

**JUNE 30, 2007**  
**POST RETIREMENT BENEFITS ANALYSIS**  
**OF**  
**THE VERMONT STATE TEACHERS'**  
**RETIREMENT SYSTEM**

**October 2007**

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## SECTION I - OVERVIEW

The Board of Trustees of the Vermont State Teachers' Retirement System has engaged Buck to prepare an actuarial valuation of their post-retirement benefits program as of June 30, 2007. 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 Government 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 presented in this study on two bases. Under one, it is assumed the System's post-retirement benefits other than pensions are funded in a manner similar to that used for pensions. Under the second, it is assumed that there is no pre-funding of such benefits. Section II provides a summary of the principal valuation results. Section V provides a projection of expense and funding amounts.

Respectfully Submitted,  
BUCK CONSULTANTS, LLC

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October 26, 2007

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## SECTION I - OVERVIEW

The System experienced a net increase in its accrued liability for post-retirement benefits over the past year, primarily due to an increase of 7.5% in premiums for all plans except MediComp (11.3%) and a net increase in its participant population from 14,034 to 14,224. Although some may elect coverage in the future, current terminated vested participants were excluded from the valuation. Using an 8.25% investment return, the actuarial accrued liability as of June 30, 2007 is about \$12 million less than the expected actuarial accrued liability at that date.

The economic actuarial assumptions used in this valuation are the same as those used last year. All demographic assumptions are the same as those used in the pension actuarial valuation, except for the assumed election of medical coverage upon retirement. The rate was decreased from 80% to 60% based on recent and expected experience. The results do not reflect any announced cost rates for 2008.

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, was issued on June 30, 2006. The Technical Bulletin provides that GASB OPEB calculations cannot reflect offsets for future Medicare Part D payments. Instead, such 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.)

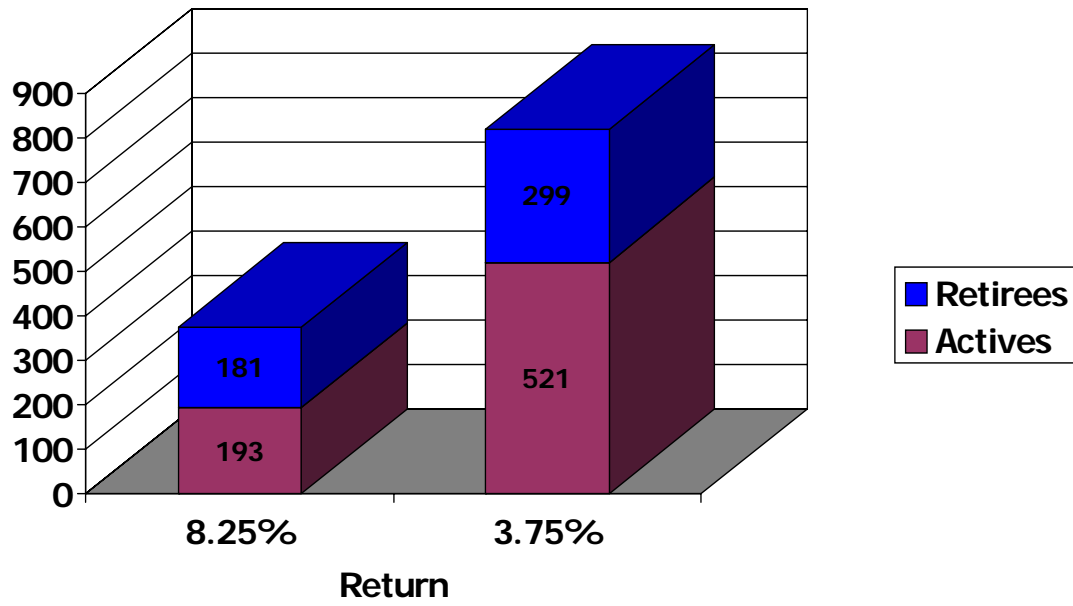
## SECTION II – REQUIRED INFORMATION

	<u>Pre-Funding Basis</u>	<u>Pay-as-you-go Basis</u>
a) Assumed investment return	8.25%	3.75%
b) Actuarial value of assets	\$ 0	\$ 0
c) Actuarial accrued liability		
Active Participants	\$ 192,959,264	\$ 520,968,301
Retired Participants	<u>180,678,133</u>	<u>299,243,545</u>
Total	\$ 373,637,397	\$ 820,211,846
d) Unfunded actuarial liability (c. - b.)	\$ 373,637,397	\$ 820,211,846
e) Funded ratio (c. / b.)	0%	0%
f) Annual covered payroll	\$ 515,572,694	\$ 515,572,694
g) Unfunded actuarial liability as percentage of covered payroll	72.5%	159.1%
h) Normal cost for the 2008 fiscal year	\$ 11,074,293	\$ 37,362,018
i) Amortization of unfunded actuarial liability for the 2008 fiscal year (30-year)	\$ <u>18,718,737</u>	\$ <u>22,858,971</u>
j) Annual Required Contribution (ARC) for the 2008 fiscal year* (h. + i.)	\$ 29,793,030	\$ 60,220,989
k) Expected benefit payments	\$ 14,756,425	\$ 14,756,425
l) Increase in annual cost to fund the Plan (j. - k.)	\$ 15,036,605	N/A

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

**SECTION II – REQUIRED INFORMATION**

**Actuarial Accrued Liability in \$millions**

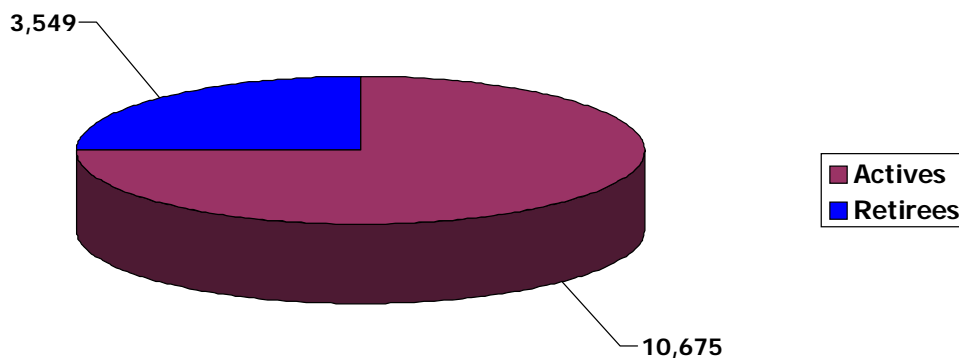


## SECTION III - MEMBERSHIP DATA AND MEDICAL PREMIUM

## Number of participants included in valuation

	<u>2007</u>	<u>2006</u>
Actives	10,675	10,696
Retired	<u>3,549</u>	<u>3,338</u>
Total	14,224	14,034

## Participants



## Monthly State Costs (including expenses) for the 2007 Fiscal Year

<u>Plan</u> <u>JY</u>	<u>State Share</u>	<u>Increase from 2007</u>	<u>Participants</u>
Retiree under 65	\$403.00	7.5%	280
Retiree over 65	\$324.47	7.5%	<u>1156</u>
			1436
 \$250 Comprehensive Plan			
Retiree under 65	\$403.00	7.5%	1598
Retiree over 65	\$324.47	7.5%	<u>230</u>
			1828
 Vermont Health Partnership			
Retiree under 65	\$403.00	7.5%	84
 MediComp C Plan			
Medicare Eligible, over 65	\$160.69	11.3%	201

THE NUMBER OF  
ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE  
AS OF JUNE 30, 2007

AGE	<i>0 to 4</i>	<i>5 to 9</i>	<i>10 to 14</i>	<i>15 to 19</i>	<i>20 to 24</i>	<i>25 to 29</i>	<i>30 to 34</i>	<i>35 to 39</i>	<i>40 &amp; up</i>	<i>Total</i>
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Under 20	1	0	0	0	0	0	0	0	0	1
20 to 24	130	0	0	0	0	0	0	0	0	130
25 to 29	609	137	0	0	0	0	0	0	0	746
30 to 34	490	481	62	0	0	0	0	0	0	1,033
35 to 39	366	423	327	60	0	0	0	0	0	1,176
40 to 44	302	306	260	222	67	0	0	0	0	1,157
45 to 49	321	329	238	250	293	78	3	0	0	1,512
50 to 54	232	341	293	312	305	400	100	0	0	1,983
55 to 59	161	244	257	316	344	321	344	37	0	2,024
60 to 64	71	87	88	124	149	123	103	55	9	809
65 to 69	8	12	13	14	14	8	13	7	3	92
70 & up	7	3	0	0	1	0	0	1	0	12
TOTAL	2,698	2,363	1,538	1,298	1,173	930	563	100	12	10,675



## SECTION IV – REQUIRED SUPPLEMENTARY INFORMATION

The Schedule of Funding Progress will be required to be included in the State's Financial Statements beginning with the Fiscal Year ending in 2008.

### SCHEDULE OF FUNDING PROGRESS BASED ON A POLICY OF PRE-FUNDING

(dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b)-(a)]/(c)
June 30, 2007	\$0	\$373,637	\$373,637	0%	\$515,573	72.5%
June 30, 2006	\$0	\$414,283	\$414,283	0%	\$499,044	83.0%
June 30, 2005	\$0	\$401,680	\$401,680	0%	\$486,857	82.5%

Assuming a discount rate of 8.25%.

### SCHEDULE OF FUNDING PROGRESS BASED ON POLICY OF PAY-AS-YOU-GO FUNDING

(dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b)-(a)]/(c)
June 30, 2007	\$0	\$820,212	\$820,212	0%	\$515,573	159.1%
June 30, 2006	\$0	\$952,526	\$952,526	0%	\$499,044	190.9%
June 30, 2005	\$0	\$890,412	\$890,412	0%	\$486,587	182.9%

Assuming a discount rate of 3.75%.

## SECTION V – FORECASTS

The Government Accounting Standards Board's Statements 43 and 45 on Accounting and Financial Reporting for Postemployment 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 page, 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 a modest amount of growth in the active population for the next few years. 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% and 3.75%.

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 actuarially determined contribution would be recorded as a liability on the financial statements. The liability will grow with interest and net new differences in successive years.

## SECTION V – FORECASTS

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

Fiscal Year Ending in	Normal Cost	Amortization of the Unfunded Actuarial Liability	Total State ARC	Pay-as-you-go	Difference
2008	11,074,293	18,718,737	29,793,030	14,756,425	15,036,605
2009	11,791,195	19,654,674	31,445,869	16,311,954	15,133,915
2010	12,437,111	20,637,408	33,074,519	17,970,787	15,103,732
2011	13,226,175	21,669,278	34,895,453	19,674,471	15,220,982
2012	14,015,262	22,752,742	36,768,004	21,494,292	15,273,712
2013	14,980,914	23,890,379	38,871,293	23,280,996	15,590,297
2014	15,966,299	25,084,898	41,051,197	25,292,970	15,758,227
2015	16,929,452	26,339,143	43,268,595	27,327,624	15,940,971
2016	17,873,687	27,656,100	45,529,787	29,570,074	15,959,713
2017	19,028,437	29,038,905	48,067,342	31,816,069	16,251,273
2018	20,615,588	30,490,850	51,106,438	34,167,480	16,938,958
2019	21,863,785	32,015,393	53,879,178	36,648,026	17,231,152
2020	23,135,089	33,616,163	56,751,252	39,278,201	17,473,051
2021	24,403,779	35,296,971	59,700,750	42,184,054	17,516,696
2022	25,740,950	37,061,819	62,802,769	45,161,414	17,641,355
2023	27,047,462	38,914,910	65,962,372	48,427,318	17,535,054
2024	28,385,608	40,860,656	69,246,264	51,791,584	17,454,680
2025	29,734,871	42,903,688	72,638,559	55,437,801	17,200,758
2026	31,124,568	45,048,873	76,173,441	59,300,306	16,873,135
2027	32,586,924	47,301,317	79,888,241	63,318,916	16,569,325
2028	34,128,116	49,666,382	83,794,498	67,572,430	16,222,068
2029	35,751,845	52,149,702	87,901,547	72,001,551	15,899,996
2030	37,422,458	54,757,187	92,179,645	76,841,370	15,338,275
2031	39,237,458	57,495,046	96,732,504	81,814,741	14,917,763
2032	41,152,067	60,369,798	101,521,865	87,049,757	14,472,108
2033	43,158,073	63,388,288	106,546,361	92,437,170	14,109,191
2034	45,251,861	66,557,703	111,809,564	97,983,317	13,826,247
2035	47,420,142	69,885,588	117,305,730	103,836,727	13,469,003
2036	49,731,522	73,379,867	123,111,389	109,730,823	13,380,566
2037	52,166,309	77,048,860	129,215,169	115,939,671	13,275,498
2038	54,766,176	0	54,766,176	122,336,362	-67,570,186

## SECTION V – FORECASTS

## FORECAST OF FUNDING AND GASB EXPENSE UNDER A DISCOUNT RATE OF 3.75%

Fiscal Year Ending in	Normal Cost	Amortization of the Unfunded Actuarial Liability	Total State ARC	Pay-as-you-go	Difference
2008	37,362,018	22,858,971	60,220,989	14,756,425	45,464,564
2009	39,780,674	24,001,920	63,782,594	16,311,954	47,470,640
2010	41,959,840	25,202,016	67,161,856	17,970,787	49,191,069
2011	44,621,954	26,462,117	71,084,070	19,674,471	51,409,599
2012	47,284,145	27,785,223	75,069,367	21,494,292	53,575,075
2013	50,542,024	29,174,484	79,716,507	23,280,996	56,435,511
2014	53,866,477	30,633,208	84,499,685	25,292,970	59,206,715
2015	57,115,925	32,164,868	89,280,793	27,327,624	61,953,169
2016	60,301,548	33,773,112	94,074,660	29,570,074	64,504,586
2017	64,197,399	35,461,767	99,659,166	31,816,069	67,843,097
2018	69,552,067	37,234,856	106,786,923	34,167,480	72,619,443
2019	73,763,185	39,096,598	112,859,784	36,648,026	76,211,758
2020	78,052,261	41,051,428	119,103,690	39,278,201	79,825,489
2021	82,332,518	43,104,000	125,436,518	42,184,054	83,252,464
2022	86,843,814	45,259,200	132,103,013	45,161,414	86,941,599
2023	91,251,673	47,522,160	138,773,833	48,427,318	90,346,515
2024	95,766,258	49,898,268	145,664,525	51,791,584	93,872,941
2025	100,318,349	52,393,181	152,711,530	55,437,801	97,273,729
2026	105,006,854	55,012,840	160,019,694	59,300,306	100,719,388
2027	109,940,494	57,763,482	167,703,976	63,318,916	104,385,060
2028	115,140,107	60,651,656	175,791,764	67,572,430	108,219,334
2029	120,618,181	63,684,239	184,302,420	72,001,551	112,300,869
2030	126,254,430	66,868,451	193,122,881	76,841,370	116,281,511
2031	132,377,806	70,211,874	202,589,680	81,814,741	120,774,939
2032	138,837,239	73,722,467	212,559,707	87,049,757	125,509,950
2033	145,605,024	77,408,591	223,013,615	92,437,170	130,576,445
2034	152,668,965	81,279,020	233,947,985	97,983,317	135,964,668
2035	159,984,226	85,342,971	245,327,198	103,836,727	141,490,471
2036	167,782,270	89,610,120	257,392,390	109,730,823	147,661,567
2037	175,996,660	94,090,626	270,087,285	115,939,671	154,147,614
2038	184,767,990	0	184,767,990	122,336,362	62,431,628

## SECTION VI - ACTUARIAL ASSUMPTIONS AND METHODS

## VERMONT STATE TEACHERS

**Interest** 8.25% per year, net of investment expenses for a funded plan. 3.75% per year for a non-funded plan.

**Actuarial Cost Method:** Projected Unit Credit

**Medical Care and State Share Inflation:**

Fiscal Year Ending	Inflation Rate
2008	7.0%
2009	6.0
2010 & After	5.0

**Amortization period:** Closed basis. Thirty year amortization starting in FYE08 with payments increasing 5% annually.

**Retirement Eligibility:** Age 55 for Group A. Earlier of (a) age 55 with 5 years of service and (b) 30 years of service for Group C. Participants terminating prior to age 55 with at least 5 years of service, may elect medical coverage beginning at age 55.

**Marital status:** Active participants are assumed to keep their current marital status upon retirement.

## SECTION VI - ACTUARIAL ASSUMPTIONS AND METHODS

**Separations before Normal Retirement:** Representative values of the assumed annual rates of withdrawal, vested retirement, early retirement, disability and death are as follows:

Age	Withdrawal and Vested Retirement		Disability		Death	
	Males	Females	Males	Females	Males	Females
25	5.40%	6.48%	.010%	.015%	.04%	.03%
30	5.40	5.40	.020	.015	.04	.03
35	4.86	4.32	.020	.015	.04	.03
40	4.05	3.60	.030	.020	.08	.03
45	3.60	3.15	.053	.045	.08	.05
50	3.60	2.70	.180	.180	.12	.08
55	3.60	2.70	.440	.390	.12	.12
59	3.60	2.70	1.170	.710	.15	.18
60	3.60	2.70	1.470	.840	.15	.19
61	3.60	2.70	1.830	1.010	.50	.22

Age	Reduced Early Retirement		Full Early Retirement	
	Males	Females	Males	Females
50	-	-	44.00%	40.00%
55	5.00%	8.75%	30.80	20.00
56	4.00	6.25	17.60	10.00
57	3.00	6.25	16.50	10.00
58	6.00	6.25	16.50	10.00
59	6.00	6.25	20.90	10.00
60	6.00	12.50	41.25	30.00
61	20.00	12.50	22.00	17.00

## SECTION VI - ACTUARIAL ASSUMPTIONS AND METHODS

### ***Service Retirements:***

Occur between ages 62 (60 for Group A) and 70. The assumed rates of service retirement are as follows:

Age	Annual Rate of Retirement	
	Male	Female
62	35.2%	25.0%
63	26.4	20.0
64	27.5	20.0
65	41.8	30.0
66	33.0	30.0
67	39.6	30.0
68	26.4	20.0
69	33.0	30.0
70	100.0	100.0

### ***Deaths after Retirement:***

The 1995 Buck Mortality Tables, set back one year, are used for the period after service retirement, while the RP-2000 Tables for Disabled Retirees are used for the period following disability retirement.

### ***Spouse's Age:***

Husbands are assumed to be 3 years older than their wives.

### ***Covered Spouse:***

85% of the male members and 35% of the female members are assumed to be covering a spouse.

### ***Health Plans:***

Retirees without Medicare may select from three plans: JY Plan, \$250 Comprehensive, and Vermont Health Partnership. Retirees with Medicare may select from three plans: JY Carve-Out, \$250 Comprehensive Carve-Out, and Medi-Comp C.

### ***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.

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. The weighted average premium includes an adjustment based on age to account for the implicit subsidy of older employees' true benefit cost.

## SECTION VI - ACTUARIAL ASSUMPTIONS AND METHODS

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. Therefore, if the retiree predeceases the beneficiary, the beneficiary will continue to have coverage until his or her death.

### *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.

### *Coverage:*

It is assumed that 60% of current active employees with 10 years of service will elect retiree medical coverage.

### *Medical Plan Costs:*

Estimated net per capita incurred claim costs for 2007-08 at age 64 and 65 was \$5,406 and \$2,847, respectively. It is assumed that future retirees are Medicare eligible. Per capita costs were developed from the State-developed monthly costs. Claims information was not available. The plans are experienced rated.

Future employee cost sharing is assumed to be a constant percentage of total costs.

### *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:

<u>Age</u>	<u>Annual Increase Retiree</u>
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%