

The logo for nyhart, featuring the word "nyhart" in a white, lowercase, sans-serif font centered within a black rectangular box. This box is part of a larger graphic element consisting of a thick black vertical bar on the left and a thin red vertical bar to its right, both extending from the top to the bottom of the page.

nyhart

***City of Dover, Delaware  
General Employee Pension Plan***

*July 1, 2016  
Actuarial Valuation Report*

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At the request of the plan sponsor, this report summarizes the City of Dover, Delaware General Employee Pension Plan as of July 1, 2016. The purpose of this report is to communicate the following results of the valuation:

- Funded Status; and
- Actuarially Determined Contribution as of July 1, 2016

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the Town. Asset information has been provided to us by the Town. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

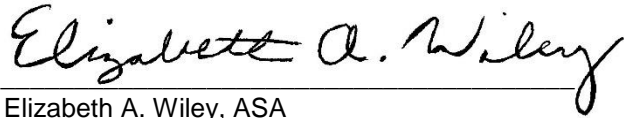
We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report.

To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart



Elizabeth A. Wiley, ASA



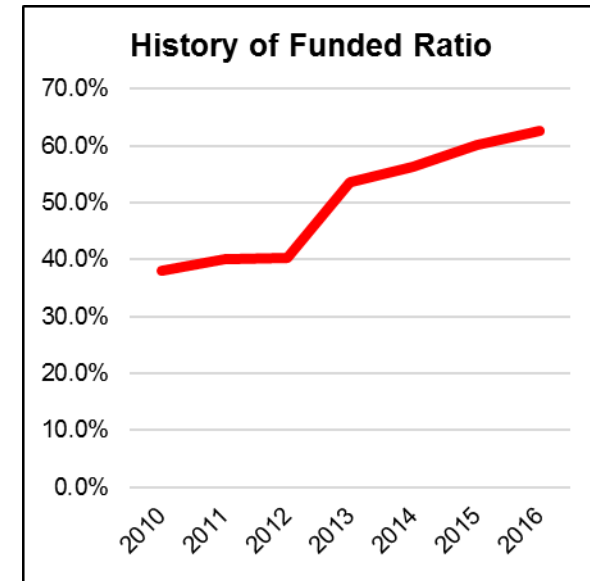
Carter M. Angell, FSA, EA, MAAA

December 30, 2016  
Date

**Summary Results**

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level normal method.

	July 1, 2014	July 1, 2016
<b>Funded Status Measures</b>		
Entry Age Accrued Liability	\$58,278,646	\$58,851,782
Actuarial Value of Assets	<u>32,825,853</u>	<u>36,791,391</u>
Unfunded Accrued Liability	\$25,452,793	\$22,060,391
Funded Percentage (AVA)	56.3%	62.5%
Funded percentage (MVA)	59.1%	60.7%
<b>Cost Measures</b>		
Actuarially Determined Contribution	\$2,983,776	\$2,824,098
Actuarially Determined Contribution (as a percentage of projected payroll)	54.3%	50.1%
<b>Asset Performance</b>		
Market Value of Assets (MVA)	\$34,425,609	\$35,698,537
Actuarial Value of Assets (AVA)	\$32,825,853	\$36,791,391
Actuarial Value/Market Value	95.4%	103.1%
<b>Participant Information</b>		
Active Participants	121	107
Terminated Vested Participants	17	19
Retirees, Beneficiaries, and Disabled Participants	<u>207</u>	<u>205</u>
Total	345	331
Total Payroll	\$5,490,192	\$5,635,987



### **Changes Since Prior Valuation and Key Notes**

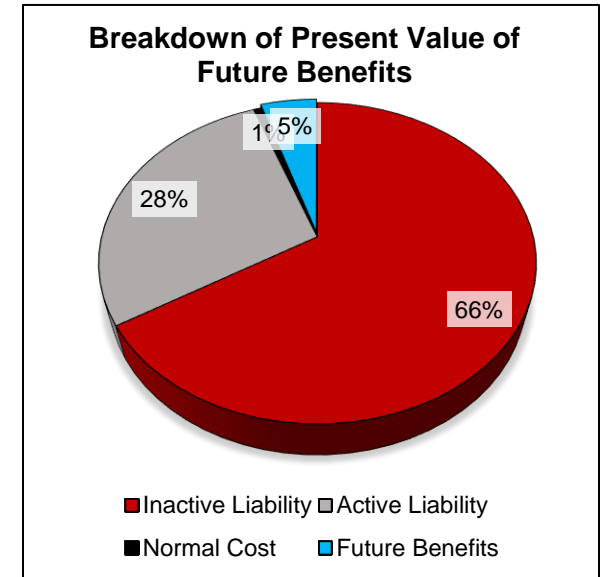
There have been no changes to the plan provisions since the last valuation.

There have been no changes to the actuarial assumptions since the last valuation.

**Present Value of Future Benefits**

The Present Value of Future Benefits represents the future benefits payable to the existing participants.

	July 1, 2016
<b>Present Value of Future Benefits</b>	
Active participants	
Retirement	\$19,531,506
Disability	0
Death	152,080
Termination	1,199,318
Refund of contributions	0
Total active	\$20,882,904
Inactive participants	
Retired participants	\$37,814,534
Beneficiaries	2,550,044
Disabled participants	0
Terminated vested participants	957,948
Total inactive	\$41,322,526
Total	\$62,205,430
 Present value of future payrolls	 \$44,490,012



**Funding Liability**

The Funding Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions.

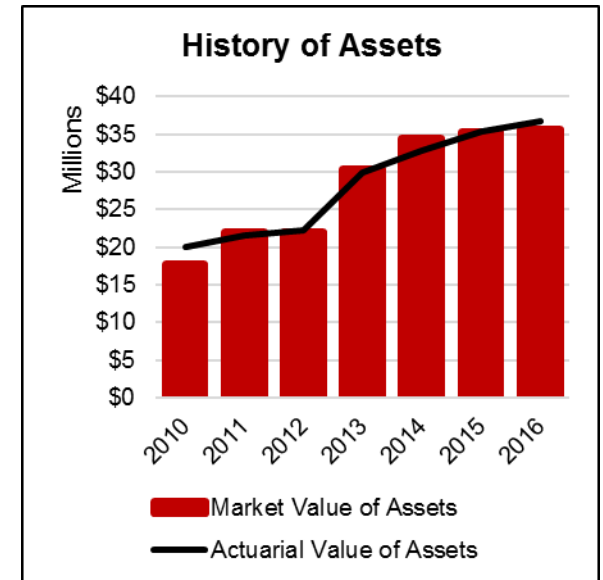
	July 1, 2016
<b>Entry Age Accrued Liability</b>	
Active participants	
Retirement	\$17,037,524
Disability	0
Death	122,916
Termination	368,816
Refund of contributions	0
Total Active	\$17,529,256
Inactive participants	
Retired participants	\$37,814,534
Beneficiaries	2,550,044
Disabled participants	0
Terminated vested participants	957,948
Total Inactive	\$41,322,526
Total	\$58,851,782
Total Normal Cost	\$427,297



**Asset Information**

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

	July 1, 2016
<b>Market Value Reconciliation</b>	
Market value of assets, beginning of prior year	\$35,290,922
Contributions	
Employer contributions	3,089,409
Member contributions	202,340
Non-employer contributing entity	0
Total	3,291,749
Investment income	850,131
Benefit payments	(3,718,225)
Administrative expenses	(16,040)
Market value of asset, beginning of current year	\$35,698,537
Return on Market Value	2.4%
 <b>Actuarial value of assets</b>	
Value at beginning of current year	\$36,791,391



**Asset Information (continued) – 20% Phase in**

Plan Assets are used to develop funded percentages and contribution requirements.

	July 1, 2016
1. Expected market value of assets	
(a) Market value of assets, beginning of prior year	\$35,290,922
(b) Contributions	3,291,749
(c) Benefit payments	(3,718,225)
(d) Expected return	2,280,267
(e) Expected market value of assets, beginning of current year	\$37,144,713
2. Market value of assets, beginning of current year	\$35,698,537
3. Actual return on market value	\$834,091
4. Amount subject to phase in [(3)-(1d)]	\$(1,446,176)
5. Phase in of asset gain/(loss)	
(a) Current year (80% x \$(1,446,176))	\$(1,156,941)
(b) First prior year (60% x \$(1,299,201))	(779,521)
(c) Second prior year (40% x \$2,039,913)	815,965
(d) Third prior year (20% x \$138,215)	27,643
(e) Total phase-in	\$(1,092,854)
6. Preliminary actuarial value of assets, beginning of current year [(2)-(5e)]	\$36,791,391
7. 80% Market value of assets	\$28,558,830
8. 120% Market value of assets	\$42,838,244
9. Adjusted actuarial value of assets	\$36,791,391
10. Final actuarial value of assets (9)	\$36,791,391
11. Return on actuarial value of assets	2.4%

**Reconciliation of Gain/Loss**

July 1, 2016

**Liability (gain)/loss**

Actuarial liability, July 1, 2014	\$58,278,646
Normal cost (2 years)	854,885
Benefit payments	(7,418,067)
Expected Interest	<u>7,455,024</u>
Expected actuarial liability, beginning of current year	\$59,170,488
Actual actuarial liability	\$58,851,782
Liability (gain)/loss	(\$318,706)

**Asset (gain)/loss**

Actuarial value of assets, July 1, 2014	\$32,825,853
Contributions	6,920,707
Benefit payments	(7,418,067)
Expected investment return	<u>4,373,722</u>
Expected actuarial value of assets, beginning of current year	\$36,702,215
Actual actuarial value of assets, beginning of current year	\$36,791,391
Asset (gain)/loss	\$(89,176)

**Total (gain)/loss**

(\$407,882)

**Development of Actuarially Determined Contribution**

The actuarially determined contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

**Valuation Date** **July 1, 2016**  
**For Plan Year Ending** **June 30, 2018**

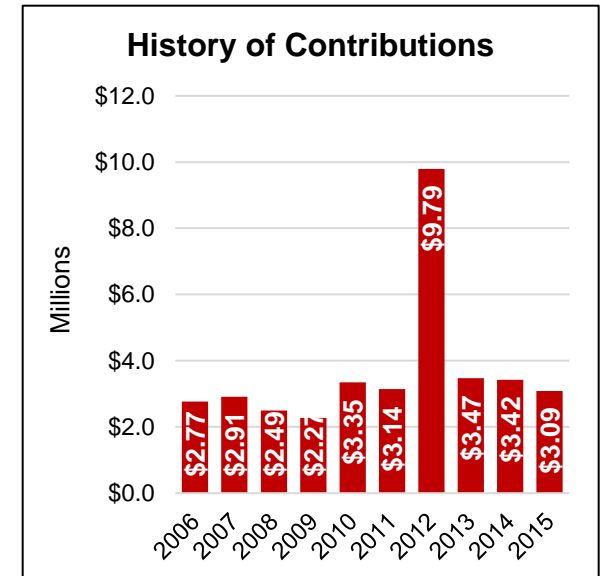
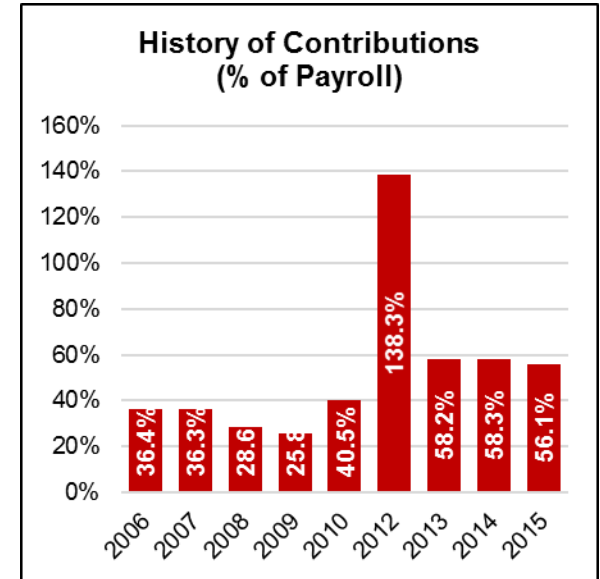
**Funded Position**

1. Entry age accrued liability	\$58,851,782
2. Actuarial value of assets	\$36,791,391
3. Unfunded actuarial accrued liability (UAAL)	\$22,060,391

**Employer Contributions**

1. Normal Cost	
(a) Total normal cost	\$427,297
(b) Expected participant contributions	195,602
(c) Net normal cost	\$231,695
2. Amortization of UAAL	2,420,040
3. Applicable interest	172,363
4. Actuarially determined contribution	\$2,824,098

Total Payroll	\$5,635,987
Actuarially determined contribution as a % of payroll	50.1%



**Demographic Information**

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

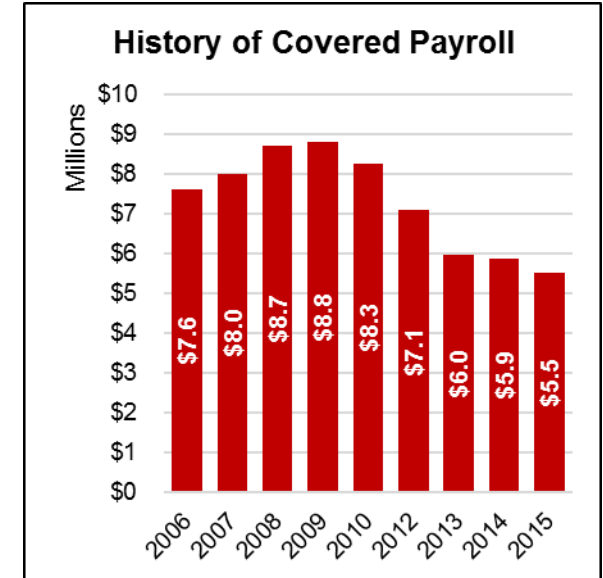
**July 1, 2016**

**Participant Counts**

Active Participants	107
Retired Participants	168
Beneficiaries	37
Disabled Participants	0
Terminated Vested Participants	19
<b>Total Participants</b>	<b>331</b>

**Active Participant Demographics**

Average Age	48.2
Average Service	16.6
Average Compensation	\$52,673
<b>Total Payroll</b>	<b>\$5,635,987</b>



Demographic Information (continued)

July 1, 2016

**Retiree Statistics**

Average Age	67.4
Average Monthly Benefit	\$1,694

**Beneficiary Statistics**

Average Age	74.1
Average Monthly Benefit	\$629

**Disabled Participants Statistics**

Average Age	N/A
Average Monthly Benefit	N/A

**Terminated Vested Participants Statistics**

Average Age	53.2
Average Monthly Benefit	\$799

**Terminated Participants Due a Return of Employee Contributions Statistics**

Average Age	39.9
Total Employee Contributions Payable	\$28,095

**Participant Reconciliation**

	<b>Active</b>	<b>Terminated Vested</b>	<b>Disabled</b>	<b>Retired</b>	<b>Survivor</b>	<b>Totals</b>
<b>Prior Year</b>	121	17	0	172	35	345
<b>Active</b>						
To Terminated Vested	(4)	4	0	0	0	0
To Retired	(7)	0	0	7	0	0
To Lump Sum Cash-Out	(2)	0	0	0	0	(2)
<b>Terminated Vested</b>						
To Retired	(1)	(1)	0	2	0	0
To Lump Sum Cash-Out	0	(1)	0	0	0	(1)
<b>Retired</b>						
To Death	0	0	0	(13)	0	(13)
<b>Survivor</b>						
To Death	0	0	0	0	(4)	(4)
<b>Additions</b>	0	0	0	0	6	6
<b>Departures</b>	0	0	0	0	0	0
<b>Current Year</b>	107	19	0	168	37	331

**Active Participant Schedule**

Active participant information grouped based on age and service.

Age Group	Years of Service										Total	Average Pay
	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												
25 to 29			4	1							5	\$48,285
30 to 34			2	5							7	\$46,028
35 to 39			6	7	3						16	\$49,016
40 to 44			2	5	3	1					11	\$58,147
45 to 49			4	5	6	2	1				18	\$49,811
50 to 54			1	3	3	2	6	1			16	\$58,233
55 to 59			2	5	1	5	5		4		22	\$54,443
60 to 64			2	2		2	3				9	\$56,038
65 to 69				1	1		1				3	\$39,361
70 & Up												
<b>Total</b>			23	34	17	12	16	1	4		107	\$52,673



**Name of plan**

City of Dover, Delaware General Employee Pension Plan

**Effective date**

The plan was originally effective as of July 1, 1967.

**Eligibility for membership**

All Full-time employment (at least 37 ½ hours worked per week) with the City. Effective May 1, 1994, employees may make an irrevocable decision to join the Deferred Compensation Plan and forfeit participation in the pension plan. The plan is closed to new members effective September 28, 2009.

**Normal retirement benefit**

2.00% of Average Monthly Earnings multiplied by Continuous Service

**Normal retirement date**

Age 65 and 10 years of Continuous Service

If hired prior to May 1, 1994, the member may also be eligible for unreduced benefits upon later of attainment of age 50 with 20 years of Continuous Service or 25 years of Continuous Service regardless of age.

If hired on or after May 1, 1994, the member may also be eligible for unreduced benefits upon the attainment age 55 where the sum of the member's age and Continuous Service is at least 80.

**Average Monthly Earnings**

36 consecutive months in the final ten years of continuous service, which results in the highest average, no less than \$150.

**Early retirement benefit**

Normal retirement benefit reduced 6% for each year the early retirement date precedes age 65

**Early retirement date**

Age 55 with 10 years of Continuous Service

### **Disability retirement benefit**

Normal retirement benefit payable immediately. The benefit ceases if the participant has recovered, refuses an examination or attains age 65, at which time the normal retirement benefit commences of the same amount.

### **Disability retirement date**

Total and permanent disability and completion of 10 years of Continuous Service

### **Death Benefit**

For members who are currently retired, eligible to retire with a normal or early retirement benefit, or have completed 20 years of Continuous Service, a benefit of 50% of the benefit the member was receiving or entitled to receive. Benefits for members not eligible for a normal retirement benefit will be reduced 6% per year from age 65, but not less than \$200 per month. Benefit is payable immediately to an Eligible Survivor and ceases upon the earliest of death, remarriage or attainment of age 18 for children.

For members ineligible for retirement or with less than 20 years of Continuous Service, accumulated contributions with interest accumulated at 5% will be refunded to a designated beneficiary or estate.

### **Eligible Survivor**

The member's spouse or domestic partner of at least one year and not domiciled apart at the date of death or surviving children under the age of 18

### **Termination Benefit**

For vested participants: Normal retirement benefit payable at age 65

For non-vested participants: A return of accumulated contributions with interest accumulated at 5% will be refunded on the 90<sup>th</sup> day following termination upon request or automatically after 5 years. Vested participants may elect a refund in lieu of the deferred vested benefit.

### **Vesting**

10 years of Continuous Service

### **Earnings**

Base pay plus scheduled overtime and payment for being on-call, except hours called out.

**Continuous service**

Continuous Service is earned for full-time employment with the City. A member who terminates and is rehired within 5 years may have service restored if reemployed within 90 days, reemployed for 5 years if had less than 20 years of continuous service or reemployed for 2 years if had at least 20 years of continuous service. Any contributions withdrawn must be repaid with interest.

**Normal form of payment**

Single life annuity, with the Death Benefit continuing to the Eligible Survivor as applicable

**Participant contributions**

3.50% of earnings

Except where otherwise indicated, the following assumptions were selected by the plan sponsor with the concurrence of the actuary. Prescribed assumptions are based on the requirements of the relevant law, the Internal Revenue Code, and applicable regulation. The actuary was not able to evaluate the prescribed assumptions for reasonableness for the purpose of the measurement.

**Valuation Date**

July 1, 2016

**Participant and Asset Information Collected as of**

July 1, 2016

**Cost Method (CO)**

Entry Age Normal Cost Method

**Amortization Method (CO)**

15 year closed level dollar amortization of Unfunded Actuarial Accrued Liability

**Asset Valuation Method**

The actuarial value of assets is equal to the fair market value of assets on the valuation date adjusted for a 5-year phase in of gains and losses on fair market value of assets.

**Interest Rate (CO)**

6.50% net of expenses

**Annual Pay Increases (FE)**

3.00%

**Expense and/or Contingency Loading (FE)**

None

**Mortality Rates (FE)**

RP-2000 Mortality Table with generational improvements based on Scale AA

**Retirement Rates (FE)** (ultimate rates shown)

	<b>Hired Before 5/1/1994</b>	<b>Hired After 5/1/1994</b>		<b>Hired Before 5/1/1994</b>	<b>Hired After 5/1/1994</b>
<b>Age</b>			<b>Age</b>		
50-51	4%	0%	62	25%	20%
52-54	8	0	63-64	25	15
55-57	8	6	65	25	50
58	10	6	66	50	50
59	15	6	67-69	100	50
60	20	10	70	100	100
61	25	10			

**Disability Rates (FE)**

None

**Withdrawal Rates (FE)**

<b>Age</b>	<b>Union</b>	<b>&lt; 3 Years</b>	<b>Nonunion 3 – 4 Years</b>	<b>5+ Years</b>
25	10.0%	30.0%	27.0%	25.5
30	9.4	30.0	27.0	23.4
35	8.2	30.0	27.0	20.3
40	6.7	30.0	27.0	16.6
45	5.2	30.0	27.0	12.5
50	3.3	30.0	27.0	7.5
55	1.2	30.0	27.0	2.6

**Marital Status and Ages (FE)**

70% of males and 55% of females in the active population are assumed to be marries, with husbands assumed to be 3 years older than wives. Terminated participants vested in an annuity are assumed to be married with husbands assumed to be 3 years older than wives.

**Other procedures**

Benefits projected to assumed retirement age for active participants have been limited so as not to exceed maximum benefit limits imposed by Code Section 415(b) and/or maximum compensation limits of Code Section 401(a)(17). IRS limits on compensation and benefits are assumed to grow at 2.50%.

FE indicates an assumption representing an estimate of future experience

MD indicates an assumption representing observations of estimates inherent in market data

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data

The actuarial report also shows the necessary items required for plan reporting and any state requirements.

- ✓ Schedule of Amortizations
- ✓ Actuarially Determined Contribution by Division

Schedule of Amortizations

July 1, 2016

<u>Date Established</u>	Remaining Period <u>Years</u>	Outstanding <u>Balance</u>	Annual <u>Payment</u>
7/1/2014	13	23,279,291	\$2,541,761
7/1/2016	15	<u>\$(1,218,900)</u>	<u>(121,721)</u>
	Total	\$22,060,391	\$2,420,040



**Actuarially Determined Contribution by Division**

	(110) General Fund	(412) Water Fund	(480) Electric Fund	Total
Funding Liability	\$32,448,049	\$4,933,772	\$21,469,961	\$58,851,782
Actuarial Value of Assets	16,255,287	2,956,172	17,579,932	36,791,391
Unfunded Liability	\$16,192,762	\$1,977,600	\$3,890,029	\$22,060,391
Normal Cost	\$151,524	\$29,668	\$50,503	\$231,695
Amortization Payment	1,769,269	216,625	434,146	2,420,040
Interest at 6.50%	124,852	16,009	31,502	172,363
Actuarially Determined Contribution	\$2,045,645	\$262,302	\$516,151	\$2,824,098
Estimated Fiscal Year Payroll	\$3,437,378	\$551,062	\$1,647,547	\$5,635,987
Actuarially Determined Contribution as a Percentage of Payroll	59.51%	47.60%	31.33%	50.11%