Classic Values, Innovative Advice

Delaware County & Municipal Employees' Pension Plan

Actuarial Valuation as of June 30, 2015

Produced by Cheiron

January 2016

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January 26, 2016

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

Dear Members of the Board:

At your request, we have conducted the annual actuarial valuation of the Delaware County & Municipal Employees' Pension Plan (Plan) as of June 30, 2015. 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 employer 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 employer contributions for Fiscal Year (FY) 2017 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 County & Municipal Employees' Pension Plan for the purposes described herein and for the use by the Plan auditor in completing an audit related to the matters herein. Other users of this valuation report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Sincerely,
Cheiron

Fiona E. Liston, FSA	Elizabeth Wiley, FSA, EA
Principal Consulting Actuary	Consulting Actuary

FOREWORD

Cheiron has performed the annual actuarial valuation of the Delaware County & Municipal Employees' Pension Plan (Plan) as of June 30, 2015. 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 participating employers for Fiscal Year (FY) 2017; 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 2017 actuarially determined contribution for participating employers.

Section V includes 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 rely on future plan experience conforming to the underlying assumptions and methods outlined in this report. To the extent that the actual plan experience deviates from the underlying assumptions and methods, or there are any changes in plan provisions, the true cost of the Plan would vary from our results.

SECTION I – BOARD SUMMARY

General Comments

The actuarially determined contribution (ADC) rate increased from 6.21% for FY 2016 to 6.76% for FY 2017.

During the year ended June 30, 2015, the Plan's assets earned 3.6% on a market value basis. However, due to the Plan's asset smoothing method, which recognizes only a portion of the investment gains and losses, the return on an actuarial value basis was 7.5%. This return was greater than the assumed investment rate of return of 7.2% for last year, resulting in an actuarial gain on investments of $0.09 million.

The Plan experienced an actuarial loss 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 loss increased the actuarial liability by $1.88 million. This type of gain or loss is normal in the course of plan experience, as we cannot predict exactly how people will behave.

This valuation report also contains information to be reported in the June 30, 2015 Comprehensive Annual Financial Report (CAFR) of the Delaware Public Employees' Retirement System (Delaware PERS) under 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 2014 actuarial valuation liability results. The calculation of net pension liability in Section V is shown as disclosed for the plan year ending June 30, 2015, based on the 2014 actuarial valuation liability results. We also present a projection of the June 30, 2016 disclosure in Section V, assuming all actuarial assumptions are met over the coming year, which is based on the 2015 actuarial valuation liability results.

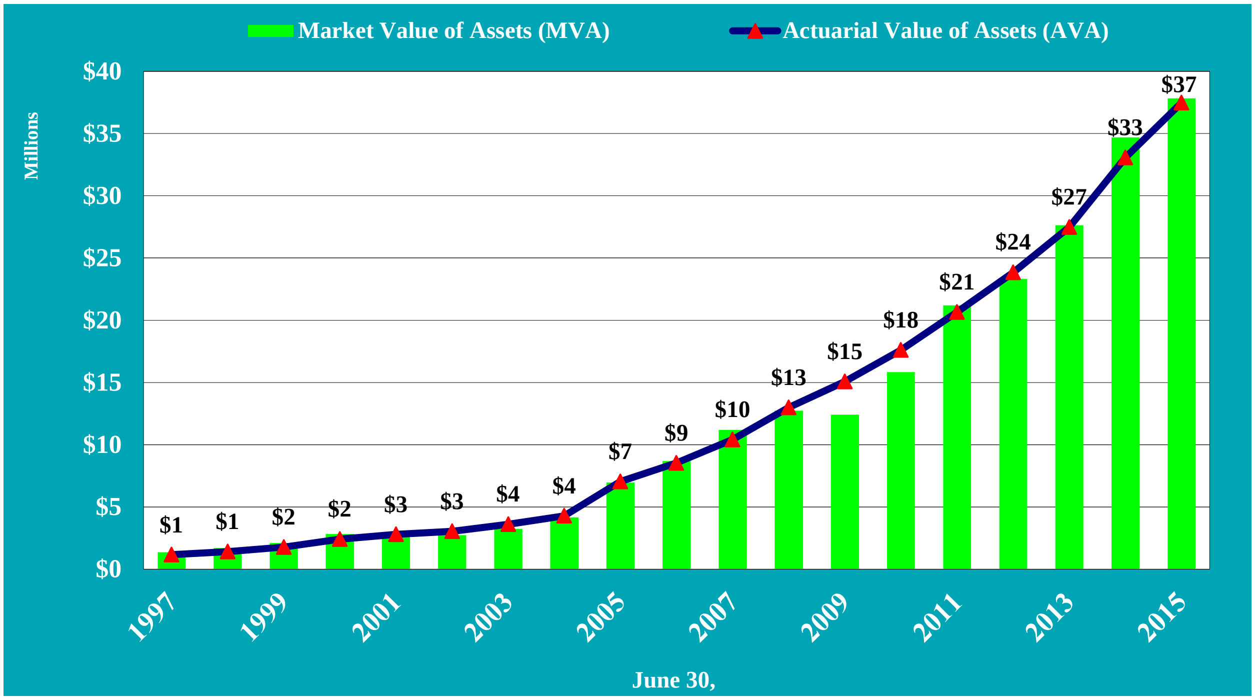
As of the June 30, 2015 actuarial valuation, the Plan's unfunded actuarial liability (UAL) was $2,286,700. This is an increase from the $544,500 UAL in the funding valuation for the prior year.

SECTION I – BOARD SUMMARY

Trends

Growth in Assets

The graph below shows measurements of the Plan's assets over the last 19 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 millions of dollars.



The market value of assets (MVA) returned 3.6% 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 7.2% assumed for the year, and continued recognition of prior years' gains and losses.

Over the period July 1, 1997 to June 30, 2015, the Plan's assets returned approximately 8.6% per year measured on an actuarial value basis, compared to the current valuation assumption of 7.2%.

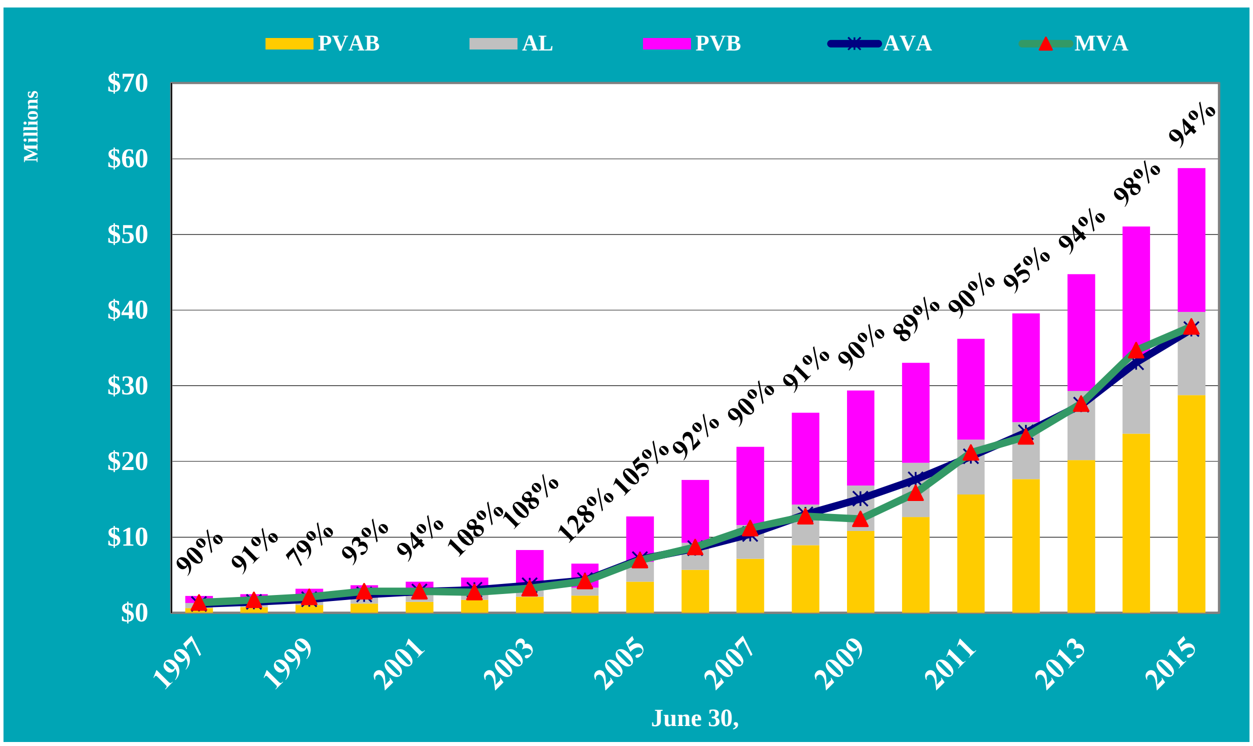
SECTION I – BOARD SUMMARY

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.

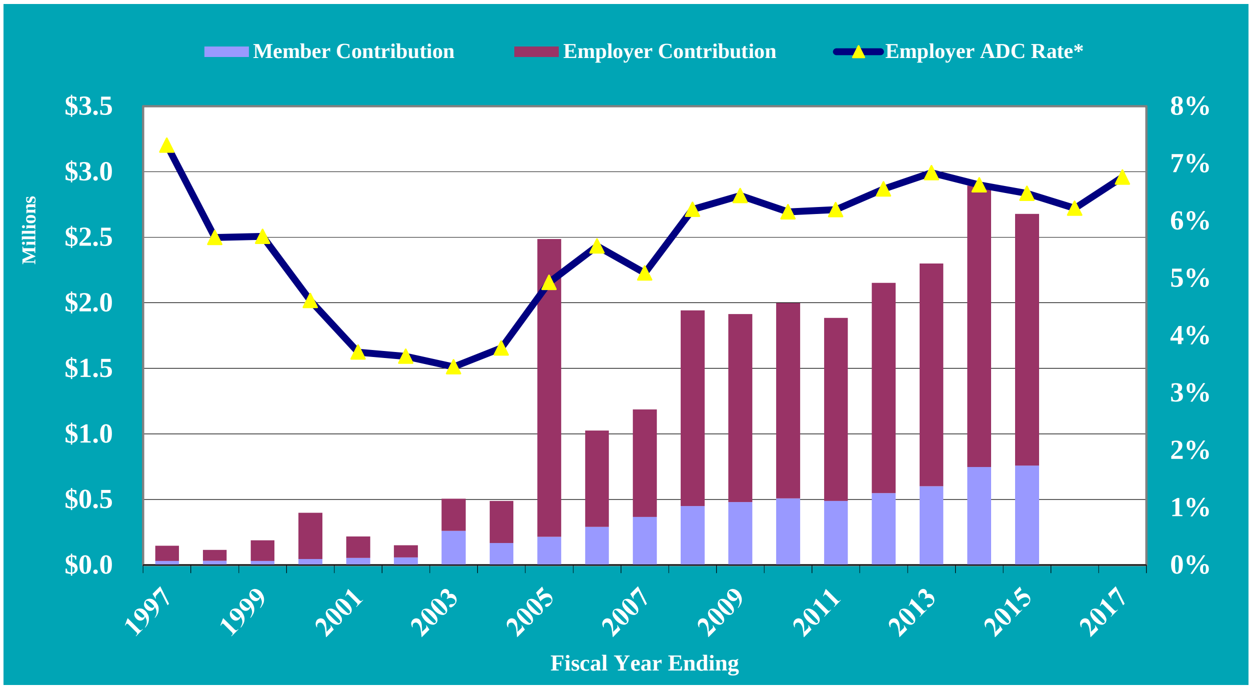
The second liability measure is the one currently used for the Plan's funding target, the actuarial liability (AL). These target amounts are represented by the top of the gray bars. The funded ratios reported by the Plan are the percentages shown above the bars and are developed by comparing these target 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.



SECTION I – BOARD SUMMARY

Contribution Rates



* Formerly known as Actuarially Required Contribution (ARC), GASB No. 67/68 redefined the term for calculated contributions to Actuarially Determined Contribution (ADC).

The stacked bars in the graph above show the contributions made by the participating employers and the members for each fiscal year, and are read using the left-hand scale. The blue line shows the employer ADC rate for each fiscal year as a percentage of payroll (right-hand scale).

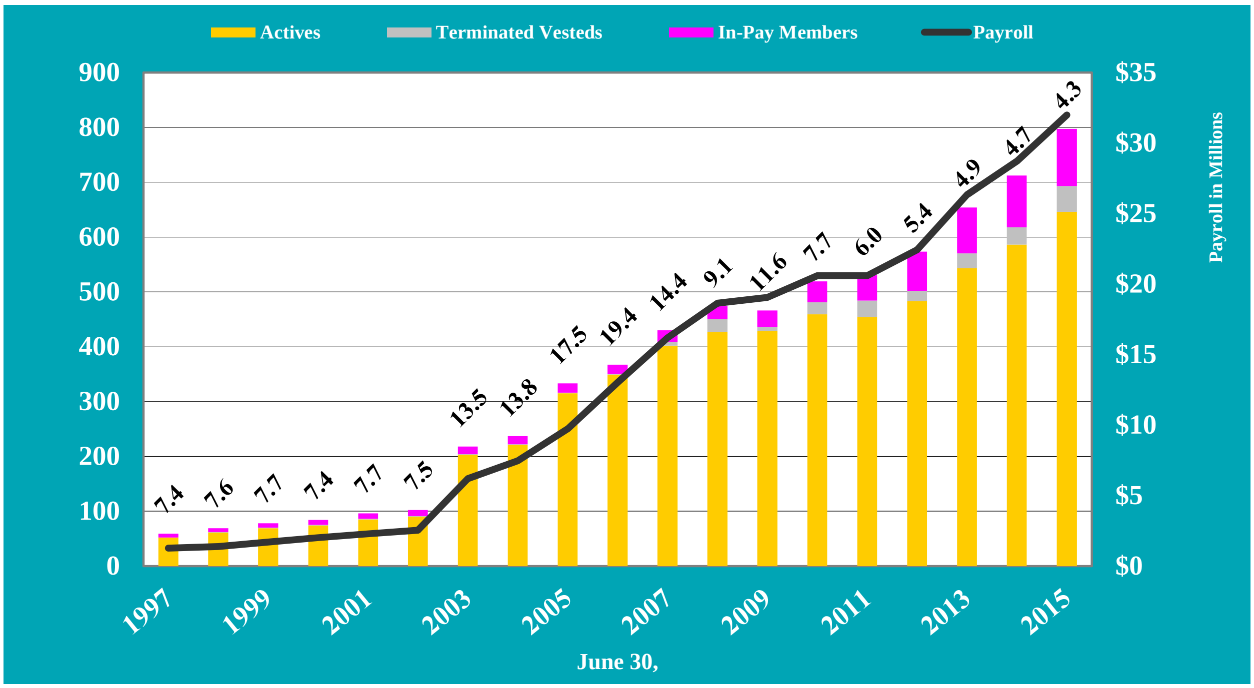
The member contribution rate is set by State law, based on the Plan in which the member participates. The participating employer contribution rate is set by the actuarial process. Please note that there is a lag in the participating employer contribution rates shown. For example, the value shown for the Fiscal Year 2015 is the rate prepared by the June 30, 2013 valuation and implemented for the period July 1, 2014 to June 30, 2015.

SECTION I – BOARD SUMMARY

Participant Trends

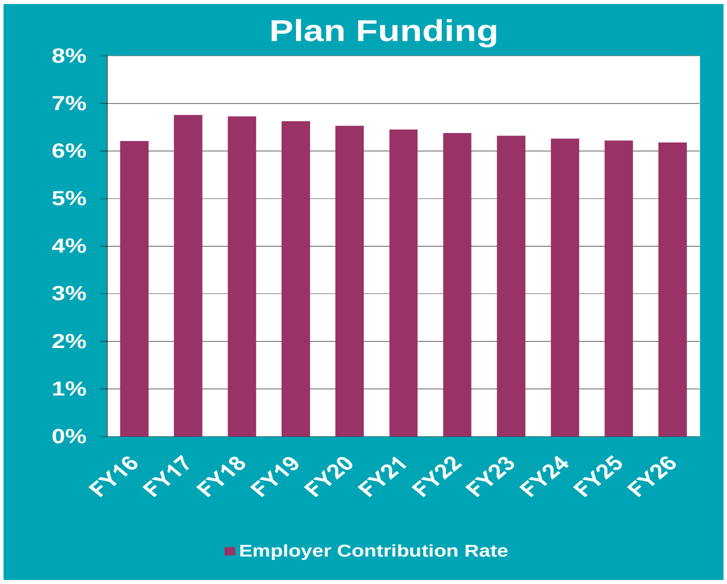
The bars below show the number of members as of each valuation date, divided between active members, terminated vested members, and retirees/beneficiaries. These bars are read using the left-hand scale. Since this is a relatively young pension plan, there are still far more active members than inactive 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. The active-to-inactive ratio has decreased from 7.4 actives to each inactive in 1997 to 4.3 actives for each inactive in 2015.

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



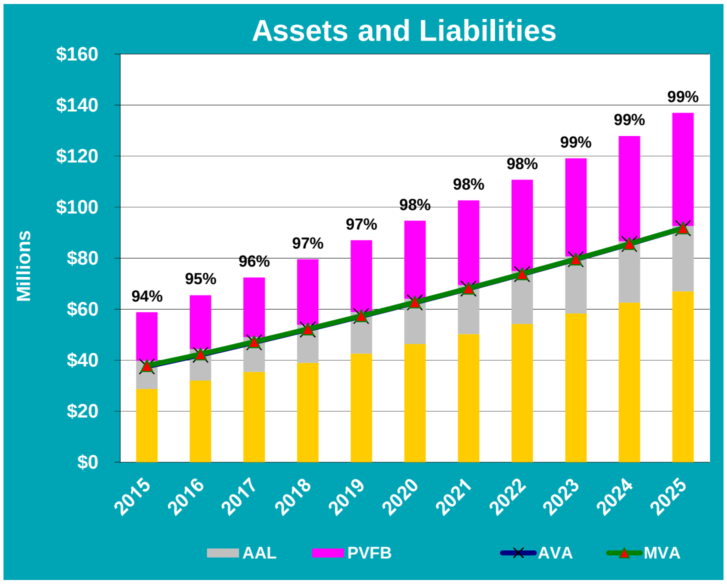
Future Outlook

Baseline Projections



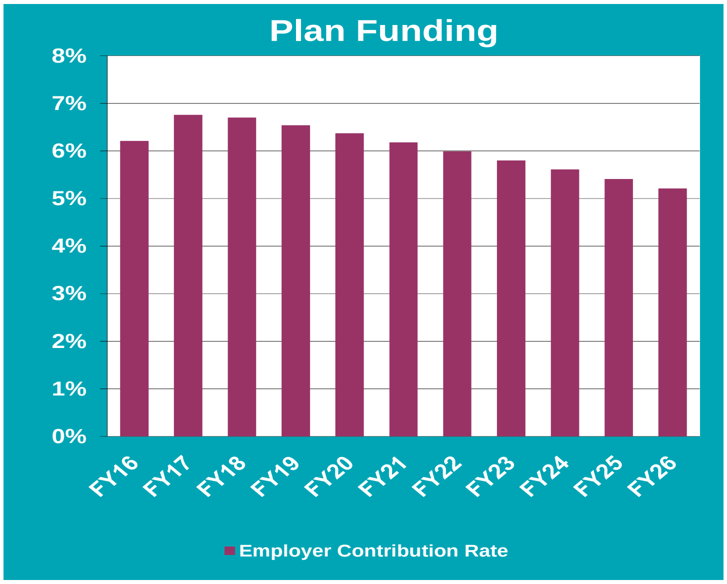
These graphs show the expected progress of the Plan over the next ten years, assuming the Plan's assets earn 7.2% on a *market value* basis and assuming all assumptions are exactly met, including that the ADC amounts are made in full. The chart entitled "Plan Funding" shows a decrease in the employer ADC rate from 6.76% in FY 2017, determined by the current valuation, to 6.18% 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 improve to a funded ratio of 99% as the existing unfunded liability is paid off.



SECTION I – BOARD SUMMARY

Projections with Asset Returns of 8.2%

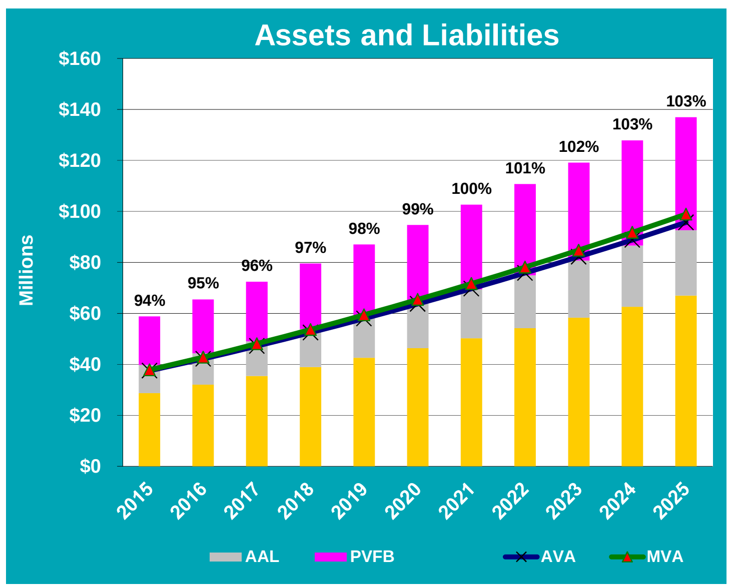


The Plan's investment earnings will affect the future funding status of the Plan. These two graphs show what the next ten years would be expected to look like if the Plan's investment performance is 8.2% each year, 1.0% higher than the valuation investment rate of return assumption.

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

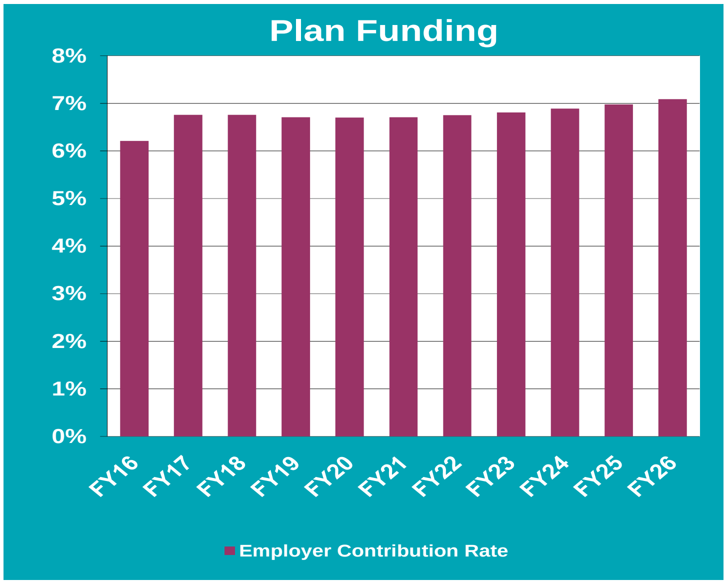
The "Plan Funding" graph shows that the employer ADC rate under this scenario decreases even more than the baseline scenario, dropping to approximately 5.21% of payroll at the end of the projected period.

The "Assets and Liabilities" graph shows that the Plan would reach a 103% funded ratio by 2025 under this scenario, an improvement over the baseline scenario's 99%.



SECTION I – BOARD SUMMARY

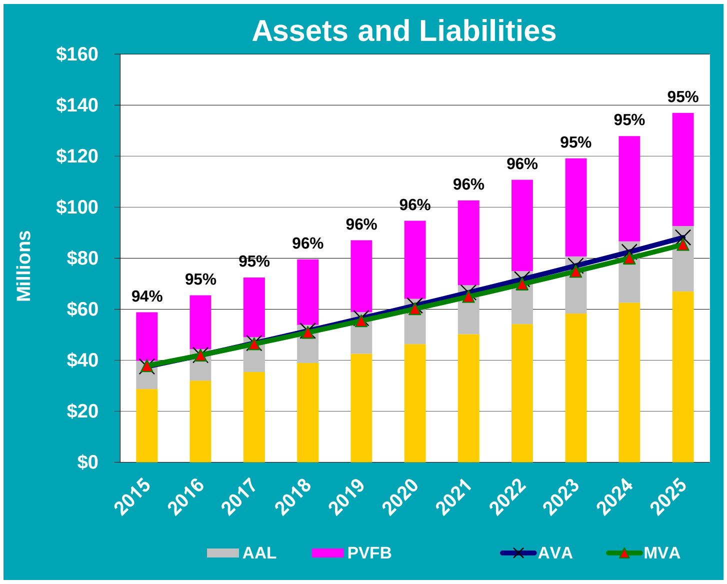
Projections with Asset Returns of 6.2%



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 participating employer contributions equal to the full actuarially determined contribution.

Under this scenario, the employer ADC rate increases to approximately 7.09% of payroll, compared to 6.18% in the baseline, and the funded ratio as of 2025 decreases to 95%, compared to 99% in the baseline scenario.



SECTION I – BOARD SUMMARY

Table I-1
Summary of Principal Plan Results

Valuation as of:	**June 30, 2014**	**June 30, 2015**	**% Change**
Member Counts			
Active Members	586	646	10.24%
Disabled Members	6	5	(16.67%)
Retirees and Beneficiaries	71	78	9.86%
Terminated Vested Members	32	47	46.88%
Terminated Non-Vested Members	17	21	23.53%
Total	**712**	**797**	**11.94%**
Covered Payroll of Active Members*	$ 28,716,200	$ 31,982,900	11.38%
Annual Benefit Payments for Retirees, Disabled Members, and Beneficiaries	$ 619,200	$ 704,900	13.84%
Assets and Liabilities			
Actuarial Liability (AL)	$ 33,621,100	$ 39,763,700	18.27%
Actuarial Value of Assets (AVA)	33,076,600	37,477,000	13.30%
Unfunded AL (UAL)	$ 544,500	$ 2,286,700	319.96%
Funded Ratio on AVA Basis (AVA/AL)	98.4%	94.2%	
Funded Ratio on MVA Basis (MVA/AL)	103.2%	95.2%	
Present Value of Accrued Benefits (PVAB)	$ 23,674,900	$ 28,749,300	21.43%
Market Value of Assets (MVA)	34,687,900	37,840,400	9.09%
Unfunded PVAB	$ (11,013,000)	$ (9,091,100)	17.45%
Accrued Benefit Funded Ratio	146.5%	131.6%	
Employer Contribution Rate	**Fiscal Year 2016**	**Fiscal Year 2017**	
Entry Age Normal Cost	5.68%	5.58%	
UAL Amortization Payment	0.23%	0.88%	
Administrative Expense	0.30%	0.30%	
Actuarially Determined Contribution (ADC)	6.21%	6.76%	

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

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, employer 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, 2014 and June 30, 2015;
- 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, 2014 and June 30, 2015, along with the changes between the two.

Table II-1
Changes in Market Values of Assets

Market Value of Assets – June 30, 2014		**$ 34,687,900**
Additions		
Member Contributions	$ 757,200	
Employer Contributions	1,921,000	
Investment Returns	1,291,400	
Total Additions	**$ 3,969,600**	
Deductions		
Benefit Payments	$ 721,900	
Administrative Expenses	95,200	
Total Deductions	**$ 817,100**	
Market Value of Assets – June 30, 2015		**$ 37,840,400**

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. The table below illustrates the calculation of the actuarial value of assets as of June 30, 2015.

Table II-2
Development of Actuarial Value of Assets

1.	Actuarial Value of Assets at June 30, 2014	$	33,076,600
2.	Amount in (1) with interest to June 30, 2015 at 7.20% per year	$	35,458,100
3.	Employer and member contributions for the Plan Year ended June 30, 2015		2,678,200
4.	Interest on contributions assuming payments made uniformly throughout the year to June 30, 2015 at 7.20% per year		96,400
5.	Disbursements from Trust except investment expenses, July 1, 2014 through June 30, 2015		817,100
6.	Interest on disbursements to June 30, 2015 at 7.20% per year		29,400
7.	Expected Actuarial Value of Assets at June 30, 2015 = (2) + (3) + (4) – (5) – (6)	$	37,386,200
8.	Actual Market Value of Assets at June 30, 2015	$	37,840,400
9.	Excess of (8) over (7)		454,200
10.	Actuarial Value of Assets at June 30, 2015 = (7) + 20% of (9)	$	37,477,000

Investment Performance

The market value of assets (MVA) returned 3.6% during 2015, which is less than the assumed 7.2% investment rate of return. The actuarial value of assets (AVA) returned 7.5% over this same year, reflecting 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*
2015	$ 1,019,000	$ 2,860,000
2016	1,294,000	3,126,000
2017	1,543,000	3,220,000
2018	1,779,000	3,316,000
2019	2,058,000	3,416,000
2020	2,361,000	3,518,000
2021	2,674,000	3,624,000
2022	2,963,000	3,733,000
2023	3,246,000	3,844,000
2024	3,556,000	3,960,000

* Expected contributions include participating employer contributions and member contributions. For illustration purposes, we have assumed the employer contribution rate will remain level from FYE 2017 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, 2015. Projecting any farther 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, 2014 and June 30, 2015; 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 fund all future benefits and expenses of a plan, assuming current members continue to accrue benefits and there are no new entrants, and that all actuarial assumptions are met.

- **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 employer 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. Note that this also assumes that all actuarial assumptions are met, including the assets returning 7.2% per year.

Note that none of the liability amounts disclosed in this report is appropriate for measuring a settlement of the plan's liabilities.

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.

SECTION III – LIABILITIES

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

	June 30, 2014	June 30, 2015
Present Value of Benefits		
Active Member Benefits	$ 44,271,500	$ 50,783,900
Retiree, Beneficiary, Disabled, and Terminated Members Benefits	6,758,800	7,980,200
Present Value of Benefits (PVB)	**$ 51,030,300**	**$ 58,764,100**
Market Value of Assets (MVA)	$ 34,687,900	$ 37,840,400
Future Member Contributions	5,880,500	6,479,900
Future Employer Contributions	10,461,900	14,443,800
Total Resources	**$ 51,030,300**	**$ 58,764,100**
Actuarial Liability		
Present Value of Benefits (PVB)	$ 51,030,300	$ 58,764,100
Present Value of Future Employer Normal Costs (PVFNC)	11,528,700	12,520,500
Present Value of Future Member Contributions (PVFEEC)	5,880,500	6,479,900
Actuarial Liability (AL=PVB–PVFNC–PVFEEC)	**$ 33,621,100**	**$ 39,763,700**
Actuarial Value of Assets (AVA)	33,076,600	37,477,000
Net (Surplus)/Unfunded AL (AL – AVA)	**$ 544,500**	**$ 2,286,700**
Present Value of Accrued Benefits		
Present Value of Benefits (PVB)	$ 51,030,300	$ 58,764,100
Present Value of Future Benefit Accruals (PVFBA)	27,355,400	30,014,800
Present Value of Accrued Benefits (PVAB=PVB–PVFBA)	**$ 23,674,900**	**$ 28,749,300**
Market Value of Assets (MVA)	$ 34,687,900	$ 37,840,400
Net (Surplus)/Unfunded PVAB (PVAB – MVA)	**$ (11,013,000)**	**$ (9,091,100)**

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:

- 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 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

	Present Value of Benefits	Actuarial Liability	Present Value of Accrued Benefits
Liabilities June 30, 2014	$ 51,030,300	$ 33,621,100	$ 23,674,900
Liabilities June 30, 2015	58,764,100	39,763,700	28,749,300
Liability Increase (Decrease)	7,733,800	6,142,600	5,074,400
Change Due to:			
Benefit Changes	0	0	0
Actuarial (Gain)/Loss	NC*	1,881,000	NC*
Benefits Accumulated and Other Sources	7,733,800	4,261,600	5,074,400

* NC = not calculated

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, 2014	June 30, 2015
1. Actuarial Liabilities		
Retiree, Beneficiary, Disabled, and Terminated Members Benefits	$ 6,758,800	$ 7,980,200
Active Members	26,862,300	31,783,500
Total Actuarial Liability	**$ 33,621,100**	**$ 39,763,700**
2. Actuarial Value of Assets	$ 33,076,600	$ 37,477,000
3. Unfunded Actuarial Liability (UAL)	$ 544,500	$ 2,286,700
4. Allocation of UAL		
Unpaid UAL from Participating Municipalities	$ 0	$ 0
5. Net Base for 10-Year UAL Amortization (3-4)	**$ 544,500**	**$ 2,286,700**

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 Normal 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 employer normal cost rate for each member. The employer normal cost rate times payroll for each active member equals the employer normal cost. The sum of the employer normal cost amounts for all active members is then divided by the covered payroll to produce the employer normal cost contribution rate.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer 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, after subtracting payments due from municipalities paying for prior service, over an open 10-year period. All payments are determined assuming total pay increases by the annual inflation rate of 3.00%.

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

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

Table IV-1
Employer Contribution Rate

	June 30, 2014 Fiscal Year 2016	June 30, 2015 Fiscal Year 2017
Entry Age Normal Cost Rate	5.68%	5.58%
UAL Amortization Payment	0.23%	0.88%
Administrative Expense	0.30%	0.30%
Actuarially Determined Contribution	6.21%	6.76%

SECTION IV – CONTRIBUTIONS

Table IV-2 below provides additional detail about the development of the contribution rate for participating employers as well as the expected dollar amounts these rates will result in for FY 2017.

Table IV-2
Expected FY 2017
Employer Contributions

	In Dollars	As % of Payroll
1. Present Value of Projected Benefits Attributable to:		
a. Total Normal Cost	$ 2,657,700	8.31%
b. Expected Members Contribution	873,100	2.73%
c. Employer Paid Normal Cost (a) – (b)	$ 1,784,600	5.58%
2. Amortization of Unfunded Liability	281,600	0.88%
3. Allowance for Administrative Expense	95,900	0.30%
4. Total Employer Actuarially Determined Contribution Rate (1) + (2) + (3)	$ 2,162,100	6.76%

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, 2014 and June 30, 2015 are exhibited in Table V-1, which also includes a reconciliation of liabilities determined as of the prior valuation, July 1, 2014, to the liabilities as of June 30, 2015.

This valuation contains information reported in the June 30, 2015 Comprehensive Annual Financial Report (CAFR) of Delaware PERS under GASB Statement No. 67. Disclosures are based on the use of updated procedures to roll forward the 2014 valuation results. The calculation of Net Pension Liability in Table V-2 shows the amounts disclosed for the plan year June 30, 2015, based on the updated 2014 liability valuation, as well as a projection of the anticipated June 30, 2016 disclosures, based on 2015 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. The Government Finance Officers Association (GFOA) has named this exhibit the Solvency Test. None of the liabilities or assets shown are appropriate for settlement purposes. Furthermore, the Solvency Test does not accurately depict a Plan's future financial condition but rather is a test developed by the GFOA to assess the level of funding that relies on the payroll for future hires to pay for the benefits that have already been accrued by the current population. This valuation does not contain any information reported based on the new GASB Statement No. 68 that will be effective for plan sponsors beginning in its Fiscal Year 2015 CAFR.

SECTION V – ACCOUNTING STATEMENT INFORMATION

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

	June 30, 2014	June 30, 2015
FASB ASC Topic No. 960 Basis		
1. Present Value of Accrued Benefits		
a. Members Currently Receiving Payments	$ 6,076,000	$ 6,913,400
b. Former Vested Members	682,800	1,066,800
c. Active Members	16,916,100	20,769,100
2. Total Present Value of Accrued Benefits (1 (a) + 1(b) + 1(c))	$ 23,674,900	$ 28,749,300
3. Assets at Market Value	34,687,900	37,840,400
4. Unfunded Present Value of Accrued Benefits (2 – 3)	$ (11,013,000)	$ (9,091,100)
5. Ratio of Assets to Present Value of Benefits (3 / 2)	146.5%	131.6%
Reconciliation of Present Value of Accrued Benefits		
Actuarial Present Value of Accrued Benefits at June 30, 2014		$ 23,674,900
Increase (Decrease) During Years Attributable to:		
Passage of Time		1,678,600
Benefit Paid – FY 2015		(721,900)
Benefit Changes		0
Benefits Accrued, Other Gains/Losses		4,117,700
Net Increase (Decrease)		5,074,400
Actuarial Present Value of Accrued Benefits at June 30, 2015		$ 28,749,300

SECTION V – ACCOUNTING STATEMENT INFORMATION

Table V-2
GASB No. 67 Disclosures

	June 30, 2015	Estimated June 30, 2016
Total Pension Liability		
Service cost	**$ 2,415,000**	**$ 2,658,000**
Interest	2,569,000	3,018,000
Changes in benefit terms	0	0
Differences between expected and actual experience	(699,000)	1,881,000
Changes in assumptions	0	0
Benefit payments, including refunds of member contributions	(722,000)	(1,019,000)
Net change in Total Pension Liability	**$ 3,563,000**	**$ 6,538,000**
Total Pension Liability - beginning	**$ 34,320,000**	**$ 37,883,000**
Total Pension Liability - ending (a)	**$ 37,883,000**	**$ 44,421,000**
Plan Fiduciary Net Position		
Contributions - Employer	$ 1,921,000	$ 1,987,000
Contributions - Non-employer	0	0
Contributions - Member	757,000	873,000
Net investment income	1,291,000	2,786,000
Benefit payments, including refunds of member contributions	(722,000)	(1,019,000)
Administrative expenses	(95,000)	(96,000)
Net change in Plan Fiduciary Net Position	**$ 3,152,000**	**$ 4,531,000**
Plan Fiduciary Net Position - beginning	**$ 34,688,000**	**$ 37,840,000**
Plan Fiduciary Net Position - ending (b)	**$ 37,840,000**	**$ 42,371,000**
Plan Net Pension Liability (Asset) - ending [(a)-(b)]	**$ 43,000**	**$ 2,050,000**

Items printed in red will be replaced with actual amounts once known at the end of FY 2016.

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, 2015
Actuarial cost method	Entry age
Amortization method	Percentage of pay - open
Amortization period	Ten 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 employer 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 employer 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.

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	2010	2011	2012	2013	2014	2015
Investment Income on Actuarial Assets	$ (440)	$ 129	$ (137)	$ 35	$ 576	$ 91
Combined Liability Experience	(383)	323	776	539	669	(1,881)
(Loss)/Gain During Year from Financial Experience	$ (823)	$ 452	$ 639	$ 574	$ 1,275	$ (1,790)
Non-Recurring Items	0	(402)	0	(1,265)	(603)	0
Composite Gain (or Loss) During Year	$ (823)	$ 50	$ 639	$ (691)	$ 672	$ (1,790)

Table V-5
Solvency Test
Aggregate Accrued Liabilities for

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)
	(expressed in thousands)						
2015	$ 5,047	$ 6,913	$ 27,804	$ 37,477	100%	100%	92%
2014	4,423	6,076	23,122	33,077	100	100	98
2013	3,886	4,872	20,554	27,492	100	100	91
2012	3,423	3,887	17,879	23,851	100	100	93
2011	3,098	3,096	16,665	20,664	100	100	87
2010	2,653	2,637	14,537	17,596	100	100	85

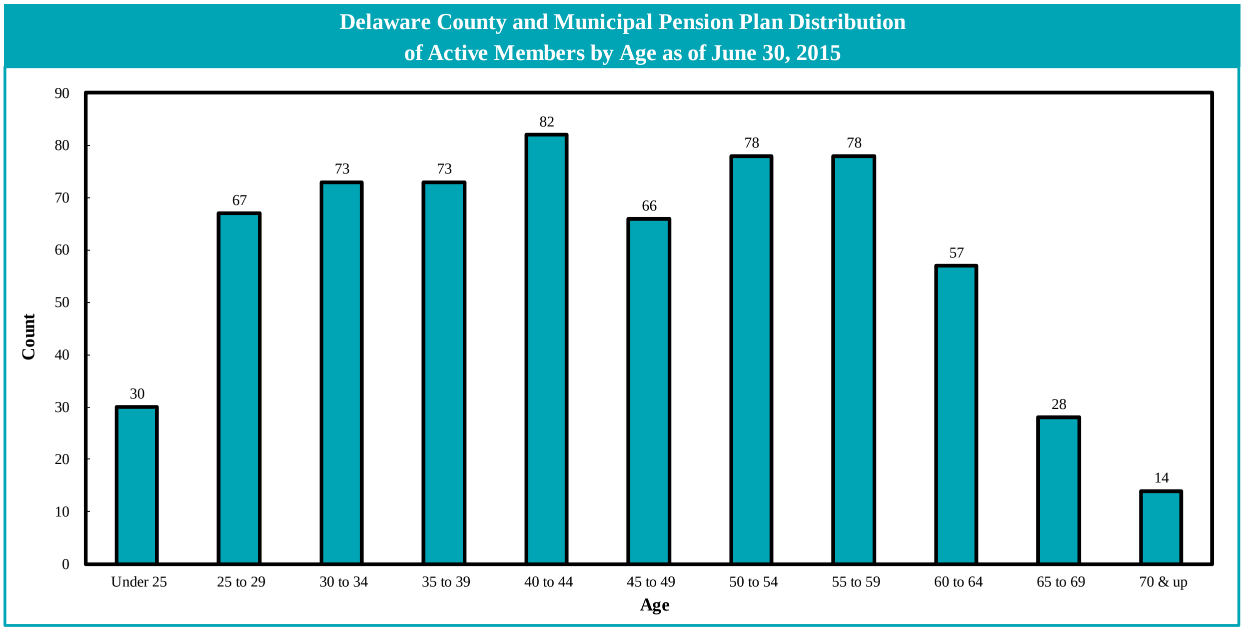
APPENDIX A – MEMBERSHIP INFORMATION

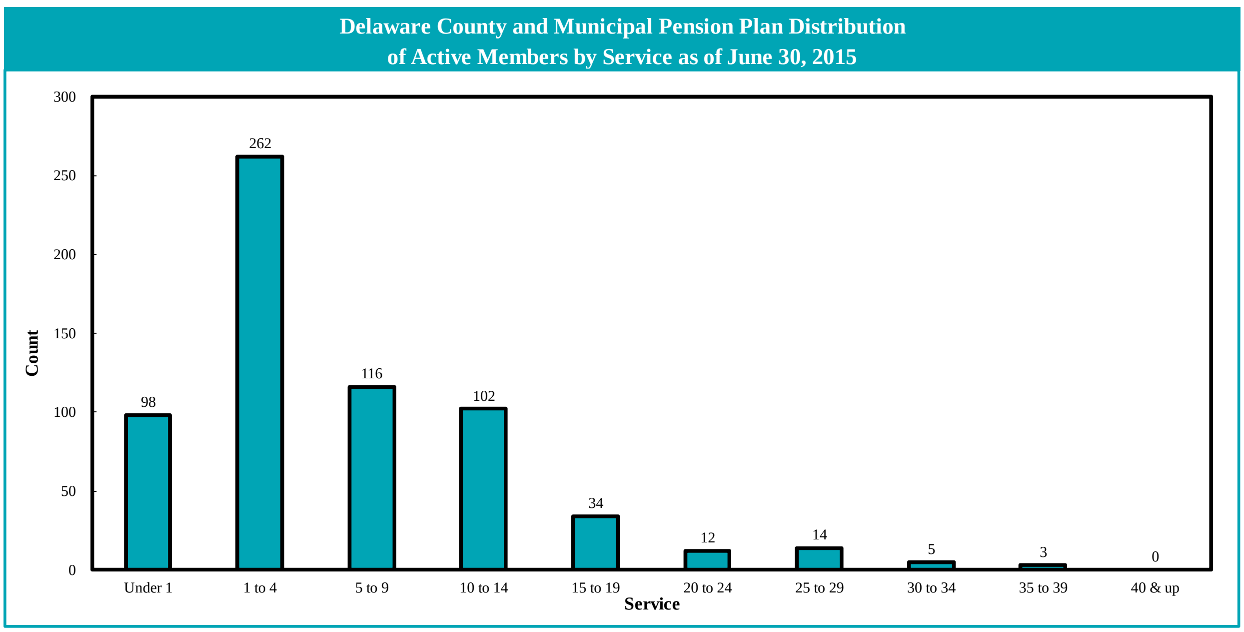
Delaware County and Municipal Pension Plan Distribution of Active Members by Age and Service as of June 30, 2015

Counts By Age/Service

	Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	**Total**
Under 25	14	16	0	0	0	0	0	0	0	0	30
25 to 29	17	39	10	1	0	0	0	0	0	0	67
30 to 34	11	41	15	6	0	0	0	0	0	0	73
35 to 39	15	27	16	12	3	0	0	0	0	0	73
40 to 44	12	31	13	19	5	2	0	0	0	0	82
45 to 49	5	21	14	15	7	1	3	0	0	0	66
50 to 54	14	24	12	12	7	3	3	3	0	0	78
55 to 59	6	27	16	15	5	3	3	1	2	0	78
60 to 64	3	22	10	17	1	0	3	1	0	0	57
65 to 69	1	6	10	2	4	2	2	0	1	0	28
70 & up	0	8	0	3	2	1	0	0	0	0	14
Total	98	262	116	102	34	12	14	5	3	0	646

APPENDIX A – MEMBERSHIP INFORMATION





APPENDIX A – MEMBERSHIP INFORMATION

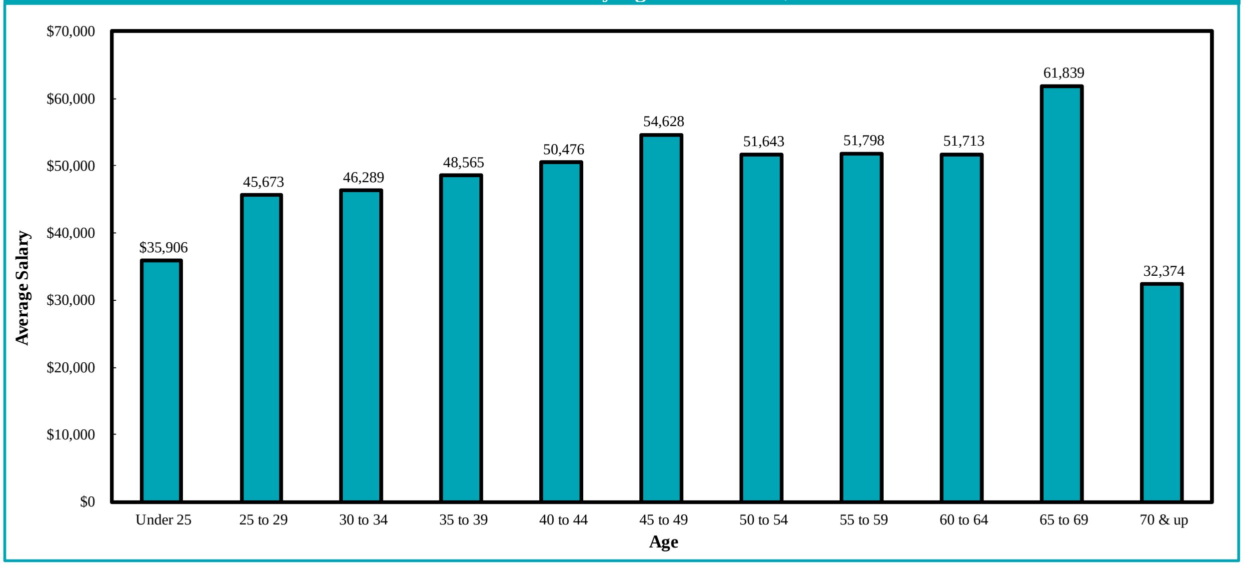
Delaware County and Municipal Pension Plan Salary Distribution of Active Members by Age and Service as of June 30, 2015

Average Salary by Age/Service

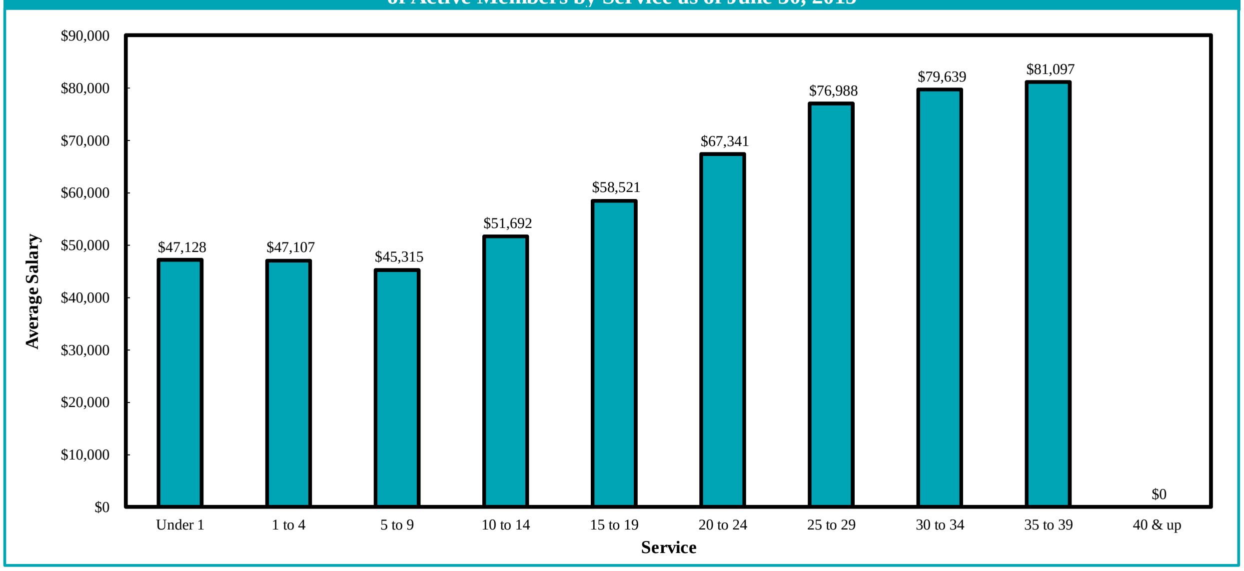
	Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	**Total**
Under 25	$ 38,301	$ 33,810	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 35,906
25 to 29	51,636	44,023	43,090	34,476	0	0	0	0	0	0	45,673
30 to 34	51,068	44,150	44,582	56,409	0	0	0	0	0	0	46,289
35 to 39	46,485	48,493	47,590	52,975	47,184	0	0	0	0	0	48,565
40 to 44	44,791	51,219	42,867	52,332	71,683	51,858	0	0	0	0	50,476
45 to 49	34,930	56,377	52,914	55,806	50,352	84,595	77,303	0	0	0	54,628
50 to 54	43,196	45,530	47,429	56,399	58,423	58,826	88,260	78,177	0	0	51,643
55 to 59	55,115	50,565	45,235	50,385	52,370	52,206	76,705	70,483	72,830	0	51,798
60 to 64	73,326	54,693	37,703	50,328	43,246	0	51,798	93,180	0	0	51,713
65 to 69	77,912	55,861	42,745	22,793	82,243	111,568	97,816	0	97,630	0	61,839
70 & up	0	24,577	0	32,946	47,120	63,547	0	0	0	0	32,374
Total	$ 47,128	$ 47,107	$ 45,315	$ 51,692	$ 58,521	$ 67,341	$ 76,988	$ 79,639	$ 81,097	$ 0	$ 49,546

APPENDIX A – MEMBERSHIP INFORMATION

Delaware County and Municipal Pension Plan Salary Distribution of Active Members by Age as of June 30, 2015



Delaware County and Municipal Pension Plan Salary Distribution of Active Members by Service as of June 30, 2015



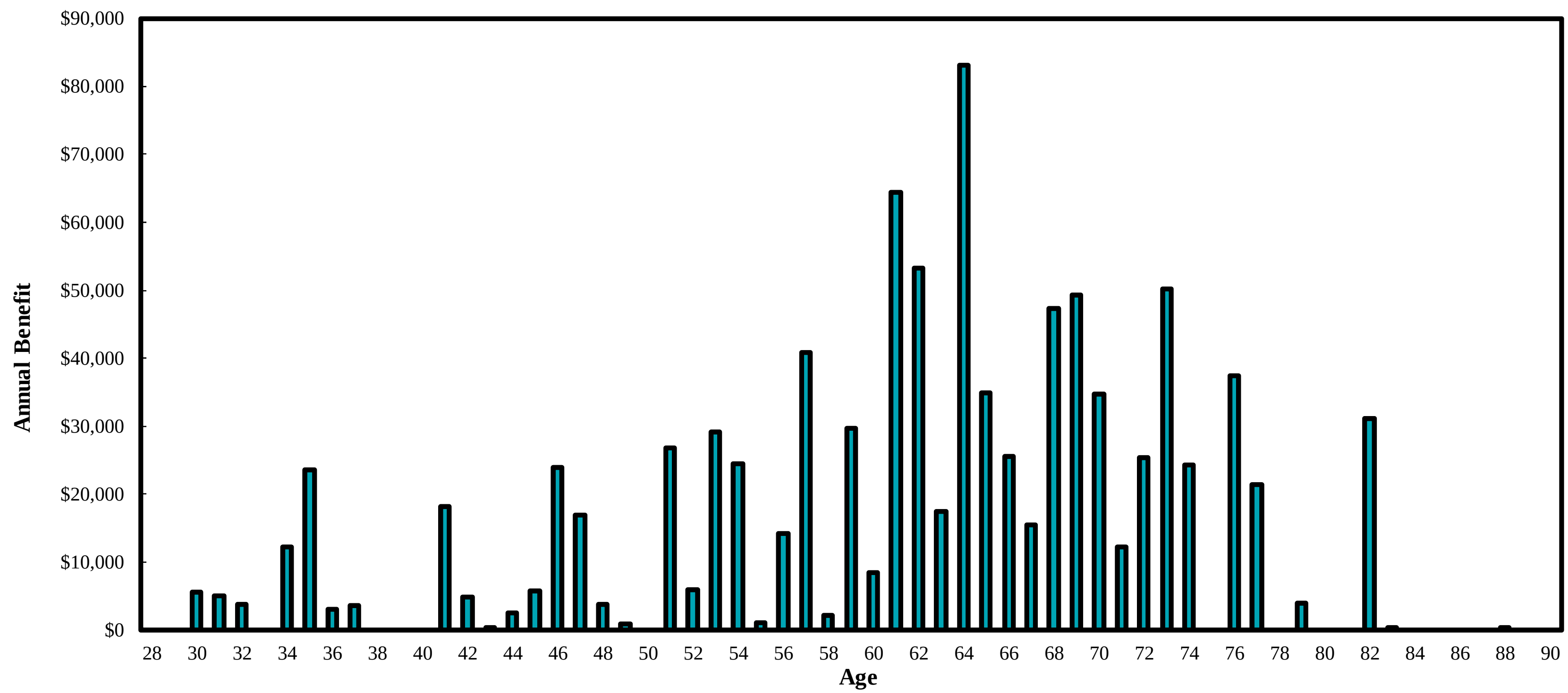
APPENDIX A – MEMBERSHIP INFORMATION

Delaware County and Municipal Pension Plan Annual Benefit Distribution of Retired Members, Survivors, Disabled, and Vested Members as of June 30, 2015

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	$ -	73	6	$ 50,171
25	0	-	74	4	24,383
26	0	-	75	0	-
27	0	-	76	5	37,456
28	0	-	77	2	21,414
29	0	-	78	0	-
30	1	5,604	79	1	3,899
31	1	5,113	80	0	-
32	1	3,806	81	0	-
33	0	-	82	3	31,053
34	3	12,231	83	1	310
35	4	23,652	84	0	-
36	1	3,132	85	0	-
37	1	3,586	86	0	-
38	0	-	87	0	-
39	0	-	88	1	436
40	0	-	89	0	-
41	2	18,223	90	0	-
42	1	4,927	91	0	-
43	1	460	92	0	-
44	1	2,520	93	0	-
45	2	5,755	94	0	-
46	4	23,989	95	0	-
47	4	16,921	96	0	-
48	1	3,780	97	0	-
49	1	936	98	0	-
50	0	-	99	0	-
51	3	26,853	100	0	-
52	1	6,006	101	0	-
53	4	29,194	102	0	-
54	3	24,479	103	0	-
55	1	1,103	104	0	-
56	4	14,293	105	0	-
57	2	40,833	106	0	-
58	2	2,233	107	0	-
59	3	29,779	108	0	-
60	3	8,485	109	0	-
61	4	64,383	110	0	-
62	3	53,188	111	0	-
63	2	17,434	112	0	-
64	7	83,146	113	0	-
65	4	34,884	114	0	-
66	4	25,579	115	0	-
67	3	15,446	116	0	-
68	8	47,297	117	0	-
69	5	49,337	118	0	-
70	6	34,796	119	0	-
71	2	12,188	120	0	-
72	4	25,450			
			Totals	130	$ 950,140

APPENDIX A – MEMBERSHIP INFORMATION

Delaware County and Municipal Pension Plan Annual Benefit Distribution of Retired Members, Survivors, Disabled, and Vested Members as of June 30, 2015



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

Mortality table was set in conjunction with the 2011 experience study to include a static projection to 2015. The System is embarking on a new experience study in 2016 which will determine whether the margin for future mortality improvements remains and to propose revised tables.

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	**Current**
20	0.05%
25	0.05
30	0.18
35	0.27
40	0.38
45	0.46
50	0.62
55	0.95
60	1.57

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

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

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

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

e. Retirement

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

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

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

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

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

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

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

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

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

30-year Service-based tables include an annual inflation rate of 3.00%.

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. Rationale for Assumptions

The assumptions were adopted by the Board of Trustees as a result of the latest experience study review performed in 2011 and covering the period July 1, 2005 through June 30, 2010.

The Board continually reviews the investment return assumption and adopted a reduced rate of 7.20% effective with the 2014 valuation, at the advice of its investment consultant.

4. Changes Since Last Valuation

None.

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 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 liability in excess of plan assets is amortized to develop an additional cost or savings that 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, after subtracting payments due from municipalities paying for prior service, is amortized over a rolling ten-year period. All payments are determined assuming total payroll increases by the annual inflation rate. Use of a rolling amortization period means that the UAL amount is never anticipated to be fully paid off. This method was chosen to provide for a more level contribution rate over time.

2. Actuarial Value of Assets

For purposes of determining the employer contribution rate to the Plan, we use an actuarial value of assets. The asset 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.

3. Changes Since Last Valuation and Rationale for Change

None.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

1. **Membership**

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

2. **Member Contributions**

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

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

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

3. **Credited Service**

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

4. **Final Average Compensation**

   Final Average Compensation is the average over the highest 60 consecutive months (or shorter period of total service).

5. **Normal Retirement**

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

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

6. **Early Retirement**

   Eligibility: Age 55 with 15 years of credited service.

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

7. **Disability Benefit**

   Eligibility: Five years of credited service

   Benefit: Normal retirement benefit

APPENDIX C – SUMMARY OF PLAN PROVISIONS

8. Survivor's Benefit

Eligibility: Death while active with five years of credited service.

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

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

9. Vesting

Eligibility: Five years of credited service

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

10. Withdrawal of Employee Contributions

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

Benefit: Accumulated employee contributions with interest.

11. 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.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

12. Cost-of-Living Adjustment

Cost-of-living adjustments are made only on an ad hoc basis.

13. Changes Since Last Valuation

None.