



**Delaware State Employees'
Pension Plan**

**Actuarial Valuation
as of June 30, 2014**

Produced by [Cheiron](#)

February 2015

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February 6, 2015

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 (Plan) as of June 30, 2014. The results of this valuation are contained in this report. The purpose of the valuation is discussed in the Foreword.

This report contains information on plan assets and liabilities, as well as analyses combining asset and liability performance and projections. It also discloses State contribution levels and required disclosures under the Governmental Accounting Standards Board (GASB) Statement No. 67.

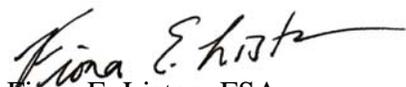
In completing the valuation and preparing our report, we relied on information, some oral and some written, supplied by staff of the Office of Pensions. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The contribution results of this report are only applicable to the State contribution for Fiscal Year (FY) 2016 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 that 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 opinions 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 State Employees' Pension Plan for the purpose 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.

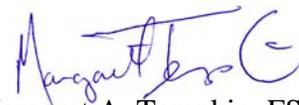
Sincerely,
Cheiron



Fiona E. Liston, FSA
Principal Consulting Actuary



Elizabeth Wiley, FSA, EA
Consulting Actuary



Margaret A. Tempkin, FSA
Principal Consulting Actuary



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

FOREWORD

Cheiron has performed the annual actuarial valuation of the Delaware State Employees' Pension Plan (Plan) as of June 30, 2014. 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 condition of the Plan;
- 3) **Determine the contribution rate** to be paid by the State for Fiscal Year (FY) 2016; and
- 4) **Provide** accounting statement information.

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 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 liabilities, measured for actuarial, accounting, and governmental reporting purposes.

Section IV presents the FY 2016 actuarially determined State contribution.

Section V includes the required disclosures under Governmental Accounting Standards Board (GASB) Statement No. 67 and items recommended by the Government Finance Officers Association (GFOA).

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 a summary of the actuarial methods and assumptions used in the valuation.

The actuarial assumptions reflect our understanding of the likely future experience of the Plan, and the assumptions individually and 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 would vary from our results.

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I
BOARD SUMMARY**

General Comments

The actuarially determined contribution (ADC) rate increased from 9.56% for FY 2015 to 9.58% for FY 2016.

During the year ended June 30, 2014, the Plan's assets earned 17.3% on a market value basis. However, due to the Plan's asset smoothing method, which recognizes only a portion of investment gains and losses, the return on an actuarial value basis was 10.9%. This return was greater than the assumed investment rate of return of 7.5% for last year, resulting in an actuarial gain on investments of \$254 million. Note that this comparison will be made against the revised 7.2% assumption next year due to the investment rate of return assumption change.

The Plan experienced an actuarial gain on plan liabilities resulting from salary increases different from those assumed and members retiring, terminating, becoming disabled, and dying at rates different from the actuarial assumptions. This liability gain decreased the actuarial liability by \$18 million, 0.2% of the total actuarial liability. This type of relatively small gain or loss is normal in the course of plan experience, as we cannot predict exactly how people will behave.

This valuation reflects changes in both liability and asset measurements due to a reduction in the assumed investment rate of return from 7.5% to 7.2%. This assumption change, combined with offsetting adjustments to inflation assumptions, increased the actuarial liability measurement by \$237 million. As a partial offset to this liability impact, an additional 30% of the remaining balance of past investment gains was included in the measurement of the actuarial value of assets at the June 30, 2014 valuation. This additional amount represents \$138 million of the total \$254 million investment gain reported above.

This valuation report also contains information to be reported in the June 30, 2014 Comprehensive Annual Financial Report (CAFR) of the Delaware Public Employees' Retirement System (Delaware PERS) under the new GASB Statement No. 67 as well as additional disclosure information recommended by the Government Finance Officers Association (GFOA). The GASB disclosures are based on the use of updated procedures to roll forward the 2013 actuarial valuation liability results. The 2013 liability results, used as the starting point for this roll forward, include the changes in the investment rate of return and inflation assumptions, first included for funding in this 2014 report, and as such are higher than the funding numbers provided in the 2013 valuation report. The calculation of net pension liability in Section V is shown as disclosed for the plan year June 30, 2014, based on the 2013 actuarial valuation liability results. We also present a projection of the June 30, 2015 disclosure in Section V, assuming all actuarial assumptions are met over the coming year, which is based on the 2014 actuarial valuation liability results.

As of the June 30, 2014 actuarial valuation, the Plan's unfunded actuarial liability (UAL) was \$673 million. This is a decrease from the \$737 million UAL in the funding valuation for the prior year.

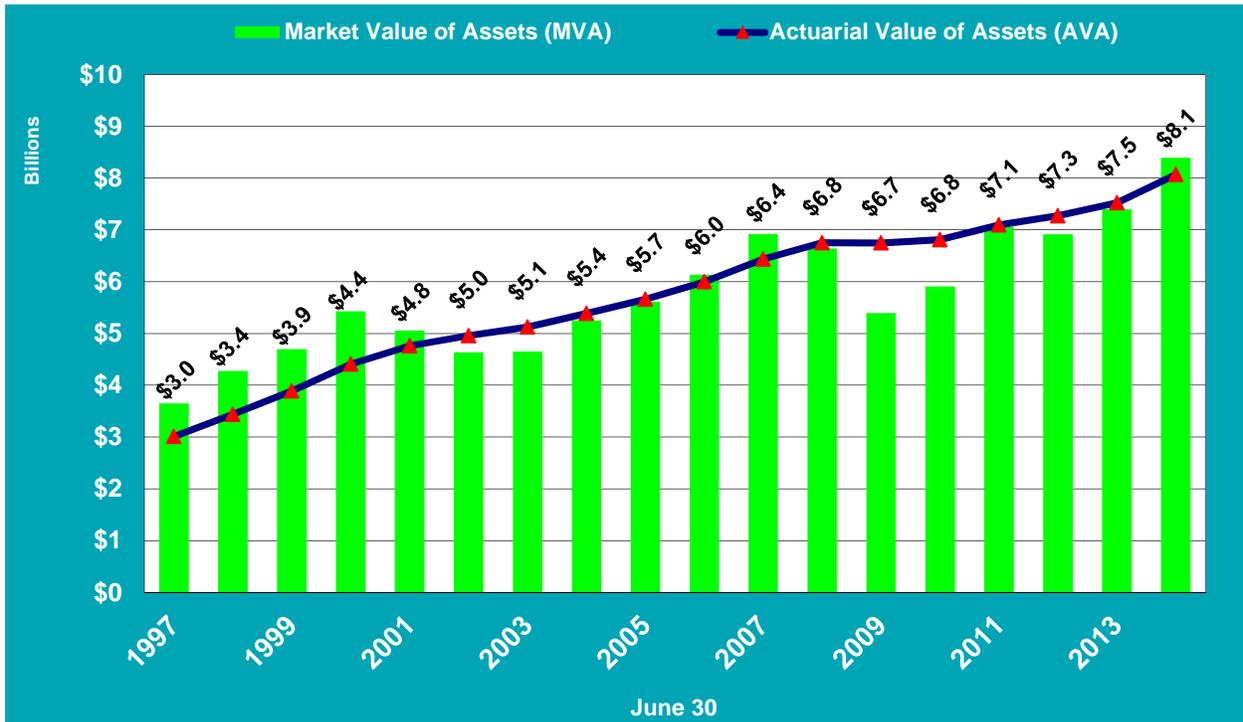
DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

SECTION I
BOARD SUMMARY

Trends

Growth in Assets

The graph below shows measurements of the Plan's assets over the last 18 years based on both market values and actuarial values. The green bars represent the market value measurements, while the blue line shows the actuarial value measurements. The black numbers are the actuarial value of asset measurements as of the valuation date for each year, in billions of dollars.



The market value of assets (MVA) returned 17.3% over the last year. The determination of the Plan's actuarial value of assets (AVA) for the current year reflects a portion of the return above the 7.5% assumed for the year, continued recognition of prior years' gains and losses, and an additional 30% of the remaining unrecognized investment gains recognized as a partial offset of the assumption changes.

Over the period July 1, 1997 to June 30, 2014, the Plan's assets returned approximately 8.8% per year measured on an actuarial value basis, compared to the current valuation assumption of 7.2%.

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

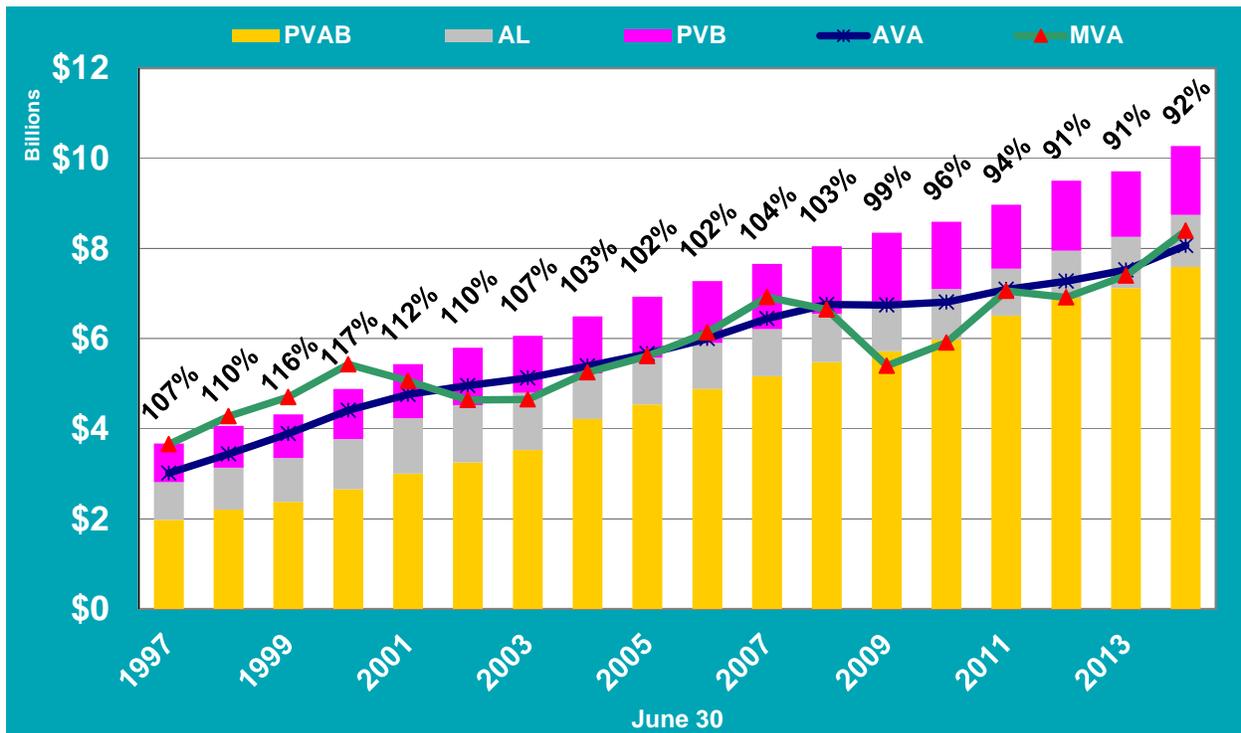
**SECTION I
BOARD SUMMARY**

Assets and Liabilities

The three colored bars below represent the three different measures of liability discussed in this report. The first measure is given by the yellow bars, the present value of accrued benefits (PVAB). The PVAB values represent the value of all benefits earned by current members through the valuation date. These values do not reflect any future additional service or salary increases for current members.

The second liability measure is the one currently used for the Plan's funding target, the actuarial liability (AL). These target amounts are represented by the top of the gray bars. The funded ratios reported by the Plan are the percentages shown above the bars and are developed by comparing these target measurements of liability to the actuarial value of assets at each valuation date. This measurement is also the basis of the liability measure used in GASB 67.

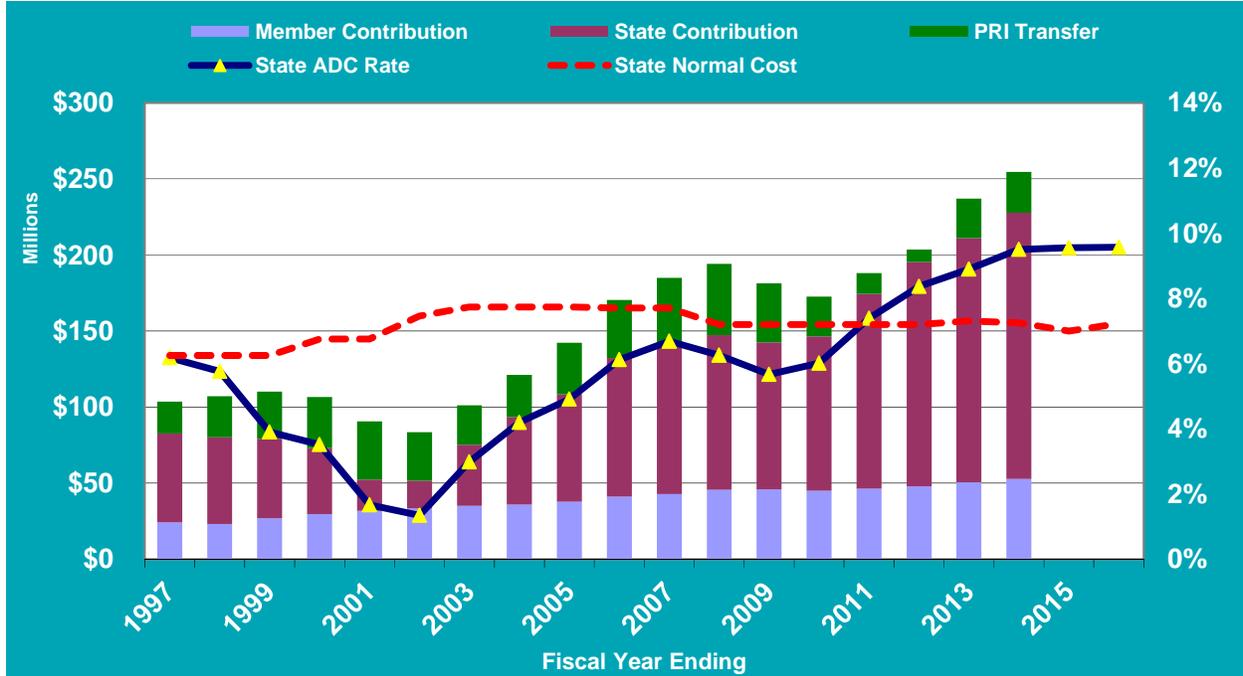
The amount represented by the top of the pink bars, the present value of future benefits (PVB), is the amount needed to provide all benefits for the current members and their beneficiaries, including reflection of assumed future service and pay increases. If the Plan had assets equal to the PVB as of a certain date, no additional contributions would, in theory, be needed for the current members if all assumptions were exactly met from that point forward.



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I
BOARD SUMMARY**

Contribution Rates



The stacked bars in the graph above show the contributions made by the State, the Post-Retirement Increase Fund (PRI), and the members for each fiscal year, and are read using the left-hand scale. The blue line shows the State ADC rate for each fiscal year as a percentage of payroll (right-hand scale). The red line shows the level of the State normal cost rate, which measures the value of benefits being accrued each year, offset by the portion paid through member contributions, also read with the right-hand scale.

The member contribution rate is set by State law, based on the Plan in which the member participates. The State contribution rate is set by the actuarial process, while the PRI transfer amounts depend on the increases granted by the State legislature. Please note that there is a lag in the State contribution rates shown. For example, the value shown for the Fiscal Year 2014 is the rate prepared by the June 30, 2012 valuation and implemented for the period July 1, 2013 to June 30, 2014.

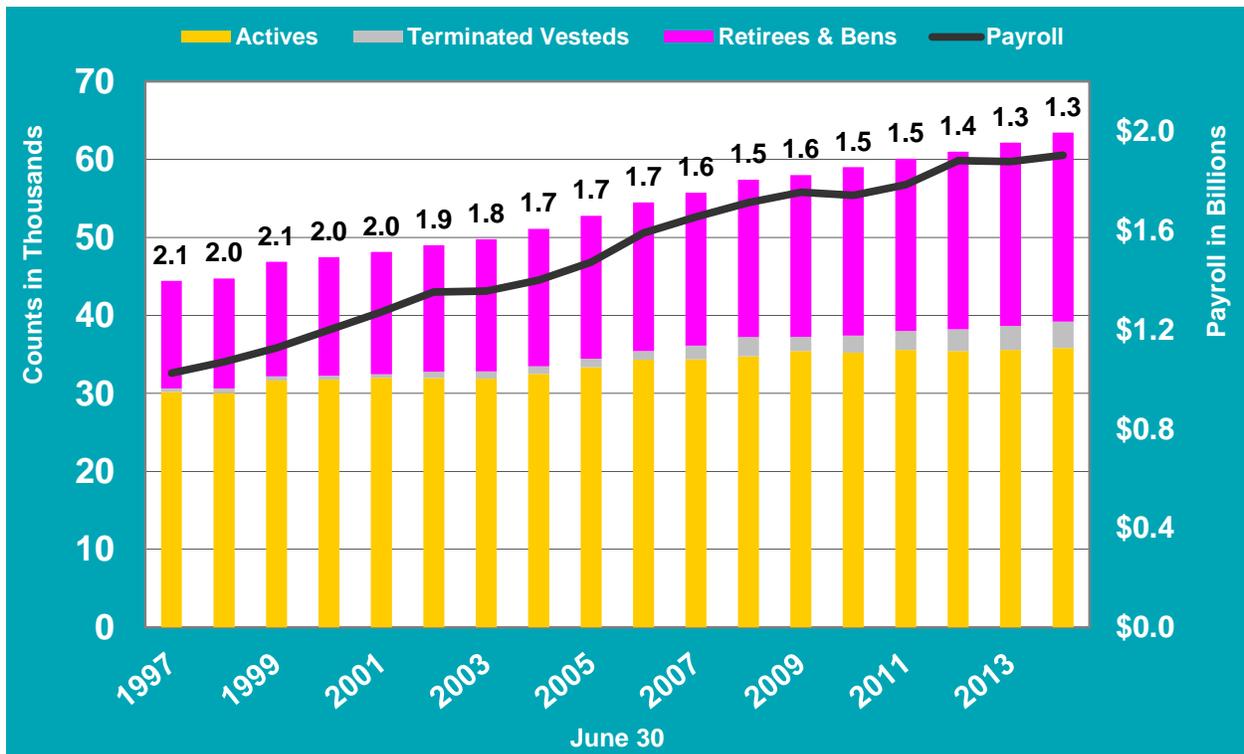
**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I
BOARD SUMMARY**

Participant Trends

The bars below show the number of members as of each valuation date, divided between active members, terminated vested members, and retirees/beneficiaries. These bars are read using the left-hand scale. As with most maturing funds, this Plan continues to show growth in the number of inactive members. The numbers that appear above each bar represent the ratio of active members to inactive members (retirees, beneficiaries, and terminated vested members) at each valuation date. This active-to-inactive ratio has decreased from 2.1 actives to each inactive in 1997 to 1.3 actives for each inactive in 2014.

The black line shows the covered payroll for the Plan as of each valuation date and is read using the right-hand scale.

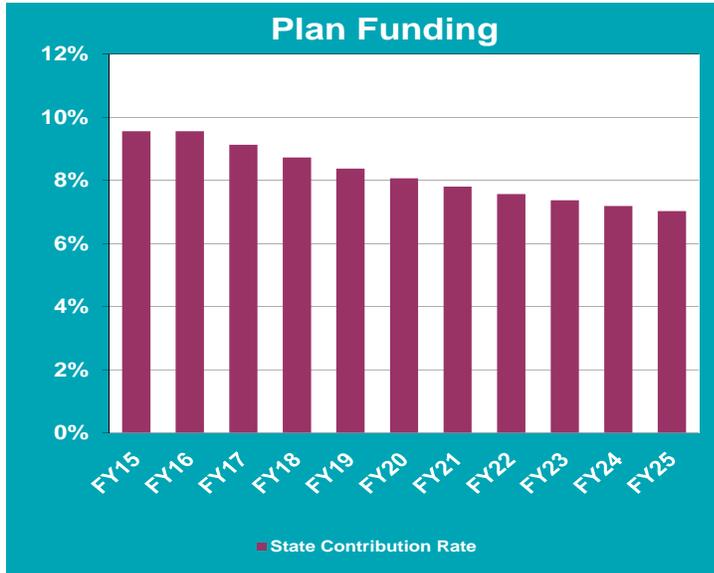


DELAWARE STATE EMPLOYEES' PENSION PLAN
 ACTUARIAL VALUATION AS OF JUNE 30, 2014

SECTION I
 BOARD SUMMARY

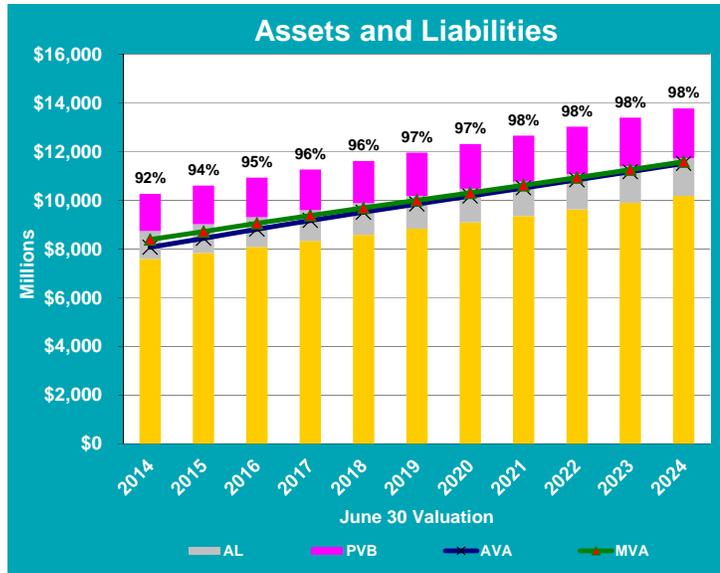
Future Outlook

Baseline Projections



These graphs show the expected progress of the Plan over the next ten years, assuming the Plan's assets earn 7.2% on a *market value* basis and assuming all assumptions are exactly met, including that the ADC amounts are made in full. The chart entitled "Plan Funding" shows a decrease in the State ADC rate from 9.58% in FY 2016, determined by the current valuation, to 7.00% at the end of this period, absent further gains or losses.

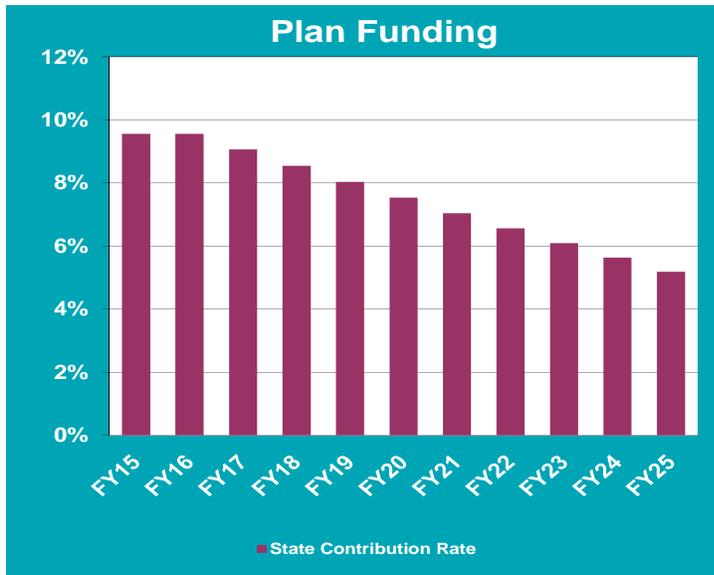
The "Assets and Liabilities" graph shows the projected funded ratios of the Plan over the next ten years. The Plan's funded status is projected to grow steadily from 92% to 98%, assuming all assumptions are exactly met.



DELAWARE STATE EMPLOYEES' PENSION PLAN
 ACTUARIAL VALUATION AS OF JUNE 30, 2014

SECTION I
 BOARD SUMMARY

Projections with Asset Returns of 8.2%

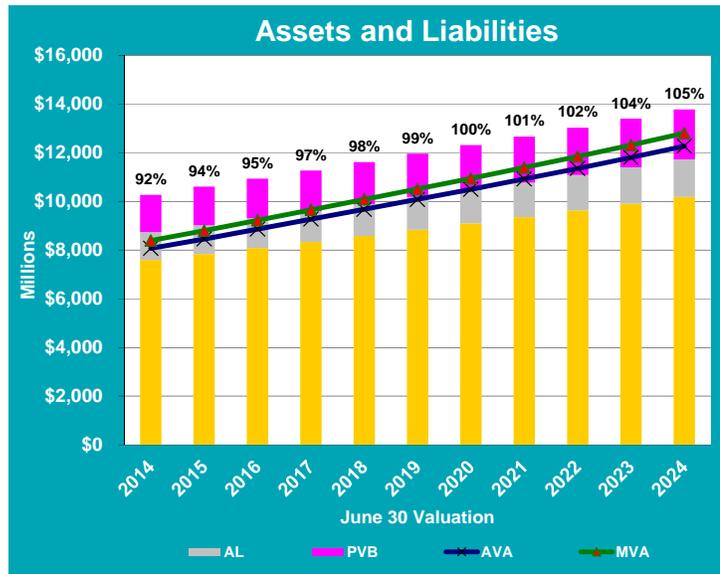


The Plan’s investment earnings will affect the future funding status of the Plan. These two graphs show what the next ten years would be expected to look like if the Plan’s investment performance is 8.2% each year, 1.0% higher than the valuation investment rate of return assumption.

These two graphs assume all other assumptions are exactly met, including State contributions equal to the full actuarially determined amounts.

The “Plan Funding” graph shows that the State ADC rate under this scenario decreases even more than the baseline scenario, dropping to approximately 5.2% of payroll at the end of the projected period.

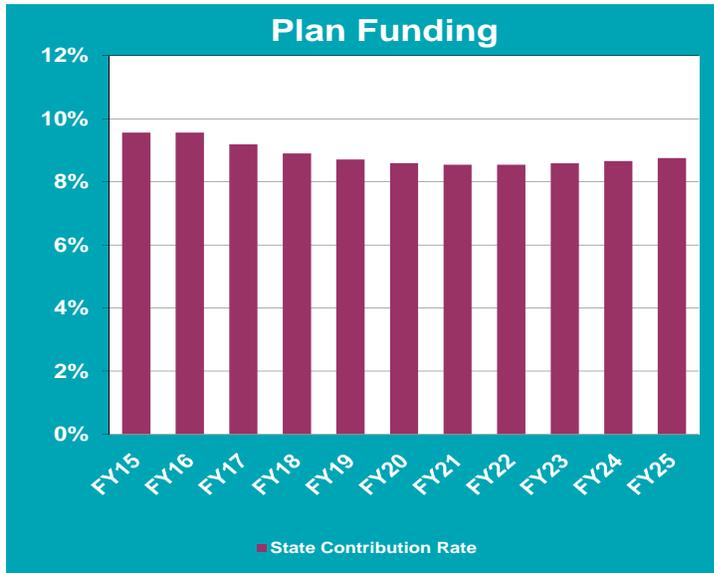
The “Assets and Liabilities” graph shows that the Plan would reach a 105% funded ratio by 2024 under this scenario, an improvement over the baseline scenario’s 98%.



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I
BOARD SUMMARY**

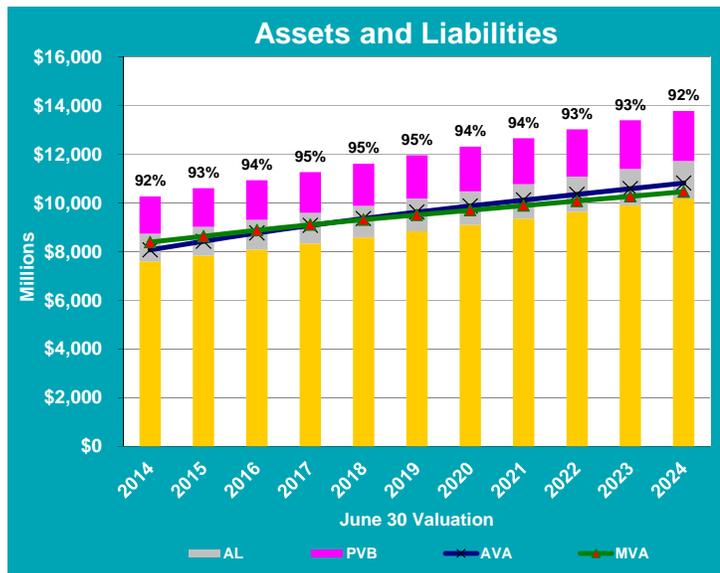
Projections with Asset Returns of 6.2%



The graphs on this page show projections of the Plan’s funding status assuming the Plan’s investment performance is 6.2% each year of the projection, 1.0% lower than the valuation investment rate of return assumption. While the current remaining unrecognized gains would cushion the new annual losses for a period, eventually the new losses would result in the funded ratio dropping and the required contributions increasing compared to the baseline scenario. This effect demonstrates the importance of investment earnings on the Plan’s future funding needs.

Note that these projections assume all other assumptions are exactly met, including payment of State contributions equal to the full actuarially determined contribution.

Under this scenario, the State’s ADC rate decreases to approximately 8.75% of payroll, compared to 7.00% in the baseline, and the funded ratio as of 2024 decreases to 92%, compared to 98% in the baseline scenario.



DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

SECTION I
BOARD SUMMARY

Table I-1
Summary of Principal Plan Results

Valuation as of:	June 30, 2013	June 30, 2014	% Change
<u>Member Counts</u>			
Active Members	35,571	35,825	0.71%
Disabled Members	1,832	1,769	(3.44%)
Retirees and Beneficiaries	21,679	22,498	3.78%
Terminated Vested Members	2,564	2,830	10.37%
Terminated Non-Vested Members	778	741	(4.76%)
Long-term Disability Members	531	544	2.45%
Total	62,955	64,207	1.99%
Covered Payroll of Active Members*	\$ 1,877,105,000	\$ 1,902,292,800	1.34%
Annual Benefit Payments for Retirees, Disabled Members, and Beneficiaries	\$ 483,005,100	\$ 506,851,700	4.94%
<u>Assets and Liabilities</u>			
Actuarial Liability (AL)	\$ 8,257,269,800	\$ 8,740,071,700	5.85%
Actuarial Value of Assets (AVA)	7,519,770,300	8,067,032,000	7.28%
Unfunded AL (UAL)	\$ 737,499,500	\$ 673,039,700	(8.74%)
Funded Ratio	91.1%	92.3%	
Present Value of Accrued Benefits (PVAB)	\$ 7,120,947,700	\$ 7,589,855,500	6.58%
Market Value of Assets (MVA)	7,395,576,600	8,389,764,700	13.44%
Unfunded PVAB	\$ (274,628,900)	\$ (799,909,200)	(191.27%)
Accrued Benefit Funded Ratio	103.9%	110.5%	
<u>State Contribution Rate</u>			
	Fiscal Year 2015	Fiscal Year 2016	
Entry Age Normal Cost	6.70%	6.93%	
UAL Amortization Payment	2.56%	2.35%	
Administrative Expense	0.30%	0.30%	
Actuarially Determined Contribution (ADC)	9.56%	9.58%	

* Assumes one year of payroll increase projection, representing payroll beginning on each valuation date.

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II
ASSETS**

Pension plan assets play a key role in the financial operation of the plan and in the decisions that 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 affect benefit levels, State actuarially determined contributions, and the ultimate security of members' benefits.

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

- **Disclosure** of the Plan's assets at June 30, 2013 and June 30, 2014;
- 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 **cash flows** for the next ten years.

Market Value of Assets Disclosure

The market values of assets represent "snap-shot" or "cash-out" values that provide the principal basis for measuring financial performance from one year to the next. However, market values can fluctuate widely with swings in the marketplace, and as such are usually not suitable for budgeting and long-range planning.

Table II-1 below shows the market values as of June 30, 2013 and June 30, 2014, along with the changes between the two.

Table II-1 Changes in Market Value of Assets	
Market Value of Assets – June 30, 2013	\$ 7,395,576,600
<u>Additions</u>	
Member Contributions	\$ 52,793,500
State Contributions	174,843,400
PRI Transfers	26,877,300
Investment Returns	1,254,715,100
Total Additions	\$ 1,509,229,300
<u>Deductions</u>	
Benefit Payments	\$ 509,799,500
Administrative Expenses	5,241,700
Total Deductions	\$ 515,041,200
Market Value of Assets – June 30, 2014	\$ 8,389,764,700

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II
ASSETS**

Actuarial Value of Assets

The actuarial value of assets represents a “smoothed” value developed by the actuary to reduce, or eliminate, erratic results that could develop from short-term fluctuations in the market value of assets. The actuarial value for this plan equals the expected actuarial value of assets, developed from the immediately prior valuation, plus 20% of the difference between the actual market value of assets and that expected actuarial value of assets at the valuation date. For this June 30, 2014 valuation, the actuarial value of assets also recognizes an additional 30% of past deferred gains to partially offset the increases in liability and normal cost resulting from the reduction of the investment rate of return assumption from 7.50% to 7.20%. The table below illustrates the calculation of the actuarial value of assets as of June 30, 2014.

Table II-2 Development of Actuarial Value of Assets	
1. Actuarial Value of Assets at June 30, 2013	\$ 7,519,770,300
2. Amount in (1) with interest to June 30, 2014 at 7.50% per year	\$ 8,083,753,100
3. State, PRI and member contributions for the Plan Year ended June 30, 2014	254,514,200
4. Interest on contributions assuming payments made uniformly throughout the year to June 30, 2014 at 7.50% per year	9,544,300
5. Disbursements from Trust except investment expenses, June 30, 2013 through June 30, 2014	515,041,200
6. Interest on disbursements to June 30, 2014 at 7.50% per year	<u>19,314,000</u>
7. Expected Actuarial Value of Assets at June 30, 2014 = (2) + (3) + (4) – (5) – (6)	\$ 7,813,456,400
8. Actual Market Value of Assets at June 30, 2014	<u>\$ 8,389,764,700</u>
9. Excess of (8) over (7)	576,308,300
10. Additional 30% Recognition of Past Deferred Gains = 30% of 80% of (9)	<u>138,314,000</u>
11. Actuarial Value of Assets at June 30, 2014 = (7) + 20% of (9) + (10)	\$ 8,067,032,000

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II
ASSETS**

Investment Performance

The market value of assets (MVA) returned 17.3% during 2014, which is greater than the assumed 7.5% investment rate of return. The actuarial value of assets (AVA) returned 10.9% over this same year, including reflecting the additional 30% recognized due to the assumption changes adopted and the standard asset smoothing method being utilized by the Plan for the measurement of the actuarial value of assets. Since only 20% of the gain or loss from the performance of the Plan is typically recognized in a given year under the asset smoothing method, in periods of very good performance, the AVA can lag significantly behind the MVA, and in a period of negative returns, the AVA does not decline as rapidly as the MVA.

Projection of Cash Flows

Table II-3 Cash Flow Projections		
Year Beginning July 1,	Expected Benefit Payments	Expected Contributions*
2014	\$ 526,897,000	\$ 270,811,000
2015	548,198,000	279,544,000
2016	569,581,000	278,122,000
2017	592,208,000	264,940,000
2018	614,832,000	272,888,000
2019	637,306,000	281,074,000
2020	659,191,000	289,507,000
2021	681,016,000	298,192,000
2022	701,322,000	307,138,000
2023	722,028,000	316,352,000

* Expected contributions include State contributions, member contributions, and PRI transfers. For illustration purposes, we have assumed the State contribution rate will remain at 9.58% from FYE 2016 forward and that payroll will increase at the actuarially assumed rate of 3.00% per year.

Expected benefit payments are projected for the closed group valued at June 30, 2014. Projecting any further than ten years using a closed group would not yield reliable projections due to the omission of new hires in the benefit payments, compounded by their inclusion in the expected contributions.

SECTION III LIABILITIES

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

- **Disclosure** of the Plan's liabilities at June 30, 2013 and June 30, 2014; and
- Statement of **changes** in these liabilities during the year.

Disclosure

Three liability measurements are calculated and presented in this report. Each type is distinguished by the purpose, or purposes, for which they are used.

- **Present Value of Benefits (PVB):** Used for analyzing the financial outlook of plans, this represents the amount of money needed today to fully pay off all future benefits and expenses of a plan, assuming current members continue to accrue benefits and there are no new entrants.
- **Actuarial Liability (AL):** Used for funding calculations and GASB disclosures, this liability is calculated by taking the present value of benefits (PVB) and subtracting the present value of future member contributions (PVFEEC) and the present value of future State normal costs (PVFNC) under an acceptable actuarial funding method. This Plan uses the **Entry Age Normal** funding method.
- **Present Value of Accrued Benefits (PVAB):** 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 a plan, assuming no future accruals of benefits. These liabilities are also required for some accounting purposes (Topic No. 960) and are sometimes used as part of assessing whether a plan can meet its current benefit commitments.

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

DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

**SECTION III
LIABILITIES**

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

	June 30, 2013	June 30, 2014
<u>Present Value of Benefits</u>		
Active Member Benefits	\$ 4,971,622,100	\$ 5,216,382,800
Retiree, Beneficiary, Disabled, and Terminated Members Benefits	<u>4,737,841,000</u>	<u>5,055,166,500</u>
Present Value of Benefits (PVB)	\$ 9,709,463,100	\$ 10,271,549,300
Market Value of Assets (MVA)	\$ 7,395,576,600	\$ 8,389,764,700
Future Member Contributions	472,238,500	496,700,800
Future State Contributions & PRI Fund Transfers	<u>1,841,648,000</u>	<u>1,385,083,800</u>
Total Resources	\$ 9,709,463,100	\$ 10,271,549,300
<u>Actuarial Liability</u>		
Present Value of Benefits (PVB)	\$ 9,709,463,100	\$ 10,271,549,300
Present Value of Future State Normal Costs (PVFNC)	979,954,800	1,034,776,800
Present Value of Future Member Contributions (PVFEEC)	<u>472,238,500</u>	<u>496,700,800</u>
Actuarial Liability (AL=PVB-PVFNC-PVFEEC)	\$ 8,257,269,800	\$ 8,740,071,700
Actuarial Value of Assets (AVA)	<u>7,519,770,300</u>	<u>8,067,032,000</u>
Net (Surplus)/Unfunded AL (AL - AVA)	\$ 737,499,500	\$ 673,039,700
<u>Present Value of Accrued Benefits</u>		
Present Value of Benefits (PVB)	\$ 9,709,463,100	\$ 10,271,549,300
Present Value of Future Benefit Accruals (PVFBA)	<u>2,588,515,400</u>	<u>2,681,693,800</u>
Present Value of Accrued Benefits (PVAB=PVB-PVFBA)	\$ 7,120,947,700	\$ 7,589,855,500
Market Value of Assets (MVA)	\$ 7,395,576,600	\$ 8,389,764,700
Net (Surplus)/Unfunded PVAB (PVAB - MVA)	\$ (274,628,900)	\$ (799,909,200)

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**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 entrants 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 assumptions
- A change in actuarial methods

Unfunded liabilities (or surpluses) will change because of all of the above as well as due to changes in plan assets resulting from:

- State 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 that 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 Liability Changes			
(In Millions)	Present Value of Benefits	Actuarial Liability	Present Value of Accrued Benefits
Liabilities June 30, 2013	\$ 9,709	\$ 8,257	\$ 7,121
Liabilities June 30, 2014	10,272	8,740	7,590
Liability Increase (Decrease)	563	483	469
Change Due to:			
PRI	0	0	0
Actuarial (Gain)/Loss	NC *	(18)	NC *
Assumption Change	303	237	243
Benefits Accumulated and Other Sources	260	264	226

* NC = not calculated.

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION III
LIABILITIES**

Table III-3 below provides additional information about the liability measurements for funding purposes as of both the current and the immediately prior valuations.

Table III-3		
Actuarial Liabilities for Funding		
	June 30, 2013	June 30, 2014
1. Actuarial Liabilities		
Retiree, Beneficiary, Disabled, and Terminated Members Benefits	\$ 4,737,841,000	\$ 5,055,166,500
Active Members	<u>3,519,428,800</u>	<u>3,684,905,200</u>
Total Actuarial Liability	\$ 8,257,269,800	\$ 8,740,071,700
2. Actuarial Value of Assets	\$ 7,519,770,300	\$ 8,067,032,000
3. Unfunded Actuarial Liability (UAL)	\$ 737,499,500	\$ 673,039,700
4. Present Value of Outstanding PRI Transfers	\$ 90,405,000	\$ 69,396,200
5. Net Base for 20-Year UAL Amortization (3-4)	\$ 647,094,500	\$ 603,643,500

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**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 are 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 fairly stable and predictable.

For this Plan, the funding method employed is the **Entry Age Actuarial** funding method. Under this method, there are three components to the total contribution: the **normal cost contribution**, the **unfunded actuarial liability contribution** (UAL contribution), and the **administrative expense contribution**.

The normal cost contribution 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 and dividing it by the value, also at entry age, of the member's expected future salary. Then, this total normal cost rate is reduced by the member contribution rate to produce the State normal cost rate for each member. The State normal cost rate times payroll for each active member equals the State normal cost. The sum of the State normal cost amounts for all active members is then divided by the covered payroll to produce the State normal cost contribution rate.

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

The UAL contribution rate is calculated by amortizing this UAL, reflecting the present value of scheduled PRI transfers as well, over an open 20-year period. All payments are determined assuming total pay increases by the annual inflation rate of 3.00% (3.25% for 2013 results).

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 State contribution rates for the Plan for this valuation and the immediately prior one.

	Table IV-1 State Contribution Rate	
	June 30, 2013 Fiscal Year 2015	June 30, 2014 Fiscal Year 2016
Entry Age Normal Cost Rate	6.70%	6.93%
UAL Amortization Payment	2.56%	2.35%
Administrative Expense	<u>0.30%</u>	<u>0.30%</u>
Actuarially Determined Contribution	9.56%	9.58%

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION IV
CONTRIBUTIONS**

Table IV-2 below provides additional detail about the development of the State contribution rate as well as the expected dollar amounts these rates will result in for FY 2016.

Table IV-2 Expected FY 2016 State Contributions		
	In Dollars	As % of Payroll
1. Present Value of Projected Benefits Attributable to:		
a. Total Normal Cost	\$ 192,131,600	10.10%
b. Expected Member Contributions	<u>60,302,700</u>	<u>3.17%</u>
c. State Normal Cost (a) – (b)	\$ 131,828,900	6.93%
2. Amortization of Unfunded Liability	44,611,200	2.35%
3. Allowance for Administrative Expense	<u>5,706,900</u>	<u>0.30%</u>
4. Total State Actuarially Determined Contribution Rate (1) + (2) + (3)	\$ 182,147,000	9.58%

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION V
ACCOUNTING STATEMENT INFORMATION**

ASC Topic No. 960 of the Financial Accounting Standards Board (FASB) requires plans subject to it to disclose certain information regarding its funded status. Statement No. 67 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.

Disclosures based on FASB ASC Topic No. 960 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.

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. The relevant amounts as of June 30, 2013 and June 30, 2014 are exhibited in Table V-1, which also includes a reconciliation of liabilities determined as of the prior valuation, July 1, 2013, to the liabilities as of June 30, 2014.

This valuation contains information reported in the June 30, 2014 Comprehensive Annual Financial Report (CAFR) of Delaware PERS under the new GASB Statement No. 67. Disclosures are based on the use of update procedures to roll forward the 2013 valuation results. The 2013 starting point is higher than the funding numbers from 2013, because it includes the reduction in the assumed investment return, which was first effective for funding purposes in the 2014 valuation. The calculation of Net Pension Liability in Table V-2 shows the amounts disclosed for the plan year June 30, 2014, based on the updated 2013 liability valuation, as well as a projection of the anticipated June 30, 2015 disclosures, based on 2014 liability valuations, assuming all actuarial assumptions are met over the coming year.

Tables V-3 through V-5 are exhibits to be used for the State’s CAFR. 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. This valuation does not contain any information reported based on the new GASB Statement No. 68 that will be effective for the State beginning in their Fiscal Year 2015 CAFR.

DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-1
Accounting Statement Disclosure and
Reconciliation of Present Value of Accrued Benefits

	June 30, 2013	June 30, 2014
FASB ASC Topic No. 960 Basis		
1. Present Value of Accrued Benefits		
a. Members Currently Receiving Payments	\$ 4,600,135,100	\$ 4,901,957,100
b. Former Vested Members (and LTDs)	137,705,900	153,209,400
c. Active Members	<u>2,383,106,700</u>	<u>2,534,689,000</u>
2. Total Present Value of Accrued Benefits (1 (a) + 1(b) + 1(c))	\$ 7,120,947,700	\$ 7,589,855,500
3. Assets at Market Value	<u>7,395,576,600</u>	<u>8,389,764,700</u>
4. Unfunded Present Value of Accrued Benefits (2 – 3)	\$ (274,628,900)	\$ (799,909,200)
5. Ratio of Assets to Present Value of Benefits (3 / 2)	103.9%	110.5%
Reconciliation of Present Value of Accrued Benefits		
Actuarial Present Value of Accrued Benefits at June 30, 2013		\$ 7,120,947,700
Increase (Decrease) During Year Attributable to:		
Passage of Time		514,953,600
Benefits Paid – FY 2014		(509,799,500)
Assumption Changes		242,671,400
PRI		0
Benefits Accrued, Other Gains/Losses		<u>221,082,300</u>
Net Increase (Decrease)		<u>468,907,800</u>
Actuarial Present Value of Accrued Benefits at June 30, 2014		\$ 7,589,855,500

DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

SECTION V
ACCOUNTING STATEMENT INFORMATION

	June 30, 2014	Estimated June 30, 2015
Table V-2		
GASB No. 67 Disclosures		
<u>Total Pension Liability</u>		
Service cost	\$ 190,156,000	\$ 192,046,000
Interest	599,144,000	618,983,000
Changes in benefit terms	0	43,621,000
Differences between expected and actual experience	0	(17,908,000)
Changes in assumptions	0	0
Benefit payments, including refunds of member contributions	(509,818,000)	(526,897,000)
Net change in Total Pension Liability	\$ 279,482,000	\$ 309,845,000
Total Pension Liability - beginning	\$ 8,478,498,000	\$ 8,757,980,000
Total Pension Liability - ending (a)	\$ 8,757,980,000	\$ 9,067,825,000
<u>Plan Fiduciary Net Position</u>		
Contributions - State	\$ 174,863,000	\$ 181,810,000
Contributions - Non-employer	26,877,000	28,783,000
Contributions - Member	52,793,000	60,218,000
Net investment income	1,254,715,000	594,802,000
Benefit payments, including refunds of member contributions	(509,818,000)	(526,897,000)
Administrative expenses	(5,242,000)	(5,707,000)
Net change in Plan Fiduciary Net Position	\$ 994,188,000	\$ 333,009,000
Plan Fiduciary Net Position - beginning	\$ 7,395,577,000	\$ 8,389,765,000
Plan Fiduciary Net Position - ending (b)	\$ 8,389,765,000	\$ 8,722,774,000
Plan Net Pension Liability (Asset) - ending [(a)-(b)]	\$ 368,215,000	\$ 345,051,000

Items printed in red will be replaced with actual amounts once known at the end of FY 2015.

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**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, 2014
Actuarial cost method	Entry age
Amortization method	Percentage of pay - open
Amortization period	20 years
Asset valuation method	5-Year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.2%
Projected salary increases*	3.5%-11.5%
Cost-of-living adjustments	ad hoc
* Includes inflation at	3.00%

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 Board of Trustees further modified the investment rate of return and inflation assumptions for the 2014 Plan Year.

The rate of State contributions to the Plan is composed of the normal cost, amortization of the unfunded actuarial liability, and an allowance for administrative expenses. The normal cost is a level percent of payroll cost that, along with member contributions, will pay for projected benefits at retirement for each active member. The actuarial liability is that portion of the present value of projected benefits that will not be paid by future State normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial 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, 2014

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	2009	2010	2011	2012	2013	2014
Investment Income on Actuarial Assets	\$ (337,848)	\$ (224,949)	\$ (8,726)	\$ (88,902)	\$ (31,048)	\$ 115,262
Combined Liability Experience	<u>31,060</u>	<u>34,271</u>	<u>26,105</u>	<u>(79,091)</u>	<u>71,572</u>	<u>17,908</u>
(Loss)/Gain During Year from Financial Experience	\$ (306,788)	\$ (190,678)	\$ 17,379	\$ (167,993)	\$ 40,524	\$ 133,170
Non-Recurring Items	<u>0</u>	<u>0</u>	<u>(173,261)</u>	<u>(39,896)</u>	<u>(84,221)</u>	<u>(98,842)</u>
Composite Gain (or Loss) During Year	\$ (306,788)	\$ (190,678)	\$ (155,882)	\$ (207,889)	\$ (42,697)	\$ 34,328

Table V-5
Solvency Test
Aggregate Accrued Liabilities for

(expressed in thousands)

Valuation Date June 30,	Active Member Contributions (1)	Retirees & Beneficiaries (2)	Active Member State Financed Contributions (3)	Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets		
					(1)	(2)	(3)
2014	\$ 633,353	\$ 4,901,957	\$ 3,204,762	\$ 8,067,032	100%	100%	79%
2013	606,874	4,600,135	3,050,261	7,519,770	100	100	76
2012	629,639	4,370,623	2,949,593	7,270,430	100	100	77
2011	558,065	4,123,360	2,866,526	7,091,821	100	100	84
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

**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Delaware State Employees' Pension Plan Population Distribution
of Active Members by Age and Service as of June 30, 2014**

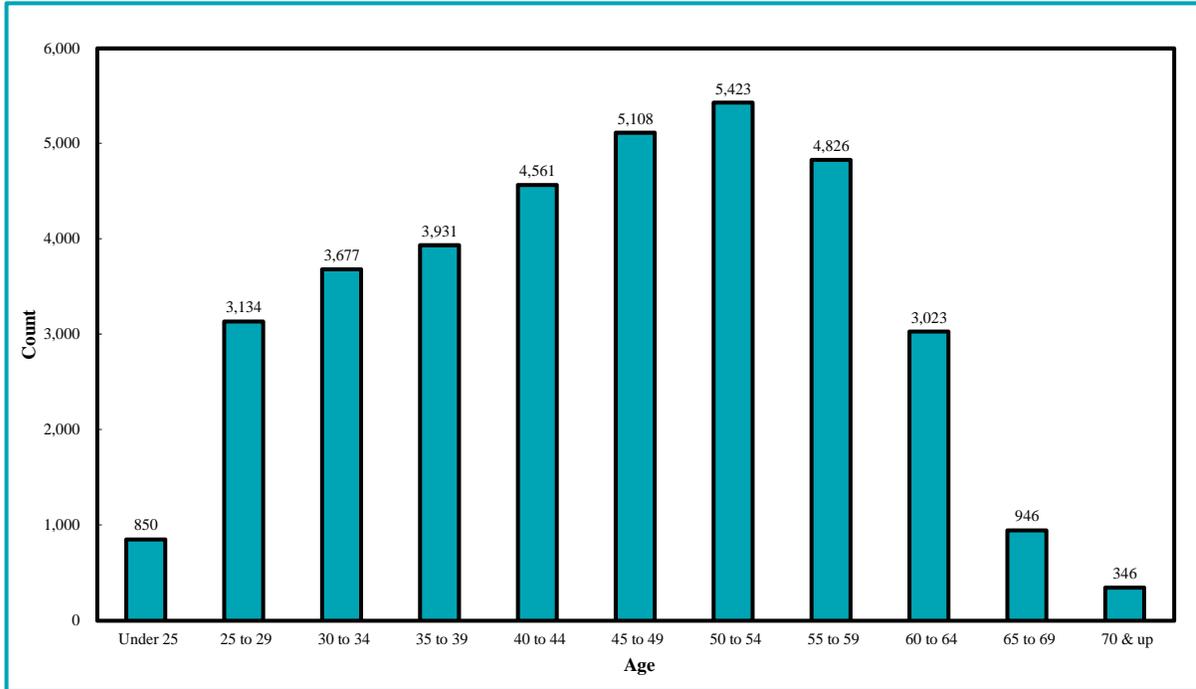
COUNTS BY AGE/SERVICE

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	315	529	6	0	0	0	0	0	0	0	850
25 to 29	459	1,949	722	4	0	0	0	0	0	0	3,134
30 to 34	262	1,197	1,676	528	14	0	0	0	0	0	3,677
35 to 39	198	934	1,191	1,194	407	7	0	0	0	0	3,931
40 to 44	199	852	1,119	1,018	1,047	312	14	0	0	0	4,561
45 to 49	196	952	1,115	919	762	850	307	7	0	0	5,108
50 to 54	146	750	1,071	1,006	883	689	689	176	13	0	5,423
55 to 59	93	559	848	884	880	662	506	292	97	5	4,826
60 to 64	58	306	527	520	502	439	321	165	139	46	3,023
65 to 69	15	105	217	171	159	109	71	37	27	35	946
70 & up	2	44	89	76	45	25	31	13	6	15	346
Total	1,943	8,177	8,581	6,320	4,699	3,093	1,939	690	282	101	35,825

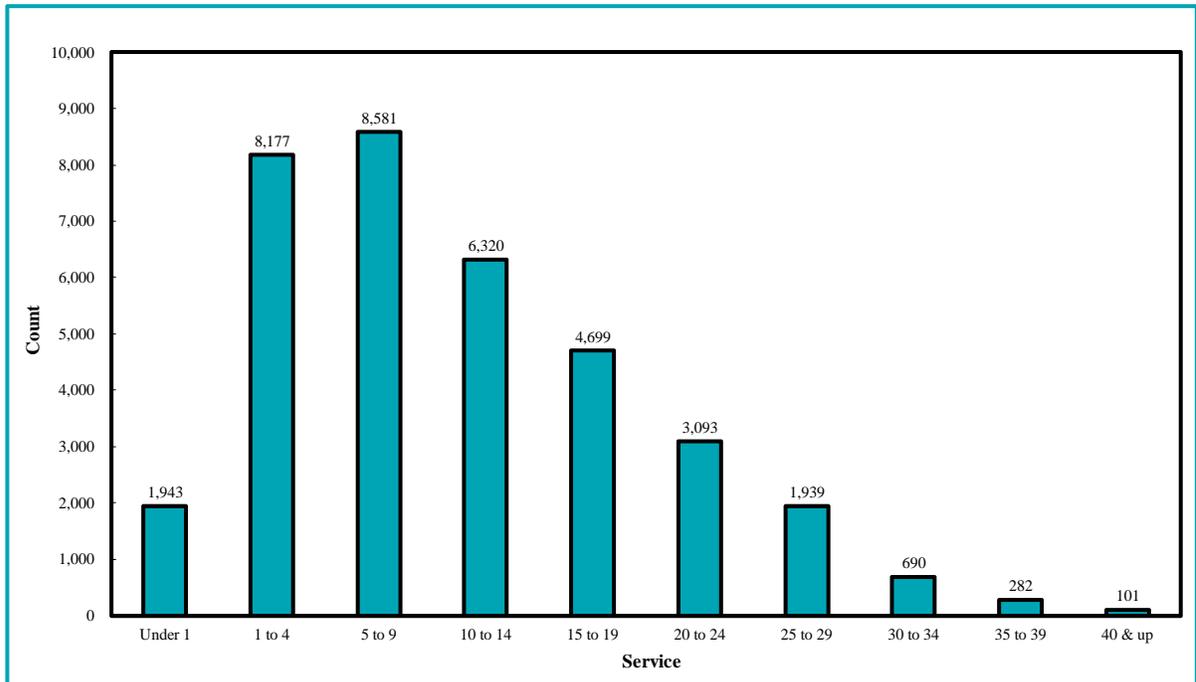
DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

APPENDIX A
MEMBERSHIP INFORMATION

Delaware State Employees' Pension Plan Population Distribution
of Active Members by Age as of June 30, 2014



Delaware State Employees' Pension Plan Population Distribution
of Active Members by Service as of June 30, 2014



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Delaware State Employees' Pension Plan Salary Distribution
of Active Members by Age and Service as of June 30, 2014**

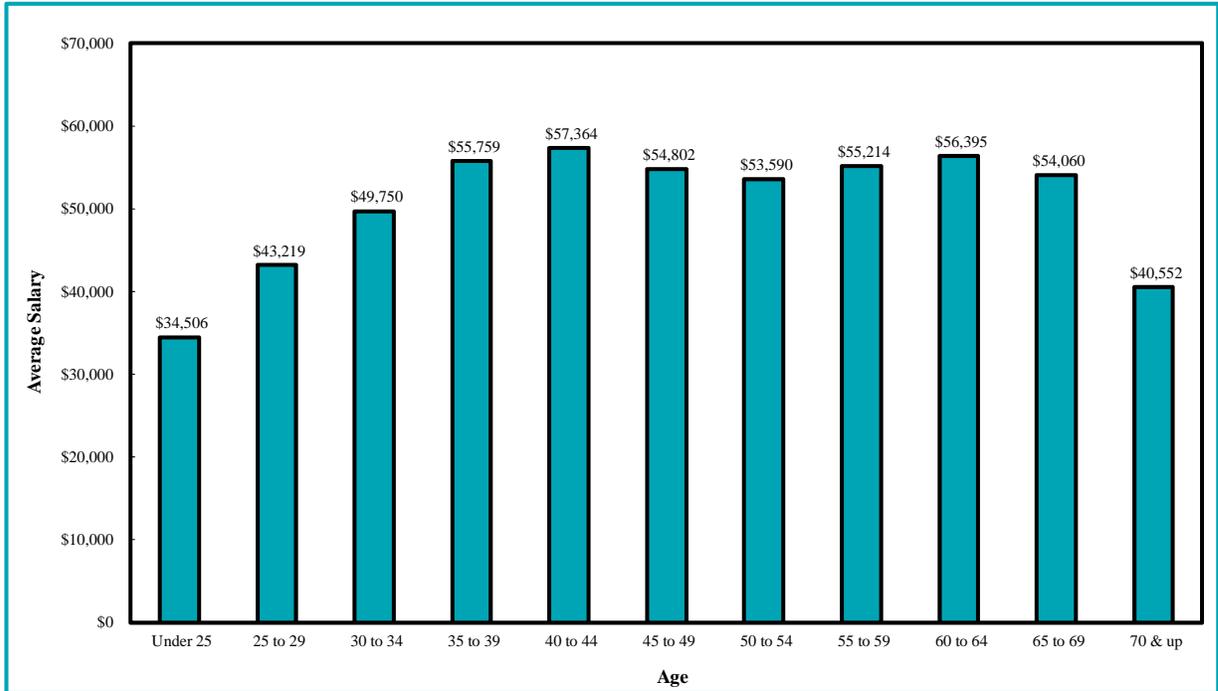
AVERAGE SALARY BY AGE/SERVICE

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	\$ 30,316	\$ 37,114	\$ 24,609	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 34,506
25 to 29	\$ 34,978	\$ 43,307	\$ 48,281	\$ 32,597	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 43,219
30 to 34	\$ 37,826	\$ 45,215	\$ 52,248	\$ 58,135	\$ 45,282	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 49,750
35 to 39	\$ 39,417	\$ 47,144	\$ 54,569	\$ 63,078	\$ 65,287	\$ 67,433	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 55,759
40 to 44	\$ 40,266	\$ 46,338	\$ 52,305	\$ 61,540	\$ 69,345	\$ 62,866	\$ 53,367	\$ 0	\$ 0	\$ 0	\$ 0	\$ 57,364
45 to 49	\$ 40,667	\$ 41,996	\$ 49,280	\$ 55,293	\$ 62,629	\$ 69,454	\$ 62,161	\$ 53,315	\$ 0	\$ 0	\$ 0	\$ 54,802
50 to 54	\$ 41,554	\$ 40,716	\$ 45,754	\$ 54,082	\$ 56,007	\$ 61,646	\$ 68,330	\$ 61,871	\$ 54,564	\$ 0	\$ 0	\$ 53,590
55 to 59	\$ 41,681	\$ 43,750	\$ 46,817	\$ 53,907	\$ 56,119	\$ 61,794	\$ 66,302	\$ 69,245	\$ 66,375	\$ 55,410	\$ 0	\$ 55,214
60 to 64	\$ 41,732	\$ 42,327	\$ 46,882	\$ 53,172	\$ 58,816	\$ 62,357	\$ 65,964	\$ 68,050	\$ 74,579	\$ 67,047	\$ 0	\$ 56,395
65 to 69	\$ 48,672	\$ 40,334	\$ 46,980	\$ 53,581	\$ 56,768	\$ 58,218	\$ 61,348	\$ 66,254	\$ 71,535	\$ 77,385	\$ 0	\$ 54,060
70 & up	\$ 56,199	\$ 28,965	\$ 32,915	\$ 34,418	\$ 40,302	\$ 55,012	\$ 54,785	\$ 63,348	\$ 63,099	\$ 67,307	\$ 0	\$ 40,552
Total	\$ 37,318	\$ 43,428	\$ 49,828	\$ 57,135	\$ 61,021	\$ 63,886	\$ 65,852	\$ 66,645	\$ 70,299	\$ 70,092	\$ 0	\$ 53,069

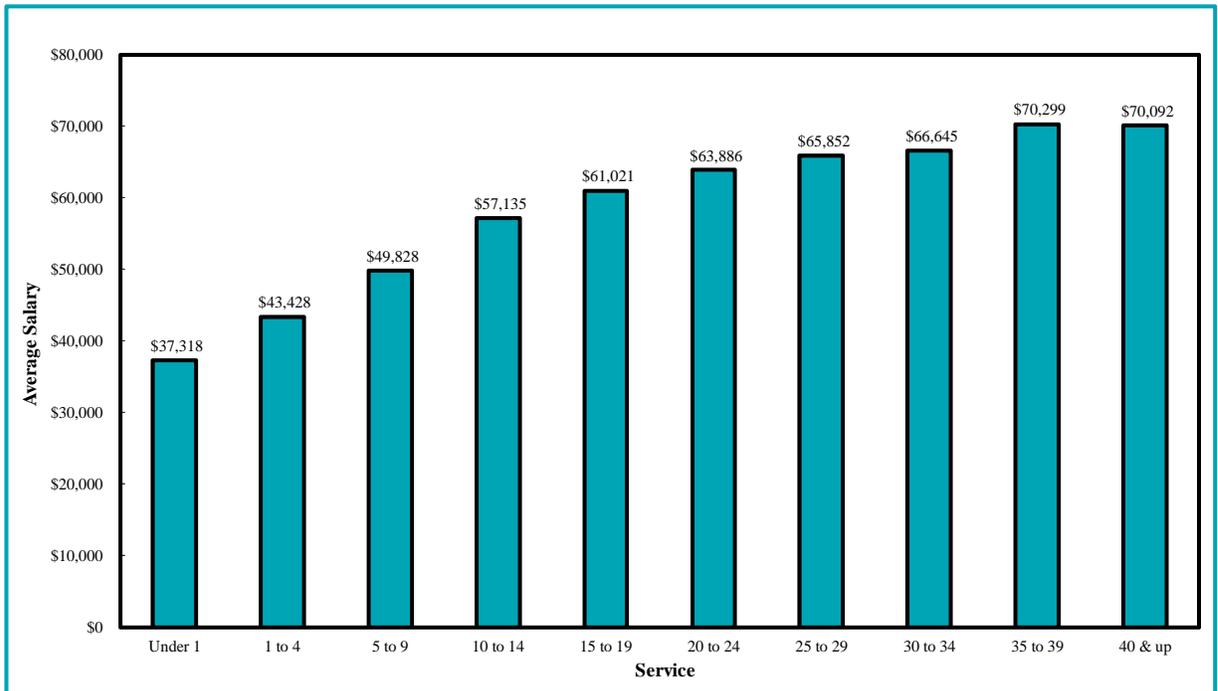
DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

APPENDIX A
MEMBERSHIP INFORMATION

Delaware State Employees' Pension Plan Salary Distribution
of Active Members by Age as of June 30, 2014



Delaware State Employees' Pension Plan Salary Distribution
of Active Members by Service as of June 30, 2014



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A
MEMBERSHIP INFORMATION**

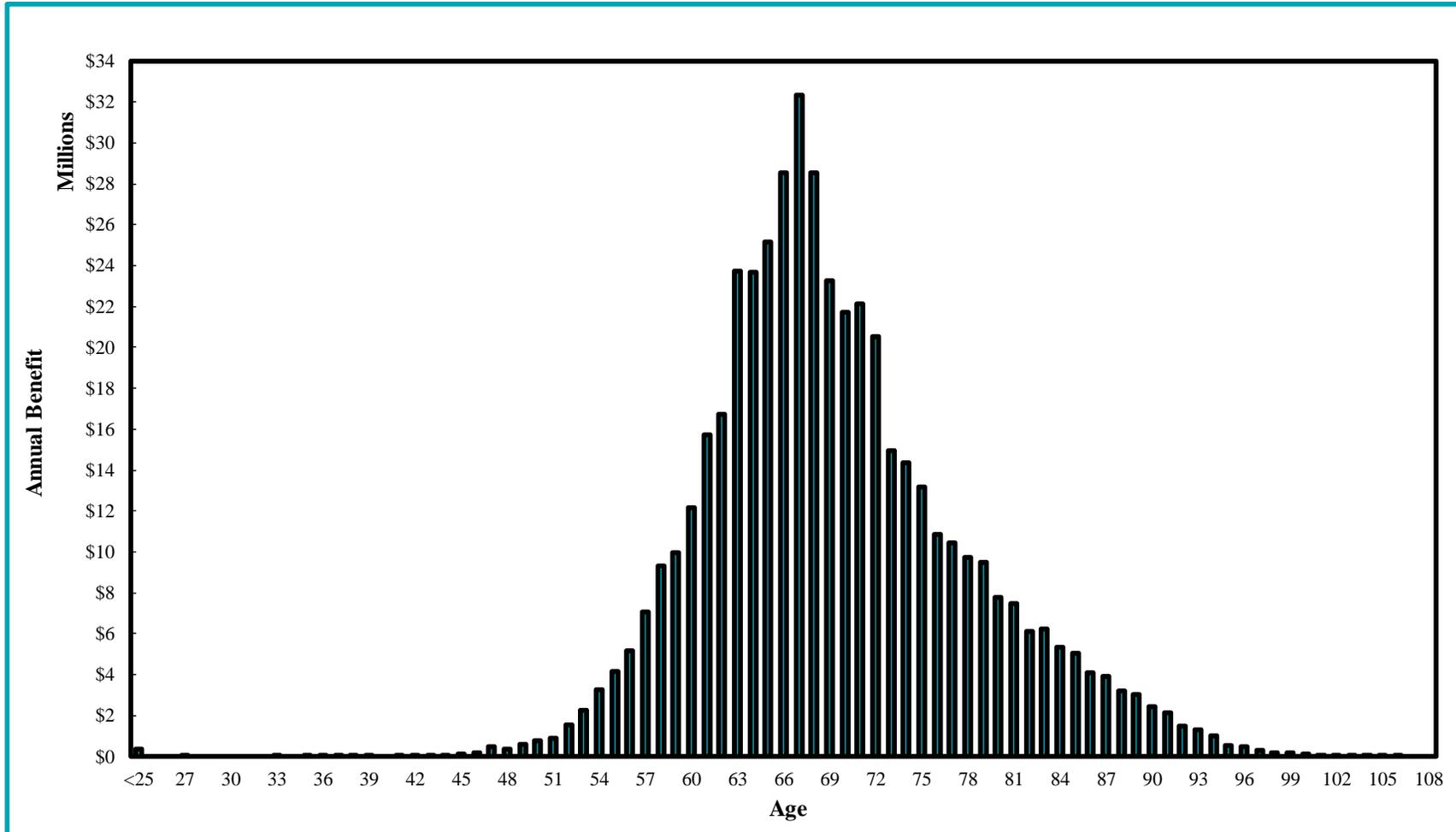
**Delaware State Employees' Pension Plan Annual Benefit Distribution by Age
of Retired Members and Beneficiaries as of June 30, 2014**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	40	\$ 340,626	73	717	\$ 14,954,602
25	0	-	74	712	14,367,549
26	0	-	75	662	13,147,758
27	1	5,328	76	601	10,859,385
28	0	-	77	586	10,440,748
29	0	-	78	550	9,705,195
30	0	-	79	580	9,483,186
31	0	-	80	525	7,778,349
32	0	-	81	506	7,464,753
33	2	12,351	82	472	6,095,521
34	0	-	83	453	6,233,783
35	1	1,884	84	419	5,361,367
36	5	26,373	85	385	5,047,142
37	3	5,814	86	333	4,122,287
38	2	20,441	87	340	3,920,763
39	1	14,840	88	266	3,193,785
40	0	-	89	262	3,038,080
41	2	14,064	90	214	2,415,024
42	5	36,662	91	201	2,170,374
43	1	8,243	92	150	1,471,472
44	7	44,059	93	138	1,331,053
45	13	102,015	94	107	1,035,046
46	11	172,335	95	64	549,443
47	28	462,933	96	56	484,956
48	22	344,903	97	29	311,049
49	30	603,595	98	23	203,572
50	40	750,411	99	18	192,747
51	44	913,284	100	12	117,612
52	65	1,535,396	101	8	59,929
53	95	2,276,775	102	6	46,308
54	137	3,267,938	103	1	6,986
55	153	4,136,217	104	1	4,835
56	189	5,145,856	105	2	14,204
57	250	7,091,618	106	2	17,460
58	329	9,299,041	107	0	-
59	342	9,955,820	108	0	-
60	408	12,180,662	109	0	-
61	492	15,697,644	110	0	-
62	608	16,707,829	111	0	-
63	863	23,743,560	112	0	-
64	909	23,654,994	113	0	-
65	972	25,132,674	114	0	-
66	1,075	28,556,609	115	0	-
67	1,243	32,324,735	116	0	-
68	1,109	28,537,633	117	0	-
69	900	23,271,866	118	0	-
70	865	21,721,758	119	0	-
71	940	22,149,837	120	0	-
72	895	20,544,219			
			Totals	22,498	\$ 486,459,163

DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

APPENDIX A
MEMBERSHIP INFORMATION

Delaware State Employees' Pension Plan Annual Benefit Distribution by Age
of Retired Members and Beneficiaries as of June 30, 2014



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A
MEMBERSHIP INFORMATION**

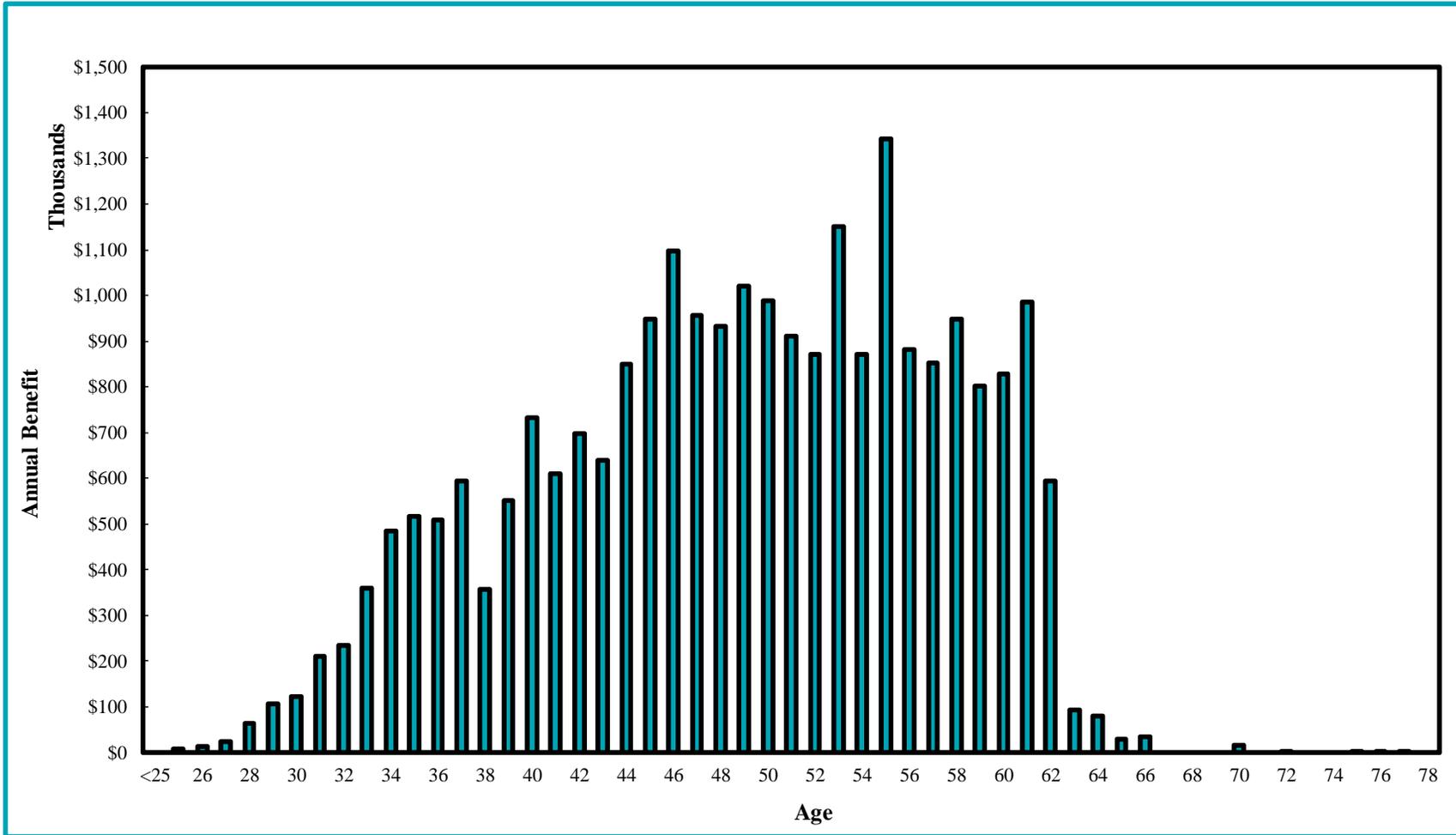
**Delaware State Employees' Pension Plan Annual Benefit
Distribution by Age of Vested Members as of June 30, 2014**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$ -	73	0	\$ -
25	2	6,862	74	0	-
26	4	14,236	75	1	1,006
27	7	23,642	76	2	3,501
28	11	63,140	77	1	3,260
29	24	107,350	78	0	-
30	23	122,069	79	0	-
31	38	209,710	80	0	-
32	37	235,314	81	0	-
33	52	360,365	82	0	-
34	74	483,538	83	0	-
35	77	517,570	84	0	-
36	66	509,387	85	0	-
37	74	595,154	86	0	-
38	48	356,449	87	0	-
39	67	551,371	88	0	-
40	84	733,330	89	0	-
41	82	610,119	90	0	-
42	86	697,190	91	0	-
43	75	639,191	92	0	-
44	77	848,712	93	0	-
45	106	947,703	94	0	-
46	107	1,097,473	95	0	-
47	99	957,241	96	0	-
48	101	931,308	97	0	-
49	109	1,020,819	98	0	-
50	98	988,298	99	0	-
51	93	911,875	100	0	-
52	104	872,076	101	0	-
53	113	1,151,546	102	0	-
54	82	870,431	103	0	-
55	116	1,343,622	104	0	-
56	95	882,342	105	0	-
57	95	851,834	106	0	-
58	105	947,410	107	0	-
59	87	802,060	108	0	-
60	94	829,000	109	0	-
61	106	984,980	110	0	-
62	66	593,582	111	0	-
63	15	92,697	112	0	-
64	11	80,610	113	0	-
65	5	28,613	114	0	-
66	8	34,221	115	0	-
67	0	-	116	0	-
68	0	-	117	0	-
69	0	-	118	0	-
70	2	16,359	119	0	-
71	0	-	120	0	-
72	1	194			
			Totals	2,830	\$ 24,928,760

DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

APPENDIX A
MEMBERSHIP INFORMATION

Delaware State Employees' Pension Plan Annual Benefit Distribution
by Age of Vested Members as of June 30, 2014



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A
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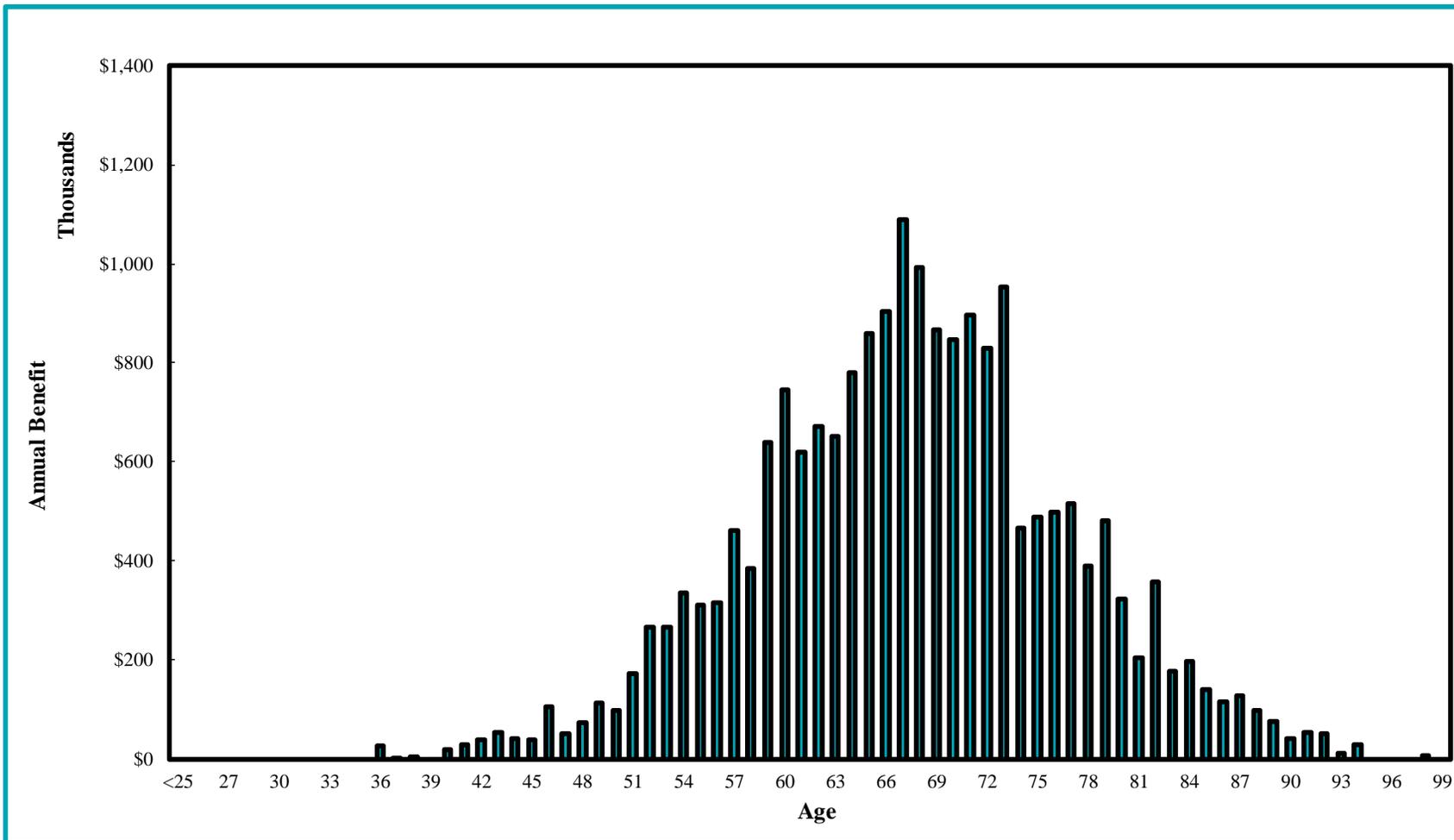
**Delaware State Employees' Pension Plan Annual Benefit
Distribution by Age of Disabled Members as of June 30, 2014**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$ -	73	68	\$ 954,315
25	0	-	74	35	466,901
26	0	-	75	46	487,718
27	0	-	76	44	497,313
28	0	-	77	45	516,319
29	0	-	78	37	390,577
30	0	-	79	43	480,282
31	0	-	80	31	321,901
32	0	-	81	26	205,061
33	0	-	82	33	358,688
34	0	-	83	14	176,376
35	0	-	84	21	195,878
36	2	25,064	85	19	139,901
37	1	2,743	86	16	115,912
38	1	4,138	87	15	128,733
39	0	-	88	10	97,199
40	2	17,769	89	10	75,631
41	3	29,283	90	4	40,064
42	4	38,362	91	10	53,185
43	6	54,182	92	6	50,299
44	7	42,323	93	2	11,484
45	2	38,059	94	4	29,526
46	10	105,760	95	0	-
47	8	50,127	96	0	-
48	11	73,406	97	0	-
49	14	112,314	98	1	5,590
50	14	97,551	99	0	-
51	16	173,242	100	0	-
52	23	266,832	101	0	-
53	27	267,238	102	0	-
54	30	334,740	103	0	-
55	32	310,956	104	0	-
56	27	315,728	105	0	-
57	37	462,418	106	0	-
58	41	384,853	107	0	-
59	57	639,060	108	0	-
60	60	745,020	109	0	-
61	51	619,000	110	0	-
62	59	670,827	111	0	-
63	55	650,612	112	0	-
64	61	779,266	113	0	-
65	73	859,620	114	0	-
66	76	904,285	115	0	-
67	80	1,088,890	116	0	-
68	69	992,695	117	0	-
69	69	866,302	118	0	-
70	57	846,720	119	0	-
71	74	895,203	120	0	-
72	70	829,119			
			Totals	1,769	\$ 20,392,562

DELAWARE STATE EMPLOYEES' PENSION PLAN
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APPENDIX A
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**Delaware State Employees' Pension Plan Annual Benefit
Distribution by Age of Disabled Members as of June 30, 2014**



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

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**Delaware State Employees' Pension Plan Annual Benefit Distribution
by Service of Disabled Members as of June 30, 2014**

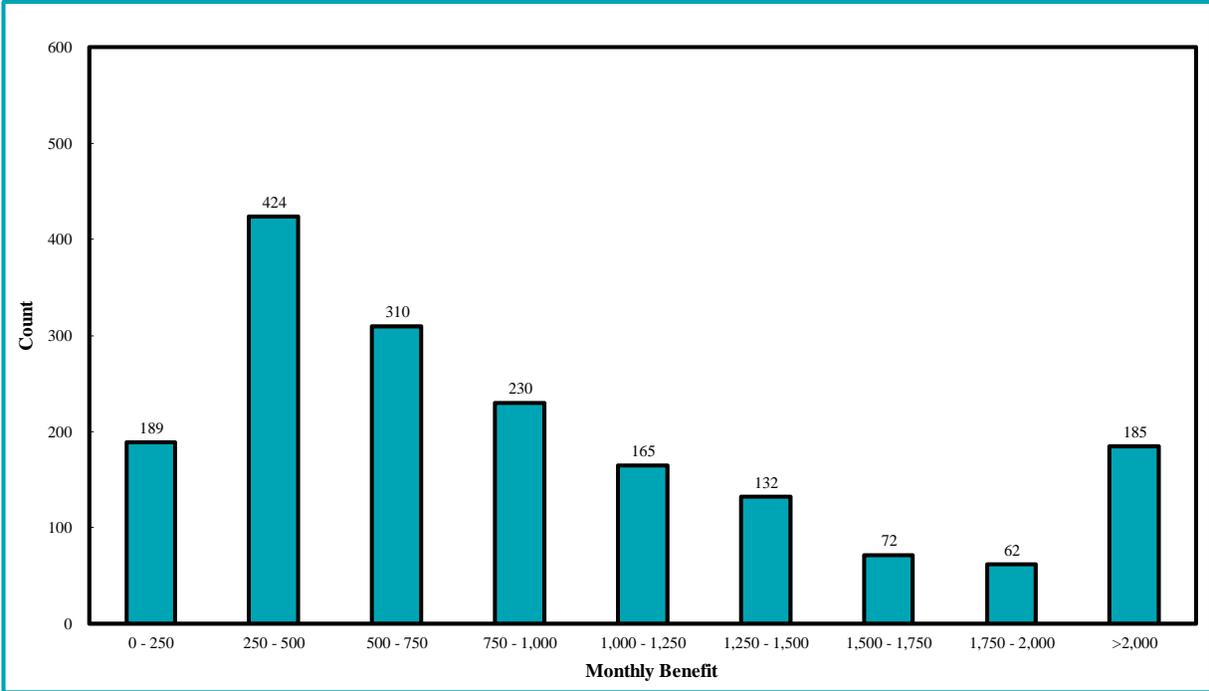
COUNTS BY BENEFIT/SERVICE

Monthly Benefit	Service									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	160	25	4	0	0	0	0	0	189
250 - 500	2	180	173	54	11	4	0	0	0	424
500 - 750	1	31	134	97	39	7	1	0	0	310
750 - 1,000	0	10	48	99	53	15	5	0	0	230
1,000 - 1,250	0	1	23	59	59	17	6	0	0	165
1,250 - 1,500	0	1	15	32	45	27	9	2	1	132
1,500 - 1,750	0	0	4	14	28	20	5	1	0	72
1,750 - 2,000	0	0	2	8	23	21	5	3	0	62
>2,000	0	0	1	8	34	71	49	18	4	185
Total	3	383	425	375	292	182	80	24	5	1,769

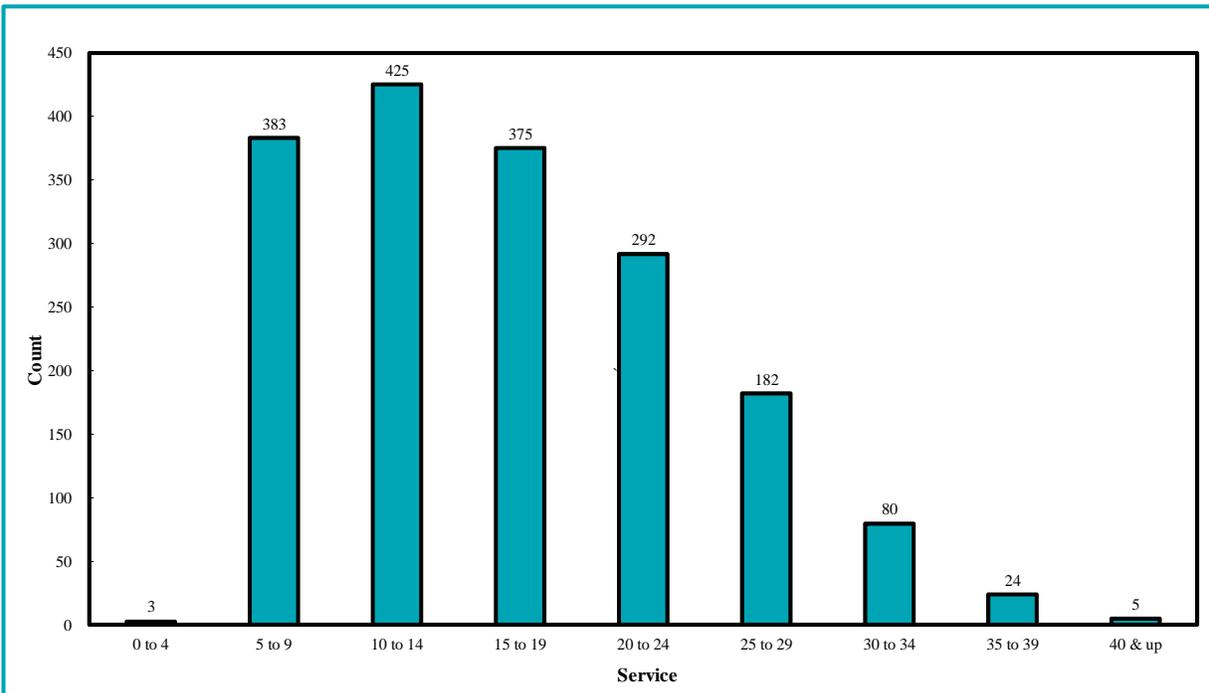
**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

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**Delaware State Employees' Pension Plan Annual Benefit
Distribution of Disabled Members as of June 30, 2014**



**Delaware State Employees' Pension Plan Annual Benefit Distribution
by Service of Disabled Members as of June 30, 2014**



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

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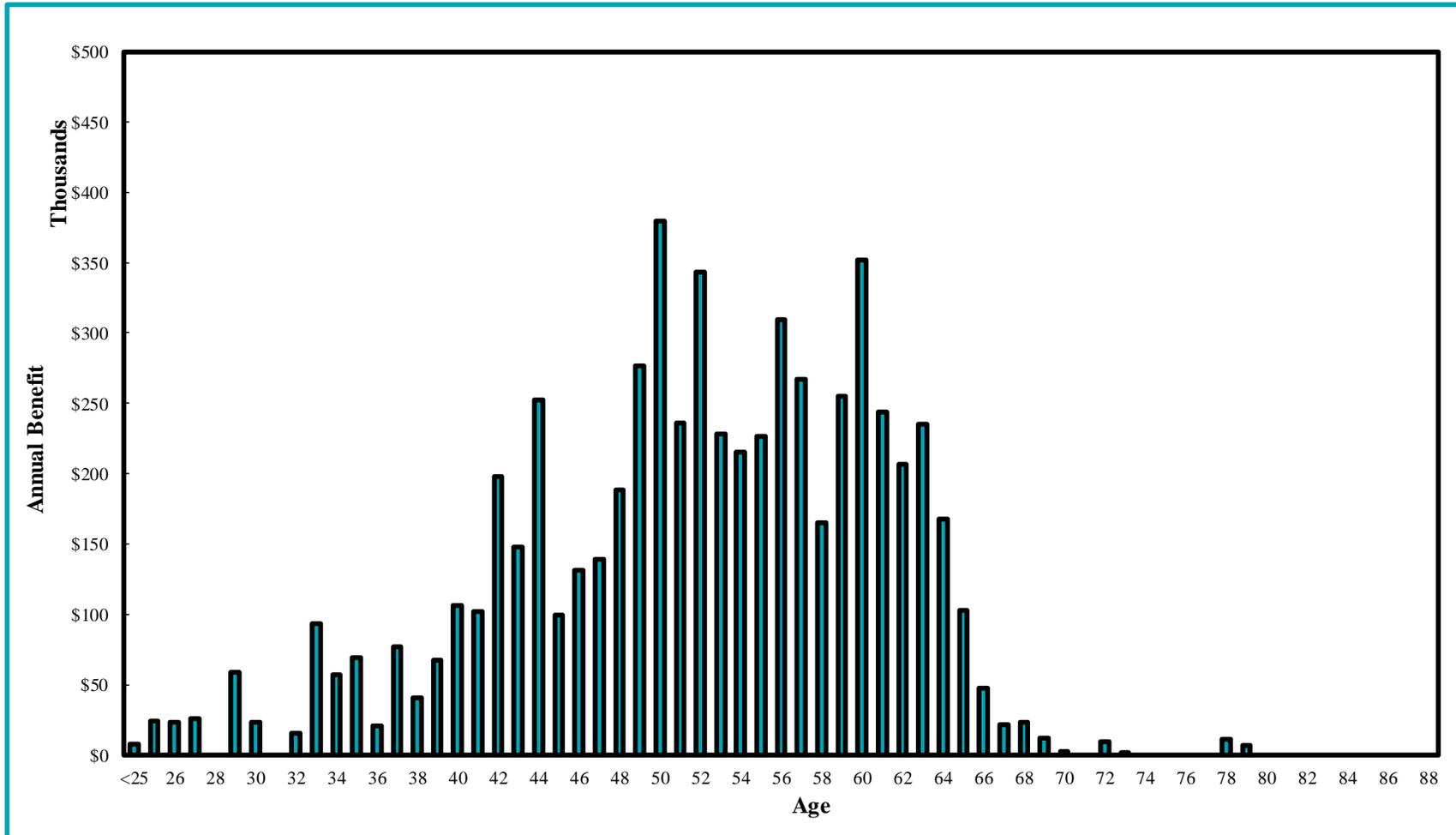
**Delaware State Employees' Pension Plan Annual Benefit
Distribution by Age of Long-Term Disability Members as of June 30, 2014**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	1	\$ 7,931	73	1	\$ 1,250.95
25	1	23,715	74	0	-
26	1	23,610	75	0	-
27	2	26,138	76	0	-
28	0	-	77	0	-
29	2	58,237	78	2	10,689
30	1	23,249	79	1	7,143
31	0	-	80	0	-
32	1	15,539	81	0	-
33	5	92,858	82	0	-
34	3	56,900	83	0	-
35	4	68,993	84	0	-
36	2	20,712	85	0	-
37	7	77,233	86	0	-
38	4	40,416	87	0	-
39	4	67,367	88	0	-
40	7	106,167	89	0	-
41	7	101,553	90	0	-
42	12	198,039	91	0	-
43	10	147,518	92	0	-
44	19	252,729	93	0	-
45	9	99,370	94	0	-
46	14	130,867	95	0	-
47	11	139,330	96	0	-
48	12	188,160	97	0	-
49	19	276,368	98	0	-
50	29	379,639	99	0	-
51	16	235,835	100	0	-
52	26	343,383	101	0	-
53	21	227,990	102	0	-
54	19	215,228	103	0	-
55	17	226,067	104	0	-
56	30	309,614	105	0	-
57	21	266,925	106	0	-
58	23	165,086	107	0	-
59	22	255,162	108	0	-
60	30	351,899	109	0	-
61	28	243,778	110	0	-
62	26	206,818	111	0	-
63	24	235,060	112	0	-
64	18	167,595	113	0	-
65	13	102,359	114	0	-
66	7	47,567	115	0	-
67	4	21,354	116	0	-
68	4	23,238	117	0	-
69	1	11,804	118	0	-
70	1	2,739	119	0	-
71	0	-	120	0	-
72	2	9,679			
			Totals	544	\$ 6,310,899

DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

APPENDIX A
MEMBERSHIP INFORMATION

Delaware State Employees' Pension Plan Annual Benefit Distribution
by Age of Long Term Disability Members as of June 30, 2014



**DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**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	0.10	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 STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

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	4.54
80	8.93	6.46

c. Rates of Active Disability

Rates of Active Disability	
Age	Rates
20	0.05%
25	0.05
30	0.18
35	0.27
40	0.38
45	0.46
50	0.62
55	0.86
60	1.24

Rates of Active Disability for those who opted into the Disability Insurance Program*	
Age	Rates
65	1.74%
70	1.73
75	2.68
80	4.87

* 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, 2014**

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

d. Termination of Employment (Prior to Retirement Eligibility)

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

Age	0	1	2	3	4	5	6	7	8	9	Ultimate
Select:											
15-19	20.0%	25.0%	25.0%	10.0%	9.0%	7.5%	5.0%	5.0%	3.5%	3.5%	2.5%
20	20.0	22.5	22.0	10.0	9.0	7.5	5.0	5.0	3.5	3.5	2.5
21	20.0	20.0	18.0	10.0	9.0	7.5	5.0	5.0	3.5	3.5	2.5
22	20.0	17.5	16.0	10.0	9.0	7.5	5.0	5.0	3.5	3.5	2.5
23-32	20.0	17.5	14.0	10.0	9.0	7.5	5.0	5.0	3.5	3.5	2.5
33-35	20.0	15.0	12.0	10.0	8.0	7.5	5.0	5.0	3.5	3.5	2.5
36	19.0	15.0	10.0	10.0	7.0	7.5	5.0	5.0	3.5	3.5	2.5
37	18.0	15.0	10.0	10.0	7.0	6.0	5.0	5.0	3.5	3.5	2.5
38	17.0	15.0	10.0	10.0	7.0	6.0	5.0	5.0	3.5	3.5	2.5
39	16.0	15.0	10.0	10.0	7.0	6.0	5.0	5.0	3.5	3.5	2.5
40	15.0	12.5	10.0	7.0	6.0	6.0	5.0	5.0	3.5	3.5	2.5
41-46	14.0	12.5	10.0	7.0	6.0	5.0	5.0	5.0	3.5	3.5	2.5
47-49	13.0	12.5	10.0	7.0	6.0	5.0	5.0	5.0	3.5	3.5	2.5
50-52	12.5	12.5	10.0	7.0	6.0	5.0	5.0	5.0	3.5	3.5	2.5
53-54	12.0	12.5	10.0	7.0	6.0	5.0	5.0	5.0	3.5	3.5	2.5
55	12.0	12.0	10.0	8.0	6.0	5.0	5.0	5.0	3.5	3.5	2.5
56-59	11.5	11.5	10.0	8.0	6.0	5.0	5.0	5.0	3.5	3.5	2.5
60-65	11.5	11.5	10.0	10.0	6.0	5.0	5.0	5.0	3.5	3.5	2.5
>66	11.5	11.5	10.0	14.0	6.0	5.0	5.0	5.0	3.5	3.5	2.5

e. Retirement

Early Retirement:

- i. age 55 with 15 years of credited service
- ii. 25 years of credited service

Pre-2012 hires:

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

DELAWARE STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

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

Post-2011 hires:

Unisex Early Retirement	
Age	Rate
<41	0.00%
42 – 59	5.00

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

Pre-2012 hires:

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

Post-2011 hires:

- i. age 65 with 10 years of credited service
- ii. age 60 with 20 years of credited service
- iii. 30 years of credited service

**DELAWARE STATE EMPLOYEES' PENSION PLAN
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**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

Pre-2012 hires:

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 STATE EMPLOYEES' PENSION PLAN
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

Pre-2012 hires:

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

Post-2011 hires:

Unisex Normal Retirement		
Age	Select	Ultimate
<45	10.00%	10.00%
45 – 64	10.00	10.00
65	30.00	30.00
66 – 79	20.00	20.00
80	100.00	100.00

DELAWARE STATE EMPLOYEES' PENSION PLAN
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APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

f. Salary Increase

30-year service-based table includes an annual inflation rate of 3.00%.

Service	Increase
0	11.48%
1	9.48
2	7.49
3	5.99
4	5.74
5	5.74
10	4.50
15	4.50
20	3.75
30	3.50

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. Investment Rate of Return: 7.20%
- b. General Wage Increase Rate: 3.00%
- c. Annual Cost-of-Living Increase Rate
for Retirees: 0.00%
- d. Total Payroll Increase Rate
(for Amortization): 3.00%
- e. Administrative Expenses as a
Percentage of Covered Payroll: 0.30%

3. Changes Since Last Valuation

Based upon adoption by the Board of Pension Trustees, the following assumptions were changed:

Investment Rate of Return was reduced from 7.5% to 7.2%.
General Wage Increase Rate was reduced from 3.25% to 3.00%.
Total Payroll Increase Rate (for Amortization) was reduced from 3.25% to 3.00%.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Funding Method

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

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future State 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 liability in excess of plan assets is amortized to develop an additional cost or savings that is added to each year's State 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 not expected to be paid through PRI transfers is amortized over a rolling 20-year period. All payments are determined assuming total payroll 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. This asset smoothing 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 payment each year, and 20% of the portion of each year's returns that have not already been reflected in asset values.

In the 2014 valuation, there was an additional recognition of 30% of the remaining balance of past investment gains.

3. Changes Since Last Valuation

There was an additional recognition of 30% of the past investment gains in the asset smoothing method.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

1. Membership

The Plan covers full-time and regular part-time employees of the State of Delaware, which includes:

- State Department of Public Education;
- School districts' part of the State School System (the membership includes 19 school districts);
- Delaware Department of Finance, State Lottery Office;
- Delaware Department of Transportation;
- Delaware Solid Waste Authority (1986);
- Delaware State University;
- Delaware Technical & Community College;
- University of Delaware (excluding most faculty and designated professional staff); and
- State Agencies supported wholly or in part by federal funds granted to the State.

2. Member Contributions

Pre - 2012 hires: 3% of compensation in excess of \$6,000 per annum.

Post - 2011 hires: 5% of compensation in excess of \$6,000 per annum.

Interest is credited at the rate of 5% per year. Member contributions are made through an "employer pick-up" arrangement that 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 (FAC) 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. Overtime payments are excluded for Post – 2011 hires.

5. Normal Retirement

Eligibility: Pre - 2012 hires: (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.

Post - 2011 hires: (i) age 65 with 10 years of credited service, or (ii) age 60 with 20 years of credited service, or (iii) any age with 30 years of credited service.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

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.

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% (by 0.4% if post - 2011 hire) 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 and eligible disability.

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

Member who opted into the Disability Insurance Program will not receive a benefit from this Plan until they reach normal retirement eligibility. All members hired on or after January 1, 2006 are covered by the Disability Insurance Program and thus will not receive a benefit from this Plan until they reach normal retirement eligibility.

8. Survivor's Benefit

Eligibility: Five years of credited service and death while active.

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 and reduced by 3% for the form of payment. If the surviving spouse has not yet attained age 50, the benefit will be actuarially reduced for each month he or she is under 50. However, this actuarial reduction will not apply for any period in which the survivor has a dependent child.

Eligible survivors include: (1) spouse (legally married/civil union), or (2) child or children under 18, 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: Pre - 2012 hires: Employees who separate from service with at least five years of service.

Post - 2011 hires: Employees who separate from service with at least ten years of service.

Benefit: Accrued normal retirement benefit, payable at age 62 for Pre - 2012 hires and age 65 for Post - 2011 hires. 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 50% joint and survivor annuity.

As an alternative to the normal form, a member may elect one of the following optional forms of payment upon service retirement or disability:

- 66 2/3% joint and survivor form with a 2% reduction in benefits;
- 75% joint and survivor form with a 3% reduction in benefits; or
- 100% joint and survivor form with a 6% reduction in benefits.

The 66 2/3% and 100% options are only available for retirement on or after January 1, 2015.

13. Cost-of-Living Adjustment

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

14. Changes Since Last Valuation

Two additional optional payment forms, a 66 2/3% joint and survivor form and a 100% joint and survivor form, were added effective for retirements on or after January 1, 2015.