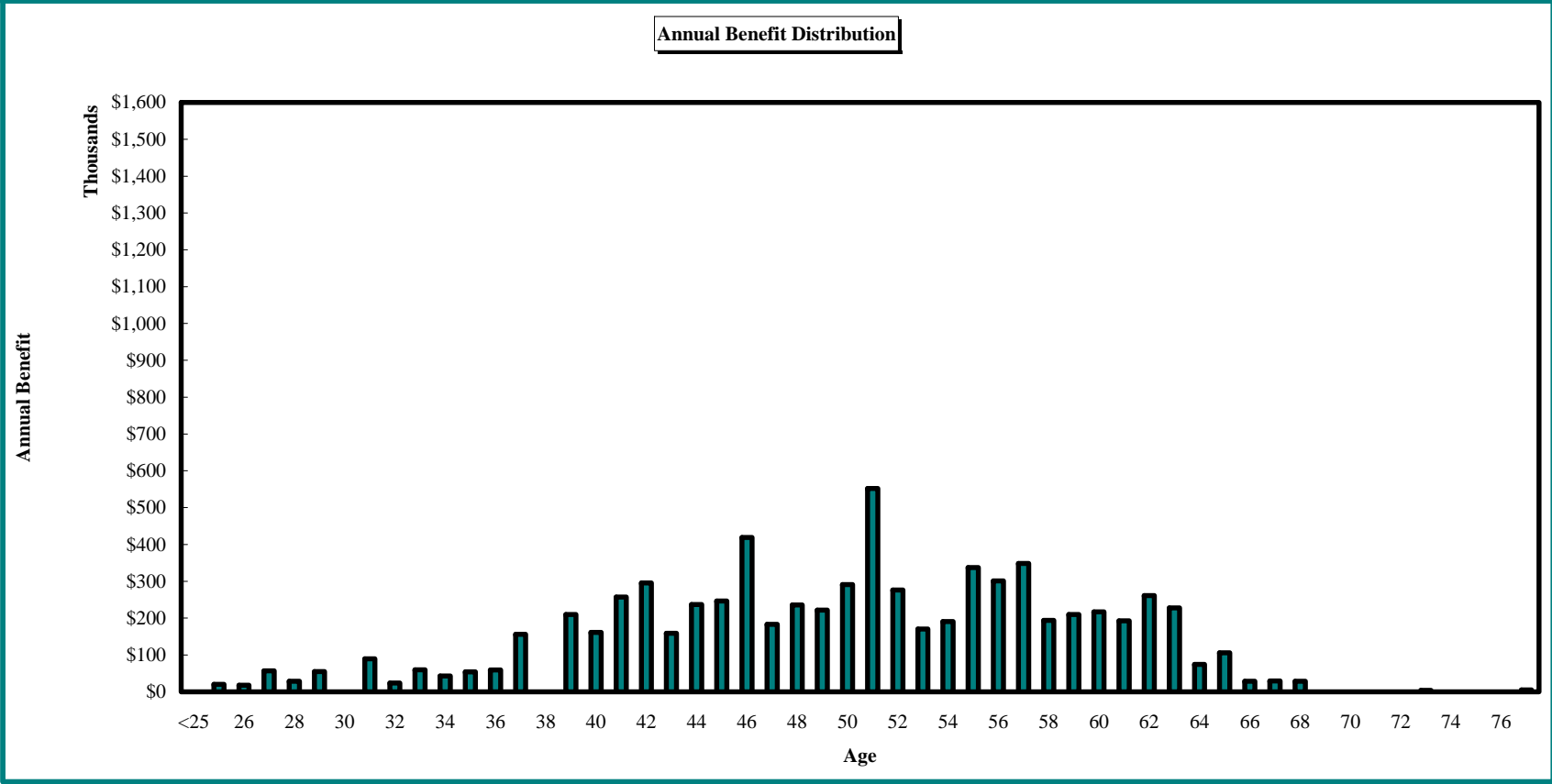
**Delaware State Employees' Pension Plan Distribution of Long Term Disability  
Members  
as of June 30, 2010**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$0	73	2	\$4,105
25	1	\$20,489	74	0	\$0
26	1	\$18,187	75	0	\$0
27	3	\$57,018	76	0	\$0
28	1	\$28,797	77	1	\$5,283
29	3	\$54,960	78	0	\$0
30	0	\$0	79	0	\$0
31	3	\$89,810	80	0	\$0
32	1	\$23,498	81	0	\$0
33	3	\$59,805	82	0	\$0
34	2	\$42,747	83	0	\$0
35	3	\$54,038	84	0	\$0
36	2	\$59,183	85	0	\$0
37	8	\$156,371	86	0	\$0
38	0	\$0	87	0	\$0
39	8	\$209,720	88	0	\$0
40	5	\$161,092	89	0	\$0
41	8	\$257,150	90	0	\$0
42	12	\$295,362	91	0	\$0
43	8	\$158,894	92	0	\$0
44	10	\$237,143	93	0	\$0
45	12	\$246,498	94	0	\$0
46	16	\$419,197	95	0	\$0
47	8	\$183,304	96	0	\$0
48	17	\$235,654	97	0	\$0
49	14	\$221,513	98	0	\$0
50	14	\$290,927	99	0	\$0
51	25	\$552,170	100	0	\$0
52	15	\$276,116	101	0	\$0
53	10	\$170,535	102	0	\$0
54	16	\$190,380	103	0	\$0
55	18	\$337,146	104	0	\$0
56	18	\$301,300	105	0	\$0
57	15	\$348,640	106	0	\$0
58	12	\$193,792	107	0	\$0
59	14	\$209,943	108	0	\$0
60	13	\$217,105	109	0	\$0
61	18	\$193,072	110	0	\$0
62	17	\$260,855	111	0	\$0
63	17	\$227,762	112	0	\$0
64	6	\$74,295	113	0	\$0
65	8	\$106,055	114	0	\$0
66	5	\$28,615	115	0	\$0
67	4	\$29,092	116	0	\$0
68	3	\$29,021	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	400	\$7,336,642

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX A  
MEMBERSHIP INFORMATION

**Delaware State Employees' Pension Plan Distribution of Long Term Disability Members  
as of June 30, 2010**



DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

**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 Fully Generational Mortality Improvements (Projection Scale AA)

Male: 85% of RP-2000 MB Mortality Table

Female: 87% of RP-2000 FW Mortality Table

<b>Rates of Healthy Inactive Mortality</b>				
<b>Rates (Prior to Projection)</b>			<b>Projection Scale</b>	
<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
50	0.48%	0.21%	1.80%	1.70%
55	0.61%	0.30%	1.90%	0.80%
60	0.90%	0.49%	1.60%	0.50%
65	1.41%	0.79%	1.40%	0.50%
70	2.27%	1.32%	1.50%	0.50%
75	3.67%	2.24%	1.40%	0.80%
80	6.00%	3.75%	1.00%	0.70%
85	9.78%	6.45%	0.70%	0.60%
90	15.45%	10.98%	0.40%	0.30%

**b. Healthy Active Mortality**

With Fully Generational Mortality Improvements (Projection Scale AA)

Male: 95% of RP-2000 RE Mortality Table

Female: 80% of RP-2000 RE Mortality Table

<b>Rates of Healthy Active Mortality</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>
20	0.03%	0.02%
25	0.04	0.02
30	0.04	0.02
35	0.07	0.04
40	0.10	0.06
45	0.14	0.09
50	0.20	0.13
55	0.29	0.20
60	0.46	0.31

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

**APPENDIX B**  
**ACTUARIAL ASSUMPTIONS AND METHODS**

**c. Disabled Inactive Mortality**

Male: 63% of 1965 Railroad Retirement Board Disabled Mortality  
Female: 92% of 1981 PBGC Disabled Mortality with Social Security

<b>Rates of Disabled Inactive Mortality</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>
40	2.78%	1.92%
45	2.82%	2.06%
50	3.06%	2.36%
55	3.73%	2.71%
60	4.57%	3.05%
65	5.46%	3.40%
70	6.53%	3.78%
75	7.96%	4.53%
80	9.73%	6.86%

**d. Rates of Active Disability**

<b>Rates of Active Disability</b>	
<b>Age</b>	<b>Current</b>
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

<b>Rates of Active Disability for those who opted into the Disability Insurance Program*</b>	
<b>Age</b>	<b>Current</b>
65	2.37%
70	3.45
75	5.36
80	9.73

\* For those who remained in the Pension Plan for disability purposes, the assumption stops at age 64.

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**APPENDIX B  
ACTUARIAL ASSUMPTIONS AND METHODS**

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

10-year Select (age- and service-based) & Ultimate (age-based) tables.

Age Select:	0	1	2	3	4	5	6	7	8	9	Ultimate
<35	19%	16%	12%	10%	8%	6%	6%	5%	4%	4%	3%
35-39	19	16	12	10	8	6	6	5	4	4	2
40-54	15	11	8	7	5	5	4	4	3	3	1.5
55-59	17	14	10	8	6	5	5	4	3	3	1.5
60-65	23	17	14	10	8	6	5	4	4	3	1.5
>65	23	21	16	14	10	8	5	4	4	3	1.5

**f. Retirement**

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

- a) age 55 with 15 years of credited service
- b) 25 years of credited service

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

- a) age 62 with five years of credited service
- b) age 60 with 15 years of credited service
- c) 30 years of credited service

<b>Male Early Retirement</b>		
Age	Select	Ultimate
<41	1.00%	0.00%
41 – 44	1.00	0.50
45 – 46	3.00	0.50
47 – 49	3.00	2.00
50 – 51	3.00	3.00
52 – 59	3.00	5.00

**DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010**

**APPENDIX B  
ACTUARIAL ASSUMPTIONS AND METHODS**

<b>Male Normal Retirement</b>		
<b>Age</b>	<b>Select</b>	<b>Ultimate</b>
<45	13.00%	0.00%
45 – 56	13.00	11.00
57	13.00	15.00
58 – 60	10.00	15.00
61	10.00	26.00
62	20.00	26.00
63	10.00	20.00
64	16.00	20.00
65 – 66	16.00	26.00
67	16.00	20.00
68 – 79	16.00	16.00
80+	100.00	100.00

<b>Female Early Retirement</b>		
<b>Age</b>	<b>Select</b>	<b>Ultimate</b>
<41	1.50%	0.00%
41 – 48	1.50	2.00
49 – 50	2.00	2.00
51 – 52	2.00	3.00
53 – 54	5.00	3.00
55	5.00	5.00
56 – 57	6.00	5.00
58 - 59	7.00	5.00

DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

**APPENDIX B  
ACTUARIAL ASSUMPTIONS AND METHODS**

<b>Female Normal Retirement</b>		
<b>Age</b>	<b>Select</b>	<b>Ultimate</b>
<45	15.00%	0.00%
45 – 51	15.00	6.00
52 – 53	15.00	8.00
54	15.00	11.00
55 – 57	20.00	11.00
58 – 59	20.00	14.00
60	12.00	14.00
61 – 62	21.00	24.00
63	10.00	24.00
64	10.00	17.00
65	26.00	24.00
66	15.00	24.00
67 – 70	15.00	21.00
71 – 79	15.00	12.00
80+	100.00	100.00

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

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

Select

<u>Service (years)</u>	<u>Increase</u>
0 – 1	6.14
2	4.25
3 – 9	2.66

Ultimate

<u>Age</u>	<u>Increase</u>
<40	1.50
40 – 49	1.00
50+	0.50

**h. 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.



DELAWARE STATE EMPLOYEES' PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2010

APPENDIX B  
ACTUARIAL ASSUMPTIONS AND METHODS

**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 for Retirees:	0.00%
d. Rate of Increase in Total Payroll (for Amortization):	3.75%
e. Administrative Expenses as a Percentage of Payroll:	0.35%

**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 amortized to develop an additional cost or savings which is added 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 portion of unfunded liability which is not expected to be paid through transfers from the PRI Fund is amortized over a rolling 20 year period. All 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 full-time and regular part-time employees of the State (including elected or appointed officials), the State Department of Public Instruction, a school district which is part of the State School System (the membership includes 19 school districts), the University of Delaware (excluding most faculty and designated professional staff), Delaware State University, Delaware Technical & Community College, Wilmington Federal Credit Union and any State Agency supported in whole or in part by federal funds granted to the State.

**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 of any 36 months comprised of three periods of 12 consecutive months (or shorter period of total service) of compensation paid to the member, including salary, wage and fees, plus overtime payments and special payments for extra duty.

**5. Normal Retirement**

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

Benefit: 2.0% of final average compensation multiplied by years of service prior to January 1, 1997 plus 1.85% of final average compensation multiplied by years of service after January 1, 1997.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**

**6. Early Retirement**

Eligibility: (i) age 55 with 15 years of credited service; or (ii) any age with 25 years of credited service.

Benefit: Normal retirement benefit calculated using final average compensation and service at early retirement, and reduced by 0.2% for each month which retirement age precedes the earlier of age 60 or the attainment of 30 years of service.

**7. Disability Benefit**

Eligibility: Five years of credited service

Benefit: Normal retirement benefit calculated using service and salary at disability date.

State Plan: Member who opted into the Disability Insurance Program will not receive a benefit from this Plan until they reach normal retirement eligibility.

**8. Survivor's Benefit**

Eligibility: Five years of credited service if active, or death after retirement.

Benefit: For eligible survivors of employees who die in active service: 75% of service pension employee would have been eligible to receive at age 62, calculated using final average compensation and credited service accrued to the date of death.

For eligible survivors of pensioners who die: 50% of pension received immediately prior to death, or 75%, if the pensioner has so elected by taking a 3% reduction to his benefit.

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. If no eligible survivors, accumulated contributions with interest over aggregate pension payments are payable to the beneficiary.

**9. Burial Benefit**

\$7,000 lump sum.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**

**10. Vesting**

Eligibility: Employees who separate from service with at least five years of service.

Benefit: Accrued normal retirement benefit, payable at age 62. 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.

**11. Withdrawal of Employee Contributions**

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

Benefit: Accumulated employee contributions with interest.

**12. Form of Payment**

The normal form of payment is a life annuity.

A member may elect a 75% joint and survivor form with a 3% reduction in benefits.

**13. Cost-of-Living Adjustment**

Cost-of-Living Adjustments are made only on an ad hoc basis.

**14. Changes Since Last Valuation**

None.