

## ***Chapter 55: STATE TEACHERS' RETIREMENT SYSTEM OF VERMONT***

### **16 V.S.A. § 1944. Vermont teachers' retirement fund**

#### **§ 1944. Vermont teachers' retirement fund**

(c) State contributions, earnings, and payments.

(1) All state appropriations and all reserves for the payment for all pensions and other benefits, including all interest and dividends earned on the assets of the retirement system shall be accumulated in the fund. All benefits payable under the system shall be paid from the fund. Annually, the retirement board shall allow regular interest on the individual accounts of members in the fund which shall be credited to each member's account.

(2) Beginning with the actuarial valuation as of June 30, 2006, the contributions to be made to the fund by the state shall be determined on the basis of the actuarial cost method known as "entry age normal." On account of each member, there shall be paid annually by the state into the fund a percentage of the earnable compensation of each member to be known as the "normal contribution" and an additional percentage of the member's earnable compensation to be known as the "accrued liability contribution." The percentage rate of such contributions shall be fixed on the basis of the liabilities of the system as shown by actuarial valuation. "Normal contributions" and "accrued liability contributions" shall be by separate appropriation in the annual budget enacted by the general assembly.

(3) The normal contribution shall be the uniform percentage of the total compensation of members which, if contributed over each member's prospective period of service and added to such member's prospective contributions, if any, will be sufficient to provide for the payment of all future benefits after subtracting the sum of the unfunded accrued liability and the total assets of the fund of the retirement system.

(4) It is the policy of the state of Vermont to liquidate fully the unfunded accrued liability to the system. Until the unfunded accrued liability is liquidated, the accrued liability contribution shall be the annual payment required to liquidate the unfunded accrued liability over a period of 30 years from July 1, 2008, provided that the amount of each annual accrued liability contribution after June 30, 2009, shall be five percent greater than the preceding annual accrued liability contribution. Any variation in the contribution of normal or unfunded accrued liability contributions from those recommended by the actuary and any actuarial gains and losses shall be added or subtracted to the unfunded accrued liability and amortized over the remainder of the 30-year period.

### OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

INTEREST RATE: A select-and-ultimate interest rate set, specified below. The interest rate set is restarted every year.

Year 1: 6.25%	Year 10: 8.50%
Year 2: 6.75%	Year 11: 8.50%
Year 3: 7.00%	Year 12: 8.50%
Year 4: 7.50%	Year 13: 8.50%
Year 5: 7.75%	Year 14: 8.50%
Year 6: 8.25%	Year 15: 8.50%
Year 7: 8.25%	Year 16: 8.75%
Year 8: 8.25%	Year 17 and later: 9.00%
Year 9: 8.50%	

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	
			Current Valuation		Prior Valuation			
	Males	Females	Males	Females	Males	Females	Males	Females
25	20.00%	20.00%	.010%	.015%	.010%	.015%	.02%	.02%
30	12.00	14.00	.015	.015	.015	.015	.02	.02
35	8.00	11.30	.020	.015	.020	.015	.02	.02
40	6.50	8.60	.030	.020	.030	.020	.05	.02
45	5.80	6.00	.053	.045	.053	.045	.05	.04
50	5.40	5.00	.067	.070	.180	.180	.07	.06
55	5.40	4.84	.088	.095	.440	.390	.07	.10
59	5.40	4.84	.234	.142	1.170	.710	.09	.14
60	5.40	4.84	.294	.168	1.470	.840	.09	.15
61	5.40	4.84	.366	.202	1.830	1.010	.297	.17

Age	Reduced Early Retirement		Full Early Retirement	
	Grandfathered	Non-Grandfathered	Grandfathered	Non-Grandfathered
50	-	-	40.00%	25.00%
55	8.75%	8.75%	20.00	20.00
56	6.25	6.25	10.00	10.00
57	6.25	6.25	10.00	10.00
58	6.25	6.25	10.00	10.00
59	6.25	6.25	10.00	10.00
60	12.50	12.50	30.00	17.00
61	12.50	12.50	17.00	17.00

**Retired Teachers Healthcare Cost and Increase to  
Annual Required Contribution for 24 Years from FY2015-2038  
(Assuming No Change to Current Funding Practice)**

Fiscal Year	Healthcare Shortfall	Total Interest Cost	Total Overall Cost	Annual Interest Cost	Annual ARC Increase
2015	20,000,000	31,497,452	51,497,452	1,250,000	1,242,985
2016	21,172,000	31,005,802	52,177,802	2,673,724	2,660,218
2017	22,413,000	30,464,526	52,877,526	4,231,439	4,273,594
2018	23,727,000	29,870,889	53,597,889	5,976,968	6,108,212
2019	25,118,000	29,221,916	54,339,916	7,868,842	8,192,984
2020	26,590,000	28,514,548	55,104,548	9,958,536	10,561,392
2021	28,148,000	27,746,791	55,894,791	12,150,042	13,252,542
2022	29,798,000	26,917,496	56,715,496	14,432,662	16,312,528
2023	31,544,000	26,023,775	57,567,775	16,841,958	19,795,977
2024	33,393,000	25,058,367	58,451,367	19,312,887	23,768,196
2025	35,350,000	24,009,895	59,359,895	21,818,649	28,307,814
2026	37,422,000	22,874,753	60,296,753	24,324,233	33,511,373
2027	39,615,000	21,648,708	61,263,708	26,784,239	39,499,226
2028	41,937,000	20,329,098	62,266,098	29,140,199	46,424,627
2029	44,395,000	18,913,590	63,308,590	31,316,816	54,487,320
2030	46,997,000	17,402,293	64,399,293	33,258,770	63,955,696
2031	49,751,000	15,799,084	65,550,084	34,836,543	75,204,331
2032	52,667,000	14,092,582	66,759,582	35,841,427	88,779,372
2033	55,754,000	12,293,682	68,047,682	36,046,281	105,533,256
2034	59,021,000	10,432,944	69,453,944	35,138,330	126,924,056
2035	62,480,000	8,490,133	70,970,133	32,666,901	155,782,593
2036	66,142,000	6,486,084	72,628,084	27,931,268	199,000,056
2037	70,018,000	4,376,125	74,394,125	19,669,819	283,344,184
2038	0	0	0	0	0
<b>Totals:</b>	<b>923,452,000</b>	<b>483,470,531</b>	<b>1,406,922,531</b>	<b>483,470,531</b>	<b>1,406,922,531</b>

1 Amortization of Teachers' Healthcare - Year 1 2 Amortization of Teachers' Healthcare - Year 2 3 Amortization of Teachers' Healthcare - Year 3 4 Amortization of Teachers' Healthcare - Year 4

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%	Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%	Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%	Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%																																																																																																											
6/30/2015	20,000,000	6.25%	1,250,000	1,242,985	6/30/2016	21,172,000	6.25%	1,323,250	1,355,084	6/30/2017	22,413,000	6.25%	1,400,813	1,480,365	6/30/2018	23,727,000	6.25%	1,482,998	1,620,999	6/30/2019	25,119,986	6.75%	1,572,257	1,770,986	6/30/2020	26,598,999	7.00%	1,668,555	1,929,085	6/30/2021	28,166,912	7.25%	1,771,936	2,099,499	6/30/2022	29,829,475	7.50%	1,889,362	2,289,774	6/30/2023	31,589,804	7.75%	2,018,143	2,490,651	6/30/2024	33,449,948	8.00%	2,162,796	2,712,213	6/30/2025	35,411,358	8.25%	2,323,491	2,958,865	6/30/2026	37,486,735	8.50%	2,501,926	3,234,608	6/30/2027	39,679,449	8.75%	2,698,097	3,540,355	6/30/2028	42,000,000	9.00%	2,914,191	3,877,973	6/30/2029	44,459,646	9.25%	3,153,599	4,247,522	6/30/2030	47,059,646	9.50%	3,433,536	4,664,348	6/30/2031	49,806,646	9.75%	3,745,998	5,121,449	6/30/2032	52,707,000	10.00%	4,084,000	5,630,348	6/30/2033	55,769,646	10.25%	4,461,278	6,184,815	6/30/2034	58,999,646	10.50%	4,879,979	6,784,815	6/30/2035	62,400,000	10.75%	5,337,378	7,437,973	6/30/2036	66,000,000	11.00%	5,849,524	8,144,815	6/30/2037	69,800,000	11.25%	6,411,278	8,914,815	6/30/2038	73,800,000	11.50%	7,031,278	9,750,000	Totals:	31,005,802		30,464,526	52,877,526	29,870,889	53,597,889

Totals: 31,005,802 52,177,802 31,005,802 52,177,802 30,464,526 52,877,526 29,870,889 53,597,889

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2019	25,113,000	6.25%	1,569,975	1,779,361
6/30/2020	24,908,514	6.75%	1,681,325	1,868,329
6/30/2021	24,721,509	7.00%	1,730,506	1,961,746
6/30/2022	24,490,269	7.50%	1,836,770	2,059,833
6/30/2023	24,267,207	7.75%	1,880,709	2,162,825
6/30/2024	23,982,091	8.25%	1,978,770	2,270,966
6/30/2025	23,692,895	8.25%	1,954,664	2,384,514
6/30/2026	23,265,045	8.25%	1,919,201	2,503,740
6/30/2027	22,678,506	8.50%	1,927,673	2,628,927
6/30/2028	21,977,253	8.50%	1,869,066	2,760,373
6/30/2029	21,084,946	8.50%	1,794,220	2,898,392
6/30/2030	19,978,775	8.50%	1,698,196	3,043,311
6/30/2031	18,633,659	8.50%	1,583,861	3,195,477
6/30/2032	17,022,043	8.50%	1,446,874	3,355,251
6/30/2033	15,113,666	8.50%	1,284,662	3,523,013
6/30/2034	12,875,315	8.75%	1,126,590	3,699,164
6/30/2035	10,302,741	9.00%	927,247	3,884,122
6/30/2036	7,345,865	9.00%	661,128	4,078,328
6/30/2037	3,928,665	9.00%	353,580	4,282,245
6/30/2038	0	9.00%	0	0
<b>Totals:</b>	<b>29,221,916</b>		<b>29,221,916</b>	<b>54,339,916</b>

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2020	26,590,000	6.25%	1,661,875	1,958,759
6/30/2021	26,283,116	6.75%	1,774,785	2,056,696
6/30/2022	26,011,205	7.00%	1,820,784	2,159,531
6/30/2023	25,672,459	7.50%	1,925,434	2,267,508
6/30/2024	25,330,385	7.75%	1,969,105	2,380,883
6/30/2025	24,912,607	8.25%	2,055,290	2,499,927
6/30/2026	24,467,969	8.25%	2,018,607	2,624,924
6/30/2027	23,861,653	8.25%	1,968,586	2,756,170
6/30/2028	23,074,070	8.50%	1,961,296	2,893,978
6/30/2029	22,141,387	8.50%	1,882,018	3,038,677
6/30/2030	20,984,728	8.50%	1,783,702	3,190,611
6/30/2031	19,577,818	8.50%	1,664,115	3,350,142
6/30/2032	17,891,791	8.50%	1,520,802	3,517,649
6/30/2033	15,894,944	8.50%	1,351,070	3,693,531
6/30/2034	13,552,483	8.50%	1,151,961	3,878,208
6/30/2035	10,826,236	8.75%	947,296	4,072,118
6/30/2036	7,701,414	9.00%	693,127	4,275,724
6/30/2037	4,118,817	9.00%	370,694	4,489,510
6/30/2038	0	9.00%	0	0
<b>Totals:</b>	<b>28,514,548</b>		<b>28,514,548</b>	<b>55,104,548</b>

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2021	28,148,000	6.25%	1,759,250	2,163,080
6/30/2022	27,744,170	6.75%	1,872,731	2,271,234
6/30/2023	27,345,667	7.00%	1,914,197	2,384,796
6/30/2024	26,875,067	7.50%	2,015,630	2,504,036
6/30/2025	26,386,661	7.75%	2,044,966	2,629,238
6/30/2026	25,802,389	8.25%	2,128,697	2,760,700
6/30/2027	25,170,387	8.25%	2,076,557	2,898,735
6/30/2028	24,348,209	8.25%	2,008,727	3,043,671
6/30/2029	23,313,265	8.50%	1,981,628	3,195,855
6/30/2030	22,099,038	8.50%	1,878,418	3,355,648
6/30/2031	20,621,808	8.50%	1,752,854	3,523,430
6/30/2032	18,851,232	8.50%	1,602,355	3,699,602
6/30/2033	16,753,985	8.50%	1,424,089	3,884,582
6/30/2034	14,293,492	8.50%	1,214,947	4,078,811
6/30/2035	11,429,628	8.50%	971,518	4,282,751
6/30/2036	8,113,995	8.75%	710,360	4,496,889
6/30/2037	4,331,865	9.00%	389,868	4,721,733
6/30/2038	0	9.00%	0	0
<b>Totals:</b>	<b>27,746,791</b>		<b>27,746,791</b>	<b>55,894,791</b>

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2022	29,798,000	6.25%	1,862,375	2,397,359
6/30/2023	29,263,016	6.75%	1,975,254	2,517,227
6/30/2024	28,721,043	7.00%	2,010,473	2,643,088
6/30/2025	28,088,428	7.50%	2,106,632	2,775,242
6/30/2026	27,419,818	7.75%	2,125,036	2,914,005
6/30/2027	26,630,849	8.25%	2,197,045	3,059,705
6/30/2028	25,768,189	8.25%	2,125,876	3,212,690
6/30/2029	24,681,375	8.25%	2,036,213	3,373,325
6/30/2030	23,344,264	8.50%	1,984,262	3,541,991
6/30/2031	21,786,535	8.50%	1,851,855	3,719,090
6/30/2032	19,919,300	8.50%	1,693,141	3,905,045
6/30/2033	17,077,396	8.50%	1,505,129	4,100,297
6/30/2034	15,112,228	8.50%	1,284,539	4,305,512
6/30/2035	12,091,455	8.50%	1,027,774	4,520,578
6/30/2036	8,598,651	8.50%	730,885	4,746,606
6/30/2037	4,582,930	8.75%	401,006	4,983,937
6/30/2038	0	9.00%	0	0
<b>Totals:</b>	<b>26,917,496</b>		<b>26,917,496</b>	<b>56,715,496</b>

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2023	31,544,000	6.25%	1,971,500	2,667,822
6/30/2024	30,847,678	6.75%	2,082,218	2,801,213
6/30/2025	30,128,682	7.00%	2,109,008	2,941,274
6/30/2026	29,296,416	7.50%	2,197,231	3,088,338
6/30/2027	28,405,309	7.75%	2,201,411	3,242,755
6/30/2028	27,363,966	8.25%	2,257,527	3,404,892
6/30/2029	26,216,601	8.25%	2,162,870	3,575,137
6/30/2030	24,804,333	8.25%	2,046,357	3,753,894
6/30/2031	23,096,797	8.50%	1,963,228	3,941,589
6/30/2032	21,118,436	8.50%	1,795,067	4,138,668
6/30/2033	18,774,835	8.50%	1,595,861	4,345,602
6/30/2034	16,025,094	8.50%	1,362,133	4,562,882
6/30/2035	12,824,345	8.50%	1,090,069	4,791,026
6/30/2036	9,123,389	8.50%	775,488	5,030,577
6/30/2037	4,868,300	8.50%	413,806	5,282,106
6/30/2038	0	8.75%	0	0
Totals:				57,567,775

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2024	33,393,000	6.25%	2,087,063	2,982,421
6/30/2025	32,497,642	6.75%	2,193,591	3,131,542
6/30/2026	31,559,691	7.00%	2,209,178	3,288,119
6/30/2027	30,480,750	7.50%	2,286,056	3,452,525
6/30/2028	29,314,282	7.75%	2,271,857	3,625,151
6/30/2029	27,960,988	8.25%	2,306,781	3,806,409
6/30/2030	26,461,360	8.25%	2,183,062	3,996,729
6/30/2031	24,647,694	8.25%	2,033,435	4,196,565
6/30/2032	22,484,563	8.50%	1,911,188	4,406,394
6/30/2033	19,989,357	8.50%	1,699,095	4,626,713
6/30/2034	17,061,739	8.50%	1,450,248	4,858,049
6/30/2035	13,653,938	8.50%	1,160,585	5,100,952
6/30/2036	9,713,571	8.50%	825,654	5,355,999
6/30/2037	5,183,225	8.50%	440,574	5,623,799
6/30/2038	0	8.50%	0	0
Totals:				58,451,367

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2025	35,350,000	6.25%	2,209,375	3,351,208
6/30/2026	34,208,167	6.75%	2,309,951	3,518,769
6/30/2027	32,998,449	7.00%	2,309,891	3,694,707
6/30/2028	31,613,634	7.50%	2,371,023	3,879,442
6/30/2029	30,105,214	7.75%	2,333,154	4,073,415
6/30/2030	28,364,953	8.25%	2,340,109	4,277,085
6/30/2031	26,427,976	8.25%	2,180,308	4,490,940
6/30/2032	24,117,345	8.25%	1,999,881	4,715,487
6/30/2033	21,391,539	8.50%	1,818,281	4,951,261
6/30/2034	18,258,559	8.50%	1,551,978	5,198,824
6/30/2035	14,611,713	8.50%	1,244,996	5,458,765
6/30/2036	10,394,943	8.50%	883,570	5,731,703
6/30/2037	5,546,810	8.50%	471,479	6,018,289
6/30/2038	0	8.50%	0	0
Totals:				59,359,895

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2026	37,422,000	6.25%	2,398,875	3,788,168
6/30/2027	35,972,707	6.75%	2,428,158	3,977,577
6/30/2028	34,423,288	7.00%	2,409,630	4,176,455
6/30/2029	32,656,463	7.50%	2,449,235	4,385,278
6/30/2030	30,720,419	7.75%	2,380,832	4,604,542
6/30/2031	28,496,709	8.25%	2,350,979	4,834,769
6/30/2032	26,042,919	8.25%	2,146,066	5,076,508
6/30/2033	23,082,477	8.25%	1,904,304	5,330,333
6/30/2034	19,656,448	8.50%	1,670,798	5,596,850
6/30/2035	15,730,396	8.50%	1,337,084	5,876,692
6/30/2036	11,190,788	8.50%	951,217	6,170,527
6/30/2037	5,971,478	8.50%	507,576	6,479,053
6/30/2038	0	8.50%	0	0
Totals:				60,296,753

3 Amortization of Teachers' Healthcare - Year 13

14

Amortization of Teachers' Healthcare - Year 14

15

Amortization of Teachers' Healthcare - Year 15

16

Amortization of Teachers' Healthcare - Year 16

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2027	39,615,000	6.25%	2,475,938	4,312,284
6/30/2028	37,778,653	6.75%	2,550,059	4,527,899
6/30/2029	35,800,813	7.00%	2,506,057	4,754,294
6/30/2030	33,552,577	7.50%	2,516,443	4,992,008
6/30/2031	31,077,012	7.75%	2,408,468	5,241,609
6/30/2032	28,243,871	8.25%	2,330,119	5,503,689
6/30/2033	25,070,302	8.25%	2,068,300	5,778,874
6/30/2034	21,359,728	8.25%	1,762,178	6,067,817
6/30/2035	17,054,088	8.50%	1,449,597	6,371,208
6/30/2036	12,132,478	8.50%	1,031,261	6,689,769
6/30/2037	6,475,970	8.50%	550,287	7,024,257
6/30/2038	0	8.50%	0	0
Totals:				61,263,708

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2028	41,997,000	6.25%	2,621,063	4,950,440
6/30/2029	39,607,623	6.75%	2,673,515	5,197,962
6/30/2030	37,083,176	7.00%	2,595,822	5,457,860
6/30/2031	34,221,138	7.50%	2,566,585	5,730,753
6/30/2032	31,056,971	7.75%	2,406,915	6,017,290
6/30/2033	27,446,596	8.25%	2,264,344	6,318,155
6/30/2034	23,392,785	8.25%	1,929,905	6,634,063
6/30/2035	18,688,627	8.25%	1,541,812	6,965,766
6/30/2036	13,264,674	8.50%	1,127,497	7,314,054
6/30/2037	7,078,117	8.50%	601,640	7,679,757
6/30/2038	0	8.50%	0	0
Totals:				62,266,098

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2029	44,395,000	6.25%	2,774,688	5,741,461
6/30/2030	41,428,226	6.75%	2,796,405	6,028,534
6/30/2031	38,196,097	7.00%	2,673,727	6,329,961
6/30/2032	34,559,865	7.50%	2,590,490	6,646,459
6/30/2033	30,483,894	7.75%	2,362,502	6,978,782
6/30/2034	25,867,614	8.25%	2,134,078	7,327,721
6/30/2035	20,673,971	8.25%	1,705,603	7,694,107
6/30/2036	14,685,467	8.25%	1,211,551	8,078,812
6/30/2037	7,818,206	8.50%	664,547	8,482,753
6/30/2038	0	8.50%	0	0
Totals:				63,308,990

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2030	46,997,000	6.25%	2,987,313	6,744,011
6/30/2031	43,190,302	6.75%	2,915,345	7,081,211
6/30/2032	39,024,436	7.00%	2,731,711	7,435,272
6/30/2033	34,320,875	7.50%	2,574,066	7,807,035
6/30/2034	29,087,905	7.75%	2,254,313	8,197,387
6/30/2035	23,144,830	8.25%	1,909,448	8,607,257
6/30/2036	16,447,022	8.25%	1,356,879	9,037,619
6/30/2037	8,766,282	8.25%	723,218	9,489,500
6/30/2038	0	8.50%	0	0
Totals:				64,399,293

Amortization of Teachers' Healthcare - Year 20

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2031	49,751,000	6.25%	3,109,438	8,050,849
6/30/2032	44,809,588	6.75%	3,024,647	8,453,392
6/30/2033	39,380,843	7.00%	2,756,659	8,876,061
6/30/2034	33,261,441	7.50%	2,494,608	9,319,865
6/30/2035	26,436,185	7.75%	2,048,804	9,785,858
6/30/2036	18,699,131	8.25%	1,542,678	10,275,151
6/30/2037	9,966,659	8.25%	822,249	10,788,908
6/30/2038	0	8.25%	0	0
Totals:				65,550,084

Amortization of Teachers' Healthcare - Year 19

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2033	55,754,000	6.25%	3,484,625	12,314,916
6/30/2034	46,523,709	6.75%	3,167,350	12,890,661
6/30/2035	37,160,399	7.00%	2,601,228	13,577,194
6/30/2036	26,184,432	7.50%	1,963,832	14,256,054
6/30/2037	13,892,210	7.75%	1,076,646	14,968,857
6/30/2038	0	8.25%	0	0
Totals:				68,047,682

Amortization of Teachers' Healthcare - Year 18

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2032	52,667,000	6.25%	3,291,688	9,814,825
6/30/2033	46,143,863	6.75%	3,114,711	10,305,566
6/30/2034	38,953,008	7.00%	2,726,711	10,820,844
6/30/2035	30,858,874	7.50%	2,314,416	11,361,886
6/30/2036	21,811,403	7.75%	1,690,384	11,929,981
6/30/2037	11,571,806	8.25%	954,674	12,526,480
6/30/2038	0	8.25%	0	0
Totals:				66,759,582

Amortization of Teachers' Healthcare - Year 17

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2031	49,751,000	6.25%	3,109,438	8,050,849
6/30/2032	44,809,588	6.75%	3,024,647	8,453,392
6/30/2033	39,380,843	7.00%	2,756,659	8,876,061
6/30/2034	33,261,441	7.50%	2,494,608	9,319,865
6/30/2035	26,436,185	7.75%	2,048,804	9,785,858
6/30/2036	18,699,131	8.25%	1,542,678	10,275,151
6/30/2037	9,966,659	8.25%	822,249	10,788,908
6/30/2038	0	8.25%	0	0
Totals:				65,550,084

Amortization of Teachers' Healthcare - Year 20

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2034	59,021,000	6.25%	3,688,813	15,114,137
6/30/2035	46,595,676	6.75%	3,145,208	15,919,844
6/30/2036	32,821,040	7.00%	2,297,473	17,065,836
6/30/2037	17,352,677	7.50%	1,301,451	18,654,128
6/30/2038	0	7.75%	0	0
Totals:				69,453,944



Amortization of Teachers' Healthcare - Year 21

Amortization of Teachers' Healthcare - Year 22

Amortization of Teachers' Healthcare - Year 23

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2035	62,480,000	6.25%	3,905,000	22,512,334
6/30/2036	43,872,666	6.75%	2,961,405	23,637,951
6/30/2037	23,196,120	7.00%	1,623,728	24,819,848
6/30/2038	0	7.50%	0	0
Totals:				70,970,133

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2036	66,142,000	6.25%	4,133,875	35,428,334
6/30/2037	34,847,541	6.75%	2,352,209	37,139,750
6/30/2038	0	7.00%	0	0
Totals:				72,628,084

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2037	70,013,000	6.25%	4,376,125	74,394,125
6/30/2038	0	6.75%	0	0
Totals:				74,394,125

Additional Interest Cost	Additional Annual Cost
1,250,000	1,242,985
2,673,724	2,660,218
4,231,439	4,273,594
5,976,968	6,108,212
7,868,842	8,192,984
9,958,536	10,561,392
12,150,042	13,252,542
14,432,662	16,312,528
16,841,958	19,795,977
19,312,887	23,768,196
21,818,649	28,307,814
24,324,233	33,511,373
26,784,239	39,499,226
29,140,199	46,424,627
31,316,816	54,487,320
33,258,770	63,955,696
34,986,543	75,204,331
36,541,427	88,779,372
38,046,281	105,593,256
39,538,330	126,924,056
41,022,901	155,782,593
42,500,268	199,000,056
44,000,819	283,344,184
0	0
483,470,551	1,406,922,552

REPORT ON THE RESULTS OF THE  
EXPERIENCE STUDY OF THE  
STATE TEACHERS' RETIREMENT  
SYSTEM OF VERMONT

COVERING THE PERIOD JULY 1, 2005 THROUGH JUNE 30, 2010

March 23, 2011

Board of Trustees  
State Teachers' Retirement System of Vermont  
Montpelier, Vermont 05602

Dear Board Members:

Section 1942, subsection (m), of Title 16, Chapter 55, Vermont Statutes Annotated, provides in part that at least once in each five-year period, the actuary is to make a study of the System's recent experience to assist in setting assumptions. In accordance with this provision, the results of our experience study covering the five-year period from July 1, 2005, through June 30, 2010, are described in this report, along with our recommendations for certain modifications in the present assumptions. We have also included a brief section discussing the financial impact of the recommended changes.

The Table of Contents, which immediately follows, outlines the information contained in this report.

This study was prepared under the supervision of David L. Driscoll, with analysis of the rate-of-return and inflation assumptions performed under the supervision of Kai Petersen. We are Fellows of the Society of Actuaries and Members of the American Academy of Actuaries. We meet the Qualification Standards of the Academy to render the actuarial opinions contained herein, and we are available to answer questions concerning them. Additionally, Mr. Petersen is a Chartered Financial Analyst (CFA) Charter holder and has performed the analyses in accordance with the professional standards of the CFA Institute.

Respectfully submitted,



David L. Driscoll, F.S.A., E.A.  
Principal and Consulting Actuary



Kai Petersen, F.S.A., C.F.A.  
Principal, National Asset Liability Management Group Leader

Interest Rate

The estimated total rates of return earned by the System's assets are shown below.

<b>Year Ending June 30</b>	<b>Rate of Return Based on Actuarial Asset Value</b>	<b>Rate of Return Based on Market Asset Value</b>
2006	8.44%	10.35%
2007	10.53%	17.74%
2008	6.94%	-6.38%
2009	-11.23%	-20.49%
2010	6.75%	19.22%
2006-2010	3.97%	2.89%

The rate of return on the market value of assets has averaged approximately 2.89% annually during the past five years.

In an effort to forecast the expected long-term rate of return on System assets, we use a capital market model (described in more detail in Appendix IV) in which individual asset class returns are estimated under a wide variety of simulated economic environments based on their underlying relationships to key economic variables, and then rolled up into a forecast of the performance of a portfolio invested in accordance with the target allocation established by the Vermont Pension Investment Committee (VPIC) at its August 24, 2010, meeting. The model is calibrated to current economic and market conditions, and trends to a state of equilibrium. Over a 20-year period, the 50<sup>th</sup> percentile rate of return forecast for such a portfolio is approximately 7.9%.

Differences between near-term and long-term expectations of rates of return on assets may be incorporated in the assumed rate of return by setting it on a select-and-ultimate basis. A select-and-ultimate return assumption posits different rates for an initial number of years (called a select

period) before stabilizing at an ultimate rate. A select-and-ultimate rate structure can be used to reflect expectations of unusually strong or weak returns in near-term years followed by a trending to a long-term equilibrium. In this sense, it is a more elaborate and complete specification of future return assumptions than is a single rate used in all future years.

We have developed a select-and-ultimate interest rate assumption on the basis of the current VPIC target asset allocation. Using the 50<sup>th</sup> percentile forecast results for each year over a 20-year horizon and applying an adjustment to reflect the five-year smoothing of asset returns generates the following select-and-ultimate interest rate set:

Year 1: 6.25%	Year 9: 8.50%
Year 2: 6.75%	Year 10: 8.50%
Year 3: 7.00%	Year 11: 8.50%
Year 4: 7.50%	Year 12: 8.50%
Year 5: 7.75%	Year 13: 8.50%
Year 6: 8.25%	Year 14: 8.50%
Year 7: 8.25%	Year 15: 8.50%
Year 8: 8.25%	Year 16: 8.75%
Year 17 and later: 9.00%	

Use of a select-and-ultimate interest rate assumptions as the investment return assumption is justifiable on the basis of the manner in which these assumptions have been established and on the basis of relevant Actuarial Standards of Practice promulgated by the Actuarial Standards Board,

which specifically label the select-and-ultimate approach to setting assumed rates of return on pension plan assets as acceptable. Conformity to Actuarial Standards of Practice makes this approach suitable for use in preparing calculations under current pension accounting standards of the Governmental Accounting Standards Board (GASB). However, for computational or administrative ease, it may be preferable to set the assumed interest rate equal to the single rate (perhaps constrained to be a multiple of 0.10% or 0.25%) that produces the same result as the select-and-ultimate rate set.