

***Via Email and US Mail***

November 7, 2014

Mr. David C. Craik  
 Pension Administrator  
 Delaware Public Employees' Retirement Systems  
 McArdle Building  
 860 Silver Lake Boulevard, Suite 1  
 Dover, Delaware 19904-2402

***Re: Closed State Police Plan Accounting***

Dear Dave:

As requested, we are writing to provide the financial disclosure figures under Government Accounting Standards Board (GASB) Statement No. 27 for the Closed State Police Plan.

The Annual Required Contribution (ARC) for last year was disclosed in a letter from Cheiron dated September 17, 2013 as \$26,169,000. After the adjustment for the Net Pension Obligation (NPO), this translated to an Annual Pension Cost (APC) of \$24,443,000. The State actually contributed \$23,064,000, and so the State's CAFR must reflect an NPO of \$120,467,000 as developed below.

	<b>7/1/2013- 6/30/2014</b>
Annual Required Contribution	\$ 26,169,000
Interest on NPO	8,932,000
Adjustment to ARC	<u>(10,658,000)</u>
Annual Pension Cost	\$ 24,443,000
Contributions Made	23,064,000
Increase in NPO	1,379,000
NPO at Beginning of Year	<u>119,088,000</u>
NPO at End of Year	\$ 120,467,000

The June 30, 2015 State financial statements will be prepared using GASB Statement No. 68 and so we have not provided the GASB Statement No. 27 information for next year.



## **Actuarial Assumptions and Methods**

### **Asset Valuation Method**

The market value of assets, representing the realizable value of the assets on a particular day, is not necessarily an appropriate value for the purpose of setting contribution rates. This is because funding will take place over a long period of time during which market values can be expected to fluctuate significantly from year to year. If market values were used to develop contribution rates, the resulting contribution rates would also fluctuate from year to year.

In order to produce a stable pattern of contribution rates, market values are adjusted to remove some of the volatility. The actuarial value of assets is equal to  $1/5^{\text{th}}$  of the market value plus  $4/5^{\text{th}}$  of the expected value, where the expected value is equal to last year's actuarial value and subsequent cash flows into and out of the fund accumulated with interest at the valuation rate of 7.5%.

### **Funding Method**

We used the Aggregate Entry Age Normal Method to determine costs. Under an Entry Age method, a total contribution rate is determined which consists of two elements: the normal cost rate and the unfunded liability rate (UAL). In addition, the overall contribution rate includes a provision for the plan's expenses which is equal to the allocation of administrative expenses in the prior year.

Under this method, an Entry Age Normal cost rate is determined for a typical member of each respective plan. This rate represents the member's expected future employer-paid normal costs divided by his expected future salary.

In addition to contributions required to meet the normal cost, contributions are required to meet the plan's unfunded actuarial liability. Actuarial liability equals the present value of future benefits less the present value of future normal costs and future employee contributions. The unfunded liability is the total actuarial liability for all members less the actuarial value of the System's assets. The total unfunded actuarial liability is amortized as a level dollar amount and will be fully paid by the year 2036.

### **Actuarial Assumptions**

- 1. Rate of Return on Investments:**  
7.5% compounded annually
- 2. Salary Increases Attributable to Inflation:**  
3.25% compounded annually

**3. Salary Increases Attributable to Merit and Productivity:**

10-Year Select (service-based) & Ultimate (age-based) table

Service	Select
0	12.50%
1	8.75%
2-3	5.50%
4	3.75%
5-9	2.00%

Age	Ultimate
<55	1.50%
55+	1.00%

**4. Rates of Mortality:**

Sex-distinct rates anticipating future improvements in mortality through the use of a projection scale

Sample rates are as follows.

Healthy Active and Inactive Mortality Rates				
Age	Mortality Rates		Projection Scale	
	Male	Female	Male	Female
50	0.21%	0.17%	1.80%	1.70%
55	0.36%	0.27%	1.90%	1.80%
60	0.67%	0.51%	1.60%	0.50%

**5. Rates of Disabled Mortality:**

Sex-distinct rates

Sample rates are as follows.

Age	Mortality Rates	
	Male	Female
50	0.78%	0.21%
55	1.00%	0.30%
60	1.28%	0.49%

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**6. Rates of Retirement:**

Age-based Select and Ultimate table are as follows.

<b>Age</b>	<b>Select</b>	<b>Ultimate</b>
<41	25.00%	0.00%
41-49	25.00%	12.50%
50-54	50.00%	15.00%
55-59	50.00%	75.00%
60+	50.00%	100.00%

**7. Rates of Termination:**

Service-based Select and Ultimate table are as follows.

<b>Service</b>	<b>Rate</b>
0	8.00%
1-2	2.50%
3	2.25%
4-5	2.00%
6	1.75%
7	1.50%
8	1.25%
9	1.00%
Ultimate	1.00%

If you have any questions, please call.

Sincerely,  
Cheiron



Fiona E. Liston, FSA, EA  
Principal Consulting Actuary