



ACTUARIAL SECTION

DELAWARE
PUBLIC
EMPLOYEES'
RETIREMENT
SYSTEM

- a component unit of the State of Delaware



MILLIMAN & ROBERTSON, INC.

Actuaries & Consultants

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October 6, 2000

Board of Pension Trustees
Delaware Public Employees' Retirement System
Thomas Collins Building
P. O. Box 1401
Dover, Delaware 19903

Dear Board Members:

At your request, we have prepared our annual actuarial valuations of each of the funded pension plans administered by the Board as of June 30, 2000. The results of these valuations are contained in this report.

Funding Objective

The funding objective of the System is to establish contribution rates which, over time, will remain level as a percent of payroll. In order to achieve this, a contribution rate has been determined which will provide for current cost (i.e., normal cost expressed as a level percent of payroll) plus level percent of payroll amortizations of each layer of the unfunded liability the periods disclosed on page 36 of the CAFR. This funding objective is currently being realized.

Furthermore, each of the plans is subject to statutory funding requirements which, in our judgement, are in conformity with generally accepted actuarial principles and practices. To our knowledge, the State has consistently funded the full amounts required based on the actuarial valuations and specific statutory provisions.

Assumptions

The actuarial assumptions and methods used in these valuations have been recommended by the actuary and adopted by the Board of Trustees. The assumptions are annually screened for their continued applicability to this plan. We believe that the assumptions and methods are reasonable, and in the aggregate represent our best estimate of anticipated experience under the plans.

The assumptions and methods used for funding purposes meet the parameters set for the disclosures presented in the financial section by Government Accounting Standards Board Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans*.

Albany, Atlanta, Boise, Boston, Chicago, Columbus, Dallas, Denver, Hartford, Houston, Indianapolis, Irvine, Los Angeles, Milwaukee, Minneapolis, New York, Omaha, Philadelphia, Phoenix, Portland, ME, Portland, OR, St. Louis, Salt Lake City, San Diego, San Francisco, Seattle, Tampa, Washington, D.C., Bermuda, Tokyo

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Board of Pension Trustees
October 6, 2000
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Reliance on Others

In preparing our report, we relied, without audit, on employee census data provided by the Delaware State Pension Office. Census data provided by the Office has been reviewed for reasonableness, and for consistency with the data used in prior years.

Supporting Schedules

The figures disclosed in Schedule 1 of the Supporting Schedules to the Financial Section were provided by Milliman & Robertson, as were the Notes to Trend Data. In addition, we were responsible for the following schedules to be found in the Actuarial Section: Actuarial Assumptions and Methods, Schedule of Active Member Valuation Data, Solvency Test.

Certification

We believe that the State's pension plans are adequately and appropriately financed, in that the contributions are determined and funded on a level cost basis using reasonable actuarial methods and assumptions.

We hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable Guides to Professional Conduct, Amplifying Opinions, and Supporting Recommendations and Interpretations of the American Academy of Actuaries.

Sincerely,

MILLIMAN & ROBERTSON, INC.



Fiona E. Liston, F.S.A.
Consulting Actuary



Gene Kalwarski, F.S.A.
Principal & Consulting Actuary

MILLIMAN & ROBERTSON, INC.

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 into the future during which time market values can be expected to fluctuate widely. If market values were used to develop contribution rates, the resulting contribution rates would also vary widely.

In order to produce a stable pattern of contribution rates, market values are adjusted so that some of the volatility is removed. The actuarial value of assets has been calculated by taking 1/5th of the market value plus 4/5th's of the expected value, where the expected value is last year's actuarial value and subsequent cash flows into and out of the fund accumulated with interest at the valuation rate (8.5%).

Funding Method

The plans generally use the Aggregate Entry Age Normal Method with projection to determine costs. The municipal plans use a modification of this method known as the Frozen Initial Liability Method. Under the 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 and a budgeting adjustment, which takes into account the one-year lag between an actuarial valuation being performed and the subsequent rates going into effect.

For each State plan, an Individual Entry Age Normal cost rate is determined for the typical new entrant of each respective plan. This rate is determined by taking the value, as of entry into the plan, of the member's projected future benefits less the member's projected future employee contributions, and dividing it by the value, also as of the member's entry age, of his expected future salary.

In addition to contributions required to meet the normal cost, contributions will be required to meet each plan's unfunded actuarial liability. Actuarial liability is defined as the present value of future benefits less the present value of future normal costs and future employee contributions. The unfunded liability is the total of the actuarial liability for all members less the actuarial value of the System's assets.

A portion of the unfunded liability will be paid through future, scheduled transfers from the Post-Retirement Increase Fund. These transfers will cover the liability increases due to the cost-of-living increases granted on July 1, 1996, July 1, 1997, July 1, 1998, July 1, 1999, and July 1, 2000 as well as the decoupling from Social Security as it applies to the retired population as of July 1, 1996. The remaining unfunded actuarial liability will be amortized over the next 15 years (for the State Employees' Plan, 21 years for the Judiciary Plan, 20 years for the New State Police Plan, and 27 years for the Volunteer Firemen's Plan) through the unfunded liability amortization component of the total contribution. The latest plan amendment to the State Employees' Plan is being amortized over a fixed 30-year period.

Actuarial Assumptions

The assumptions used for the actuarial valuation were recommended by the actuary and adopted by the Board based upon an ongoing analysis of the plans' experience. Differences between assumed and actual experience (actuarial gains and losses) are part of the unfunded actuarial liabilities.

The following significant assumptions were used in the actuarial valuations as of July 1, 2000:

1. a rate of return on investments of 8.5% compounded annually (adopted 1990);
2. projected salary increases of 5% compounded annually, attributable to inflation (adopted 1983);

3. additional projected salary increases ranging from ½% to 5% per year attributable to seniority, productivity, and merit (adopted 1985);
4. rates of mortality are based on the 1983 Group Annuity Mortality Table in all cases except for the Diamond State Port Corporation Plan which uses the UP-84 Mortality Table with ages set forward two years for males and set back three years for females (adopted 1984). Sample rates from all of these tables follow:

Age	1983 GAM		UP84 (+2, -3)	
	Male	Female	Male	Female
35	0.09%	0.05%	0.16%	0.12%
40	0.12%	0.07%	0.26%	0.16%
45	0.22%	0.10%	0.42%	0.26%
50	0.39%	0.16%	0.69%	0.42%
55	0.61%	0.25%	1.08%	0.69%
60	0.92%	0.42%	1.70%	1.08%

5. rates of termination of service, disablement, and retirement are based on continuous monitoring of actual experience (adopted 1999); and
6. the aggregate active member payroll is assumed to increase by 4% annually (adopted 1976).

Summary of Plan Provisions and Changes in Plan Provisions

The plans valued are those described on pages 24-26 of the Financial Section. As of July 1, 2000, there were significant plan changes in five of the plans, which are not reflected in the aforementioned plan descriptions.

The State Employees' Pension Plan was amended to grant an ad hoc post-retirement benefit increase to those currently receiving benefits. The pension calculation multiplier increased from 1.66 to 1.8.

Currently retired members of the Special Pension Plan received an ad hoc post-retirement benefit increase in benefits.

Currently retired members of the New State Police Pension Plan received an ad hoc post-retirement benefit increase in benefits. Also, eligibility requirements were reduced from 25 years to 20 years, the member contribution rate was increased by 2% of pay, and the multiplier for years of service in excess of 20 was increased to 3.5%

The Judiciary Pension Plan was also amended to grant an ad hoc post-retirement benefit increase to those currently receiving benefits.

Currently retired members of the County & Municipal Police/Firemen's Plans (FICA and Non-FICA) received an ad hoc post-retirement benefit increase in benefits.

All of these plan changes are reflected in the liabilities shown as of June 30, 2000.

ACTUARIAL SECTION

Schedule of Active Member Valuation Data

Plan	Fiscal Year Ended	Number of Members	Annualized Covered Payroll (Expressed in thousands)	Annual Average Pay	% Increase in Average Pay
State Employees'	6/30/2000	31,740	\$ 1,198,626	\$ 37,764	6.1%
	6/30/1999	31,634	1,125,857	35,590	(0.1%)
	6/30/1998	30,031	1,070,052	35,632	4.9%
	6/30/1997	30,163	1,024,976	33,981	1.9%
	6/30/1996	29,435	981,800	33,355	3.7%
	6/30/1995	28,927	930,541	32,169	4.8%
Special	The Special Plan has no Active Members				
New State Police	6/30/2000	527	\$ 25,558	\$ 48,497	6.4%
	6/30/1999	516	23,518	45,578	5.3%
	6/30/1998	496	21,462	43,270	4.6%
	6/30/1997	465	19,227	41,348	4.5%
	6/30/1996	436	17,252	39,569	3.0%
	6/30/1995	385	14,796	38,433	4.3%
Judiciary	6/30/2000	49	\$ 5,794	\$ 118,245	0.1%
	6/30/1999	48	5,673	118,188	8.5%
	6/30/1998	47	5,118	108,894	(1.0%)
	6/30/1997	45	4,948	109,959	3.3%
	6/30/1996	44	4,685	106,479	8.0%
	6/30/1995	46	4,536	98,618	(1.4%)
County & Municipal Police/Firemen's (FICA)	6/30/2000	163	\$ 6,070	\$ 37,239	13.0%
	6/30/1999	150	4,945	32,965	(3.1%)
	6/30/1998	122	4,150	34,016	6.2%
	6/30/1997	123	3,939	32,022	8.4%
	6/30/1996	119	3,514	29,530	1.0%
	6/30/1995	111	3,245	29,235	10.7%
County & Municipal Police/Firemen's (Non-FICA)	6/30/2000	296	\$ 11,941	\$ 40,341	0.8%
	6/30/1999	257	10,285	40,019	22.8%
	6/30/1998	232	7,562	32,595	6.3%
	6/30/1997	172	5,276	30,676	1.9%
	6/30/1996	124	3,735	30,118	15.1%
	6/30/1995	98	2,564	26,162	2.3%

Schedule of Active Member Valuation Data *(continued)*

Plan	Fiscal Year Ended	Number of Members	Annualized Covered Payroll <i>(Expressed in thousands)</i>	Annual Average Pay	% Increase in Average Pay
County & Municipal	6/30/2000	74	\$ 2,004	\$ 27,081	9.5%
Other Employees'	6/30/1999	69	1,706	24,725	8.9%
	6/30/1998	61	1,385	22,705	(7.7%)
	6/30/1997	52	1,279	24,595	16.7%
	6/30/1996	51	1,096	21,074	(2.1%)
	6/30/1995	52	1,119	21,526	(0.7%)
Volunteer Firemen's	6/30/2000	4,579	-	-	-
	6/30/1999	4,706	-	-	-
	6/30/1998	4,651	-	-	-
	6/30/1997	4,621	-	-	-
	6/30/1996	4,505	-	-	-
	6/30/1995	4,465	-	-	-
Diamond State Port Corporation	6/30/2000	227	\$ 7,715	\$ 33,987	(7.9%)
	6/30/1999	207	7,637	36,894	0.3%
	6/30/1998	183	6,731	36,781	(1.7%)
	6/30/1997	110	4,116	37,422	9.1%
	6/30/1996	101	3,464	34,302	N/A
Closed State Police	6/30/2000	57	\$ 3,888	\$ 68,211	3.8%
	6/30/1999	75	4,930	65,733	4.6%
	6/30/1998	87	5,466	62,828	6.6%
	6/30/1997	97	5,716	58,929	6.7%
	6/30/1996	104	5,745	55,246	6.0%
	6/30/1995	125	6,514	52,116	(1.2%)

ACTUARIAL SECTION

Schedule of Retirants and Beneficiaries Added to and Removed from Rolls

Plan	Fiscal Year Ended	Additions	Deletions	Year-end Total	Annual Allowances (Expressed in thousands)	% Increase in Annual Allowances	Average Annual Allowances
State Employees'	6/30/2000	1,135	611	15,199	\$ 159,122	9.4%	\$ 10,469
	6/30/1999	1,076	536	14,675	145,391	9.3%	9,907
	6/30/1998	892	566	14,135	133,018	7.7%	9,410
	6/30/1997	892	594	13,809	123,478	8.6%	8,942
	6/30/1996	750	507	13,511	113,703	4.8%	8,416
	6/30/1995	681	470	13,268	108,503	4.2%	8,178
Special	6/30/2000	-	1	42	\$ 133	0.8%	\$ 3,167
	6/30/1999	2	4	43	132	5.6%	3,070
	6/30/1998	2	-	45	125	(3.0%)	2,895
	6/30/1997	2	4	43	129	(2.7%)	2,985
	6/30/1996	-	6	45	132	(2.8%)	2,932
	6/30/1995	-	2	51	136	0.6%	2,662
New State Police*	6/30/2000	-	-	5	\$ 166	46.9%	\$ 33,200
	6/30/1999	-	-	5	113	(7.4%)	22,600
	6/30/1998	-	-	5	122	41.1%	24,372
	6/30/1997	1	-	5	87	0.9%	17,272
	6/30/1996	-	-	4	86	1.1%	21,388
	6/30/1995	-	-	4	85	1.6%	21,158
Judiciary	6/30/2000	5	1	37	\$ 1,642	9.6%	\$ 44,378
	6/30/1999	3	-	33	1,498	10.5%	45,394
	6/30/1998	5	3	30	1,356	6.8%	45,203
	6/30/1997	-	2	28	1,268	7.2%	45,333
	6/30/1996	2	1	30	1,184	5.9%	39,475
	6/30/1995	1	-	29	1,118	12.6%	38,567
County & Municipal Police/Firemen's (FICA)	6/30/2000	-	-	4	\$ 53	1.9%	\$ 13,250
	6/30/1999	1	-	4	52	48.6%	13,000
	6/30/1998	-	-	3	35	10.5%	11,795
	6/30/1997	-	-	3	32	1.7%	10,672
	6/30/1996	-	-	3	32	76.8%	10,495
	6/30/1995	1	-	3	18	58.3%	5,938

* In FY1998 and in FY2000, the New State Police Plan settled appeal cases which included prior year funds. Therefore, even though there was no change to the membership, there was a significant increase in the annual allowance for this Plan.

Schedule of Retirants and Beneficiaries Added to and Removed from Rolls (continued)

Plan	Fiscal Year Ended	Additions	Deletions	Year-end Total	Annual Allowances (Expressed in thousands)	% Increase in Annual Allowances	Average Annual Allowance
County & Municipal	6/30/2000	-	-	1	\$ 16	23.1%	\$ 16,000
Police/Firemen's (Non-FICA)	6/30/1999	1	-	1	13	100.0%	13,000
	6/30/1998	-	-	-	-	-	-
	6/30/1997	-	-	-	-	-	-
County & Municipal	6/30/2000	1	-	9	\$ 21	50.0%	\$ 2,333
Other Employees'	6/30/1999	1	-	8	14	(6.7%)	1,750
	6/30/1998	-	-	7	15	0.0%	2,161
	6/30/1997	-	-	7	15	1.9%	2,161
	6/30/1996	4	-	7	15	31.4%	2,119
	6/30/1995	-	-	3	11	36.1%	3,762
Volunteer Firemen's	6/30/2000	66	42	1,103	\$ 920	3.4%	\$ 834
	6/30/1999	73	33	1,079	890	6.5%	825
	6/30/1998	68	38	1,039	836	3.1%	805
	6/30/1997	68	50	1,009	811	2.7%	804
	6/30/1996	67	36	991	791	4.6%	798
	6/30/1995	67	33	960	755	4.4%	787
Diamond State Port Corporation	6/30/2000	1	1	7	\$ 75	(14.8%)	\$ 10,714
	6/30/1999	2	1	7	88	66.0%	12,571
	6/30/1998	1	-	6	53	64.8%	8,894
	6/30/1997	4	-	5	33	1,292.0%	6,476
	6/30/1996	1	-	1	2	100.0%	2,326
Closed State Police	6/30/2000	22	4	541	\$ 16,078	3.9%	\$ 29,719
	6/30/1999	21	14	523	15,481	3.1%	29,600
	6/30/1998	16	11	516	15,018	3.8%	29,105
	6/30/1997	15	12	511	14,465	4.1%	28,308
	6/30/1996	23	9	508	13,902	6.3%	27,365
	6/30/1995	14	6	494	13,082	4.4%	26,481

ACTUARIAL SECTION

Solvency Test

(Dollar values expressed in thousands)

Plan	Valuation Date	Aggregate Accrued Liabilities for			Market Value of Reported Assets	Portion of Accrued Liabilities by Reported Assets		
		Active Member Contributions	Retirants & Beneficiaries	Active Member Employer Financed Contributions		(1)	(2)	(3)
		(1)	(2)	(3)		(1)	(2)	(3)
State Employees'	6/30/2000	\$ 325,684	\$ 1,453,396	\$ 1,990,516	\$ 5,428,898	100%	100%	183%
	6/30/1999	307,831	1,333,509	1,708,787	4,700,554	100%	100%	179%
	6/30/1998	291,421	1,231,545	1,612,699	4,277,736	100%	100%	171%
	6/30/1997	269,295	1,154,814	1,391,686	3,651,457	100%	100%	160%
	6/30/1996	248,535	1,062,198	1,359,967	3,135,119	100%	100%	134%
	6/30/1995	227,106	1,001,137	933,085	2,654,066	100%	100%	152%
Special	6/30/2000	\$ -	\$ 834	-	\$ 2,325	-	279%	-
	6/30/1999	-	826	-	2,131	-	258%	-
	6/30/1998	-	899	-	2,090	-	232%	-
	6/30/1997	-	797	-	1,906	-	239%	-
	6/30/1996	-	824	-	1,777	-	216%	-
	6/30/1995	-	925	-	1,626	-	176%	-
New State Police	6/30/2000	\$ 12,600	\$ 1,495	\$ 54,272	\$ 104,462	100%	100%	167%
	6/30/1999	10,680	1,319	42,714	85,827	100%	100%	173%
	6/30/1998	9,258	1,337	36,483	73,521	100%	100%	172%
	6/30/1997	8,064	1,188	31,373	58,929	100%	100%	158%
	6/30/1996	6,830	1,013	26,746	47,281	100%	100%	147%
	6/30/1995	5,763	997	18,154	36,790	100%	100%	165%
Judiciary	6/30/2000	\$ 1,803	\$ 14,727	\$ 11,578	\$ 30,293	100%	100%	119%
	6/30/1999	1,064	12,131	12,207	25,494	100%	100%	101%
	6/30/1998	1,437	11,463	11,275	22,698	100%	100%	87%
	6/30/1997	1,331	9,704	10,637	18,958	100%	100%	74%
	6/30/1996	1,128	10,094	9,624	15,918	100%	100%	49%
	6/30/1995	1,081	9,428	7,781	13,012	100%	100%	32%
County & Municipal Police/Firemen's (FICA)	6/30/2000	\$ 1,308	\$ 460	\$ 11,171	\$ 15,298	100%	100%	121%
	6/30/1999	995	463	9,202	12,074	100%	100%	115%
	6/30/1998	895	303	7,195	10,089	100%	100%	124%
	6/30/1997	752	304	5,661	7,923	100%	100%	121%
	6/30/1996	615	284	4,369	6,007	100%	100%	117%
	6/30/1995	516	278	2,861	4,263	100%	100%	121%
County & Municipal Police/Firemen's (Non-FICA)	6/30/2000	\$ 1,979	\$ 183	\$ 8,481	\$ 12,262	100%	100	119%
	6/30/1999	1,101	180	5,756	8,138	100%	100	119%
	6/30/1998	908	-	3,567	5,056	100%	-	116%
	6/30/1997	578	-	2,091	3,036	100%	-	118%
	6/30/1996	344	-	1,104	1,629	100%	-	116%
	6/30/1995	148	-	398	634	100%	-	122%
County & Municipal Other Employees'	6/30/2000	\$ 227	\$ 185	\$ 2,192	\$ 2,819	100%	100%	110%
	6/30/1999	130	144	1,918	2,092	100%	100%	91%
	6/30/1998	170	120	1,262	1,704	100%	100%	112%
	6/30/1997	132	123	1,019	1,357	100%	100%	108%
	6/30/1996	106	126	797	1,017	100%	100%	99%
	6/30/1995	88	92	626	556	100%	100%	60%

Solvency Test *(continued)*
(Dollar values expressed in thousands)

Plan	Valuation Date	Aggregate Accrued Liabilities for			Market Value of Reported Assets	Portion of Accrued Liabilities by Reported Assets		
		Active Member Contributions	Retirants & Beneficiaries	Active Member Employer Financed Contributions		(1)	(2)	(3)
		(1)	(2)	(3)		(1)	(2)	(3)
Volunteer Firemen's	6/30/2000	\$ 2,784	\$ 6,887	\$ 3,757	\$ 10,254	100%	100%	8%
	6/30/1999	2,744	6,655	3,678	8,897	100%	92%	0%
	6/30/1998	2,521	6,351	3,619	8,162	100%	89%	0%
	6/30/1997	2,311	6,053	3,648	6,901	100%	76%	0%
	6/30/1996	2,077	5,888	3,546	5,875	100%	65%	0%
	6/30/1995	1,875	5,729	2,696	4,969	100%	54%	0%
Diamond State Port	6/30/2000	\$ 626	\$ 584	\$ 4,012	\$ 6,053	100%	100%	121%
	6/30/2000	542	624	3,785	4,777	100%	100%	95%
	6/30/1998	532	467	3,369	3,833	100%	100%	84%
	6/30/1997	337	431	3,094	2,891	100%	100%	69%
	6/30/1996	418	11	4,302	1,808	100%	100%	32%
Closed State Police	6/30/2000	\$ 3,248	\$ 264,722	\$ 34,825	\$ 1,687	52%	0%	0%
	6/30/1999	4,021	256,445	43,970	1,345	33%	0%	0%
	6/30/1998	4,285	255,383	48,896	1,029	24%	0%	0%
	6/30/1997	4,374	250,364	50,021	731	17%	0%	0%
	6/30/1996	4,287	242,724	49,196	432	10%	0%	0%

Analysis of Financial Experience for the State Employees' Pension Plan

Gains/(Losses) in Accrued Liability During Years Ended June 30,
 Resulting from Differences Between Assumed Experience and Actuarial Experience
(Expressed in thousands)

Type of Activity	Gain/(Loss) for the Fiscal Years Ending June 30,					
	1995	1996	1997	1998	1999	2000
Investment Income on Actuarial Assets	\$ 94,994	120,335	159,984	209,366	202,925	254,955
Combined Liability Experience	(226)	18,367	60,984	3,073	39,854	4,349
Gain/(Loss) During Year from Financial Experience	\$ 94,768	138,702	220,968	212,439	242,779	259,304
Non-Recurring Items	-	(243,125)	(23,322)	(134,164)	(41,170)	(202,468)
Composite Gain/(Loss) During Year	\$ 94,768	(104,423)	197,646	78,275	201,609	56,836

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