



**THE WORKERS' COMPENSATION
RATING AND INSPECTION BUREAU OF MASSACHUSETTS**

101 ARCH STREET - 5TH FLOOR, BOSTON, MA 02110
VOICE: (617) 439-9030 FAX: (617) 439-6055

April 17, 1998

CIRCULAR LETTER NO. 1797

To All Members and Subscribers of the Bureau:

**RETROSPECTIVE RATING PLAN CHANGES
EFFECTIVE FEBRUARY 14, 1998**

The Commissioner of Insurance has approved changes in Retrospective Rating Plan parameters effective 12:01 A.M., February 14, 1998, applicable to new and renewal policies, concurrent with the general revision of rates.

The changes and corresponding exhibits used to produce these values follow.

- Exhibit 1 Table of Compensation Expense Ratios - Type A Premium Discount
- Exhibit 2 Table of Compensation Expense Ratios - Type B Premium Discount
- Exhibit 3 Table of Compensation Expense Ratios - Type A Premium Discount-Allocated Loss Adjustment Expense [ALAE] Option
- Exhibit 4 Table of Compensation Expense Ratios - Type B Premium Discount-Allocated Loss Adjustment Expense [ALAE] Option
- Exhibit 5 Expense Provisions Underlying the Retrospective Rating Plan
 - The Expected Loss Ratio is changed to **.643**
 - The State Tax Multiplier is changed to **1.043**
 - The Loss Conversion Factor is changed to **1.21**
- Exhibit 6 Expense Provisions Underlying the ALAE Option of the Retrospective Rating Plan
 - The ALAE Option Expected Loss and ALAE Ratio is changed to **.715**
 - The ALAE Option State Tax Multiplier is changed to **1.043**
 - The ALAE Option Loss Conversion Factor is changed to **1.088**

Exhibit 7 Calculation of the Provision For Residual Market Subsidy

Reprinted Retrospective Rating Plan manual pages will be distributed in due course.

NORMAN R. FONTAINE
Vice President of Industry Affairs

NRF/sf
Enclosures

MASSACHUSETTS WORKERS' COMPENSATION**Table of Compensation Expense Ratios****Type A Premium Discount***Excluding Taxes, but Including Profit and Contingencies***Effective February 14, 1998**

<u>Standard Premium</u>	<u>Expense Ratio</u>	<u>Standard Premium</u>	<u>Expense Ratio</u>	<u>Standard Premium</u>	<u>Expense Ratio</u>
0 - 10,058	0.316	18,274 - 18,663	0.276	112,604 - 129,289	0.236
10,059 - 10,175	0.315	18,664 - 19,071	0.275	129,290 - 151,781	0.235
10,176 - 10,295	0.314	19,072 - 19,498	0.274	151,782 - 183,746	0.234
10,296 - 10,418	0.313	19,499 - 19,943	0.273	183,747 - 204,944	0.233
10,419 - 10,544	0.312	19,944 - 20,410	0.272	204,945 - 213,540	0.232
10,545 - 10,673	0.311	20,411 - 20,899	0.271	213,541 - 222,889	0.231
10,674 - 10,805	0.310	20,900 - 21,412	0.270	222,890 - 233,094	0.230
10,806 - 10,940	0.309	21,413 - 21,950	0.269	233,095 - 244,278	0.229
10,941 - 11,079	0.308	21,951 - 22,517	0.268	244,279 - 256,590	0.228
11,080 - 11,222	0.307	22,518 - 23,113	0.267	256,591 - 270,208	0.227
11,223 - 11,368	0.306	23,114 - 23,742	0.266	270,209 - 285,353	0.226
11,369 - 11,518	0.305	23,743 - 24,406	0.265	285,354 - 302,297	0.225
11,519 - 11,672	0.304	24,407 - 25,109	0.264	302,298 - 321,380	0.224
11,673 - 11,831	0.303	25,110 - 25,853	0.263	321,381 - 343,034	0.223
11,832 - 11,993	0.302	25,854 - 26,642	0.262	343,035 - 367,818	0.222
11,994 - 12,160	0.301	26,643 - 27,481	0.261	367,819 - 396,461	0.221
12,161 - 12,332	0.300	27,482 - 28,375	0.260	396,462 - 429,942	0.220
12,333 - 12,509	0.299	28,376 - 29,329	0.259	429,943 - 469,600	0.219
12,510 - 12,691	0.298	29,330 - 30,349	0.258	469,601 - 517,317	0.218
12,692 - 12,878	0.297	30,350 - 31,443	0.257	517,318 - 575,828	0.217
12,879 - 13,071	0.296	31,444 - 32,618	0.256	575,829 - 649,263	0.216
13,072 - 13,270	0.295	32,619 - 33,885	0.255	649,264 - 744,166	0.215
13,271 - 13,475	0.294	33,886 - 35,254	0.254	744,167 - 871,563	0.214
13,476 - 13,686	0.293	35,255 - 36,739	0.253	871,564 - 1,051,589	0.213
13,687 - 13,904	0.292	36,740 - 38,354	0.252	1,051,590 - 1,325,346	0.212
13,905 - 14,130	0.291	38,355 - 40,117	0.251	1,325,347 - 1,759,556	0.211
14,131 - 14,362	0.290	40,118 - 42,051	0.250	1,759,557 - 1,913,510	0.210
14,363 - 14,603	0.289	42,052 - 44,180	0.249	1,913,511 - 2,096,989	0.209
14,604 - 14,851	0.288	44,181 - 46,537	0.248	2,096,990 - 2,319,386	0.208
14,852 - 15,108	0.287	46,538 - 49,159	0.247	2,319,387 - 2,594,552	0.207
15,109 - 15,375	0.286	49,160 - 52,094	0.246	2,594,553 - 2,943,796	0.206
15,376 - 15,650	0.285	52,095 - 55,402	0.245	2,943,797 - 3,401,685	0.205
15,651 - 15,936	0.284	55,403 - 59,158	0.244	3,401,686 - 4,028,256	0.204
15,937 - 16,233	0.283	59,159 - 63,461	0.243	4,028,257 - 4,937,764	0.203
16,234 - 16,540	0.282	63,462 - 68,439	0.242	4,937,765 - 6,377,744	0.202
16,541 - 16,860	0.281	68,440 - 74,264	0.241	6,377,745 - 9,003,355	0.201
16,861 - 17,192	0.280	74,265 - 81,174	0.240	9,003,356 - 15,303,589	0.200
17,193 - 17,538	0.279	81,175 - 89,501	0.239	15,303,590 - 50,972,067	0.199
17,539 - 17,898	0.278	89,502 - 99,731	0.238	50,972,068 - and OVER	0.198
17,899 - 18,273	0.277	99,732 - 112,603	0.237		

Note: Above table based on the following discounts:

First	10,000	0.0%
Next	190,000	9.1%
Next	1,550,000	11.3%
Over	1,750,000	12.3%

MASSACHUSETTS WORKERS' COMPENSATION

Table of Compensation Expense Ratios

Type B Premium Discount

Excluding Taxes, but Including Profit and Contingencies

Effective February 14, 1998

<u>Standard Premium</u>	<u>Expense Ratio</u>	<u>Standard Premium</u>	<u>Expense Ratio</u>	<u>Standard Premium</u>	<u>Expense Ratio</u>
0 - 10,103	0.316	20,043 - 20,899	0.291	247,542 - 268,484	0.266
10,104 - 10,316	0.315	20,900 - 21,832	0.290	268,485 - 293,297	0.265
10,317 - 10,539	0.314	21,833 - 22,852	0.289	293,298 - 323,163	0.264
10,540 - 10,771	0.313	22,853 - 23,972	0.288	323,164 - 359,802	0.263
10,772 - 11,014	0.312	23,973 - 25,208	0.287	359,803 - 405,811	0.262
11,015 - 11,267	0.311	25,209 - 26,578	0.286	405,812 - 465,312	0.261
11,268 - 11,533	0.310	26,579 - 28,106	0.285	465,313 - 545,260	0.260
11,534 - 11,812	0.309	28,107 - 29,820	0.284	545,261 - 658,379	0.259
11,813 - 12,104	0.308	29,821 - 31,757	0.283	658,380 - 830,719	0.258
12,105 - 12,411	0.307	31,758 - 33,963	0.282	830,720 - 1,125,276	0.257
12,412 - 12,735	0.306	33,964 - 36,498	0.281	1,125,277 - 1,743,482	0.256
12,736 - 13,075	0.305	36,499 - 39,442	0.280	1,743,483 - 1,917,001	0.255
13,076 - 13,434	0.304	39,443 - 42,902	0.279	1,917,002 - 2,120,764	0.254
13,435 - 13,814	0.303	42,903 - 47,028	0.278	2,120,765 - 2,372,997	0.253
13,815 - 14,215	0.302	47,029 - 52,033	0.277	2,372,998 - 2,693,328	0.252
14,216 - 14,641	0.301	52,034 - 58,229	0.276	2,693,329 - 3,113,638	0.251
14,642 - 15,093	0.300	58,230 - 66,101	0.275	3,113,639 - 3,689,389	0.250
15,094 - 15,574	0.299	66,102 - 76,433	0.274	3,689,390 - 4,526,373	0.249
15,575 - 16,086	0.298	76,434 - 90,594	0.273	4,526,374 - 5,854,551	0.248
16,087 - 16,633	0.297	90,595 - 111,196	0.272	5,854,552 - 8,285,885	0.247
16,634 - 17,219	0.296	111,197 - 143,925	0.271	8,285,886 - 14,170,923	0.246
17,220 - 17,847	0.295	143,926 - 200,600	0.270	14,170,924 - 48,907,168	0.245
17,848 - 18,524	0.294	200,601 - 214,136	0.269	48,907,169 - and OVER	0.244
18,525 - 19,253	0.293	214,137 - 229,630	0.268		
19,254 - 20,042	0.292	229,631 - 247,541	0.267		

Note: Above table based on the following discounts:

First	10,000	0.0%
Next	190,000	5.1%
Next	1,550,000	6.5%
Over	1,750,000	7.5%

MASSACHUSETTS WORKERS' COMPENSATION**Table of Compensation Expense Ratios****Type A Premium Discount - ALAE OPTION***Excluding Allocated LAE and Taxes, but Including Profit and Contingencies***Effective February 14, 1998**

<u>Standard Premium</u>	<u>Expense Ratio</u>	<u>Standard Premium</u>	<u>Expense Ratio</u>	<u>Standard Premium</u>	<u>Expense Ratio</u>
0 - 10,058	0.244	18,274 - 18,663	0.204	112,604 - 129,289	0.164
10,059 - 10,175	0.243	18,664 - 19,071	0.203	129,290 - 151,781	0.163
10,176 - 10,295	0.242	19,072 - 19,498	0.202	151,782 - 183,746	0.162
10,296 - 10,418	0.241	19,499 - 19,943	0.201	183,747 - 204,944	0.161
10,419 - 10,544	0.240	19,944 - 20,410	0.200	204,945 - 213,540	0.160
10,545 - 10,673	0.239	20,411 - 20,899	0.199	213,541 - 222,889	0.159
10,674 - 10,805	0.238	20,900 - 21,412	0.198	222,890 - 233,094	0.158
10,806 - 10,940	0.237	21,413 - 21,950	0.197	233,095 - 244,278	0.157
10,941 - 11,079	0.236	21,951 - 22,517	0.196	244,279 - 256,590	0.156
11,080 - 11,222	0.235	22,518 - 23,113	0.195	256,591 - 270,208	0.155
11,223 - 11,368	0.234	23,114 - 23,742	0.194	270,209 - 285,353	0.154
11,369 - 11,518	0.233	23,743 - 24,406	0.193	285,354 - 302,297	0.153
11,519 - 11,672	0.232	24,407 - 25,109	0.192	302,298 - 321,380	0.152
11,673 - 11,831	0.231	25,110 - 25,853	0.191	321,381 - 343,034	0.151
11,832 - 11,993	0.230	25,854 - 26,642	0.190	343,035 - 367,818	0.150
11,994 - 12,160	0.229	26,643 - 27,481	0.189	367,819 - 396,461	0.149
12,161 - 12,332	0.228	27,482 - 28,375	0.188	396,462 - 429,942	0.148
12,333 - 12,509	0.227	28,376 - 29,329	0.187	429,943 - 469,600	0.147
12,510 - 12,691	0.226	29,330 - 30,349	0.186	469,601 - 517,317	0.146
12,692 - 12,878	0.225	30,350 - 31,443	0.185	517,318 - 575,828	0.145
12,879 - 13,071	0.224	31,444 - 32,618	0.184	575,829 - 649,263	0.144
13,072 - 13,270	0.223	32,619 - 33,885	0.183	649,264 - 744,166	0.143
13,271 - 13,475	0.222	33,886 - 35,254	0.182	744,167 - 871,563	0.142
13,476 - 13,686	0.221	35,255 - 36,739	0.181	871,564 - 1,051,589	0.141
13,687 - 13,904	0.220	36,740 - 38,354	0.180	1,051,590 - 1,325,346	0.140
13,905 - 14,130	0.219	38,355 - 40,117	0.179	1,325,347 - 1,759,556	0.139
14,131 - 14,362	0.218	40,118 - 42,051	0.178	1,759,557 - 1,913,510	0.138
14,363 - 14,603	0.217	42,052 - 44,180	0.177	1,913,511 - 2,096,989	0.137
14,604 - 14,851	0.216	44,181 - 46,537	0.176	2,096,990 - 2,319,386	0.136
14,852 - 15,108	0.215	46,538 - 49,159	0.175	2,319,387 - 2,594,552	0.135
15,109 - 15,375	0.214	49,160 - 52,094	0.174	2,594,553 - 2,943,796	0.134
15,376 - 15,650	0.213	52,095 - 55,402	0.173	2,943,797 - 3,401,685	0.133
15,651 - 15,936	0.212	55,403 - 59,158	0.172	3,401,686 - 4,028,256	0.132
15,937 - 16,233	0.211	59,159 - 63,461	0.171	4,028,257 - 4,937,764	0.131
16,234 - 16,540	0.210	63,462 - 68,439	0.170	4,937,765 - 6,377,744	0.130
16,541 - 16,860	0.209	68,440 - 74,264	0.169	6,377,745 - 9,003,355	0.129
16,861 - 17,192	0.208	74,265 - 81,174	0.168	9,003,356 - 15,303,589	0.128
17,193 - 17,538	0.207	81,175 - 89,501	0.167	15,303,590 - 50,972,067	0.127
17,539 - 17,898	0.206	89,502 - 99,731	0.166	50,972,068 - and OVER	0.126
17,899 - 18,273	0.205	99,732 - 112,603	0.165		

Note: Above table based on the following discounts:

First	10,000	0.0%
Next	190,000	9.1%
Next	1,550,000	11.3%
Over	1,750,000	12.3%

MASSACHUSETTS WORKERS' COMPENSATION**Table of Compensation Expense Ratios****Type B Premium Discount - ALAE OPTION***Excluding Allocated LAE and Taxes, but Including Profit and Contingencies***Effective February 14, 1998**

<u>Standard Premium</u>	<u>Expense Ratio</u>	<u>Standard Premium</u>	<u>Expense Ratio</u>	<u>Standard Premium</u>	<u>Expense Ratio</u>
0 - 10,103	0.244	20,043 - 20,899	0.219	247,542 - 268,484	0.194
10,104 - 10,316	0.243	20,900 - 21,832	0.218	268,485 - 293,297	0.193
10,317 - 10,539	0.242	21,833 - 22,852	0.217	293,298 - 323,163	0.192
10,540 - 10,771	0.241	22,853 - 23,972	0.216	323,164 - 359,802	0.191
10,772 - 11,014	0.240	23,973 - 25,208	0.215	359,803 - 405,811	0.190
11,015 - 11,267	0.239	25,209 - 26,578	0.214	405,812 - 465,312	0.189
11,268 - 11,533	0.238	26,579 - 28,106	0.213	465,313 - 545,260	0.188
11,534 - 11,812	0.237	28,107 - 29,820	0.212	545,261 - 658,379	0.187
11,813 - 12,104	0.236	29,821 - 31,757	0.211	658,380 - 830,719	0.186
12,105 - 12,411	0.235	31,758 - 33,963	0.210	830,720 - 1,125,276	0.185
12,412 - 12,735	0.234	33,964 - 36,498	0.209	1,125,277 - 1,743,482	0.184
12,736 - 13,075	0.233	36,499 - 39,442	0.208	1,743,483 - 1,917,001	0.183
13,076 - 13,434	0.232	39,443 - 42,902	0.207	1,917,002 - 2,120,764	0.182
13,435 - 13,814	0.231	42,903 - 47,028	0.206	2,120,765 - 2,372,997	0.181
13,815 - 14,215	0.230	47,029 - 52,033	0.205	2,372,998 - 2,693,328	0.180
14,216 - 14,641	0.229	52,034 - 58,229	0.204	2,693,329 - 3,113,638	0.179
14,642 - 15,093	0.228	58,230 - 66,101	0.203	3,113,639 - 3,689,389	0.178
15,094 - 15,574	0.227	66,102 - 76,433	0.202	3,689,390 - 4,526,373	0.177
15,575 - 16,086	0.226	76,434 - 90,594	0.201	4,526,374 - 5,854,551	0.176
16,087 - 16,633	0.225	90,595 - 111,196	0.200	5,854,552 - 8,285,885	0.175
16,634 - 17,219	0.224	111,197 - 143,925	0.199	8,285,886 - 14,170,923	0.174
17,220 - 17,847	0.223	143,926 - 200,600	0.198	14,170,924 - 48,907,168	0.173
17,848 - 18,524	0.222	200,601 - 214,136	0.197	48,907,169 - and OVER	0.172
18,525 - 19,253	0.221	214,137 - 229,630	0.196		
19,254 - 20,042	0.220	229,631 - 247,541	0.195		

Note: Above table based on the following discounts:

First	10,000	0.0%
Next	190,000	5.1%
Next	1,550,000	6.5%
Over	1,750,000	7.5%

Massachusetts Workers' Compensation
Effective February 14, 1998

Expense Provisions Underlying the Retrospective Rating Plans

(1)	Expected Loss and LAE Ratio (adjusted for Residual Market Subsidy) 1 - [(4) + (5) + (7)]	77.8%
(2)	Loss Adjustment Expense (as percentage of losses)	21.0%
(3)	Expected Loss without LAE (1)/[1 + (2)]	64.3%
	Tax Multiplier 1 / (1 - [(5) + (6) + (7)])	1.043
	Expenses excluding Premium Taxes but including LAE 1 - [(3) + (5) + (6) + (7)]	31.6%
	Acquisition and Field Supervision (Net of Premium Discount)	8.0%
	Fixed Expenses (Net of Premium Discount)	7.0%
	Premium Discount ¹	7.8%
	Premium Taxes (Net of Premium Discount) ¹	2.1%
	<u>Profit and Contingencies</u>	<u>-4.5%</u>
(4)	Total Expenses	20.4%
(5)	Residual Market Subsidy	1.5%
(6)	Premium Tax Rate	2.3%
(7)	Insolvency Fund Assessment	0.3%

Premium Discount Schedule

<u>Layer of Premium</u>	<u>Premium Discounts</u>	
	<u>Type A</u> <u>Discount</u>	<u>Type B</u> <u>Discount</u>
First \$ 10,000	0.0 %	0.0 %
Next 190,000	9.1	5.1
Next 1,550,000	11.3	6.5
Over 1,750,000	12.3	7.5

¹ Average Voluntary Premium Discount as a Percent of Standard Premium / (1 + Average ARAP Surcharge) = 8.3% / (1 + 6.9%) = 7.8%. The average premium discount is larger for the voluntary market than for the total market, so the premium taxes are slightly lower for the voluntary market than for the total market : 2.3% X [1.00 - Premium Discount (Voluntary Mkt.)] = 2.3% X (1 - 7.8%) = 2.1%.

Massachusetts Workers' Compensation
Effective February 14, 1998
Expense Provisions Underlying the ALAE Option
of the Retrospective Rating Plans

(1)	Expected Loss without Loss Adjustment Expense	64.3%
(2)	Provision for Allocated ALAE (as percentage of losses)	11.2%
	Expected Loss plus Allocated LAE Ratio	71.5%
	$(1) \times [1 + (2)]$	
(3)	Loss Adjustment Expense	21.0%
	Loss Conversion Factor	1.088
	$[1 + (3)] / [1 + (2)]$	
	Tax Multiplier	1.043
(4)	Expenses excluding Premium Taxes but including LAE	31.6%
	Expenses including all Unallocated LAE but excluding	24.4%
	Allocated LAE and Premium Taxes	
	$(4) - [(2) \times (1)]$	

MASSACHUSETTS WORKERS' COMPENSATION

EFFECTIVE FEBRUARY 14, 1998

CALCULATION OF THE PROVISION FOR RESIDUAL MARKET SUBSIDY

(1)	Expected Loss Ratio (without loss adjustment expense)	66.4%
(2)	Residual Market Loss Ratio ÷ Full Coverage Voluntary Loss Ratio	1.45
(3)	Residual Market Premium ÷ Full Coverage Voluntary Market Premium	.146
(4)	Provision for Premium Discounts	6.8%
(5)	Residual Market Premium ÷ Voluntary Assessable Premium	.130
(6)	Provision for Loss Adjustment Expense	1.21
(7)	Effective Residual Market Surcharge	10.0%
(8)	Factor to Take into Account Basic Premium	.80
(9)	Retro Provision for the Residual Market Subsidy	1.5%

(7) While a Residual Market surcharge was requested in the rate filing, no surcharge was approved by the Commissioner of Insurance.

(8) From the filing for the provision for the Residual Market Subsidy effective 1/1/89.

$$(9) = (8) \times (5) \times \left\{ \frac{(6) \times (1) \times [(2) - 1]}{1 + [(2) \times (3)]} - (4) - \frac{(7)}{1 + (3) + [(3) \times (7)]} \right\}$$