REPORT ON THE ACTUARIAL VALUATION OF THE POST RETIREMENT BENEFITS OF THE VERMONT STATE EMPLOYEES' RETIREMENT SYSTEM PREPARED AS OF JUNE 30, 2009

November 2009



# TABLE OF CONTENTS

Section	Item	Page 1
SECTION I	OVERVIEW	2
SECTION II	REQUIRED INFORMATION	3
SECTION III	MEMBERSHIP DATA AND MEDICAL PREMIUMS	5
SECTION IV	REQUIRED SUPPLEMENTARY INFORMATION	7
SECTION V	NET OPEB OBLIGATION	8
SECTION VI	FORECASTS	9
SECTION VII	ACTUARIAL ASSUMPTIONS AND METHODS	13
SECTION VIII	GLOSSARY OF TERMS	19

## **INTRODUCTION**

The Board of Trustees of the Vermont State Employees' Retirement System has engaged Buck to prepare an actuarial valuation of their post-retirement benefits program as of June 30, 2009. The State Treasurer's Office provided the employee data and premium information used in the completion of this study.

The purposes of the valuation are to measure the current liabilities of the System for its post-retirement benefits program, to determine the level of contributions necessary to assure sound funding of such benefits and to provide reporting and disclosure information for financial statements, governmental agencies and other interested parties. This valuation report contains information that is required for compliance with the Governmental Accounting Standards Board's Statements 43 and 45, which relate to accounting and financial reporting for post-employment benefits other than pensions.

We performed the calculations assuming that the System would continue its current practice of paying for the benefits on a pay-as-you-go basis, and contributing the Medicare Part D refunds into the trust fund. This approach qualifies as partial prefunding under Governmental Accounting Standards, and it was determined that a 4.25% discount rate is reasonable for this purpose. As requested, we have also provided results under alternative scenarios that assume that the System's post-retirement medical benefits other than pensions are funded in a manner similar to that used for pensions and on a pure pay-as-you-go basis. Section II provides a summary of the principal valuation results. Section VI provides a projection of expense and funding amounts.

David Driscoll is a Fellow of the Society of Actuaries and Daniel Sherman is an Associate of the Society of Actuaries. We are Members of the American Academy of Actuaries. We meet the Qualification Standards of the Academy to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions concerning it.

Respectfully Submitted,

BUCK CONSULTANTS, LLC

Daniel W. Therman

Daniel W. Sherman, ASA, MAAA, EA Director and Consulting Actuary

David Drinel

David L. Driscoll, FSA, MAAA, EA Principal and Consulting Actuary November 6, 2009

Date

November 6, 2009

Date

#### **SECTION I - OVERVIEW**

The plan experienced a net actuarial gain in its accrued liability over the past year. The net increase in liability was less than expected, primarily due to an adjustment to our calculation of estimated per capita claims that reflected additional claims information provided this year. The additional information improved the accuracy of our allocation of expected claims between pre- and post-65 age groups.

Offsetting the gain was an increase in the overall headcount from 11,815 to 12,028, which reflects the addition of 346 Defined Contribution participants. These previously unreported participants added about \$13 million to the liabilities computed using an 8.25% discount rate. The asset return was about 2%, resulting in an actuarial loss. The net result was an increase in the unfunded liability slightly greater than expected.

All assumptions, including the assumed discount rate and healthcare trend rates, were the same as those used in 2008. All plan provisions were the same as those reflected in the 2008 valuation except for a cost-sharing amendment applicable to Group F and Defined Contribution employees hired on or after July 1, 2008. In this year's report, we added results based on partial prefunding on assumption that Medicare Part D refunds will continue to be deposited into the trust.

GASB Staff Technical Bulletin No. 2006-1, Accounting and Financial Reporting by Employers for Payments from the Federal Government Pursuant to the Retiree Drug Subsidy Provisions of Medicare Part D, provides that GASB OPEB calculations cannot reflect offsets for future Medicare Part D subsidy payments. Instead, the payments are to be reflected when the drug subsidy is actually earned (i.e., when the drug benefit costs for which the subsidy is due have been incurred by the participants.) Thus, our calculations do not reflect the value of future Retiree Drug Subsidy amounts.

# SECTION II – REQUIRED INFORMATION

		Ē	Pre-Funding Basis		<u>Partial-</u> <u>Funding</u> Basis	<u>Pa</u>	ay-as-you-go <u>Basis</u>
a)	Assumed discount rate		8.25%		<u>4.25%</u>		4.00%
b)	Actuarial value of assets	\$	5,748,582	\$	5,748,582	\$	5,748,582
c)	Actuarial accrued liability Active Participants Retired Participants Total	\$ \$	234,565,363 <u>219,645,689</u> 454,211,052	\$ \$ \$	468,333,368 <u>312,414,941</u> 780,748,309	\$ \$ \$	492,411,774 <u>320,575,251</u> 812,987,025
d)	Unfunded actuarial liability (c b.)	\$	448,462,470	\$	774,999,727	\$	807,238,443
e)	Funded ratio		1.3%		0.7%		0.7%
f)	Annual covered payroll	\$	426,826,921	\$	426,826,921	\$	426,826,921
g)	Unfunded actuarial liability as a percentage of covered payroll		105.1%		181.6%		189.1%
h)	Normal cost for the 2010 fiscal year	\$	15,091,245	\$	34,759,864	\$	36,913,222
i)	Amortization of unfunded actuarial liability for the fiscal year (30-year)	\$	<u>22,467,374</u>	\$	23,238,214	\$	23,341,591
j)	Annual Required Contribution (ARC) for the 2010 fiscal year* (h. + i.)	\$	37,558,619	\$	57,998,078	\$	60,254,813
k)	Expected net retiree claims	\$	25,191,706	\$	25,191,706	\$	25,191,706

\* Payment is assumed to be made at the beginning of the fiscal year.

## SECTION II - REQUIRED INFORMATION



## **Actuarial Accrued Liability in \$ millions**

### SECTION III - MEMBERSHIP DATA AND MEDICAL PREMIUM

## Number of participants included in valuation

	<u>Total</u>
Active	
Group A	16
Group C	427
Group D	51
Group F	7,601
Defined Contribution	<u>346</u>
Total	8,441
Retired	<u>3,587</u>
Total	12,028







# SECTION III - MEMBERSHIP DATA AND MEDICAL PREMIUM

## Monthly State Premium Costs (including expenses) Effective January 1, 2009

	State Share	Retirees	Dependents
Total Choice			
Retiree under 65	\$528.98	184	0
2 Person under 65	\$1,057.97	134	134
Family Retiree under 65	\$1,454.71	21	21
Retiree under 65 and 1 over 65	\$748.74	72	72
3 Person, Retiree and 1 under 65 and 1 over			
65	\$984.78	3	3
Retiree over 65	\$219.76	1456	0
2 Person over 65	\$439.52	772	772
Retiree over 65 and 1 under 65	\$748.74	204	204
Retiree over 65 and 2 or more under 65	\$984.78	11	11
Retiree over 65 and 2 or more dependents,			
1 Medicare eligible	\$645.19	8	8
SelectCare POS			
Retiree under 65	\$442.72	299	0
2 Person under 65	\$885.44	313	313
Family (Retiree under 65)	\$1,217.48	50	50
SafetyNet			
Retiree under 65	\$310.18	3	0
2 Person under 65	\$620.35	0	0
Family (Retiree under 65)	\$852.98	0	0
Other		57	0
Total		3,587	1,588

#### TABLE 1 THE NUMBER OF ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE AS OF JUNE 30, 2009

	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
AGE	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Under 20	2	0	0	0	0	0	0	0	0	2
20 to 24	152	2	0	0	0	0	0	0	0	154
25 to 29	416	77	2	0	0	0	0	0	0	495
30 to 34	400	275	47	0	0	0	0	0	0	722
35 to 39	346	307	202	85	11	0	0	0	0	951
40 to 44	289	279	212	183	154	6	0	0	0	1,123
45 to 49	279	276	185	156	244	136	17	0	0	1,293
50 to 54	270	288	188	157	215	177	108	10	0	1,413
55 to 59	184	238	134	134	217	172	171	78	1	1,329
60 to 64	93	115	86	76	98	112	77	80	31	768
65 to 69	16	32	24	20	24	10	14	8	11	159
70 & up	3	9	4	2	3	2	0	3	6	32
TOTAL	2,450	1,898	1,084	813	966	615	387	179	49	8,441

# SECTION IV – REQUIRED SUPPLEMENTARY INFORMATION

The Schedule of Funding Progress is required to be included in the State's Financial Statements.

# SCHEDULE OF FUNDING PROGRESS WITH ASSUMPTIONS **BASED ON CURRENT POLICY ON FUNDING**

	(dollar amounts in thousands)							
Actuarial Valuation Date	Actuarial Value of Assets <u>(a)</u>	Actuarial Accrued Liability (AAL) <u>(b)</u>	Unfunded AAL (UAAL) <u>(b)-(a)</u>	Funded Ratio (a)/(b)	Covered Payroll <u>(c)</u>	UAAL as a Percentage of Covered Payroll [(b)-(a)]/(c)		
June 30, 2009	\$5,749	\$780,748	\$775,000	0.7%	\$426,827	181.6%		
June 30, 2008	\$3,664	\$754,690	\$751,027	0.5%	\$404,937	185.5%		
June 30, 2007	\$2,211	\$606,499	\$604,288	0.4%	\$386,917	156.2%		
June 30, 2006	\$0	\$552,152	\$552,152	0.0%	\$369,310	149.5%		
June 30, 2005	\$0	\$529,027	\$529,027	0.0%	\$349,258	151.5%		

These results are based on a discount rate of 3.75% for 2005 – 2007, 4.00% for 2007 – 2008 and 4.25% for 2009.

If the State were to change its funding policy to pre-fund the entire calculated Annual Required Contribution, prospectively, the Schedule of Funding Progress would look as follows:

## SCHEDULE OF FUNDING PROGRESS WITH ASSUMPTIONS

# **BASED ON POLICY OF PRE-FUNDING**

		(dol	llar amounts i	n thousan	ds)	
Actuarial Valuation Date	Actuarial Value of Assets <u>(a)</u>	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b)-(a)]/(c)
June 30, 2009	\$5,749	\$454,211	\$448,462	1.3%	\$426,827	105.1%
June 30, 2008	\$3,664	\$754,690	\$751,027	0.5%	\$404,937	185.5%
June 30, 2007	\$2,211	\$606,499	\$604,288	0.4%	\$386,917	156.2%
June 30, 2006	\$0	\$552,152	\$552,152	0.0%	\$369,310	149.5%
June 30, 2005	\$0	\$529,027	\$529,027	0.0%	\$349,258	151.5%

These results are based on a discount rate of 3.75% for 2005 – 2007, 4.00% for 2007 – 2008 and 8.25% for 2009.

# SECTION V – NET OPEB OBLIGATION

GASB Statement No. 45 requires the development of Annual OPEB Cost and Net OPEB Obligation (NOO). This development is shown in the following table.

# DEVELOPMENT OF OPEB COST AND NET OPEB OBLIGATION (NOO)

Year Ending June 30	Annual Required Contribution (1)	Interest on NOO (2)	Amortization of NOO (3)	Annual OPEB Cost (1)+(2)-(3) (4)	Actual Contribution (5)	Change in NOO (4)-(5) (6)	NOO Balance (7)
2008 2009 2010	47,284,903 58,666,959 57,998,078	0 1,180,342 2,915,902	0 853,250 2,057,241	47,284,903 58,994,051 58,856,739	17,776,355 19,893,129	29,508,548 39,100,922	29,508,548 68,609,470



The Government Accounting Standards Board's Statements 43 and 45, which cover accounting and financial reporting for post-employment benefits other than pensions, outline various requirements of a funding schedule that will amortize the unfunded actuarial liability and cover normal costs. Amortization of the unfunded actuarial liability is to be based on a schedule that extends no longer than 30 years. The contribution towards the amortization of the unfunded actuarial liability may be made in level payments or in payments increasing at the same rate as assumed salary increases.

In the amortization schedule shown on the following pages, the amortization of the unfunded accrued liability is made in installments that increase annually by 5%. The normal cost is expected to increase at a rate that reflects both the assumed ultimate health care trend rate and the fact that employees hired after June 30, 2008, will be covered under a less generous plan. The contributions were computed assuming that the contribution is paid on July 1 (i.e., at the beginning of the fiscal year). Below is a comparison of the forecasted Annual Required Contributions, computed under discount rates of 8.25%, 4.25% and 4.00%.

Also included is a forecast of the pay-as-you-go amount. If the State chooses to not fund the obligation, the difference between the pay-as-you-go amount and the Annual Required Contribution (ARC) will be recorded as a liability on the financial statements. The liability will grow with interest and new net differences in successive years. The amount shown for the 4% and 4.25% scenarios reflect the difference between pay-as-you-go and the ARC as additional liability, which is reflected in the amortization of the Unfunded Actuarial Liability. Any future additional partial pre-funding, such as contribution of Medicare Part D Retiree Drug Subsidy received in the future, would serve to reduce the shown amortization.



# FORECAST OF FUNDING AND GASB ARC UNDER A DISCOUNT RATE OF 8.25%

		Amortization of the	Total		
Fiscal Year	Normal	Unfunded Actuarial	State		
Ending in	Cost	Liability	ARC	Pay-as-you-go	Difference
2010	15,091,245	22,467,374	37,558,619	25,191,706	12,366,913
2011	15,845,807	23,590,743	39,436,550	28,010,367	11,426,183
2012	16,638,097	24,770,280	41,408,377	30,450,971	10,957,406
2013	17,470,002	26,008,794	43,478,796	32,689,326	10,789,470
2014	18,343,502	27,309,233	45,652,735	34,665,210	10,987,525
2015	19,260,677	28,674,695	47,935,372	36,924,963	11,010,409
2016	20,223,711	30,108,430	50,332,141	38,747,833	11,584,308
2017	21,234,897	31,613,851	52,848,748	40,602,331	12,246,417
2018	22,296,642	33,194,544	55,491,186	42,684,139	12,807,047
2019	23,411,474	34,854,271	58,265,745	44,472,224	13,793,521
2020	24,582,048	36,596,985	61,179,033	46,459,714	14,719,319
2021	25,811,150	38,426,834	64,237,984	48,450,364	15,787,620
2022	27,101,708	40,348,176	67,449,884	50,628,777	16,821,107
2023	28,456,793	42,365,584	70,822,377	52,587,735	18,234,642
2024	29,879,633	44,483,864	74,363,497	54,514,516	19,848,981
2025	31,373,615	46,708,057	78,081,672	56,782,557	21,299,115
2026	32,942,296	49,043,460	81,985,756	58,885,504	23,100,252
2027	34,589,411	51,495,633	86,085,044	61,240,942	24,844,102
2028	36,318,882	54,070,414	90,389,296	63,554,497	26,834,799
2029	38,134,826	56,773,935	94,908,761	65,395,378	29,513,383
2030	40,041,567	59,612,632	99,654,199	67,234,976	32,419,223
2031	42,043,645	62,593,263	104,636,908	68,976,642	35,660,266
2032	44,145,827	65,722,926	109,868,753	70,670,892	39,197,861
2033	46,353,118	69,009,073	115,362,191	72,089,902	43,272,289
2034	48,670,774	72,459,526	121,130,300	73,300,546	47,829,754
2035	51,104,313	76,082,503	127,186,816	74,187,845	52,998,971
2036	53,659,529	79,886,628	133,546,157	74,022,803	59,523,354
2037	56,342,505	83,880,959	140,223,464	74,377,502	65,845,962
2038	59,159,630	88,075,007	147,234,637	74,375,308	72,859,329
2039	62,117,612	92,478,758	154,596,370	73,917,621	80,678,749
2040	65,223,493	0	65,223,493	73,800,503	-8,577,010



## FORECAST OF FUNDING AND GASB ARC UNDER A DISCOUNT RATE OF 4.25%

		Amortization of the	Total		
Fiscal Year	Normal	Unfunded Actuarial	State		
Ending in	Cost	Liability	ARC	Pay-as-you-go	Difference
2010	34,759,864	23,238,214	57,998,078	25,191,692	32,806,386
2011	36,497,857	24,541,149	61,039,006	28,010,367	33,028,639
2012	38,322,749	25,867,493	64,190,242	30,450,971	33,739,271
2013	40,238,886	27,232,531	67,471,418	32,689,326	34,782,092
2014	42,250,831	28,646,952	70,897,783	34,665,210	36,232,573
2015	44,363,372	30,123,886	74,487,257	36,924,963	37,562,294
2016	46,581,541	31,660,442	78,241,982	38,747,833	39,494,149
2017	48,910,619	33,275,832	82,186,450	40,602,331	41,584,119
2018	51,356,150	34,975,905	86,332,055	42,684,139	43,647,916
2019	53,923,957	36,760,941	90,684,898	44,472,224	46,212,674
2020	56,620,156	38,647,365	95,267,521	46,459,714	48,807,807
2021	59,451,163	40,637,396	100,088,559	48,450,364	51,638,195
2022	62,423,722	42,739,554	105,163,276	50,628,777	54,534,499
2023	65,544,907	44,957,280	110,502,188	52,587,735	57,914,453
2024	68,822,153	47,306,851	116,129,005	54,514,516	61,614,489
2025	72,263,262	49,799,734	122,062,996	56,782,557	65,280,439
2026	75,876,426	52,436,693	128,313,119	58,885,504	69,427,615
2027	79,670,247	55,234,286	134,904,533	61,240,942	73,663,591
2028	83,653,761	58,197,255	141,851,015	63,554,497	78,296,518
2029	87,836,449	61,339,841	149,176,289	65,395,378	83,780,911
2030	92,228,270	64,690,375	156,918,645	67,234,976	89,683,669
2031	96,839,683	68,264,272	165,103,955	68,976,642	96,127,313
2032	101,681,667	72,080,886	173,762,553	70,670,892	103,091,661
2033	106,765,749	76,159,193	182,924,942	72,089,902	110,835,040
2034	112,104,037	80,526,308	192,630,345	73,300,546	119,329,799
2035	117,709,239	85,208,832	202,918,071	74,187,845	128,730,226
2036	123,594,702	90,238,412	213,833,114	74,022,803	139,810,311
2037	129,774,436	95,670,777	225,445,213	74,377,502	151,067,711
2038	136,263,157	101,516,331	237,779,488	74,375,308	163,404,180
2039	143,076,316	107,813,220	250,889,537	73,917,621	176,971,916
2040	150,230,133	114,604,713	264,834,846	73,800,503	191,034,343



### FORECAST OF FUNDING AND GASB ARC UNDER A DISCOUNT RATE OF 4%

		Amortization of the	Total		
Fiscal Year	Normal	Unfunded Actuarial	State		
Ending in	Cost	Liability	ARC	Pay-as-you-go	Difference
2010	36,913,222	23,341,591	60,254,813	25,191,692	35,063,121
2011	38,758,882	24,642,456	63,401,338	28,010,367	35,390,971
2012	40,696,826	25,967,741	66,664,566	30,450,971	36,213,595
2013	42,731,667	27,332,346	70,064,013	32,689,326	37,374,687
2014	44,868,251	28,746,723	73,614,973	34,665,210	38,949,763
2015	47,111,663	30,223,661	77,335,324	36,924,963	40,410,361
2016	49,467,246	31,760,505	81,227,751	38,747,833	42,479,918
2017	51,940,610	33,375,907	85,316,517	40,602,331	44,714,186
2018	54,537,641	35,075,618	89,613,259	42,684,139	46,929,120
2019	57,264,522	36,860,028	94,124,550	44,472,224	49,652,326
2020	60,127,749	38,745,090	98,872,839	46,459,714	52,413,125
2021	63,134,136	40,733,049	103,867,185	48,450,364	55,416,821
2022	66,290,844	42,832,235	109,123,079	50,628,777	58,494,302
2023	69,605,385	45,046,080	114,651,465	52,587,735	62,063,730
2024	73,085,655	47,390,388	120,476,043	54,514,516	65,961,527
2025	76,739,939	49,876,309	126,616,248	56,782,557	69,833,691
2026	80,576,936	52,504,679	133,081,616	58,885,504	74,196,112
2027	84,605,783	55,291,559	139,897,342	61,240,942	78,656,400
2028	88,836,074	58,241,611	147,077,685	63,554,497	83,523,188
2029	93,277,877	61,368,657	154,646,534	65,395,378	89,251,156
2030	97,941,770	64,700,075	162,641,845	67,234,976	95,406,869
2031	102,838,858	68,250,755	171,089,613	68,976,642	102,112,971
2032	107,980,800	72,039,370	180,020,170	70,670,892	109,349,278
2033	113,379,839	76,084,198	189,464,037	72,089,902	117,374,135
2034	119,048,832	80,411,334	199,460,166	73,300,546	126,159,620
2035	125,001,274	85,046,335	210,047,609	74,187,845	135,859,764
2036	131,251,339	90,019,573	221,270,911	74,022,803	147,248,108
2037	137,813,904	95,384,558	233,198,463	74,377,502	158,820,961
2038	144,704,599	101,151,033	245,855,632	74,375,308	171,480,324
2039	151,939,830	107,355,449	259,295,279	73,917,621	185,377,658
2040	159,536,823	114,039,115	273,575,938	73,800,503	199,775,435



## **VERMONT STATE EMPLOYEES – ALL GROUPS**

Assumed investment return	4.25% per year for a partially-funded plan based on a blend of
	8.25% per year, net of investment expenses, the assumed rate of
	return on assets accumulated in the System's trust for benefit
	payments; and 4.00% per year, the assumed rate of return on
	general assets of the employer. In addition, two alternative
	scenarios are presented, using 8.25% for a pre-funded plan, and
	4.00% for a non-funded plan.
	•

*Actuarial cost method*: Projected Unit Credit with benefits attributed from date of hire until reaching age 55 with at least 10 years of service.

Medical care and state share inflation:

Fiscal Year	Medical
Ending	Inflation Rate
2010	8.0
2011	7.0
2012	6.0
2013 & After	5.0

Amortization period:

**Retirement eligibility:** 

Closed basis for full prefunding; open basis for partial prefunding and pay-as-you-go. Thirty-year amortization starting in the fiscal year starting in 2010 with payments increasing by 5% annually.

At termination of employment, employee must be eligible for retirement as prescribed by the terms of the State Employees' Retirement System of Vermont to receive medical coverage:

Group A: Earlier of (a) age 55 with 5 years of service, and (b) 30 years of service.

Group C: Earlier of (a) age 55, (b) age 50 with 20 years of service, and (c) 30 years of service.

Group D: Age 55 with 5 years of service.

Group F and Defined Contribution: Earlier of (a) age 55 with 5 years of service, and (b) 30 years of service.



Health plans:	Retirees without Medicare may select from four plans: Total Choice, Health Guard PPO, SelectCare POS and SafteyNet. Retirees with Medicare may select from two plans: Total Choice and Health Guard. Employees in Group F or in the Defined Contribution group who are hired on or after July 1, 2008 pay a percentage of the premium costs based on service (100% for less than 10 years of service, 60% for service from 10 to 14 years, 40% for service from 15 and 19 years, 20% for 20 or more years of service). For all other groups, the retirees pay 20% of the premium costs.
Pre-age 65 retirees:	Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65, at which time they enter the average plan provided to current post-65 retirees.
	Contributions for current active employees who are assumed to retire prior to age 65 are valued with a weighted-average premium. This weighted-average premium is based on the medical plan coverage of current retirees under age 65.
	At age 65, all participants are assumed to participate in post-65 plans in the same proportions as current retirees over age 65.
	Retirees and beneficiaries remain in their current medical plan until death. If a retiree predeceases his/her beneficiary, the beneficiary will continue to have coverage until his or her death. However, the State does not cover any of the costs of coverage, except for the implicit subsidy inherent in the premium rates. We assumed that $xx\%$ of beneficiaries of deceased retirees continued pre-65 coverage after the death of the retiree.
	Post-age 65 retirees: Current retirees over age 65 remain in their current medical plan until death. Beneficiaries remain in their current medical plan until death. Therefore, if the retiree predeceases the beneficiary, the beneficiary will continue to have coverage until his or her death. However, the State does not cover any of the costs of coverage except for the implicit subsidy inherent in the premium rates. We assumed that 100% of beneficiaries of deceased retirees continued post-65 coverage after the death of the retiree.

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Coverage:	It is assumed that 80 retiree medical cover vested participants w receiving benefits.	0% of current active employees will elect rage. It is assumed that 70% of terminated vill elect medical coverage when they start	
Administrative expenses:	No provision made b of the System are pai	beyond healthcare administration; expenses d by the State.	
Medical plan costs:	Estimated gross per age 64 and 65 was \$1 claims costs at othe based on Morbidity Medicare eligible at from the State develo total retiree claims.	Estimated gross per capita incurred claim costs for 2009-10 at age 64 and 65 was \$11,090 and \$2,594, respectively. Per capita claims costs at other ages reflect estimated underlying costs based on Morbidity. It is assumed that future retirees are Medicare eligible at age 65. Per capita costs were developed from the State developed monthly costs and an estimate of the total retiree claims. The plans are experienced-rated.	
	Future employee cost sharing is based on the weighted average of the current retiree contributions.		
Age-based morbidity:	Per capita costs are adjusted to reflect expected cost increases related to age. The increase in the net incurred claims was assumed to be:		
		Annual Increase	
	Age	Retiree	
	49 and below	2.6%	
	50-54	3.2%	
	55-59	3.4%	
	60-64	3.7%	
	65-69	3.2%	
	70-74	2.4%	
	75-79	1.8%	
	80 and over	0.0%	



#### Groups A, D, F, and Defined Contribution

Separations from service:

Representative values of the assumed annual rates of withdrawal, vested retirement, disability and death are as follows:

			De	ath
	Withdrawal			
Age	Retirement <sup>1</sup>	Disability	Men	Women
25	3.15%	.03%	.03%	.02%
30	2.52	.04	.04	.02
35	2.10	.05	.07	.04
40	1.95	.08	.10	.06
45	1.73	.13	.13	.09
50	1.44	.21	.18	.14
55	2.52	.35	.25	.23
59	2.52	.52	.37	.34
60	2.50	.57	.41	.37
61	2.49	.62	.46	.41

<sup>1</sup> Increased during first 10 years of service.

Retirement <sup>2</sup>					
Age	Rate	Age	Rate	Age	Rate
55 56 57 58 59	5.0% 4.2 5.6 6.3 7.0	60 61 62 63 64	7.0% 14.0 28.0 17.5 17.5	65 66 67 68 69 70	25.0% 15.0 17.5 17.5 20.0 100.0

<sup>2</sup> All Group A and D members are assumed to retire when first eligible.

Deaths after retirement:

According to the RP-2000 Mortality Tables for Healthy Annuitants for retirees and beneficiaries.



## Groups A, D, F, and Defined Contribution

Spouse's age:	Husbands are assumed to be 3 years older than their wives.		
Covered spouses:	75.4% (71.4% for Group F and Defined Contribution) of male members and 64.0% (63.1% for Group F and Defined Contribution) of female members are assumed to be covering spouses.		



## Group C

Separations before retirement:

Representative values of the assumed annual rates of withdrawal, vested retirement, disability and death are as follows:

			De	ath
Age	Withdrawal and Vested Retirement <sup>1</sup>	Disability	Men	Women
25 30 35 40 45 50 55 60	3.60% 3.60 3.60	.15% .20 .27 .40 .65 1.09 1.82 2.93	.03% .04 .07 .10 .13 .18 .25 .41	.02% .02 .04 .06 .09 .14 .23 .37

<sup>1</sup> Increased during first 5 years of service.

Early and normal retirement rates:	All members are assumed to retire when first eligible.		
Deaths after retirement:	According to the RP-2000 Mortality Tables for Healthy Annuitants for retirees and beneficiaries.		
Future expenses:	No provision made; expenses of the System are paid by the State outside of the plan.		
Spouse's age:	Husbands are assumed to be 3 years older than their wives.		
Covered spouses:	75.4% of male members and 64.0% of female members are assumed to be covering spouses.		



# SECTION VIII - GLOSSARY OF TERMS

### Actuarial accrued liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of OPEB benefits and expenses which is not provided for by future Normal Costs and therefore is the value of benefits already earned.

#### Actuarial assumptions

Assumptions as to the occurrence of future events affecting OPEB costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided OPEB benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

#### Actuarial cost method

A procedure for determining the Actuarial Present Value of OPEB benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

### Actuarial experience gain or loss

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

#### Amortization (of unfunded actuarial accrued liability)

That portion of the OPEB plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability or the Unfunded Frozen Actuarial Accrued Liability.

## **Annual OPEB cost**

An accrual-basis measure of the periodic cost of an employer's participation in a defined benefit OPEB plan.

## Annual required contributions of the employer (ARC)

The employer's periodic expense to a defined benefit OPEB plan, calculated in accordance with the parameters. It is the value of the cash contributions for a funded plan and the starting point in the calculations of the expense entry in the profit and loss section of the financial statements.

## **Closed amortization period (closed basis)**

A specific number of years that is counted from one date and, therefore, declines to zero with the passage of time. For example, if the amortization period initially is thirty years on a closed basis, twenty-nine years remain after the first year, twenty-eight years after the second year, and so forth. In contrast, an open amortization period (open basis) is one that begins again or is recalculated at each actuarial valuation date. Within a maximum number of years specified by law or policy (for example, thirty years), the period may increase, decrease, or remain stable.

## SECTION VIII - GLOSSARY OF TERMS

## **Covered payroll**

Annual compensation paid to active employees covered by an OPEB plan. If employees also are covered by a pension plan, the covered payroll should include all elements included in compensation on which contributions to the pension plan are based. For example, if pension contributions are calculated on base pay including overtime, covered payroll includes overtime compensation.

## Defined benefit OPEB plan

An OPEB plan having terms that specify the benefits to be provided at or after separation from employment. The benefits may be specified in dollars (for example, a flat dollar payment or an amount based on one or more factors such as age, years of service, and compensation), or as a type or level of coverage (for example, prescription drugs or a percentage of healthcare insurance premiums).

### Funded ratio

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

### **Funding policy**

The program for the amounts and timing of contributions to be made by plan members, employer(s), and other contributing entities (for example, state government contributions to a local government plan) to provide the benefits specified by an OPEB plan.

### Healthcare cost trend rate

The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

#### Investment return assumption (discount rate)

The rate used to adjust a series of future payments to reflect the time value of money.

## Level dollar amortization method

The amount to be amortized is divided into equal dollar amounts to be paid over a given number of years; part of each payment is interest and part is principal (similar to a mortgage payment on a building). Because payroll can be expected to increase as a result of inflation, level dollar payments generally represent a decreasing percentage of payroll; in dollars adjusted for inflation, the payments can be expected to decrease over time.

## Level percentage of projected payroll amortization method

Amortization payments are calculated so that they are a constant percentage of the projected payroll of active plan members over a given number of years. The dollar amount of the payments generally will increase over time as payroll increases due to inflation; in dollars adjusted for inflation, the payments can be expected to remain level.



## SECTION VIII - GLOSSARY OF TERMS

### Net OPEB obligation (NOO)

The cumulative difference since the effective date of this Statement between annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt. It will be included as a balance sheet entry on the financial statements.

### Normal cost

That portion of the Actuarial Present Value of OPEB benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. It is the value of benefits to be accrued in the valuation year by active employees.

### **OPEB-related debt**

All long-term liabilities of an employer to an OPEB plan, the payment of which is not included in the annual required contributions of a sole or agent employer (ARC) or the actuarially determined required contributions of a cost-sharing employer. Payments generally are made in accordance with installment contracts that usually include interest. Examples include contractually deferred contributions and amounts assessed to an employer upon joining a multiple-employer plan.

### **Other postemployment benefits**

Postemployment benefits other than pension benefits. Other postemployment benefits (OPEB) include postemployment healthcare benefits, regardless of the type of plan that provides them, and all postemployment benefits provided separately from a pension plan, excluding benefits defined as termination offers and benefits.

#### Pay-as-you-go

A method of financing a OPEB plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

#### **Required supplementary information (RSI)**

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

