

PERAC Report on Impact of COLA Base Increase

September, 2005



Table of Contents

1. Introduction.....	1
2. Cost Analysis – Current Funding Schedule.....	2
3. FY05 Cost Increase Under Supplemental Pension Funding Schedules	3
4. Recommendations.....	5
Appendix	
Exhibit 1	6
Exhibit 2	7
Exhibit 3	8
Exhibit 4	9

1. Introduction

The Public Employee Retirement Administration Commission (PERAC) is pleased to release our analysis of Section 375 of Chapter 149 of the Acts of 2004 which requires PERAC to analyze, study and evaluate the costs and actuarial liabilities associated with increasing the base to which cost of living adjustments (COLAs) are applied under G.L. c. 32, §102. The legislation directs PERAC to complete an analysis of the costs and liabilities attributable to increasing the COLA base in accordance with the Act and submit a report and recommendations to the House and Senate Committees on Ways and Means along with the Joint Committee on Public Service by December 31, 2005.

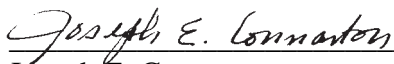
The legislation provides that the costs and liabilities be analyzed for COLA bases ranging from \$12,000 to \$22,000 in increments of \$1,000. The legislation also provides that funding schedules be developed that reduce the increase in unfunded liability due to the increased COLA bases to 0 by June 30, 2028, June 30, 2034 and June 30, 2038.

The results in this report reflect the January 1, 2004 valuation results for the State Retirement System, State Teachers' Retirement System and Boston teachers. These groups determine the Commonwealth funding schedule. We have calculated the impact for several local retirement systems and found the changes to be similar to the Commonwealth.

Respectfully submitted,
Public Employee Retirement Administration Commission



James R. Lamenza
Member of the American Academy of Actuaries
Associate of the Society of Actuaries
Enrolled Actuary Number 05-4709



Joseph E. Connarton
Executive Director

Dated: September 28, 2005

2. Cost Analysis – Current Funding Schedule

To determine the actuarial liability associated with increasing the COLA base, we valued the members (both active and retired) of the State Retirement System, the State-Teachers' Retirement System and the Boston teachers as of January 1, 2004 using the COLA base of \$12,000 and alternative COLA bases of \$16,000 and \$20,000. We determined the cost and cost increases for FY05. The results using the \$12,000 base are the same as shown the January 1, 2004 Commonwealth valuation report. For the exhibit below, it is assumed that the current Commonwealth schedule (4.5% increasing amortization to 2023) would remain in place.

Below, we show the costs for the \$12,000, \$16,000 and \$20,000 COLA bases. The costs for the other COLA bases can be found in Section 3 and the Appendix.

COLA Base	\$12,000	\$16,000	\$20,000
(Amounts are in thousands)			
1. Total Normal Cost	1,026,624	1,046,386	1,063,412
2. Expected Employee Contributions	<u>778,285</u>	<u>778,285</u>	<u>778,285</u>
3. Net Normal Cost	248,339	268,101	285,127
Actuarial Accrued Liability			
4. Active	24,478,858	24,903,582	25,313,224
5. Retiree	20,325,364	20,802,408	21,217,622
6. Inactive	732,987	743,000	753,000
7. Local COLA	<u>522,000</u>	<u>522,000</u>	<u>522,000</u>
8. Total Actuarial Liability	46,059,209	46,970,990	47,805,846
9. Increase in Actuarial Liability		911,781	1,746,637
10. % Increase in Actuarial Liability		2.0%	3.8%
11. Actuarial Value of Assets	34,045,177	34,045,177	34,045,177
12. Unfunded Liability (UAL) (8) – (11)	12,014,032	12,925,813	13,760,669
Funding Schedule Development			
13. Normal Cost (FY05): (3) x 1.0825	268,827	290,219	308,650
14. Amortization of UAL			
4.5% increasing to 2023	<u>922,785</u>	<u>992,817</u>	<u>1,056,942</u>
15. FY05 Total	1,191,612	1,283,037	1,365,592
16. FY05 Increase		91,425	173,980

Note: The current Commonwealth funding schedule was developed before the January 1, 2004 actuarial valuation was completed. The schedule shows an appropriation of \$1.217 billion for FY05 and reflects the estimated actuarial liability on January 1, 2004.

3. FY05 Cost Increase under Supplemental Pension Funding Schedules

The exhibit on the next page shows the increase in the FY05 appropriation for each COLA base from \$12,000 to \$22,000 in \$1,000 intervals. The figures are based on the results of the Commonwealth's January 1, 2004 actuarial valuation. We are in the process of performing the January 1, 2005 actuarial valuation. Although these results could affect the overall funding schedule, the magnitude of the increases due to changing the COLA base will not be affected.

We calculated the impact of increasing the COLA base from \$12,000 to \$16,000 and \$20,000 by running the data through our valuation program with the change in plan provisions. For the other bases, we interpolated and/or extrapolated the results, as necessary, to estimate the costs.

The legislation required that we prepare supplemental pension funding schedules which are designed to reduce the actuarial unfunded liability attributable to the increased COLA base to 0 by June 30, 2028. The legislation also required we provide two alternative schedules that reduce the increased unfunded liability to 0 by June 30, 2034 and June 30, 2038. For comparison, we have also shown the resulting costs associated with the Commonwealth's current funding schedule, which will reduce the unfunded actuarial liability to 0 by June 30, 2023.

The complete schedules showing the annual increase in appropriation for each COLA base can be found in the appendix.

3. FY05 Cost Increase under Supplemental Pension Funding Schedules (continued)

COLA Base	\$12,000	\$13,000	\$14,000	\$15,000	\$16,000	\$17,000	\$18,000	\$19,000	\$20,000	\$21,000	\$22,000
	(Amounts in millions)										
1. Normal Cost (NC) for FY05	269	274	280	285	290	295	300	304	309	314	319
2. Increase in NC		5	11	16	21	26	31	35	40	45	50
3. Total Actuarial Liability	46,059	46,287	46,515	46,743	46,971	47,180	47,389	47,597	47,806	48,015	48,224
4. Increase in Actuarial Liability		228	456	684	912	1,121	1,330	1,538	1,747	1,956	2,165
5. Percent Increase in Actuarial Liability		0.5%	1.0%	1.5%	2.0%	2.4%	2.9%	3.3%	3.8%	4.2%	4.7%
6. Amortization of Increase in Liability (FY05)											
a. 4.5% increasing to 2023		18	35	53	70	86	102	118	134	150	166
b. 4.5% increasing to 2028		15	30	45	60	74	87	101	115	128	142
c. 4.5% increasing to 2034		13	26	39	52	64	76	88	100	112	124
d. 4.5% increasing to 2038		12	24	37	49	60	71	83	94	105	116
7. Increase in NC and Amortization of AL (FY05)											
a. 4.5% increasing to 2023: (2) + (6a)		23	46	69	91	112	133	153	174	195	216
b. 4.5% increasing to 2028: (2) + (6b)		20	41	61	81	100	118	136	155	173	192
c. 4.5% increasing to 2034: (2) + (6c)		18	37	55	73	90	107	123	140	157	174
d. 4.5% increasing to 2038: (2) + (6d)		17	35	53	70	86	102	118	134	150	166

FY05 cost estimates based on January 1, 2004 valuation results.

4. Recommendations

Outside section 375 of the FY05 budget requires that PERAC “file the [COLA] study together with its recommendations and proposed funding schedule to the House and Senate Committees on Ways and Means, along with the Joint Committee on Public Service on or before December 31, 2005”.

We believe there are three questions the Commission must consider.

1. Should a recommendation be made that the COLA base be increased?
2. If yes, what is the recommended increase?
3. If yes, how will the additional cost be funded?

The Commission in the past has supported a “reasonable increase in the COLA base”. The current law provides an annual COLA increase of up to 3% on the first \$12,000 of benefit (\$360 maximum). The COLA base has been raised periodically over time. The current \$12,000 base became effective in 1998.

COLAs are an important piece of sound pension plan design especially for members who retire with long service. Defined benefit plans are designed to replace a certain percentage of a member’s pre-retirement income. COLAs attempt to keep a retiree’s benefit current with inflation over time.

It would be appropriate to increase the current COLA base because the base has not kept up with pension inflation, the current base disadvantages the longer service employees, and it is not competitive with most other state and teacher systems. That being said, we recognize costs may increase significantly to provide additional COLA benefits and there may be current fiscal constraints. For this reason, a modest increase or phased increases might be more acceptable.

The Commissioners reviewed all the materials provided by the actuarial staff with respect to COLA costs and considerations. The Commissioners first voted at the September 22, 2005 meeting to recommend the COLA base be increased. After further discussion, the Commission voted to recommend the COLA base be increased to \$16,000.

After settling on the \$16,000 base, the discussion moved to the funding of the COLA increase. The legislation authorizing the COLA study provides that funding schedules be developed that reduce the increase in unfunded liability due to the increased COLA bases to 0 by June 30, 2028, June 30, 2034, and June 30, 2038. These figures are shown in Exhibits 2, 3, and 4 of the Appendix.

The Commission’s recommendation is that the current schedule or a modification of the current schedule, if necessary, be adopted to fund the increased COLA cost.

We are available to discuss Exhibits 1 through 4 and/or create additional Commonwealth funding schedules that include the costs of an increased COLA base.

Amortization of Increase in Liability on 4.5% Increasing Basis to June 30, 2023

(Amounts in millions)

COLA Base	\$13,000	\$14,000	\$15,000	\$16,000	\$17,000	\$18,000	\$19,000	\$20,000	\$21,000	\$22,000
Fiscal Year										
2005	23	46	69	91	112	133	153	174	195	216
2006	24	48	72	95	117	139	160	182	204	226
2007	25	50	76	100	123	146	168	191	214	237
2008	26	53	79	105	129	153	176	200	224	248
2009	28	55	83	109	135	160	184	209	235	260
2010	29	58	87	115	141	168	193	219	246	272
2011	30	61	91	120	148	176	202	230	257	285
2012	32	64	95	126	155	184	211	241	270	299
2013	33	67	100	132	162	193	222	252	282	313
2014	35	70	105	138	170	202	232	264	296	328
2015	36	73	110	145	178	211	243	276	310	343
2016	38	77	115	151	186	221	255	290	325	359
2017	40	80	120	159	195	232	267	303	340	377
2018	42	84	126	166	205	243	279	318	356	394
2019	44	88	132	174	214	254	293	333	373	413
2020	46	92	138	182	224	267	307	349	391	433
2021	48	97	145	191	235	279	321	365	409	453
2022	50	101	152	200	246	293	336	383	429	475
2023	53	106	159	210	258	307	352	401	449	498

Supplemental Pension Schedule

Exhibit 2

Amortization of Increase in Liability on 4.5% Increasing Basis to June 30, 2028 (Amounts in millions)

COLA Base	\$13,000	\$14,000	\$15,000	\$16,000	\$17,000	\$18,000	\$19,000	\$20,000	\$21,000	\$22,000
Fiscal Year										
2005	20	41	61	81	100	118	136	155	173	192
2006	21	43	64	85	105	124	142	162	181	201
2007	22	45	67	89	110	130	149	170	190	211
2008	23	47	70	93	115	136	156	178	199	221
2009	24	49	73	98	120	142	164	187	208	231
2010	25	52	77	102	126	149	172	196	218	242
2011	26	54	81	107	132	156	180	205	229	254
2012	28	57	85	112	139	163	188	215	240	266
2013	29	60	89	118	145	171	197	225	251	279
2014	30	62	93	123	152	179	207	236	263	292
2015	32	65	97	129	159	188	217	247	276	306
2016	33	69	102	135	167	197	227	259	289	321
2017	35	72	107	142	175	206	238	271	303	336
2018	37	75	112	148	183	216	249	284	317	352
2019	38	79	117	156	192	227	261	298	332	369
2020	40	83	123	163	201	238	274	312	348	386
2021	42	87	129	171	211	249	287	327	365	405
2022	44	91	135	179	221	261	300	342	382	424
2023	46	95	141	188	232	273	315	359	401	445
2024	48	100	148	197	243	287	330	376	420	466
2025	51	104	155	206	254	300	346	394	440	488
2026	53	109	163	216	267	315	362	413	461	512
2027	56	115	170	226	279	330	380	433	483	536
2028	58	120	179	237	293	346	398	454	506	562

Supplemental Pension Schedule

Exhibit 3

Amortization of Increase in Liability on 4.5% Increasing Basis to June 30, 2034 (Amounts in millions)

COLA Base	\$13,000	\$14,000	\$15,000	\$16,000	\$17,000	\$18,000	\$19,000	\$20,000	\$21,000	\$22,000
Fiscal Year										
2005	18	37	55	73	90	107	123	140	157	174
2006	19	39	58	76	94	112	129	147	165	182
2007	20	41	60	80	99	117	135	154	172	191
2008	21	43	63	84	104	123	142	161	181	200
2009	22	45	66	88	109	129	148	169	189	210
2010	23	47	70	92	114	135	155	177	198	220
2011	24	49	73	97	119	142	163	185	208	230
2012	25	51	76	101	125	149	171	194	218	241
2013	26	54	80	106	131	156	179	204	228	253
2014	27	56	84	111	137	163	187	213	239	265
2015	29	59	88	117	144	171	196	224	251	278
2016	30	62	92	122	151	179	206	234	263	291
2017	32	65	97	128	158	188	216	246	275	305
2018	33	68	101	134	166	197	226	257	289	320
2019	35	71	106	141	174	206	237	270	303	335
2020	36	75	111	148	182	216	248	283	317	352
2021	38	78	117	155	191	227	260	296	332	369
2022	40	82	122	162	200	238	273	311	349	386
2023	42	86	128	170	210	249	286	326	365	405
2024	44	90	134	178	220	261	300	341	383	424
2025	46	95	141	187	230	274	314	358	401	445
2026	48	99	148	196	241	287	330	375	421	466
2027	50	104	155	205	253	301	345	393	441	489
2028	53	109	162	215	265	315	362	412	462	513
2029	55	115	170	225	278	331	380	432	485	537
2030	58	120	178	236	291	347	398	453	508	563
2031	61	126	187	248	306	363	417	475	533	591
2032	64	132	196	260	320	381	437	498	559	619
2033	67	138	205	272	336	399	459	522	586	649
2034	70	145	215	286	352	419	481	547	614	681

Supplemental Pension Schedule

Exhibit 4

Amortization of Increase in Liability on 4.5% Increasing Basis to June 30, 2038
(Amounts in millions)

COLA Base	\$13,000	\$14,000	\$15,000	\$16,000	\$17,000	\$18,000	\$19,000	\$20,000	\$21,000	\$22,000
Fiscal Year										
2005	17	35	53	70	86	102	118	134	150	166
2006	18	37	56	73	90	107	124	140	157	174
2007	19	38	58	77	94	112	130	147	165	182
2008	20	40	61	81	99	117	136	154	173	191
2009	21	42	64	84	104	123	142	162	181	200
2010	21	44	67	89	109	129	149	169	190	210
2011	23	46	70	93	114	135	156	178	199	220
2012	24	49	74	97	119	142	164	186	208	231
2013	25	51	77	102	125	149	172	195	218	242
2014	26	53	81	107	131	156	180	204	229	253
2015	27	56	85	112	138	163	189	214	240	266
2016	28	59	89	117	144	171	198	225	251	278
2017	30	62	93	123	151	179	207	235	264	292
2018	31	65	98	129	158	188	217	247	276	306
2019	33	68	102	135	166	197	228	259	290	321
2020	34	71	107	142	174	207	239	271	304	336
2021	36	74	113	149	183	217	250	284	318	352
2022	38	78	118	156	191	227	262	298	334	369
2023	40	82	124	163	201	238	275	312	350	387
2024	42	86	130	171	210	250	288	328	367	406
2025	44	90	136	179	221	262	302	343	385	426
2026	46	94	143	188	231	274	317	360	403	446
2027	48	99	149	197	242	288	332	377	423	468
2028	50	104	157	207	254	302	348	396	443	491
2029	53	109	164	217	267	316	365	415	465	514
2030	55	114	172	227	279	332	383	435	487	539
2031	58	120	181	238	293	348	401	456	511	565
2032	61	125	189	250	307	365	421	478	536	593
2033	64	132	199	262	322	382	441	502	562	622
2034	67	138	208	275	338	401	463	526	589	652
2035	70	145	218	288	354	420	485	551	618	684
2036	73	152	229	302	372	441	509	578	648	717
2037	77	159	240	317	390	462	534	606	679	752
2038	81	167	252	332	409	485	560	636	712	788

p:\actuarial\COLA\sect375COLAstudywithrecommndations

PERAC

Five Middlesex Avenue | Third Floor
Somerville, MA 02145

Ph: 617.666.4446 | Fax: 617.628.4002

TTY: 617.591.8917 | Web: www.mass.gov/perac