Aon Risk Solutions

Global Risk Consulting Actuarial and Analytics

Commonwealth of Massachusetts

Actuarial Estimate of Outstanding Liability
As of June 30, 2012

FINAL REPORT

Issue Date - September 10, 2012

One Federal Street Boston, MA 02110 tel:617.457.7648 • fax: 847.953.0953 • www.aon.com





Table of Contents

I. Narrative

II. Summary Exhibits

III. Supporting Exhibits

Section 1	All Clusters Combined	
Section 1	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 2	Department of Mental Retardation - Cluster 1	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 3	Department of Mental Health - Cluster 2	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 4	Department of Corrections - Cluster 3	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 5	University of Massachusetts (Amherst) - Cluster 4	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 6	University of Massachusetts (Medical Center) - Clusto	er 4
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 7	Massachusetts Colleges & Universities - Cluster 4	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 8	All Other - Clusters 5-17 & 95	
	Exhibit 1 - Indemnity	

Exhibit 2 - Medical



Table of Contents

I.	Introduction	4
	Purpose	4
	Scope	4
II.	Conditions and Limitations	6
	Inherent Uncertainty	6
	Extraordinary Future Emergence	6
	Data Reliance	6
	Discounting	6
	Use and Distribution	6
III.	Executive Summary	7
	Summary of Results	7
IV.	Program Description	11
٧.	Data	12
	Loss	12
	Exposure	12
	Industry Data	12
VI.	Actuarial Analysis	13
	Overview	13
	Methods/Models of Estimating Unpaid Loss Estimates	13
	Actuarial Assumptions	16
VII.	Arrangement of Exhibits	18
VIII	l.Description of Exhibits	20
IX.	Exhibits	22



I. Introduction

Purpose

Aon Global Risk Consulting ("AGRC") has conducted an actuarial review of the GAAP outstanding loss reserves of the Commonwealth of Massachusetts' ("Commonwealth") self-insured Workers Compensation program.

Scope

The specific scope of this study is to prepare an independent estimate of the required workers compensation reserves as of June 30, 2012, separately for seven clusters of agencies:

- a) The Department of Mental Retardation ("DMR")
- b) The Department of Mental Health ("DMH")
- c) The Department of Corrections ("DOC")
- d) UMass Amherst
- e) UMass Medical School
- f) All Other Colleges and Universities
- g) All Other Departments

For the "All Other Colleges and Universities" cluster, we have provided estimates of each educational institution's obligations.

In addition, we have provided estimates of the outstanding liability contained within the "All Other Departments" cluster that is associated with agencies that during fiscal year 2010 ceased to be the liability of the Commonwealth and instead became the liability of the newly created Massachusetts Department of Transportation (MDOT).

We have provided a range of reserves that can be used to test the reasonableness of the carried reserves established by the Commonwealth. Estimates have been prepared on both a discounted and undiscounted basis, utilizing rates of discount equal to 4% and 6%.

Our estimates do not include any provision for allocated loss adjustment expenses (ALAE) that may be incurred in the processing and settlement of claims, other than rehabilitation/investigation payments included with medical losses as described in the Data section (Section V) of this report.

* * * * * *

Vahan A. Mahdasian ACAS, MAAA is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial report contained herein.



We performed this analysis using generally accepted actuarial principles and in accordance with all relevant Actuarial Standards of Practice.

Please contact us if you have any questions regarding this report.

Respectfully submitted,

Aon Global Risk Consulting

Vahan A. Mahdasian, ACAS, MAAA

Director & Actuary +1.617.457.7648

vahan.mahdasian@aon.com

Neil J. Fenton

Senior Actuarial Analyst

+1.617.457.768

neil.fenton@aon.com



II. Conditions and Limitations

Inherent Uncertainty

Actuarial calculations produce estimates of inherently uncertain future contingent events. We believe that the estimates provided represent reasonable provisions based on the appropriate application of actuarial techniques to the available data. However, there is no guarantee that actual future payments will not differ from estimates included herein.

Extraordinary Future Emergence

Our projections make no provision for the extraordinary future emergence of losses or types of losses not sufficiently represented in the historical data or which are not yet quantifiable.

Data Reliance

In conducting this analysis, we relied upon the provided data without audit or independent verification; however, we reviewed it for reasonableness and consistency. Any inaccuracies in quantitative data or qualitative representations could have a significant effect on the results of our review and analysis.

Discounting

The uncertainty inherent in the discounted unpaid loss estimates is greater than that of the undiscounted unpaid loss estimates. This is because undiscounted liabilities normally contemplate an implicit risk margin for the uncertainty in the loss estimation process (e.g., under-estimating). Discounting takes away this implicit risk margin and would subject the unpaid loss estimates to additional risks such as yields on the investment portfolio and the timing risk. Future loss payments could occur more or less rapidly than expected due to random variation and the timing of claim payments. We made no adjustment to account for these risks. The interest rate used to discount the unpaid losses was provided by the Commonwealth of Massachusetts. We express no opinion and have not independently evaluated the appropriateness of the interest rate.

Use and Distribution

Use of this report is limited to the Commonwealth of Massachusetts for the specific purpose described in the Introduction section. Other uses are prohibited without an executed release with Aon.

Distribution by the Commonwealth of Massachusetts is unrestricted. We recognize that this report may be distributed to others and we request that Aon be notified of further distribution of this report. The report should only be distributed in its entirety including all supporting exhibits.



III. Executive Summary

Summary of Results

As stated in the "Introduction" and detailed in the "Program Description" section of this report, this analysis considers those liabilities within the "All Other Departments" cluster that are attributed to the agencies of the newly created MDOT (excluding MTA).

Consistent with the methodology and presentation in the prior report issued in 2011, the liability amounts in the summary tables below are provided both **Gross** (including) and **Net** (excluding) of those liabilities associated with the MDOT (excluding MTA).

A summary table of the composition of the "All Other Departments" cluster with respect to the MDOT (excluding MTA) and Non-MDOT agencies is also provided.

Total Gross Reserves

Based on our review, which utilized loss and exposure data valued as of June 30, 2012, we estimate that the range of reasonable undiscounted **gross** (inclusive of MDOT liability, excluding MTA) loss reserves for the Commonwealth's aggregate workers compensation program to be: **§314.3M to \$400.6M**.

We also calculated reasonable ranges on a present value basis, using interest rates of 4% and 6% and the Commonwealth's historical payment patterns. We estimate the range of reasonable **gross** reserves to be as follows:

Discounted at 4%: \$237.3 to \$305.9M | Discounted at 6%: \$211.9M to \$274.3M

The following table shows **gross** reserves for each cluster identified in the Scope section:

		Report			
Cluster	Cluster	Section	Undiscounted	Discounted at 4%	Discounted at 6%
DMR	1	2	\$29.2 - 36.2M	\$23.4 - 29.4M	\$21.4 - 27.1M
DMH	2	3	\$25.5 - 31.2M	\$19.7 - 24.3M	\$17.7 - 22.0M
DOC	3	4	\$60.4 - 84.5M	\$45.5 - 64.5M	\$40.6 - 57.8M
UMass - Amherst	4	5	\$7.5 - 10.6M	\$5.9 - 8.4M	\$5.3 - 7.6M
UMass - Medical	4	6	\$4.0 - 5.6M	\$3.3 - 4.7M	\$3.1 - 4.3M
Other Colleges & Univ's	4	7	\$13.9 - 17.2M	\$11.5 - 14.2M	\$10.5 - 13.1M
All Other Dept's (incl. MDOT, excl. MTA)	5	8	\$173.8 - 215.4M	\$128.1 - 160.5M	\$113.2 - 142.5M
Total			\$314.3 - 400.6M	\$237.3 - 305.9M	\$211.9 - 274.3M



Total Net Reserves

Based on our review, which utilized loss and exposure data valued as of June 30, 2012, we estimate that the range of reasonable undiscounted **net** (excluding MDOT and MTA liability) loss reserves for the Commonwealth's aggregate workers compensation program to be: **\$301.6M to \$384.8M.**

We also calculated reasonable ranges on a present value basis, using interest rates of 4% and 6% and the Commonwealth's historical payment patterns. We estimate the range of reasonable **net** reserves to be as follows:

Discounted at 4%: \$227.9M to \$294.1M | Discounted at 6%: \$203.6M to \$263.9M

The following shows **net** reserves for each cluster identified in the Scope section:

		Report			
Cluster	Cluster	Section	Undiscounted	Discounted at 4%	Discounted at 6%
DMR	1	2	\$29.2 - 36.2M	\$23.4 - 29.4M	\$21.4 - 27.1M
DMH	2	3	\$25.5 - 31.2M	\$19.7 - 24.3M	\$17.7 - 22.0M
DOC	3	4	\$60.4 - 84.5M	\$45.5 - 64.5M	\$40.6 - 57.8M
UMass - Amherst	4	5	\$7.5 - 10.6M	\$5.9 - 8.4M	\$5.3 - 7.6M
UMass - Medical	4	6	\$4.0 - 5.6M	\$3.3 - 4.7M	\$3.1 - 4.3M
Other Colleges & Univs	4	7	\$13.9 - 17.2M	\$11.5 - 14.2M	\$10.5 - 13.1M
All Other Dept's (excl MDOT & MTA)	5	8	\$161.1 - 199.6M	\$118.7 - 148.7M	\$104.9 - 132.0M
Total			\$301.6 - 384.8M	\$227.9 - 294.1M	\$203.6 - 263.9M

All Other Departments – Decomposition of Departmental Liability

The total gross reserve of the All Other Departments cluster contains both MDOT (excluding MTA) and Non-MDOT liabilities. As shown in the table below, approximately 7.3% of the gross reserve for All Other Departments is attributed to MDOT (excluding MTA) agencies.

The following shows the range of reasonable reserves at various discount rates for the cluster segments.

		% of			
All Other Departments	Cluster	Cluster	Undiscounted	Discounted at 4%	Discounted at 6%
MDOT Agencies (excl. MTA)	5	7.3%	\$12.7 - 15.8M	\$9.4 - 11.8M	\$8.3 - 10.4M
Non-MDOT Agencies	5	92.7%	\$161.1 - 199.6M	\$118.7 - 148.7M	\$104.9 - 132.0M
Total			\$173.8 - 215.4M	\$128.1 - 160.5M	\$113.2.0 - 142.5M



Fiscal Year 2012 Loss Rates

The cost of the workers compensation program as measured by the estimated FY2012 loss rates (losses per \$100 payroll) varied significantly by cluster.

As shown in the table below, overall rates decreased by 4.3% when compared to the prior year

		Average	Average FY 12	Prior	%
Cluster	Payroll (000)	Ult Loss	Loss Rate	Loss Rate	Change
DMR	295,908	5,589,500	1.889	1.860	1.6%
DMH	177,399	3,873,000	2.183	2.622	-16.7%
DOC	348,187	11,286,775	3.242	4.271	-24.1%
UMass - Amherst	467,753	1,939,500	0.415	0.477	-13.1%
UMass - Medical	381,943	1,464,725	0.383	0.454	-15.6%
Other C & Univs	1,202,674	4,031,000	0.335	0.379	-11.6%
All Other Dept's (excl. MTA)	3,006,849	35,108,500	1.168	1.083	7.8%
Total	5,880,714	63,293,000	1.076	1.125	-4.3%

All Other Departments – Fiscal Year 2012 Loss Rates

In the table below, we have estimated, the composition of the All Other Departments FY2012 loss rate as a function of both the MDOT (excluding MTA) and Non-MDOT departments experience and exposure:

		Average	Average FY 12	Prior	%
All Other Dept's	Payroll (000)	Ult Loss	Loss Rate	Loss Rate	Change
MDOT (excl. MTA)	207,447	2,628,575	1.267	1.135	11.7%
Non-MDOT	2,799,402	32,479,925	1.160	1.079	7.5%
Total	3,006,849	35,108,500	1.168	1.083	7.8%

It is important to note that the loss rates estimated via the decomposition methodology are inherently volatile due to their derivation being reliant on a variety of assumptions and estimations which are themselves also volatile.



UMass Reserves

To facilitate the use of this report by the University of Massachusetts ("UMass"), we present an aggregate estimate of the liabilities for each UMass segment. These include UMass Amherst and UMass Medical School (shown separately in table above) as well as UMass Lowell, Boston, and Dartmouth (included as part of the "Other Colleges and & Universities" cluster above).

A reasonable range of reserves for the aggregate UMass program is estimated at \$14.9M to \$20.4M.

Discounted at 4%: \$12.0M to \$16.5M | Discounted at 6%: \$11.0M to \$15.2M

The following shows the range of reasonable reserves at various discount rates for each UMass segment.

Cluster	Undiscounted	Discounted at 4%	Discounted at 6%
UMass - Amherst	\$7.5 - 10.6M	\$5.9 - 8.4M	\$5.3 - 7.6M
UMass - Medical	\$4.0 - 5.6M	\$3.3 - 4.7M	\$3.1 - 4.3M
UMass - Dartmouth	\$1.2 - 1.5M	\$1.0 - 1.3M	\$0.9 - 1.2M
University of Lowell	\$1.1 - 1.4M	\$0.9 - 1.2M	\$0.9 - 1.1M
UMass - Boston	\$1.1 - 1.3M	\$0.9 - 1.1M	\$0.8 - 1.0M
Total UMass	\$14.9 - 20.4M	\$12.0 - 16.5M	\$11.0 - 15.2M

Other Colleges and Universities Reserve

We have allocated the aggregate reserve estimate for All Other Colleges and Universities to the individual institutions within the cluster. Estimates for each institution are shown on Summary Exhibit 7.

Short Term Reserve Percentages

We have determined the percentage of the reserve estimates that can be considered short-term, meaning the percentage of projected payments of the total reserves expected to be made over the next twelve month period. The calculation of these percentages is shown on Exhibit 1 Page 16 of Sections 1-8 in the Full Report.



IV. Program Description

The Commonwealth has provided workers compensation coverage to its employees on a self-insured basis since the early 1920's ("the Program"). The Program covers all workers, except those employed by the Commonwealth's various public authorities and the State Police.

The Commonwealth retains responsibility for all claims and does not purchase per claim or aggregate reinsurance.

Pursuant to legislation effective July 1, 1997, the Program is administered by the Commonwealth's Human Resources Division ("HRD"); prior to that date, certain workers compensation administration responsibilities had been under the supervision of the Public Employee Retirement Administration Commission ("PERAC"). HRD is responsible for making fair and timely payments of indemnity and medical benefits to injured employees, maintaining the claim and financial records of the Program and for negotiating appropriate settlements for all Program claims.

Effective November 1, 2009 a new entity, the Massachusetts Department of Transportation (MDOT) was created. As part of the creation, various agencies ceased to be considered part of the Commonwealth and became part of the MDOT. The agencies, previously part of the Commonwealth, that now comprise the MDOT are the Old Mass Highway Department (MHD), Registry of Motor vehicle (RMV), The Office of Transportation (TRP); The Mass Aeronautics Commission (MAC); Tobin Bridge (TOBIN) and a small operation of the Department of Conservation and Recreation (DCR).

Per discussions with the Commonwealth, it is our understanding that the MDOT would assume the total historical liability of each of those departments; MHD, RMV, TRP, MAC, TOBIN and DCR.



V. Data Loss

Claim payments for the 12 month period ending June 30, 2012 were provided by the Commonwealth. Payments were provided by department and agency and were split into four categories: compensation, medical, lump sum, and rehabilitation/investigations. For our review, we analyzed compensation (Indemnity) and lump sum payments separately. Medical and rehabilitation/ investigation payments were combined and analyzed as "Medical" losses.

Our estimates do not include any provision for allocated loss adjustment expenses (ALAE) that may be incurred in the processing and settlement of claims, other than rehabilitation/investigation payments included with medical losses noted above. Also, the estimates do not consider unallocated loss adjustment expenses (ULAE), such as fees of adjusters and settling agents, etc.

The 12 month incremental payments provided by the Commonwealth were added to the cumulative claim payments from the prior analysis (at June 30, 2011) to derive cumulative paid figures as of June 30, 2012 found in this report.

Exposure

Exposure information for FY2012, in the form of payroll was provided by the Commonwealth and fully consistent with the "object code" classification which was revised as part of the FY2010 study.

We relied on loss and exposure data provided by responsible officers or employees of the Commonwealth. We also relied on data found in the prior analysis and thereby also those sources described in it; utilizing last year's triangles and updating them with data provided by the HRD. We also relied on payroll data provided by the Office of the Comptroller. As mentioned previously, any inaccuracies in quantitative data or qualitative representations could have a significant effect on the results of our analysis.

Industry Data

Loss development factors were derived from the Commonwealth's own triangles and industry data provided by:

- The National Council on Compensation Insurance (NCCI)
- The Workers Compensation Rating and Inspection Bureau of Massachusetts (WCRIBMA)

Trend factors used to adjust for changes in historical wage and benefit levels are based on data from these sources as well.



VI. Actuarial Analysis

Overview

Performing an actuarial analysis involves developing a qualitative understanding of the risk and applying actuarial techniques and methods to available data. These methods attempt to project unpaid losses to ultimate settlement value. Each method requires certain underlying assumptions and varies in its responsiveness to loss data. As a result, not all methods are appropriate for use in all circumstances. For each unique situation, actuaries assess the strengths and weaknesses inherent in the results of each method in producing reasonable estimates of ultimate loss.

The following methods were employed in developing the recommendations contained in this report.

Methods/Models of Estimating Unpaid Loss Estimates

Paid Loss Development Method

This method is based on the assumption that losses from a group of claims are paid in a sufficiently consistent pattern such that past experience can be used to predict future development. The term loss development is used to describe changes that take place in the value of a group of claims over time. In order to reflect loss development arithmetically, incremental loss development factors are calculated by dividing losses at a given evaluation date by the immediately preceding evaluation date. A multiplicative process is then used to calculate a cumulative loss development factor that represents the development to ultimate for a given age of maturity.

This method can be applied using either cumulative paid losses or incurred losses (cumulative paid losses plus case reserves). For a given group of claims, cumulative losses are multiplied by the appropriate cumulative loss development factor to estimate ultimate losses. For the Commonwealth, we relied on the Paid Loss Development Method only, as the Commonwealth does not currently establish case reserves.

This method relies heavily on data as of the most recent evaluation date and assumes past patterns are predictive of future development. If the program has inadequate history to develop predictive loss development patterns, other sources of loss development information may be considered.

In addition to the cumulative loss development factors, we apply an additional factor to bring losses from their current paid status to a projected ultimate basis. This factor is called an "Additional Tail Consideration" factor.

The "Additional Tail Factor" consideration is based on our observation that for certain clusters, some of the older policy periods showed more open claims and higher development than other periods. We also evaluated the average age of the paid claimants for each cluster and year, and noticed that in certain years payments were being made to relatively young claimants. We judgmentally added a tail factor selection to account for these observations



Paid Bornhuetter-Ferguson (BF) Method

This method offers a blend of stability and responsiveness by estimating ultimate losses using a percentage of the expected loss results and current loss data. It calculates future loss development based on expected loss estimates and the cumulative loss development factors described in the Loss Development Method.

The B-F Method can be applied using either cumulative paid or incurred losses. Again, for the Commonwealth, we relied on the Paid B-F Method only as the Commonwealth does not currently establish case reserves.

In determining future loss development, the percent of expected losses remaining to be paid is based on the appropriate loss development factor. This percentage is multiplied by expected losses to determine expected future development. This estimate of future loss development is added to losses at the current evaluation date to project ultimate losses.

To determine the expected losses, we determine an initial expected pure premium (or an "a priori" loss rate) based upon (1) a review of the Commonwealth's historic pure premiums (losses divided by payroll) as well as (2) consideration of the selected rate the trend and benefit level adjustments removed ("detrended"). By considering both metrics, we attempt to balance stability and responsiveness in the selection of the initial expected pure premium.

Lump Sum Methodology

Lump sum indemnity payments are analyzed separately from all other indemnity payments. We relied on two methods to develop lump sum payments to ultimate levels. The first is a standard paid loss development method, where current lump sum payments are multiplied by a cumulative lump sum development factor to arrive at the estimate of ultimate lump sum losses.

The second method uses ultimate indemnity losses excluding lump sums as a base for estimating remaining outstanding lump sum payments. Outstanding lump sums payments are estimated by multiplying base ultimates by cumulative incremental lump sums as a percent of ultimate losses excluding lump sums ratio. The outstanding lump sum payments are added to payments to date to arrive at the estimate of ultimate lump sum losses. An estimate of ultimate lump sums is selected based on a review of both methods.

7/1/81-82 and Prior Periods Methodology

In order to estimate liabilities relating to periods 7/1/81-82 and prior, we again relied on two methods. The first uses an average payment trend to estimate the reserves needed for prior periods. This estimate is added to payments to date to arrive at the estimate of ultimate loss. The average payment trend is derived from the Commonwealth's history of incremental payments and is credibility weighted with the total Commonwealth payment trend (derived from all Commonwealth data combined).

The second method multiplies average incremental payments over the last three fiscal years by a selected number of survival years in order to estimate the needed reserve. The needed reserve is added to payments to date to arrive at an estimate of the ultimate loss. An estimate of ultimate loss is selected based on a review of both methods



Selection of Ultimate Losses and Reasonable Reserve Estimates

Our estimates of ultimate losses by year were judgmentally selected based on the methods described above. Generally, we selected the lower and higher of the Paid Loss Development and Paid Bornhuetter-Ferguson methods as the "Low End" and "High End" selections by year. In certain cases, we judgmentally increased the high end of the range if we felt there was not enough "differential" in the two methodologies.

Similar to the prior analysis, we assume that any payment made during fiscal year 2012 implies an "open" claim and will remain open during fiscal year 2012. As a rule, if no payments were made for two years in a row, we project minimal reserves for that year, assuming the claims in that year are closed

Allocation Methodology for Massachusetts Colleges and Universities

The allocation of reserves to each college and university is based on a credibility weighting of expected loss experience based on exposure (payroll) and actual loss experience. The credibility weight is based on the formula P/ (P+K) where P is average payroll for the entity over the past five years and K is 20,000,000 for entities with a low coefficient of variation (CV) and 50,000,000 for entities with a high coefficient of variation (> 1.00).

The expected loss experience is the 5 year average payroll for each entity multiplied by the overall indemnity and medical loss rates for the entire Other Colleges and Universities group. The actual loss experience used in the allocation is a 5-year average ultimate loss for each entity. The ultimate loss for each entity is calculated by applying the paid loss development method to each entity's loss experience.

The outstanding losses estimated for Other Colleges and Universities is then allocated to each entity based on its percentage share of the ultimate credibility weighted losses.

Composition Analysis Methodology for Cluster 5 - All Other Departments

The decomposition of the All Other Departments cluster into the liability associated with MDOT (excl. MTA) and Non-MDOT agencies is based on a blended consideration of three different methods. Each method, estimates a percentage share of the total liability for each fiscal year that is associated with the agencies of the MDOT (excl. MTA) agencies. Each of the three methods described below are applied to both the Medical and Indemnity analyses independently:

<u>Method 1</u>: The <u>number</u> of loss payments made to claimants of the MDOT (excl. MTA) agencies during the fiscal year as a proportion of the total number of claim payments made during the fiscal year to the All Other Departments in Cluster 5

<u>Method 2</u>: The <u>value</u> of loss payments made to claimants of the MDOT (excl. MTA) during the fiscal year as a proportion of the total value of claim payments made during the fiscal year to All Other Departments in Cluster 5.

<u>Method 3</u>: The <u>payroll</u> of the MDOT (excl. MTA) agencies during each of the past fiscal years as a proportion of the total payroll paid to All Other Departments in Cluster 5 over the past fiscal years. Where this historical payroll split was not available, an assumption was made based upon available information.



Actuarial Assumptions

Incurred But Not Reported (IBNR)

Generally, losses will increase over time for the following reasons:

- 1. It is impossible to estimate precisely the ultimate losses and allocated loss adjustment expenses for claims when they are initially reported.
- 2. It takes a period of time for some claims to be discovered, reported, and recorded. Unreported claims are referred to as "pure" IBNR claims. Claims that are reported but not yet recorded are referred to as "pipeline" IBNR claims.
- 3. Closed claims are sometimes reopened.

These three conditions result in the need for IBNR reserves.

Loss Trend

Loss trend is the change in claim frequency and cost levels from one time period to the next. Factors that affect the frequency and severity of claims are constantly changing over time. Examples of causes of these changes include inflation, societal attitudes toward legal action, and changes in laws. Actuaries use trend factors to adjust historical loss experience to comparable cost levels. Using workers compensation as an example, three elements of cost are combined within this single factor:

Increases in defined benefits for Workers Compensation: Benefits are established by legislative authority and typically reviewed annually by state legislatures. Many times, benefits are expanded by legislatures through changes such as broadening the definition of injury, decreasing waiting periods, increasing benefit duration, or increasing maximum benefit limits.

Increases in medical costs: This causes inflationary trend in the medical component of workers compensation losses.

Increase in wage costs: Wage inflation, although relatively small in some economic sectors, has occurred over the past several years as well.

Specifically, for this analysis, trend factors were obtained from the 2012 rate filing published by the WCRIB of Massachusetts.

Exposure

Actuaries select an exposure base expected to vary directly with the incidence and/or severity of claims. The actuary must consider both the historical loss level and the corresponding exposures in evaluating claim liabilities and expected future costs.

As previously discussed, payroll exposure for FY1985 through FY2012 were provided by the Commonwealth. For the FY2012 non-MTA element of the MDOT payroll in Cluster 5, it was necessary to estimate the MTA-only payroll based upon prior values as a FY2012 figure was not available. This figure was then subtracted from the total MDOT payroll.



Time Value of Money

Due to the time lag between when claims are incurred, reported, and finally paid, a sound funding recommendation may consider the time value of money. Income will be earned on self-insurance fund assets until those assets are liquidated to pay losses. If this income is retained in the self-insurance fund, such investment income may be considered.

At the Commonwealth's direction, we used 4% and 6% rates to discount the estimated reserves. We have not formed any opinion regarding the reasonability of these rates. It is noted that discounting reserves introduces additional risk to the analysis since the timing of actual loss payments may differ from the estimated payment pattern, and since the realized investment yield may differ from that assumed.

Provision for Uncertainty

An actuarial projection may consider the degree of uncertainty inherent in its projection. An estimate stated at its ultimate value on a nominal basis may include an implicit provision for uncertainty due to the time value of money. If an estimate is stated at present value, it may be appropriate to include an explicit provision for uncertainty. Further, an explicit provision for uncertainty may be warranted when losses are subject to a high degree of variability.

For the Commonwealth, we have not explicitly used any provision for risk in our calculations. Instead, we have determined a "low" and "high" end range of reasonable reserves. It should be understood that the range does not represent all possible outcomes, but rather a range of reasonable estimates



VII. Arrangement of Exhibits

This report contains eight sections preceded by a set of summary exhibits. The summary exhibits include the following:

Summary Exhibit	Description
1	Summary of Reserve Estimates - Undiscounted
2	Summary of Reserve Estimates - Discounted at 4%
3	Summary of Reserve Estimates - Discounted at 6%
4	Summary of Change in Ultimate Loss
5	Summary of Estimates for 12-13 Fiscal Year
6	Summary of Reserve Estimates by Cluster
7	Summary of Reserve Estimates by College
8	Summary of Ultimate Losses by Cluster
9	Calculation of Implied Development Factors
10	MA Colleges and Universities Allocation

The eight sections and their exhibits are organized as follows:

Section	Exhibit	Cluster
1	1	All Clusters Combined - Indemnity
1	2	All Clusters Combined - Medical
2	1	DMR - Indemnity
2	2	DMR - Medical
3	1	DMH - Indemnity
3	2	DMH - Medical
4	1	DOC - Indemnity
4	2	DOC - Medical
5	1	Umass Amherst - Indemnity
5	2	Umass Amherst - Medical
6	1	Umass Medical School - Indemnity
6	2	Umass Medical School - Medical
7	1	Other College and Universities - Indemnity
7	2	Other College and Universities - Medical
8	1	All Other - Indemnity
8	2	All Other - Medical



Within Sections 1 through 8, the worksheets are organized as follows:

<u>Page</u>	Description
1	Summary of Ultimate Losses
2	Paid Loss Development Method
3	Paid Bornhuetter-Ferguson Method
4	Calculation of Initial Expected Loss Rates
5	Calculation of 1982 and Prior Reserves Page 1
6	Calculation of 1982 and Prior Reserves Page 2
7	Paid Loss Triangle
8	Comparison of Ultimate Losses
9-12	Calculation of Ultimate Lump Sum Payments
13-15	Discounting Exhibits
16	Calculation of FY 2013 Payments

<u>Page</u>	<u>Description</u>
DOT - FY2011	MDOT (excl. MTA) Reserve Allocation as of 06/30/11
DOT - FY2012	MDOT (excl. MTA) Reserve Allocation as of 06/30/12



VIII. Description of Exhibits

Summary Exhibits

<u>Summary Exhibit 1</u> shows the undiscounted low and high reserve estimates by cluster for indemnity and medical separately.

<u>Summary Exhibit 2</u> shows the low and high reserve estimates by cluster for indemnity and medical separately, discounted at 4%.

<u>Summary Exhibit 3</u> shows the low and high reserve estimates by cluster for indemnity and medical separately, discounted at 6%.

<u>Summary Exhibit 4</u> shows the change in ultimate loss from the prior report by cluster and for indemnity and medical separately. Changes in the ultimate loss for the current fiscal year are excluded.

<u>Summary Exhibit 5</u> shows the low and high ultimate loss estimate for the current fiscal year. The estimates are shown by cluster and for indemnity and medical separately. The midpoint of the range of estimates is used to calculate the loss rate for each cluster.

<u>Summary Exhibit 6</u> contains an additional summary of reserve estimates by cluster, showing both the discounted and undiscounted ranges of reserves.

<u>Summary Exhibit 7</u> contains a summary of reserve estimates by college. High and low reserve estimates are shown undiscounted as well as at 4% and 6% discount rates.

<u>Summary Exhibit 8</u> shows the selection of ultimate losses by accident year for all clusters. A calculation of the outstanding losses and loss rates is also shown by accident year.

Page 1 shows results for all clusters combined.

Pages 2 – 8 show results for each of the clusters specified in the Scope section.

<u>Summary Exhibit 9</u> shows the calculation of the implied loss development factors underlying the results of our analysis by accident year. The selected ultimate loss for all clusters is divided by the paid losses to date for all clusters to derive the indicated LDF by accident year.

<u>Summary Exhibit 10 Page 1</u> shows the results of the methodology used to allocate ultimate losses to each of the college and universities contained in the Other Colleges and Universities group. This methodology is discussed in the Overview section of this report.

<u>Summary Exhibit 10 Page 2</u> shows the estimated loss costs for indemnity and medical combined for each college and university. The loss costs are calculated by dividing the sum of the estimated ultimate indemnity and medical losses on Page 4 by the payroll figures on Page 3.

Summary Exhibit 10 Page 3 shows the historical payrolls for each college and university.



<u>Summary Exhibit 10 Page 4</u> shows the estimated ultimate indemnity and medical losses for each college and university. The estimated ultimate losses are calculated by multiplying the cumulative paid indemnity and medical losses on Page 5 by the Age-to-Ultimate LDF's shown on Page 4.

<u>Summary Exhibit 10 Page 5</u> shows the historical cumulative indemnity and medical payments for each college and university.

<u>Summary Exhibit 10 Page 6</u> shows the current fiscal year indemnity and medical payments for each college and university.

Pages in Exhibits 1 and 2 of Sections 1 through 8

<u>Page 1</u> shows the selected ultimate losses by accident year. A high and low selection is made for each accident year based on a review of the actuarial methods presented. Outstanding losses based on the low and high estimates are also calculated. The outstanding loss estimate equals the selected ultimate loss minus paid losses to date.

<u>Page 2</u> shows the application of the Paid Loss Development Method to the applicable data. The number of paid counts in the last 12 months, average outstanding claim amounts, and the average age for claimants that had an indemnity payment within the last calendar year are also shown.

<u>Page 3</u> shows the application of the Paid Bornhuetter-Ferguson Method to the applicable data. The ultimate loss cost resulting from the method is also shown.

<u>Page 4</u> calculates the initial expected loss rate, which is used as the a priori loss rate in the B-F method. Expected ultimate losses from the Paid Loss Development Method are divided by payroll for each accident year. The resulting loss rates are trended to the current cost and wage level and adjusted for historical changes in benefit levels. A current loss cost is then selected.

<u>Page 5</u> shows the application of the methodology used to estimate ultimate losses for periods 7/1/1981-82 and prior. This methodology is described in the Actuarial Analysis section of this report.

<u>Page 6</u> shows the derivation of the selected trend using the applicable data for each section. The selected trend is used in the methodology for estimating the 7/1/1981-82 and prior reserves.

<u>Page 7</u> shows the paid loss development triangle and selected LDF's underlying the paid loss development and paid B-F methods.

<u>Page 8</u> shows the comparison of the selected ultimate losses to the selection from the prior actuarial reserve review. The changes in ultimates are shown on an absolute and percentage change basis.

<u>Page 9</u> calculates the estimated ultimate lump sum payments. Two methodologies are reviewed and an estimate of the ultimate lump sum payments by accident year is made. The two methods are described in the Actuarial Analysis section of this report. A comparison to the prior ultimate lump sum selection is also shown.



<u>Pages 10 through 12</u> show various lump sum development triangles underlying the lump sum methodology on Page 9. Incremental lump sum payments (in 12 month intervals) are accumulated to derive a cumulative lump sum payment triangle (Page 10). Page 11 shows the incremental lump sum payments as a percent of ultimate indemnity loss excluding lump sum payments. Page 12 shows the selection of the LDF's for the cumulative lump sum payment triangle.

<u>Page 13</u> calculates the discount factors based on the selected payout patterns from Page 7. Discount factors are calculated assuming 4% and 6% interest rates.

<u>Pages 14 and 15</u> show the application of the discount factors from Page 13 to the outstanding losses from Page 1. Page 14 shows the discounted outstanding losses at 4%; Page 15 shows them at 6%.

<u>Page 16</u> estimates the percentage of reserve estimates which can be considered short-term; i.e., projected payments associated with the reserves which will be made over the next calendar period

Additional MDOT Pages in Exhibits 1 and 2 of Section 8 ONLY

<u>Page MDOT FY2011</u> shows the results of the methodology used to allocate outstanding reserve liability to the MDOT (excl. MTA) and Non-MDOT agencies. This methodology is discussed in the Overview section of this report. This page utilizes the results of the previous actuarial analysis performed in 2010 and based on loss data valued as of 6/30/11.

<u>Page MDOT FY2012</u> shows the results of the methodology used to allocate outstanding reserve liability to the MDOT (excl. MTA) and Non-MDOT agencies. This methodology is discussed in the Overview section of this report. This page utilizes the results of the current actuarial analysis, based on data valued as of 6/30/12.

IX. Exhibits



Table of Contents

I. Narrative

II. Summary Exhibits

III. Supporting Exhibits

or ting Danibits		
Section 1	All Clusters Combined	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 2	Department of Mental Retardation - Cluster 1	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 3	Department of Mental Health - Cluster 2	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 4	Department of Corrections - Cluster 3	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 5	University of Massachusetts (Amherst) - Cluster 4	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 6	University of Massachusetts (Medical Center) - Cluster 4	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 7	Massachusetts Colleges & Universities - Cluster 4	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	
Section 8	All Other - Clusters 5-17 & 95	
	Exhibit 1 - Indemnity	
	Exhibit 2 - Medical	



Summary of Reserve Estimates - Undiscounted

		Report	Loss Reserv	ve Estimate
<u>Cluster</u>	Cluster #	Section	Low End	High End
Department of Mental Retardation	1	Section 2		
Indemnity			25,853,595	31,455,439
Medical			<u>3,319,214</u>	4,775,794
Total			29,172,809	36,231,233
Department of Mental Health	2	Section 3		
Indemnity			21,950,290	27,152,755
Medical			<u>3,533,537</u>	4,039,895
Total			25,483,827	31,192,650
Department of Corrections	3	Section 4		
Indemnity			48,177,208	67,005,390
Medical			12,177,817	17,460,796
Total			60,355,024	84,466,186
UMass - Amherst	4	Section 5		
Indemnity			6,036,805	8,862,619
Medical			1,491,352	1,718,997
Total			7,528,157	10,581,616
UMass - Medical School	4	Section 6		
Indemnity			3,144,580	4,279,385
Medical			809,233	1,296,417
Total			3,953,813	5,575,802
Other Colleges & Universities	4	Section 7		
Indemnity			11,543,345	14,512,742
Medical			2,404,814	2,674,417
Total			13,948,159	17,187,159
All Others	5-17 & 95	Section 8		
Indemnity			151,977,647	184,871,422
Medical			21,836,450	30,530,573
Total			173,814,096	215,401,995
Grand Total		Section 1		
Indemnity			268,683,469	338,139,752
Medical			45,572,417	62,496,889
Total			314,255,886	400,636,641



Summary of Reserve Estimates - Discounted at 4%

		Report	Loss Reser	ve Estimate
<u>Cluster</u>	Cluster #	Section	Low End	High End
Department of Mental Retardation	1	Section 2		
Indemnity			20,631,161	25,423,015
Medical			<u>2,774,587</u>	3,986,135
Total			23,405,748	29,409,150
Department of Mental Health	2	Section 3		
Indemnity			16,862,831	21,124,747
Medical			2,806,264	3,204,801
Total			19,669,094	24,329,547
Department of Corrections	3	Section 4		
Indemnity			36,228,291	50,922,450
Medical			9,305,040	13,538,239
Total			45,533,332	64,460,689
UMass - Amherst	4	Section 5		
Indemnity			4,615,264	6,939,963
Medical			1,240,031	1,427,764
Total			5,855,295	8,367,727
UMass - Medical School	4	Section 6		
Indemnity			2,607,045	3,557,863
Medical			701,247	1,106,995
Total			3,308,292	4,664,858
Other Colleges & Universities	4	Section 7		
Indemnity			9,424,701	11,908,836
Medical			2,045,004	2,272,780
Total			11,469,706	14,181,616
All Others	5-17 & 95	Section 8		
Indemnity			111,145,535	136,870,882
Medical			16,922,411	23,615,124
Total			128,067,946	160,486,006
Grand Total		Section 1		
Indemnity			201,514,829	256,747,755
Medical			35,794,584	49,151,838
Total			237,309,413	305,899,593



Summary of Reserve Estimates - Discounted at 6%

		Report	Loss Reserv	ve Estimate
<u>Cluster</u>	Cluster #	Section	Low End	High End
Department of Mental Retardation	1	Section 2		
Indemnity			18,863,289	23,350,912
Medical			<u>2,581,473</u>	3,708,558
Total			21,444,762	27,059,470
Department of Mental Health	2	Section 3		
Indemnity			15,152,898	19,076,568
Medical			2,555,837	2,917,324
Total			17,708,735	21,993,892
Department of Corrections	3	Section 4		
Indemnity			32,285,268	45,594,651
Medical			8,345,866	12,232,349
Total			40,631,134	57,827,001
UMass - Amherst	4	Section 5		
Indemnity			4,133,829	6,268,420
Medical			1,148,951	1,322,261
Total			5,282,780	7,590,681
UMass - Medical School	4	Section 6		
Indemnity			2,415,963	3,295,270
Medical			659,730	1,034,554
Total			3,075,693	4,329,824
Other Colleges & Universities	4	Section 7		
Indemnity			8,635,806	10,931,610
Medical			1,911,329	2,123,486
Total			10,547,135	13,055,096
All Others	5-17 & 95	Section 8		
Indemnity			97,916,198	121,176,500
Medical			<u>15,263,452</u>	21,292,992
Total			113,179,650	142,469,491
Grand Total		Section 1		
Indemnity			179,403,251	229,693,930
Medical			32,466,639	44,631,525
Total			211,869,890	274,325,455
			* * *	, , ,



Summary of Change in Ultimate Loss (excluding current Fiscal Year)

			Current Ult Lo	ss Estimate less
		Report	Previous Ult	Loss Estimate
<u>Cluster</u>	Cluster #	Section	Low End	High End
Department of Mental Retardation	1	Section 2		
Indemnity			748,537	496,802
Medical			(616,553)	(543,208)
Total			131,984	(46,407)
Department of Mental Health	2	Section 3		
Indemnity			(1,444,807)	(1,860,297)
Medical			(507,894)	(792,711)
Total			(1,952,702)	(2,653,008)
Department of Corrections	3	Section 4		
Indemnity			(13,450,034)	(16,916,140)
Medical			(1,166,253)	(682,397)
Total			(14,616,288)	(17,598,537)
UMass - Amherst	4	Section 5		
Indemnity			(573,995)	(938,372)
Medical			(142,000)	(407,836)
Total			(715,995)	(1,346,207)
UMass - Medical School	4	Section 6		
Indemnity			(236,000)	(500,845)
Medical			<u>(180,000)</u>	(307,600)
Total			(416,000)	(808,445)
Other Colleges & Universities	4	Section 7		
Indemnity			611,444	135,512
Medical			(266,095)	(689,324)
Total			345,349	(553,811)
All Others	5-17 & 95	Section 8		
Indemnity			(669,076)	(4,273,045)
Medical			(2,476,872)	(5,039,252)
Total			(3,145,948)	(9,312,297)
Grand Total		Section 1		
Indemnity			(15,013,932)	(23,856,386)
Medical			(5,355,668)	(8,462,327)
Total			(20,369,599)	(32,318,713)



Summary of Estimates for 2011-12 Fiscal Year

		Report	<u>Ultimate I</u>	Loss Estimate			
<u>Cluster</u>	Cluster #	Section	Low End	<u>High End</u>	<u>Average</u>	Payroll (000)	Loss Rate
Department of Mental Retardation	1	Section 2					
Indemnity			3,793,000	3,995,000			
Medical			1,565,000	1,826,000			
Total			5,358,000	5,821,000	5,589,500	295,908	1.889
Department of Mental Health	2	Section 3					
Indemnity			2,799,000	3,053,000			
Medical			938,000	956,000			
Total			3,737,000	4,009,000	3,873,000	177,399	2.183
Department of Corrections	3	Section 4					
Indemnity			6,850,000	10,569,000			
Medical			1,951,000	3,203,550			
Total			8,801,000	13,772,550	11,286,775	348,187	3.242
UMass - Amherst	4	Section 5					
Indemnity			1,230,000	1,411,000			
Medical			605,000	633,000			
Total			1,835,000	2,044,000	1,939,500	467,753	0.415
UMass - Medical School	4	Section 6					
Indemnity			1,009,000	1,045,000			
Medical			404,000	471,450			
Total			1,413,000	1,516,450	1,464,725	381,943	0.383
Other Colleges & Universities	4	Section 7					
Indemnity			2,801,000	2,898,000			
Medical			1,174,000	1,189,000			
Total			3,975,000	4,087,000	4,031,000	1,202,674	0.335
All Others	5-17 & 95	Section 8					
Indemnity			24,995,000	28,674,000			
Medical			7,000,000	9,548,000			
Total			31,995,000	38,222,000	35,108,500	3,006,849	1.168
Grand Total		Section 1					
Indemnity			43,477,000	51,645,000			
Medical			13,637,000	17,827,000			
Total			57,114,000	69,472,000	63,293,000	5,880,714	1.076



Summary of Reserve Estimates by Cluster

	Cluster /						_
	Report	Undiscounted		Discoun	ted at 4%	Discoun	ted at 6%
Cluster	Section	Low End	High End	Low End	High End	Low End	High End
DMR	1 / 2	29,172,809	36,231,233	23,405,748	29,409,150	21,444,762	27,059,470
DMH	2/3	25,483,827	31,192,650	19,669,094	24,329,547	17,708,735	21,993,892
DOC	3 / 4	60,355,024	84,466,186	45,533,332	64,460,689	40,631,134	57,827,001
UMass - Amherst	4/5	7,528,157	10,581,616	5,855,295	8,367,727	5,282,780	7,590,681
UMass - Medical	4/6	3,953,813	5,575,802	3,308,292	4,664,858	3,075,693	4,329,824
Other Colleges & Univ's	4/7	13,948,159	17,187,159	11,469,706	14,181,616	10,547,135	13,055,096
All Other Dept's (incl. MDOT, excl. MTA)	5 / 8	173,814,096	215,401,995	128,067,946	160,486,006	113,179,650	142,469,491
Total		314,255,886	400,636,641	237,309,413	305,899,593	211.869.890	274,325,455

	Cluster /						
	Report	Undisc	counted	Discoun	ted at 4%	Discounted at 6%	
All Other Departments	Section	Low End	High End	Low End	High End	Low End	High End
MDOT Agencies (excl. MTA)	5/8	12,693,564	15,792,816	9,351,954	11,764,414	8,264,468	10,442,928
Non-MDOT Agencies	5 / 8	161,120,532	199,609,179	118,715,992	148,721,592	104,915,181	132,026,563

AON

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012

Summary of Reserve Estimates by College

	Undisc	ounted	Discount	ted at 4%	Discour	nted at 6%
Cluster	Low End	High End	Low End	High End	Low End	High End
Berkshire Community College	156,000	192,226	128,280	158,611	117,962	146,012
Bridgewater State College	1,116,675	1,375,986	918,253	1,135,365	844,392	1,045,177
Bristol Community College	341,057	420,256	280,454	346,765	257,896	319,220
Bunker Hill Community College	472,043	581,660	388,166	479,944	356,944	441,820
Cape Cod Community College	202,244	249,208	166,307	205,629	152,930	189,295
Fitchburg State College	678,517	836,080	557,951	689,873	513,072	635,073
Framingham State College	553,518	682,054	455,163	562,782	418,552	518,078
Greenfield Community College	111,266	137,104	91,495	113,129	84,136	104,142
Holyoke Community College	306,613	377,813	252,130	311,744	231,850	286,981
Mass Bay Community College	203,902	251,252	167,671	207,315	154,184	190,847
Mass College of Art	362,079	446,160	297,741	368,139	273,792	338,896
Mass Maritime Academy	326,469	402,281	268,459	331,934	246,865	305,566
Massachusetts College of Liberal Arts	242,453	298,754	199,371	246,511	183,335	226,929
Massasoit Community College	642,376	791,547	528,232	653,128	485,744	601,247
Middlesex Community College	270,090	332,810	222,098	274,611	204,233	252,797
Mt Wachusett Community College	298,799	368,185	245,705	303,800	225,942	279,668
North Essex Community College	197,986	243,962	162,806	201,300	149,711	185,310
North Shore Community College	312,438	384,991	256,921	317,667	236,255	292,433
Quinsigamond Community College	472,273	581,943	388,354	480,177	357,117	442,034
Roxbury Community College	216,071	266,246	177,677	219,687	163,385	202,236
Salem State College	799,992	985,763	657,841	813,382	604,927	748,770
Springfield Tech Community College	944,403	1,163,710	776,592	960,210	714,126	883,936
UMass (Boston)	1,060,258	1,306,468	871,860	1,078,004	801,732	992,373
UMass (Dartmouth)	1,247,800	1,537,560	1,026,078	1,268,685	943,545	1,167,906
University of Lowell	1,144,549	1,410,333	941,174	1,163,706	865,470	1,071,267
Westfield State College	842,308	1,037,907	692,638	856,406	636,926	788,378
Worcester State College	425,981	524,901	350,288	433,111	322,113	398,707
Total	13,948,159	17,187,159	11,469,706	14,181,616	10,547,135	13,055,09



All Clusters Combined Total Indemnity (Including Lump Sums) + Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		97,712,219			115,883,047	126,428,588	18,170,828	28,716,370		
6/30/82-83		17,770,900	19,121,694		18,705,338	19,672,157	934,438	1,901,257		
6/30/83-84		25,658,736	28,367,335		27,851,766	29,221,770	2,193,030	3,563,034		
6/30/84-85	1,823,085	38,317,600	42,489,797	39,591,905	39,855,700	41,951,557	1,538,100	3,633,957	2.186	2.301
6/30/85-86	1,952,445	51,548,281	57,582,296	53,628,249	54,402,356	56,026,060	2,854,075	4,477,779	2.786	2.870
6/30/86-87	2,220,820	56,971,275	62,153,282	59,732,200	59,058,562	61,500,422	2,087,288	4,529,147	2.659	2.769
6/30/87-88	2,885,583	82,111,884	90,719,980	87,030,943	87,441,456	89,878,709	5,329,573	7,766,825	3.030	3.115
6/30/88-89	3,098,180	81,174,218	88,061,726	86,398,999	86,791,596	88,951,024	5,617,379	7,776,806	2.801	2.871
6/30/89-90	3,079,763	78,295,168	84,874,820	84,432,181	83,348,856	85,058,479	5,053,688	6,763,311	2.706	2.762
6/30/90-91	2,914,364	64,896,289	74,857,601	71,094,903	69,758,935	74,135,696	4,862,646	9,239,407	2.394	2.544
6/30/91-92	2,880,434	43,544,958	48,388,854	47,679,674	47,409,013	48,711,766	3,864,055	5,166,807	1.646	1.691
6/30/92-93	2,887,238	29,971,712	34,180,486	33,342,772	32,947,124	34,518,630	2,975,412	4,546,918	1.141	1.196
6/30/93-94	3,056,850	32,319,402	36,746,940	36,205,145	35,863,000	36,957,000	3,543,598	4,637,598	1.173	1.209
6/30/94-95	3,158,808	29,654,537	33,868,444	33,685,848	33,587,423	34,359,476	3,932,886	4,704,939	1.063	1.088
6/30/95-96	3,301,791	28,157,568	32,568,581	32,497,022	32,144,029	32,942,516	3,986,461	4,784,949	0.974	0.998
6/30/96-97	3,902,868	28,520,097	33,411,105	33,367,419	33,252,684	33,990,912	4,732,588	5,470,815	0.852	0.871
6/30/97-98	3,776,138	31,117,920	36,620,729	36,549,543	36,447,642	37,151,756	5,329,722	6,033,836	0.965	0.984
6/30/98-99	4,017,530	29,082,684	35,072,237	35,034,941	35,025,000	35,742,000	5,942,316	6,659,316	0.872	0.890
6/30/99-00	4,221,786	32,884,259	40,600,374	40,480,767	40,472,000	41,308,000	7,587,741	8,423,741	0.959	0.978
6/30/00-01	4,310,725	38,334,179	47,787,832	47,586,338	46,896,492	48,469,000	8,562,313	10,134,821	1.088	1.124
6/30/01-02	4,438,755	33,924,619	43,468,541	43,370,556	43,358,000	44,225,000	9,433,381	10,300,381	0.977	0.996
6/30/02-03	4,423,888	33,353,202	43,603,595	43,520,234	42,828,450	44,363,000	9,475,248	11,009,798	0.968	1.003
6/30/03-04	4,482,207	33,417,015	44,319,317	44,270,686	43,615,043	45,134,850	10,198,028	11,717,835	0.973	1.007
6/30/04-05	4,639,517	34,562,523	47,443,402	46,419,544	45,588,000	47,673,850	11,025,477	13,111,327	0.983	1.028
6/30/05-06	4,938,165	30,138,853	43,051,786	44,319,665	42,509,000	44,546,100	12,370,147	14,407,247	0.861	0.902
6/30/06-07	5,183,126	27,454,257	41,129,062	43,760,159	40,466,000	44,211,350	13,011,743	16,757,093	0.781	0.853
6/30/07-08	5,508,425	29,132,319	47,448,168	50,117,439	46,445,000	50,445,850	17,312,681	21,313,531	0.843	0.916
6/30/08-09	5,447,676	26,788,024	48,735,992	51,137,566	48,252,000	52,539,350	21,463,976	25,751,326	0.886	0.964
6/30/09-10	5,525,579	23,120,370	50,965,835	53,848,282	50,169,000	56,795,300	27,048,630	33,674,930	0.908	1.028
6/30/10-11	5,712,303	20,336,831	58,663,301	59,126,541	56,071,000	63,556,100	35,734,169	43,219,269	0.982	1.113
6/30/11-12	5,880,714	9,029,730	60,274,479	62,401,203	57,114,000	69,472,000	48,084,270	60,442,270	0.971	1.181
Total	109,668,762	1,219,301,627	1,456,577,592	1,400,630,723	1,533,557,513	1,619,938,268	314,255,886	400,636,641		
Tot 6/30/84-12	109,668,762	1,078,159,772	1,409,088,563	1,400,630,723	1,371,117,361	1,444,615,753	292,957,589	366,455,980	1.250	1.317

NOTES:

(2) Provided by Commonwealth of Massachusetts

(3) - (9) = Sum of Summary Exhibit 8, Pages 2-8

(10) = (6) / (2) / 10

(11) = (7) / (2) / 10



Department of Mental Retardation - Cluster 1 Total Indemnity (Including Lump Sums) + Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		21,130,386			26,035,045	28,228,454	4,904,659	7,098,069		
6/30/82-83		4,882,760	5,367,575		5,240,254	5,503,890	357,494	621,129		
6/30/83-84		9,314,639	11,004,553		10,811,538	11,239,749	1,496,900	1,925,110		
6/30/84-85	181,560	7,521,690	7,718,396	7,724,546	7,597,041	7,672,438	75,351	150,747	4.184	4.226
6/30/85-86	195,247	11,874,262	12,303,724	12,297,578	12,206,000	12,310,000	331,739	435,739	6.252	6.305
6/30/86-87	224,370	15,376,859	16,024,975	16,036,728	15,665,316	15,819,280	288,457	442,421	6.982	7.051
6/30/87-88	262,864	21,527,607	24,355,217	22,577,234	22,573,000	23,468,000	1,045,393	1,940,393	8.587	8.928
6/30/88-89	283,884	23,647,704	24,966,947	24,971,389	24,967,000	24,971,000	1,319,296	1,323,296	8.795	8.796
6/30/89-90	285,078	18,647,750	19,790,046	19,923,512	18,834,576	19,020,384	186,826	372,634	6.607	6.672
6/30/90-91	267,732	13,753,946	14,711,430	14,704,520	13,935,000	14,044,000	181,054	290,054	5.205	5.246
6/30/91-92	261,442	9,850,688	10,567,156	10,557,970	10,558,000	10,567,000	707,312	716,312	4.038	4.042
6/30/92-93	259,992	5,942,408	6,396,598	6,390,027	6,035,000	6,078,000	92,592	135,592	2.321	2.338
6/30/93-94	257,062	4,761,076	5,131,672	5,126,667	4,871,000	4,906,000	109,924	144,924	1.895	1.908
6/30/94-95	255,854	3,009,043	3,247,179	3,247,680	3,247,000	3,248,000	237,957	238,957	1.269	1.269
6/30/95-96	255,539	3,981,910	4,333,025	4,328,204	4,328,000	4,333,000	346,090	351,090	1.694	1.696
6/30/96-97	270,071	3,349,599	3,653,789	3,653,773	3,653,000	3,654,000	303,401	304,401	1.353	1.353
6/30/97-98	245,367	3,309,685	3,662,025	3,657,950	3,658,000	3,678,000	348,315	368,315	1.491	1.499
6/30/98-99	251,453	2,901,673	3,227,852	3,228,377	3,227,000	3,242,000	325,327	340,327	1.283	1.289
6/30/99-00	255,641	3,026,058	3,404,888	3,403,274	3,403,000	3,421,000	376,942	394,942	1.331	1.338
6/30/00-01	263,918	4,376,328	4,977,269	4,959,479	4,959,000	5,004,000	582,672	627,672	1.879	1.896
6/30/01-02	267,598	3,050,329	3,502,149	3,503,224	3,502,000	3,520,000	451,671	469,671	1.309	1.315
6/30/02-03	274,465	3,741,621	4,382,703	4,372,531	4,372,000	4,401,000	630,379	659,379	1.593	1.603
6/30/03-04	272,384	3,774,416	4,495,351	4,482,726	4,482,000	4,514,000	707,584	739,584	1.645	1.657
6/30/04-05	273,647	3,628,298	4,378,161	4,307,698	4,256,000	4,378,000	627,702	749,702	1.555	1.600
6/30/05-06	285,139	3,512,627	4,485,275	4,461,982	4,413,000	4,485,000	900,373	972,373	1.548	1.573
6/30/06-07	298,516	3,499,476	4,538,839	4,554,752	4,475,000	4,559,000	975,524	1,059,524	1.499	1.527
6/30/07-08	314,231	2,193,743	3,185,218	3,613,369	3,135,000	3,613,000	941,257	1,419,257	0.998	1.150
6/30/08-09	302,998	2,807,455	4,260,675	4,463,625	4,121,000	4,545,000	1,313,545	1,737,545	1.360	1.500
6/30/09-10	297,252	3,180,188	5,648,578	5,382,772	5,267,000	5,723,000	2,086,812	2,542,812	1.772	1.925
6/30/10-11	292,432	2,127,491	5,094,406	5,019,750	4,891,000	5,167,000	2,763,509	3,039,509	1.673	1.767
6/30/11-12	295,908	1,201,247	5,733,912	5,331,180	5,358,000	5,821,000	4,156,753	4,619,753	1.811	1.967
Total	7,451,644	224,902,962	234,549,583	216,282,517	254,075,771	261,134,194	29,172,809	36,231,233		
Tot 6/30/84-12	7,451,644	189,575,177	218,177,454	216,282,517	211,988,933	216,162,101	22,413,756	26,586,924	2.845	2.901

NOTES:

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3) - (9) =} Sum of Section 2, Exhibit 1, Page 1 + Section 2, Exhibit 2, Page 1

^{(10) = (6) / (2) / 10}

^{(11) = (7) / (2) / 10}



Department of Mental Health - Cluster 2 Total Indemnity (Including Lump Sums) + Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		19,840,435			23,661,979	25,084,938	3,821,544	5,244,503		
6/30/82-83		2,639,490	2,720,967		2,656,434	2,786,897	16,945	147,407		
6/30/83-84		2,864,047	3,084,462		3,012,665	3,158,385	148,619	294,339		
6/30/84-85	142,561	4,529,831	5,097,731	4,693,552	4,694,000	5,098,000	164,169	568,169	3.293	3.576
6/30/85-86	153,298	4,891,866	5,161,468	5,148,967	5,149,000	5,162,000	257,134	270,134	3.359	3.367
6/30/86-87	176,136	6,911,248	7,337,364	7,346,496	7,054,000	7,179,000	142,752	267,752	4.005	4.076
6/30/87-88	206,319	13,104,804	14,522,699	13,928,531	14,280,985	14,523,000	1,176,180	1,418,196	6.922	7.039
6/30/88-89	222,806	14,006,331	15,595,846	14,997,178	15,356,733	15,596,000	1,350,402	1,589,669	6.892	7.000
6/30/89-90	223,751	13,298,877	14,898,801	14,347,220	14,317,000	14,888,000	1,018,123	1,589,123	6.399	6.654
6/30/90-91	210,162	9,486,260	10,625,119	10,315,802	9,785,000	9,941,000	298,740	454,740	4.656	4.730
6/30/91-92	205,241	5,518,908	5,997,331	5,993,621	5,672,000	5,770,000	153,092	251,092	2.764	2.811
6/30/92-93	176,705	4,549,833	4,985,334	4,979,452	4,979,000	4,986,000	429,167	436,167	2.818	2.822
6/30/93-94	173,075	3,009,247	3,356,263	3,352,701	3,353,000	3,356,000	343,753	346,753	1.937	1.939
6/30/94-95	178,317	3,648,607	4,228,910	4,103,395	4,103,000	4,229,000	454,393	580,393	2.301	2.372
6/30/95-96	175,996	2,720,382	3,031,258	3,031,321	2,807,000	2,846,000	86,618	125,618	1.595	1.617
6/30/96-97	190,083	2,094,352	2,335,145	2,343,449	2,335,000	2,343,000	240,648	248,648	1.228	1.233
6/30/97-98	177,278	3,418,162	3,875,360	3,868,196	3,867,000	3,876,000	448,838	457,838	2.181	2.186
6/30/98-99	189,080	2,311,900	2,640,612	2,648,954	2,641,000	2,649,000	329,100	337,100	1.397	1.401
6/30/99-00	194,494	2,908,940	3,347,646	3,351,613	3,347,000	3,352,000	438,060	443,060	1.721	1.723
6/30/00-01	201,568	4,005,912	4,694,082	4,680,875	4,598,600	4,694,000	592,688	688,088	2.281	2.329
6/30/01-02	203,105	3,220,562	3,878,108	3,875,043	3,874,000	3,880,000	653,438	659,438	1.907	1.910
6/30/02-03	202,515	2,575,320	3,126,213	3,141,411	3,126,000	3,141,000	550,680	565,680	1.544	1.551
6/30/03-04	189,588	4,465,790	5,579,598	5,543,088	5,543,000	5,579,000	1,077,210	1,113,210	2.924	2.943
6/30/04-05	186,990	3,584,877	4,575,767	4,420,296	4,420,000	4,575,000	835,123	990,123	2.364	2.447
6/30/05-06	193,254	2,624,120	3,455,108	3,598,990	3,448,000	3,606,000	823,880	981,880	1.784	1.866
6/30/06-07	203,359	2,646,961	3,714,075	3,787,620	3,715,000	3,788,000	1,068,040	1,141,040	1.827	1.863
6/30/07-08	212,083	2,157,001	3,127,376	3,480,035	3,127,000	3,480,000	969,999	1,322,999	1.474	1.641
6/30/08-09	204,679	2,222,752	3,551,417	3,811,084	3,551,000	3,811,000	1,328,248	1,588,248	1.735	1.862
6/30/09-10	184,688	1,396,606	2,518,901	2,998,653	2,718,000	2,998,000	1,321,394	1,601,394	1.472	1.623
6/30/10-11	169,689	1,716,835	3,870,721	3,755,459	3,756,000	4,009,000	2,039,165	2,292,165	2.213	2.363
6/30/11-12	177,399	831,319	3,737,359	3,863,408	3,737,000	4,009,000	2,905,681	3,177,681	2.107	2.260
Total	5,324,220	153,201,570	158,671,042	151,406,408	178,685,397	184,394,220	25,483,827	31,192,650		
Tot 6/30/84-12	5,324,220	127,857,599	152,865,612	151,406,408	149,354,318	153,364,000	21,496,719	25,506,401	2.805	2.880

NOTES:

(2) Provided by Commonwealth of Massachusetts

(3) - (9) = Sum of Section 3, Exhibit 1, Page 1 + Section 3, Exhibit 2, Page 1

(10) = (6) / (2) / 10

(11) = (7) / (2) / 10



Department of Corrections - Cluster 3 Total Indemnity (Including Lump Sums) + Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		4,290,520			5,663,083	7,212,566	1,372,563	2,922,046		
6/30/82-83		2,912,565	3,252,354		3,170,521	3,255,901	257,956	343,336		
6/30/83-84		2,135,674	2,203,978		2,143,623	2,218,623	7,949	82,949		
6/30/84-85	115,258	4,268,609	5,551,714	4,380,850	4,737,181	4,969,000	468,571	700,391	4.110	4.311
6/30/85-86	123,937	6,947,276	9,738,315	7,166,567	8,056,185	8,455,000	1,108,909	1,507,724	6.500	6.822
6/30/86-87	142,396	4,532,911	4,719,377	4,728,320	4,720,000	4,728,000	187,089	195,089	3.315	3.320
6/30/87-88	166,792	7,243,616	7,843,403	7,587,428	7,584,000	7,847,000	340,384	603,384	4.547	4.705
6/30/88-89	180,117	8,328,858	9,447,500	8,715,882	8,715,000	9,447,000	386,142	1,118,142	4.839	5.245
6/30/89-90	180,883	10,949,384	11,587,585	11,580,433	11,580,000	11,587,000	630,616	637,616	6.402	6.406
6/30/90-91	169,902	11,850,879	16,410,688	12,987,811	12,988,000	16,411,000	1,137,121	4,560,121	7.644	9.659
6/30/91-92	165,926	6,003,883	6,517,981	6,518,709	6,517,000	6,520,000	513,117	516,117	3.928	3.929
6/30/92-93	174,198	4,479,265	4,900,117	4,905,194	4,899,000	4,906,000	419,735	426,735	2.812	2.816
6/30/93-94	185,946	6,326,608	7,013,236	7,014,071	7,012,000	7,016,000	685,392	689,392	3.771	3.773
6/30/94-95	194,051	7,472,050	8,419,268	8,412,830	8,413,000	8,419,000	940,950	946,950	4.335	4.339
6/30/95-96	205,262	6,528,672	7,407,160	7,408,453	7,405,000	7,410,000	876,328	881,328	3.608	3.610
6/30/96-97	234,073	7,745,712	8,855,393	8,857,035	8,853,000	8,860,000	1,107,288	1,114,288	3.782	3.785
6/30/97-98	221,865	9,816,106	11,465,496	11,427,747	11,427,000	11,465,000	1,610,894	1,648,894	5.150	5.168
6/30/98-99	256,071	9,332,079	11,113,980	11,088,654	11,089,000	11,114,000	1,756,921	1,781,921	4.330	4.340
6/30/99-00	268,486	10,146,176	12,261,830	12,223,482	12,223,000	12,262,000	2,076,824	2,115,824	4.553	4.567
6/30/00-01	279,182	13,383,124	16,416,744	16,314,556	15,707,892	16,417,000	2,324,768	3,033,876	5.626	5.880
6/30/01-02	283,070	10,725,098	13,356,158	13,313,008	13,313,000	13,356,000	2,587,902	2,630,902	4.703	4.718
6/30/02-03	289,846	10,855,528	13,736,054	13,692,064	13,023,450	13,736,000	2,167,922	2,880,472	4.493	4.739
6/30/03-04	293,771	9,864,841	12,749,677	12,729,834	12,101,043	12,750,000	2,236,203	2,885,159	4.119	4.340
6/30/04-05	291,382	10,678,073	14,146,822	13,588,720	13,589,000	14,147,000	2,910,927	3,468,927	4.664	4.855
6/30/05-06	294,709	7,825,917	10,688,475	11,053,112	10,611,000	11,131,000	2,785,083	3,305,083	3.600	3.777
6/30/06-07	289,603	6,122,321	8,742,884	9,693,339	9,165,000	9,694,000	3,042,679	3,571,679	3.165	3.347
6/30/07-08	354,668	5,807,518	8,746,101	10,714,678	9,582,000	10,714,000	3,774,482	4,906,482	2.702	3.021
6/30/08-09	332,413	4,740,542	7,794,788	10,135,948	8,708,000	10,517,000	3,967,458	5,776,458	2.620	3.164
6/30/09-10	336,338	2,831,389	5,452,385	9,581,948	7,213,000	9,949,000	4,381,611	7,117,611	2.145	2.958
6/30/10-11	333,783	3,086,264	8,045,233	11,745,722	9,498,000	12,332,500	6,411,736	9,246,236	2.846	3.695
6/30/11-12	348,187	921,493	5,491,279	13,116,628	8,801,000	13,772,550	7,879,507	12,851,057	2.528	3.956
Total	6,712,116	218,152,954	274,075,972	280,683,021	278,507,978	302,619,140	60,355,024	84,466,186		
Tot 6/30/84-12	6,712,116	208,814,195	268,619,640	280,683,021	267,530,751	289,932,050	58,716,556	81,117,855	3.986	4.320

NOTES:

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3) - (9) =} Sum of Section 4, Exhibit 1, Page 1 + Section 4, Exhibit 2, Page 1

^{(10) = (6) / (2) / 10}

^{(11) = (7) / (2) / 10}



University of Massachusetts (Amherst) - Cluster 4 Total Indemnity (Including Lump Sums) + Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		2,207,273			2,600,897	2,724,843	393,624	517,570		
6/30/82-83		225,530	228,499		229,124	232,625	3,594	7,095		
6/30/83-84		220,938	224,032		224,907	230,145	3,969	9,207		
6/30/84-85	176,924	1,856,966	2,242,411	1,884,998	1,884,805	2,243,546	27,839	386,580	1.065	1.268
6/30/85-86	188,662	1,676,445	2,277,774	1,697,661	1,697,741	1,988,208	21,296	311,763	0.900	1.054
6/30/86-87	212,277	2,482,506	3,346,421	2,515,202	2,515,000	3,347,000	32,494	864,494	1.185	1.577
6/30/87-88	243,118	2,277,944	2,315,421	2,314,441	2,315,000	2,316,000	37,056	38,056	0.952	0.953
6/30/88-89	248,990	2,098,825	2,142,132	2,143,021	2,142,000	2,143,000	43,175	44,175	0.860	0.861
6/30/89-90	250,404	679,355	697,064	704,674	696,890	705,463	17,535	26,108	0.278	0.282
6/30/90-91	235,170	2,750,093	2,881,447	2,880,444	2,881,000	2,882,000	130,907	131,907	1.225	1.225
6/30/91-92	235,607	2,922,997	3,347,986	3,132,086	3,132,000	3,348,000	209,003	425,003	1.329	1.421
6/30/92-93	241,161	712,440	751,164	751,318	719,696	740,317	7,256	27,877	0.298	0.307
6/30/93-94	254,321	1,195,789	1,419,787	1,301,582	1,218,000	1,246,000	22,211	50,211	0.479	0.490
6/30/94-95	256,665	1,067,175	1,176,775	1,174,596	1,078,423	1,111,476	11,248	44,301	0.420	0.433
6/30/95-96	265,739	835,707	933,684	932,546	844,425	870,865	8,718	35,158	0.318	0.328
6/30/96-97	296,336	700,495	809,588	808,962	707,847	730,726	7,352	30,232	0.239	0.247
6/30/97-98	296,982	651,817	739,209	741,283	666,000	685,000	14,183	33,183	0.224	0.231
6/30/98-99	299,530	879,447	1,023,543	1,022,216	1,022,000	1,024,000	142,553	144,553	0.341	0.342
6/30/99-00	323,627	1,572,444	1,919,591	1,900,774	1,901,000	1,919,000	328,556	346,556	0.587	0.593
6/30/00-01	338,348	1,658,822	2,051,889	2,030,682	2,031,000	2,052,000	372,178	393,178	0.600	0.606
6/30/01-02	329,555	1,179,755	1,422,868	1,417,704	1,418,000	1,423,000	238,245	243,245	0.430	0.432
6/30/02-03	329,179	1,010,210	1,255,836	1,252,044	1,252,000	1,256,000	241,790	245,790	0.380	0.382
6/30/03-04	344,547	414,340	520,502	532,515	520,000	533,000	105,660	118,660	0.151	0.155
6/30/04-05	325,530	912,330	1,177,999	1,170,181	1,169,000	1,180,000	256,670	267,670	0.359	0.362
6/30/05-06	403,750	640,143	847,293	980,130	847,000	980,000	206,857	339,857	0.210	0.243
6/30/06-07	420,219	646,248	896,299	1,047,927	896,000	1,048,000	249,752	401,752	0.213	0.249
6/30/07-08	425,998	749,181	1,080,875	1,205,427	1,077,000	1,209,000	327,819	459,819	0.253	0.284
6/30/08-09	420,566	1,150,260	1,955,691	1,859,760	1,859,000	1,955,000	708,740	804,740	0.442	0.465
6/30/09-10	433,206	630,280	1,503,028	1,693,173	1,503,000	1,694,000	872,720	1,063,720	0.347	0.391
6/30/10-11	444,673	663,244	1,743,286	1,667,987	1,668,000	1,743,000	1,004,756	1,079,756	0.375	0.392
6/30/11-12	467,753	354,598	2,044,560	1,835,386	1,835,000	2,044,000	1,480,402	1,689,402	0.392	0.437
Total	8,708,837	37,023,597	44,976,653	42,598,721	44,551,754	47,605,214	7,528,157	10,581,616		

NOTES:

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3) - (9) =} Sum of Section 5, Exhibit 1, Page 1 + Section 5, Exhibit 2, Page 1

^{(10) = (6) / (2) / 10}

^{(11) = (7) / (2) / 10}



University of Massachusetts (Medical Center) - Cluster 4 Total Indemnity (Including Lump Sums) + Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		1,455,812			1,455,812	1,455,812	0	0		
6/30/82-83		327,566	329,074		327,672	335,649	106	8,083		
6/30/83-84		1,494,800	1,501,405		1,523,932	1,553,573	29,132	58,773		
6/30/84-85	116,303	1,015,470	1,020,505	1,022,379	1,033,339	1,052,834	17,869	37,364	0.888	0.905
6/30/85-86	123,981	2,733,296	2,746,853	2,749,960	2,747,432	2,752,662	14,136	19,367	2.216	2.220
6/30/86-87	139,388	3,694,816	4,313,116	3,712,636	3,712,000	4,012,705	17,184	317,889	2.663	2.879
6/30/87-88	159,499	3,315,292	3,593,878	3,330,175	3,330,000	3,462,547	14,708	147,255	2.088	2.171
6/30/88-89	180,644	3,112,432	3,137,418	3,146,676	3,167,349	3,268,054	54,917	155,622	1.753	1.809
6/30/89-90	142,494	3,797,545	3,848,813	3,867,916	3,865,186	3,987,422	67,641	189,877	2.713	2.798
6/30/90-91	143,694	1,403,520	1,427,626	1,427,451	1,427,065	1,473,696	23,545	70,176	0.993	1.026
6/30/91-92	155,170	2,187,492	2,232,781	2,232,057	2,221,204	2,296,867	33,712	109,375	1.431	1.480
6/30/92-93	163,283	1,033,363	1,058,803	1,058,360	1,048,102	1,085,031	14,739	51,668	0.642	0.665
6/30/93-94	177,184	2,489,918	2,573,386	2,570,619	2,570,000	2,573,000	80,082	83,082	1.450	1.452
6/30/94-95	188,391	937,761	958,751	958,567	958,000	958,000	20,239	20,239	0.509	0.509
6/30/95-96	201,751	874,675	895,099	895,059	886,424	913,492	11,749	38,817	0.439	0.453
6/30/96-97	231,872	618,302	628,177	629,188	628,838	647,186	10,535	28,883	0.271	0.279
6/30/97-98	232,237	1,004,193	1,042,907	1,041,959	1,019,642	1,054,756	15,448	50,563	0.439	0.454
6/30/98-99	232,075	937,877	965,935	966,137	966,000	967,000	28,123	29,123	0.416	0.417
6/30/99-00	211,819	872,750	917,936	916,445	916,000	918,000	43,250	45,250	0.432	0.433
6/30/00-01	215,099	940,632	987,720	986,809	987,000	988,000	46,368	47,368	0.459	0.459
6/30/01-02	227,797	543,177	574,795	575,848	574,000	575,000	30,823	31,823	0.252	0.252
6/30/02-03	242,008	1,019,063	1,103,448	1,100,137	1,099,000	1,104,000	79,937	84,937	0.454	0.456
6/30/03-04	276,758	1,259,226	1,369,746	1,367,010	1,367,000	1,385,850	107,774	126,624	0.494	0.501
6/30/04-05	260,378	357,969	402,052	457,202	403,000	466,850	45,031	108,881	0.155	0.179
6/30/05-06	317,741	1,097,498	1,253,220	1,249,811	1,250,000	1,271,100	152,502	173,602	0.393	0.400
6/30/06-07	325,922	605,124	708,251	775,225	708,000	790,350	102,876	185,226	0.217	0.242
6/30/07-08	354,130	1,783,468	2,187,734	2,084,027	2,084,000	2,217,850	300,532	434,382	0.588	0.626
6/30/08-09	362,309	769,974	1,031,993	1,103,364	1,032,000	1,121,350	262,026	351,376	0.285	0.310
6/30/09-10	383,298	761,973	1,190,700	1,273,271	1,191,000	1,291,300	429,027	529,327	0.311	0.337
6/30/10-11	394,924	718,633	1,520,785	1,520,761	1,514,000	1,551,600	795,367	832,967	0.383	0.393
6/30/11-12	381,943	308,565	1,412,731	1,493,464	1,413,000	1,516,450	1,104,435	1,207,885	0.370	0.397
Total	6,542,094	43,472,183	46,935,636	44,512,511	47,425,996	49,047,985	3,953,813	5,575,802		
Tot 6/30/84-12	6,542,094	40,194,005	45,105,157	44,512,511	44,118,580	45,702,951	3,924,576	5,508,947	0.674	0.699

NOTES:

(2) Provided by Commonwealth of Massachusetts

(3) - (9) = Sum of Section 6, Exhibit 1, Page 1 + Section 6, Exhibit 2, Page 1

(10) = (6) / (2) / 10

(11) = (7) / (2) / 10



Massachusetts Colleges & Universities - Cluster 4 Total Indemnity (Including Lump Sums) + Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		3,304,559			3,934,062	4,271,741	629,503	967,182		
6/30/82-83		796,317	798,495		811,448	826,578	15,131	30,261		
6/30/83-84		945,504	947,917		963,997	982,491	18,493	36,987		
6/30/84-85	357,749	1,604,929	1,609,203	1,611,363	1,635,334	1,665,739	30,405	60,810	0.457	0.466
6/30/85-86	380,112	2,253,254	2,259,801	2,262,019	2,260,269	2,264,190	7,015	10,936	0.595	0.596
6/30/86-87	423,770	2,796,307	3,048,286	2,805,135	2,805,246	3,049,437	8,940	253,130	0.662	0.720
6/30/87-88	480,405	4,726,075	5,500,056	4,740,400	4,810,472	4,934,162	84,397	208,088	1.001	1.027
6/30/88-89	495,261	1,941,183	1,947,737	1,951,238	1,973,514	2,018,971	32,331	77,788	0.398	0.408
6/30/89-90	502,691	4,008,247	4,025,192	4,025,911	4,079,203	4,184,209	70,956	175,962	0.811	0.832
6/30/90-91	482,143	1,866,079	1,875,084	1,875,051	1,875,000	1,875,000	8,921	8,921	0.389	0.389
6/30/91-92	492,539	2,150,562	2,621,549	2,167,216	2,230,809	2,394,899	80,247	244,337	0.453	0.486
6/30/92-93	524,541	1,653,844	1,672,478	1,672,288	1,679,326	1,716,282	25,482	62,438	0.320	0.327
6/30/93-94	584,853	1,634,641	2,034,539	1,670,779	1,671,000	2,035,000	36,359	400,359	0.286	0.348
6/30/94-95	587,701	2,051,520	2,096,769	2,096,045	2,096,000	2,097,000	44,480	45,480	0.357	0.357
6/30/95-96	614,868	1,850,889	1,908,473	1,907,937	1,879,180	1,920,160	28,290	69,271	0.306	0.312
6/30/96-97	700,686	1,771,425	1,849,780	1,849,654	1,849,000	1,850,000	77,575	78,575	0.264	0.264
6/30/97-98	684,415	2,334,210	2,501,901	2,496,641	2,497,000	2,502,000	162,790	167,790	0.365	0.366
6/30/98-99	707,796	1,619,506	1,774,574	1,773,518	1,773,000	1,846,000	153,494	226,494	0.250	0.261
6/30/99-00	760,477	1,665,822	1,832,814	1,835,522	1,832,000	1,836,000	166,178	170,178	0.241	0.241
6/30/00-01	811,600	2,082,026	2,366,356	2,363,188	2,363,000	2,367,000	280,974	284,974	0.291	0.292
6/30/01-02	835,038	2,719,111	3,147,951	3,134,950	3,135,000	3,148,000	415,889	428,889	0.375	0.377
6/30/02-03	825,340	1,735,208	2,046,525	2,049,250	2,046,000	2,050,000	310,792	314,792	0.248	0.248
6/30/03-04	849,216	2,177,378	2,619,117	2,616,520	2,617,000	2,712,000	439,622	534,622	0.308	0.319
6/30/04-05	992,508	1,677,822	2,063,192	2,228,066	2,063,000	2,228,000	385,178	550,178	0.208	0.224
6/30/05-06	962,878	1,985,327	2,558,734	2,618,616	2,552,000	2,716,000	566,673	730,673	0.265	0.282
6/30/06-07	1,032,930	1,524,823	2,035,283	2,305,329	2,035,000	2,305,000	510,177	780,177	0.197	0.223
6/30/07-08	1,063,597	2,496,649	3,503,421	3,474,821	3,475,000	3,503,000	978,351	1,006,351	0.327	0.329
6/30/08-09	1,073,805	1,948,636	2,993,026	3,127,792	2,986,000	3,135,000	1,037,364	1,186,364	0.278	0.292
6/30/09-10	1,084,749	2,426,627	4,676,941	4,378,329	4,378,000	4,677,000	1,951,373	2,250,373	0.404	0.431
6/30/10-11	1,134,164	1,822,430	4,303,442	3,980,857	3,981,000	4,303,000	2,158,570	2,480,570	0.351	0.379
6/30/11-12	1,202,674	742,790	4,087,397	3,975,149	3,975,000	4,087,000	3,232,210	3,344,210	0.331	0.340
Total	20,648,505	64,313,701	76,706,034	72,993,583	78,261,860	81,500,860	13,948,159	17,187,159		
Tot 6/30/84-12	20,648,505	59,267,321	74,959,621	72,993,583	72,552,353	75,420,050	13,285,031	16,152,728	0.351	0.365

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3) - (9) =} Sum of Section 7, Exhibit 1, Page 1 + Section 7, Exhibit 2, Page 1

^{(10) = (6) / (2) / 10}

^{(11) = (7) / (2) / 10}



All Other - Clusters 5-17 & 95 Total Indemnity (Including Lump Sums) + Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		45,483,234			52,532,169	57,450,234	7,048,935	11,967,000		
6/30/82-83		5,986,672	6,424,729		6,269,885	6,730,618	283,213	743,945		
6/30/83-84		8,683,135	9,400,987		9,171,103	9,838,804	487,969	1,155,669		
6/30/84-85	732,729	17,520,104	19,249,838	18,274,217	18,274,000	19,250,000	753,896	1,729,896	2.494	2.627
6/30/85-86	787,208	21,171,883	23,094,362	22,305,497	22,285,730	23,094,000	1,113,847	1,922,117	2.831	2.934
6/30/86-87	902,483	21,176,627	23,363,744	22,587,684	22,587,000	23,365,000	1,410,373	2,188,373	2.503	2.589
6/30/87-88	1,366,586	29,916,547	32,589,306	32,552,734	32,548,000	33,328,000	2,631,453	3,411,453	2.382	2.439
6/30/88-89	1,486,478	28,038,885	30,824,147	30,473,614	30,470,000	31,507,000	2,431,115	3,468,115	2.050	2.120
6/30/89-90	1,494,463	26,914,010	30,027,319	29,982,515	29,976,000	30,686,000	3,061,990	3,771,990	2.006	2.053
6/30/90-91	1,405,560	23,785,512	26,926,207	26,903,824	26,867,870	27,509,000	3,082,358	3,723,488	1.912	1.957
6/30/91-92	1,364,510	14,910,428	17,104,071	17,078,016	17,078,000	17,815,000	2,167,572	2,904,572	1.252	1.306
6/30/92-93	1,347,359	11,600,559	14,415,992	13,586,133	13,587,000	15,007,000	1,986,441	3,406,441	1.008	1.114
6/30/93-94	1,424,410	12,902,123	15,218,056	15,168,726	15,168,000	15,825,000	2,265,877	2,922,877	1.065	1.111
6/30/94-95	1,497,829	11,468,381	13,740,792	13,692,734	13,692,000	14,297,000	2,223,619	2,828,619	0.914	0.955
6/30/95-96	1,582,635	11,365,333	14,059,883	13,993,502	13,994,000	14,649,000	2,628,667	3,283,667	0.884	0.926
6/30/96-97	1,979,748	12,240,212	15,279,233	15,225,358	15,226,000	15,906,000	2,985,788	3,665,788	0.769	0.803
6/30/97-98	1,917,994	10,583,746	13,333,831	13,315,767	13,313,000	13,891,000	2,729,254	3,307,254	0.694	0.724
6/30/98-99	2,081,524	11,100,202	14,325,742	14,307,086	14,307,000	14,900,000	3,206,798	3,799,798	0.687	0.716
6/30/99-00	2,207,243	12,692,069	16,915,669	16,849,657	16,850,000	17,600,000	4,157,931	4,907,931	0.763	0.797
6/30/00-01	2,201,008	11,887,335	16,293,772	16,250,750	16,250,000	16,947,000	4,362,665	5,059,665	0.738	0.770
6/30/01-02	2,292,592	12,486,586	17,586,512	17,550,779	17,542,000	18,323,000	5,055,414	5,836,414	0.765	0.799
6/30/02-03	2,260,534	12,416,251	17,952,816	17,912,797	17,910,000	18,675,000	5,493,749	6,258,749	0.792	0.826
6/30/03-04	2,255,942	11,461,024	16,985,326	16,998,993	16,985,000	17,661,000	5,523,976	6,199,976	0.753	0.783
6/30/04-05	2,309,083	13,723,153	20,699,410	20,247,380	19,688,000	20,699,000	5,964,847	6,975,847	0.853	0.896
6/30/05-06	2,480,693	12,453,221	19,763,680	20,357,025	19,388,000	20,357,000	6,934,779	7,903,779	0.782	0.821
6/30/06-07	2,612,577	12,409,304	20,493,432	21,595,967	19,472,000	22,027,000	7,062,696	9,617,696	0.745	0.843
6/30/07-08	2,783,717	13,944,759	25,617,443	25,545,083	23,965,000	25,709,000	10,020,241	11,764,241	0.861	0.924
6/30/08-09	2,750,907	13,148,407	27,148,401	26,635,995	25,995,000	27,455,000	12,846,593	14,306,593	0.945	0.998
6/30/09-10	2,806,048	11,893,306	29,975,302	28,540,136	27,899,000	30,463,000	16,005,694	18,569,694	0.994	1.086
6/30/10-11	2,942,638	10,201,933	34,085,427	31,436,005	30,763,000	34,450,000	20,561,067	24,248,067	1.045	1.171
6/30/11-12	3,006,849	4,669,718	37,767,242	32,785,987	31,995,000	38,222,000	27,325,282	33,552,282	1.064	1.271
Total	54,281,345	478,234,661	620,662,672	592,153,961	652,048,757	693,636,655	173,814,096	215,401,995		
Tot 6/30/84-12	54,281,345	418,081,620	604,836,956	592,153,961	584,075,600	619,617,000	165,993,980	201,535,380	1.076	1.141

NOTES:

(3) - (9) = Sum of Section 8, Exhibit 1, Page 1 + Section 8, Exhibit 2, Page 1

(11) = (7) / (2) / 10

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(10) = (6) / (2) / 10}



All Clusters Combined

Total Indemnity (Including Lump Sums) + Medical

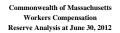
Calculation of Implied Development Factors

(1)	(2)	(3)	(4)
	Pd Loss	Implied	Selected Ult Los
Accident	Including	Cumulative	Including
Year	Lump Sum	LDF	Lump Sum
All Prior Yrs	97,712,219	1.240	121,155,818
6/30/82-83	17,770,900	1.080	19,188,748
6/30/83-84	25,658,736	1.112	28,536,768
6/30/84-85	38,317,600	1.067	40,903,628
6/30/85-86	51,548,281	1.071	55,214,208
6/30/86-87	56,971,275	1.058	60,279,492
6/30/87-88	82,111,884	1.080	88,660,083
6/30/88-89	81,174,218	1.083	87,871,310
6/30/89-90	78,295,168	1.075	84,203,667
6/30/90-91	64,896,289	1.109	71,947,315
6/30/91-92	43,544,958	1.104	48,060,389
6/30/92-93	29,971,712	1.125	33,732,877
6/30/93-94	32,319,402	1.127	36,410,000
6/30/94-95	29,654,537	1.146	33,973,450
6/30/95-96	28,157,568	1.156	32,543,273
6/30/96-97	28,520,097	1.179	33,621,798
6/30/97-98	31,117,920	1.183	36,799,699
6/30/98-99	29,082,684	1.217	35,383,500
6/30/99-00	32,884,259	1.243	40,890,000
6/30/00-01	38,334,179	1.244	47,682,746
6/30/01-02	33,924,619	1.291	43,791,500
6/30/02-03	33,353,202	1.307	43,595,725
6/30/03-04	33,417,015	1.328	44,374,947
6/30/04-05	34,562,523	1.349	46,630,925
6/30/05-06	30,138,853	1.444	43,527,550
6/30/06-07	27,454,257	1.542	42,338,675
6/30/07-08	29,132,319	1.663	48,445,425
6/30/08-09	26,788,024	1.881	50,395,675
6/30/09-10	23,120,370	2.313	53,482,150
6/30/10-11	20,336,831	2.941	59,813,550
6/30/11-12	9,029,730	7.009	63,293,000
Total	1,219,301,627		1,576,747,891

⁽²⁾ From Summary Exhibit 8, Page 1, Column (3)

^{(3) = (4) / (2)}

⁽⁴⁾ From Summary Exhibit 8, Page 1, Av erage of Columns (6) and (7)





Massachusetts Colleges & Universities - Cluster 4

Allocation Methodology

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	5 Year							5 Year	Credibility	Distribution	CUR	RENT	PR	IOR
	Average	Initial Lo	ss Costs	1	Expected Losse	S		Average	Weighted	of Total	Reserve	Estimate	Reserve	Estimate
Cluster	Payroll	Indemnity	Medical	Indemnity	Medical	Total	Credibility	Ult Loss	Ult Loss	Losses	Low End	High End	Low End	High End
Berkshire Community College	12,760,978	0.20	0.10	25,522	12,761	38,283	20.3%	37,877	38,200	1.1%	156,000	192,226	133,581	174,282
Bridgewater State College	71,166,231	0.20	0.10	142,332	71,166	213,499	78.1%	290,291	273,445	8.0%	1,116,675	1,375,986	992,319	1,294,673
Bristol Community College	32,084,258	0.20	0.10	64,169	32,084	96,253	39.1%	63,667	83,516	2.4%	341,057	420,256	282,507	368,586
Bunker Hill Community College	37,038,920	0.20	0.10	74,078	37,039	111,117	64.9%	118,007	115,591	3.4%	472,043	581,660	439,941	573,989
Cape Cod Community College	17,455,035	0.20	0.10	34,910	17,455	52,365	25.9%	41,386	49,524	1.4%	202,244	249,208	242,400	316,258
Fitchburg State College	34,185,459	0.20	0.10	68,371	34,185	102,556	63.1%	203,357	166,151	4.9%	678,517	836,080	752,198	981,389
Framingham State College	34,036,270	0.20	0.10	68,073	34,036	102,109	40.5%	184,656	135,542	4.0%	553,518	682,054	555,960	725,358
Greenfield Community College	13,791,528	0.20	0.10	27,583	13,792	41,375	40.8%	6,758	27,246	0.8%	111,266	137,104	114,943	149,965
Holyoke Community College	30,429,053	0.20	0.10	60,858	30,429	91,287	37.8%	48,453	75,081	2.2%	306,613	377,813	280,012	365,330
Mass Bay Community College	20,886,145	0.20	0.10	41,772	20,886	62,658	29.5%	19,460	49,930	1.5%	203,902	251,252	206,607	269,559
Mass College of Art	25,939,100	0.20	0.10	51,878	25,939	77,817	56.5%	97,027	88,664	2.6%	362,079	446,160	299,128	390,271
Mass Maritime Academy	17,211,359	0.20	0.10	34,423	17,211	51,634	25.6%	162,185	79,944	2.3%	326,469	402,281	297,492	388,136
Massachusetts College of Liberal Arts	18,916,704	0.20	0.10	37,833	18,917	56,750	27.4%	66,296	59,370	1.7%	242,453	298,754	250,744	327,144
Massasoit Community College	30,227,466	0.20	0.10	60,455	30,227	90,682	60.2%	201,380	157,301	4.6%	642,376	791,547	573,621	748,401
Middlesex Community College	41,823,682	0.20	0.10	83,647	41,824	125,471	67.6%	37,765	66,138	1.9%	270,090	332,810	214,873	280,343
Mt Wachusett Community College	23,677,030	0.20	0.10	47,354	23,677	71,031	32.1%	77,681	73,168	2.1%	298,799	368,185	270,318	352,683
North Essex Community College	27,425,995	0.20	0.10	54,852	27,426	82,278	57.8%	23,836	48,482	1.4%	197,986	243,962	205,522	268,143
North Shore Community College	31,717,586	0.20	0.10	63,435	31,718	95,153	38.8%	47,116	76,508	2.2%	312,438	384,991	323,518	422,092
Quinsigamond Community College	32,586,030	0.20	0.10	65,172	32,586	97,758	39.5%	143,096	115,647	3.4%	472,273	581,943	412,683	538,426
Roxbury Community College	15,166,288	0.20	0.10	30,333	15,166	45,499	23.3%	77,343	52,910	1.5%	216,071	266,246	219,624	286,543
Salem State College	67,968,327	0.20	0.10	135,937	67,968	203,905	77.3%	193,541	195,897	5.7%	799,992	985,763	1,004,030	1,309,953
Springfield Tech Community College	30,148,113	0.20	0.10	60,296	30,148	90,444	60.1%	324,675	231,260	6.8%	944,403	1,163,710	834,315	1,088,527
UMass (Boston)	145,341,733	0.20	0.10	290,683	145,342	436,025	87.9%	235,356	259,630	7.6%	1,060,258	1,306,468	999,389	1,303,897
UMass (Dartmouth)	95,282,359	0.20	0.10	190,565	95,282	285,847	82.7%	309,690	305,554	8.9%	1,247,800	1,537,560	1,053,396	1,374,360
University of Lowell	127,956,403	0.20	0.10	255,913	127,956	383,869	86.5%	264,077	280,270	8.2%	1,144,549	1,410,333	1,049,719	1,369,563
Westfield State College	41,221,589	0.20	0.10	82,443	41,222	123,665	67.3%	246,333	206,259	6.0%	842,308	1,037,907	797,241	1,040,156
Worcester State College	35,354,380	0.20	0.10	70,709	35,354	106,063	63.9%	103,321	104,312	3.1%	425,981	524,901	407,665	531,878
Total	1,111,798,021	·		2,223,596	1,111,798			3,624,631	3,415,540	·	13,948,159	17,187,159	13,213,745	17,239,905

- (1) Provided by Commonwealth of Massachusetts; From Summary Exhibit 10, Page 3 $\,$
- (2) From Section 7, Exhibit 1, Page 4(3) From Section 7, Exhibit 2, Page 4
- (4) = (1) * (2) / 100 (5) = (1) * (3) / 100
- (6) = (4) + (5)
- (7) = P / (P + K); where P = Column (1) and K = 20M (if CV < 1) and K = 50M (if CV > 1). CV is the Coefficient of Variation, as calculated on Summary Exhibit 10, Page 2.
- (8) = The Average of Columns (2) (6) plus The Average of Columns (8) (12) on Summary Exhibit 10 Page 4. (9) = (7) * (8) + [1.00 (7)] * (6) (10) = (9) / Total (9)

- (11) = The Total from Summary Exhibit 8, Page7, Column (8), allocated according to Column (10) of this exhibit.
- (12) = The Total from Summary Exhibit 8, Page7, Column (9), allocated according to Column (10) of this exhibit.
- (13) & (14) From Aon analysis as of June 30, 2011



Massachusetts Colleges & Universities - Cluster 4

Estimated Loss Costs (Indemnity and Medical Combined)

	(1)	(2)	(3)	(4)	(5)	(6)
						Coefficient
						of
Cluster	2012	2011	2010	2009	2008	Variation
Berkshire Community College	0.078	0.815	0.158	0.038	0.388	1.084
Bridgewater State College	0.522	0.457	0.407	0.132	0.506	0.393
Bristol Community College	0.073	0.152	0.578	0.189	0.008	1.113
Bunker Hill Community College	0.397	0.563	0.433	0.053	0.107	0.709
Cape Cod Community College	0.281	0.635	0.086	0.008	0.195	1.010
Fitchburg State College	0.323	0.759	0.736	0.525	0.647	0.299
Framingham State College	0.372	0.312	0.509	0.009	1.527	1.059
Greenfield Community College	0.040	0.018	0.039	0.116	0.032	0.792
Holyoke Community College	0.016	0.476	0.216	0.069	0.017	1.229
Mass Bay Community College	0.057	0.034	0.081	0.008	0.300	1.220
Mass College of Art	0.530	0.657	0.109	0.477	0.054	0.734
Mass Maritime Academy	0.345	0.190	1.722	2.564	0.043	1.146
Massachusetts College of Liberal Arts	0.041	0.006	0.890	0.800	0.034	1.268
Massasoit Community College	0.663	0.482	1.016	0.476	0.718	0.329
Middlesex Community College	0.233	0.102	0.015	0.073	0.037	0.933
Mt Wachusett Community College	0.119	0.755	0.656	0.088	0.012	1.075
North Essex Community College	0.073	0.035	0.128	0.062	0.140	0.510
North Shore Community College	0.220	0.011	0.476	0.019	0.012	1.385
Quinsigamond Community College	0.576	0.097	0.058	0.063	1.484	1.350
Roxbury Community College	0.000	0.022	1.462	0.004	1.111	1.368
Salem State College	0.224	0.756	0.090	0.209	0.125	0.967
Springfield Tech Community College	0.582	0.878	1.242	1.683	1.011	0.383
UMass (Boston)	0.234	0.209	0.156	0.150	0.038	0.482
UMass (Dartmouth)	0.581	0.252	0.357	0.127	0.279	0.527
University of Lowell	0.183	0.202	0.262	0.246	0.144	0.232
Westfield State College	0.577	0.334	0.793	0.360	0.964	0.451
Worcester State College	0.131	0.192	0.359	0.441	0.364	0.437

^{(1) - (5) -} Sum of Indemnity + Medical Losses from Summary Exhibit 10, Page 4 divided by Payroll from Summary Exhibit 10, Page 3.

^{(6) =} Std Deviation / Mean of Columns (1) - (5) Used to calculate "ballast factor" (K) on Summary Exhibit 10, Page 1, Column (7).



Massachusetts Colleges & Universities - Cluster 4

Payroll

Cluster	2012	2011	2010	2009	2008	2007	2006	2005
Berkshire Community College	12,961,874	12,765,728	12,608,194	12,477,038	12,992,058	11,898,851	11,571,324	10,685,054
Bridgewater State College	76,987,472	73,247,587	69,620,026	68,323,197	67,652,873	64,261,538	61,047,713	56,048,979
Bristol Community College	35,468,250	33,155,586	31,455,847	30,708,796	29,632,813	28,018,495	27,162,772	26,258,267
Bunker Hill Community College	41,205,115	38,164,922	35,956,105	34,871,020	34,997,441	33,161,774	31,541,772	29,120,838
Cape Cod Community College	17,381,338	17,148,486	17,159,865	18,672,490	16,912,998	15,950,229	15,226,570	14,770,711
Fitchburg State College	35,976,187	34,204,248	33,842,950	33,451,439	33,452,473	32,301,042	31,062,131	29,328,148
Framingham State College	37,321,481	33,532,654	32,772,606	33,174,219	33,380,388	30,833,277	29,662,046	27,998,424
Greenfield Community College	14,351,088	13,421,721	13,089,560	13,957,686	14,137,583	13,176,176	12,124,207	12,506,074
Holyoke Community College	31,361,111	30,596,223	30,303,801	30,190,866	29,693,264	27,429,195	26,202,662	24,123,482
Mass Bay Community College	22,339,575	21,205,789	20,707,657	20,503,198	19,674,504	19,109,225	17,901,584	17,257,398
Mass College of Art	28,328,979	26,762,645	25,447,450	24,847,648	24,308,780	22,974,607	21,431,467	19,601,643
Mass Maritime Academy	18,578,003	17,378,246	16,347,571	16,574,691	17,178,285	15,082,818	14,253,305	14,025,416
Massachusetts College of Liberal Arts	20,035,251	18,732,309	18,675,839	18,685,437	18,454,686	18,630,165	17,120,021	15,805,473
Massasoit Community College	31,525,419	30,340,130	28,826,366	31,145,834	29,299,579	27,145,154	26,147,478	25,079,665
Middlesex Community College	40,195,957	39,162,007	38,762,758	44,276,269	46,721,418	40,306,485	39,854,733	39,229,106
Mt Wachusett Community College	25,995,624	24,563,097	22,854,199	22,358,426	22,613,805	21,506,104	20,291,041	19,252,044
North Essex Community College	28,927,197	27,447,993	26,978,801	27,092,760	26,683,224	25,763,800	24,367,949	23,275,783
North Shore Community College	33,319,965	32,328,218	31,394,592	31,025,948	30,519,208	29,162,993	27,735,649	26,225,595
Quinsigamond Community College	36,409,993	34,059,973	32,268,537	30,912,984	29,278,660	27,416,465	26,247,469	24,838,269
Roxbury Community College	15,935,833	15,402,953	15,082,812	14,798,159	14,611,682	13,898,017	13,523,360	13,022,388
Salem State College	72,888,033	69,431,901	65,990,811	66,268,106	65,262,785	61,444,512	58,062,968	52,736,558
Springfield Tech Community College	30,853,455	29,918,442	29,428,123	30,327,286	30,213,259	28,750,170	28,506,180	27,834,525
UMass (Boston)	163,491,368	152,917,036	142,970,614	134,516,405	132,813,241	128,623,720	122,484,538	106,714,813
UMass (Dartmouth)	102,971,786	98,435,825	92,935,564	90,902,061	91,166,561	88,363,987	83,231,754	68,337,324
University of Lowell	144,359,303	131,389,765	122,995,978	119,667,601	121,369,367	119,277,790	111,802,758	94,257,544
Westfield State College	45,096,498	42,505,518	41,760,360	39,918,536	36,827,031	35,142,912	33,641,879	31,400,791
Worcester State College	38,408,159	35,944,721	34,512,511	34,156,985	33,749,525	31,849,376	30,672,750	28,556,062
UMass (Amherst)	467,753,393	444,672,991	433,205,775	420,565,863	425,998,100	420,218,656	403,750,092	325,529,837
UMass (Medical Center)	381,942,827	394,924,203	383,297,750	362,308,924	354,130,286	325,921,625	317,740,675	260,378,409
Total	2,052,370,532	1,973,760,916	1,901,253,022	1,856,679,871	1,843,725,875	1,757,619,156	1,684,368,848	1,464,198,619



$Mass a chusetts \ Colleges \ \& \ Universities - \ Cluster \ 4$

Estimated Ultimate Losses

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			Indemnity					Medical		
Cluster	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Berkshire Community College	18,528	114	15,536	71,888	0	31,857	4,666	4,429	32,192	10,174
Bridgewater State College	282,388	50,637	163,842	271,344	303,305	59,688	39,289	119,342	63,433	98,187
Bristol Community College	0	35,694	158,223	82	1,144	2,512	22,210	23,470	50,231	24,767
Bunker Hill Community College	16,932	8,446	122,260	144,683	111,475	20,507	10,155	33,436	70,140	52,001
Cape Cod Community College	6,314	0	-4,496	84,861	16,189	26,751	1,414	19,288	23,959	32,652
Fitchburg State College	191,542	104,544	176,648	213,054	64,677	24,871	71,085	72,442	46,421	51,499
Framingham State College	318,831	0	98,864	75,718	78,197	190,866	3,098	68,087	28,940	60,679
Greenfield Community College	482	5,583	0	0	0	3,975	10,601	5,097	2,362	5,690
Holyoke Community College	0	5,474	29,828	99,817	4,513	5,167	15,397	35,758	45,928	382
Mass Bay Community College	39,225	0	10,196	0	8,015	19,727	1,683	6,557	7,124	4,772
Mass College of Art	3,206	80,600	15,609	156,399	87,199	9,813	37,830	12,130	19,493	62,854
Mass Maritime Academy	3,552	267,125	256,916	22,427	38,088	3,824	157,912	24,590	10,567	25,925
Massachusetts College of Liberal Arts	0	123,981	137,506	0	0	6,292	25,561	28,777	1,056	8,306
Massasoit Community College	124,525	107,893	244,385	78,563	160,307	85,910	40,298	48,503	67,777	48,736
Middlesex Community College	1,599	16,606	0	31,327	51,341	15,883	15,535	5,655	8,471	42,409
Mt Wachusett Community College	0	5,409	111,257	160,509	2,709	2,709	14,157	38,555	24,884	28,215
North Essex Community College	17,229	6,070	17,705	3,263	9,307	20,015	10,635	16,739	6,381	11,836
North Shore Community College	0	0	93,642	0	14,868	3,521	5,810	55,774	3,533	58,432
Quinsigamond Community College	378,747	7,480	11,528	19,862	161,802	55,745	11,848	7,321	13,126	48,025
Roxbury Community College	136,346	0	207,302	10	0	25,963	557	13,199	3,340	0
Salem State College	35,517	55,227	25,530	233,967	111,068	46,149	83,211	33,619	291,117	52,298
Springfield Tech Community College	177,578	377,669	308,385	209,024	105,687	127,868	132,855	57,045	53,537	73,731
UMass (Boston)	28,611	144,980	161,133	215,795	321,905	21,386	56,463	61,499	104,341	60,669
UMass (Dartmouth)	210,344	55,337	241,647	143,382	431,489	44,338	59,904	90,428	104,624	166,957
University of Lowell	121,084	210,252	182,521	202,171	164,729	53,273	84,530	139,931	63,005	98,890
Westfield State College	296,264	113,333	244,762	67,360	224,408	58,664	30,315	86,286	74,456	35,815
Worcester State College	104,021	121,392	55,013	18,403	24,831	18,994	29,139	68,820	50,591	25,399
Total	2,512,867	1,903,846	3,085,742	2,523,910	2,497,253	986,267	976,159	1,176,778	1,271,030	1,189,301
Age to Ultimate LDF's	1.527	1.682	1.977	2.689	6.054	1.160	1.195	1.359	1.584	3.600

NOTES:

(1) - (10) - Cumualtive Paid Losses from Summary Exhibit 10, Page 5 multiplied by Age to Ultimate LDF's at the bottom of this exhibit.



Massachusetts Colleges & Universities - Cluster 4

Cumulative Paid Losses as of 6/30/12

			Indemnity					Medical		
Cluster	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Berkshire Community College	12,137	68	7,858	26,734	0	27,473	3,904	3,259	20,324	2,826
Bridgewater State College	184,984	30,105	82,872	100,908	50,097	51,474	32,874	87,810	40,047	27,270
Bristol Community College	0	21,221	80,030	31	189	2,166	18,584	17,269	31,712	6,879
Bunker Hill Community College	11,092	5,021	61,839	53,805	18,412	17,685	8,497	24,602	44,282	14,443
Cape Cod Community College	4,136	0	-2,274	31,558	2,674	23,070	1,183	14,192	15,126	9,069
Fitchburg State College	125,473	62,154	89,349	79,231	10,683	21,449	59,477	53,301	29,307	14,303
Framingham State College	208,857	0	50,006	28,158	12,916	164,600	2,592	50,097	18,271	16,853
Greenfield Community College	316	3,319	0	0	0	3,428	8,870	3,750	1,491	1,580
Holyoke Community College	0	3,254	15,087	37,120	745	4,456	12,883	26,310	28,996	106
Mass Bay Community College	25,695	0	5,157	0	1,324	17,012	1,408	4,825	4,498	1,325
Mass College of Art	2,100	47,918	7,895	58,162	14,403	8,462	31,653	8,925	12,306	17,457
Mass Maritime Academy	2,327	158,811	129,949	8,340	6,291	3,298	132,127	18,093	6,671	7,200
Massachusetts College of Liberal Arts	0	73,709	69,551	0	0	5,426	21,387	21,173	667	2,307
Massasoit Community College	81,573	64,144	123,611	29,216	26,478	74,088	33,718	35,687	42,790	13,536
Middlesex Community College	1,047	9,873	0	11,650	8,480	13,697	12,998	4,161	5,348	11,779
Mt Wachusett Community College	0	3,216	56,274	59,691	447	2,336	11,846	28,368	15,710	7,836
North Essex Community College	11,286	3,609	8,955	1,214	1,537	17,261	8,899	12,316	4,029	3,287
North Shore Community College	0	0	47,364	0	2,456	3,037	4,862	41,037	2,230	16,229
Quinsigamond Community College	248,106	4,447	5,831	7,386	26,725	48,073	9,913	5,387	8,287	13,338
Roxbury Community College	89,316	0	104,854	4	0	22,390	466	9,711	2,109	0
Salem State College	23,266	32,834	12,913	87,008	18,345	39,799	69,624	24,737	183,792	14,525
Springfield Tech Community College	116,326	224,532	155,982	77,732	17,456	110,271	111,161	41,973	33,800	20,478
UMass (Boston)	18,742	86,194	81,501	80,250	53,169	18,443	47,243	45,250	65,874	16,850
UMass (Dartmouth)	137,790	32,899	122,226	53,321	71,269	38,236	50,122	66,535	66,053	46,371
University of Lowell	79,319	124,999	92,320	75,184	27,208	45,942	70,727	102,959	39,777	27,466
Westfield State College	194,074	67,379	123,801	25,050	37,066	50,591	25,365	63,487	47,006	9,947
Worcester State College	68,141	72,170	27,826	6,844	4,101	16,380	24,381	50,637	31,940	7,054
Total	1,646,106	1,131,874	1,560,776	938,598	412,473	850,544	816,761	865,851	802,442	330,317



Massachusetts Colleges & Universities - Cluster 4

Fiscal Year 2012 Paid Losses

			Indemnity					Medical		
Cluster	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Berkshire Community College	0	0	0	24,650	0	98	0	2,368	19,490	2,826
Bridgewater State College	25,013	0	17,299	57,543	50,097	0	0	17,777	20,614	27,270
Bristol Community College	0	0	50,285	0	189	0	0	3,720	13,113	6,879
Bunker Hill Community College	0	0	24,569	26,234	18,412	0	238	1,936	8,032	14,443
Cape Cod Community College	0	0	0	30,178	2,674	0	0	137	8,736	9,069
Fitchburg State College	22,081	19,421	25,862	29,892	10,683	2,083	4,748	6,860	14,256	14,303
Framingham State College	6,152	0	21,246	16,535	12,916	10,089	0	12,495	7,654	16,853
Greenfield Community College	0	0	0	0	0	0	0	0	292	1,580
Holyoke Community College	0	0	0	33,532	745	0	0	261	10,092	106
Mass Bay Community College	0	0	0	0	1,324	0	0	750	3,148	1,325
Mass College of Art	0	8,059	0	37,643	14,403	0	1,877	241	4,065	17,457
Mass Maritime Academy	0	52,782	79,941	221	6,291	0	11,830	0	2,450	7,200
Massachusetts College of Liberal Arts	0	0	21,758	0	0	0	939	100	157	2,307
Massasoit Community College	14,559	19,304	16,949	15,739	26,478	1,531	1,970	1,211	27,511	13,536
Middlesex Community College	0	0	0	9,150	8,480	0	9,559	0	3,964	11,779
Mt Wachusett Community College	0	0	50,643	36,673	447	0	0	4,196	2,515	7,836
North Essex Community College	0	0	0	0	1,537	0	0	0	266	3,287
North Shore Community College	0	0	-13,189	0	2,456	0	0	77	1,470	16,229
Quinsigamond Community College	32,450	0	0	-400	26,725	4,016	3,639	443	1,942	13,338
Roxbury Community College	0	0	30,031	4	0	0	76	1,166	2,109	0
Salem State College	0	0	60	49,178	18,345	945	5,221	3,402	98,353	14,525
Springfield Tech Community College	54,868	85,110	49,277	37,802	17,456	1,007	14,840	4,278	7,141	20,478
UMass (Boston)	0	0	11,332	48,274	53,169	0	0	7,456	31,455	16,850
UMass (Dartmouth)	0	0	28,551	28,804	71,269	0	77	4,966	37,885	46,371
University of Lowell	0	38,000	35,124	50,116	27,208	0	2,205	7,884	24,225	27,466
Westfield State College	47,426	34,607	34,726	2,842	37,066	1,075	3,016	2,134	17,748	9,947
Worcester State College	36,389	0	7,782	3,579	4,101	0	0	6,244	19,841	7,054
Total	238,938	257,283	492,249	538,187	412,473	20,843	60,236	90,102	388,523	330,317



Table of Contents

I. Narrative

II. Summary Exhibits

III.	Suppo	rting	Exhibits
------	-------	-------	-----------------

Section 1	All Clusters Combined	
		Exhibit 1 - Indemnity
		Exhibit 2 - Medical
Section 2	Department of Mental F	Retardation - Cluster 1
		Exhibit 1 - Indemnity
		Exhibit 2 - Medical
Section 3	Department of Mental H	Health - Cluster 2
		Exhibit 1 - Indemnity
		Exhibit 2 - Medical
Section 4	Department of Correcti	ons - Cluster 3
		Exhibit 1 - Indemnity
		Exhibit 2 - Medical
Section 5	University of Massachu	setts (Amherst) - Cluster 4
		Exhibit 1 - Indemnity
		Exhibit 2 - Medical
Section 6	University of Massachu	setts (Medical Center) - Cluster 4
		Exhibit 1 - Indemnity
		Exhibit 2 - Medical
Section 7	Massachusetts Colleges	& Universities - Cluster 4
		Exhibit 1 - Indemnity
		Exhibit 2 - Medical
Section 8	All Other - Clusters 5-1	7 & 95
		Exhibit 1 - Indemnity
		Exhibit 2 - Medical



All Clusters Combined Indemnity

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		91,614,600			108,747,179	118,155,925	17,132,579	26,541,326		
6/30/82-83		16,537,467	17,871,370		17,467,009	18,396,525	929,542	1,859,058		
6/30/83-84		22,413,630	25,063,685		24,588,692	25,847,387	2,175,062	3,433,757		
6/30/84-85	1,823,085	35,178,530	39,286,439	36,393,213	36,659,859	38,738,574	1,481,330	3,560,045	2.011	2.125
6/30/85-86	1,952,445	46,603,960	52,527,433	48,576,099	49,371,185	50,963,945	2,767,225	4,359,985	2.529	2.610
6/30/86-87	2,220,820	51,263,811	56,305,297	53,878,887	53,223,000	55,642,705	1,959,189	4,378,894	2.397	2.506
6/30/87-88	2,885,583	72,433,896	80,757,817	77,062,599	77,486,456	79,902,709	5,052,560	7,468,813	2.685	2.769
6/30/88-89	3,098,180	69,286,250	75,794,776	74,126,277	74,525,366	76,654,799	5,239,117	7,368,549	2.405	2.474
6/30/89-90	3,079,763	65,774,665	71,895,159	71,437,651	70,449,658	72,066,971	4,674,993	6,292,306	2.288	2.340
6/30/90-91	2,914,364	53,130,051	62,594,063	58,834,557	57,534,859	61,857,914	4,404,809	8,727,864	1.974	2.123
6/30/91-92	2,880,434	33,382,781	37,795,249	37,090,781	36,848,479	38,104,118	3,465,698	4,721,337	1.279	1.323
6/30/92-93	2,887,238	22,256,984	26,055,199	25,222,627	24,832,376	26,375,946	2,575,392	4,118,962	0.860	0.914
6/30/93-94	3,056,850	24,344,760	28,285,968	27,751,948	27,410,000	28,497,000	3,065,240	4,152,240	0.897	0.932
6/30/94-95	3,158,808	22,890,093	26,626,285	26,450,202	26,360,000	27,122,000	3,469,907	4,231,907	0.834	0.859
6/30/95-96	3,301,791	21,636,497	25,529,287	25,463,738	25,126,985	25,896,891	3,490,488	4,260,394	0.761	0.784
6/30/96-97	3,902,868	21,855,244	26,120,463	26,081,921	25,974,838	26,694,286	4,119,593	4,839,041	0.666	0.684
6/30/97-98	3,776,138	24,926,558	29,777,782	29,710,237	29,612,642	30,266,556	4,686,084	5,339,998	0.784	0.802
6/30/98-99	4,017,530	22,680,100	27,870,524	27,836,606	27,828,000	28,525,000	5,147,900	5,844,900	0.693	0.710
6/30/99-00	4,221,786	25,745,470	32,444,581	32,334,441	32,328,000	33,135,000	6,582,530	7,389,530	0.766	0.785
6/30/00-01	4,310,725	29,630,405	37,727,059	37,552,454	36,945,892	38,382,000	7,315,487	8,751,595	0.857	0.890
6/30/01-02	4,438,755	27,006,940	35,352,010	35,246,732	35,244,000	36,080,000	8,237,060	9,073,060	0.794	0.813
6/30/02-03	4,423,888	25,805,739	34,525,006	34,446,087	33,899,450	35,261,000	8,093,711	9,455,261	0.766	0.797
6/30/03-04	4,482,207	25,324,070	34,403,491	34,360,392	33,841,043	35,178,000	8,516,973	9,853,930	0.755	0.785
6/30/04-05	4,639,517	25,017,850	35,306,841	34,802,929	34,597,000	35,512,000	9,579,150	10,494,150	0.746	0.765
6/30/05-06	4,938,165	21,638,827	31,999,415	33,281,170	31,988,000	33,384,000	10,349,173	11,745,173	0.648	0.676
6/30/06-07	5,183,126	18,501,850	28,938,571	31,800,383	29,360,000	31,800,000	10,858,150	13,298,150	0.566	0.614
6/30/07-08	5,508,425	20,768,231	35,718,972	37,951,827	35,305,000	38,203,000	14,536,769	17,434,769	0.641	0.694
6/30/08-09	5,447,676	18,387,556	36,291,513	38,404,502	36,751,000	39,349,000	18,363,444	20,961,444	0.675	0.722
6/30/09-10	5,525,579	15,907,243	39,235,092	41,112,631	39,028,000	43,571,000	23,120,757	27,663,757	0.706	0.789
6/30/10-11	5,712,303	13,320,087	44,326,381	44,534,654	42,977,000	48,035,000	29,656,913	34,714,913	0.752	0.841
6/30/11-12	5,880,714	5,840,358	44,420,431	46,837,682	43,477,000	51,645,000	37,636,642	45,804,642	0.739	0.878
Total	109,668,762	991,104,501	1,180,846,159	1,128,583,226	1,259,787,969	1,329,244,252	268,683,469	338,139,752		
Tot 6/30/84-12	109,668,762	860,538,804	1,137,911,103	1,128,583,226	1,108,985,090	1,166,844,415	248,446,286	306,305,611	1.011	1.064

- (2) Provided by Commonwealth of Massachusetts
- (3) Sum of Section 1, Exhibit 1, Page 2, Column 3 and Section 1, Exhibit 1, Page 9, Column 8
- (4) From Section 1, Exhibit 1, Page 2, Column 8
- (5) From Section 1, Exhibit 1, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



All Clusters Combined Indemnity

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Paid Loss	Implied	Adjstmnt for	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average	
Accident	Payroll	Excluding	Paid	Extra	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding	Average
Year	(000's)	Lump Sum	LDF	Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim	Age
All Prior Yrs		87,672,918							46	43		79
6/30/82-83		15,766,236	1.085	N/A	17,098,778	772,592	17,871,370		6	4	333,136	79
6/30/83-84		20,620,991	1.128	N/A	23,260,718	1,802,967	25,063,685		4	5	527,946	64
6/30/84-85	1,823,085	32,412,266	1.126	N/A	36,504,845	2,781,595	39,286,439	2.155	7	8	511,572	74
6/30/85-86	1,952,445	43,312,360	1.136	N/A	49,214,840	3,312,593	52,527,433	2.690	10	7	843,211	77
6/30/86-87	2,220,820	45,816,061	1.109	N/A	50,827,472	5,477,825	56,305,297	2.535	10	10	501,141	75
6/30/87-88	2,885,583	64,434,879	1.128	N/A	72,705,561	8,052,256	80,757,817	2.799	22	19	435,299	72
6/30/88-89	3,098,180	59,460,012	1.108	N/A	65,885,606	9,909,170	75,794,776	2.446	22	21	305,981	73
6/30/89-90	3,079,763	55,910,367	1.107	N/A	61,918,990	9,976,169	71,895,159	2.334	15	15	400,575	67
6/30/90-91	2,914,364	44,863,611	1.208	N/A	54,202,518	8,391,545	62,594,063	2.148	13	13	718,377	70
6/30/91-92	2,880,434	27,962,307	1.155	N/A	32,284,489	5,510,759	37,795,249	1.312	13	12	360,182	67
6/30/92-93	2,887,238	18,169,867	1.204	N/A	21,878,606	4,176,594	26,055,199	0.902	10	9	412,082	63
6/30/93-94	3,056,850	20,167,726	1.190	N/A	23,997,598	4,288,369	28,285,968	0.925	12	11	348,170	64
6/30/94-95	3,158,808	18,839,234	1.191	N/A	22,444,812	4,181,473	26,626,285	0.843	9	9	400,620	68
6/30/95-96	3,301,791	18,012,627	1.207	N/A	21,741,309	3,787,979	25,529,287	0.773	10	9	414,298	65
6/30/96-97	3,902,868	17,411,092	1.231	N/A	21,438,077	4,682,386	26,120,463	0.669	6	12	335,582	65
6/30/97-98	3,776,138	20,239,681	1.225	N/A	24,784,712	4,993,070	29,777,782	0.789	14	14	324,645	62
6/30/98-99	4,017,530	18,768,162	1.261	N/A	23,659,514	4,211,010	27,870,524	0.694	9	12	407,613	56
6/30/99-00	4,221,786	21,850,101	1.291	N/A	28,204,638	4,239,944	32,444,581	0.769	11	11	577,685	56
6/30/00-01	4,310,725	25,878,042	1.297	N/A	33,560,374	4,166,685	37,727,059	0.875	16	17	451,902	58
6/30/01-02	4,438,755	23,221,272	1.335	N/A	31,007,110	4,344,900	35,352,010	0.796	14	14	556,131	56
6/30/02-03	4,423,888	22,423,326	1.362	N/A	30,534,975	3,990,031	34,525,006	0.780	20	18	450,647	53
6/30/03-04	4,482,207	21,767,551	1.384	N/A	30,129,147	4,274,344	34,403,491	0.768	24	13	643,200	53
6/30/04-05	4,639,517	21,201,896	1.439	N/A	30,507,051	4,799,790	35,306,841	0.761	48	30	310,172	53
6/30/05-06	4,938,165	17,913,398	1.501	N/A	26,896,637	5,102,778	31,999,415	0.648	63	42	213,887	52
6/30/06-07	5,183,126	15,786,760	1.573	N/A	24,838,017	4,100,555	28,938,571	0.558	80	48	188,568	52
6/30/07-08	5,508,425	17,473,101	1.716	N/A	29,978,434	5,740,538	35,718,972	0.648	137	94	133,035	52
6/30/08-09	5,447,676	16,148,288	1.912	N/A	30,879,028	5,412,485	36,291,513	0.666	194	155	95,037	51
6/30/09-10	5,525,579	14,508,772	2.284	N/A	33,140,567	6,094,524	39,235,092	0.710	468	211	88,302	51
6/30/10-11	5,712,303	12,542,403	3.047	N/A	38,216,451	6,109,930	44,326,381	0.776	1,318	508	50,539	48
6/30/11-12	5,880,714	5,840,358	6.525	N/A	38,106,178	6,314,253	44,420,431	0.755		1,288	25,051	46
Total	109,668,762	866,395,666			1,029,847,051	150,999,108	1,180,846,159		2,631	2,682		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 1, Exhibit 1, Page 7
- (4) = (6) / (5) / (3). For this All Clusters Combined exhibit only, this column includes the impact of the "Additional Tail consideration".
- (5) Based on information from the MA WCRIB. For this All Clusters Combined exhibit only, impacts shown here are for Escalation of Benefits only.
- $(6) = (3) \times (4) \times (5)$
- (7) From Section 1, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10), (11) Provided by Commonwealth of Massachusetts
- $(12) = Maximum of [{(6) (3)} / (11)] and 0$
- (13) Calculated for claimants that had an indemnity payment within the last calendar year.

Section 1 Exhibit 1 Page 3

All Clusters Combined Indemnity

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori	Paid Loss		Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss	Excluding	Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Lump Sum	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	1,823,085	2.991	32,412,266	1.126	33,611,618	2,781,595	36,393,213	1.996	1.844
6/30/85-86	1,952,445	3.712	43,312,360	1.136	45,263,506	3,312,593	48,576,099	2.488	2.318
6/30/86-87	2,220,820	3.485	45,816,061	1.109	48,401,062	5,477,825	53,878,887	2.426	2.179
6/30/87-88	2,885,583	3.526	64,434,879	1.128	69,010,343	8,052,256	77,062,599	2.671	2.392
6/30/88-89	3,098,180	2.963	59,460,012	1.108	64,217,107	9,909,170	74,126,277	2.393	2.073
6/30/89-90	3,079,763	2.802	55,910,367	1.107	61,461,482	9,976,169	71,437,651	2.320	1.996
6/30/90-91	2,914,364	1.848	44,863,611	1.208	50,443,012	8,391,545	58,834,557	2.019	1.731
6/30/91-92	2,880,434	1.110	27,962,307	1.155	31,580,022	5,510,759	37,090,781	1.288	1.096
6/30/92-93	2,887,238	0.750	18,169,867	1.204	21,046,034	4,176,594	25,222,627	0.874	0.729
6/30/93-94	3,056,850	0.774	20,167,726	1.190	23,463,578	4,288,369	27,751,948	0.908	0.768
6/30/94-95	3,158,808	0.702	18,839,234	1.191	22,268,729	4,181,473	26,450,202	0.837	0.705
6/30/95-96	3,301,791	0.651	18,012,627	1.207	21,675,759	3,787,979	25,463,738	0.771	0.656
6/30/96-97	3,902,868	0.549	17,411,092	1.231	21,399,535	4,682,386	26,081,921	0.668	0.548
6/30/97-98	3,776,138	0.649	20,239,681	1.225	24,717,167	4,993,070	29,710,237	0.787	0.655
6/30/98-99	4,017,530	0.588	18,768,162	1.261	23,625,596	4,211,010	27,836,606	0.693	0.588
6/30/99-00	4,221,786	0.660	21,850,101	1.291	28,094,498	4,239,944	32,334,441	0.766	0.665
6/30/00-01	4,310,725	0.762	25,878,042	1.297	33,385,769	4,166,685	37,552,454	0.871	0.774
6/30/01-02	4,438,755	0.692	23,221,272	1.335	30,901,831	4,344,900	35,246,732	0.794	0.696
6/30/02-03	4,423,888	0.685	22,423,326	1.362	30,456,056	3,990,031	34,446,087	0.779	0.688
6/30/03-04	4,482,207	0.670	21,767,551	1.384	30,086,048	4,274,344	34,360,392	0.767	0.671
6/30/04-05	4,639,517	0.657	21,201,896	1.439	30,003,138	4,799,790	34,802,929	0.750	0.647
6/30/05-06	4,938,165	0.670	17,913,398	1.501	28,178,392	5,102,778	33,281,170	0.674	0.571
6/30/06-07	5,183,126	0.684	15,786,760	1.573	27,699,828	4,100,555	31,800,383	0.614	0.534
6/30/07-08	5,508,425	0.699	17,473,101	1.716	32,211,289	5,740,538	37,951,827	0.689	0.585
6/30/08-09	5,447,676	0.714	16,148,288	1.912	32,992,018	5,412,485	38,404,502	0.705	0.606
6/30/09-10	5,525,579	0.724	14,508,772	2.284	35,018,107	6,094,524	41,112,631	0.744	0.634
6/30/10-11	5,712,303	0.730	12,542,403	3.047	38,424,724	6,109,930	44,534,654	0.780	0.673
6/30/11-12	5,880,714	0.743	5,840,358	6.525	40,523,429	6,314,253	46,837,682	0.796	0.689
Total	109,668,762		742,335,521		980,159,678	148,423,548	1,128,583,226		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 1, Exhibit 1, Page 4, Column 11
- (4) From Section 1, Exhibit 1, Page 2, Column 3
- (5) From Section 1, Exhibit 1, Page 2, Column 4
- $(6) = (4) + [{1 {1 / (5)}} x (3) x (2) x 10]$
- (7) From Section 1, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10



All Clusters Combined Indemnity

Calculation of Initial Expected Loss Rate

Accident Year	Payroll	Exp Ult Loss	Unadjusted							
	Payroll		Chadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Year		Excluding	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
	(000's)	Lump Sum	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									2.991	2.991
6/30/85-86									3.712	3.712
6/30/86-87									3.485	3.485
6/30/87-88									3.526	3.526
6/30/88-89									2.963	2.963
6/30/89-90									2.802	2.802
6/30/90-91	2,914,364	54,202,518	1.860	0.946	1.760	1.245	2.190	0.637	1.905	1.848
6/30/91-92	2,880,434	32,284,489	1.121	1.038	1.163	1.232	1.434	0.586	1.120	1.110
6/30/92-93	2,887,238	21,878,606	0.758	1.210	0.917	1.220	1.119	0.508	0.758	0.750
6/30/93-94	3,056,850	23,997,598	0.785	1.195	0.938	1.208	1.133	0.520	0.784	0.774
6/30/94-95	3,158,808	22,444,812	0.711	1.184	0.841	1.196	1.006	0.530	0.713	0.702
6/30/95-96	3,301,791	21,741,309	0.658	1.174	0.773	1.184	0.916	0.539	0.664	0.651
6/30/96-97	3,902,868	21,438,077	0.549	1.163	0.639	1.173	0.749	0.550	0.565	0.549
6/30/97-98	3,776,138	24,784,712	0.656	1.148	0.753	1.161	0.875	0.563	0.662	0.649
6/30/98-99	4,017,530	23,659,514	0.589	1.133	0.667	1.149	0.767	0.576	0.606	0.588
6/30/99-00	4,221,786	28,204,638	0.668	1.114	0.745	1.138	0.847	0.591	0.681	0.660
6/30/00-01	4,310,725	33,560,374	0.779	1.086	0.846	1.127	0.953	0.613	0.781	0.762
6/30/01-02	4,438,755	31,007,110	0.699	1.065	0.744	1.116	0.830	0.631	0.716	0.692
6/30/02-03	4,423,888	30,534,975	0.690	1.061	0.732	1.105	0.809	0.640	0.710	0.685
6/30/03-04	4,482,207	30,129,147	0.672	1.061	0.713	1.094	0.780	0.646	0.695	0.670
6/30/04-05	4,639,517	30,507,051	0.658	1.054	0.693	1.083	0.751	0.657	0.707	0.657
6/30/05-06	4,938,165	26,896,637	0.545	1.044	0.568	1.072	0.609	0.670	0.722	0.670
6/30/06-07	5,183,126	24,838,017	0.479	1.032	0.495	1.062	0.525	0.684	0.737	0.684
6/30/07-08	5,508,425	29,978,434	0.544	1.021	0.556	1.051	0.584	0.699	0.752	0.699
6/30/08-09	5,447,676	30,879,028	0.567	1.009	0.572	1.041	0.595	0.714	0.769	0.714
6/30/09-10	5,525,579	33,140,567	0.600	1.005	0.603	1.030	0.621	0.724	0.780	0.724
6/30/10-11	5,712,303	38,216,451	0.669	1.007	0.673	1.020	0.687	0.730	0.792	0.730
6/30/11-12	5,880,714	38,106,178	0.648	1.000	0.648	1.010	0.654	0.743		0.743
Total	94,608,887	652,430,241								
			Trend L	ast 4 (ex 11-12):	6.5%	Avg 3 (x11-12):	0.635			
			Trend L	ast 8 (ex 11-12):	-1.1%	Avg 5 (x11-12):	0.603			
			Trend La	st 12 (ex 11-12):	-3.0%	Avg 10 (x11-12):	0.679			
			Prior	Selected Trend:	1.0%	Prior Sel Avg:	0.800			

Selected Trend:

1.0%

Sel. Loss Cost:

0.750

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 1, Exhibit 1, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCRIB
- $(6) = (4) \times (5)$ (7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

Section 1 Exhibit 1 Page 5

All Clusters Combined Indemnity

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	<u></u>		
(1)	Average Payment Trend		0.960
(2)	Credibility		93%
(3)	Average Pmt Trend Statewide		0.960
(4)	Credibility Weighted Trend		0.960
	<u>-</u>	(Low)	(High)
(5)	Selected Range	0.940	0.970
(6)	Incremental Paid for 2012	1,565,889	1,565,889
(7)	Estimated Reserve	24,532,258	50,630,405
(8)	Paid to Date (82 & Prior)	87,672,918	87,672,918
(9)	Est Ult Paid for 1982 & Prior	112,205,176	138,303,323
Method 2	<u> </u>		
		(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	1,678,237	1,737,548
(11)	Projected Number of Years	2	2
(12)	Estimated Reserve	3,356,475	3,475,095
(13)	Paid to Date (82 & Prior)	87,672,918	86,107,029
(14)	Est Ult Paid for 1982 & Prior	91,029,393	89,582,124
(14a)	Paid Counts During Fiscal Year	43	46
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	101,617,284	113,942,724
(16)	Lump Sum Ultimates	3,971,578	3,971,578
(17)	Ult Loss Including Lump Sums	105,588,862	117,914,302
(18)	Implied Tail	1.159	1.300
(19)	Ult Loss Inc Lump Sums @ 6/11	104,773,485	117.793.796
(17)	OR LOSS THE Lump Sums & 0/11	104,773,403	117,73,770
NOTES:			
(1) From Sectio	n 1, Exhibit 1, Page 6		(10) Avg of 3 latest years from Section 1, Exhibit 1, Page 6, Column 3
(2) = (Average of Average of Av	of Section 1, Exhibit 1, Page 6, Column 3 / 3,000,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta	tewide Trend		(12) = (10 x (11))
$(4) = (1) \times (2) +$	(4) x {1 - (2)}		(14) = (12) + (13)
(5) Selected jud	gmentally based on (4)		(15) = Average of (9) and (14)
(6), (14a) Provid	ded by Commonwealth of Massachusetts		(16) From Section 1, Exhibit 1, Page 9, Column 13
$(7) = (6) \times (5) /$	{1 - (5)}		(17) = (15) + (16)
(8), (16) From S	Section 1, Exhibit 1, Page 2, Column 3		(18) = (15) / (8)
(9) = (7) + (8)			(19) From Aon analysis as of June 30, 2011



Section 1 Exhibit 1 Page 6

All Clusters Combined Indemnity

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	3,761,035	15.140			
1993	2	3,748,741	15.137	0.997		
1994	3	3,655,655	15.112	0.975		
1995	4	3,194,135	14.977	0.874		
1996	5	3,058,848	14.934	0.958		
1997	6	3,023,014	14.922	0.988		
1998	7	3,014,756	14.919	0.997		
1999	8	2,756,848	14.830	0.914		
2000	9	2,909,790	14.884	1.055	n =	21
2001	10	2,865,446	14.868	0.985	S(x) =	42,042
2002	11	2,547,239	14.751	0.889	S(x-sq) =	84,168,854
2003	12	2,422,167	14.700	0.951	S(xy) =	619,208
2004	13	2,289,077	14.644	0.945	S(y) =	309
2005	14	2,336,964	14.664	1.021	D =	16,170
2006	15	2,051,702	14.534	0.878	slope =	-0.044
2007	16	2,039,778	14.528	0.994	Avg Trend =	0.956
2008	17	1,799,337	14.403	0.882		
2009	18	1,743,820	14.372	0.969		
2010	19	1,812,753	14.410	1.040		
2011	20	1,656,071	14.320	0.914		
2012	21	1,565,889	14.264	0.946		

Selected Trend: 0.960

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.946 = 1565889 / 1656071



Section Exhibit Page



	June-85 June-86 June-87 June-88 June-89 June-90 June-90 June-90 June-90 June-91 June-92 June-92 June-96 June-98 June-96 June-97 June-98 June-99 June-90 June-01 June-01 June-03 June-05 June-07 June-07 June-07 June-07 June-07 June-09 June-07 June-09 June-07 June-09 June-10 June-10 June-10 June-10 June-10	1,522,536 2,512,722 3,828,307 4,540,457 6,620,154 6,102,502 8,325,393 6,727,038 5,529,696 5,529,696 3,973,223 3,781,238 4,117,530 3,802,186 3,999,102 3,807,499 5,785,207 5,785,207 5,782,322 5,772,533 4,757,325 4,753,872 4,973,425 4,973,425	3.686,963 6.084,789 9.270,600 10,913,697 15,480,715 16,819,475 19,198,639 15,771,999 15,771,999 15,776,567 8.090,389 8.152,795 10,538,860 12,277,793 12,402,263 12,277,793 13,090,711 12,048,148 11,867,294 10,276,384 9,431,881 10,276,384	5.350.672 8.830.495 13.395.875 15.583.325 23.458,326 24.580,175 27.299.181 21.520.901 14.154.78 10.924.326 10.451,304 10.658,744 10.157.406 9.916.724 11.057.251 11.043.621 14.135.679 16.670.356 16.238.526 15.701.108 13.459.435 11.574.108 13.459.435 11.574.108 13.459.435 11.574.108 13.459.435 11.574.108 13.459.435 11.584.810 13.469.751	6,757,899 11,054,439 16,854,774 19,957,432 30,204,660 31,278,437 32,979,315 25,666,833 12,579,041 12,041,730 12,524,501 11,265,946 11,263,946 11,263,946 11,263,947 13,063,666 13,229,580 16,504,973 19,654,595 18,865,437 18,020,724 18,198,437 18,020,724 15,194,558 13,586,119	8,148,886 3,342,359 20,186,912 23,712,974 36,116,026 35,945,703 36,487,113 28,606,961 18,010,508 13,184,654 13,184,654 13,184,654 13,187,068 14,725,657 14,782,416 18,268,102 21,577,531 20,310,007 20,300,493 19,734,152 16,209,103,103 16,209,10	9,608,045 15,590,069 22,858,610 26,356,678 39,838,569 39,938,569 39,225,080 30,755,665 19,080,293 14,650,572 14,033,719 14,358,059 15,964,487 15,710,384 19,419,784 22,938,517 21,368,596 21,059,553 19,590,574 19,972,058	10,911,357 17,427,365 24,903,526 28,401,253 42,256,230 41,415,130 41,403,021 19,981,070 14,780,593 15,205,770 14,313,197 15,406,905 16,521,760 20,242,086 23,908,952 21,163,829 20,719,729	12,126,179 18,998,017 26,819,536 30,259,862 44,503,212 43,490,698 43,419,245 33,434,382 20,663,423 15,299,706 15,679,180 15,840,120 14,989,243 15,928,071 17,479,286 17,074,054 20,650,338 22,319,683 21,885,146 21,542,100	13,057,188 20,498,944 28,134,649 31,823,542 46,313,785 45,072,501 44,619,978 34,630,923 21,458,872 5,652,059 16,229,340 16,337,357 15,617,069 16,176,008 17,452,452 21,022,134 24,859,220 22,695,839 22,172,772	13,815,581 21,563,372 29,661,018 33,295,483 47,917,629 46,555,926 46,178,291 35,639,652 22,141,168 15,960,508 16,777,362 16,021,237 16,397,842 18,445,861 21,259,984 25,164,944 25,164,944	14,430,389 22,525,232 30,865,387 34,562,410 49,366,750 47,860,013 47,478,622 36,661,638 22,851,311 16,198,969 17,232,935 17,024,333 16,346,275 16,558,081 18,841,212 18,180,175 21,435,910 25,501,251	14,959,403 23,442,205 32,219,696 35,908,967 50,785,172 49,040,632 48,500,081 37,733,064 23,533,251 16,437,335 17,804,861 17,347,955 16,663,225 16,798,807 19,225,160 19,225,160 18,1642,301	15,419,688 24,219,603 33,488,982 37,317,032 52,214,314 50,166,177 49,380,975 38,765,183 24,097,364 16,647,751 18,235,433 17,981,046 16,942,675 16,939,079 19,574,481 18,600,387	15,772,255 25,046,022 34,570,174 38,375,710 53,499,831 51,242,940 50,215,035 39,734,589 24,573,283 16,845,525 18,616,699 17,980,888 17,212,063 17,212,063 19,929,478	16,197,151 25,818,487 35,702,155 39,392,496 54,758,162 52,234,068 50,970,670 40,612,815 25,143,387 17,057,996 18,971,484 18,198,811 17,486,480 17,228,429	16,639,612 26,459,414 36,866,038 40,287,844 56,029,186 53,147,033 51,700,073 41,479,663 25,744,950 17,261,464 19,309,314 18,406,575 17,759,866	17,122,286 27,121,279 37,770,882 41,070,876 57,216,310 54,016,738 52,443,554 42,275,974 26,283,250 17,446,939 19,603,806 18,613,590	17,516,764 27,778,658 38,520,460 41,703,092 58,242,797 54,832,591 53,046,968 42,925,167 42,925,167 17,667,638 19,888,097	228 12,810,499 17,977,890 28,406,401 39,153,946 42,193,153 56,522,016 55,632,016 34,635,880 27,207,194 17,927,011 20,167,726	18,438,292 28,976,876 39,794,497 42,715,548 60,251,502 56,403,282 54,272,144 44,069,182 27,587,356	18,803,484 29,543,002 40,432,599 43,489,344 61,225,020 57,157,649 54,832,428 44,462,411	19,139,323 30,030,413 41,063,216 43,946,144 62,100,854 57,924,017 55,362,682	19,459,619 30,523,992 41,644,745 44,426,128 62,859,543 58,698,403	19,718,217 30,983,182 42,241,569 44,966,121 63,676,981	19,937,128 31,363,675 42,712,869 45,385,703	20,149,887 31,712,251 43,097,941	20,327,863 2 32,055,755 3	0,472,356		360 ,766,236
Ao	e-to-Age Fac c Yr Ending	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	
	June-83 June-84	2.422 2.422	1.451 1.451	1.263 1.263	1.210 1.206	1.170 1.179	1.148 1.136	1.155 1.111	1.113 1.077	1.107 1.058	1.075 1.045	1.059 1.037	1.058 1.031	1.047 1.023	1.035 1.027	1.028 1.027	1.026	1.026	1.029 1.026	1.022 1.026	1.022	1.020 1.018	1.021	1.021	1.022	1.021	1.018	1.017 1.007	1.014	1.011	
	June-85	2.422	1.451	1.252	1.207	1.168	1.118	1.090	1.079	1.052	1.045	1.041	1.033	1.034	1.031	1.025	1.025	1.024	1.023	1.020	1.020	1.016	1.016	1.015	1.012	1.011	1.011	1.011			
	June-86 June-87	2.422	1.445 1.428	1.258 1.281	1.198 1.188	1.132 1.111	1.089	1.077 1.065	1.049 1.052	1.054	1.041	1.044	1.039	1.032 1.028	1.033	1.033 1.023	1.025	1.020	1.016 1.012	1.016 1.012	1.016 1.018	1.016 1.011	1.014	1.014 1.012	1.011	1.009 1.009	1.005				
	June-88	2.338	1.515	1.288	1.196	1.103	1.061	1.053	1.041	1.035	1.030	1.029	1.028	1.025	1.024	1.023	1.021	1.018	1.018	1.017	1.016	1.014	1.012	1.013	1.012						
	June-89 June-90	2.755 2.306	1.483 1.422	1.254 1.208	1.149 1.106	1.083 1.076	1.064 1.056	1.050	1.036 1.035	1.033	1.028 1.028	1.025 1.022	1.023	1.021 1.017	1.019 1.015	1.017 1.014	1.016 1.014	1.015	1.015 1.012	1.014	1.013 1.010	1.013 1.010	1.013 1.010	1.013							
	June-91	2.345	1.384	1.176	1.115	1.075	1.049	1.037	1.036	1.029	1.029	1.022	1.027	1.025	1.022	1.021	1.019	1.015	1.012	1.010	1.009	1.009	1.010								
	June-92 June-93	1.991 2.166	1.286 1.290	1.180 1.162	1.078	1.059	1.047	1.034	1.038	1.032	1.032 1.015	1.030	1.024	1.020 1.012	1.023	1.024 1.012	1.021	1.018	1.016 1.015	1.014 1.014	1.014										
	June-93 June-94	2.053	1.346	1.152	1.000	1.064	1.022	1.021	1.023	1.020	1.015	1.013	1.013	1.012	1.013	1.012	1.015	1.015	1.015	1.014											
	June-95	1.964	1.318	1.175	1.081	1.062	1.057	1.042	1.031	1.021	1.021	1.019	1.020	1.016	1.012	1.011	1.011	1.012													
	June-96 June-97	1.938 2.045	1.335 1.275	1.109 1.196	1.120 1.128	1.076	1.054 1.058	1.047	1.042	1.026	1.020 1.010	1.019	1.017	1.016	1.016	1.016 1.011	1.014														
	June-98	2.023	1.367	1.181	1.127	1.084	1.058	1.035	1.030	1.024	1.021	1.020	1.018	1.018	1.016																
	June-99 June-00	2.141 2.129	1.355 1.341	1.198 1.168	1.117	1.063	1.052	1.033	1.022	1.025	1.017	1.013	1.010 1.010	1.009																	
	June-01	2.137	1.344	1.179	1.098	1.063	1.042	1.029	1.011	1.012	1.013	1.015																			
	June-02 June-03	2.130	1.323 1.296	1.162 1.118	1.077	1.052	1.026	1.018	1.017 1.013	1.013	1.010																				
	June-04	2.084	1.313	1.159	1.076	1.043	1.028	1.018	1.010																						
	June-05 June-06	2.056 2.145	1.323 1.319	1.148 1.129	1.061	1.045	1.037 1.036	1.023																							
	June-07	1.980	1.228	1.173	1.104	1.052																									
	June-08 June-09	2.066 2.108	1.308 1.346	1.181 1.182	1.101																										
	June-10	2.088 2.006	1.325																												
	June-11	2.006																													
	erages imple Avg	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	To Ult
	All Yrs	2.176	1.360	1.192	1.122	1.083	1.060	1.048	1.037	1.033	1.028	1.027	1.024	1.022	1.021	1.020	1.019	1.017	1.018	1.016	1.016	1.014	1.014	1.015	1.013	1.012	1.011	1.012	1.011	1.011	
	Latest 5 Latest 3	2.050 2.067	1.305 1.326	1.162 1.178	1.083	1.047	1.030	1.020	1.014	1.015 1.012	1.014 1.011	1.015	1.013	1.014 1.012	1.014	1.013	1.014 1.014	1.015	1.015 1.015	1.012 1.012	1.012 1.011	1.011	1.012 1.012	1.014 1.013	1.011	1.012	1.008	1.012			
	olume Wtd																														
	All Yrs Latest 5	2.168 2.048	1.362 1.307	1.193 1.162	1.120 1.082	1.079	1.056	1.044	1.035	1.032	1.027 1.014	1.027	1.025	1.022	1.021	1.021	1.019	1.017	1.016 1.014	1.015	1.015	1.013	1.013	1.014	1.012	1.011	1.009	1.011	1.010	1.011	
	Latest 3	2.048	1.326	1.102	1.082	1.046	1.030	1.021	1.014	1.014	1.014	1.014	1.012	1.014	1.014	1.014	1.013	1.013	1.014	1.012	1.013	1.012	1.012	1.013	1.011	1.011	1.008	1.011			



All Clusters Combined Indemnity

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		ate Loss		ite Loss	Change in U		Change in U	
Accident	As o	f 6/11	As o	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	107,958,528	117,914,919	108,747,179	118,155,925	788,650	0.7%	241,006	0.2%
6/30/82-83	17,406,476	18,331,527	17,467,009	18,396,525	60,533	0.3%	64,998	0.4%
6/30/83-84	24,564,762	25,825,156	24,588,692	25,847,387	23,930	0.1%	22,231	0.1%
6/30/84-85	36,561,619	38,674,574	36,659,859	38,738,574	98,240	0.3%	64,000	0.2%
6/30/85-86	49,591,280	51,283,325	49,371,185	50,963,945	(220,095)	-0.4%	(319,380)	-0.6%
6/30/86-87	53,303,000	55,800,330	53,223,000	55,642,705	(80,000)	-0.2%	(157,625)	-0.3%
6/30/87-88	77,632,059	80,867,707	77,486,456	79,902,709	(145,603)	-0.2%	(964,998)	-1.2%
6/30/88-89	74,638,199	76,273,799	74,525,366	76,654,799	(112,833)	-0.2%	381,000	0.5%
6/30/89-90	70,828,455	71,794,762	70,449,658	72,066,971	(378,797)	-0.5%	272,209	0.4%
6/30/90-91	58,401,859	62,956,914	57,534,859	61,857,914	(867,000)	-1.5%	(1,099,000)	-1.7%
6/30/91-92	37,116,823	38,385,944	36,848,479	38,104,118	(268,344)	-0.7%	(281,826)	-0.7%
6/30/92-93	25,072,376	25,988,946	24,832,376	26,375,946	(240,000)	-1.0%	387,000	1.5%
6/30/93-94	27,828,000	28,394,000	27,410,000	28,497,000	(418,000)	-1.5%	103,000	0.4%
6/30/94-95	26,744,000	26,947,000	26,360,000	27,122,000	(384,000)	-1.4%	175,000	0.6%
6/30/95-96	25,535,985	26,330,891	25,126,985	25,896,891	(409,000)	-1.6%	(434,000)	-1.6%
6/30/96-97	26,475,838	27,219,286	25,974,838	26,694,286	(501,000)	-1.9%	(525,000)	-1.9%
6/30/97-98	29,992,642	30,642,556	29,612,642	30,266,556	(380,000)	-1.3%	(376,000)	-1.2%
6/30/98-99	28,638,000	29,342,000	27,828,000	28,525,000	(810,000)	-2.8%	(817,000)	-2.8%
6/30/99-00	33,336,000	34,164,000	32,328,000	33,135,000	(1,008,000)	-3.0%	(1,029,000)	-3.0%
6/30/00-01	38,450,000	39,685,000	36,945,892	38,382,000	(1,504,108)	-3.9%	(1,303,000)	-3.3%
6/30/01-02	36,273,000	37,124,000	35,244,000	36,080,000	(1,029,000)	-2.8%	(1,044,000)	-2.8%
6/30/02-03	35,618,000	36,481,000	33,899,450	35,261,000	(1,718,550)	-4.8%	(1,220,000)	-3.3%
6/30/03-04	35,540,000	36,393,000	33,841,043	35,178,000	(1,698,957)	-4.8%	(1,215,000)	-3.3%
6/30/04-05	36,080,000	36,854,000	34,597,000	35,512,000	(1,483,000)	-4.1%	(1,342,000)	-3.6%
6/30/05-06	33,098,000	34,448,000	31,988,000	33,384,000	(1,110,000)	-3.4%	(1,064,000)	-3.1%
6/30/06-07	31,037,000	33,798,000	29,360,000	31,800,000	(1,677,000)	-5.4%	(1,998,000)	-5.9%
6/30/07-08	35,892,000	41,169,000	35,305,000	38,203,000	(587,000)	-1.6%	(2,966,000)	-7.2%
6/30/08-09	37,423,000	41,396,000	36,751,000	39,349,000	(672,000)	-1.8%	(2,047,000)	-4.9%
6/30/09-10	38,458,000	45,004,000	39,028,000	43,571,000	570,000	1.5%	(1,433,000)	-3.2%
6/30/10-11	41,830,000	51,966,000	42,977,000	48,035,000	1,147,000	2.7%	(3,931,000)	-7.6%
6/30/11-12								
Total	1,231,324,901	1,301,455,638	1,216,310,969	1,277,599,252	(15,013,932)	-1.2%	(23,856,386)	-1.8%

^{(2), (3)} From Aon analysis as of June 30, 2011

^{(4), (5)} From Section 1, Exhibit 1, Page 1, Columns 6, 7

^{(6) = (4) - (2)}

^{(7) = (4) / (2) - 1}

^{(8) = (5) - (3)}

^{(9) = (5) / (3) - 1}



All Clusters Combined Indemnity

Calculation of Ultimate Lump Sum Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Paid Loss	Implied	Ult Loss	Selected Incr	Cumulative	Total	Paid	Est Ult	Ultimate		Est Ult	Selected	Prior
Accident	Excluding	Cumulative	Excluding	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum -	Lump Sum	Lump Sum	Lump Sum -	Est Ultimate	Est Ultimate
Year	Lump Sum	LDF	Lump Sum	% Outstdg	% Outstdg	Outstdg	to Date	Incr Method	Percentage	LDF	Paid Method	Lump Sums	Lump Sums
All Prior Yrs	87,672,918	1.229	107,780,004	0.0%	0.0%	0	3,941,682	3,941,682	3.7%	1.015	4,001,474	3,971,578	3,956,353
6/30/82-83	15,766,236	1.085	17,098,778	0.0%	0.0%	0	771,231	771,231	4.5%	1.004	773,954	772,592	772,592
6/30/83-84	20,620,991	1.128	23,260,718	0.0%	0.0%	0	1,792,639	1,792,639	7.7%	1.012	1,813,296	1,802,967	1,802,967
6/30/84-85	32,412,266	1.126	36,504,845	0.0%	0.0%	0	2,766,264	2,766,264	7.6%	1.011	2,796,925	2,781,595	2,781,595
6/30/85-86	43,312,360	1.136	49,214,840	0.0%	0.0%	0	3,291,601	3,291,601	6.7%	1.013	3,333,586	3,312,593	3,311,062
6/30/86-87	45,816,061	1.109	50,827,472	0.0%	0.0%	0	5,447,750	5,447,750	10.7%	1.011	5,507,900	5,477,825	5,483,808
6/30/87-88	64,434,879	1.128	72,705,561	0.0%	0.0%	0	7,999,017	7,999,017	11.0%	1.013	8,105,495	8,052,256	7,998,411
6/30/88-89	59,460,012	1.108	65,885,606	0.0%	0.0%	0	9,826,238	9,826,238	14.9%	1.017	9,992,102	9,909,170	9,936,898
6/30/89-90	55,910,367	1.107	61,918,990	0.1%	0.1%	35,905	9,864,298	9,900,203	16.0%	1.019	10,052,134	9,976,169	9,976,958
6/30/90-91	44,863,611	1.208	54,202,518	0.1%	0.1%	59,768	8,266,440	8,326,208	15.4%	1.023	8,456,883	8,391,545	8,417,263
6/30/91-92	27,962,307	1.155	32,284,489	0.1%	0.2%	53,571	5,420,474	5,474,044	17.0%	1.023	5,547,475	5,510,759	5,537,828
6/30/92-93	18,169,867	1.204	21,878,606	0.1%	0.3%	57,048	4,087,117	4,144,165	18.9%	1.030	4,209,023	4,176,594	4,187,473
6/30/93-94	20,167,726	1.190	23,997,598	0.0%	0.3%	71,565	4,177,034	4,248,599	17.7%	1.036	4,328,139	4,288,369	4,341,888
6/30/94-95	18,839,234	1.191	22,444,812	0.0%	0.3%	77,581	4,050,859	4,128,440	18.4%	1.045	4,234,505	4,181,473	4,284,638
6/30/95-96	18,012,627	1.207	21,741,309	0.2%	0.5%	114,684	3,623,870	3,738,554	17.2%	1.059	3,837,404	3,787,979	3,871,369
6/30/96-97	17,411,092	1.231	21,438,077	0.0%	0.5%	114,534	4,444,152	4,558,686	21.3%	1.081	4,806,086	4,682,386	4,684,633
6/30/97-98	20,239,681	1.225	24,784,712	0.0%	0.5%	134,958	4,686,877	4,821,835	19.5%	1.102	5,164,304	4,993,070	4,967,688
6/30/98-99	18,768,162	1.261	23,659,514	0.1%	0.7%	155,181	3,911,938	4,067,119	17.2%	1.113	4,354,901	4,211,010	4,383,904
6/30/99-00	21,850,101	1.291	28,204,638	0.2%	0.8%	231,666	3,895,368	4,127,034	14.6%	1.117	4,352,853	4,239,944	4,472,907
6/30/00-01	25,878,042	1.297	33,560,374	0.2%	1.0%	335,398	3,752,363	4,087,761	12.2%	1.121	4,206,378	4,166,685	4,378,374
6/30/01-02	23,221,272	1.335	31,007,110	0.3%	1.3%	392,479	3,785,668	4,178,147	13.5%	1.178	4,458,343	4,344,900	4,403,209
6/30/02-03	22,423,326	1.362	30,534,975	0.3%	1.6%	483,680	3,382,412	3,866,093	12.7%	1.198	4,051,223	3,990,031	4,211,856
6/30/03-04	21,767,551	1.384	30,129,147	0.3%	1.9%	576,208	3,556,519	4,132,727	13.7%	1.220	4,338,222	4,274,344	4,458,458
6/30/04-05	21,201,896	1.439	30,507,051	0.4%	2.4%	720,604	3,815,953	4,536,558	14.9%	1.299	4,956,711	4,799,790	5,194,874
6/30/05-06	17,913,398	1.501	26,896,637	1.0%	3.3%	891,475	3,725,429	4,616,904	17.2%	1.395	5,198,531	5,102,778	4,918,191
6/30/06-07	15,786,760	1.573	24,838,017	1.0%	4.3%	1,079,835	2,715,090	3,794,925	15.3%	1.530	4,154,274	4,100,555	4,772,692
6/30/07-08	17,473,101	1.716	29,978,434	1.5%	5.9%	1,756,521	3,295,130	5,051,652	16.9%	1.767	5,822,031	5,740,538	5,601,432
6/30/08-09	16,148,288	1.912	30,879,028	2.4%	8.2%	2,536,825	2,239,268	4,776,092	15.5%	2.521	5,644,360	5,412,485	5,687,035
6/30/09-10	14,508,772	2.284	33,140,567	3.8%	12.0%	3,978,529	1,398,471	5,376,999	16.2%	4.640	6,489,263	6,094,524	4,985,376
6/30/10-11	12,542,403	3.047	38,216,451	2.5%	14.5%	5,543,744	777,684	6,321,428	16.5%	12.864	10,004,486	6,109,930	4,540,082
6/30/11-12	5,840,358	6.525	38,106,178	2.4%	16.9%	6,447,867	0	6,447,867	16.9%	N/A	0	6,314,253	
Total	866,395,666		1,137,627,055			25,849,625	124,708,835	150,558,460	13.2%		154,992,260	154,970,685	148,321,815

NOTES:

(2) From Section 1, Exhibit 1, Page 2, Column 3

(3) = (4) / (2)

(4) From Section 1, Exhibit 1, Page 2, Column 6

(5) From Section 1, Exhibit 1, Page 11

(6) Downward sum of (5)

 $(7) = (6) \times (4)$

(8) From Section 1, Exhibit 1, Page 10

(9) = (7) + (8)

(9) = (7) + (8)(10) = (9) / (4)

(11) From Section 1, Exhibit 1, Page 12

 $(12) = (8) \times (11)$

(13) Selected based on (9) and (12)

(14) From Aon analysis as of June 30, 2011



Commonwealth of Massachusetts Workers Compensation All Clusters Combined INDEMNITY Lump Sum Development Incremental Lump Sum Payments

Section 1 Exhibit 1 Page 10

Acc Y Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-86 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun	408,337 251,500 135,731 108,490 48,000 20,000 47,500 6,157 0 36,000 17,730 285,000 0	438,707 830,673 654,058 679,356 888,102 705,230 1,184,751 890,613 439,250 994,493 517,820 251,595 243,617 153,200 171,103 171,301 451,583 728,501 362,500	1,205,138 1,994,750 583,116 665,328 863,226 977,200 1,049,356 1,074,000 1,162,675 1,042,681 726,541 838,510 619,400 973,654 552,463 840,367 772,454	1,809,296 1,433,327 753,497 971,951 715,524 797,324 656,831 820,183 665,000 765,621 532,050 515,804 692,914 830,735 917,102 1,359,602	1,789,441 1,317,952	1,573,442 1,630,950 1,060,755 1,217,840 535,501 415,801 102,560 110,001 110,001 110,001 110,001 110,001 110,001 155,680 165,68		84-96 46,500 32,500 178,437 201,250 826,899 509,001 711,383 995,502 993,000 201,500 103,000 201,500 10,000 158,833 140,600 161,166 179,055 198,118 370,500 325,000 80,000 241,501	96-108 31,000 37,500 119,500 383,400 586,995 398,456 849,000 531,500 409,534 232,000 47,500 7,500 7,500 7,500 106,501 106,501 118,001 129,000 73,001 118,001 134,000 100,000	108-120 20,000 80,000 233,650 565,833 10,000 184,806 373,400 332,500 438,300 140,000 178,000 40,050 134,875 131,001 18,001 18,000 18,000 96,000	120-132 184,000 153,481 204,200 337,200 147,000 147,000 147,000 147,000 103,000 103,000 103,000 107,000 52,000 53,000	132-144 115,000 90,750 246,501 193,500 20,000 102,671 241,507 258,100 31,250 55,000 62,500 17,300 234,500 35,000 62,500 173,001 34,000 27,750 34,000 27,750 34,000 27,750 34,000	144-156 138,000 77,000 48,000 294,550 86,000 334,859 328,463 0 13,500 0 71,000 0 0 130,000 0 25,000	156-168 550,984 110,000 102,001 40,000 37,500 406,500 46,000 0 25,000 112,000 0 119,000 0	168-180 594,000 160,000 0 0 240,000 59,910 25,000 31,000 70,000 33,368 0 25,000 42,500 16,600 40,000 69,000	180-192 318,784 0 0 30,000 133,500 0 239,999 0 18,500 25,000 178,100 20,867 0 120,000 12,500 0 40,000	192-204 155,500 10,000 37,500 120,000 0 50,000 191,667 63,500 106,000 102,500 326,500 0 0	204-216 30,000 0 00 85,000 30,000 132,000 65,000 218,333 110,125 280,000 0 0	216-228 362,833 0 45,000 35,000 80,000 55,000 80,000 81,333 116,383 129,876 130,000 0	228-240 369,668 0 0 25,000 64,000 100,001 100,001 160,284 27,500 0 35,000	240-252 354,998 0 0 16,000 90,000 62,500 0	252-264 72,250 0 84,000 0 45,000 150,001 0 33,333 0	145,500 0 0 0	276-288 201,500 0 10,000 0 237,801 135,000 58,001 10,000	288-300 118,040 0 0 0 0 0 62,000	300-312 28,000 0 0 0 198,000 0	312-324 78,125 0 150,000 0 2,000	324-336 0 0 0 0	336-348 0 0 0	348-360 7,500 0	360-372 7,500
Cumulative Lum Acc Yr Ending	p Sum Pay	ments 24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
All Daine Von											202 500	100 500			1 601 404							2 255 517	2 501 017	2 702 517	2 020 557	2.040.557	2.025.502				
All Prior Yrs Jun-83	0	0	0	0	0	20,000	12,000 20,000	58,500 52,500	89,500 90,000	109,500 170,000	293,500 323,481	408,500 414,231	491,231	601,231	761,231	761,231	771,231	771,231	771,231	771,231	3,283,267 771,231	771,231	771,231	771,231	771,231	3,848,557 771,231	771,231	771,231	3,926,682 771,231	3,934,182 771,231	3,941,682
Jun-83 Jun-84	0	0 0 0	0	0 0 0	0 0 25,750	20,000 58,250	12,000 20,000 168,850	58,500 52,500 347,287	89,500 90,000 466,787	109,500 170,000 700,437	323,481 904,637	414,231 1,151,138	491,231 1,199,138	601,231 1,301,139	761,231 1,351,139	761,231 1,381,139	771,231 1,418,639	771,231 1,503,639	771,231 1,548,639	771,231 1,548,639	771,231 1,548,639	771,231 1,632,639	771,231 1,632,639	771,231 1,642,639	771,231 1,642,639	771,231 1,642,639	771,231 1,792,639	771,231 1,792,639	771,231		3,941,082
Jun-83	0	0 0 0 0	0	0	0	20,000	12,000 20,000	58,500 52,500 347,287 608,281	89,500 90,000 466,787 991,681	109,500 170,000	323,481 904,637 1,894,714	414,231 1,151,138 2,088,214	491,231 1,199,138 2,382,764	601,231 1,301,139 2,422,764	761,231 1,351,139 2,422,764	761,231 1,381,139 2,556,264	771,231 1,418,639 2,676,264	771,231 1,503,639 2,706,264	771,231 1,548,639 2,741,264	771,231 1,548,639 2,766,264	771,231 1,548,639 2,766,264	771,231 1,632,639 2,766,264	771,231 1,632,639 2,766,264	771,231 1,642,639 2,766,264	771,231 1,642,639 2,766,264	771,231 1,642,639 2,766,264	771,231	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87	0 0 0 0 0	0 0 0 0 0 81,440	0 0 0 0 58,000 265,762	0 0 98,476 174,759 512,428	0 25,750 133,976 387,859 765,890	20,000 58,250 260,476 534,203 1,387,497	12,000 20,000 168,850 407,031 871,131 2,438,034	58,500 52,500 347,287 608,281 1,698,030 2,947,035	89,500 90,000 466,787 991,681 2,285,025 3,345,491	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297	323,481 904,637 1,894,714 2,442,025 3,716,721	414,231 1,151,138 2,088,214 2,462,025 3,819,392	491,231 1,199,138 2,382,764 2,548,025 4,154,251	601,231 1,301,139 2,422,764 2,585,525 4,560,751	761,231 1,351,139 2,422,764 2,585,525 4,800,751	761,231 1,381,139 2,556,264 2,585,525 5,040,750	771,231 1,418,639 2,676,264 2,585,525 5,090,750	771,231 1,503,639 2,706,264 2,615,525 5,222,750	771,231 1,548,639 2,741,264 2,670,525 5,302,750	771,231 1,548,639 2,766,264 2,734,525 5,312,750	771,231 1,548,639 2,766,264 2,750,525 5,312,750	771,231 1,632,639 2,766,264 2,795,525 5,312,750	771,231 1,632,639 2,766,264 2,853,800 5,312,750	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,682
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88	0 0 0 0	106,671	0 0 0 58,000 265,762 307,099	0 0 98,476 174,759 512,428 725,599	0 25,750 133,976 387,859 765,890 1,562,083	20,000 58,250 260,476 534,203 1,387,497 3,135,525	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90	0 0 0 0 0 0 0	106,671 239,195 254,094	0 0 0 58,000 265,762 307,099 620,195 1,459,232	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528	0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,682
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91	0 0 0 0 0 0 0 0 0 0 13,500	106,671 239,195 254,094 452,207	0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,776,550	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90	0 0 0 0 0 0 0	106,671 239,195 254,094 452,207 896,673	0 0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 3,072,036	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,776,550 3,902,037	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839 4,305,037	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94	0 0 0 0 0 0 0 0 0 13,500 66,000 90,000	106,671 239,195 254,094 452,207 896,673 716,058 769,356	0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,353,337 2,348,106	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 3,072,036 2,761,587 2,873,483	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,776,550 3,902,037 3,464,117 3,406,484	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,607,984	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839 4,305,037 3,757,117 3,655,484	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-94	0 0 0 0 0 0 0 0 0 13,500 66,000 62,000 90,000 219,963	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065	0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265	0 0 98,476 174,759 512,428 725,599 3,268,528 3,880,284 2,233,286 2,353,337 2,348,106 2,882,589	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 3,072,036 2,761,587 2,873,483 3,282,359	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,507,959	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,776,550 3,902,037 3,464,117 3,406,484 3,574,959	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,607,984 3,584,959	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839 4,305,037 3,757,117 3,655,484 3,655,584	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,848,859	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 3,883,859	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-99 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-97	0 0 0 0 0 0 0 0 0 13,500 66,000 62,000 90,000 219,963 80,500 134,365	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116	0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,835,086 2,393,116	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,353,337 2,348,106 2,882,589 2,491,917 3,213,299	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 2,761,587 2,873,483 3,282,359 2,811,368 3,635,799	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,507,959 2,921,369 3,808,050	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,776,550 3,902,037 3,464,117 3,406,484 3,574,959 3,010,536 3,824,050	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,607,984 3,584,959 3,169,369 3,964,650	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839 4,305,037 3,757,117 3,655,484 3,655,584 3,292,369 4,071,151	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,848,859 3,526,370 4,347,152	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 3,883,859 3,588,870 4,364,152	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-87 Jun-88 Jun-99 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-97 Jun-97	0 0 0 0 0 0 0 0 0 13,500 66,000 62,000 90,000 219,963 80,500 134,365 408,337	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950	0 0 0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,835,086 2,393,116 2,461,625	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,333,337 2,348,106 2,882,589 2,491,917 3,213,299 3,126,625	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 3,072,036 2,761,587 2,873,483 3,282,359 2,811,368 3,635,799 3,557,716	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,507,959 2,921,369 3,808,050 3,808,050 3,822,625	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,661,325 6,6776,550 3,902,037 3,464,117 3,406,484 3,574,959 3,010,536 3,824,050 3,932,960	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,607,984 3,584,959 3,169,369 4,094,126	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,258,327 8,035,319 7,211,839 4,305,037 3,757,117 3,655,484 3,655,584 3,292,369 4,071,151 4,123,126	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,848,859 3,526,370 4,347,152 4,141,127	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877	491,231 1,199,138 2,382,764 2,548,025 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 3,883,859 3,588,870 4,364,152 4,498,877	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-99 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-97	0 0 0 0 0 0 0 0 0 0 13,500 66,000 62,000 90,000 219,963 80,500 134,365 408,337 251,500	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950 690,750	0 0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,835,086 2,393,116 2,461,625 1,733,431	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,353,337 2,348,106 2,882,589 2,491,917 3,213,299 3,126,625 2,499,052	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 2,761,587 2,873,483 3,282,359 2,811,368 3,633,799 3,557,716 2,866,608	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,507,959 2,921,369 3,808,050 3,822,625 3,824,805	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,776,550 3,902,037 3,464,417 3,406,484 3,574,959 3,010,536 3,824,050 3,932,960 3,354,881	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,607,984 3,584,959 3,169,369 3,964,650 4,094,126	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839 4,305,037 3,757,117 3,655,548 4,3292,369 4,071,151 4,102,037 4,102	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,780,937	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,113 3,695,534 3,695,537 4,347,152 4,141,127 3,838,937	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-95 Jun-96 Jun-97 Jun-99 Jun-99 Jun-90 Jun-01	0 0 0 0 0 0 0 0 0 0 13,500 66,000 62,000 90,000 219,963 80,500 134,365 408,337 251,500 135,730	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950 690,750 1,130,224 626,310	0 0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,835,086 2,393,116 2,461,625 1,733,431 1,856,765	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,233,286 2,491,917 3,213,299 3,126,625 2,499,052 2,388,815 1,980,624	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 3,072,036 2,761,587 2,873,483 3,282,359 2,811,368 3,635,799 3,557,716 2,866,608 2,783,366 2,466,794	20,000 58,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,507,959 2,921,369 3,822,625 3,044,805 3,047,865 2,990,359	12,000 20,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,061,325 6,76,550 3,902,037 3,464,117 3,406,484 3,574,959 3,010,536 3,824,050 3,354,881 3,412,749 3,229,863	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,567,984 3,584,959 3,169,369 3,964,650 4,094,126 3,533,936 3,610,867 3,600,363	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839 4,305,037 3,757,117 3,655,484 3,655,584 4,071,151 4,123,126 3,606,937 3,728,868 3,728,868	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 3,423,117 3,695,534 3,423,370 4,180,152 4,131,127 3,780,459 3,423,370 4,180,152 4,131,127 3,786,937 3,804,868 3,752,368	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,3941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-86 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-96 Jun-99 Jun-90 Jun-91 Jun-99 Jun-90 Jun-90 Jun-90 Jun-90 Jun-90 Jun-90 Jun-90 Jun-90 Jun-90	0 0 0 0 0 0 0 0 0 0 13,500 66,000 62,000 90,000 219,963 80,500 134,365 408,337 251,500 135,731 108,490 48,000	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950 690,750 1,130,224 626,310 299,595	0 0 0 0 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,282 2,085,265 2,393,116 2,461,625 1,733,431 1,856,765 1,464,820 918,995	0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,353,337 2,348,106 2,882,589 2,491,917 3,213,299 3,126,625 2,499,052 2,388,815 1,980,624 1,611,909	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,800,710 3,072,036 2,761,587 2,873,483 3,282,359 2,811,368 2,835,799 3,557,716 2,866,608 2,783,366 2,466,794 2,466,794	20,000 \$8,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,507,959 2,921,369 3,808,050 3,822,625 3,084,805 3,047,865 2,947,865 2,947,865 2,947,865 2,947,861	12,000 20,000 168,850 407,031 871,131 2438,034 4,328,025 6,061,325 6,776,550 3,902,037 3,464,117 3,406,484 3,010,536 3,932,960 3,354,881 3,412,749 3,229,863 3,229,863	58,500 52,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,607,984 3,584,959 3,964,650 4,094,126 3,533,936 3,618,637 3,600,363 3,618,533	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839 4,305,037 3,757,117 3,655,548 4,3292,369 4,071,151 4,123,126 3,606,937 3,728,868 3,734,363 3,663,663	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,786,937 3,786,937 3,786,937 3,782,363 3,752,363	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,3941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-95 Jun-96 Jun-97 Jun-99 Jun-99 Jun-90 Jun-01	0 0 0 0 0 0 0 0 0 0 13,500 66,000 62,000 90,000 219,963 80,500 134,365 408,337 251,500 135,730	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950 690,750 1,130,224 626,310 299,595	0 0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,835,086 2,393,116 2,461,625 1,733,431 1,856,765 1,464,820 918,995 1,237,271	0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,353,337 2,348,106 2,352,338,73 2,13,299 3,126,625 2,499,052 2,388,155 1,980,624 1,611,909 2,068,006	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 3,072,036 2,761,587 2,873,483 3,282,359 3,635,799 3,557,716 2,866,608 2,766,794 2,379,996 2,379,996 2,622,988	20,000 \$8,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,107,388 3,507,959 2,921,369 3,822,625 3,088,805 2,903,808,050 2,923,808,050 2,923,808,050 2,923,808,050 2,936,811 3,075,411	12,000 20,000 168,850 407,031 871,131 2438,034 4,328,025 6,061,325 6,776,550 3,902,037 3,464,117 3,406,484 3,010,536 3,932,960 3,354,881 3,412,749 3,229,863 3,229,863	\$8,500 \$2,500 \$47,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,607,984 3,584,959 3,169,369 3,964,650 4,094,126 3,533,936 3,610,867 3,610,	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,211,839 4,305,037 3,757,117 3,655,584 3,655,584 4,071,151 4,123,126 3,606,937 3,728,868 3,728,868 3,734,363 3,728,868	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,786,937 3,786,937 3,786,937 3,782,363 3,752,363	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,3941,082
Jun-83 Jun-84 Jun-86 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-92 Jun-93 Jun-94 Jun-95 Jun-95 Jun-92 Jun-93 Jun-97 Jun-93 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-93 Jun-91 Jun-93 Jun-94 Jun-93 Jun-94 Jun-95 Jun-93 Jun-94 Jun-95 Jun-94 Jun-95	0 0 0 0 0 0 0 0 0 0 13,500 66,000 62,000 90,000 219,963 80,500 134,365 408,337 251,500 135,731 108,490 48,000 20,000 47,500 61,57	106,671 239,195 254,094 452,207 896,673 716,055 1,108,065 785,730 1,319,116 1,298,950 690,750 1,130,224 626,310 299,595 263,617 200,700 177,260	0 0 0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,835,086 2,393,116 2,461,625 1,733,431 1,734,431 1,734	0 0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 4,233,237 2,348,106 2,882,589 2,491,917 3,213,299 3,126,625 2,499,052 2,388,815 1,980,624 1,611,909 2,068,006 1,670,265 2,377,226	0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 3,072,036 2,761,587 2,873,483 3,282,359 3,635,799 3,557,716 2,866,608 2,783,366 2,783,366 2,466,794 2,379,996 2,622,988 2,500,018 3,026,952	20,000 \$8,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,507,959 2,921,369 3,888,050 3,882,062 3,084,805 2,941,865 2,990,359 2,936,811 3,075,411 3,075,411 3,053,018 3,327,952	12,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,762,507 3,962,037 3,464,117 3,406,484 3,574,959 3,010,536 3,932,960 3,932,960 3,354,881 3,412,749 3,229,863 3,293,532 2,000,412 3,215,018 3,258,955	\$8,500 \$2,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,567,	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,211,839 4,305,037 3,757,117 3,655,584 3,655,584 4,071,151 4,123,126 3,606,937 3,728,868 3,728,868 3,734,363 3,728,868	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,786,937 3,786,937 3,786,937 3,782,363 3,752,363	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-86 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-96 Jun-97 Jun-98 Jun-90 Jun-01 Jun-02 Jun-03 Jun-04 Jun-02 Jun-03 Jun-04	0 0 0 0 0 0 0 0 0 13,500 66,000 90,000 219,963 80,500 134,365 408,337 251,500 48,000 20,000 47,500	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950 690,750 1,130,224 626,310 299,595 263,617 200,700 177,260	0 0 0 0 58,000 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,733,431 1,835,086 2,393,3116 2,461,625 1,733,431 1,856,765 1,464,820 918,995 1,237,271 753,163 1,017,627 1,079,755	0 0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,235,337 2,348,106 2,882,289 2,491,917 3,213,299 3,126,625 2,499,052 2,388,815 1,980,624 1,611,909 2,068,006 1,670,265 2,377,229 2,432,756	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,586,480 4,800,710 3,072,036 2,761,587 2,873,483 3,282,359 2,811,368 2,781,366 2,466,794 2,379,996 2,466,794 2,622,988 2,500,018 3,026,952 2,916,929	20,000 \$8,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,809,050 3,802,625 2,921,369 2,921,369 2,921,369 2,936,811 3,047,865 2,990,359 2,936,811 3,075,411 3,075,411 3,075,413	12,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,762,507 3,962,037 3,464,117 3,406,484 3,574,959 3,010,536 3,932,960 3,932,960 3,354,881 3,412,749 3,229,863 3,293,532 2,000,412 3,215,018 3,258,955	\$8,500 \$2,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,567,	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,211,839 4,305,037 3,757,117 3,655,584 3,655,584 4,071,151 4,123,126 3,606,937 3,728,868 3,728,868 3,734,363 3,728,868	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,786,937 3,786,937 3,786,937 3,782,363 3,752,363	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-86 Jun-87 Jun-88 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-96 Jun-90 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-04 Jun-05 Jun-05 Jun-05 Jun-05 Jun-05 Jun-05 Jun-06 Jun-07 Jun-06 Jun-07 Jun-07 Jun-08	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 62,000 62,000 90,000 219,963 80,500 134,365 408,337 251,500 135,731 108,490 48,000 20,000 47,500 61,5	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,056 785,730 1,319,116 1,298,950 1,130,224 626,310 299,595 263,617 200,700 307,301 487,533	0 0 0 0 0 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,083,265 1,833,086 2,393,116 2,461,625 1,733,431 1,734,431 1,	0 0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,2353,337 2,348,106 2,882,589 2,491,917 3,213,299 3,126,625 2,499,052 2,388,815 1,980,624 1,611,909 2,068,006 1,670,265 2,377,229 2,4432,756 2,106,086	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 2,761,587 2,873,483 3,282,359 2,811,368 3,635,799 3,635,799 3,557,716 2,866,098 2,783,366 2,466,794 2,379,996 2,622,988 2,500,018 2,500,018 2,502,018 2,502,018 2,502,018 2,522,088	20,000 \$8,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,809,050 3,802,625 2,921,369 2,921,369 2,921,369 2,936,811 3,047,865 2,990,359 2,936,811 3,075,411 3,075,411 3,075,413	12,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,762,507 3,962,037 3,464,117 3,406,484 3,574,959 3,010,536 3,932,960 3,932,960 3,354,881 3,412,749 3,229,863 3,293,532 2,000,412 3,215,018 3,258,955	\$8,500 \$2,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,567,	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,211,839 4,305,037 3,757,117 3,655,584 3,655,584 4,071,151 4,123,126 3,606,937 3,728,868 3,728,868 3,734,363 3,728,868	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,786,937 3,786,937 3,786,937 3,782,363 3,752,363	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,3941,082
Jun-83 Jun-84 Jun-86 Jun-86 Jun-87 Jun-88 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-93 Jun-94 Jun-95	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950 690,750 1,130,224 626,310 299,595 263,617 200,700 177,260 307,301 487,583 746,231 647,500	0 0 0 0 0 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,835,086 2,393,116 2,461,625 1,733,431 1,856,765 1,464,820 918,995 1,237,271 7,53,163 1,017,627 1,079,755 1,1402,333 1,520,880 1,431,267	0 0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,2353,337 2,348,106 2,882,589 2,491,917 3,213,299 3,126,625 2,499,052 2,388,815 1,980,624 1,611,909 2,068,006 1,670,265 2,377,229 2,4432,756 2,106,086	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 2,761,587 2,873,483 3,282,359 2,811,368 3,635,799 3,635,799 3,557,716 2,866,098 2,783,366 2,466,794 2,379,996 2,622,988 2,500,018 2,500,018 2,502,018 2,502,018 2,502,018 2,522,088	20,000 \$8,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,809,050 3,802,625 2,921,369 2,921,369 2,921,369 2,936,811 3,047,865 2,990,359 2,936,811 3,075,411 3,075,411 3,075,413	12,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,762,507 3,962,037 3,464,117 3,406,484 3,574,959 3,010,536 3,932,960 3,932,960 3,354,881 3,412,749 3,229,863 3,293,532 2,000,412 3,215,018 3,258,955	\$8,500 \$2,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,567,	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,211,839 4,305,037 3,757,117 3,655,584 3,655,584 4,071,151 4,123,126 3,606,937 3,728,868 3,728,868 3,734,363 3,728,868	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,786,937 3,786,937 3,786,937 3,782,363 3,752,363	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082
Jun-83 Jun-84 Jun-85 Jun-86 Jun-86 Jun-87 Jun-88 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-96 Jun-90 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-04 Jun-05 Jun-05 Jun-05 Jun-05 Jun-05 Jun-05 Jun-06 Jun-07 Jun-06 Jun-07 Jun-07 Jun-08	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 62,000 62,000 90,000 219,963 80,500 134,365 408,337 251,500 135,731 108,490 48,000 20,000 47,500 61,5	106,671 239,195 254,094 452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950 690,750 1,130,224 626,310 299,595 263,617 200,700 177,260 307,301 487,583 746,231 647,500	0 0 0 0 0 265,762 307,099 620,195 1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,083,265 1,833,086 2,393,116 2,461,625 1,733,431 1,734,431 1,	0 0 0 98,476 174,759 512,428 725,599 1,617,939 3,268,528 3,880,284 2,233,286 2,2353,337 2,348,106 2,882,589 2,491,917 3,213,299 3,126,625 2,499,052 2,388,815 1,980,624 1,611,909 2,068,006 1,670,265 2,377,229 2,4432,756 2,106,086	0 0 25,750 133,976 387,859 765,890 1,562,083 3,407,380 4,586,480 4,800,710 2,761,587 2,873,483 3,282,359 2,811,368 3,635,799 3,635,799 3,557,716 2,866,098 2,783,366 2,466,794 2,379,996 2,622,988 2,500,018 2,500,018 2,502,018 2,502,018 2,502,018 2,522,088	20,000 \$8,250 260,476 534,203 1,387,497 3,135,525 5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,809,050 3,802,625 2,921,369 2,921,369 2,921,369 2,936,811 3,047,865 2,990,359 2,936,811 3,075,411 3,075,411 3,075,413	12,000 168,850 407,031 871,131 2,438,034 4,328,025 6,061,325 6,632,785 6,762,507 3,962,037 3,464,117 3,406,484 3,574,959 3,010,536 3,932,960 3,932,960 3,354,881 3,412,749 3,229,863 3,293,532 2,000,412 3,215,018 3,258,955	\$8,500 \$2,500 347,287 608,281 1,698,030 2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,567,	89,500 90,000 466,787 991,681 2,285,025 3,345,491 5,888,408 7,211,839 4,305,037 3,757,117 3,655,584 3,655,584 4,071,151 4,123,126 3,606,937 3,728,868 3,728,868 3,734,363 3,728,868	109,500 170,000 700,437 1,557,514 2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,786,937 3,786,937 3,786,937 3,782,363 3,752,363	323,481 904,637 1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	414,231 1,151,138 2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 3,995,859 3,607,270 4,364,152 4,617,877	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231		3,941,082



Commonwealth of Massachusetts Workers Compensation All Clusters Combined INDEMINTY Lump Sum Development Incremental Lump Sums as a % of Ultimate Losses Excluding Lump Sums

Section 1 Exhibit 1 Page 11

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-93 Jun-94 Jun-95 Jun-96 Jun-97 Jun-98 Jun-97 Jun-98 Jun-97 Jun-98 Jun-97 Jun-98 Jun-97 Jun-98 Jun-90 Jun-01 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-05 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Jun-11 Jun-12	0-12 0.000	12-24 10-00 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.004 0.004 0.008 0.028 0.028 0.028 0.039	24-36 0.000 0.000 0.000 0.000 0.001 0.001 0.001 0.003 0.003 0.003 0.003 0.004 0.030 0.044 0.044 0.044 0.050 0.044 0.050 0.050 0.018 0.025 0.	36-48 0.000 0.000 0.000 0.000 0.000 0.003 0.002 0.005 0.006 0.015 0.026 0.023 0.023 0.030 0.038 0.037 0.030 0.038 0.027 0.030 0.038 0.027 0.030 0.038 0.027 0.030 0.038 0.027 0.030 0.030 0.030 0.030 0.030 0.030 0.030 0.030	48-60 0.000 0.000 0.001 0.001 0.001 0.001 0.002 0.012 0.027 0.021 0.017 0.026 0.018 0.019 0.020 0.017 0.021 0.021 0.021 0.021 0.018 0.018 0.019 0.022 0.017 0.016 0.014 0.028 0.017 0.028 0.021 0.018	60-72 0.000 0.001 0.001 0.003 0.012 0.022 0.025 0.017 0.017 0.019 0.010 0.010 0.008 0.011 0.015 0.008 0.018 0.018 0.018 0.018 0.018 0.019 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.019 0.018 0.019 0.018 0.019 0.019 0.018 0.019 0.018 0.019 0.019 0.019 0.018 0.019 0.018 0.019 0.018 0.019 0.018 0.019 0.010 0.	72-84 0.000 0.000 0.000 0.005 0.004 0.007 0.021 0.016 0.016 0.016 0.010 0.003 0.003 0.004 0.003 0.004 0.003 0.004 0.001 0.004 0.005 0.007 0.004 0.005 0.005	84-96 0.000 0.002 0.008 0.006 0.017 0.010 0.015 0.016 0.004 0.007 0.005 0.008 0.007	96-108 0.000 0.000 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 0.003 0.006 0.001 0.003 0.004 0.004 0.004 0.004 0.004	108-120 0.000 0.005 0.010 0.016 0.000 0.004 0.005 0.005 0.005 0.005 0.006 0.006 0.006 0.006 0.006 0.006 0.000 0.006 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.00	120-132 0.002 0.009 0.009 0.009 0.003 0.004 0.004 0.004 0.002 0.006 0.002 0.001 0.003 0.003 0.000 0.003 0.000 0.003 0.0000 0.000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.	132-144 0.001 0.001 0.001 0.005 0.011 0.005 0.000 0.002 0.003 0.004 0.007 0.001 0.001 0.003 0.010 0.002 0.003 0.001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001	144-156 0.001 0.005 0.002 0.008 0.002 0.007 0.005 0.004 0.001 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.00	156-168 0.005 0.005 0.004 0.004 0.004 0.001 0.000 0.001 0.001 0.000 0.00	168-180 0.006 0.008 0.002 0.002 0.000 0.000 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 0.003	180-192 0.003 0.003 0.001 0.001 0.001 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.00	192-204 0.001 0.001 0.002 0.003 0.000 0.001 0.002 0.001 0.002 0.000 0.000	204-216 0.000 0.000 0.004 0.001 0.001 0.001 0.003 0.001 0.003 0.002 0.005	216-228 0.003 0.003 0.002 0.001 0.001 0.001 0.001 0.002 0.002 0.002 0.002 0.002	228-240 0.003 0.003 0.000 0.001 0.001 0.001 0.001 0.002 0.000 0.000 0.000	240-252 0.003 0.000 0.000 0.000 0.000 0.000 0.001 0.001 0.001 0.001	252-264 0.001 0.001 0.000 0.001 0.001 0.000 0.001 0.000 0.001	264-276 0.001 0.000 0.000 0.000 0.001 0.001 0.001 0.001	276-288 0.002 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.00	288-300 0.001 0.000 0.000 0.000 0.000 0.000 0.000	300-312 0.000 0.000 0.000 0.000 0.000 0.000	312-324 0.001 0.000 0.006 0.000 0.000	324-336 0.000 0.000 0.000 0.000	336-348 0.000 0.000 0.000	348-360 0.000 0.000	360-372 0.000
Averages Simple Avg		12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372
All Yrs (ex P)	0.003	0.016	0.024	0.024	0.016	0.012	0.009	0.008	0.005	0.005	0.004	0.004	0.002	0.002	0.002	0.001	0.002	0.002	0.001	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.002	0.000	0.000	0.000	
Latest 5				0.036	0.022	0.013	0.009	0.008	0.003	0.003	0.001	0.003	0.001	0.002	0.002	0.001	0.003	0.002	0.002	0.001	0.001	0.001	0.000	0.002	0.000	0.001					
Latest 3	0.004	0.017	0.028																												
		0.017 0.014	0.028	0.036	0.022	0.013	0.009	0.006	0.002	0.002	0.001	0.001	0.002	0.002	0.002	0.001	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.000			
Olympic Avg	0.004 0.003	0.014	0.025	0.029	0.020	0.011	0.009	0.006																							
Olympic Avg All Yrs (ex P) Latest 10	0.004								0.002 0.005 0.003	0.002 0.004 0.003	0.001 0.004 0.002	0.001 0.004 0.003	0.002 0.002 0.001	0.002 0.002 0.001	0.002 0.001 0.001	0.001 0.001 0.001	0.000 0.001 0.001	0.001 0.002 0.002	0.001 0.001 0.002	0.001 0.001 0.001	0.000 0.000 0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.000			



Commonwealth of Massachusetts Workers Compensation All Clusters Combined INDEMNITY Paid Loss Development Paid Loss - Lump Sum only

Section 1 Exhibit 1 Page 12

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-86 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-95 Jun-95 Jun-95 Jun-95 Jun-95 Jun-97 Jun-98 Jun-97 Jun-98 Jun-99 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-91 Jun-92 Jun-93 Jun-99 Jun-91 Jun-91 Jun-91 Jun-91 Jun-92 Jun-93 Jun-99 Jun-91 Ju	80,500 134,365 408,337 251,500	452,207 896,673 716,058 769,356 1,108,065 785,730 1,319,116 1,298,950 690,750 1,130,224 626,310 295,263 263,617 200,700 177,260 307,301 487,583 746,231 647,500	1,459,232 2,446,957 1,479,789 1,381,386 1,632,582 2,085,265 1,835,086 2,393,116 2,461,625 1,733,431 1,856,765 1,464,820 918,995 1,237,271 753,163 1,017,627 1,079,755 1,402,335	3,880,284 2,233,286 2,353,337 2,348,106 2,882,589 2,491,917 3,213,299 3,126,625 2,499,052 2,388,815 1,980,624 1,670,265 2,377,229 2,432,756 2,106,086 2,106,086 2,106,088	4,586,480 4,800,710 3,072,036 2,761,587 2,873,483 3,282,2359 2,811,368 3,635,799 3,557,716 2,866,636 2,466,794 2,379,996 2,622,988 2,500,018 3,026,952 2,916,929 2,522,088	5,038,330 5,647,235 6,018,550 3,607,537 3,177,388 3,206,984 3,507,959 2,921,369 3,808,050 3,822,625 3,084,805 3,047,865 2,990,359 2,936,811 3,075,411 3,053,018 3,327,952 3,3362,429	4,328,025 6,061,325 6,632,785 6,776,550 3,902,037 3,406,481 3,574,959 3,010,536 3,824,050 3,932,960 3,354,881 3,412,749 3,229,863 3,229,863 3,229,863 3,200,412 3,215,018 3,598,952	2,947,035 5,039,408 7,056,827 7,625,785 6,979,839 4,123,537 3,567,117 3,607,984 3,584,959 3,169,369 3,964,650 4,094,126 3,533,936 3,610,867 3,610,	2,285,025 3,345,491 5,888,408 7,588,327 8,035,319 7,211,839 4,305,037 3,757,117 3,655,5484 3,292,369 4,071,151 4,123,126 3,666,368 3,734,363 3,728,868 3,734,363 3,663,668 3,663,668	2,295,025 3,530,297 6,261,808 7,920,827 8,473,619 7,351,839 4,483,037 3,842,117 3,695,534 3,790,459 3,423,370 4,180,152 4,131,127 3,786,937 3,804,868 3,752,363 3,752,363	1,894,714 2,442,025 3,716,721 6,567,134 8,524,638 8,839,131 7,451,840 4,685,720 3,854,117 3,695,534 3,848,859 3,526,370 4,347,152 4,141,127 3,838,937 3,836,368 3,752,363	2,088,214 2,462,025 3,819,392 6,808,641 8,782,738 9,247,964 7,505,840 4,716,970 3,909,117 3,930,034 3,883,859 3,588,870 4,364,152 4,368,877 3,911,938 3,870,368	491,231 1,199,138 2,382,764 2,548,025 4,154,251 7,137,104 9,059,238 9,288,797 7,505,840 4,730,470 3,909,117 4,001,034 4,001,034 4,364,152 4,498,877 3,911,938	168 1,097,484 601,231 1,301,139 2,422,764 2,585,525 4,560,751 7,137,104 9,151,738 9,334,797 7,505,840 4,852,738 3,909,117 4,026,034 4,026,034 4,026,034 4,046,152 4,026,034 4,046,152 4,017,877 3,911,938	761,231 1,351,139 2,422,764 2,585,525 4,800,751 7,197,014 9,176,738 9,365,797 7,575,840 4,886,106 3,909,117 4,051,034 4,038,359 3,623,870 4,404,152	761,231 1,381,139 2,556,264 2,585,525 5,040,750 7,197,014 9,195,238 9,390,797 7,753,940 4,906,973 3,909,117 4,171,034 4,050,859 3,623,870	771,231 1,418,639 2,676,264 2,585,525 5,090,750 7,388,681 9,258,738 9,496,797 7,856,440 5,233,473 3,959,117 4,177,034 4,050,859	771,231 1,503,639 2,706,264 2,615,525 5,222,750 7,453,681 9,477,071 9,606,922 8,136,440 5,340,473 4,017,117 4,177,034	771,231 1,548,639 2,741,264 2,670,525 5,302,750 7,539,014 9,593,454 9,736,798 8,266,440 5,420,474 4,052,117	771,231 1,548,639 2,766,264 2,734,525 5,312,750 7,639,015 9,753,738 9,764,298 8,266,440 5,420,474	771,231 1,548,639 2,766,264 2,750,525 5,312,750 7,729,015 9,816,238 9,797,631 8,266,440	771,231 1,632,639 2,766,264 2,795,525 5,312,750 7,879,016 9,816,238 9,830,965	771,231 1,632,639 2,766,264 2,853,800 5,312,750 7,879,016 9,816,238	771,231 1,642,639 2,766,264 3,091,601 5,447,750 7,937,017	771,231 1,642,639 2,766,264 3,091,601 5,447,750	771,231 1,642,639 2,766,264 3,289,601	771,231 1,792,639 2,766,264	771,231 1,792,639	771,231	360 3,934,182 771,231	372 3,941,682
Age-to-Age Fac Ace Y Fedding All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-85 Jun-89 Jun-91 Jun-91 Jun-91 Jun-92 Jun-93 Jun-94 Jun-94 Jun-93 Jun-94 Jun-93 Jun-94 Jun-95 Jun-90 J	33.497 13.596 11.549 8.548 5.038 9.761 2.747 8.327 5.773 6.242 13.181 4.225 28.790 13.544 42.089 2.272 2.463	24-36 3.263 2.879 2.593 5.743 5.411 1.650 1.929 2.122 1.882 2.336 1.814 1.893 3.067 4.693 3.753 5.741 3.514 2.876 2.038 2.232	3.013 1.928 2.363 2.609 2.240 1.586 1.509 1.438 1.343 1.343 1.270 1.422 1.287 1.287 1.271 1.2218 2.218	1.360 2.219 2.219 2.153 2.106 6.1403 1.237 1.376 1.124 1.128 1.131 1.138 1.147 1.249 1.148 1.147 1.249 1.149 1.149 1.149 1.249	2.262 1.944 1.377 1.479 1.479 1.479 1.479 1.479 1.151 1.151 1.160 1.069 1.069 1.074 1.074 1.074 1.074 1.074 1.075 1.211 1.234 1.151 1.074 1.075 1.211 1.074 1.075 1.075 1.077	72-84 1.000 2.899 1.563 1.631 1.757 1.380 1.175 1.126 1.082 1.092 1.092 1.091	84-96 4.875 2.625 2.057 1.494 1.949 1.209 1.164 1.164 1.160 1.030 1.057 1.030 1.053 1.053 1.053 1.053 1.055 1.058 1.115 1.058 1.115 1.059 1.0255 1.060	96-108 1,530 1,714 1,344 1,630 1,346 1,168 1,075 1,054 1,053 1,013 1,020 1,039 1,027 1,027 1,027 1,027 1,027 1,027 1,027 1,027 1,029	108-120 1.223 1.889 1.501 1.501 1.501 1.004 1.055 1.063 1.044 1.055 1.019 1.041 1.023 1.041 1.023 1.041 1.023 1.041 1.023 1.041 1.023 1.041 1.023 1.041 1.027 1.020 1.020 1.020 1.020 1.020 1.020 1.020	120-132 2.680 1.903 1.903 1.292 1.216 1.064 1.053 1.049 1.076 1.043 1.044 1.045 1.030 1.030 1.030 1.030 1.049 1.044 1.045 1.045 1.045 1.049 1.044 1.045 1.049 1.044 1.045 1.049 1.04	132-144 1.392 1.281 1.272 1.102 1.008 1.028 1.037 1.030 1.046 1.007 1.007 1.007 1.018 1.009 1.018 1.009 1.018 1.009	144-156 1.338 1.186 1.042 1.141 1.035 1.088 1.048 1.031 1.004 1.000 1.000 1.000 1.000 1.000 1.000 1.000	156-168 2.008 1.224 1.085 1.017 1.015 1.098 1.000 1.010 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	168-180 1.541 1.266 1.038 1.000 1.000 1.053 1.033 1.003 1.003 1.003 1.007 1.007 1.006 1.001 1.005 1.005	180-192 1.188 1.000 1.002 1.055 1.055 1.050 1.050 1.050 1.050 1.000 1.002 1.003 1.024 1.004 1.000 1.000 1.000	192-204 1.077 1.013 1.027 1.047 1.047 1.050 1.010 1.010 1.011 1.013 1.067 1.013 1.001 1.000	204-216 1.014 1.000 1.060 1.011 1.012 1.026 1.029 1.024 1.024 1.020 1.03	216-228 1.165 1.000 1.030 1.013 1.021 1.015 1.011 1.012 1.014 1.016 1.015 1.009 1.000	228-240 1.144 1.000 1.000 1.009 1.024 1.002 1.013 1.017 1.003 1.000 1.000	240-252 1.121 1.000 1.000 1.000 1.000 1.010 1.010 1.010 1.010 1.000 1.000	252-264 1.022 1.000 1.054 1.000 1.016 1.000 1.019 1.000 1.003	264-276 1.043 1.000 1.000 1.000 1.021 1.000 1.000 1.000 1.000	276-288 1.058 1.000 1.000 1.000 1.003 1.005 1.007 1.007	288-300 1.032 1.000 1.000 1.000 1.000 1.000 1.000	300-312 1.007 1.000 1.000 1.000 1.000 1.064 1.000	312-324 1.020 1.000 1.091 1.000 1.001	324-336 1.000 1.000 1.000 1.000	336-348 1.000 1.000 1.000	348-360 1.002 1.000	360-372 1.002	To UIt
Averages Simple Avg All Yrs (ex P) Latest 5 Latest 3	12-24 11.823	24-36 2.926 2.593 2.192	36-48 1.782 1.860 1.570	48-60 1.378 1.297 1.238	60-72 1.307 1.144 1.110	72-84 1.239 1.081 1.081	84-96 1.244 1.075 1.053	96-108 1.129 1.023 1.014	1.119 1.025 1.018	120-132 1.094 1.008 1.007	132-144 1.053 1.017 1.009	1.035 1.007 1.012	1.032 1.012 1.009	1.027 1.009 1.010	1.013 1.008 1.004	192-204 1.017 1.016 1.000	204-216 1.017 1.014 1.005	216-228 1.013 1.011 1.008	228-240 1.007 1.006 1.003	240-252 1.003 1.004 1.001	252-264 1.010 1.005 1.001	264-276 1.003 1.005 1.001	276-288 1.018 1.023 1.011	288-300 1.001 1.002 1.003	300-312 1.013 1.013 1.021	312-324 1.023 1.031	324-336 1.000 1.000	336-348 1.000	348-360 1.000	360-372	To Ult
Volume Wtd All Yrs (ex P) Latest 5 Latest 3	6.386	2.410 2.449 2.181	1.608 1.806 1.572	1.286 1.286 1.241	1.194 1.143 1.111	1.124 1.081 1.082	1.095 1.075 1.054	1.060 1.023 1.015	1.043 1.024 1.017	1.038 1.008 1.007	1.030 1.018 1.009	1.022 1.008 1.013	1.016 1.012 1.009	1.012 1.009 1.010	1.012 1.009 1.004	1.016 1.019 1.001	1.017 1.018 1.005	1.013 1.012 1.008	1.007 1.006 1.002	1.004 1.005 1.001	1.006 1.004 1.001	1.002 1.003 1.001	1.015 1.015 1.009	1.003 1.003 1.004	1.014 1.014 1.018	1.018 1.020	1.000	1.000	1.000		

Section 1 Exhibit 1 Page 13

All Clusters Combined Indemnity

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	7.8%	0.0%	2.4%	1.3%	1.000	1.000
360	92.2%	3.6%	7.8%	1.1%	0.6%	0.981	0.971
348	88.7%	-0.1%	11.3%	0.0%	0.0%	0.955	0.934
336	88.8%	0.8%	11.2%	0.3%	0.2%	0.917	0.880
324	88.0%	-2.1%	12.0%	-0.8%	-0.5%	0.888	0.839
312	90.1%	1.5%	9.9%	0.6%	0.3%	0.827	0.753
300	88.6%	-1.6%	11.4%	-0.6%	-0.4%	0.820	0.745
288	90.2%	0.0%	9.8%	0.0%	0.0%	0.756	0.658
276	90.3%	7.5%	9.7%	3.1%	2.0%	0.726	0.619
264	82.8%	-3.8%	17.2%	-1.7%	-1.1%	0.821	0.753
252	86.6%	3.6%	13.4%	1.6%	1.1%	0.735	0.636
240	83.0%	-1.0%	17.0%	-0.5%	-0.3%	0.764	0.678
228	84.0%	0.1%	16.0%	0.1%	0.0%	0.720	0.619
216	83.9%	1.1%	16.1%	0.5%	0.4%	0.694	0.586
204	82.8%	1.6%	17.2%	0.9%	0.6%	0.687	0.580
192	81.2%	-0.4%	18.8%	-0.2%	-0.2%	0.688	0.584
180	81.7%	2.3%	18.3%	1.3%	1.0%	0.654	0.540
168	79.3%	1.9%	20.7%	1.1%	0.8%	0.669	0.562
156	77.5%	0.4%	22.5%	0.2%	0.2%	0.671	0.567
144	77.1%	2.2%	22.9%	1.4%	1.1%	0.650	0.541
132	74.9%	1.5%	25.1%	1.0%	0.8%	0.657	0.551
120	73.4%	1.2%	26.6%	0.8%	0.7%	0.651	0.545
108	72.2%	2.7%	27.8%	2.0%	1.7%	0.641	0.534
96	69.5%	2.9%	30.5%	2.2%	1.9%	0.649	0.546
84	66.6%	3.0%	33.4%	2.4%	2.1%	0.655	0.554
72	63.6%	5.3%	36.4%	4.3%	3.8%	0.659	0.560
60	58.3%	6.0%	41.7%	5.0%	4.6%	0.678	0.585
48	52.3%	8.5%	47.7%	7.4%	6.9%	0.693	0.604
36	43.8%	11.0%	56.2%	9.9%	9.5%	0.714	0.631
24	32.8%	17.5%	67.2%	16.5%	16.0%	0.734	0.656
12	15.3%	15.3%	84.7%	15.0%	14.9%	0.763	0.692

Total 100.0%

- (2) = 1 / Section 1, Exhibit 1, Page 2, Column 4
- (3) Incremental % based on (2)
- (4) = 1 (2)
- $(5) = [(3) / 1.04] ^ {[(1) 6] / 12}$
- $(6) = [(3) / 1.06] ^ {[(1) 6] / 12}$
- (7), (8) Discount factor based on (5), (6)

Section 1 Exhibit 1 Page 14

All Clusters Combined Indemnity

Outstanding Loss Discounting - 4.0%

(1)	(2) (3)		(4)	(5)	(6)
		counted	Discount		ounted
Accident	Outstandi	ng Losses	Factor at	Outstandi	ng Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	17,132,579	26,541,326		15,034,742	23,300,462
6/30/82-83	929,542	1,859,058	0.981	911,491	1,822,957
6/30/83-84	2,175,062	3,433,757	0.955	2,082,562	3,285,040
6/30/84-85	1,481,330	3,560,045	0.917	1,373,261	3,297,017
6/30/85-86	2,767,225	4,359,985	0.888	2,504,483	3,939,866
6/30/86-87	1,959,189	4,378,894	0.827	1,747,604	3,834,884
6/30/87-88	5,052,560	7,468,813	0.820	4,416,880	6,517,881
6/30/88-89	5,239,117	7,368,549	0.756	4,503,280	6,319,766
6/30/89-90	4,674,993	6,292,306	0.726	3,946,542	5,314,958
6/30/90-91	4,404,809	8,727,864	0.821	3,682,286	7,283,648
6/30/91-92	3,465,698	4,721,337	0.735	2,865,511	3,917,403
6/30/92-93	2,575,392	4,118,962	0.764	2,077,748	3,330,067
6/30/93-94	3,065,240	4,152,240	0.720	2,445,353	3,351,337
6/30/94-95	3,469,907	4,231,907	0.694	2,717,763	3,314,450
6/30/95-96	3,490,488	4,260,394	0.687	2,688,009	3,289,915
6/30/96-97	4,119,593	4,839,041	0.688	3,128,667	3,679,380
6/30/97-98	4,686,084	5,339,998	0.654	3,504,805	3,998,051
6/30/98-99	5,147,900	5,844,900	0.669	3,814,436	4,340,915
6/30/99-00	6,582,530	7,389,530	0.671	4,802,804	5,392,135
6/30/00-01	7,315,487	8,751,595	0.650	5,246,646	6,278,693
6/30/01-02	8,237,060	9,073,060	0.657	5,839,200	6,432,260
6/30/02-03	8,093,711	9,455,261	0.651	5,646,682	6,593,025
6/30/03-04	8,516,973	9,853,930	0.641	5,868,502	6,798,477
6/30/04-05	9,579,150	10,494,150	0.649	6,522,783	7,167,678
6/30/05-06	10,349,173	11,745,173	0.655	7,026,323	7,991,137
6/30/06-07	10,858,150	13,298,150	0.659	7,359,608	9,035,032
6/30/07-08	14,536,769	17,434,769	0.678	9,930,209	11,907,948
6/30/08-09	18,363,444	20,961,444	0.693	12,726,190	14,570,795
6/30/09-10	23,120,757	27,663,757	0.714	16,523,437	19,825,932
6/30/10-11	29,656,913	34,714,913	0.734	21,844,007	25,587,865
6/30/11-12	37,636,642	45,804,642	0.763	28,733,015	35,028,783
Total	268,683,469	338,139,752		201,514,829	256,747,755

(7) Total Discount Factor:

0.750

0.759

	Discount Calculation for All Prior Years				
_	(Low)	or Years (High)			
(8) Estimated Total Reserve:	17,132,579	26,541,326			
(9) Projected Number of Years:	N/A	N/A			
(10) Projected Paid Loss per Year:	#VALUE!	#VALUE!			
(11) Discounted Value at 4%:	0	0			

NOTES:

(2), (3) From Section 1, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 1, Exhibit 1, Page 13, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $\left(7\right)=Sum\ of\ \left(5\right)/\ Sum\ of\ \left(2\right)$ and $Sum\ of\ \left(6\right)/\ Sum\ of\ \left(3\right)$

(10) = (8) / (9)

Section 1 Exhibit 1 Page 15

All Clusters Combined Indemnity

Outstanding Loss Discounting - 6.0%

(1)	(2) (3)		(4)	(5)	(6)
		counted	Discount		ounted
Accident	Outstandi	ing Losses	Factor at	Outstandi	ing Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	17,132,579	26,541,326		14,143,696	21,923,711
6/30/82-83	929,542	1,859,058	0.981	902,851	1,805,677
6/30/83-84	2,175,062	3,433,757	0.955	2,039,338	3,215,572
6/30/84-85	1,481,330	3,560,045	0.917	1,324,117	3,177,457
6/30/85-86	2,767,225	4,359,985	0.888	2,387,802	3,753,432
6/30/86-87	1,959,189	4,378,894	0.827	1,655,345	3,599,913
6/30/87-88	5,052,560	7,468,813	0.820	4,145,561	6,112,420
6/30/88-89	5,239,117	7,368,549	0.756	4,195,347	5,881,878
6/30/89-90	4,674,993	6,292,306	0.726	3,648,196	4,914,761
6/30/90-91	4,404,809	8,727,864	0.821	3,391,622	6,705,926
6/30/91-92	3,465,698	4,721,337	0.735	2,627,215	3,598,270
6/30/92-93	2,575,392	4,118,962	0.764	1,884,283	3,022,844
6/30/93-94	3,065,240	4,152,240	0.720	2,208,091	3,043,934
6/30/94-95	3,469,907	4,231,907	0.694	2,435,117	2,969,671
6/30/95-96	3,490,488	4,260,394	0.687	2,390,873	2,930,308
6/30/96-97	4,119,593	4,839,041	0.688	2,768,208	3,257,258
6/30/97-98	4,686,084	5,339,998	0.654	3,082,638	3,518,096
6/30/98-99	5,147,900	5,844,900	0.669	3,344,303	3,810,128
6/30/99-00	6,582,530	7,389,530	0.671	4,184,925	4,698,528
6/30/00-01	7,315,487	8,751,595	0.650	4,540,783	5,434,739
6/30/01-02	8,237,060	9,073,060	0.657	5,032,893	5,544,123
6/30/02-03	8,093,711	9,455,261	0.651	4,837,869	5,646,939
6/30/03-04	8,516,973	9,853,930	0.641	5,008,852	5,805,429
6/30/04-05	9,579,150	10,494,150	0.649	5,544,426	6,101,474
6/30/05-06	10,349,173	11,745,173	0.655	5,976,549	6,803,155
6/30/06-07	10,858,150	13,298,150	0.659	6,270,274	7,703,697
6/30/07-08	14,536,769	17,434,769	0.678	8,504,034	10,199,336
6/30/08-09	18,363,444	20,961,444	0.693	10,998,990	12,611,159
6/30/09-10	23,120,757	27,663,757	0.714	14,502,427	17,422,865
6/30/10-11	29,656,913	34,714,913	0.734	19,449,044	22,789,099
6/30/11-12	37,636,642	45,804,642	0.763	25,977,581	31,692,130
Total	268,683,469	338,139,752		179,403,251	229,693,930

_	Discount Calculation for					
	All Prior Years					
_	(Low)	(High)				
_						
(8) Estimated Total Reserve:	17,132,579	26,541,326				
(9) Projected Number of Years:	N/A	N/A				
(10) Projected Paid Loss per Year:	#VALUE!	#VALUE!				
(11) Discounted Value at 6%:	0	0				

0.679

NOTES

(2), (3) From Section 1, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 1, Exhibit 1, Page 13, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

(7) = Sum of (5) / Sum of (2) and Sum of (6) / Sum of (3)

(10) = (8) / (9)



All Clusters Combined Total Indemnity (Including Lump Sums) + Medical

Calculation of Fiscal Year 7/1/12 - 13 Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Cumulative	Increme	ntal Paid	Estimated Pa	ayments from	FY 7/1/12	2 - 6/30/13
Accident	Est Ult Losses	Est Ult Losses	Paid Losses	Reserves	Reserves	Percent	as a % of	as a % of	7/1/12 -	6/30/13	as a % of	Reserves
Year	(Low)	(High)	to Date	(Low)	(High)	Paid	Ultimates	Reserves	(Low)	(High)	(Low)	(High)
All Prior Yrs	115,883,047	126,428,588	97,712,219	18,170,828	28,716,370				1,498,171	1,647,989	8.2%	5.7%
6/30/82-83	18,705,338	19,672,157	17,770,900	934,438	1,901,257	92.6%	1.0%	13.5%	115,187	285,334	12.3%	15.0%
6/30/83-84	27,851,766	29,221,770	25,658,736	2,193,030	3,563,034	89.9%	1.0%	9.9%	212,071	402,232	9.7%	11.3%
6/30/84-85	39,855,700	41,951,557	38,317,600	1,538,100	3,633,957	93.7%	1.0%	15.8%	292,851	665,263	19.0%	18.3%
6/30/85-86	54,402,356	56,026,060	51,548,281	2,854,075	4,477,779	93.4%	1.0%	15.1%	409,035	613,123	14.3%	13.7%
6/30/86-87	59,058,562	61,500,422	56,971,275	2,087,288	4,529,147	94.5%	1.0%	18.2%	406,118	740,889	19.5%	16.4%
6/30/87-88	87,441,456	89,878,709	82,111,884	5,329,573	7,766,825	92.6%	1.0%	13.5%	721,609	1,134,024	13.5%	14.6%
6/30/88-89	86,791,596	88,951,024	81,174,218	5,617,379	7,776,806	92.4%	1.0%	13.1%	773,371	1,124,287	13.8%	14.5%
6/30/89-90	83,348,856	85,058,479	78,295,168	5,053,688	6,763,311	93.0%	1.0%	14.3%	913,863	1,256,861	18.1%	18.6%
6/30/90-91	69,758,935	74,135,696	64,896,289	4,862,646	9,239,407	90.2%	1.0%	10.2%	697,891	1,248,114	14.4%	13.5%
6/30/91-92	47,409,013	48,711,766	43,544,958	3,864,055	5,166,807	90.6%	2.0%	21.3%	529,002	681,513	13.7%	13.2%
6/30/92-93	32,947,124	34,518,630	29,971,712	2,975,412	4,546,918	88.9%	2.0%	17.9%	414,385	576,665	13.9%	12.7%
6/30/93-94	35,863,000	36,957,000	32,319,402	3,543,598	4,637,598	88.8%	2.0%	17.8%	483,963	594,252	13.7%	12.8%
6/30/94-95	33,587,423	34,359,476	29,654,537	3,932,886	4,704,939	87.3%	2.0%	15.7%	490,676	569,429	12.5%	12.1%
6/30/95-96	32,144,029	32,942,516	28,157,568	3,986,461	4,784,949	86.5%	2.0%	14.8%	432,189	532,607	10.8%	11.1%
6/30/96-97	33,252,684	33,990,912	28,520,097	4,732,588	5,470,815	84.8%	2.0%	13.2%	506,576	568,551	10.7%	10.4%
6/30/97-98	36,447,642	37,151,756	31,117,920	5,329,722	6,033,836	84.6%	2.0%	13.0%	633,572	698,513	11.9%	11.6%
6/30/98-99	35,025,000	35,742,000	29,082,684	5,942,316	6,659,316	82.2%	2.0%	11.2%	629,578	701,347	10.6%	10.5%
6/30/99-00	40,472,000	41,308,000	32,884,259	7,587,741	8,423,741	80.4%	3.0%	15.3%	853,594	931,396	11.2%	11.1%
6/30/00-01	46,896,492	48,469,000	38,334,179	8,562,313	10,134,821	80.4%	3.2%	16.3%	918,797	1,082,445	10.7%	10.7%
6/30/01-02	43,358,000	44,225,000	33,924,619	9,433,381	10,300,381	77.5%	2.9%	13.0%	913,220	975,960	9.7%	9.5%
6/30/02-03	42,828,450	44,363,000	33,353,202	9,475,248	11,009,798	76.5%	1.0%	4.1%	726,377	850,620	7.7%	7.7%
6/30/03-04	43,615,043	45,134,850	33,417,015	10,198,028	11,717,835	75.3%	1.2%	4.9%	740,517	857,133	7.3%	7.3%
6/30/04-05	45,588,000	47,673,850	34,562,523	11,025,477	13,111,327	74.1%	1.2%	4.6%	868,752	1,044,604	7.9%	8.0%
6/30/05-06	42,509,000	44,546,100	30,138,853	12,370,147	14,407,247	69.2%	4.9%	15.9%	1,972,344	2,283,872	15.9%	15.9%
6/30/06-07	40,466,000	44,211,350	27,454,257	13,011,743	16,757,093	64.8%	4.4%	12.5%	1,443,757	1,818,333	11.1%	10.9%
6/30/07-08	46,445,000	50,445,850	29,132,319	17,312,681	21,313,531	60.1%	4.7%	11.8%	1,942,845	2,401,282	11.2%	11.3%
6/30/08-09	48,252,000	52,539,350	26,788,024	21,463,976	25,751,326	53.2%	7.0%	14.9%	3,038,584	3,657,671	14.2%	14.2%
6/30/09-10	50,169,000	56,795,300	23,120,370	27,048,630	33,674,930	43.2%	9.9%	17.5%	3,921,581	4,776,868	14.5%	14.2%
6/30/10-11	56,071,000	63,556,100	20,336,831	35,734,169	43,219,269	34.0%	9.2%	14.0%	4,840,582	5,702,410	13.5%	13.2%
6/30/11-12	57,114,000	69,472,000	9,029,730	48,084,270	60,442,270	14.3%	19.7%	23.0%	11,086,243	13,790,027	23.1%	22.8%
Total	1,533,557,513	1,619,938,268	1,219,301,627	314,255,886	400,636,641				43,427,303	54,213,615	13.8%	13.5%

NOTES:

(2) Exhibit 1, Page 1, Column (4) + Exhibit 2, Page 1, Column (4)

(3) Exhibit 1, Page 1, Column (5) + Exhibit 2, Page 1, Column (5)

(4) Exhibit 1, Page 1, Column (2) + Exhibit 2, Page 1, Column (2)

(5) = (2) - (4)

(6) = (3) - (4)

(7) = (4) / Average of Columns (2), (3)

(8) = (7) - Prior Year's (7)

(9) = (8) / (1.00 - (7))

(10), (11) Sum of Columns (10), (11) for all clusters

(12) = (10) / (5)

(13) = (11) / (6)



All Clusters Combined Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll		Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Paid Loss	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		6,097,619			7,135,868	8,272,663	1,038,249	2,175,044		
6/30/82-83		1,233,433	1,250,324		1,238,329	1,275,632	4,896	42,198		
6/30/83-84		3,245,106	3,303,649		3,263,074	3,374,383	17,968	129,277		
6/30/84-85	1,823,085	3,139,070	3,203,358	3,198,693	3,195,840	3,212,983	56,770	73,913	0.175	0.176
6/30/85-86	1,952,445	4,944,321	5,054,863	5,052,150	5,031,171	5,062,115	86,850	117,795	0.258	0.259
6/30/86-87	2,220,820	5,707,463	5,847,985	5,853,314	5,835,562	5,857,716	128,099	150,253	0.263	0.264
6/30/87-88	2,885,583	9,677,988	9,962,163	9,968,344	9,955,000	9,976,000	277,012	298,012	0.345	0.346
6/30/88-89	3,098,180	11,887,968	12,266,950	12,272,722	12,266,230	12,296,225	378,262	408,257	0.396	0.397
6/30/89-90	3,079,763	12,520,503	12,979,662	12,994,530	12,899,198	12,991,507	378,695	471,004	0.419	0.422
6/30/90-91	2,914,364	11,766,239	12,263,538	12,260,346	12,224,075	12,277,782	457,837	511,543	0.419	0.421
6/30/91-92	2,880,434	10,162,177	10,593,606	10,588,893	10,560,534	10,607,647	398,357	445,470	0.367	0.368
6/30/92-93	2,887,238	7,714,728	8,125,286	8,120,144	8,114,747	8,142,684	400,019	427,955	0.281	0.282
6/30/93-94	3,056,850	7,974,641	8,460,972	8,453,197	8,453,000	8,460,000	478,359	485,359	0.277	0.277
6/30/94-95	3,158,808	6,764,444	7,242,159	7,235,646	7,227,423	7,237,476	462,979	473,032	0.229	0.229
6/30/95-96	3,301,791	6,521,070	7,039,294	7,033,285	7,017,043	7,045,625	495,973	524,555	0.213	0.213
6/30/96-97	3,902,868	6,664,852	7,290,642	7,285,498	7,277,847	7,296,626	612,995	631,774	0.186	0.187
6/30/97-98	3,776,138	6,191,362	6,842,947	6,839,306	6,835,000	6,885,200	643,638	693,838	0.181	0.182
6/30/98-99	4,017,530	6,402,584	7,201,714	7,198,335	7,197,000	7,217,000	794,416	814,416	0.179	0.180
6/30/99-00	4,221,786	7,138,790	8,155,793	8,146,326	8,144,000	8,173,000	1,005,210	1,034,210	0.193	0.194
6/30/00-01	4,310,725	8,703,774	10,060,773	10,033,884	9,950,600	10,087,000	1,246,826	1,383,226	0.231	0.234
6/30/01-02	4,438,755	6,917,679	8,116,531	8,123,824	8,114,000	8,145,000	1,196,321	1,227,321	0.183	0.183
6/30/02-03	4,423,888	7,547,463	9,078,589	9,074,147	8,929,000	9,102,000	1,381,537	1,554,537	0.202	0.206
6/30/03-04	4,482,207	8,092,945	9,915,827	9,910,294	9,774,000	9,956,850	1,681,055	1,863,905	0.218	0.222
6/30/04-05	4,639,517	9,544,673	12,136,561	11,616,615	10,991,000	12,161,850	1,446,327	2,617,177	0.237	0.262
6/30/05-06	4,938,165	8,500,027	11,052,371	11,038,495	10,521,000	11,162,100	2,020,973	2,662,073	0.213	0.226
6/30/06-07	5,183,126	8,952,407	12,190,491	11,959,776	11,106,000	12,411,350	2,153,593	3,458,943	0.214	0.239
6/30/07-08	5,508,425	8,364,088	11,729,196	12,165,611	11,140,000	12,242,850	2,775,912	3,878,762	0.202	0.222
6/30/08-09	5,447,676	8,400,468	12,444,479	12,733,064	11,501,000	13,190,350	3,100,532	4,789,882	0.211	0.242
6/30/09-10	5,525,579	7,213,128	11,730,743	12,735,651	11,141,000	13,224,300	3,927,872	6,011,172	0.202	0.239
6/30/10-11	5,712,303	7,016,744	14,336,920	14,591,886	13,094,000	15,521,100	6,077,256	8,504,356	0.229	0.272
6/30/11-12	5,880,714	3,189,372	15,854,048	15,563,521	13,637,000	17,827,000	10,447,628	14,637,628	0.232	0.303
Total	109,668,762	228,197,127	275,731,433	272,047,497	273,769,543	290,694,016	45,572,417	62,496,889	- 	
Tot 6/30/84-12	109,668,762	217,620,968	271,177,460	272,047,497	262,132,272	277,771,338	44,511,303	60,150,369	0.239	0.253

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 1, Exhibit 2, Page 2, Column 3
- (4) From Section 1, Exhibit 2, Page 2, Column 8
- (5) From Section 1, Exhibit 2, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



All Clusters Combined Medical

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	-				Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average
Accident	Payroll		Paid	Adjustment	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding
Year	(000's)	Paid Loss	LDF	for Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim
All Prior Yrs		6,097,619							17	9	
6/30/82-83		1,233,433	1.014	N/A	1,250,324	N/A	1,250,324		2	2	8,445
6/30/83-84		3,245,106	1.018	N/A	3,303,649	N/A	3,303,649		3	2	29,271
6/30/84-85	1,823,085	3,139,070	1.020	N/A	3,203,358	N/A	3,203,358	0.176	6	3	21,429
6/30/85-86	1,952,445	4,944,321	1.022	N/A	5,054,863	N/A	5,054,863	0.259	7	3	36,848
6/30/86-87	2,220,820	5,707,463	1.025	N/A	5,847,985	N/A	5,847,985	0.263	7	5	28,104
6/30/87-88	2,885,583	9,677,988	1.029	N/A	9,962,163	N/A	9,962,163	0.345	16	15	18,945
6/30/88-89	3,098,180	11,887,968	1.032	N/A	12,266,950	N/A	12,266,950	0.396	22	18	21,055
6/30/89-90	3,079,763	12,520,503	1.037	N/A	12,979,662	N/A	12,979,662	0.421	11	10	45,916
6/30/90-91	2,914,364	11,766,239	1.042	N/A	12,263,538	N/A	12,263,538	0.421	21	19	26,174
6/30/91-92	2,880,434	10,162,177	1.042	N/A	10,593,606	N/A	10,593,606	0.368	16	11	39,221
6/30/92-93	2,887,238	7,714,728	1.053	N/A	8,125,286	N/A	8,125,286	0.281	16	13	31,581
6/30/93-94	3,056,850	7,974,641	1.061	N/A	8,460,972	N/A	8,460,972	0.277	21	22	22,106
6/30/94-95	3,158,808	6,764,444	1.071	N/A	7,242,159	N/A	7,242,159	0.229	18	17	28,101
6/30/95-96	3,301,791	6,521,070	1.079	N/A	7,039,294	N/A	7,039,294	0.213	9	10	51,822
6/30/96-97	3,902,868	6,664,852	1.094	N/A	7,290,642	N/A	7,290,642	0.187	19	20	31,289
6/30/97-98	3,776,138	6,191,362	1.105	N/A	6,842,947	N/A	6,842,947	0.181	20	21	31,028
6/30/98-99	4,017,530	6,402,584	1.125	N/A	7,201,714	N/A	7,201,714	0.179	27	23	34,745
6/30/99-00	4,221,786	7,138,790	1.142	N/A	8,155,793	N/A	8,155,793	0.193	32	27	37,667
6/30/00-01	4,310,725	8,703,774	1.156	N/A	10,060,773	N/A	10,060,773	0.233	39	39	34,795
6/30/01-02	4,438,755	6,917,679	1.173	N/A	8,116,531	N/A	8,116,531	0.183	53	56	21,408
6/30/02-03	4,423,888	7,547,463	1.203	N/A	9,078,589	N/A	9,078,589	0.205	52	51	30,022
6/30/03-04	4,482,207	8,092,945	1.225	N/A	9,915,827	N/A	9,915,827	0.221	73	52	35,055
6/30/04-05	4,639,517	9,544,673	1.272	N/A	12,136,561	N/A	12,136,561	0.262	88	68	38,116
6/30/05-06	4,938,165	8,500,027	1.300	N/A	11,052,371	N/A	11,052,371	0.224	106	77	33,147
6/30/06-07	5,183,126	8,952,407	1.362	N/A	12,190,491	N/A	12,190,491	0.235	150	91	35,583
6/30/07-08	5,508,425	8,364,088	1.402	N/A	11,729,196	N/A	11,729,196	0.213	215	133	25,302
6/30/08-09	5,447,676	8,400,468	1.481	N/A	12,444,479	N/A	12,444,479	0.228	441	204	19,824
6/30/09-10	5,525,579	7,213,128	1.626	N/A	11,730,743	N/A	11,730,743	0.212	1,558	368	12,276
6/30/10-11	5,712,303	7,016,744	2.043	N/A	14,336,920	N/A	14,336,920	0.251	2,498	1,490	4,913
6/30/11-12	5,880,714	3,189,372	4.971	N/A	15,854,048	N/A	15,854,048	0.270		2,380	5,321
Total	109,668,762	228,197,127		•	275,731,433		275,731,433	•	5,563	5,259	

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 1, Exhibit 2, Page 7

 $^{(5) \} Based \ on \ information \ from \ the \ MA \ WCRIB \ 9/1/12 \ filing. \ Consideration \ for \ development \ beyond \ 252 \ months \ made \ in \ selection \ of \ LDF's.$

^{(6) = (3)} x (4) x (5)

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 1 Exhibit 2 Page 3

All Clusters Combined Medical

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss		Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Paid Loss	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	1,823,085	0.198	3,139,070	1.020	3,198,693	N/A	3,198,693	0.175	0.175
6/30/85-86	1,952,445	0.298	4,944,321	1.022	5,052,150	N/A	5,052,150	0.259	0.259
6/30/86-87	2,220,820	0.308	5,707,463	1.025	5,853,314	N/A	5,853,314	0.264	0.264
6/30/87-88	2,885,583	0.387	9,677,988	1.029	9,968,344	N/A	9,968,344	0.345	0.345
6/30/88-89	3,098,180	0.448	11,887,968	1.032	12,272,722	N/A	12,272,722	0.396	0.396
6/30/89-90	3,079,763	0.489	12,520,503	1.037	12,994,530	N/A	12,994,530	0.422	0.422
6/30/90-91	2,914,364	0.418	11,766,239	1.042	12,260,346	N/A	12,260,346	0.421	0.421
6/30/91-92	2,880,434	0.363	10,162,177	1.042	10,588,893	N/A	10,588,893	0.368	0.368
6/30/92-93	2,887,238	0.277	7,714,728	1.053	8,120,144	N/A	8,120,144	0.281	0.281
6/30/93-94	3,056,850	0.272	7,974,641	1.061	8,453,197	N/A	8,453,197	0.277	0.277
6/30/94-95	3,158,808	0.225	6,764,444	1.071	7,235,646	N/A	7,235,646	0.229	0.229
6/30/95-96	3,301,791	0.210	6,521,070	1.079	7,033,285	N/A	7,033,285	0.213	0.213
6/30/96-97	3,902,868	0.185	6,664,852	1.094	7,285,498	N/A	7,285,498	0.187	0.187
6/30/97-98	3,776,138	0.180	6,191,362	1.105	6,839,306	N/A	6,839,306	0.181	0.181
6/30/98-99	4,017,530	0.178	6,402,584	1.125	7,198,335	N/A	7,198,335	0.179	0.179
6/30/99-00	4,221,786	0.191	7,138,790	1.142	8,146,326	N/A	8,146,326	0.193	0.193
6/30/00-01	4,310,725	0.228	8,703,774	1.156	10,033,884	N/A	10,033,884	0.233	0.233
6/30/01-02	4,438,755	0.183	6,917,679	1.173	8,123,824	N/A	8,123,824	0.183	0.183
6/30/02-03	4,423,888	0.204	7,547,463	1.203	9,074,147	N/A	9,074,147	0.205	0.205
6/30/03-04	4,482,207	0.219	8,092,945	1.225	9,910,294	N/A	9,910,294	0.221	0.221
6/30/04-05	4,639,517	0.206	9,544,673	1.272	11,616,615	N/A	11,616,615	0.250	0.250
6/30/05-06	4,938,165	0.211	8,500,027	1.300	11,038,495	N/A	11,038,495	0.224	0.224
6/30/06-07	5,183,126	0.215	8,952,407	1.362	11,959,776	N/A	11,959,776	0.231	0.231
6/30/07-08	5,508,425	0.219	8,364,088	1.402	12,165,611	N/A	12,165,611	0.221	0.221
6/30/08-09	5,447,676	0.225	8,400,468	1.481	12,733,064	N/A	12,733,064	0.234	0.234
6/30/09-10	5,525,579	0.236	7,213,128	1.626	12,735,651	N/A	12,735,651	0.230	0.230
6/30/10-11	5,712,303	0.240	7,016,744	2.043	14,591,886	N/A	14,591,886	0.255	0.255
6/30/11-12	5,880,714	0.245	3,189,372	4.971	15,563,521	N/A	15,563,521	0.265	0.265
Total	109,668,762		217,620,968		272,047,497		272,047,497		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 1, Exhibit 2, Page 4, Column 11
- (4) From Section 1, Exhibit 2, Page 2, Column 3
- (5) From Section 1, Exhibit 2, Page 2, Column 4
- $(6) = (4) + [{1 {1 / (5)}} x (3) x (2) x 10]$
- (7) Lump Sum Payments are considered in the Indemnity analysis (Section 1)
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10

Section 1 Exhibit 2 Page 4

All Clusters Combined Medical

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Expected	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Ult Loss	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.198	0.198
6/30/85-86									0.298	0.298
6/30/86-87									0.308	0.308
6/30/87-88									0.387	0.387
6/30/88-89									0.448	0.448
6/30/89-90									0.489	0.489
6/30/90-91	2,914,364	12,263,538	0.421	1.194	0.502	1.546	0.777	0.135	0.421	0.418
6/30/91-92	2,880,434	10,593,606	0.368	1.189	0.437	1.516	0.663	0.139	0.364	0.363
6/30/92-93	2,887,238	8,125,286	0.281	1.189	0.335	1.486	0.497	0.141	0.281	0.277
6/30/93-94	3,056,850	8,460,972	0.277	1.178	0.326	1.457	0.475	0.146	0.274	0.272
6/30/94-95	3,158,808	7,242,159	0.229	1.170	0.268	1.428	0.383	0.150	0.225	0.225
6/30/95-96	3,301,791	7,039,294	0.213	1.155	0.246	1.400	0.345	0.155	0.212	0.210
6/30/96-97	3,902,868	7,290,642	0.187	1.137	0.212	1.373	0.291	0.160	0.183	0.185
6/30/97-98	3,776,138	6,842,947	0.181	1.135	0.206	1.346	0.277	0.164	0.179	0.180
6/30/98-99	4,017,530	7,201,714	0.179	1.135	0.203	1.319	0.268	0.167	0.177	0.178
6/30/99-00	4,221,786	8,155,793	0.193	1.135	0.219	1.294	0.284	0.170	0.190	0.191
6/30/00-01	4,310,725	10,060,773	0.233	1.109	0.259	1.268	0.328	0.178	0.226	0.228
6/30/01-02	4,438,755	8,116,531	0.183	1.101	0.201	1.243	0.250	0.183	0.180	0.183
6/30/02-03	4,423,888	9,078,589	0.205	1.073	0.220	1.219	0.268	0.191	0.204	0.204
6/30/03-04	4,482,207	9,915,827	0.221	1.046	0.232	1.195	0.277	0.200	0.221	0.219
6/30/04-05	4,639,517	12,136,561	0.262	1.036	0.271	1.172	0.317	0.206	0.196	0.206
6/30/05-06	4,938,165	11,052,371	0.224	1.032	0.231	1.149	0.265	0.211	0.203	0.211
6/30/06-07	5,183,126	12,190,491	0.235	1.032	0.243	1.126	0.273	0.215	0.209	0.215
6/30/07-08	5,508,425	11,729,196	0.213	1.032	0.220	1.104	0.243	0.219	0.215	0.219
6/30/08-09	5,447,676	12,444,479	0.228	1.027	0.234	1.082	0.254	0.225	0.223	0.225
6/30/09-10	5,525,579	11,730,743	0.212	1.000	0.212	1.061	0.225	0.236	0.236	0.236
6/30/10-11	5,712,303	14,336,920	0.251	1.000	0.251	1.040	0.261	0.240	0.243	0.240
6/30/11-12	5,880,714	15,854,048	0.270	1.000	0.270	1.020	0.275	0.245		0.245
Total	94,608,887	221,862,479								
			Trend L	ast 4 (ex 11-12):	3.0%	Avg 3 (x11-12):	0.247			
			Trend L	ast 8 (ex 11-12):	-0.8%	Avg 5 (x11-12):	0.251			
			Trend La	st 12 (ex 11-12):	0.3%	Avg 10 (x11-12):	0.263			
			Prior	Selected Trend:	3.0%	Prior Sel Avg:	0.250			

2.0%

Sel. Loss Cost:

0.250

Selected Trend:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 1, Exhibit 2, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCIRB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6) $\,$
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- $\left(10\right)$ From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

Section 1 Exhibit 2 Page 5

All Clusters Combined Medical

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	<u></u>					
(1)	Average Payment Trend		0.950			
(2)	Credibility		90%			
(3)	Average Pmt Trend Statewide		0.950			
(4)	Credibility Weighted Trend		0.950			
	_	(Low)	(High)			
(5)	Selected Range	0.920	0.970			
(6)	Incremental Paid for 2012	102,690	102,690			
(7)	Estimated Reserve	1,180,935	3,320,310			
(8)	Paid to Date (82 & Prior)	6,097,619	6,097,619			
(9)	Est Ult Paid for 1982 & Prior	7,278,554	9,417,929			
Method 2	<u> </u>					
		(Current)	(Prior)			
(10)	Avg Incremental Paid (3 yrs)	136,810	154,727			
(11)	Projected Number of Years	3	3			
(12)	Estimated Reserve	410,430	464,181			
(13)	Paid to Date (82 & Prior)	6,097,619	5,995,860			
(14)	Est Ult Paid for 1982 & Prior	6,508,049	6,460,041			
(14a)	Paid Counts During Fiscal Year	9	17			
		(Low)	(High)			
(15)	Sel Ult Excluding Lump Sums	6,893,301	9,417,929			
(16)	Lump Sum Ultimates	N/A	N/A			
(17)	Ult Loss Including Lump Sums	6,893,301	9,417,929			
(17)	On 2000 Metading Edinp Bains	0,000,001	3,11,92			
(18)	Implied Tail	1.130	1.545			
(19)	Ult Loss Inc Lump Sums @ 6/11	6,656,730	7,407,397			
NOTES:						
· ·	on 1, Exhibit 2, Page 6		(10) Avg of 3 latest years from Section 1, Exhibit 2, Page 6, Column 3			
	of Section 1, Exhibit 2, Page 6, Column 3 / 175,000) ^ 0.5		(11) Selected judgmentally			
(3) Average Sta			$(12) = (10 \times (11))$			
$(4) = (1) \times (2) +$			(14) = (12) + (13)			
	Igmentally based on (4)		(15) = Average of (9) and (14)			
•	ded by Commonwealth of Massachusetts	(16) Lump Sums are considered in Indemnity analysis (Section 1)				
$(7) = (6) \times (5) /$	•		(17) Earning status are considered in indefinity analysis (section 1) $(17) = (15) + (16)$			
	Section 1, Exhibit 2, Page 2, Column 3	(17) = (13) + (10) (18) = (15) / (8)				
(9) = (7) + (8)			(19) From Prior Aon Analysis as of June 30, 2011			
			• • • • • • • • • • • • • • • • • • • •			

Section 1 Exhibit 2 Page 6

All Clusters Combined Medical

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	401,487	12.903			
1993	2	281,130	12.547	0.700		
1994	3	275,063	12.525	0.978		
1995	4	195,978	12.186	0.712		
1996	5	235,244	12.368	1.200		
1997	6	119,211	11.689	0.507		
1998	7	74,969	11.225	0.629		
1999	8	167,971	12.032	2.241		
2000	9	112,165	11.628	0.668	n =	21
2001	10	83,644	11.334	0.746	S(x) =	42,042
2002	11	54,441	10.905	0.651	S(x-sq) =	84,168,854
2003	12	53,298	10.884	0.979	S(xy) =	491,772
2004	13	73,810	11.209	1.385	S(y) =	246
2005	14	86,676	11.370	1.174	D =	16,170
2006	15	71,904	11.183	0.830	slope =	-0.051
2007	16	66,960	11.112	0.931	Avg Trend =	0.949
2008	17	71,871	11.183	1.073		
2009	18	156,441	11.960	2.177		
2010	19	168,137	12.033	1.075		
2011	20	139,603	11.847	0.830		
2012	21	102,690	11.539	0.736		

Selected Trend: 0.950

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2011: 0.736 = 102690 / 139603



Commonwealth of Massachusetts Workers Compensation All Clusters Combined MEDICAL Paid Loss Development Paid Loss (Excluding Lump Sum)

AON

Acc Yf Ending June-83 June-84 June-85 June-86 June-89 June-90 June-91 June-91 June-93 June-94 June-95 June-95 June-95 June-95 June-96 June-95 June-96 June-97 June-98 June-99	12 80,157 278,846 281,180 525,630 679,622 1,191,827 1,301,800 1,971,011 2,079,021 2,254,109 1,766,253 1,766,725 1,434,653 1,427,577 1,919,617 1,955,272 1,474,485 969,154 1,427,577 2,296,407 2,296,407 2,296,407 2,296,407 2,296,407 2,296,407 2,296,407 2,296,407 2,296,407 2,296,407 2,296,407 3,247,133 3,060,289 3,709,038 3,189,372	24 194,108 675,251 680,904 1,272,862 1,645,768 3,330,054 4,749,050 6,207,955 6,481,845 6,069,511 5,170,869 4,622,918 3,375,539 4,422,918 3,365,240 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,316,372 4,077,952 3,077,952	2,495,914 5,139,009 6,698,392 8,378,887 8,128,761 7,466,854 6,081,502 5,401,604 4,748,104 4,865,024 4,494,601 4,046,082 3,912,893 4,792,481 5,089,014	8,042,212 9,502,646 9,129,342 8,202,774 6,489,487 5,967,695 5,104,898 5,174,865 4,941,702 4,435,465 4,351,301 5,313,057 5,933,836 5,338,916	60 430,372 1,497,148 1,524,376 2,801,909 3,758,601 7,138,465 9,005,556 9,005,556 10,377,079 9,569,888 8,503,875 6,751,595 6,223,895 5,297,904 4,694,328 5,452,218 5,201,917 4,694,328 5,734,822 6,659,457 8,622,668 8,698,237 7,265,266 8,698,237 7,265,266 8,698,237 7,265,266 8,698,237 7,923,458 8,708,706 8,364,088	10,866,795	11,178,293	11,460,398	4,982,646 8,654,240 10,588,606 11,654,311 10,198,433 9,135,160 7,037,255 6,987,145 5,903,503 5,980,868 5,852,834 5,487,330 5,746,199 6,681,932 8,000,937	8,771,119 10,754,116 11,744,612 10,318,761 9,257,875 7,082,866 7,147,202 6,059,664 6,100,238 5,984,835 5,608,858 5,876,662 6,813,975 8,307,585 6,663,212	10,897,219 11,853,219 10,419,870	11,929,544	12,013,692	168 1,082,827 2,961,604 2,743,570 4,495,556 5,450,543 9,039,583 11,233,906 12,102,616 10,667,922 9,594,979 7,532,612 7,640,660 6,491,856 6,491,358 6,492,332 6,078,298 6,402,584	4,540,345 5,483,690 9,080,840 11,311,779 12,193,641 10,767,927 9,639,410	12,288,370	5,518,035 9,182,392 11,460,208 12,363,890 11,031,802	12,414,703 11,209,381 9,777,992 7,640,635		12,472,674	11,643,261	12,504,730			3,198,788 3,063,056 4,898,350	312 11.6414 3.205.196 3.088.322 4.937.177 5.707.463	3,111,388	336 1,225,876 3,243,352 3,139,070	348 1,230,254 3,245,106	360 1,233,433
Arcsio-Arc Facto Arcs Y Long Long State June-84 June-85 June-86 June-87 June-87 June-89 June-90 June-91 June-91 June-93 June-93 June-93 June-93 June-94 June-95 June-95 June-96 June-97 June-97 June-98 June-90 June-01 June-01 June-02 June-03 June-04 June-05 June-05 June-06 June-06 June-06 June-06 June-07 June-08 June-09 June-10 June-10 June-11	12-24 2.422 2.422 2.422 2.422 2.422 2.422 2.422 2.794 3.648 3.150 3.118 2.350 2.649 2.051 1.958 2.368 2.368 2.368 2.368 2.369 2.344 2.252 2.095 2.344 2.252 2.295 2.206 2.331 3.03 2.632 2.260 2.331 2.632 2.260 2.331 2.632 2.260	24-36 1.451 1.451 1.451 1.451 1.451 1.451 1.451 1.517 1.543 1.254 1.230 1.250 1.168 1.168 1.168 1.163 1.206 1.203 1.217 1.192 1.248 1.303 1.231 1.238 1.231	36-48 1.263 1.263 1.263 1.243 1.242 1.220 1.201 1.134 1.199 1.096 1.105 1.105 1.105 1.106 1.116	48-60 1.210 1.210 1.220 1.221 1.220 1.184 1.133 1.040 1.040 1.045 1.045 1.053 1.053 1.067 1.079 1.121 1.079 1.121 1.079 1.121 1.074	60-72 1.174 1.131 1.159 1.149 1.149 1.127 1.082 1.047 1.027 1.020 1.030 1.030 1.030 1.027 1.041 1.041 1.062 1.065 1.068 1.068 1.068 1.038	72-84 1.154 1.161 1.164 1.1161 1.000 1.065 1.015 1.015 1.018 1.025 1.025 1.025 1.023 1.041 1.053 1.021 1.025 1.023 1.023 1.031	84-96 1.155 1.150 1.098 1.011 1.048 1.031 1.040 1.025 1.026 1.040 1.040 1.031 1.031 1.031 1.021	96-108 1.174 1.101 1.064 1.099 1.030 1.020 1.018 1.017 1.017 1.018 1.012 1.011 1.018 1.026 1.021 1.028 1.021 1.034 1.034 1.030	108-120 1.090 1.069 1.079 1.023 1.023 1.022 1.016 1.008 1.008 1.008 1.008 1.023 1.02	120-132 1.062 1.059 1.024 1.014 1.020 1.011 1.013 1.009 1.010 1.017 1.017 1.018 1.024 1.017 1.017 1.018 1.024 1.017 1.018 1.024 1.038	132-144 1.0666 1.032 1.013 1.015 1.015 1.007 1.007 1.007 1.007 1.007 1.010 1.018 1.018 1.018 1.018 1.027 1.014 1.023	144-156 1.033 1.007 1.012 1.024 1.024 1.007 1.007 1.007 1.008 1.008 1.008 1.018 1.024 1.011 1.011 1.011 1.011	156-168 1.074 1.012 1.002 1.002 1.009 1.009 1.009 1.009 1.009 1.009 1.009 1.009 1.009 1.009 1.009 1.009 1.002 1.002 1.003 1.00	168-180 1.052 1.010 1.018 1.010 1.010 1.005 1.005 1.005 1.005 1.005 1.010 1.01	180-192 1.002 1.012 1.012 1.003 1.003 1.003 1.003 1.005 1.005 1.005 1.005 1.005 1.005 1.005 1.005 1.005	192-204 1.005 1.011 1.011 1.014 1.003 1.006 1.006 1.006 1.007 1.007	204-216 1.003 1.009 1.010 1.010 1.010 1.003 1.005 1.004 1.016 1.005 1.016 1.018	216-228 1.002 1.005 1.008 1.008 1.003 1.006 1.010 1.010 1.007 1.005 1.008	228-240 1.000 1.002 1.099 1.007 1.003 1.007 1.001 1.009 1.005	240-252 1.001 1.012 1.009 1.008 1.003 1.004 1.004 1.002 1.009 1.016	252-264 1.015 1.006 1.009 1.008 1.003 1.004 1.001 1.001	264-276 1.005 1.004 1.009 1.005 1.004 1.004 1.004 1.004 1.001	276-288 1.014 1.002 1.007 1.004 1.006 1.006	288-300 1.011 1.004 1.008 1.006 1.006	300-312 1.009 1.002 1.008 1.008 1.005	312-324 1.005 1.004 1.007 1.001	324-336 1.003 1.008 1.009	336-348 1.004 1.001	348-360 1.003	
Averages Simple Avg All Yrs	12-24 2.478	24-36 1.290	36-48 1.141	48-60 1.093	60-72 1.066	72-84 1.054	84-96 1.045	96-108 1.035	108-120 1.028	120-132 1.021	132-144 1.019	144-156 1.014	156-168 1.015	168-180 1.013	180-192 1.009	192-204 1.008	204-216 1.008	216-228 1.007	228-240 1.006	240-252 1.007	252-264 1.007	264-276 1.005	276-288 1.006	288-300 1.006	300-312 1.006	312-324 1.004	324-336 1.007	336-348 1.002	348-360 1.003	To Ult
Latest 5 Latest 3 Volume Wtd	2.052 1.977	1.194 1.171	1.085 1.075	1.048 1.047	1.037 1.034	1.030 1.033	1.029 1.025	1.025 1.025	1.025 1.028	1.022 1.025	1.022 1.021	1.015 1.018	1.015 1.020	1.012 1.014	1.012 1.013	1.006 1.006	1.011 1.012	1.009 1.007	1.008 1.010	1.008 1.009	1.005 1.005	1.004 1.004	1.005 1.005	1.006 1.005	1.006 1.007	1.004	1.007			
All Yrs Latest 5 Latest 3	2.379 2.038 1.972	1.254 1.194 1.172	1.120 1.085 1.075	1.073 1.048 1.047	1.051 1.037 1.034	1.039 1.031 1.033	1.032 1.029 1.024	1.024 1.024 1.024	1.021 1.026 1.029	1.017 1.023 1.025	1.015 1.021 1.021	1.012 1.015 1.018	1.012 1.015 1.020	1.010 1.012 1.014	1.009 1.012 1.013	1.007 1.006 1.006	1.009 1.011 1.011	1.008 1.009 1.007	1.007 1.007 1.010	1.007 1.008 1.009	1.006 1.005 1.005	1.004 1.004 1.004	1.005 1.005 1.005	1.006 1.005 1.005	1.006 1.006 1.007	1.004	1.008	1.001	1.003	



All Clusters Combined Medical

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Ultimate Loss			Ultima	ite Loss	Change in U	Itimate Loss	Change in Ultimate Loss		
Accident	As o	f 6/11	As o	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)	
Year	Low	High	Low	High	Low	Low	High	High	
All Prior Yrs	6,985,539	7,611,470	7,135,868	8,272,663	150,329	2.2%	661,192	8.7%	
6/30/82-83	1,237,456	1,280,583	1,238,329	1,275,632	874	0.1%	(4,952)	-0.4%	
6/30/83-84	3,264,815	3,407,021	3,263,074	3,374,383	(1,741)	-0.1%	(32,638)	-1.0%	
6/30/84-85	3,224,329	3,243,388	3,195,840	3,212,983	(28,489)	-0.9%	(30,405)	-0.9%	
6/30/85-86	5,118,441	5,155,115	5,031,171	5,062,115	(87,270)	-1.7%	(93,000)	-1.8%	
6/30/86-87	5,893,562	5,916,716	5,835,562	5,857,716	(58,000)	-1.0%	(59,000)	-1.0%	
6/30/87-88	10,088,000	10,108,000	9,955,000	9,976,000	(133,000)	-1.3%	(132,000)	-1.3%	
6/30/88-89	12,449,230	12,483,225	12,266,230	12,296,225	(183,000)	-1.5%	(187,000)	-1.5%	
6/30/89-90	13,061,659	13,149,933	12,899,198	12,991,507	(162,460)	-1.2%	(158,425)	-1.2%	
6/30/90-91	12,313,685	12,368,782	12,224,075	12,277,782	(89,610)	-0.7%	(91,000)	-0.7%	
6/30/91-92	10,559,534	10,608,647	10,560,534	10,607,647	1,000	0.0%	(1,000)	0.0%	
6/30/92-93	8,232,747	8,264,684	8,114,747	8,142,684	(118,000)	-1.4%	(122,000)	-1.5%	
6/30/93-94	8,569,000	8,579,000	8,453,000	8,460,000	(116,000)	-1.4%	(119,000)	-1.4%	
6/30/94-95	7,246,423	7,257,476	7,227,423	7,237,476	(19,000)	-0.3%	(20,000)	-0.3%	
6/30/95-96	7,121,043	7,150,625	7,017,043	7,045,625	(104,000)	-1.5%	(105,000)	-1.5%	
6/30/96-97	7,241,847	7,261,626	7,277,847	7,296,626	36,000	0.5%	35,000	0.5%	
6/30/97-98	6,849,000	6,881,100	6,835,000	6,885,200	(14,000)	-0.2%	4,100	0.1%	
6/30/98-99	7,226,000	7,234,000	7,197,000	7,217,000	(29,000)	-0.4%	(17,000)	-0.2%	
6/30/99-00	8,171,000	8,182,000	8,144,000	8,173,000	(27,000)	-0.3%	(9,000)	-0.1%	
6/30/00-01	9,954,900	10,066,000	9,950,600	10,087,000	(4,300)	0.0%	21,000	0.2%	
6/30/01-02	8,020,000	8,035,000	8,114,000	8,145,000	94,000	1.2%	110,000	1.4%	
6/30/02-03	8,995,000	9,148,000	8,929,000	9,102,000	(66,000)	-0.7%	(46,000)	-0.5%	
6/30/03-04	9,948,000	10,113,650	9,774,000	9,956,850	(174,000)	-1.7%	(156,800)	-1.6%	
6/30/04-05	11,284,000	12,405,250	10,991,000	12,161,850	(293,000)	-2.6%	(243,400)	-2.0%	
6/30/05-06	10,731,000	11,298,950	10,521,000	11,162,100	(210,000)	-2.0%	(136,850)	-1.2%	
6/30/06-07	11,284,000	12,843,250	11,106,000	12,411,350	(178,000)	-1.6%	(431,900)	-3.4%	
6/30/07-08	11,481,000	12,762,400	11,140,000	12,242,850	(341,000)	-3.0%	(519,550)	-4.1%	
6/30/08-09	12,000,000	13,890,800	11,501,000	13,190,350	(499,000)	-4.2%	(700,450)	-5.0%	
6/30/09-10	12,101,000	14,783,950	11,141,000	13,224,300	(960,000)	-7.9%	(1,559,650)	-10.5%	
6/30/10-11	14,836,000	19,838,700	13,094,000	15,521,100	(1,742,000)	-11.7%	(4,317,600)	-21.8%	
6/30/11-12									
Total	265,488,211	281,329,343	260,132,543	272,867,016	(5,355,668)	-2.0%	(8,462,327)	-3.0%	

^{(2), (3)} From Aon analysis as of June 30, 2011

^{(4), (5)} From Section 1, Exhibit 2, Page 1, Columns 6, 7

^{(6) = (4) - (2)}

^{(7) = (4) / (2) - 1}

^{(8) = (5) - (3)}

^{(9) = (5) / (3) - 1}



Section 1 Exhibit 2 Page 9

All Clusters Combined Medical

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	1.4%	0.0%	0.4%	0.2%	1.000	1.000
360	98.6%	0.4%	1.4%	0.1%	0.1%	0.981	0.971
348	98.2%	0.2%	1.8%	0.1%	0.0%	0.952	0.929
336	98.0%	0.2%	2.0%	0.1%	0.0%	0.923	0.888
324	97.8%	0.2%	2.2%	0.1%	0.0%	0.895	0.849
312	97.6%	0.4%	2.4%	0.2%	0.1%	0.871	0.816
300	97.1%	0.2%	2.9%	0.1%	0.1%	0.860	0.801
288	96.9%	0.4%	3.1%	0.2%	0.1%	0.839	0.773
276	96.5%	0.5%	3.5%	0.2%	0.1%	0.829	0.760
264	95.9%	0.0%	4.1%	0.0%	0.0%	0.820	0.749
252	95.9%	1.0%	4.1%	0.4%	0.3%	0.790	0.708
240	94.9%	0.7%	5.1%	0.3%	0.2%	0.802	0.727
228	94.3%	0.8%	5.7%	0.4%	0.3%	0.797	0.720
216	93.4%	0.8%	6.6%	0.4%	0.3%	0.794	0.717
204	92.6%	1.2%	7.4%	0.6%	0.5%	0.786	0.707
192	91.4%	0.9%	8.6%	0.5%	0.4%	0.788	0.710
180	90.5%	1.6%	9.5%	0.9%	0.7%	0.779	0.700
168	88.9%	1.4%	11.1%	0.8%	0.6%	0.782	0.704
156	87.5%	1.0%	12.5%	0.6%	0.5%	0.777	0.698
144	86.5%	1.3%	13.5%	0.8%	0.7%	0.765	0.682
132	85.2%	2.1%	14.8%	1.4%	1.1%	0.757	0.672
120	83.1%	1.5%	16.9%	1.0%	0.9%	0.759	0.676
108	81.6%	3.0%	18.4%	2.1%	1.8%	0.751	0.665
96	78.6%	1.7%	21.4%	1.3%	1.1%	0.758	0.675
84	76.9%	3.5%	23.1%	2.7%	2.4%	0.748	0.662
72	73.4%	2.1%	26.6%	1.7%	1.5%	0.753	0.670
60	71.3%	3.8%	28.7%	3.2%	2.9%	0.743	0.657
48	67.5%	6.0%	32.5%	5.2%	4.9%	0.746	0.661
36	61.5%	12.5%	38.5%	11.4%	10.8%	0.758	0.678
24	48.9%	28.8%	51.1%	27.2%	26.4%	0.791	0.721
12	20.1%	20.1%	79.9%	19.7%	19.5%	0.840	0.785

Total 100.0%

- (2) = 1 / Section 1, Exhibit 2, Page 2, Column 4
- (3) Incremental % based on (2)
- (4) = 1 (2)
- $(5) = [(3) / 1.04] ^ {[(1) 6] / 12}$
- $(6) = [(3) / 1.06] ^ {[(1) 6] / 12}$
- (7), (8) Discount factor based on (5), (6)

Section 1 Exhibit 2 Page 10

All Clusters Combined Medical

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)		
		counted	Discount	Discounted			
Accident	Outstandi	ng Losses	Factor at	Outstandi	ng Losses		
Year	(Low)	(High)	4.0%	(Low)	(High)		
All Prior Yrs	1,038,249	2,175,044		958,352	2,024,638		
6/30/82-83	4,896	42,198	0.981	4,808	41,398		
6/30/83-84	17,968	129,277	0.952	17,085	122,824		
6/30/84-85	56,770	73,913	0.923	52,645	68,674		
6/30/85-86	86,850	117,795	0.895	78,640	107,133		
6/30/86-87	128,099	150,253	0.871	113,203	132,837		
6/30/87-88	277,012	298,012	0.860	238,553	256,510		
6/30/88-89	378,262	408,257	0.839	318,819	342,605		
6/30/89-90	378,695	471,004	0.829	312,593	386,615		
6/30/90-91	457,837	511,543	0.820	369,539	412,867		
6/30/91-92	398,357	445,470	0.790	316,731	353,737		
6/30/92-93	400,019	427,955	0.802	319,104	341,233		
6/30/93-94	478,359	485,359	0.797	379,264	384,823		
6/30/94-95	462,979	473,032	0.794	362,413	370,434		
6/30/95-96	495,973	524,555	0.786	384,386	406,525		
6/30/96-97	612,995	631,774	0.788	468,887	483,054		
6/30/97-98	643,638	693,838	0.779	488,189	525,198		
6/30/98-99	794,416	814,416	0.782	600,467	614,831		
6/30/99-00	1,005,210	1,034,210	0.777	759,086	779,910		
6/30/00-01	1,246,826	1,383,226	0.765	931,146	1,030,556		
6/30/01-02	1,196,321	1,227,321	0.757	891,336	913,350		
6/30/02-03	1,381,537	1,554,537	0.759	1,026,042	1,150,966		
6/30/03-04	1,681,055	1,863,905	0.751	1,252,408	1,387,410		
6/30/04-05	1,446,327	2,617,177	0.758	1,070,633	1,941,732		
6/30/05-06	2,020,973	2,662,073	0.748	1,504,664	1,985,580		
6/30/06-07	2,153,593	3,458,943	0.753	1,601,619	2,574,590		
6/30/07-08	2,775,912	3,878,762	0.743	2,065,659	2,887,641		
6/30/08-09	3,100,532	4,789,882	0.746	2,316,164	3,578,794		
6/30/09-10	3,927,872	6,011,172	0.758	2,996,385	4,579,028		
6/30/10-11	6,077,256	8,504,356	0.791	4,813,804	6,721,576		
6/30/11-12	10,447,628	14,637,628	0.840	8,781,957	12,244,768		
Total	45,572,417	62,496,889		35,794,584	49,151,838		

(7) Total Discount Facto

iscount Calculation for	ſ
All Prior Years	
(Low)	(High)
1,038,249	2,175,044
3	3
346,083	725,015
979,621	2,052,221
	All Prior Years (Low) 1,038,249 3 346,083

0.785

0.786

NOTES:

(2), (3) From Section 1, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 1, Exhibit 2, Page 9, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

Section 1 Exhibit 2 Page 11

All Clusters Combined Medical

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
		counted	Discount		ounted
Accident		ng Losses	Factor at		ng Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	1,038,249	2,175,044		923,122	1,957,576
6/30/82-83	4,896	42,198	0.971	4,766	41,014
6/30/83-84	17,968	129,277	0.929	16,673	119,818
6/30/84-85	56,770	73,913	0.888	50,770	66,294
6/30/85-86	86,850	117,795	0.849	75,000	102,404
6/30/86-87	128,099	150,253	0.816	106,751	125,293
6/30/87-88	277,012	298,012	0.801	222,271	238,945
6/30/88-89	378,262	408,257	0.773	294,204	315,483
6/30/89-90	378,695	471,004	0.760	285,816	352,538
6/30/90-91	457,837	511,543	0.749	334,596	373,837
6/30/91-92	398,357	445,470	0.708	285,058	318,247
6/30/92-93	400,019	427,955	0.727	288,227	308,198
6/30/93-94	478,359	485,359	0.720	341,994	347,010
6/30/94-95	462,979	473,032	0.717	325,148	332,410
6/30/95-96	495,973	524,555	0.707	343,625	363,445
6/30/96-97	612,995	631,774	0.710	416,894	429,422
6/30/97-98	643,638	693,838	0.700	432,894	465,319
6/30/98-99	794,416	814,416	0.704	532,268	544,703
6/30/99-00	1,005,210	1,034,210	0.698	673,422	691,485
6/30/00-01	1,246,826	1,383,226	0.682	822,616	909,584
6/30/01-02	1,196,321	1,227,321	0.672	787,284	806,338
6/30/02-03	1,381,537	1,554,537	0.676	905,749	1,014,764
6/30/03-04	1,681,055	1,863,905	0.665	1,108,440	1,227,659
6/30/04-05	1,446,327	2,617,177	0.675	945,659	1,716,593
6/30/05-06	2,020,973	2,662,073	0.662	1,333,522	1,761,070
6/30/06-07	2,153,593	3,458,943	0.670	1,419,427	2,281,871
6/30/07-08	2,775,912	3,878,762	0.657	1,831,516	2,561,101
6/30/08-09	3,100,532	4,789,882	0.661	2,058,160	3,180,998
6/30/09-10	3,927,872	6,011,172	0.678	2,689,826	4,108,921
6/30/10-11	6,077,256	8,504,356	0.721	4,394,832	6,132,330
6/30/11-12	10,447,628	14,637,628	0.785	8,216,107	11,436,856
Total	45,572,417	62,496,889		32,466,639	44,631,525

	Discount Ca	alculation for
	All Pri	or Years
	(Low)	(High)
(8) Estimated Total Reserve:	1,038,249	2,175,044
(9) Projected Number of Years:	3	3
(10) Projected Paid Loss per Year:	346,083	725,015

0.712

952,837

(7) Total Discount Factor:

(11) Discounted Value at 6%:

0.714

1,996,112

NOTES:

(2), (3) From Section 1, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 1, Exhibit 2, Page 9, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



Department of Mental Retardation - Cluster 1 Indemnity

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		19,920,232			24,817,827	27,008,015	4,897,594	7,087,783		
6/30/82-83		4,621,791	5,104,283		4,976,675	5,231,890	354,884	610,098		
6/30/83-84		7,911,441	9,586,029		9,394,308	9,777,749	1,482,868	1,866,309		
6/30/84-85	181,560	6,782,046	6,969,177	6,974,577	6,850,000	6,918,000	67,954	135,954	3.773	3.810
6/30/85-86	195,247	10,272,096	10,677,574	10,670,704	10,580,000	10,683,000	307,904	410,904	5.419	5.472
6/30/86-87	224,370	13,480,506	14,096,384	14,105,833	13,750,000	13,885,000	269,494	404,494	6.128	6.188
6/30/87-88	262,864	19,044,519	21,824,867	20,043,379	20,043,000	20,934,000	998,481	1,889,481	7.625	7.964
6/30/88-89	283,884	19,780,264	21,018,012	21,020,933	21,018,000	21,021,000	1,237,736	1,240,736	7.404	7.405
6/30/89-90	285,078	14,966,981	16,024,200	16,150,323	15,117,000	15,266,000	150,019	299,019	5.303	5.355
6/30/90-91	267,732	10,863,097	11,747,846	11,741,516	10,972,000	11,080,000	108,903	216,903	4.098	4.138
6/30/91-92	261,442	7,448,162	8,099,256	8,091,058	8,091,000	8,099,000	642,838	650,838	3.095	3.098
6/30/92-93	259,992	4,189,576	4,591,596	4,586,054	4,231,000	4,273,000	41,424	83,424	1.627	1.644
6/30/93-94	257,062	3,496,223	3,826,340	3,822,166	3,566,000	3,601,000	69,777	104,777	1.387	1.401
6/30/94-95	255,854	2,081,529	2,288,126	2,289,127	2,288,000	2,289,000	206,471	207,471	0.894	0.895
6/30/95-96	255,539	2,977,888	3,292,783	3,288,710	3,289,000	3,293,000	311,112	315,112	1.287	1.289
6/30/96-97	270,071	2,467,027	2,738,106	2,738,498	2,738,000	2,738,000	270,973	270,973	1.014	1.014
6/30/97-98	245,367	2,558,030	2,880,040	2,876,195	2,876,000	2,880,000	317,970	321,970	1.172	1.174
6/30/98-99	251,453	2,268,046	2,567,421	2,567,630	2,567,000	2,568,000	298,954	299,954	1.021	1.021
6/30/99-00	255,641	2,267,234	2,611,764	2,610,197	2,610,000	2,612,000	342,766	344,766	1.021	1.022
6/30/00-01	263,918	3,106,854	3,646,666	3,631,079	3,631,000	3,647,000	524,146	540,146	1.376	1.382
6/30/01-02	267,598	2,229,461	2,638,313	2,639,229	2,638,000	2,639,000	408,539	409,539	0.986	0.986
6/30/02-03	274,465	2,902,035	3,495,635	3,485,015	3,485,000	3,496,000	582,965	593,965	1.270	1.274
6/30/03-04	272,384	2,931,797	3,589,154	3,575,749	3,576,000	3,589,000	644,203	657,203	1.313	1.318
6/30/04-05	273,647	2,622,417	3,274,273	3,207,364	3,207,000	3,274,000	584,583	651,583	1.172	1.196
6/30/05-06	285,139	2,397,522	3,223,389	3,213,605	3,214,000	3,223,000	816,478	825,478	1.127	1.130
6/30/06-07	298,516	2,405,339	3,267,447	3,288,368	3,267,000	3,288,000	861,661	882,661	1.094	1.101
6/30/07-08	314,231	1,350,780	2,169,828	2,542,935	2,170,000	2,543,000	819,220	1,192,220	0.691	0.809
6/30/08-09	302,998	1,718,834	2,870,218	3,084,665	2,870,000	3,085,000	1,151,166	1,366,166	0.947	1.018
6/30/09-10	297,252	2,141,596	4,149,344	3,917,917	3,918,000	4,149,000	1,776,404	2,007,404	1.318	1.396
6/30/10-11	292,432	1,346,423	3,656,764	3,596,655	3,597,000	3,657,000	2,250,577	2,310,577	1.230	1.251
6/30/11-12	295,908	737,468	3,995,278	3,793,059	3,793,000	3,995,000	3,055,532	3,257,532	1.282	1.350
Total	7,451,644	183,287,215	189,920,112	173,552,540	209,140,810	214,742,654	25,853,595	31,455,439		
Tot 6/30/84-12	7,451,644	150,833,751	175,229,801	173,552,540	169,952,000	172,725,000	19,118,249	21,891,249	2.281	2.318

- (2) Provided by Commonwealth of Massachusetts
- (3) Sum of Section 2, Exhibit 1, Page 2, Column 3 and Section 2, Exhibit 1, Page 9, Column 8
- (4) From Section 2, Exhibit 1, Page 2, Column 8
- (5) From Section 2, Exhibit 1, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



Department of Mental Retardation - Cluster 1 Indemnity

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Paid Loss		Adjstmnt for	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average	
Accident	Payroll	Excluding	Paid	Extra	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding	Average
Year	(000's)	Lump Sum	LDF	Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim	Age
All Prior Yrs		18,654,734							11	10		74
6/30/82-83		4,231,391	1.013	1.100	4,713,883	390,400	5,104,283		2	1	482,491	84
6/30/83-84		7,362,291	1.023	1.200	9,036,879	549,150	9,586,029		3	4	418,647	63
6/30/84-85	181,560	5,652,195	1.033	1.000	5,839,326	1,129,851	6,969,177	3.838	0	1	187,132	61
6/30/85-86	195,247	9,334,452	1.043	1.000	9,739,930	937,644	10,677,574	5.469	1	0		
6/30/86-87	224,370	11,412,789	1.054	1.000	12,027,633	2,068,751	14,096,384	6.283	0	0		
6/30/87-88	262,864	16,248,755	1.064	1.100	19,024,906	2,799,960	21,824,867	8.303	4	4	694,038	66
6/30/88-89	283,884	16,140,651	1.076	1.000	17,369,285	3,648,726	21,018,012	7.404	4	3	409,545	81
6/30/89-90	285,078	11,614,400	1.089	1.000	12,648,476	3,375,724	16,024,200	5.621	1	1	1,034,076	58
6/30/90-91	267,732	8,297,667	1.103	1.000	9,153,915	2,593,931	11,747,846	4.388	1	1	856,248	80
6/30/91-92	261,442	5,641,750	1.111	1.000	6,265,239	1,834,017	8,099,256	3.098	2	2	311,744	61
6/30/92-93	259,992	3,210,473	1.119	1.000	3,591,149	1,000,447	4,591,596	1.766	0	0		
6/30/93-94	257,062	2,527,522	1.121	1.000	2,834,218	992,122	3,826,340	1.488	0	0		
6/30/94-95	255,854	1,526,329	1.125	1.000	1,717,460	570,667	2,288,126	0.894	0	0		
6/30/95-96	255,539	2,231,248	1.130	1.000	2,520,613	772,170	3,292,783	1.289	1	1	289,365	56
6/30/96-97	270,071	1,787,477	1.138	1.000	2,033,832	704,275	2,738,106	1.014	0	0		
6/30/97-98	245,367	2,024,867	1.144	1.000	2,315,863	564,177	2,880,040	1.174	1	1	290,996	52
6/30/98-99	251,453	1,745,975	1.151	1.000	2,010,218	557,203	2,567,421	1.021	0	1	264,243	38
6/30/99-00	255,641	1,924,733	1.159	1.000	2,230,589	381,175	2,611,764	1.022	2	1	305,856	68
6/30/00-01	263,918	2,855,751	1.169	1.000	3,339,733	306,933	3,646,666	1.382	4	3	161,327	56
6/30/01-02	267,598	1,946,247	1.185	1.000	2,306,084	332,229	2,638,313	0.986	1	2	179,918	58
6/30/02-03	274,465	2,574,011	1.201	1.000	3,092,272	403,362	3,495,635	1.274	2	2	259,131	62
6/30/03-04	272,384	2,651,972	1.215	1.000	3,222,042	367,112	3,589,154	1.318	4	2	285,035	58
6/30/04-05	273,647	2,315,265	1.237	1.000	2,865,058	409,215	3,274,273	1.197	5	1	549,792	47
6/30/05-06	285,139	2,165,020	1.258	1.000	2,723,389	500,000	3,223,389	1.130	11	6	93,061	57
6/30/06-07	298,516	2,144,089	1.291	1.000	2,767,447	500,000	3,267,447	1.095	13	9	69,262	50
6/30/07-08	314,231	1,226,279	1.362	1.000	1,669,828	500,000	2,169,828	0.691	14	8	55,444	46
6/30/08-09	302,998	1,598,834	1.482	1.000	2,370,218	500,000	2,870,218	0.947	15	16	48,212	54
6/30/09-10	297,252	2,071,218	1.721	1.000	3,565,530	583,814	4,149,344	1.396	81	37	40,387	50
6/30/10-11	292,432	1,318,901	2.347	1.000	3,094,865	561,899	3,656,764	1.250	237	61	29,114	50
6/30/11-12	295,908	737,468	4.523	1.000	3,335,888	659,390	3,995,278	1.350		256	10,150	46
Total	7,451,644	155,174,756			159,425,769	30,494,343	189,920,112		420	434		

- (2) Provided by Commonwealth of Massachusetts
- (3), (4) From Section 2, Exhibit 1, Page 7
- (5) Based on information from the MA WCIRB
- (6) = (3) x (4) x (5)
- (7) From Section 2, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10), (11) Provided by Commonwealth of Massachusetts
- $(12) = Maximum of [{(6) (3)} / (11)] and 0$
- (13) Calculated for claimants that had an indemnity payment within the last calendar year.

Section 2 Exhibit 1 Page 3

Department of Mental Retardation - Cluster 1 Indemnity

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori	Paid Loss	<u> </u>	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss	Excluding	Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Lump Sum	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	181,560	3.309	5,652,195	1.033	5,844,726	1,129,851	6,974,577	3.841	3.219
6/30/85-86	195,247	4.904	9,334,452	1.043	9,733,060	937,644	10,670,704	5.465	4.985
6/30/86-87	224,370	5.443	11,412,789	1.054	12,037,082	2,068,751	14,105,833	6.287	5.365
6/30/87-88	262,864	6.253	16,248,755	1.064	17,243,418	2,799,960	20,043,379	7.625	6.560
6/30/88-89	283,884	6.133	16,140,651	1.076	17,372,207	3,648,726	21,020,933	7.405	6.119
6/30/89-90	285,078	4.978	11,614,400	1.089	12,774,600	3,375,724	16,150,323	5.665	4.481
6/30/90-91	267,732	3.394	8,297,667	1.103	9,147,585	2,593,931	11,741,516	4.386	3.417
6/30/91-92	261,442	2.365	5,641,750	1.111	6,257,041	1,834,017	8,091,058	3.095	2.393
6/30/92-93	259,992	1.361	3,210,473	1.119	3,585,608	1,000,447	4,586,054	1.764	1.379
6/30/93-94	257,062	1.088	2,527,522	1.121	2,830,044	992,122	3,822,166	1.487	1.101
6/30/94-95	255,854	0.675	1,526,329	1.125	1,718,461	570,667	2,289,127	0.895	0.672
6/30/95-96	255,539	0.973	2,231,248	1.130	2,516,540	772,170	3,288,710	1.287	0.985
6/30/96-97	270,071	0.754	1,787,477	1.138	2,034,223	704,275	2,738,498	1.014	0.753
6/30/97-98	245,367	0.931	2,024,867	1.144	2,312,018	564,177	2,876,195	1.172	0.942
6/30/98-99	251,453	0.800	1,745,975	1.151	2,010,427	557,203	2,567,630	1.021	0.800
6/30/99-00	255,641	0.868	1,924,733	1.159	2,229,022	381,175	2,610,197	1.021	0.872
6/30/00-01	263,918	1.225	2,855,751	1.169	3,324,146	306,933	3,631,079	1.376	1.260
6/30/01-02	267,598	0.864	1,946,247	1.185	2,307,001	332,229	2,639,229	0.986	0.862
6/30/02-03	274,465	1.104	2,574,011	1.201	3,081,652	403,362	3,485,015	1.270	1.123
6/30/03-04	272,384	1.155	2,651,972	1.215	3,208,637	367,112	3,575,749	1.313	1.178
6/30/04-05	273,647	0.920	2,315,265	1.237	2,798,149	409,215	3,207,364	1.172	1.023
6/30/05-06	285,139	0.938	2,165,020	1.258	2,713,605	500,000	3,213,605	1.127	0.952
6/30/06-07	298,516	0.958	2,144,089	1.291	2,788,368	500,000	3,288,368	1.102	0.934
6/30/07-08	314,231	0.978	1,226,279	1.362	2,042,935	500,000	2,542,935	0.809	0.650
6/30/08-09	302,998	1.000	1,598,834	1.482	2,584,665	500,000	3,084,665	1.018	0.853
6/30/09-10	297,252	1.014	2,071,218	1.721	3,334,103	583,814	3,917,917	1.318	1.122
6/30/10-11	292,432	1.023	1,318,901	2.347	3,034,756	561,899	3,596,655	1.230	1.038
6/30/11-12	295,908	1.040	737,468	4.523	3,133,669	659,390	3,793,059	1.282	1.059
Total	7,451,644		124,926,340		143,997,748	29,554,793	173,552,540		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 2, Exhibit 1, Page 4, Column 11
- (4) From Section 2, Exhibit 1, Page 2, Column 3
- (5) From Section 2, Exhibit 1, Page 2, Column 4
- $(6) = (4) + [\{1 \{1/(5)\}\} \times (3) \times (2) \times 10]$
- (7) From Section 2, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10

Section 2 Exhibit 1 Page 4

Department of Mental Retardation - Cluster 1 Indemnity

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Exp Ult Loss	Unadjusted	Benefit	Benefit	Loss	Trended	Detrended	Prior	Current
Accident	Payroll	Excluding	Loss	Level	Adjusted	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Lump Sum	Cost	Factor	Loss Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									3.309	3.309
6/30/85-86									4.904	4.904
6/30/86-87									5.443	5.443
6/30/87-88									6.253	6.253
6/30/88-89									6.133	6.133
6/30/89-90									4.978	4.978
6/30/90-91	267,732	9,153,915	3.419	0.946	3.235	1.245	4.026	0.892	3.390	3.394
6/30/91-92	261,442	6,265,239	2.396	1.038	2.487	1.232	3.065	0.821	2.346	2.365
6/30/92-93	259,992	3,591,149	1.381	1.210	1.672	1.220	2.040	0.711	1.354	1.361
6/30/93-94	257,062	2,834,218	1.103	1.195	1.317	1.208	1.591	0.727	1.084	1.088
6/30/94-95	255,854	1,717,460	0.671	1.184	0.795	1.196	0.950	0.742	0.673	0.675
6/30/95-96	255,539	2,520,613	0.986	1.174	1.158	1.184	1.372	0.755	0.964	0.973
6/30/96-97	270,071	2,033,832	0.753	1.163	0.876	1.173	1.027	0.770	0.755	0.754
6/30/97-98	245,367	2,315,863	0.944	1.148	1.083	1.161	1.258	0.788	0.923	0.931
6/30/98-99	251,453	2,010,218	0.799	1.133	0.906	1.149	1.041	0.806	0.797	0.800
6/30/99-00	255,641	2,230,589	0.873	1.114	0.972	1.138	1.107	0.828	0.854	0.868
6/30/00-01	263,918	3,339,733	1.265	1.086	1.374	1.127	1.549	0.858	1.201	1.225
6/30/01-02	267,598	2,306,084	0.862	1.065	0.918	1.116	1.024	0.884	0.861	0.864
6/30/02-03	274,465	3,092,272	1.127	1.061	1.196	1.105	1.321	0.896	1.093	1.104
6/30/03-04	272,384	3,222,042	1.183	1.061	1.255	1.094	1.373	0.905	1.136	1.155
6/30/04-05	273,647	2,865,058	1.047	1.054	1.104	1.083	1.195	0.920	0.928	0.920
6/30/05-06	285,139	2,723,389	0.955	1.044	0.997	1.072	1.069	0.938	0.947	0.938
6/30/06-07	298,516	2,767,447	0.927	1.032	0.957	1.062	1.016	0.958	0.967	0.958
6/30/07-08	314,231	1,669,828	0.531	1.021	0.543	1.051	0.570	0.978	0.988	0.978
6/30/08-09	302,998	2,370,218	0.782	1.009	0.790	1.041	0.822	1.000	1.009	1.000
6/30/09-10	297,252	3,565,530	1.199	1.005	1.206	1.030	1.242	1.014	1.023	1.014
6/30/10-11	292,432	3,094,865	1.058	1.007	1.065	1.020	1.087	1.023	1.040	1.023
6/30/11-12	295,908	3,335,888	1.127	1.000	1.127	1.010	1.139	1.040		1.040
Total	6,018,641	69,025,451								
			Trend L	ast 4 (ex 11-12):	27.7%	Avg 3 (x11-12):	1.050			
			Trend L	ast 8 (ex 11-12):	-2.3%	Avg 5 (x11-12):	0.947			
			Trend La	st 12 (ex 11-12):	-2.1%	Avg 10 (x11-12):	1.072			
			Prior	Selected Trend:	1.0%	Prior Sel Avg:	1.050			

Selected Trend:

1.0%

1.050

Sel. Loss Cost:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 2, Exhibit 1, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCRIB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)





Department of Mental Retardation - Cluster 1 Indemnity

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	<u> </u>		
(1)	Average Payment Trend	0.9	960
(2)	Credibility	43	1%
(3)	Average Pmt Trend Statewide	0.9	060
(4)	Credibility Weighted Trend	0.9	060
		(Low)	(High)
(5)	Selected Range	0.950	0.965
(6)	Incremental Paid for 2012	372,558	372,558
(7)	Estimated Reserve	7,078,607	10,211,483
(8)	Paid to Date (82 & Prior)	18,654,734	18,654,734
(9)	Est Ult Paid for 1982 & Prior	25,733,341	28,866,217
Method 2	_		
		(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	388,083	396,399
(11)	Projected Number of Years	7	7
(12)	Estimated Reserve	2,716,582	2,774,792
(13)	Paid to Date (82 & Prior)	18,654,734	18,282,176
(14)	Est Ult Paid for 1982 & Prior	21,371,317	21,056,968
(14a)	Paid Counts During Fiscal Year	10	11
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	23,552,329	25,742,517
(16)	Lump Sum Ultimates	1,265,498	1,265,498
(17)	Ult Loss Including Lump Sums	24,817,827	27,008,015
(18)	Implied Tail	1.263	1.380
(19)	Ult Loss Inc Lump Sums @ 6/11	24,641,535	26,916,429

(1	From	Section	2	Exhibit	1	Page 6
١,		, 1 10111	Dection	۷,	LAIIIOIL	1,	I age o

- (2) = (Average of Section 2, Exhibit 1, Page 6, Column 3/3,000,000) $^{\circ}$ 0.5
- (3) Average Statewide Trend
- $(4) = (1) x (2) + (4) x \{1 (2)\}$
- (5) Selected judgmentally based on (4)
- (6), (14a) Provided by Commonwealth of Massachusetts
- $(7) = (6) \times (5) / \{1 (5)\}$
- (8), (16) From Section 2, Exhibit 1, Page 2, Column 3
- (9) = (7) + (8)

- (10) Avg of 3 latest years from Section 2, Exhibit 1, Page 6, Column 3
- (11) Selected judgmentally
- (12) = (10 x (11))
- (14) = (12) + (13)
- (15) = Average of (9) and (14)
- (16) From Section 2, Exhibit 1, Page 9, Column 13
- (17) = (15) + (16)
- (18) = (15) / (8)
- (19) From Aon analysis as of June 30, 2011



Section 2 Exhibit 1 Page 6

Department of Mental Retardation - Cluster 1 Indemnity

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	689,918	13.444			
1993	2	793,381	13.584	1.150		
1994	3	677,152	13.426	0.854		
1995	4	616,229	13.331	0.910		
1996	5	581,038	13.273	0.943		
1997	6	667,765	13.412	1.149		
1998	7	676,041	13.424	1.012		
1999	8	626,143	13.347	0.926		
2000	9	638,144	13.366	1.019	n =	21
2001	10	586,837	13.283	0.920	S(x) =	42,042
2002	11	551,859	13.221	0.940	S(x-sq) =	84,168,854
2003	12	510,510	13.143	0.925	S(xy) =	554,088
2004	13	475,438	13.072	0.931	S(y) =	277
2005	14	461,151	13.041	0.970	D =	16,170
2006	15	476,801	13.075	1.034	slope =	-0.036
2007	16	429,059	12.969	0.900	Avg Trend =	0.964
2008	17	388,693	12.871	0.906		
2009	18	397,505	12.893	1.023		
2010	19	401,537	12.903	1.010		
2011	20	390,154	12.874	0.972		
2012	21	372,558	12.828	0.955		

Selected Trend: 0.960

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.955 = 372558 / 390154



Commonwealth of Massachusetts Workers Compensation Department of Mental Retardation - Cluster 1 INDEMNITY Paid Loss Development Paid Loss (Excludine Lump Sum)



1,018,528 1,273,160 1,522,276 1,772,634 1,978,503 2,473,129 2,957,038 3,430,512 2,427,085 3,021,356 3,575,162 4,153,362 2,026,466 2,293,172 3,850,638 4,248,292 4,555,210 4,859,145 2989,792 3,133,165 3,273,307 3,334,466 3,383,400 3,420,864 3,471,952 3,531,863 3,593,426 3,665,87 5,352,765 5,500,225 5,591,777 5,10,671 5,844,905 5,981,927 6,097,750 6,217,962 6,335,407 6,446,404 5,335,406 4,242,572 5,464,010 5,605,977 5,522,923 5,522,306 5,580,002 5,609,877 5,609,827 2.709.942 2.878.245 3.718.769 3.782.583 3.849.168 3.918.660 3.991.417 4.067.350 4.144.239 4.190.906 4.231.391 June-83 716 212 2.479 591 1,391,250 1,706,685 4,569,012 5,067,185 4,852,567 5,084,077 5,195,242 5,289,258 6,682,092 5,650,202 June-84 588,752 6,561,447 6,807,737 6,918,835 7,027,806 7,138,148 7.248.169 722,238 5,650,202 5,650,202 5,650,202 5,650,202 June-85 5,650,202 5,652,195 7,575,650 7,835,016 9,735,307 10,048,389 8,089,718 8,284,822 8,452,458 8,677,431 8,856,536 8,960,945 9,024,666 9,066,019 9,108,290 10,319,413 10,602,871 10,771,580 10,933,614 11,088,267 11,148,911 11,204,986 11,255,712 11,281,293 1.095.655 2 589 088 3.658.454 4.589.190 5.452.112 6.125.447 6.630.963 7.055.749 7.268.651 9 147 296 9 188 006 9 230 664 9 275 183 9 320 262 9 334 452 9 334 452 4,705,173 6,001,822 7,077,490 7,800,986 8,402,000 9,027,460 9,393,871 11,313,500 11,347,192 11,382,355 11,412,789 11,412,789 11,412,789 June-88 2.142.725 4.931.624 7.312.968 9.157.962 10.751.119 11.652.385 12.239.999 12.826.004 13.145.803 13.410.989 13.647.380 13.914.189 14.176.053 14.393.869 14.564.189 14.732.219 14.899.699 15.069.301 15.232.127 15.401.826 15.590.731 15.776.168 15.939.935 16.048.755 16.248.75514,223,676 14,460,790 14,677,503 14,820,152 14,959,611 15,088,991 15,215,644 15,354,762 15,504,713 15,612,328 15,710,703 15,815,015 15,923,590 16,033,593 16,140,651 11,541,269 11,650,902 11,599,979 11,605,663 11,609,714 11,609,714 11,609,714 11,609,714 11,610,392 11,610,392 11,610,392 11,612,790 11,614,053 11,614,400 June-90 2,678,119 5,989,136 8,059,169 9,355,215 10,163,757 10,729,296 11,079,915 11,298,239 11,383,933 2,055,995 4,525,519 5,956,270 6,809,892 7,377,934 7,700,162 1,556,680 2,907,997 3,613,911 4,262,894 4,511,682 4,736,540 7,848,119 7,941,980 4,868,155 4,962,680 8,070,661 5,049,867 8,111,443 8,150,308 5,098,658 5,131,848 8,195,730 8,243,748 8,275,457 8,287,806 8,289,633 8,289,927 8,295,115 8,296,069 8,296,953 8,297,667 5,177,939 5,259,492 5,311,896 5,373,855 5,435,773 5,480,341 5,518,481 5,558,121 5,598,760 5,641,750 3.197.728 June-93 931.603 1.916.981 2.439.817 2.755.036 2.906.872 3.136.998 3.162.217 3.209.301 3.219.019 3.198.001 3.197.828 3.197.728 3.197.728 3.204.287 3.210.473 3.210.473 3.210.473 3.210.473 3.210.473 1,598,259 1,108,550 2,093,050 2,066,940 1,495,864 1,512,391 2,146,254 1,513,346 2,134,209 2,198,365 1,516,872 2,247,827 2,310,431 1,525,732 2,340,041 1,525,732 2,380,852 1,526,329 2,417,221 1,526,329 2,452,624 1,526,329 2,487,353 2,524,486 2,527,522 1,526,329 1,526,329 1,526,329 June-95 684,696 1.371.127 1.516.782 1.519.087 1.526.329 662,860 698,135 1,328,147 1,214,849 1,644,584 1,839,246 1,990,102 1,461,845 1,657,511 1,722,983 2,077,055 2,112,857 1,788,438 2,140,474 1,787,621 2,201,270 1,785,332 2,201,845 1,785,117 2,202,890 1,785,270 2,202,890 1,787,627 2,182,890 1,787,477 2,187,427 1,787,477 2,194,160 2,208,436 2,231,248 1,787,477 1,787,477 June-96 June-97 June-98 573.338 1.086.539 1.414.459 1.559.175 1.673.532 1 729 564 1 772 059 1.810.392 1.842.420 1.881.278 1.926.278 1.959.704 1.981.242 2.002.689 2.024.867 474,980 1,002,186 1,286,380 1,461,855 1,602,851 1,734,926 1,734,926 1,735,176 1,735,217 1,735,938 1,676,266 1,728,806 1,745,975 June-99 June-00 554.623 1.006.163 1.264,666 1.446,800 1.556,201 1.579.597 1.684.607 1.741.958 1.774.284 1.814.835 1.849.313 1.888.484 1.924.733 727,441 1,320,455 660,993 1,170,323 1,784,558 2,038,666 2,257,429 2,391,407 1,474,134 1,719,436 1,840,352 1,925,268 2,505,985 1,929,260 2,630,995 1,934,317 2,692,967 1,935,028 2,745,367 2,798,403 1,938,322 1,946,247 2,855,751 June-02 June-03 June-04 1,386,238 1,930,433 2,233,645 2,345,508 2,434,780 1,250,196 1,708,083 2,040,603 2,220,200 2,394,408 681 649 2.476.294 2.514.232 2,549,374 2,574,011 2,394,408 2,518,890 2,590,854 2,285,267 2,302,225 2,315,265 June-05 629 880 1 271 294 1.746.413 2.055.018 2.203.801 1,564,874 1,794,067 1,951,884 2,062,228 1,513,205 1,806,536 2,009,359 2,144,089 2,062,228 June-06 2,165,020 June-07 526.806 1.054.827 492,006 609,589 840,226 1,027,421 1,150,550 1,226,279 1,045,186 1,367,431 1,598,834 June-08 June-09 June-10 611,726 1,437,135 2,071,218 714,837 1,318,901 June-12 737,468 Age-to-Age Factors 24-36 1.422 96-108 1.081 120-132 1.062 132-144 1.039 Acc Yr Ending 108-120 144-156 156-168 168-180 180-192 204-216 276-288 1.018 288-300 300-312 312-324 324-336 336-348 192-204 1.196 1.132 1.093 1.019 1.015 1.011 1.017 1.018 1.019 1.019 1.011 1.010 1.062 1.025 1.042 1.036 1.020 1.020 1.048 1.018 1.034 1.032 1.018 1.017 1.018 June-84 1.422 1.250 1.160 1.103 1.075 1.043 1.030 1.048 1.033 1.017 1.022 1.023 1.023 1.019 1.020 1.019 1.018 1.018 1.019 1.016 1.016 1.016 1.015 1.016 1.422 1.245 1.254 1.276 1.183 1.162 1.067 1.064 1.074 1.048 1.009 1.033 1.027 1.016 1.024 1.027 1.008 1.000 1.005 1.003 1.000 1.005 1.003 2.363 1.097 1.008 1.027 1.003 1.000 1.012 1.005 1.005 1.004 0.998 1.004 1.000 1.005 1.000 1.000 1.000 2.363 1.083 1.021 1.005 1.002 June-86 1.007 1.005 1.000 June-87 2 338 1.405 1 179 1.102 1.077 1.041 1.016 1.015 1.014 1.005 1.005 1.005 1.002 1.003 1.003 1.000 1.000 1.252 1.084 1.048 1.025 1.020 1.003 1.003 1.010 June-88 1.483 1.011 1.009 1.010 June-89 2.681 1.454 1.127 1.055 1.010 1.009 1.009 1.008 1.010 1.007 1.006 1.007 1.017 1.009 1.005 1.007 1.000 1.013 1.000 1.000 1.008 1.016 1.018 1.003 1.022 1.014 1.005 1.010 0.993 1.028 0.996 1.006 1.009 1.000 1.086 2.236 1.346 1.161 1.056 1.033 1.020 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.012 June-91 2.201 1.316 1.143 1.044 1.019 1.006 1.004 1.001 1.000 1.000 1.000 1.001 1.000 1.000 1.000 1.868 1.243 1 180 1.058 1.050 1.028 1.019 1.010 1.012 1.012 1.008 1.007 1.007 1.007 1.008 1.000 June-93 2.058 1.731 1.129 1.079 1.008 1.000 1.000 1.002 1.002 1.000 1.000 1.000 1.017 June-94 1.211 1.082 0.988 1.038 0.994 1.030 1.015 1.015 1.014 1.015 1.001 1.000 1.000 1.237 1.091 1.011 1.002 1.000 1.001 1.004 1.000 1.000 1.000 1.007 June-95 1.001 1.044 June-96 2.004 0.991 1.003 1.010 1.000 1.021 1.000 1.023 June-97 1.203 1 134 1.040 1.029 1.008 1.000 0.999 1.000 1.001 1.000 1.000 1.000 1.000 1.895 1.302 1.073 1.033 1.025 June-98 1.102 1.011 1.011 1.011 June-99 1 284 1 136 1.096 1.046 1.031 1.004 1.000 1.019 1.024 1.000 1.019 1.000 1.000 1.006 1.076 1.046 June-00 1.257 1.144 1.066 1.034 1.021 1.019 1.048 1.019 June-01 1.815 1.142 1.050 1.019 1.020 1.070 1.003 1.000 1.002 1.260 1.393 1.166 1.157 1.046 1.038 1.002 1.017 1.004 June-03 June-04 June-05 2.031 1.078 1.366 1.195 1.177 1.088 1.072 1.052 1.029 1.024 1.374 June-06 2.056 1 352 1 146 1.088 1.057 1.050 2.002 1.435 1.223 June-07 June-08 1.120 1.066 June-09 June-10 1.715 1.308 1.169 June-11 1.845 12-24 24-36 36-48 48.60 60-72 72.84 84-96 96.108 108-120 120-132 132-144 144-156 156-168 168-180 180-102 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 To Ult Averages Simple Avg All Yrs Latest 5 1.172 1.098 1.043 1.035 1.023 1.010 1.010 1.008 1.007 1.009 1.012 1.014 1.010 1.924 1.352 1.025 1.011 1.026 1.006 1.005 1.001 1.004 1.005 1.012 Latest 3 1 970 1 324 1 161 1.089 1.054 1.036 1.017 1.013 1.010 1.014 1.014 1.010 1.006 1.005 1.002 1.004 1.000 1.002 1.002 1.003 1.002 1.006 1.006 1.005 1.001 1.005 2.120 1.358 1.073 1.018 1.011 1.007 1.007 1.005 1.007 1.011 1.010 All Yrs 1.188 1.112 1.048 1.025 1.022 1.016 1.015 1.010 1.009 1.007 1.006 1.007 1.000 1.007 1.008 1.014 Latest 5 1 928 1 363 1 164 1.055 1.026 1.022 1.017 1.011 1.014 1.013 1.004 1.004 1.006 1.005 1.005 1.002 1.001 1.003 1.006 1.005 1.006 1.006 1.006 1.005 1.344 1.092 1.014 1.015 1.002 1.006 Latest 3 1.166 1.053 1.036 1.011 1.015 1.010 1.006 1.005 1.003 1.004 1.000 1.003 1.007 1.005 1.001 1.005 1.011 Dev Factor Selection Industry 1 2.781 1.499 1.187 1.039 Industry 2 1.746 1.300 1.126 1.062 1.029 1.020 1.009 1.008 1.005 1.006 1.010 1.003 1.002 1.004 1.003 1.001 1.001 1.001 1.345 1.166 1.017 1.014 1.013 1.007 1.091 1.051 1.016 1.007 1.007 1.013 1.012 1.011 1.010 1.010 1.010 1.010 Prior 1.026 1.008 1.006 1.007 1.005 1.008 1.004 1.004 1.002 Selected 1.363 1.161 1.055 1.026 1.017 1.019 1.011 1.014 1.013 1.009 1.007 1.007 1.005 1.007 1.004 1.003 1.007 1.013 1.012 1.011 1.010 1.010 1.010 1.010 1.013 4.523 2.347 1.721 1.482 1.291 1.258 1.237 1.215 1.185 1.159 1.151 1.144 1.138 1.130 1.125 1.121 1.119 1.111 1.103 1.089 1.076 1.064 1.054 1.043 1.033 1.023 82.3% Percent of Ult 22.1% 42.6% 58.1% 73.4% 79.5% 80.8% 83.2% 84.4% 85.5% 86.3% 86.9% 87.4% 87.9% 88.5% 88.9% 89.2% 89.4% 90.0% 90.6% 91.8% 92.9% 94.9% 95.8% 96.8% 97.8% 98.7%

Section 2 Exhibit 1 Page 8

Department of Mental Retardation - Cluster 1 Indemnity

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ite Loss	Ultima	ite Loss	Change in U	Iltimate Loss	Change in U	Itimate Loss
Accident	As of	f 6/11	As of	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	24,641,535	26,916,429	24,817,827	27,008,015	176,291	0.7%	91,586	0.3%
6/30/82-83	4,939,564	5,192,875	4,976,675	5,231,890	37,112	0.8%	39,015	0.8%
6/30/83-84	9,270,174	9,648,549	9,394,308	9,777,749	124,134	1.3%	129,201	1.3%
6/30/84-85	6,848,000	6,916,000	6,850,000	6,918,000	2,000	0.0%	2,000	0.0%
6/30/85-86	10,580,000	10,683,000	10,580,000	10,683,000	0	0.0%	0	0.0%
6/30/86-87	13,750,000	13,885,000	13,750,000	13,885,000	0	0.0%	0	0.0%
6/30/87-88	19,924,000	20,805,000	20,043,000	20,934,000	119,000	0.6%	129,000	0.6%
6/30/88-89	20,981,000	20,988,000	21,018,000	21,021,000	37,000	0.2%	33,000	0.2%
6/30/89-90	15,116,000	15,266,000	15,117,000	15,266,000	1,000	0.0%	0	0.0%
6/30/90-91	10,971,000	11,080,000	10,972,000	11,080,000	1,000	0.0%	0	0.0%
6/30/91-92	8,051,000	8,059,000	8,091,000	8,099,000	40,000	0.5%	40,000	0.5%
6/30/92-93	4,231,000	4,273,000	4,231,000	4,273,000	0	0.0%	0	0.0%
6/30/93-94	3,566,000	3,601,000	3,566,000	3,601,000	0	0.0%	0	0.0%
6/30/94-95	2,286,000	2,287,000	2,288,000	2,289,000	2,000	0.1%	2,000	0.1%
6/30/95-96	3,268,000	3,272,000	3,289,000	3,293,000	21,000	0.6%	21,000	0.6%
6/30/96-97	2,747,000	2,747,000	2,738,000	2,738,000	(9,000)	-0.3%	(9,000)	-0.3%
6/30/97-98	2,860,000	2,864,000	2,876,000	2,880,000	16,000	0.6%	16,000	0.6%
6/30/98-99	2,565,000	2,565,000	2,567,000	2,568,000	2,000	0.1%	3,000	0.1%
6/30/99-00	2,548,000	2,549,000	2,610,000	2,612,000	62,000	2.4%	63,000	2.5%
6/30/00-01	3,567,000	3,581,000	3,631,000	3,647,000	64,000	1.8%	66,000	1.8%
6/30/01-02	2,636,000	2,637,000	2,638,000	2,639,000	2,000	0.1%	2,000	0.1%
6/30/02-03	3,549,000	3,558,000	3,485,000	3,496,000	(64,000)	-1.8%	(62,000)	-1.7%
6/30/03-04	3,649,000	3,661,000	3,576,000	3,589,000	(73,000)	-2.0%	(72,000)	-2.0%
6/30/04-05	3,292,000	3,352,000	3,207,000	3,274,000	(85,000)	-2.6%	(78,000)	-2.3%
6/30/05-06	3,122,000	3,139,000	3,214,000	3,223,000	92,000	2.9%	84,000	2.7%
6/30/06-07	3,186,000	3,237,000	3,267,000	3,288,000	81,000	2.5%	51,000	1.6%
6/30/07-08	2,178,000	2,626,000	2,170,000	2,543,000	(8,000)	-0.4%	(83,000)	-3.2%
6/30/08-09	2,826,000	3,127,000	2,870,000	3,085,000	44,000	1.6%	(42,000)	-1.3%
6/30/09-10	3,730,000	3,868,000	3,918,000	4,149,000	188,000	5.0%	281,000	7.3%
6/30/10-11	3,721,000	3,867,000	3,597,000	3,657,000	(124,000)	-3.3%	(210,000)	-5.4%
6/30/11-12								
Total	204,599,273	210,250,852	205,347,810	210,747,654	748,537	0.4%	496,802	0.2%

^{(2), (3)} From Aon analysis as of June 30, 2011

^{(4), (5)} From Section 2, Exhibit 1, Page 1, Columns 6, 7

^{(6) = (4) - (2)}

^{(7) = (4) / (2) - 1}

^{(8) = (5) - (3)}

^{(9) = (5) / (3) - 1}



Department of Mental Retardation - Cluster 1 Indemnity

Calculation of Ultimate Lump Sum Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Paid Loss	Implied	Ult Loss	Selected Incr	Cumulative	Total	Paid	Est Ult	Ultimate		Est Ult	Selected	Prior
Accident	Excluding	Cumulative	Excluding	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum -	Lump Sum	Lump Sum	Lump Sum -	Est Ultimate	Est Ultimate
Year	Lump Sum	LDF	Lump Sum	% Outstdg	% Outstdg	Outstdg	to Date	Incr Method	Percentage	LDF	Paid Method	Lump Sums	Lump Sums
All Prior Yrs	18,654,734	1.321	24,647,423	0.0%	0.0%	0	1,265,498	1,265,498	5.1%	1.000	1,265,498	1,265,498	1,265,498
6/30/82-83	4,231,391	1.114	4,713,883	0.0%	0.0%	0	390,400	390,400	8.3%	1.000	390,400	390,400	390,400
6/30/83-84	7,362,291	1.227	9,036,879	0.0%	0.0%	0	549,150	549,150	6.1%	1.000	549,150	549,150	549,150
6/30/84-85	5,652,195	1.033	5,839,326	0.0%	0.0%	0	1,129,851	1,129,851	19.3%	1.000	1,129,851	1,129,851	1,129,851
6/30/85-86	9,334,452	1.043	9,739,930	0.0%	0.0%	0	937,644	937,644	9.6%	1.000	937,644	937,644	938,113
6/30/86-87	11,412,789	1.054	12,027,633	0.0%	0.0%	0	2,067,717	2,067,717	17.2%	1.001	2,069,785	2,068,751	2,070,821
6/30/87-88	16,248,755	1.171	19,024,906	0.0%	0.0%	0	2,795,764	2,795,764	14.7%	1.003	2,804,157	2,799,960	2,798,755
6/30/88-89	16,140,651	1.076	17,369,285	0.0%	0.0%	0	3,639,613	3,639,613	21.0%	1.005	3,657,840	3,648,726	3,666,528
6/30/89-90	11,614,400	1.089	12,648,476	0.1%	0.1%	12,648	3,352,581	3,365,229	26.6%	1.010	3,386,218	3,375,724	3,390,570
6/30/90-91	8,297,667	1.103	9,153,915	0.1%	0.2%	18,308	2,565,430	2,583,738	28.2%	1.015	2,604,125	2,593,931	2,605,004
6/30/91-92	5,641,750	1.111	6,265,239	0.1%	0.3%	18,796	1,806,412	1,825,208	29.1%	1.020	1,842,827	1,834,017	1,844,763
6/30/92-93	3,210,473	1.119	3,591,149	0.2%	0.5%	17,956	979,103	997,059	27.8%	1.025	1,003,835	1,000,447	1,005,253
6/30/93-94	2,527,522	1.121	2,834,218	0.2%	0.7%	19,840	968,701	988,541	34.9%	1.028	995,703	992,122	994,911
6/30/94-95	1,526,329	1.125	1,717,460	0.2%	0.9%	15,457	555,200	570,657	33.2%	1.028	570,676	570,667	573,215
6/30/95-96	2,231,248	1.130	2,520,613	0.3%	1.2%	30,247	746,640	776,887	30.8%	1.028	767,452	772,170	775,765
6/30/96-97	1,787,477	1.138	2,033,832	0.3%	1.5%	30,507	679,550	710,057	34.9%	1.028	698,492	704,275	710,837
6/30/97-98	2,024,867	1.144	2,315,863	0.3%	1.8%	41,686	533,163	574,849	24.8%	1.038	553,505	564,177	571,551
6/30/98-99	1,745,975	1.151	2,010,218	0.3%	2.1%	42,215	522,071	564,286	28.1%	1.054	550,120	557,203	564,225
6/30/99-00	1,924,733	1.159	2,230,589	0.3%	2.4%	53,534	342,501	396,035	17.8%	1.070	366,316	381,175	360,627
6/30/00-01	2,855,751	1.169	3,339,733	0.3%	2.7%	90,173	251,103	341,276	10.2%	1.086	272,591	306,933	312,918
6/30/01-02	1,946,247	1.185	2,306,084	0.3%	3.0%	69,183	283,214	352,396	15.3%	1.102	312,061	332,229	341,684
6/30/02-03	2,574,011	1.201	3,092,272	0.5%	3.5%	108,230	328,024	436,253	14.1%	1.129	370,471	403,362	500,000
6/30/03-04	2,651,972	1.215	3,222,042	0.5%	4.0%	128,882	279,825	408,707	12.7%	1.163	325,517	367,112	500,000
6/30/04-05	2,315,265	1.237	2,865,058	1.0%	5.0%	143,253	307,152	450,405	15.7%	1.198	368,025	409,215	500,000
6/30/05-06	2,165,020	1.258	2,723,389	1.0%	6.0%	163,403	232,502	395,905	14.5%	1.238	287,807	500,000	500,000
6/30/06-07	2,144,089	1.291	2,767,447	1.0%	7.0%	193,721	261,250	454,971	16.4%	1.345	351,482	500,000	500,000
6/30/07-08	1,226,279	1.362	1,669,828	1.4%	8.4%	140,266	124,501	264,767	15.9%	1.578	196,418	500,000	500,000
6/30/08-09	1,598,834	1.482	2,370,218	2.5%	10.9%	258,354	120,000	378,354	16.0%	2.334	280,101	500,000	500,000
6/30/09-10	2,071,218	1.721	3,565,530	3.5%	14.4%	513,436	70,378	583,814	16.4%	3.812	268,309	583,814	581,555
6/30/10-11	1,318,901	2.347	3,094,865	2.9%	17.3%	534,376	27,523	561,899	18.2%	10.083	277,500	561,899	639,583
6/30/11-12	737,468	4.523	3,335,888	2.5%	19.8%	659,390	0	659,390	19.8%	55.455	0	659,390	
Total	155,174,756		184,073,192			3,303,859	28,112,459	31,416,318	17.1%		29,453,874	31,759,841	31,581,576

- (2) From Section 2, Exhibit 1, Page 2, Column 3
- (3) = (4) / (2)
- (4) From Section 2, Exhibit 1, Page 2, Column 6
- (5) From Section 2, Exhibit 1, Page 11
- (6) Downward sum of (5)
- $(7) = (6) \times (4)$
- (8) From Section 2, Exhibit 1, Page 10
- (9) = (7) + (8)
- (10) = (9) / (4)
- (11) From Section 2, Exhibit 1, Page 12
- $(12) = (8) \times (11)$
- (13) Selected based on (9) and (12)
- (14) From Aon analysis as of June 30, 2011



Commonwealth of Massachusetts Workers Compensation Department of Mental Retardation - Cluster 1 INDEMNITY Lump Sum Development Incremental Lump Sum Payments

Section 2 Exhibit 1 Page 10

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-91 Jun-92 Jun-93 Jun-95 Jun-95 Jun-96 Jun-96 Jun-96 Jun-97 Jun-98 Jun-99 Jun-00 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-06 Jun-07	0-12 0 0 0 0 0 0 0 10,000 54,000 33,000 20,500 4,000 10,00	12-24 0 0 0 36,440 9,000 51,500 83,875 315,052 344,161 174,000 212,180 178,250 108,163 182,500 57,501 22,844 800 0 0 7,500	24-36 0 0 0 0 23,500 107,000 561,509 866,050 128,250 164,503 289,500 207,200 214,000 214,000 43,510 23,940 48,352 88,974 39,052 50,202 88,974 39,052 50,202 88,974	36-48 0 0 12,500 19,200 107,500 314,201 525,918 740,856 279,500 48,960 155,300 48,960 155,300 36,500 37,903 52,775 99,400 104,600 87,500 83,750	48-60 0 0 0 0 32,500 19,100 831,350 246,000 174,700 110,000 15,000 42,000 85,500 42,000 30,000 1,824 38,500 34,170 72,135 91,822 121,250 42,000 46,500 78,000	60-72 0 32,500 24,500 93,844 393,241 663,711 467,250 295,600 509,340 0 0 10,000 0 7,437 8,500 41,676 32,564 48,450 94,000 30,000 6,000	72-84 12,000 0 19,000 92,001 174,500 517,987 365,000 201,495 525,500 313,000 0 48,667 0 0 11,035 10,500 38,500 76,000 0 20,000 3,500	84-96 24,000 0 128,250 476,000 205,500 263,001 468,000 27,788 15,000 0 10,000 11,000 114,055 27,500 15,000 25,000 0 5,718	96-108 9,000 25,500 45,000 196,400 95,500 149,499 345,000 227,500 127,241 15,000 0 0 0 43,000 0 0 10,000 0 0 0 0 0 0 0 0 0 0 0 0	108-120 0 25,000 108,650 182,000 0 10,000 230,400 96,000 77,000 60,000 0 0 0 35,000 0 0 0 0 0 0 0 0	52,900 69,000 70,000 0 92,500 71,500 182,000 235,834 0 88,000 0	132-144 40,000 7,000 145,000 48,500 0 15,000 91,500 0 228,100 135,833 0 0 0 0 0 0 0 0 0 25,000 0 0 34,000	144-156 0 30,000 0 205,700 36,000 146,000 40,000 0 0 0 0 0 0 0 0 0 0 0 0	156-168 172,000 95,000 45,000 0 0 0 125,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	168-180 110,000 145,000 0 0 0 120,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	180-192 50,000 0 30,000 30,000 0 75,000 0 0 0 0 0 0	192-204 70,500 10,000 10,000 52,500 0 0 0 0 1055,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	204-216 30,000 0 30,000 0 0 0 33,333 0 0 0 0	216-228 208,333 0 45,000 0 0 0 45,833 0 0 0	228-240 116,667 0 0 25,000 0 0 45,834 0 0	240-252 324,998 0 0 0 0 0 0 0 0 0	252-264 0 0 0 0 0 0 0 1 1 0 0 0	264-276 60,000 0 0 0 0 0 0 0	276-288 35,000 0 0 0 0 0 0	288-300 0 0 0 0 0 0 0 4,000	300-312 3,000 0 0 0 0	312-324 0 0 0 0 0	324-336 0 0 0	336-348 0 0 0	348-360 0 0	360-372 0
Jun-08 Jun-09	0	37,000 24,000	17,501 55,000	25,000 41,000	45,000																										
Jun-10 Jun-11	0	12,500 27,523	57,878																												
Jun-12	0	21,323																													
Cumulative Lun	n Sum Pavn	nents																													
			36	40		72	84	96	100	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
Acc Yr Ending	12	24		48	60	72			108	120																					
All Prior Yrs	0	0	0	0	0	0	12,000	36,000	45,000	45,000	45,000	85,000	85,000	257,000	367,000	417,000	487,500	517,500	725,833	842,500	1,167,498	1,167,498	1,227,498	1,262,498	1,262,498	1,265,498	1,265,498	1,265,498	1,265,498	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84				0 0 0	0 0 0		12,000 0 51,500	36,000 0 51,500											725,833 390,400 549,150												1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85	0 0 0	0 0 0	0 0 0	0 0 0 12,500	0 0 0 45,000	0 0 32,500 69,500	12,000 0 51,500 161,501	36,000 0 51,500 289,751	45,000 25,500 96,500 486,151	45,000 50,500 205,150 668,151	45,000 103,400 274,150 738,151	85,000 110,400 419,150 786,651	85,000 140,400 419,150 992,351	257,000 235,400 464,150 992,351	367,000 380,400 464,150 992,351	417,000 380,400 494,150 1,022,351	487,500 390,400 504,150 1,074,851	517,500 390,400 504,150 1,104,851	390,400 549,150 1,104,851	842,500 390,400 549,150 1,129,851	1,167,498 390,400 549,150 1,129,851	1,167,498 390,400 549,150 1,129,851	1,227,498 390,400 549,150 1,129,851	1,262,498 390,400 549,150 1,129,851	1,262,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84	0 0 0	0	0 0 0 0 23,500	0 0 0 12,500 42,700	0 0 0	0 0 32,500 69,500 155,644	12,000 0 51,500 161,501 330,144	36,000 0 51,500	45,000 25,500 96,500 486,151 901,644	45,000 50,500 205,150 668,151 901,644	45,000 103,400 274,150 738,151 901,644	85,000 110,400 419,150 786,651 901,644	85,000 140,400 419,150 992,351 937,644	257,000 235,400 464,150 992,351 937,644	367,000 380,400 464,150 992,351 937,644	417,000 380,400 494,150 1,022,351 937,644	487,500 390,400 504,150 1,074,851 937,644	517,500 390,400 504,150 1,104,851 937,644	390,400 549,150 1,104,851 937,644	842,500 390,400 549,150 1,129,851 937,644	1,167,498 390,400 549,150 1,129,851 937,644	1,167,498 390,400 549,150 1,129,851 937,644	1,227,498 390,400 549,150 1,129,851 937,644	1,262,498 390,400 549,150 1,129,851 937,644	1,262,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88	0 0 0 0 0	0 0 0 0 0 36,440 9,000	0 0 0 23,500 42,529 107,700	0 0 12,500 42,700 150,029 421,901	0 0 0 45,000 61,800 217,990 721,651	0 32,500 69,500 155,644 611,231 1,385,362	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89	0 0 0 0 0 0	0 0 0 0 0 36,440 9,000 51,500	0 0 0 23,500 42,529 107,700 158,500	0 0 12,500 42,700 150,029 421,901 684,418	0 0 0 45,000 61,800 217,990 721,651 1,515,768	0 32,500 69,500 155,644 611,231 1,385,362 1,983,018	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,976,013	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763 3,514,613	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88	0 0 0 0 0	0 0 0 0 0 36,440 9,000	0 0 0 23,500 42,529 107,700 158,500 645,384	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240	0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,976,013 2,947,581	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763 3,514,613 3,352,581	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92	0 0 0 0 0 0 0 0 0 0 10,000 54,000	0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161	0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912	0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,463,412	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 1,493,412	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,976,013 2,947,581 2,565,430 1,553,412	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,183,415 2,565,430 1,641,412	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91	0 0 0 0 0 0 0 0 0	0 0 0 0 0 36,440 9,000 51,500 83,875 325,052	0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602	0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302	0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,976,013 2,947,581 2,565,430	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,183,415 2,565,430	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763 3,514,613 3,352,581 2,565,430	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95	0 0 0 0 0 0 0 0 0 10,000 54,000 33,000 20,500 4,000	0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 160,500	0 0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700	0 0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 530,200	0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,463,412 959,103 933,701 555,200	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,976,013 2,947,581 2,565,430 1,553,412 979,103 968,701 555,200	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,183,415 2,565,430 1,641,412 979,103 968,701 555,200	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-95 Jun-96	0 0 0 0 0 0 0 0 0 10,000 54,000 33,000 4,000 52,000	0 0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 160,500 264,180	0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 530,200 534,140	0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200 576,140	0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200 576,140	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200 624,807	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,463,412 959,103 933,701 555,200 643,640	45,000 25,500 96,500 96,500 901,644 1,484,217 2,358,363 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,581 2,565,430 1,553,412 979,103 968,701 555,200 721,640	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,183,415 2,565,430 1,641,412 979,103 968,701 555,200 746,640	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95	0 0 0 0 0 0 0 0 0 10,000 54,000 33,000 20,500 4,000	0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 160,500 264,180 214,750	0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 428,750 358,163	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 530,200 534,140 584,050 478,163	0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,463,412 959,103 933,701 555,200 643,640 679,550 508,163	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,976,013 2,947,581 2,565,430 1,553,412 979,103 968,701 555,200 721,640 679,550 508,163	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,183,415 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 508,163	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-97 Jun-97 Jun-97 Jun-97 Jun-98	0 0 0 0 0 0 0 0 0 0 10,000 54,000 33,000 20,500 4,000 52,000 36,500 10,000 0	0 0 0 0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 160,500 264,180 214,750 118,163 182,500	0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 428,750 358,163 374,500	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,625 613,912 767,253 623,201 534,140 584,050 478,163 487,720	0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,159,412 816,753 733,201 545,200 576,140 669,550 508,163 489,544	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200 576,140 679,550 508,163 496,981	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,457,3340 2,467,642 959,103 933,701 545,200 624,807 679,550 508,163 508,016	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,463,412 959,103 933,701 555,200 643,640 679,550 508,163 522,071	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 979,103 968,701 555,200 686,640 679,550 508,163 522,071	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,976,013 2,947,581 2,565,430 1,553,412 979,103 968,701 555,200 721,640 679,550 508,163 502,1671	45,000 103,400 274,150 738,151 901,644 1.586,717 2,660,263 3,158,013 3,183,415 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 508,163 522,071	85,000 110,400 419,150 786,651 901,644 1,2751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 522,071	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-95 Jun-95 Jun-97 Jun-97 Jun-97 Jun-97 Jun-97 Jun-97 Jun-98	0 0 0 0 0 0 0 0 0 0 10,000 54,000 33,000 20,500 4,000 52,000 10,000 0 0 11,500	0 0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 160,500 264,180 214,750	0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 374,500 152,001	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 530,200 530,200 584,050 478,163 487,720 188,501	0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200 576,140 669,550 508,163	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200 576,140 679,550 508,163	12,000 0 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,163	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,463,412 959,103 933,701 555,200 643,640 679,550 508,163 522,071 273,501	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,581 2,565,430 1,553,412 979,103 968,701 555,200 721,640 679,550 508,163 522,071 283,501	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,183,415 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 508,163 522,071 283,501	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 523,011 317,501	85,000 140,400 419,150 992,351 937,644 1,747,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-95 Jun-96 Jun-97 Jun-98 Jun-99 Jun-00 Jun-01 Jun-01 Jun-02	0 0 0 0 0 0 0 0 0 10,000 54,000 33,000 20,500 4,000 52,000 0 0 12,500 17,500	0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 160,500 214,750 118,163 182,500 70,001 40,344	0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 428,750 358,163 374,500 152,001 83,854 24,740	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 530,200 534,140 584,050 478,163 487,720 188,501 121,757 77,515	0 0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200 576,140 669,550 508,163 489,544 227,001 155,927 149,659	0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200 576,140 679,550 508,163 496,981 235,501 197,603	12,000 0 51,500 161,501 330,144 1,750,362 2,184,513 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,116 246,001 236,103 258,214	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,465,412 959,103 933,701 555,200 643,640 679,550 508,163 522,071 273,501 251,103 283,214	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163 522,071 283,501 251,103 283,214	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,618 2,947,61	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,158,013 3,158,013 3,158,013 5,55,200 746,640 679,550 508,163 522,071 283,501 251,103	85,000 110,400 419,150 786,651 901,644 1,2751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 522,071	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-90 Jun-91 Jun-92 Jun-95 Jun-95 Jun-96 Jun-97 Jun-98 Jun-99 Jun-90 Jun-00 Jun-01 Jun-02 Jun-03	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 1207,000 111,201 160,500 264,180 214,750 118,163 182,500 70,001 40,344 800 0	0 0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 488,180 428,750 358,163 374,500 152,001 83,854 24,745 48,352	0 0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,200 534,140 584,050 478,163 487,720 188,501 121,757 77,515	0 0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200 576,140 669,550 508,163 489,544 227,001 155,927 149,650	0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200 576,140 679,550 508,163 496,981 125,501 197,603 182,214 288,024	12,000 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,163 508,016 246,001 236,103 258,214 298,024	36,000 0 51,500 289,751 806,141 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,463,412 959,103 933,701 555,200 643,640 679,550 508,163 522,071 273,501 251,103 283,214 298,024	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163 522,071 283,501 251,103 283,214 298,024	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,976,013 2,947,581 2,565,430 1,553,412 979,103 968,701 555,200 721,640 679,550 508,163 522,071 283,501 251,103	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,158,013 3,158,013 3,158,013 5,55,200 746,640 679,550 508,163 522,071 283,501 251,103	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 523,011 317,501	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-95 Jun-96 Jun-97 Jun-98 Jun-99 Jun-00 Jun-01 Jun-01 Jun-02	0 0 0 0 0 0 0 0 0 10,000 54,000 33,000 20,500 4,000 52,000 0 0 12,500 17,500	0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 160,500 214,750 118,163 182,500 70,001 40,344	0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 428,750 358,163 374,500 152,001 83,854 24,740	0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 530,200 534,140 584,050 478,163 487,720 188,501 121,757 77,515	0 0 0 45,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200 576,140 669,550 508,163 489,544 227,001 155,927 149,659	0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200 576,140 679,550 508,163 496,981 235,501 197,603	12,000 0 51,500 161,501 330,144 1,750,362 2,184,513 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,116 246,001 236,103 258,214	36,000 0 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,430 1,465,412 959,103 933,701 555,200 643,640 679,550 508,163 522,071 273,501 251,103 283,214	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163 522,071 283,501 251,103 283,214	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,618 2,947,61	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,158,013 3,158,013 3,158,013 5,55,200 746,640 679,550 508,163 522,071 283,501 251,103	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 523,011 317,501	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-91 Jun-93 Jun-94 Jun-95 Jun-95 Jun-95 Jun-90 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Ju	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 160,500 264,180 214,750 118,163 800 0 0 7,500 14,800	0 0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 374,500 152,001 83,854 24,740 48,352 88,974 46,552 65,002	0 0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 530,200 534,140 584,050 478,163 487,720 188,501 121,757 77,515 147,515 147,515 147,515	0 0 0 45,000 61,800 217,990 721,651 1,515,768 1,635,2240 1,645,302 1,159,412 816,753 733,201 545,200 575,200 508,163 489,544 227,001 155,927 149,650 239,574 274,324 193,152	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 815,701 545,200 576,140 679,550 508,163 496,981 235,501 197,603 182,214 288,024 274,324 287,152 229,002	12,000 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,457,340 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,163 508,016 246,001 236,103 258,214 298,024 274,324	36,000 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,5430 1,463,412 993,101 555,200 643,640 679,550 508,163 522,071 273,501 251,103 283,214 298,024 279,825	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163 522,071 283,501 251,103 283,214 298,024	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,618 2,947,61	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,158,013 3,158,013 3,158,013 5,55,200 746,640 679,550 508,163 522,071 283,501 251,103	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 523,011 317,501	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-97 Jun-98 Jun-99 Jun-00 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-05 Jun-06 Jun-06 Jun-06 Jun-07	0 0 0 0 0 0 0 0 0 0 10,000 54,000 33,000 20,500 4,000 52,000 10,000 0 12,500 17,500 0 0	0 0 0 0 0 36,440 9,000 51,500 83,161 207,000 111,201 110,201 111,201 1	0 0 0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 428,750 358,163 374,500 152,001 83,854 24,740 48,352 88,974 46,552 65,002 93,500	0 0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 534,140 584,050 478,163 487,720 188,501 121,757 77,515 147,752 153,074 151,152 152,502	0 0 0 15,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200 576,140 669,550 508,163 489,544 227,001 155,927 149,650 239,574 274,322 199,002 255,250	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 1,927,840 2,154,642 1,395,912 883,253 815,701 545,200 576,140 679,550 508,163 496,981 1235,501 197,603 182,214 288,024 274,324 287,152	12,000 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,163 508,016 246,001 236,103 258,214 298,024 274,324 307,152	36,000 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,5430 1,463,412 993,101 555,200 643,640 679,550 508,163 522,071 273,501 251,103 283,214 298,024 279,825	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163 522,071 283,501 251,103 283,214 298,024	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,618 2,947,61	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,158,013 3,158,013 3,158,013 5,55,200 746,640 679,550 508,163 522,071 283,501 251,103	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 523,011 317,501	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-97 Jun-98 Jun-96 Jun-97 Jun-98 Jun-90 Jun-00 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-05 Jun-07 Jun-08 Jun-07 Jun-08 Jun-09	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 118,163 118,163 118,163 118,163 0 0 0 7,500 14,800 0 0 0 7,500 14,800 37,000 37,000	0 0 0 0 0 0 107.700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 428,750 358,163 374,500 152,001 83,854 44,740 44,352 88,974 46,552 65,002 93,500 54,501 79,000	0 0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,602 613,912 767,253 623,201 530,200 534,140 584,050 478,163 487,720 188,501 121,757 77,515 147,515 147,515 147,515	0 0 0 45,000 61,800 217,990 721,651 1,515,768 1,635,2240 1,645,302 1,159,412 816,753 733,201 545,200 575,200 508,163 489,544 227,001 155,927 149,650 239,574 274,324 193,152	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 815,701 545,200 576,140 679,550 508,163 496,981 235,501 197,603 182,214 288,024 274,324 287,152 229,002	12,000 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,163 508,016 246,001 236,103 258,214 298,024 274,324 307,152	36,000 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,5430 1,463,412 993,101 555,200 643,640 679,550 508,163 522,071 273,501 251,103 283,214 298,024 279,825	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163 522,071 283,501 251,103 283,214 298,024	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,618 2,947,61	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,158,013 3,158,013 3,158,013 5,55,200 746,640 679,550 508,163 522,071 283,501 251,103	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 523,011 317,501	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-93 Jun-95 Jun-95 Jun-95 Jun-95 Jun-96 Jun-90 Ju	0 0 0 0 0 0 0 0 10,000 54,000 20,500 4,000 52,000 10,000 10,000 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 151,500 33,875 325,052 398,161 100,500 264,180 214,750 118,163 182,500 0 0 0 0 1,400 1	0 0 0 0 23,500 42,529 107,700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 358,163 374,500 152,001 83,874 48,352 88,974 46,552 65,002 93,500 54,501	0 0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,620 613,912 767,253 623,201 530,200 534,140 548,050 478,163 487,720 188,501 121,757 77,515 147,515 147,525 153,074 151,152 152,502 177,250 177,250	0 0 0 15,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200 576,140 669,550 508,163 489,544 227,001 155,927 149,650 239,574 274,322 199,002 255,250	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 815,701 545,200 576,140 679,550 508,163 496,981 235,501 197,603 182,214 288,024 274,324 287,152 229,002	12,000 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,163 508,016 246,001 236,103 258,214 298,024 274,324 307,152	36,000 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,5430 1,463,412 993,101 555,200 643,640 679,550 508,163 522,071 273,501 251,103 283,214 298,024 279,825	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163 522,071 283,501 251,103 283,214 298,024	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,618 2,947,61	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,158,013 3,158,013 3,158,013 5,55,200 746,640 679,550 508,163 522,071 283,501 251,103	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 523,011 317,501	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498
All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-97 Jun-98 Jun-96 Jun-97 Jun-98 Jun-90 Jun-00 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-05 Jun-07 Jun-08 Jun-07 Jun-08 Jun-09	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 36,440 9,000 51,500 83,875 325,052 398,161 207,000 111,201 118,163 118,163 118,163 118,163 0 0 0 7,500 14,800 0 0 0 7,500 14,500 8,500 14,5	0 0 0 0 0 0 107.700 158,500 645,384 1,191,102 526,411 371,503 400,701 367,700 485,180 428,750 358,163 374,500 152,001 83,854 44,740 44,352 88,974 46,552 65,002 93,500 54,501 79,000	0 0 0 12,500 42,700 150,029 421,901 684,418 1,386,240 1,470,620 613,912 767,253 623,201 530,200 534,140 548,050 478,163 487,720 188,501 121,757 77,515 147,515 147,525 153,074 151,152 152,502 177,250 177,250	0 0 0 15,000 61,800 217,990 721,651 1,515,768 1,632,240 1,645,302 1,159,412 816,753 733,201 545,200 576,140 669,550 508,163 489,544 227,001 155,927 149,650 239,574 274,322 199,002 255,250	0 0 32,500 69,500 155,644 611,231 1,385,362 1,983,018 815,701 545,200 576,140 679,550 508,163 496,981 235,501 197,603 182,214 288,024 274,324 287,152 229,002	12,000 51,500 161,501 330,144 1,129,218 1,750,362 2,184,513 2,453,340 2,467,642 1,448,412 959,103 933,701 545,200 624,807 679,550 508,163 508,016 246,001 236,103 258,214 298,024 274,324 307,152	36,000 51,500 289,751 806,144 1,334,718 2,013,363 2,652,513 2,743,340 2,525,5430 1,463,412 993,101 555,200 643,640 679,550 508,163 522,071 273,501 251,103 283,214 298,024 279,825	45,000 25,500 96,500 486,151 901,644 1,484,217 2,358,363 2,880,013 2,870,581 2,540,430 1,493,412 979,103 968,701 555,200 686,640 679,550 508,163 522,071 283,501 251,103 283,214 298,024	45,000 50,500 205,150 668,151 901,644 1,494,217 2,588,763 2,947,618 2,947,61	45,000 103,400 274,150 738,151 901,644 1,586,717 2,660,263 3,158,013 3,158,013 3,158,013 3,158,013 5,55,200 746,640 679,550 508,163 522,071 283,501 251,103	85,000 110,400 419,150 786,651 901,644 1,601,717 2,751,763 3,386,113 3,319,248 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163 523,011 317,501	85,000 140,400 419,150 992,351 937,644 17,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 746,640 679,550 533,163 522,071	257,000 235,400 464,150 992,351 937,644 1,872,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550 533,163	367,000 380,400 464,150 992,351 937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640 679,550	417,000 380,400 494,150 1,022,351 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,641,412 979,103 968,701 555,200 746,640	487,500 390,400 504,150 1,074,851 937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430 1,806,412 979,103 968,701 555,200	517,500 390,400 504,150 1,104,851 937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430 1,806,412 979,103 968,701	390,400 549,150 1,104,851 937,644 2,067,717 2,791,763 3,593,779 3,352,581 2,565,430 1,806,412 979,103	842,500 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430 1,806,412	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	1,167,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613 3,352,581	1,227,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	1,262,498 390,400 549,150 1,129,851 937,644 2,067,717	1,265,498 390,400 549,150 1,129,851 937,644	1,265,498 390,400 549,150 1,129,851	1,265,498 390,400 549,150	1,265,498 390,400	1,265,498	1,265,498



Commonwealth of Massachusetts Workers Compensation Department of Mental Retardation - Cluster 1 INDEMNITY Lump Sum Development Incremental Lump Sums as '8 of Ultimate Losses Excluding Lump Sums

Acc Yr Ending	0-12	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372
All Prior Yrs	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.002	0.000	0.007	0.004	0.002	0.003	0.001	0.008	0.005	0.013	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun-83	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.011	0.001	0.006	0.020	0.031	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Jun-84	0.000	0.000	0.000	0.000	0.000	0.004	0.002	0.000	0.005	0.012	0.008	0.016	0.000	0.005	0.000	0.003	0.001	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Jun-85	0.000	0.000	0.000	0.002	0.006	0.004	0.016	0.022	0.034	0.031	0.012	0.008	0.035	0.000	0.000	0.005	0.009	0.005	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Jun-86	0.000	0.000	0.002	0.002	0.002	0.010	0.018	0.049	0.010	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
Jun-87	0.000	0.003	0.001	0.009	0.006	0.033	0.043	0.017	0.012	0.001	0.008	0.001	0.012	0.010	0.010	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Jun-88	0.000	0.000	0.005	0.017	0.016	0.035	0.019	0.014	0.018	0.012	0.004	0.005	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
Jun-89	0.000	0.003	0.006	0.030	0.048	0.027	0.012	0.027	0.013	0.006	0.010	0.013	0.007	0.000	0.000	0.000	0.000	0.002	0.003	0.003	0.000	0.000	0.000	0.000							
Jun-90	0.000	0.007	0.044	0.059	0.019	0.023	0.042	0.023	0.010	0.006	0.019	0.011	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
Jun-91	0.001	0.034	0.095	0.031	0.019	0.056	0.034	0.006	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000									
Jun-92	0.009	0.055	0.020	0.014	0.087	0.038	0.008	0.002	0.005	0.010	0.014	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000										
Jun-93	0.009	0.048	0.046	0.110	0.014	0.019	0.021	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000											
Jun-94	0.007	0.032	0.102	0.079	0.039	0.029	0.042	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000												
Jun-95	0.002	0.091	0.121	0.095	0.009	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000													
Jun-96	0.021	0.084	0.088	0.019	0.017	0.000	0.019	0.007	0.017	0.014	0.010	0.000	0.000	0.000	0.000	0.000	0.000														
Jun-97	0.018	0.088	0.105 0.104	0.076	0.042	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000															
Jun-98 Jun-99	0.004	0.047	0.104	0.052	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000																
Jun-00	0.006	0.091	0.037	0.036	0.001	0.004	0.005	0.007	0.004	0.000	0.000	0.000	0.000	0.000																	
Jun-01	0.005	0.026	0.037	0.010	0.017	0.004	0.003	0.012	0.004	0.000	0.000	0.000	0.011																		
Jun-02	0.000	0.000	0.013	0.023	0.031	0.012	0.012	0.004	0.000	0.000	0.000	0.000																			
Jun-03	0.000	0.000	0.016	0.023	0.030	0.014	0.003	0.000	0.000	0.010	0.000																				
Jun-04	0.000	0.000	0.028	0.020	0.038	0.000	0.000	0.002	0.000	0.010																					
Jun-05	0.000	0.003	0.028	0.020	0.036	0.033	0.007	0.002	0.000																						
Jun-06	0.000	0.005	0.014	0.037	0.017	0.011	0.001	0.000																							
Jun-07	0.000	0.003	0.031	0.032	0.028	0.002	0.001																								
Jun-08	0.000	0.022	0.010	0.015	0.027																										
Jun-09	0.000	0.010	0.023	0.017																											
Jun-10	0.000	0.004	0.016																												
Jun-11	0.000	0.009																													
Jun-12	0.000																														
Averages		12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372
Simple Avg																															
All Yrs (ex P)	0.003	0.023	0.038	0.033	0.021	0.015	0.014	0.009	0.007	0.005	0.005	0.004	0.004	0.002	0.003	0.001	0.003	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Latest 5	0.000	0.010	0.020	0.026	0.025	0.012	0.009	0.003	0.001	0.002	0.000	0.005	0.002	0.000	0.000	0.000	0.005	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000					
Latest 3	0.000	0.008	0.017	0.021	0.024	0.015	0.003	0.001	0.000	0.003	0.000	0.005	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Olympic Avg																															
All Yrs (ex P)	0.002	0.022	0.036	0.031	0.019	0.014	0.014	0.008	0.006	0.004	0.004	0.004	0.003	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Latest 10	0.000	0.004	0.017	0.023	0.022	0.008	0.004	0.004	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000										
Latest 5	0.000	0.008	0.019	0.027	0.024	0.010	0.004	0.002	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Dev Factor Sele	ection																														
Prior	NA.	0.025	0.029	0.035	0.025	0.014	0.010	0.010	0.010	0.005	0.005	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	
Selected	NA	0.025	0.029	0.035	0.025	0.014	0.010	0.010	0.010	0.005	0.005	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FacToUlt	NA	0.198	0.173	0.144	0.109	0.084	0.070	0.060	0.050	0.040	0.035	0.030	0.027	0.024	0.021	0.018	0.015	0.012	0.009	0.007	0.005	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Section 2 Exhibit 1 Page 11



Commonwealth of Massachusetts Workers Compensation Department of Mental Retardation - Cluster 1 INDEMNITY Paid Loss Development Paid Loss - Lump Sum only

Section 2 Exhibit 1 Page 12

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-95 Jun-96 Jun-97 Jun-98 Jun-96 Jun-97 Jun-98 Jun-90 Jun-01 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Jun-01 Jun-11	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24 0 0 0 0 36,440 9,000 51,500 83,875 225,052 398,161 207,000 111,201 118,163 118,163 118,163 118,163 118,2500 0 0 0 0 0 0 0 0 1,500		1,386,240 1,470,602	1,515,768 1,632,240 1,645,302	1,385,362 1,983,018 1,927,840 2,154,642	2,184,513 2,453,340 2,467,642	2,652,513 2,743,340 2,525,430	2,880,013	2,976,013	2,660,263 3,158,013 3,183,415 2,565,430	2,751,763 3,386,113 3,319,248 2,565,430	2,791,763 3,514,613 3,352,581 2,565,430	2,791,763 3,514,613 3,352,581	937,644 1,992,717 2,791,763 3,514,613 3,352,581 2,565,430	2,791,763 3,514,613 3,352,581 2,565,430	937,644 2,067,717 2,791,763 3,514,613 3,352,581 2,565,430	937,644 2,067,717 2,791,763 3,547,946 3,352,581 2,565,430	2,791,763 3,593,779	2,791,763 3,639,613 3,352,581 2,565,430	390,400 549,150 1,129,851 937,644 2,067,717 2,791,763 3,639,613 3,352,581 2,565,430	2,791,764 3,639,613 3,352,581	390,400 549,150 1,129,851 937,644 2,067,717 2,791,764 3,639,613	390,400 549,150 1,129,851 937,644 2,067,717 2,791,764	937,644 2,067,717	390,400 549,150	324 1,265,498 390,400 549,150 1,129,851 937,644	390,400 549,150	348 1,265,498 390,400 549,150	360 1,265,498 390,400	372 1,265,498
Age-to-Ase Fas Ace Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-97 Jun-98 Jun-90 Jun-00 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-07 Jun-08 Jun-07 Jun-08 Jun-09 Jun-00 Jun-01 Jun-01 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Jun-09 Jun-10 Jun-09 Jun-10 Jun-09 Jun-10 Jun-09 Jun-10 Jun-09 Jun-10 Jun-11	32.505 7.373 6.273 5.424 40.125 5.080 11.816 5.600 2.305	24-36 1.167 11.967 3.078 7.695 3.664 1.322 1.795 3.603 2.291 1.837 1.997 3.031 2.052 2.171 2.078 30.925 6.207 4.392 11.000 1.473 3.292 5.630	1.817 3.528 3.917 4.318 2.148 1.235 1.166 2.065 1.555 1.442 1.101 1.362 1.302 1.240 1.452 3.133 3.056 1.720 3.247 2.346 1.896	3.600 1.447 1.453 1.710 2.215 1.177 1.119 1.889 1.065 1.177 1.028 1.079 1.146 1.063 1.004 1.204 1.204 1.201 1.281	1.544 2.519 2.504 2.804 2.804 1.308 1.308 1.310 1.204 1.310 1.000 1.000 1.015 1.037 1.267 1.218 1.202 1.218 1.202 1.218 1.202 1.203 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.218 1.204 1.204 1.204 1.204 1.204 1.204 1.204 1.204 1.204 1.205 1.206	72-84 1.585 2.324 2.121 1.847 1.263 1.102 1.273 1.145 1.036 1.045 1.050 1.045 1.050	84-96 3.000 1.794 2.442 1.182 1.150 1.214 1.118 1.000	96-108 1.250 1.874 1.678 1.118 1.112 1.119 1.046 1.006 1.006 1.001 1.021 1.021 1.021 1.021 1.021 1.021 1.021 1.021 1.020 1.060 1.000 1.000 1.000 1.000 1.000	108-120 1.980 1.980 2.126 1.374 1.000 1.007 1.098 1.033 1.027 1.010 1.040 1.000	120-132 1.000 2.048 1.336 1.105 1.000 1.062 1.028 1.061 1.080 1.090	132-144 1.889 1.068 1.529 1.066 1.000 1.009 1.034 1.072 1.043 1.000 1.00	144-156 1.000 1.272 1.200 1.261 1.040 1.091 1.015 1.010 1.00	156-168 3.024 1.677 1.107 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	168-180 1.428 1.616 1.000	180-192 1.136 1.000 1.065 1.065 1.030 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	192-204 1.169 1.026 1.020 1.051 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	204-216 1.062 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	216-228 1.403 1.000 1.089 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	228-240 1.161 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	240-252 1.386 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	252-264 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	264-276 1.051 1.000 1.000 1.000 1.000 1.000 1.000 1.000	276-288 1.029 1.000 1.000 1.000 1.000 1.000 1.000	288-300 1.000 1.000 1.000 1.000 1.000 1.000 1.000	300-312 1.002 1.000 1.000 1.000 1.000 1.000	312-324 1.000 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000 1.000	1.000 1.000 1.000	1.000	360-372 1.000	To Uli
Averages Simple Avg All Yrs (ex P) Latest 5 Latest 3 Volume Wtd All Yrs (ex P) Latest 5 Latest 3	12-24 12.239 9.621	24-36 5.121 5.157 3.465 2.645 3.744 2.774	36-48 2.057 2.093 1.624 1.633 2.010 1.660	48-60 1.483 1.476 1.437 1.311 1.466 1.414	1.322 1.173 1.220 1.241 1.154 1.201	72-84 1.253 1.107 1.028 1.168 1.087 1.030	84-96 1.150 1.036 1.007 1.110 1.033 1.006	96-108 1.108 1.007 1.000 1.068 1.007 1.000	1.136 1.020 1.034 1.042 1.018 1.036	1.091 1.000 1.000 1.041 1.000 1.000	132-144 1.052 1.034 1.040 1.033 1.026 1.032	1.045 1.045 1.016 1.026 1.028 1.009 1.018	1.050 1.000 1.000 1.000 1.011 1.000 1.000	1.043 1.000 1.000 1.000 1.012 1.000 1.000	1.009 1.000 1.000 1.000 1.000 1.000 1.000	1.014 1.020 1.000 1.011 1.034 1.000	1.003 1.000 1.000 1.000 1.003 1.000 1.000	1.009 1.000 1.000 1.000 1.004 1.000 1.000	1.003 1.003 1.000 1.000 1.004 1.004 1.000	240-252 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000	276-288 1.000 1.000 1.000 1.000 1.000 1.000	288-300 1.000 1.000 1.000 1.001 1.001 1.001	1.000 1.000 1.000 1.000 1.000 1.000 1.000	312-324 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000 1.000	336-348 1.000 1.000	348-360 1.000 1.000	360-372	To Ult
Dev Factor Sele Prior Selected FacToUlt Percent of Ult	5.500 5.500 55.455 1.8%	2.629 2.645 10.083 9.9%	1.635 1.633 3.812 26.2%	1.483 1.480 2.334 42.8%	1.211 1.173 1.578 63.4%	1.118 1.087 1.345 74.3%	1.056 1.033 1.238 80.8%	1.030 1.030 1.198 83.5%	1.030 1.030 1.163 86.0%	1.025 1.025 1.129 88.5%	1.015 1.015 1.102 90.8%	1.015 1.015 1.086 92.1%	1.015 1.015 1.070 93.5%	1.015 1.015 1.054 94.9%	1.010 1.010 1.038 96.3%	1.000 1.000 1.028 97.3%	1.000 1.000 1.028 97.3%	1.000 1.000 1.028 97.3%	1.003 1.003 1.028 97.3%	1.005 1.005 1.025 97.5%	1.005 1.005 1.020 98.0%	1.005 1.005 1.015 98.5%	1.005 1.005 1.010 99.0%	1.002 1.002 1.005 99.5%	1.002 1.002 1.003 99.7%	1.001 1.001 1.001 99.9%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 100.0%

Section 2 Exhibit 1 Page 13

Department of Mental Retardation - Cluster 1 Indemnity

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	1.3%	0.0%	0.4%	0.2%	1.000	1.000
360	98.7%	1.0%	1.3%	0.3%	0.2%	0.981	0.971
348	97.8%	1.0%	2.2%	0.3%	0.2%	0.959	0.940
336	96.8%	1.0%	3.2%	0.3%	0.2%	0.940	0.913
324	95.8%	0.9%	4.2%	0.3%	0.2%	0.922	0.886
312	94.9%	0.9%	5.1%	0.3%	0.2%	0.904	0.861
300	93.9%	1.0%	6.1%	0.4%	0.2%	0.886	0.837
288	92.9%	1.1%	7.1%	0.4%	0.3%	0.871	0.816
276	91.8%	1.2%	8.2%	0.5%	0.3%	0.857	0.797
264	90.6%	0.6%	9.4%	0.3%	0.2%	0.843	0.779
252	90.0%	0.6%	10.0%	0.3%	0.2%	0.821	0.750
240	89.4%	0.2%	10.6%	0.1%	0.1%	0.801	0.723
228	89.2%	0.3%	10.8%	0.1%	0.1%	0.775	0.688
216	88.9%	0.4%	11.1%	0.2%	0.1%	0.751	0.658
204	88.5%	0.6%	11.5%	0.3%	0.2%	0.730	0.632
192	87.9%	0.5%	12.1%	0.2%	0.2%	0.717	0.615
180	87.4%	0.6%	12.6%	0.3%	0.2%	0.700	0.595
168	86.9%	0.6%	13.1%	0.3%	0.3%	0.686	0.579
156	86.3%	0.8%	13.7%	0.5%	0.4%	0.673	0.564
144	85.5%	1.1%	14.5%	0.7%	0.6%	0.665	0.556
132	84.4%	1.2%	15.6%	0.8%	0.6%	0.664	0.556
120	83.2%	0.9%	16.8%	0.6%	0.5%	0.662	0.555
108	82.3%	1.5%	17.7%	1.1%	0.9%	0.655	0.548
96	80.8%	1.3%	19.2%	1.0%	0.8%	0.657	0.552
84	79.5%	2.0%	20.5%	1.6%	1.4%	0.654	0.550
72	77.5%	4.0%	22.5%	3.3%	2.9%	0.660	0.559
60	73.4%	6.0%	26.6%	5.0%	4.6%	0.688	0.595
48	67.5%	9.4%	32.5%	8.2%	7.6%	0.720	0.637
36	58.1%	15.5%	41.9%	14.0%	13.4%	0.757	0.683
24	42.6%	20.5%	57.4%	19.3%	18.8%	0.796	0.733
12	22.1%	22.1%	77.9%	21.7%	21.5%	0.822	0.765

Total 100.0%

NOTES:

(2) = 1 / Section 2, Exhibit 1, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)

Section 2 Exhibit 1 Page 14

Department of Mental Retardation - Cluster 1 Indemnity

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
		ounted	Discount		unted
Accident		ng Losses	Factor at		ng Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	4,897,594	7,087,783		4,283,363	6,198,869
6/30/82-83	354,884	610,098	0.981	347,993	598,251
6/30/83-84	1,482,868	1,866,309	0.959	1,422,590	1,790,444
6/30/84-85	67,954	135,954	0.940	63,878	127,799
6/30/85-86	307,904	410,904	0.922	283,739	378,656
6/30/86-87	269,494	404,494	0.904	243,519	365,507
6/30/87-88	998,481	1,889,481	0.886	884,861	1,674,471
6/30/88-89	1,237,736	1,240,736	0.871	1,077,679	1,080,291
6/30/89-90	150,019	299,019	0.857	128,494	256,116
6/30/90-91	108,903	216,903	0.843	91,844	182,927
6/30/91-92	642,838	650,838	0.821	527,841	534,410
6/30/92-93	41,424	83,424	0.801	33,190	66,841
6/30/93-94	69,777	104,777	0.775	54,056	81,170
6/30/94-95	206,471	207,471	0.751	155,145	155,896
6/30/95-96	311,112	315,112	0.730	227,239	230,160
6/30/96-97	270,973	270,973	0.717	194,248	194,248
6/30/97-98	317,970	321,970	0.700	222,507	225,306
6/30/98-99	298,954	299,954	0.686	205,210	205,897
6/30/99-00	342,766	344,766	0.673	230,778	232,124
6/30/00-01	524,146	540,146	0.665	348,721	359,366
6/30/01-02	408,539	409,539	0.664	271,278	271,942
6/30/02-03	582,965	593,965	0.662	385,968	393,251
6/30/03-04	644,203	657,203	0.655	421,792	430,304
6/30/04-05	584,583	651,583	0.657	384,039	428,055
6/30/05-06	816,478	825,478	0.654	533,997	539,883
6/30/06-07	861,661	882,661	0.660	569,077	582,946
6/30/07-08	819,220	1,192,220	0.688	563,269	819,731
6/30/08-09	1,151,166	1,366,166	0.720	828,660	983,427
6/30/09-10	1,776,404	2,007,404	0.757	1,344,042	1,518,818
6/30/10-11	2,250,577	2,310,577	0.796	1,790,900	1,838,645
6/30/11-12	3,055,532	3,257,532	0.822	2,511,245	2,677,263
Total	25,853,595	31,455,439		20,631,161	25,423,015

(7) Total Discount Factor:	0.798	0.808

Discount Ca	alculation for
All Pri	or Years
(Low)	(High)
4,897,594	7,087,783
7	7
699,656	1,012,540
4,283,363	6,198,869
	All Pri (Low) 4,897,594 7 699,656

NOTES:

(2), (3) From Section 2, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 2, Exhibit 1, Page 13, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

Section 2 Exhibit 1 Page 15

Department of Mental Retardation - Cluster 1 Indemnity

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
		counted	Discount		unted
Accident	Outstandi	ng Losses	Factor at		ng Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	4,897,594	7,087,783		4,022,921	5,821,958
6/30/82-83	354,884	610,098	0.971	344,694	592,580
6/30/83-84	1,482,868	1,866,309	0.940	1,394,396	1,754,960
6/30/84-85	67,954	135,954	0.913	62,011	124,063
6/30/85-86	307,904	410,904	0.886	272,895	364,184
6/30/86-87	269,494	404,494	0.861	232,093	348,357
6/30/87-88	998,481	1,889,481	0.837	835,854	1,581,734
6/30/88-89	1,237,736	1,240,736	0.816	1,009,964	1,012,411
6/30/89-90	150,019	299,019	0.797	119,557	238,302
6/30/90-91	108,903	216,903	0.779	84,888	169,072
6/30/91-92	642,838	650,838	0.750	481,826	487,822
6/30/92-93	41,424	83,424	0.723	29,961	60,338
6/30/93-94	69,777	104,777	0.688	48,022	72,110
6/30/94-95	206,471	207,471	0.658	135,893	136,551
6/30/95-96	311,112	315,112	0.632	196,510	199,036
6/30/96-97	270,973	270,973	0.615	166,783	166,783
6/30/97-98	317,970	321,970	0.595	189,105	191,484
6/30/98-99	298,954	299,954	0.579	173,139	173,719
6/30/99-00	342,766	344,766	0.564	193,298	194,426
6/30/00-01	524,146	540,146	0.556	291,243	300,133
6/30/01-02	408,539	409,539	0.556	227,175	227,731
6/30/02-03	582,965	593,965	0.555	323,780	329,890
6/30/03-04	644,203	657,203	0.548	352,735	359,853
6/30/04-05	584,583	651,583	0.552	322,705	359,691
6/30/05-06	816,478	825,478	0.550	448,764	453,710
6/30/06-07	861,661	882,661	0.559	481,810	493,553
6/30/07-08	819,220	1,192,220	0.595	487,414	709,340
6/30/08-09	1,151,166	1,366,166	0.637	732,901	869,782
6/30/09-10	1,776,404	2,007,404	0.683	1,214,083	1,371,959
6/30/10-11	2,250,577	2,310,577	0.733	1,649,254	1,693,223
6/30/11-12	3,055,532	3,257,532	0.765	2,337,615	2,492,153
Total	25,853,595	31,455,439		18,863,289	23,350,912

	Discount C	alculation for
	All Pri	or Years
	(Low)	(High)
(8) Estimated Total Reserve:	4,897,594	7,087,783
(9) Projected Number of Years:	7	7
(10) Projected Paid Loss per Year:	699,656	1,012,540
(11) Discounted Value at 6%:	4,022,921	5,821,958

0.730

(7) Total Discount Factor:

0.742

NOTES:

(2), (3) From Section 2, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 2, Exhibit 1, Page 13, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



Department of Mental Retardation - Cluster 1 Total Indemnity (Including Lump Sums) + Medical

Calculation of Fiscal Year 7/1/12 - 13 Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Cumulative	Increme	ntal Paid	Estimated Pa	nyments from	FY 7/1/12	- 6/30/13
Accident	Est Ult Losses	Est Ult Losses	Paid Losses	Reserves	Reserves	Percent	as a % of	as a % of	7/1/12 -	6/30/13	as a % of	Reserves
Year	(Low)	(High)	to Date	(Low)	(High)	Paid	Ultimates	Reserves	(Low)	(High)	(Low)	(High)
All Prior Yrs	26,035,045	28,228,454	21,130,386	4,904,659	7,098,069				357,656	393,422	7.3%	5.5%
6/30/82-83	5,240,254	5,503,890	4,882,760	357,494	621,129	90.9%	1.0%	11.0%	39,249	68,193	11.0%	11.0%
6/30/83-84	10,811,538	11,239,749	9,314,639	1,496,900	1,925,110	84.5%	1.0%	6.4%	96,460	124,053	6.4%	6.4%
6/30/84-85	7,597,041	7,672,438	7,521,690	75,351	150,747	98.5%	1.0%	67.5%	50,888	101,807	67.5%	67.5%
6/30/85-86	12,206,000	12,310,000	11,874,262	331,739	435,739	96.9%	1.0%	31.9%	105,969	139,191	31.9%	31.9%
6/30/86-87	15,665,316	15,819,280	15,376,859	288,457	442,421	97.7%	1.0%	43.1%	124,261	190,585	43.1%	43.1%
6/30/87-88	22,573,000	23,468,000	21,527,607	1,045,393	1,940,393	93.5%	1.0%	15.4%	161,200	299,210	15.4%	15.4%
6/30/88-89	24,967,000	24,971,000	23,647,704	1,319,296	1,323,296	94.7%	1.0%	18.9%	249,312	250,068	18.9%	18.9%
6/30/89-90	18,834,576	19,020,384	18,647,750	186,826	372,634	98.5%	1.0%	67.7%	126,413	252,137	67.7%	67.7%
6/30/90-91	13,935,000	14,044,000	13,753,946	181,054	290,054	98.3%	1.0%	59.4%	107,528	172,262	59.4%	59.4%
6/30/91-92	10,558,000	10,567,000	9,850,688	707,312	716,312	93.3%	1.0%	14.8%	104,957	106,293	14.8%	14.8%
6/30/92-93	6,035,000	6,078,000	5,942,408	92,592	135,592	98.1%	1.0%	53.1%	49,152	71,978	53.1%	53.1%
6/30/93-94	4,871,000	4,906,000	4,761,076	109,924	144,924	97.4%	1.0%	38.4%	42,171	55,599	38.4%	38.4%
6/30/94-95	3,247,000	3,248,000	3,009,043	237,957	238,957	92.7%	1.0%	13.6%	32,407	32,543	13.6%	13.6%
6/30/95-96	4,328,000	4,333,000	3,981,910	346,090	351,090	92.0%	0.7%	8.8%	30,392	30,831	8.8%	8.8%
6/30/96-97	3,653,000	3,654,000	3,349,599	303,401	304,401	91.7%	0.3%	3.2%	9,791	9,823	3.2%	3.2%
6/30/97-98	3,658,000	3,678,000	3,309,685	348,315	368,315	90.2%	1.5%	14.8%	51,723	54,693	14.8%	14.8%
6/30/98-99	3,227,000	3,242,000	2,901,673	325,327	340,327	89.7%	0.5%	5.1%	16,479	17,239	5.1%	5.1%
6/30/99-00	3,403,000	3,421,000	3,026,058	376,942	394,942	88.7%	1.0%	9.0%	34,038	35,663	9.0%	9.0%
6/30/00-01	4,959,000	5,004,000	4,376,328	582,672	627,672	87.9%	0.8%	6.9%	40,150	43,250	6.9%	6.9%
6/30/01-02	3,502,000	3,520,000	3,050,329	451,671	469,671	86.9%	1.0%	7.4%	33,474	34,808	7.4%	7.4%
6/30/02-03	4,372,000	4,401,000	3,741,621	630,379	659,379	85.3%	2.0%	13.6%	85,757	89,703	13.6%	13.6%
6/30/03-04	4,482,000	4,514,000	3,774,416	707,584	739,584	83.9%	1.4%	8.6%	60,935	63,691	8.6%	8.6%
6/30/04-05	4,256,000	4,378,000	3,628,298	627,702	749,702	84.0%	2.0%	12.5%	78,693	93,987	12.5%	12.5%
6/30/05-06	4,413,000	4,485,000	3,512,627	900,373	972,373	79.0%	5.1%	24.2%	217,901	235,326	24.2%	24.2%
6/30/06-07	4,475,000	4,559,000	3,499,476	975,524	1,059,524	77.5%	1.5%	6.6%	64,080	69,598	6.6%	6.6%
6/30/07-08	3,135,000	3,613,000	2,193,743	941,257	1,419,257	65.0%	2.0%	5.7%	53,815	81,145	5.7%	5.7%
6/30/08-09	4,121,000	4,545,000	2,807,455	1,313,545	1,737,545	64.8%	2.0%	5.7%	74,617	98,703	5.7%	5.7%
6/30/09-10	5,267,000	5,723,000	3,180,188	2,086,812	2,542,812	57.9%	6.9%	16.4%	342,711	417,598	16.4%	16.4%
6/30/10-11	4,891,000	5,167,000	2,127,491	2,763,509	3,039,509	42.3%	15.6%	27.0%	745,762	820,243	27.0%	27.0%
6/30/11-12	5,358,000	5,821,000	1,201,247	4,156,753	4,619,753	21.5%	20.8%	26.5%	1,101,988	1,224,733	26.5%	26.5%
Total	254,075,771	261,134,194	224,902,962	29,172,809	36,231,233				4,689,928	5,678,373	16.1%	15.7%

NOTES:

(2) Exhibit 1, Page 1, Column (4) + Exhibit 2, Page 1, Column (4)

(3) Exhibit 1, Page 1, Column (5) + Exhibit 2, Page 1, Column (5)

(4) Exhibit 1, Page 1, Column (2) + Exhibit 2, Page 1, Column (2)

(5) = (2) - (4)

(6) = (3) - (4)

(7) = (4) / Average of Columns (2), (3)

(8) = (7) - Prior Year's (7)

(9) = (8) / (1.00 - (7))

(10) = (5) * (9)

(11) = (6) * (9)(12) = (10) / (5)

(13) = (11) / (6)



Department of Mental Retardation - Cluster 1 Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll		Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Paid Loss	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		1,210,153			1,217,218	1,220,439	7,065	10,286		
6/30/82-83		260,969	263,293		263,579	272,000	2,610	11,031		
6/30/83-84		1,403,198	1,418,524		1,417,230	1,462,000	14,032	58,802		
6/30/84-85	181,560	739,645	749,219	749,969	747,041	754,438	7,396	14,793	0.411	0.416
6/30/85-86	195,247	1,602,166	1,626,150	1,626,874	1,626,000	1,627,000	23,835	24,835	0.833	0.833
6/30/86-87	224,370	1,896,353	1,928,590	1,930,895	1,915,316	1,934,280	18,964	37,927	0.854	0.862
6/30/87-88	262,864	2,483,087	2,530,350	2,533,855	2,530,000	2,534,000	46,913	50,913	0.962	0.964
6/30/88-89	283,884	3,867,441	3,948,935	3,950,456	3,949,000	3,950,000	81,559	82,559	1.391	1.391
6/30/89-90	285,078	3,680,769	3,765,846	3,773,189	3,717,576	3,754,384	36,808	73,615	1.304	1.317
6/30/90-91	267,732	2,890,850	2,963,584	2,963,003	2,963,000	2,964,000	72,150	73,150	1.107	1.107
6/30/91-92	261,442	2,402,525	2,467,900	2,466,912	2,467,000	2,468,000	64,475	65,475	0.944	0.944
6/30/92-93	259,992	1,752,832	1,805,002	1,803,972	1,804,000	1,805,000	51,168	52,168	0.694	0.694
6/30/93-94	257,062	1,264,853	1,305,333	1,304,501	1,305,000	1,305,000	40,147	40,147	0.508	0.508
6/30/94-95	255,854	927,514	959,053	958,553	959,000	959,000	31,486	31,486	0.375	0.375
6/30/95-96	255,539	1,004,022	1,040,242	1,039,495	1,039,000	1,040,000	34,978	35,978	0.407	0.407
6/30/96-97	270,071	882,572	915,682	915,276	915,000	916,000	32,428	33,428	0.339	0.339
6/30/97-98	245,367	751,655	781,985	781,755	782,000	798,000	30,345	46,345	0.319	0.325
6/30/98-99	251,453	633,627	660,431	660,747	660,000	674,000	26,373	40,373	0.262	0.268
6/30/99-00	255,641	758,824	793,124	793,077	793,000	809,000	34,176	50,176	0.310	0.316
6/30/00-01	263,918	1,269,474	1,330,602	1,328,400	1,328,000	1,357,000	58,526	87,526	0.503	0.514
6/30/01-02	267,598	820,868	863,837	863,995	864,000	881,000	43,132	60,132	0.323	0.329
6/30/02-03	274,465	839,586	887,068	887,516	887,000	905,000	47,414	65,414	0.323	0.330
6/30/03-04	272,384	842,619	906,197	906,977	906,000	925,000	63,381	82,381	0.333	0.340
6/30/04-05	273,647	1,005,881	1,103,888	1,100,333	1,049,000	1,104,000	43,119	98,119	0.383	0.403
6/30/05-06	285,139	1,115,105	1,261,887	1,248,377	1,199,000	1,262,000	83,895	146,895	0.420	0.443
6/30/06-07	298,516	1,094,137	1,271,391	1,266,384	1,208,000	1,271,000	113,863	176,863	0.405	0.426
6/30/07-08	314,231	842,963	1,015,390	1,070,434	965,000	1,070,000	122,037	227,037	0.307	0.341
6/30/08-09	302,998	1,088,621	1,390,457	1,378,960	1,251,000	1,460,000	162,379	371,379	0.413	0.482
6/30/09-10	297,252	1,038,592	1,499,233	1,464,855	1,349,000	1,574,000	310,408	535,408	0.454	0.530
6/30/10-11	292,432	781,068	1,437,643	1,423,096	1,294,000	1,510,000	512,932	728,932	0.442	0.516
6/30/11-12	295,908	463,779	1,738,634	1,538,122	1,565,000	1,826,000	1,101,221	1,362,221	0.529	0.617
Total	7,451,644	41,615,747	44,629,471	42,729,976	44,934,961	46,391,540	3,319,214	4,775,794		
Tot 6/30/84-12	7,451,644	38,741,426	42,947,654	42,729,976	42,036,933	43,437,101	3,295,508	4,695,675	0.564	0.583

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 2, Exhibit 2, Page 2, Column 3
- (4) From Section 2, Exhibit 2, Page 2, Column 8
- (5) From Section 2, Exhibit 2, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



Department of Mental Retardation - Cluster 1 Medical

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average
Accident	Payroll		Paid	Adjustment	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding
Year	(000's)	Paid Loss	LDF	for Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim
All Prior Yrs		1,210,153							2	1	
6/30/82-83		260,969	1.009	1.000	263,293	N/A	263,293		0	0	
6/30/83-84		1,403,198	1.011	1.000	1,418,524	N/A	1,418,524		3	2	7,663
6/30/84-85	181,560	739,645	1.013	1.000	749,219	N/A	749,219	0.413	0	1	9,574
6/30/85-86	195,247	1,602,166	1.015	1.000	1,626,150	N/A	1,626,150	0.833	1	0	
6/30/86-87	224,370	1,896,353	1.017	1.000	1,928,590	N/A	1,928,590	0.860	0	0	
6/30/87-88	262,864	2,483,087	1.019	1.000	2,530,350	N/A	2,530,350	0.963	1	1	47,263
6/30/88-89	283,884	3,867,441	1.021	1.000	3,948,935	N/A	3,948,935	1.391	4	4	20,374
6/30/89-90	285,078	3,680,769	1.023	1.000	3,765,846	N/A	3,765,846	1.321	0	1	85,078
6/30/90-91	267,732	2,890,850	1.025	1.000	2,963,584	N/A	2,963,584	1.107	2	1	72,735
6/30/91-92	261,442	2,402,525	1.027	1.000	2,467,900	N/A	2,467,900	0.944	2	2	32,687
6/30/92-93	259,992	1,752,832	1.030	1.000	1,805,002	N/A	1,805,002	0.694	1	1	52,170
6/30/93-94	257,062	1,264,853	1.032	1.000	1,305,333	N/A	1,305,333	0.508	1	2	20,240
6/30/94-95	255,854	927,514	1.034	1.000	959,053	N/A	959,053	0.375	0	0	
6/30/95-96	255,539	1,004,022	1.036	1.000	1,040,242	N/A	1,040,242	0.407	1	0	
6/30/96-97	270,071	882,572	1.038	1.000	915,682	N/A	915,682	0.339	1	0	
6/30/97-98	245,367	751,655	1.040	1.000	781,985	N/A	781,985	0.319	1	1	30,330
6/30/98-99	251,453	633,627	1.042	1.000	660,431	N/A	660,431	0.263	2	2	13,402
6/30/99-00	255,641	758,824	1.045	1.000	793,124	N/A	793,124	0.310	3	1	34,300
6/30/00-01	263,918	1,269,474	1.048	1.000	1,330,602	N/A	1,330,602	0.504	7	8	7,641
6/30/01-02	267,598	820,868	1.052	1.000	863,837	N/A	863,837	0.323	4	5	8,594
6/30/02-03	274,465	839,586	1.057	1.000	887,068	N/A	887,068	0.323	6	6	7,914
6/30/03-04	272,384	842,619	1.075	1.000	906,197	N/A	906,197	0.333	10	7	9,083
6/30/04-05	273,647	1,005,881	1.097	1.000	1,103,888	N/A	1,103,888	0.403	5	2	49,003
6/30/05-06	285,139	1,115,105	1.132	1.000	1,261,887	N/A	1,261,887	0.443	13	6	24,464
6/30/06-07	298,516	1,094,137	1.162	1.000	1,271,391	N/A	1,271,391	0.426	17	13	13,635
6/30/07-08	314,231	842,963	1.205	1.000	1,015,390	N/A	1,015,390	0.323	15	14	12,316
6/30/08-09	302,998	1,088,621	1.277	1.000	1,390,457	N/A	1,390,457	0.459	35	20	15,092
6/30/09-10	297,252	1,038,592	1.444	1.000	1,499,233	N/A	1,499,233	0.504	192	54	8,530
6/30/10-11	292,432	781,068	1.841	1.000	1,437,643	N/A	1,437,643	0.492	307	185	3,549
6/30/11-12	295,908	463,779	3.749	1.000	1,738,634	N/A	1,738,634	0.588		317	4,022
Total	7,451,644	41,615,747			44,629,471		44,629,471		636	657	

- (2) Provided by Commonwealth of Massachusetts
- (3), (4) From Section 2, Exhibit 2, Page 7
- $(5) \ Based \ on \ information \ from \ the \ MA \ WCRIB \ 9/1/12 \ filing. \ Consideration \ for \ development \ beyond \ 252 \ months \ made \ in \ selection \ of \ LDF's.$
- $(6) = (3) \times (4) \times (5)$
- (7) Lump Sum Payments are considered in the Indemnity analysis (Section 1)
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10), (11) Provided by Commonwealth of Massachusetts
- $(12) = Maximum of [{(6) (3)} / (11)] and 0$

Section 2 Exhibit 2 Page 3

Department of Mental Retardation - Cluster 1 Medical

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss		Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Paid Loss	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	181,560	0.445	739,645	1.013	749,969	N/A	749,969	0.413	0.413
6/30/85-86	195,247	0.858	1,602,166	1.015	1,626,874	N/A	1,626,874	0.833	0.833
6/30/86-87	224,370	0.921	1,896,353	1.017	1,930,895	N/A	1,930,895	0.861	0.861
6/30/87-88	262,864	1.034	2,483,087	1.019	2,533,855	N/A	2,533,855	0.964	0.964
6/30/88-89	283,884	1.417	3,867,441	1.021	3,950,456	N/A	3,950,456	1.392	1.392
6/30/89-90	285,078	1.435	3,680,769	1.023	3,773,189	N/A	3,773,189	1.324	1.324
6/30/90-91	267,732	1.098	2,890,850	1.025	2,963,003	N/A	2,963,003	1.107	1.107
6/30/91-92	261,442	0.930	2,402,525	1.027	2,466,912	N/A	2,466,912	0.944	0.944
6/30/92-93	259,992	0.681	1,752,832	1.030	1,803,972	N/A	1,803,972	0.694	0.694
6/30/93-94	257,062	0.497	1,264,853	1.032	1,304,501	N/A	1,304,501	0.507	0.507
6/30/94-95	255,854	0.369	927,514	1.034	958,553	N/A	958,553	0.375	0.375
6/30/95-96	255,539	0.399	1,004,022	1.036	1,039,495	N/A	1,039,495	0.407	0.407
6/30/96-97	270,071	0.335	882,572	1.038	915,276	N/A	915,276	0.339	0.339
6/30/97-98	245,367	0.316	751,655	1.040	781,755	N/A	781,755	0.319	0.319
6/30/98-99	251,453	0.266	633,627	1.042	660,747	N/A	660,747	0.263	0.263
6/30/99-00	255,641	0.310	758,824	1.045	793,077	N/A	793,077	0.310	0.310
6/30/00-01	263,918	0.486	1,269,474	1.048	1,328,400	N/A	1,328,400	0.503	0.503
6/30/01-02	267,598	0.324	820,868	1.052	863,995	N/A	863,995	0.323	0.323
6/30/02-03	274,465	0.326	839,586	1.057	887,516	N/A	887,516	0.323	0.323
6/30/03-04	272,384	0.337	842,619	1.075	906,977	N/A	906,977	0.333	0.333
6/30/04-05	273,647	0.389	1,005,881	1.097	1,100,333	N/A	1,100,333	0.402	0.402
6/30/05-06	285,139	0.402	1,115,105	1.132	1,248,377	N/A	1,248,377	0.438	0.438
6/30/06-07	298,516	0.414	1,094,137	1.162	1,266,384	N/A	1,266,384	0.424	0.424
6/30/07-08	314,231	0.426	842,963	1.205	1,070,434	N/A	1,070,434	0.341	0.341
6/30/08-09	302,998	0.441	1,088,621	1.277	1,378,960	N/A	1,378,960	0.455	0.455
6/30/09-10	297,252	0.467	1,038,592	1.444	1,464,855	N/A	1,464,855	0.493	0.493
6/30/10-11	292,432	0.481	781,068	1.841	1,423,096	N/A	1,423,096	0.487	0.487
6/30/11-12	295,908	0.495	463,779	3.749	1,538,122	N/A	1,538,122	0.520	0.520
Total	7,451,644		38,741,426		42,729,976		42,729,976		

⁽²⁾ Provided by Commonwealth of Massachusetts

⁽³⁾ From Section 2, Exhibit 2, Page 4, Column 11

⁽⁴⁾ From Section 2, Exhibit 2, Page 2, Column 3

⁽⁵⁾ From Section 2, Exhibit 2, Page 2, Column 4

 $^{(6) = (4) + [\{1 - \{1/(5)\}\} \}times (3) \times (2) \times 10]$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10) = (6) / (2) / 10}

Section 2 Exhibit 2 Page 4

Department of Mental Retardation - Cluster 1 Medical

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Expected	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Ult Loss	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.445	0.445
6/30/85-86									0.858	0.858
6/30/86-87									0.921	0.921
6/30/87-88									1.034	1.034
6/30/88-89									1.417	1.417
6/30/89-90									1.435	1.435
6/30/90-91	267,732	2,963,584	1.107	1.194	1.322	1.916	2.532	0.223	1.102	1.098
6/30/91-92	261,442	2,467,900	0.944	1.189	1.122	1.860	2.087	0.231	0.932	0.930
6/30/92-93	259,992	1,805,002	0.694	1.189	0.826	1.806	1.491	0.237	0.684	0.681
6/30/93-94	257,062	1,305,333	0.508	1.178	0.598	1.754	1.049	0.247	0.500	0.497
6/30/94-95	255,854	959,053	0.375	1.170	0.439	1.702	0.747	0.256	0.372	0.369
6/30/95-96	255,539	1,040,242	0.407	1.155	0.470	1.653	0.777	0.267	0.402	0.399
6/30/96-97	270,071	915,682	0.339	1.137	0.385	1.605	0.618	0.280	0.338	0.335
6/30/97-98	245,367	781,985	0.319	1.135	0.362	1.558	0.564	0.288	0.317	0.316
6/30/98-99	251,453	660,431	0.263	1.135	0.298	1.513	0.451	0.297	0.268	0.266
6/30/99-00	255,641	793,124	0.310	1.135	0.352	1.469	0.517	0.306	0.310	0.310
6/30/00-01	263,918	1,330,602	0.504	1.109	0.559	1.426	0.797	0.322	0.472	0.486
6/30/01-02	267,598	863,837	0.323	1.101	0.355	1.384	0.492	0.335	0.324	0.324
6/30/02-03	274,465	887,068	0.323	1.073	0.347	1.344	0.466	0.354	0.332	0.326
6/30/03-04	272,384	906,197	0.333	1.046	0.348	1.305	0.454	0.374	0.343	0.337
6/30/04-05	273,647	1,103,888	0.403	1.036	0.418	1.267	0.529	0.389	0.400	0.389
6/30/05-06	285,139	1,261,887	0.443	1.032	0.457	1.230	0.562	0.402	0.414	0.402
6/30/06-07	298,516	1,271,391	0.426	1.032	0.440	1.194	0.525	0.414	0.426	0.414
6/30/07-08	314,231	1,015,390	0.323	1.032	0.333	1.159	0.387	0.426	0.439	0.426
6/30/08-09	302,998	1,390,457	0.459	1.027	0.471	1.126	0.530	0.441	0.455	0.441
6/30/09-10	297,252	1,499,233	0.504	1.000	0.504	1.093	0.551	0.467	0.481	0.467
6/30/10-11	292,432	1,437,643	0.492	1.000	0.492	1.061	0.522	0.481	0.495	0.481
6/30/11-12	295,908	1,738,634	0.588	1.000	0.588	1.030	0.605	0.495		0.495
Total	6,018,641	28,398,563								
			Trend L	ast 4 (ex 11-12):	13.1%	Avg 3 (x11-12):	0.534			
			Trend L	ast 8 (ex 11-12):	3.9%	Avg 5 (x11-12):	0.503			
			Trend La	st 12 (ex 11-12):	1.9%	Avg 10 (x11-12):	0.502			
			Prior	Selected Trend:	3.0%	Prior Sel Avg:	0.510			

Selected Trend:

3.0%

Sel. Loss Cost:

0.510

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 2, Exhibit 2, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCIRB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- $\left(10\right)$ From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

Section 2 Exhibit 2 Page 5

Department of Mental Retardation - Cluster 1 Medical

Calculation of 1982 & Prior Reserves (Page 1)

Method 1			
40			0.000
(1)	Average Payment Trend		0.800
(2)	Credibility		35%
(3)	Average Pmt Trend Statewide		0.950
(4)	Credibility Weighted Trend		0.898
	-	(Low)	(High)
(5)	Selected Range	0.850	0.943
(6)	Incremental Paid for 2012	179	179
(7)	Estimated Reserve	1,016	2,956
(8)	Paid to Date (82 & Prior)	1,210,153	1,210,153
(9)	Est Ult Paid for 1982 & Prior	1,211,169	1,213,109
Method 2	<u> </u>		
		(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	1,873	2,542
(11)	Projected Number of Years	7	7
(12)	Estimated Reserve	13,114	17,795
(13)	Paid to Date (82 & Prior)	1,210,153	1,209,974
(14)	Est Ult Paid for 1982 & Prior	1,223,267	1,227,769
(14a)	Paid Counts During Fiscal Year	1	2
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	1,217,218	1,220,439
(16)	Lump Sum Ultimates	N/A	N/A
(10)	Ult Loss Including Lump Sums	1,217,218	1,220,439
(17)	On Loss merading Lump Sums	1,217,216	1,420,437
(18)	Implied Tail	1.006	1.008
(19)	Ult Loss Inc Lump Sums @ 6/11	1,221,593	1,221,817
NOTES:			
(1) From Section	on 2, Exhibit 2, Page 6		(10) Avg of 3 latest years from Section 2, Exhibit 2, Page 6, Column 3
(2) = (Average)	of Section 2, Exhibit 2, Page 6, Column 3 / 175,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta	atewide Trend		$(12) = (10 \times (11))$
$(4) = (1) \times (2) + (4) = (4) \times (2) + (4) \times (2) $			(14) = (12) + (13)
	lgmentally based on (4)		(15) = Average of (9) and (14)
	ided by Commonwealth of Massachusetts		(16) Lump Sums are considered in Indemnity analysis (Section 1)
$(7) = (6) \times (5) /$	•		(17) = (15) + (16)
	Section 2, Exhibit 2, Page 2, Column 3		(18) = (15) / (8)
(9) = (7) + (8)	,		(19) From Prior Aon Analysis as of June 30, 2011
(-) (-) - (0)			(,



Section 2 Exhibit 2

Page 6

Department of Mental Retardation - Cluster 1 Medical

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	76,171	11.241			
1993	2	75,723	11.235	0.994		
1994	3	63,040	11.052	0.833		
1995	4	28,227	10.248	0.448		
1996	5	63,291	11.055	2.242		
1997	6	29,585	10.295	0.467		
1998	7	13,039	9.476	0.441		
1999	8	13,407	9.504	1.028		
2000	9	11,930	9.387	0.890	n =	21
2001	10	9,078	9.114	0.761	S(x) =	42,042
2002	11	5,110	8.539	0.563	S(x-sq) =	84,168,854
2003	12	6,295	8.748	1.232	S(xy) =	384,903
2004	13	4,115	8.322	0.654	S(y) =	192
2005	14	17,494	9.770	4.251	D =	16,170
2006	15	5,802	8.666	0.332	slope =	-0.214
2007	16	8,975	9.102	1.547	Avg Trend =	0.786
2008	17	3,912	8.272	0.436		
2009	18	2,186	7.690	0.559		
2010	19	4,246	8.354	1.943		
2011	20	1,195	7.086	0.281		
2012	21	179	5.189	0.150		

Selected Trend: 0.800

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.15 = 179 / 1195



AON

Commonwealth of Massachusetts Workers Compensation Department of Mental Retardation - Cluster 1 MEDICAL Paid Loss Development Paid Loss (Excluding Lump Sum)

Section 2	
Exhibit 2	
Page 7	

Acc Yr Ending June 83 June 84 June 84 June 85 June 86 June 86 June 87 June 88 June 90 June 91 June 91 June 91 June 92 June 93 June 94 June 96 June 96 June 97 June 98 June 99 June 90 June 11 June 12	573,775	1,832,452 1,646,809 1,313,078 988,866 715,818 780,302 680,288 554,887 434,499 480,160 500,976 476,132 459,264 361,725 766,546 662,581 746,618 692,272	2,336,684 2,002,754 1,537,374 1,093,334 815,621 879,753 796,380 629,610 509,933 554,610 665,683 547,189 666,927 544,47 887,167 842,645 936,091 777,557	48 88_239 546_990 374_570 765_67 1,802_247 1,135_085 1,802_247 2,805_123 3,042_168 2,570_536 1,170_915 863_086 927_773 819_630 674_301 556_932 607_363 751_467 630_575 739_223 644_486 942_1494 1,034_943 805_740 1,034_943 805_740 1,034_943 805_740	60 105,504 654,018 455,180 912,72,135 2,044,603 3,365,956 2,690,503 2,195,456 1,619,013 1,212,098 890,307 959,109 848,942 694,718 596,752 639,042 818,710 673,854 775,337 731,761 987,834 1,038,675 1,071,013 842,963	72 122,855 741,928 522,720 1,103,818 1,441,924 2,209,730 3,298,078 3,509,844 2,229,059 11,550 2,229,059 11,113 977,572 854,522 711,568 611,737 681,279 893,280 722,281 800,620 788,111 999,094 1,080,705 1,094,137	2,337,274 3,424,849 3,547,356 2,767,093 2,250,251 1,662,183 922,985 986,429 862,163 723,173 618,749 703,362 968,370 746,769 814,827 824,704	96 160,692 959,232 634,207 1,358,130 1,685,111 2,381,902 3,485,100 2,783,177 2,258,976 1,669,637 1,243,122 923,881 944,587 870,431 762,442 725,333 1,062,045 768,857 825,961 835,702 1,005,881	108 180,838 1,050,170 685,633 1,444,684 1,741,279 2,440,826 3,510,635 3,660,798 2,271,388 1,672,913 1,247,382 924,606 997,113 872,306 739,218 625,193 730,593 1,117,446 788,866 832,962 842,619	120 198.763 1.118.632 702.603 1.4885.929 2.450.413 3.573.650 3.669.321 2.282.222 1.251.645 926,605 876.115 743.949 627,351 736.009 1.168.471 810.710 839.586	132 206.648 1,160,913 713,358 1,499,042 1,801,621 2,453,714 3,673,294 2,299,759 1,679,743 1,252,686 992,6603 878,979 744,590 628,383 743,547 1,217,356 820,868	144 244.385 1,192.447 717.026 1,514.125 1,842.953 2,458.159 3,649.	156 249.094 1,199,268 720,062 1,520,647 1,884,775 2,468,582 3,663,581 3,667,5267 2,821,013 1,260,284 926,605 1,002,373 881,313 744,993 632,095 758,824	168 254,712 1,203,920 720,920 1,537,037 1,889,603 2,469,709 3,679,501 3,676,903 2,824,31 1,694,444 1,261,941 926,605 882,123 746,349 633,627	180 256,363 1,225,075 726,880 1,547,606 2,470,273 3,725,869 3,676,903 2,824,744 1,262,624 926,779 1,003,880 882,572 751,655	3,746,061 3,676,975 2,835,316 2,361,934 1,735,033	927,514	216 258,257 1,290,858 731,081 1,567,432 1,895,651 2,474,120 3,677,203 3,677,203 2,852,912 2,377,427 1,747,278 1,263,431 927,514	228 258,537 1,296,673 1,573,496 1,573,496 1,573,496 1,2473,679 3,677,264 2,862,970 2,385,401 1,750,189 1,264,853			264 259,869 731,218 1,586,031 2,480,422 3,838,465 3,677,264 2,890,850	276 260,265 1,342,906 731,218 1,593,552 2,482,560 3,680,769	288 260,719 1,349,107 731,218 1,596,723 1,896,35 2,482,824 3,867,441		312 260969 1,363,288 731,218 1,602,166 1,896,353	324 260,969 1,375,051 731,218 1,602,166	336 260,969 1.401,444 739,645	348 260,969 1,403,198	360 260,969
Age-to-Age Fact June-84 June-84 June-85 June-85 June-86 June-86 June-87 June-88 June-90 June-91 June-91 June-91 June-91 June-91 June-91 June-94 June-95 June-94 June-95 June-96 June-97 June-98 June-99 June-01 June-11	2.363 2.363 2.363 2.363 2.363 2.363 2.363 2.701 2.879 2.879 3.194 2.414 2.476 1.949 1.708 2.039 1.810 2.047 2.172 2.817 2.412 2.817 2.412 2.817 2.412 2.817 2.415 2.604 2.416	24-36 1.422 1.422 1.422 1.422 1.538 1.515 1.378 1.295 1.216 1.139 1.127 1.171 1.105 1.139 1.127 1.171 1.155 1.329 1.149 1.452 1.505 1.157 1.177 1.171 1.172 1.171 1.172 1.171 1.172 1.171 1.172 1.171 1.171 1.172 1.171 1.171 1.172 1.171 1.171 1.171 1.171 1.172 1.171	36-48 1.250 1.250 1.250 1.250 1.204 1.283 1.283 1.283 1.100 1.069 1.037 1.071 1.058 1.029 1.071 1.092 1.129 1.105 1.121 1.108 1.257 1.062 1.117 1.106 1.106	48-60 1.196 1.196 1.196 1.215 1.227 1.217 1.131 1.103 1.106 1.035 1.034 1.036 1.030 1.031 1.036 1.030 1.071 1.052 1.089 1.069 1.049 1.103 1.046	60-72 1.164 1.134 1.148 1.175 1.133 1.081 1.066 1.043 1.015 1.019 1.015 1.019 1.017 1.025 1.066 1.091 1.077 1.011 1.077 1.011 1.040 1.022	72-84 1.131 1.155 1.114 1.123 1.058 1.038 1.011 1.010 1.007 1.004 1.009 1.016 1.032 1.034 1.031 1.011 1.032 1.084 1.034 1.034 1.034 1.034	84-96 1.157 1.119 1.089 1.093 1.040 1.019 1.018 1.020 1.004 1.006 1.001 1.006 1.001 1.007 1.007 1.001 1.007 1.001 1.001 1.001 1.002	96-108 1.125 1.095 1.095 1.081 1.064 1.033 1.025 1.007 1.012 1.005 1.005 1.005 1.001 1.003 1.001 1.003 1.001 1.003 1.001 1.003 1.002 1.015 1.004	108-120 1.099 1.065 1.025 1.025 1.029 1.018 1.004 1.018 1.002 1.004 1.005 1.002 1.003 1.004 1.005 1.003 1.004 1.005 1.003 1.004 1.005 1.004 1.005 1.003 1.004 1.005 1.004 1.005 1.004 1.005 1.004 1.005 1.005 1.004 1.005 1.00	120-132 1.040 1.038 1.015 1.009 1.017 1.001 1.015 1.001 1.003 1.008 1.000 1.000 1.000 1.001	132-144 1.183 1.027 1.005 1.010 1.023 1.007 1.000 1.001 1.002 1.000 1.001 1.002 1.000 1.001 1.003 1.002 1.003	144-156 1.019 1.006 1.004 1.004 1.023 1.004 1.000 1.001 1.005 1.003 1.004 1.000 1.002 1.001 1.002 1.001	156-168 1.023 1.004 1.001 1.001 1.011 1.003 1.000 1.010 1.000 1.001 1.001 1.001 1.002 1.002	168-180 1.006 1.018 1.008 1.007 1.003 1.000 1.007 1.000 1.005 1.001 1.000 1.000 1.000 1.000 1.000	180-192 1.002 1.020 1.020 1.004 1.004 1.000 1.001 1.005 1.000 1.004 1.004 1.002 1.000 1.000 1.000	192-204 1.003 1.015 1.001 1.008 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	204-216 1.002 1.017 1.001 1.002 1.000 1.000 1.000 1.000 1.003 1.003 1.003 1.003 1.000	216-228 1.001 1.005 1.000 1.004 1.000 1.001 1.003 1.000 1.001 1.003 1.004 1.003 1.004 1.003	228-240 1.000 1.003 1.003 1.000 1.002 1.000 1.000 1.004 1.003 1.003 1.003	240-252 1.003 1.013 1.013 1.000 1.004 1.000 1.001 1.003 1.003 1.003 1.004	252-264 1.002 1.012 1.000 1.002 1.000 1.000 1.000 1.000 1.000 1.000 1.000	264-276 1.002 1.007 1.007 1.000 1.005 1.000 1.001 1.001	276-288 1.002 1.005 1.000 1.000 1.000 1.000 1.000	288-300 1.001 1.007 1.000 1.002 1.000 1.000	300-312 1.000 1.004 1.000 1.001 1.001 1.000	312-324 1.000 1.009 1.009 1.000 1.000	324-336 1.019 1.019 1.012	336-348 1.000 1.001	348-360 1.000	
Averages Simple Avg All Yrs Latest 5 Latest 3 Volume Wtd	12-24 2.318 1.929 1.863	24-36 1.275 1.205 1.166	36-48 1.130 1.086 1.083	48-60 1.084 1.060 1.061	1.061 1.037 1.024	72-84 1.045 1.027 1.028	84-96 1.035 1.031 1.010	96-108 1.027 1.020 1.014	1.018 1.018 1.018 1.027	1.011 1.014 1.022	132-144 1.017 1.012 1.019	1.005 1.003 1.004	1.004 1.001 1.002	1.004 1.002 1.003	1.004 1.004 1.000	192-204 1.003 1.001 1.000	204-216 1.003 1.002 1.001	216-228 1.002 1.002 1.002	228-240 1.001 1.002 1.002	240-252 1.003 1.002 1.002	252-264 1.003 1.002 1.003	264-276 1.002 1.002 1.002	276-288 1.002 1.001 1.001	288-300 1.002 1.002 1.001	300-312 1.001 1.001 1.000	312-324 1.002 1.003	324-336 1.010 1.010	336-348 1.001	348-360 1.000	To Ult
All Yrs Latest 5 Latest 3	2.286 1.898 1.858	1.260 1.202 1.167	1.120 1.087 1.086	1.076 1.060 1.061	1.051 1.034 1.025	1.036 1.026 1.026	1.025 1.032 1.009	1.019 1.022 1.014	1.013 1.021 1.029	1.009 1.017 1.025	1.008 1.015 1.024	1.004 1.003 1.004	1.004 1.001 1.002	1.004 1.001 1.002	1.004 1.006 1.000	1.003 1.002 1.000	1.003 1.002 1.002	1.002 1.002 1.002	1.002 1.002 1.003	1.003 1.002 1.002	1.003 1.002 1.003	1.002 1.002 1.002	1.002 1.002 1.002	1.002 1.002 1.001	1.001 1.001 1.000	1.003	1.015 1.015	1.001	1.000	
Industry 1 Industry 2 Prior Selected FacToUlt Percent of Ult	1.968 2.045 2.037 3.749 26.7%	1.143 1.266 1.276 1.275 1.841 54.3%	1.054 1.074 1.131 1.130 1.444 69.3%	1.030 1.040 1.061 1.060 1.277 78.3%	1.018 1.013 1.047 1.037 1.205 83.0%	1.014 1.011 1.037 1.027 1.162 86.1%	1.012 1.010 1.037 1.031 1.132 88.4%	1.015 1.020 1.020 1.097 91.1%	1.008 1.018 1.018 1.075 93.0%	1.013 1.004 1.004 1.057 94.6%	1.013 1.004 1.004 1.052 95.0%	1.009 1.003 1.003 1.048 95.4%	1.008 1.003 1.003 1.045 95.7%	1.008 1.002 1.002 1.042 95.9%	1.008 1.003 1.003 1.040 96.1%	1.005 1.002 1.001 1.038 96.4%	1.004 1.002 1.002 1.036 96.5%	1.002 1.002 1.002 1.034 96.7%	1.004 1.002 1.002 1.032 96.9%	1.005 1.002 1.002 1.030 97.1%	1.002 1.002 1.027 97.4%	1.002 1.002 1.025 97.5%	1.002 1.002 1.023 97.7%	1.002 1.002 1.021 97.9%	1.002 1.002 1.019 98.1%	1.002 1.002 1.017 98.3%	1.002 1.002 1.015 98.5%	1.002 1.002 1.013 98.7%	1.016 1.002 1.011 98.9%	1.009 1.009 99.1%

Section 2 Exhibit 2 Page 8

Department of Mental Retardation - Cluster 1 Medical

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ate Loss	Ultima	ite Loss	Change in U	Iltimate Loss	Change in U	Itimate Loss
Accident	As o	f 6/11	As o	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	1,221,593	1,221,817	1,217,218	1,220,439	(4,375)	-0.4%	(1,378)	-0.1%
6/30/82-83	263,579	274,000	263,579	272,000	0	0.0%	(2,000)	-0.7%
6/30/83-84	1,415,459	1,470,000	1,417,230	1,462,000	1,772	0.1%	(8,000)	-0.5%
6/30/84-85	738,530	745,842	747,041	754,438	8,511	1.2%	8,595	1.2%
6/30/85-86	1,637,000	1,638,000	1,626,000	1,627,000	(11,000)	-0.7%	(11,000)	-0.7%
6/30/86-87	1,915,316	1,934,280	1,915,316	1,934,280	0	0.0%	0	0.0%
6/30/87-88	2,547,000	2,551,000	2,530,000	2,534,000	(17,000)	-0.7%	(17,000)	-0.7%
6/30/88-89	3,960,000	3,962,000	3,949,000	3,950,000	(11,000)	-0.3%	(12,000)	-0.3%
6/30/89-90	3,714,037	3,750,809	3,717,576	3,754,384	3,540	0.1%	3,575	0.1%
6/30/90-91	2,972,000	2,973,000	2,963,000	2,964,000	(9,000)	-0.3%	(9,000)	-0.3%
6/30/91-92	2,473,000	2,474,000	2,467,000	2,468,000	(6,000)	-0.2%	(6,000)	-0.2%
6/30/92-93	1,812,000	1,814,000	1,804,000	1,805,000	(8,000)	-0.4%	(9,000)	-0.5%
6/30/93-94	1,311,000	1,312,000	1,305,000	1,305,000	(6,000)	-0.5%	(7,000)	-0.5%
6/30/94-95	965,000	965,000	959,000	959,000	(6,000)	-0.6%	(6,000)	-0.6%
6/30/95-96	1,046,000	1,047,000	1,039,000	1,040,000	(7,000)	-0.7%	(7,000)	-0.7%
6/30/96-97	922,000	923,000	915,000	916,000	(7,000)	-0.8%	(7,000)	-0.8%
6/30/97-98	782,000	782,000	782,000	798,000	0	0.0%	16,000	2.0%
6/30/98-99	664,000	665,000	660,000	674,000	(4,000)	-0.6%	9,000	1.4%
6/30/99-00	791,000	791,000	793,000	809,000	2,000	0.3%	18,000	2.3%
6/30/00-01	1,285,000	1,289,000	1,328,000	1,357,000	43,000	3.3%	68,000	5.3%
6/30/01-02	861,000	861,000	864,000	881,000	3,000	0.3%	20,000	2.3%
6/30/02-03	900,000	901,000	887,000	905,000	(13,000)	-1.4%	4,000	0.4%
6/30/03-04	921,000	922,000	906,000	925,000	(15,000)	-1.6%	3,000	0.3%
6/30/04-05	1,140,000	1,146,000	1,049,000	1,104,000	(91,000)	-8.0%	(42,000)	-3.7%
6/30/05-06	1,217,000	1,281,000	1,199,000	1,262,000	(18,000)	-1.5%	(19,000)	-1.5%
6/30/06-07	1,262,000	1,329,000	1,208,000	1,271,000	(54,000)	-4.3%	(58,000)	-4.4%
6/30/07-08	1,007,000	1,137,000	965,000	1,070,000	(42,000)	-4.2%	(67,000)	-5.9%
6/30/08-09	1,317,000	1,536,000	1,251,000	1,460,000	(66,000)	-5.0%	(76,000)	-4.9%
6/30/09-10	1,408,000	1,642,000	1,349,000	1,574,000	(59,000)	-4.2%	(68,000)	-4.1%
6/30/10-11	1,518,000	1,771,000	1,294,000	1,510,000	(224,000)	-14.8%	(261,000)	-14.7%
6/30/11-12								
Total	43,986,514	45,108,749	43,369,961	44,565,540	(616,553)	-1.4%	(543,208)	-1.2%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 2, Exhibit 2, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1

Section 2 Exhibit 2

Page 9

Department of Mental Retardation - Cluster 1 Medical

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	0.9%	0.0%	0.3%	0.1%	1.000	1.000
360	99.1%	0.2%	0.9%	0.1%	0.0%	0.981	0.971
348	98.9%	0.2%	1.1%	0.1%	0.0%	0.950	0.926
336	98.7%	0.2%	1.3%	0.1%	0.0%	0.924	0.889
324	98.5%	0.2%	1.5%	0.1%	0.0%	0.900	0.856
312	98.3%	0.2%	1.7%	0.1%	0.0%	0.879	0.827
300	98.1%	0.2%	1.9%	0.1%	0.0%	0.860	0.800
288	97.9%	0.2%	2.1%	0.1%	0.0%	0.841	0.776
276	97.7%	0.2%	2.3%	0.1%	0.1%	0.824	0.752
264	97.5%	0.2%	2.5%	0.1%	0.1%	0.807	0.731
252	97.4%	0.2%	2.6%	0.1%	0.1%	0.791	0.710
240	97.1%	0.2%	2.9%	0.1%	0.1%	0.779	0.695
228	96.9%	0.2%	3.1%	0.1%	0.1%	0.765	0.677
216	96.7%	0.2%	3.3%	0.1%	0.1%	0.749	0.658
204	96.5%	0.1%	3.5%	0.1%	0.1%	0.735	0.640
192	96.4%	0.3%	3.6%	0.1%	0.1%	0.717	0.617
180	96.1%	0.2%	3.9%	0.1%	0.1%	0.709	0.609
168	95.9%	0.3%	4.1%	0.2%	0.1%	0.695	0.592
156	95.7%	0.3%	4.3%	0.2%	0.1%	0.687	0.584
144	95.4%	0.4%	4.6%	0.2%	0.2%	0.680	0.575
132	95.0%	0.4%	5.0%	0.3%	0.2%	0.679	0.576
120	94.6%	1.7%	5.4%	1.1%	1.0%	0.676	0.573
108	93.0%	1.9%	7.0%	1.3%	1.1%	0.728	0.643
96	91.1%	2.8%	8.9%	2.1%	1.8%	0.759	0.683
84	88.4%	2.3%	11.6%	1.8%	1.6%	0.789	0.722
72	86.1%	3.0%	13.9%	2.4%	2.2%	0.796	0.729
60	83.0%	4.7%	17.0%	4.0%	3.6%	0.804	0.738
48	78.3%	9.0%	21.7%	7.9%	7.4%	0.818	0.756
36	69.3%	14.9%	30.7%	13.5%	12.9%	0.843	0.789
24	54.3%	27.7%	45.7%	26.1%	25.3%	0.866	0.819
12	26.7%	26.7%	73.3%	26.2%	25.9%	0.889	0.847

Total 100.0%

NOTES:

(2) = 1 / Section 2, Exhibit 2, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)

Section 2 Exhibit 2 Page 10

Department of Mental Retardation - Cluster 1 Medical

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount	Disco	
Accident	Outstandi	ng Losses	Factor at	Outstandi	ng Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	7,065	10,286		6,179	8,996
6/30/82-83	2,610	11,031	0.981	2,559	10,817
6/30/83-84	14,032	58,802	0.950	13,327	55,848
6/30/84-85	7,396	14,793	0.924	6,832	13,663
6/30/85-86	23,835	24,835	0.900	21,462	22,363
6/30/86-87	18,964	37,927	0.879	16,675	33,351
6/30/87-88	46,913	50,913	0.860	40,331	43,770
6/30/88-89	81,559	82,559	0.841	68,612	69,453
6/30/89-90	36,808	73,615	0.824	30,320	60,641
6/30/90-91	72,150	73,150	0.807	58,229	59,036
6/30/91-92	64,475	65,475	0.791	51,003	51,794
6/30/92-93	51,168	52,168	0.779	39,859	40,638
6/30/93-94	40,147	40,147	0.765	30,703	30,703
6/30/94-95	31,486	31,486	0.749	23,593	23,593
6/30/95-96	34,978	35,978	0.735	25,707	26,442
6/30/96-97	32,428	33,428	0.717	23,246	23,963
6/30/97-98	30,345	46,345	0.709	21,514	32,858
6/30/98-99	26,373	40,373	0.695	18,329	28,059
6/30/99-00	34,176	50,176	0.687	23,495	34,494
6/30/00-01	58,526	87,526	0.680	39,784	59,497
6/30/01-02	43,132	60,132	0.679	29,270	40,806
6/30/02-03	47,414	65,414	0.676	32,038	44,201
6/30/03-04	63,381	82,381	0.728	46,151	59,986
6/30/04-05	43,119	98,119	0.759	32,726	74,470
6/30/05-06	83,895	146,895	0.789	66,206	115,923
6/30/06-07	113,863	176,863	0.796	90,583	140,703
6/30/07-08	122,037	227,037	0.804	98,063	182,435
6/30/08-09	162,379	371,379	0.818	132,812	303,756
6/30/09-10	310,408	535,408	0.843	261,807	451,579
6/30/10-11	512,932	728,932	0.866	444,448	631,609
6/30/11-12	1,101,221	1,362,221	0.889	978,721	1,210,687
Total	3,319,214	4,775,794		2,774,587	3,986,135

_		
_	Discount Ca	alculation for
	All Pri	or Years
_	(Low)	(High)
_		
(8) Estimated Total Reserve:	7,065	10,286
(9) Projected Number of Years:	7	7
(10) Projected Paid Loss per Year:	1,009	1,469
(11) Discounted Value at 4%:	6,179	8,996

0.836

(7) Total Discount Factor:

0.835

NOTES:

(2), (3) From Section 2, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 2, Exhibit 2, Page 9, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

(7) = Sum of (5) / Sum of (2) and Sum of (6) / Sum of (3)

(10) = (8) / (9)

Section 2 Exhibit 2 Page 11

Department of Mental Retardation - Cluster 1 Medical

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount	Disco	
Accident		ng Losses	Factor at	Outstandi	· ·
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	7,065	10,286		5,803	8,449
6/30/82-83	2,610	11,031	0.971	2,535	10,714
6/30/83-84	14,032	58,802	0.926	12,999	54,472
6/30/84-85	7,396	14,793	0.889	6,575	13,151
6/30/85-86	23,835	24,835	0.856	20,411	21,268
6/30/86-87	18,964	37,927	0.827	15,685	31,370
6/30/87-88	46,913	50,913	0.800	37,548	40,749
6/30/88-89	81,559	82,559	0.776	63,257	64,032
6/30/89-90	36,808	73,615	0.752	27,695	55,390
6/30/90-91	72,150	73,150	0.731	52,714	53,445
6/30/91-92	64,475	65,475	0.710	45,776	46,486
6/30/92-93	51,168	52,168	0.695	35,560	36,255
6/30/93-94	40,147	40,147	0.677	27,183	27,183
6/30/94-95	31,486	31,486	0.658	20,708	20,708
6/30/95-96	34,978	35,978	0.640	22,385	23,025
6/30/96-97	32,428	33,428	0.617	20,020	20,638
6/30/97-98	30,345	46,345	0.609	18,473	28,213
6/30/98-99	26,373	40,373	0.592	15,610	23,897
6/30/99-00	34,176	50,176	0.584	19,952	29,293
6/30/00-01	58,526	87,526	0.575	33,677	50,364
6/30/01-02	43,132	60,132	0.576	24,826	34,611
6/30/02-03	47,414	65,414	0.573	27,182	37,502
6/30/03-04	63,381	82,381	0.643	40,747	52,962
6/30/04-05	43,119	98,119	0.683	29,451	67,017
6/30/05-06	83,895	146,895	0.722	60,551	106,022
6/30/06-07	113,863	176,863	0.729	83,007	128,935
6/30/07-08	122,037	227,037	0.738	90,124	167,666
6/30/08-09	162,379	371,379	0.756	122,836	280,941
6/30/09-10	310,408	535,408	0.789	244,996	422,582
6/30/10-11	512,932	728,932	0.819	419,977	596,832
6/30/11-12	1,101,221	1,362,221	0.847	933,207	1,154,386
Total	3,319,214	4,775,794		2,581,473	3,708,558

·	Discount Ca	lculation for
	All Pri	or Years
_	(Low)	(High)
(8) Estimated Total Reserve:	7,065	10,286
(9) Projected Number of Years:	7	7
(10) Projected Paid Loss per Year:	1,009	1,469

0.778

5,803

(7) Total Discount Factor:

(11) Discounted Value at 6%:

0.777

8,449

NOTES:

(2), (3) From Section 2, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 2, Exhibit 2, Page 9, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



Department of Mental Health - Cluster 2 Indemnity

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		19,027,723			22,819,387	24,223,911	3,791,665	5,196,189		
6/30/82-83		2,501,755	2,581,318		2,516,785	2,645,851	15,030	144,095		
6/30/83-84		2,655,007	2,871,880		2,800,083	2,943,677	145,076	288,670		
6/30/84-85	142,561	4,037,976	4,596,040	4,191,635	4,192,000	4,596,000	154,024	558,024	2.940	3.224
6/30/85-86	153,298	4,634,091	4,897,749	4,885,215	4,885,000	4,898,000	250,909	263,909	3.187	3.195
6/30/86-87	176,136	6,208,413	6,616,166	6,624,960	6,333,000	6,457,000	124,587	248,587	3.596	3.666
6/30/87-88	206,319	11,384,166	12,751,811	12,164,745	12,516,985	12,752,000	1,132,818	1,367,834	6.067	6.181
6/30/88-89	222,806	11,959,768	13,483,195	12,884,541	13,243,733	13,483,000	1,283,965	1,523,232	5.944	6.051
6/30/89-90	223,751	11,360,798	12,892,136	12,340,083	12,340,000	12,892,000	979,202	1,531,202	5.515	5.762
6/30/90-91	210,162	7,745,382	8,817,226	8,508,320	7,978,000	8,133,000	232,618	387,618	3.796	3.870
6/30/91-92	205,241	4,260,079	4,684,814	4,681,610	4,388,000	4,473,000	127,921	212,921	2.138	2.179
6/30/92-93	176,705	3,504,183	3,889,638	3,884,426	3,884,000	3,890,000	379,817	385,817	2.198	2.201
6/30/93-94	173,075	2,365,441	2,678,945	2,675,518	2,676,000	2,679,000	310,559	313,559	1.546	1.548
6/30/94-95	178,317	2,817,398	3,350,062	3,225,191	3,225,000	3,350,000	407,602	532,602	1.809	1.879
6/30/95-96	175,996	1,922,991	2,185,636	2,186,368	1,962,000	2,000,000	39,009	77,009	1.115	1.136
6/30/96-97	190,083	1,571,537	1,775,898	1,783,447	1,776,000	1,783,000	204,463	211,463	0.934	0.938
6/30/97-98	177,278	2,912,109	3,328,381	3,320,378	3,320,000	3,328,000	407,891	415,891	1.873	1.877
6/30/98-99	189,080	1,674,660	1,945,709	1,953,686	1,946,000	1,954,000	271,340	279,340	1.029	1.033
6/30/99-00	194,494	2,313,702	2,692,238	2,695,092	2,692,000	2,695,000	378,298	381,298	1.384	1.386
6/30/00-01	201,568	3,265,709	3,870,152	3,856,822	3,857,000	3,870,000	591,291	604,291	1.913	1.920
6/30/01-02	203,105	2,606,204	3,186,482	3,181,519	3,182,000	3,186,000	575,796	579,796	1.567	1.569
6/30/02-03	202,515	1,901,611	2,358,773	2,372,419	2,359,000	2,372,000	457,389	470,389	1.165	1.171
6/30/03-04	189,588	3,242,897	4,162,471	4,133,439	4,133,000	4,162,000	890,103	919,103	2.180	2.195
6/30/04-05	186,990	2,718,828	3,542,352	3,411,469	3,411,000	3,542,000	692,172	823,172	1.824	1.894
6/30/05-06	193,254	1,855,810	2,491,127	2,642,311	2,491,000	2,642,000	635,190	786,190	1.289	1.367
6/30/06-07	203,359	1,982,868	2,839,531	2,885,009	2,840,000	2,885,000	857,132	902,132	1.397	1.419
6/30/07-08	212,083	1,507,306	2,231,262	2,541,824	2,231,000	2,542,000	723,694	1,034,694	1.052	1.199
6/30/08-09	204,679	1,617,302	2,670,318	2,882,387	2,670,000	2,882,000	1,052,698	1,264,698	1.304	1.408
6/30/09-10	184,688	931,282	1,764,958	2,161,462	1,964,000	2,161,000	1,032,718	1,229,718	1.063	1.170
6/30/10-11	169,689	1,136,164	2,767,461	2,745,679	2,746,000	2,906,000	1,609,836	1,769,836	1.618	1.713
6/30/11-12	177,399	603,523	2,799,074	2,907,713	2,799,000	3,053,000	2,195,477	2,449,477	1.578	1.721
Total	5,324,220	128,226,684	130,722,801	123,727,268	150,176,973	155,379,439	21,950,290	27,152,755	- 	
Tot 6/30/84-12	5,324,220	104,042,199	125,269,603	123,727,268	122,040,718	125,566,000	17,998,519	21,523,801	2.292	2.358

- (2) Provided by Commonwealth of Massachusetts
- (3) Sum of Section 3, Exhibit 1, Page 2, Column 3 and Section 3, Exhibit 1, Page 9, Column 8
- (4) From Section 3, Exhibit 1, Page 2, Column 8
- (5) From Section 3, Exhibit 1, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



Department of Mental Health - Cluster 2 Indemnity

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Paid Loss		Adjstmnt for	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average	
Accident	Payroll	Excluding	Paid	Extra	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding	Average
Year	(000's)	Lump Sum	LDF	Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim	Age
All Prior Yrs		18,362,043							11	10		85
6/30/82-83		2,407,755	1.033	1.000	2,486,613	94,705	2,581,318		1	1	78,858	86
6/30/83-84		2,245,006	1.043	1.050	2,458,804	413,076	2,871,880		0	0		
6/30/84-85	142,561	3,486,893	1.054	1.100	4,040,824	555,216	4,596,040	3.224	2	2	276,965	68
6/30/85-86	153,298	4,048,163	1.064	1.000	4,307,427	590,322	4,897,749	3.195	0	0		
6/30/86-87	176,136	5,376,022	1.075	1.000	5,777,532	838,634	6,616,166	3.756	0	0		
6/30/87-88	206,319	9,699,144	1.085	1.050	11,054,151	1,697,660	12,751,811	6.181	2	2	677,504	72
6/30/88-89	222,806	9,984,126	1.096	1.050	11,492,736	1,990,459	13,483,195	6.052	4	4	377,152	78
6/30/89-90	223,751	9,323,158	1.107	1.050	10,839,214	2,052,922	12,892,136	5.762	2	2	758,028	72
6/30/90-91	210,162	6,079,918	1.118	1.050	7,139,271	1,677,955	8,817,226	4.195	1	1	1,059,352	84
6/30/91-92	205,241	3,230,938	1.129	1.000	3,647,955	1,036,860	4,684,814	2.283	0	0		
6/30/92-93	176,705	2,710,104	1.140	1.000	3,089,603	800,035	3,889,638	2.201	2	2	189,749	56
6/30/93-94	173,075	2,006,857	1.155	1.000	2,317,622	361,323	2,678,945	1.548	1	1	310,765	62
6/30/94-95	178,317	2,340,974	1.166	1.050	2,864,829	485,233	3,350,062	1.879	2	1	523,855	68
6/30/95-96	175,996	1,438,931	1.174	1.000	1,689,399	496,237	2,185,636	1.242	0	1	250,468	55
6/30/96-97	190,083	1,057,037	1.181	1.000	1,248,410	527,487	1,775,898	0.934	0	0		
6/30/97-98	177,278	2,101,308	1.188	1.000	2,495,621	832,760	3,328,381	1.877	1	0		
6/30/98-99	189,080	1,254,410	1.204	1.000	1,510,659	435,050	1,945,709	1.029	0	0		
6/30/99-00	194,494	1,634,502	1.215	1.000	1,985,336	706,903	2,692,238	1.384	0	0		
6/30/00-01	201,568	2,469,209	1.226	1.000	3,027,986	842,166	3,870,152	1.920	2	2	279,389	67
6/30/01-02	203,105	2,097,298	1.257	1.000	2,636,010	550,472	3,186,482	1.569	1	0		
6/30/02-03	202,515	1,404,611	1.291	1.000	1,813,065	545,708	2,358,773	1.165	1	2	204,227	42
6/30/03-04	189,588	2,661,897	1.315	1.000	3,499,732	662,738	4,162,471	2.196	3	0		
6/30/04-05	186,990	2,083,828	1.345	1.000	2,802,877	739,475	3,542,352	1.894	5	2	359,524	58
6/30/05-06	193,254	1,353,060	1.385	1.000	1,874,255	616,872	2,491,127	1.289	3	2	260,598	42
6/30/06-07	203,359	1,702,117	1.439	1.000	2,448,943	390,588	2,839,531	1.396	5	2	373,413	56
6/30/07-08	212,083	1,222,576	1.482	1.000	1,812,126	419,135	2,231,262	1.052	8	4	147,388	51
6/30/08-09	204,679	1,347,802	1.608	1.000	2,167,548	502,770	2,670,318	1.305	10	4	204,936	49
6/30/09-10	184,688	895,282	1.771	1.000	1,585,502	179,456	1,764,958	0.956	23	9	76,691	56
6/30/10-11	169,689	1,099,134	2.142	1.000	2,354,286	413,175	2,767,461	1.631	147	42	29,885	52
6/30/11-12	177,399	603,523	3.831	1.000	2,311,981	487,093	2,799,074	1.578		146	11,702	48
Total	5,324,220	107,727,626			108,780,317	21,942,484	130,722,801		237	242		

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 3, Exhibit 1, Page 7

⁽⁵⁾ Based on information from the MA WCRIB

^{(6) = (3)} x (4) x (5)

⁽⁷⁾ From Section 3, Exhibit 1, Page 9, Column 13

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 3 Exhibit 1 Page 3

Department of Mental Health - Cluster 2 Indemnity

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori	Paid Loss		Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss	Excluding	Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Lump Sum	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	142,561	2.065	3,486,893	1.054	3,636,419	555,216	4,191,635	2.940	2.551
6/30/85-86	153,298	2.674	4,048,163	1.064	4,294,893	590,322	4,885,215	3.187	2.802
6/30/86-87	176,136	3.352	5,376,022	1.075	5,786,326	838,634	6,624,960	3.761	3.285
6/30/87-88	206,319	4.729	9,699,144	1.085	10,467,086	1,697,660	12,164,745	5.896	5.073
6/30/88-89	222,806	4.650	9,984,126	1.096	10,894,082	1,990,459	12,884,541	5.783	4.890
6/30/89-90	223,751	4.448	9,323,158	1.107	10,287,161	2,052,922	12,340,083	5.515	4.598
6/30/90-91	210,162	3.375	6,079,918	1.118	6,830,365	1,677,955	8,508,320	4.048	3.250
6/30/91-92	205,241	1.764	3,230,938	1.129	3,644,750	1,036,860	4,681,610	2.281	1.776
6/30/92-93	176,705	1.724	2,710,104	1.140	3,084,391	800,035	3,884,426	2.198	1.746
6/30/93-94	173,075	1.324	2,006,857	1.155	2,314,195	361,323	2,675,518	1.546	1.337
6/30/94-95	178,317	1.576	2,340,974	1.166	2,739,958	485,233	3,225,191	1.809	1.537
6/30/95-96	175,996	0.963	1,438,931	1.174	1,690,131	496,237	2,186,368	1.242	0.960
6/30/96-97	190,083	0.683	1,057,037	1.181	1,255,959	527,487	1,783,447	0.938	0.661
6/30/97-98	177,278	1.379	2,101,308	1.188	2,487,618	832,760	3,320,378	1.873	1.403
6/30/98-99	189,080	0.824	1,254,410	1.204	1,518,636	435,050	1,953,686	1.033	0.803
6/30/99-00	194,494	1.029	1,634,502	1.215	1,988,189	706,903	2,695,092	1.386	1.022
6/30/00-01	201,568	1.466	2,469,209	1.226	3,014,657	842,166	3,856,822	1.913	1.496
6/30/01-02	203,105	1.286	2,097,298	1.257	2,631,047	550,472	3,181,519	1.566	1.295
6/30/02-03	202,515	0.925	1,404,611	1.291	1,826,711	545,708	2,372,419	1.171	0.902
6/30/03-04	189,588	1.782	2,661,897	1.315	3,470,700	662,738	4,133,439	2.180	1.831
6/30/04-05	186,990	1.226	2,083,828	1.345	2,671,994	739,475	3,411,469	1.824	1.429
6/30/05-06	193,254	1.251	1,353,060	1.385	2,025,440	616,872	2,642,311	1.367	1.048
6/30/06-07	203,359	1.278	1,702,117	1.439	2,494,420	390,588	2,885,009	1.419	1.227
6/30/07-08	212,083	1.305	1,222,576	1.482	2,122,689	419,135	2,541,824	1.199	1.001
6/30/08-09	204,679	1.333	1,347,802	1.608	2,379,617	502,770	2,882,387	1.408	1.163
6/30/09-10	184,688	1.352	895,282	1.771	1,982,006	179,456	2,161,462	1.170	1.073
6/30/10-11	169,689	1.363	1,099,134	2.142	2,332,504	413,175	2,745,679	1.618	1.375
6/30/11-12	177,399	1.386	603,523	3.831	2,420,621	487,093	2,907,713	1.639	1.365
Total	5,324,220		84,712,823		102,292,565	21,434,703	123,727,268		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 3, Exhibit 1, Page 4, Column 11
- (4) From Section 3, Exhibit 1, Page 2, Column 3
- (5) From Section 3, Exhibit 1, Page 2, Column 4
- $(6) = (4) + [\{1 \{1 / (5)\}\} \times (3) \times (2) \times 10]$
- (7) From Section 3, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10



Section 3 Exhibit 1 Page 4

Department of Mental Health - Cluster 2 Indemnity

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Exp Ult Loss	Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Excluding	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Lump Sum	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									2.065	2.065
6/30/85-86									2.674	2.674
6/30/86-87									3.352	3.352
6/30/87-88									4.729	4.729
6/30/88-89									4.650	4.650
6/30/89-90									4.448	4.448
6/30/90-91	210,162	7,139,271	3.397	0.946	3.214	1.245	4.000	1.189	3.370	3.375
6/30/91-92	205,241	3,647,955	1.777	1.038	1.845	1.232	2.274	1.094	1.770	1.764
6/30/92-93	176,705	3,089,603	1.748	1.210	2.116	1.220	2.582	0.948	1.715	1.724
6/30/93-94	173,075	2,317,622	1.339	1.195	1.600	1.208	1.933	0.970	1.306	1.324
6/30/94-95	178,317	2,864,829	1.607	1.184	1.902	1.196	2.275	0.989	1.578	1.576
6/30/95-96	175,996	1,689,399	0.960	1.174	1.127	1.184	1.335	1.007	0.969	0.963
6/30/96-97	190,083	1,248,410	0.657	1.163	0.764	1.173	0.895	1.027	0.690	0.683
6/30/97-98	177,278	2,495,621	1.408	1.148	1.616	1.161	1.876	1.051	1.400	1.379
6/30/98-99	189,080	1,510,659	0.799	1.133	0.905	1.149	1.040	1.075	0.839	0.824
6/30/99-00	194,494	1,985,336	1.021	1.114	1.138	1.138	1.295	1.104	1.048	1.029
6/30/00-01	201,568	3,027,986	1.502	1.086	1.632	1.127	1.839	1.144	1.495	1.466
6/30/01-02	203,105	2,636,010	1.298	1.065	1.382	1.116	1.542	1.178	1.329	1.286
6/30/02-03	202,515	1,813,065	0.895	1.061	0.950	1.105	1.049	1.194	0.947	0.925
6/30/03-04	189,588	3,499,732	1.846	1.061	1.959	1.094	2.142	1.206	1.838	1.782
6/30/04-05	186,990	2,802,877	1.499	1.054	1.581	1.083	1.712	1.226	1.326	1.226
6/30/05-06	193,254	1,874,255	0.970	1.044	1.012	1.072	1.085	1.251	1.353	1.251
6/30/06-07	203,359	2,448,943	1.204	1.032	1.243	1.062	1.320	1.278	1.382	1.278
6/30/07-08	212,083	1,812,126	0.854	1.021	0.872	1.051	0.917	1.305	1.411	1.305
6/30/08-09	204,679	2,167,548	1.059	1.009	1.069	1.041	1.112	1.333	1.441	1.333
6/30/09-10	184,688	1,585,502	0.858	1.005	0.863	1.030	0.889	1.352	1.462	1.352
6/30/10-11	169,689	2,354,286	1.387	1.007	1.397	1.020	1.425	1.363	1.485	1.363
6/30/11-12	177,399	2,311,981	1.303	1.000	1.303	1.010	1.316	1.386		1.386
Total	4,199,350	56,323,017								
			Trend L	ast 4 (ex 11-12):	12.7%	Avg 3 (x11-12):	1.142			
				ast 8 (ex 11-12):	-6.4%	Avg 5 (x11-12):	1.133			
				st 12 (ex 11-12):	-2.6%	Avg 10 (x11-12):	1.319			
				Selected Trend:	1.0%	Prior Sel Avg:	1.500			

1.0%

Sel. Loss Cost:

1.400

Selected Trend:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 3, Exhibit 1, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCRIB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

Section 3 Exhibit 1 Page 5

Department of Mental Health - Cluster 2 Indemnity

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	-		
(1)	Average Payment Trend		0.950
(2)	Credibility		44%
(3)	Average Pmt Trend Statewide		0.960
(4)	Credibility Weighted Trend		0.956
(1)	Creationity Weighted French	(Low)	(High)
(5)	Selected Range	0.930	0.960
(6)	Incremental Paid for 2012	370,117	370,117
(7)	Estimated Reserve	4,917,268	8,882,807
(8)	Paid to Date (82 & Prior)	18,362,043	18,362,043
(9)	Est Ult Paid for 1982 & Prior	23,279,311	27,244,849
Method 2	<u> </u>		
	_	(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	379,439	387,530
(11)	Projected Number of Years	7	8
(12)	Estimated Reserve	2,656,076	3,100,239
(13)	Paid to Date (82 & Prior)	18,362,043	17,991,926
(14)	Est Ult Paid for 1982 & Prior	21,018,119	21,092,165
(14a)	Paid Counts During Fiscal Year	10	11
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	22,148,715	23,553,239
(16)	Lump Sum Ultimates	670,673	670,673
(17)	Ult Loss Including Lump Sums	22,819,387	24,223,911
(18)	Implied Tail	1.206	1.283
(19)	Ult Loss Inc Lump Sums @ 6/11	22,486,642	23,896,348
NOTES:			
(1) From Section	n 3, Exhibit 1, Page 6		(10) Avg of 3 latest years from Section 3, Exhibit 1, Page 6, Column 3
(2) = (Average o	of Section 3, Exhibit 1, Page 6, Column 3 / 3,000,000) ^ 0.5		(11) Selected judgmentally
(3) Average Stat	tewide Trend		(12) = (10 x (11))
$(4) = (1) \times (2) +$	(4) x {1 - (2)}		(14) = (12) + (13)
(5) Selected judg	gmentally based on (4)		(15) = Average of (9) and (14)
(6), (14a) Provid	led by Commonwealth of Massachusetts		(16) From Section 3, Exhibit 1, Page 9, Column 13
$(7) = (6) \times (5) / {$	{1 - (5)}		(17) = (15) + (16)
(8), (16) From S	ection 3, Exhibit 1, Page 2, Column 3		(18) = (15) / (8)
(9) = (7) + (8)			(19) From Aon analysis as of June 30, 2011



Section 3 Exhibit 1 Page 6

Department of Mental Health - Cluster 2 Indemnity

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	750,775	13.529			
1993	2	716,997	13.483	0.955		
1994	3	790,631	13.581	1.103		
1995	4	675,209	13.423	0.854		
1996	5	721,864	13.490	1.069		
1997	6	762,764	13.545	1.057		
1998	7	718,856	13.485	0.942		
1999	8	630,481	13.354	0.877		
2000	9	625,893	13.347	0.993	n =	21
2001	10	614,002	13.328	0.981	S(x) =	42,042
2002	11	594,569	13.296	0.968	S(x-sq) =	84,168,854
2003	12	551,328	13.220	0.927	S(xy) =	556,175
2004	13	536,825	13.193	0.974	S(y) =	278
2005	14	518,060	13.158	0.965	D =	16,170
2006	15	465,230	13.050	0.898	slope =	-0.041
2007	16	463,442	13.046	0.996	Avg Trend =	0.959
2008	17	390,409	12.875	0.842		
2009	18	394,388	12.885	1.010		
2010	19	396,721	12.891	1.006		
2011	20	371,480	12.825	0.936		
2012	21	370,117	12.822	0.933		

Selected Trend: 0.950

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.933 = 370117 / 371480



Commonwealth of Massachusetts Workers Compensation Department of Mental Health - Cluster 2 INDEMNITY Paid Loss Development Paid Loss (Excluding Lump Sum)



Acc Yr Ending 366,841 453,896 544,549 640,359 749,442 914,819 651,169 805,697 966,187 1,36,616 1,274,005 1,376,021 1,036,762 1,282,444 1,536,673 1,793,390 1,967,113 2,201,587 1,911,756 2,265,456 2,545,075 2,747,857 2,913,298 3,035,997 914,819 1,077,281 1,197,004 1,318,238 1,411,761 1,487,347 1,551,200 1,663,300 1,725,578 1,734,915 1,848,20 1,889,326 2,918,204 2,078,684 2,127,762 2,181,186 2,236,94 2,233,388 2,349,618 2,407,755 1,376,021 1,469,295 1,531,586 1,571,197 1,574,113 1,632,297 1,648,271 1,715,119 1,788,667 1,866,433 1,948,603 2,027,969 2,033,80 2,061,132 2,116,425 2,146,711 2,178,653 2,211,990 2,245,006 2,245,006 2,245,006 2,245,006 2,245,006 2,245,006 2,363,303 2,368,248 2,368,328 2 79,308 140,777 287,043 June-83 June-84 192,487 341.678 509.522 229,548 557,132 830,815 424,946 1,031,378 1,515,527 June-86 June-87 June-88 June-90 1,355,410 3,008,842 4,339,167 5,277,757 5,970,429 6,408,269 6,758,493 6,970,610 7,237,879 7,548,184 7,808,304 7,989,794 8,127,173 8,265,835 8,400,915 8,532,029 8,676,814 8,782,514 8,912,207 9,013,337 9,115,739 9,217,710 1,118,653 2,599,016 3,552,946 4,081,060 4,081,060 4,371,249 4,003,660 4,081,060 4,081,060 4,371,249 4,003,660 5,381,680 5,381,680 5,481,680 5,481,680 5,581,280 5,393,45 5,965,760 5,938,855 6,022,299 6,050 6,052,299 6,050 6,052,299 6,050 6,052,299 6,050 6,052,299 6,050 6,050 5,381,680 7,001,83 3,111,601 3,122,928 3,137,949 3,150,571 3,201,317 3,209,383 3,230,393 3,230,938 5,004 2,113,942 3,161,859 1,054,11 2,165,99 2,257,552 5,393,075 2,425,099 2,425,09 June-93 June-96 June-97 368 317 714 320 867 272 851,009 922,681 963,841 1,008,538 1,037,840 1,056,559 1,346,558 1,538,911 1,686,620 1,733,801 1,756,573 1,858,553 1,112,460 1,171,394 1,215,503 1,243,288 1,247,060 1,247,060 1.056.947 1.057.037 1.057.037 1.057.037 1.057.037 1.057.037 1.057.037 1 176 288 1,897,738 1,249,270 1,938,454 2,001,913 2,059,542 2,101,308 2,101,308 1,249,270 1,254,410 1,254,410 1,254,410 853,733 1,204,737 1,330,009 1,450,814 1,536,528 1,585,725 1,622,250 1,634,502 1,634,502 1,634,502 1,634,502 1,634,502 June-00 421,812 42/612 833/33 12/8/37 1,500/09 1,450/614 1,350/62 1,356/25 1,622,59 1,634,502 1,354,502 1,534,50 June-01 2,417,073 2,440,162 2,469,209 June-03 398,131 , 1,034,135 1,959,406 2,261,994 2,448,308 2,555,905 2,614,938 2,661,897 2,661,897 4,042,135 1,043,462 1,212,582 1,245,483 1,043,862 1,212,582 1,225,583 1,335,360 1,043,862 1,212,582 1,225,583 1,335,3737 1,353,360 1,353,660 1,359,461 1,269,307 1,468,089 1,629,703 1,702,117 June-04 June-05 June-06 June-07 June-08 June-09 619,287 959,312 1,100,546 1,186,728 1,222,576 633,064 1,071,264 1,269,944 1,347,802 June-10 415,006 709.896 895,282 June-11 652,304 1,099,134 Age-to-Age Factors Acc Yr Ending 216-228 264-276 108-120 120-132 132-144 144-156 156-168 168-180 180-192 192-204 204-216 228-240 240-252 252-264 288-300 300-312 312-324 324-336 336-348 348-360 24-36 276-288 1.221 1.024 1.024 1.025 1.025 June-83 1.491 1.278 1.237 1.200 1.176 1.170 1.178 1.111 1.101 1.054 1.043 1.072 1.037 1.028 1.024 1.024 1.025 1.025 1.026 1.025 June-84 2.427 1.491 1 199 1 176 1.002 1.010 1.041 1.043 1.043 1.044 1.041 1.006 1.011 1.027 1.014 1.015 1.015 1.015 1.000 1.000 1.042 0.996 1.013 1.034 1.040 1.024 1.034 1.018 1.026 1.069 1.033 1.031 1.033 1.019 1.023 1.016 1.024 1.010 1.000 1.007 1.248 1.261 1.198 1.123 1.145 1.118 1.060 1.119 1.042 1.051 1.061 1.055 1.030 1.018 1.040 0.999 1.008 1.020 1.023 1.023 1.004 1.022 1.009 1.023 1.009 1.023 1.024 1.000 1.000 1.007 1.024 1.000 1.024 1.024 1.040 1.047 1.029 1.043 1.022 1.000 June-87 2.427 1 476 1 294 1.208 1 141 1.072 1.051 1.046 1.027 1.025 1.024 1.018 1.014 1.008 1.005 1.001 1.000 1.000 1.011 1.000 June-88 June-89 2.341 1.058 1.056 1.046 1.025 1.025 1.020 1.014 1.015 1.015 1.012 1.531 1.442 1.370 1.165 1.042 1.035 1.033 1.031 1.038 1.040 1.016 1.015 1.013 1.013 1.011 1.005 1.013 1.012 1.051 1.016 1.015 June-90 1.011 June-91 2.318 1.149 1.071 1.053 1.060 1.016 1.015 1.014 1.015 1.008 1.004 1.005 1.005 1.005 1.009 1.011 1.036 1.029 2.053 2.243 1.877 1.282 1.420 1.067 1.062 1.059 1.041 1.030 1.009 0.984 1.059 1.044 1.004 1.000 June-92 June-93 1.026 1.011 1.039 1.011 1.002 1.000 1.021 1.002 1.000 1.009 1.008 1.011 1.037 1.031 1.000 1.000 1.021 1.000 1.000 1.010 1.005 1.004 1.012 1.016 1.012 $\frac{1.000}{1.012}$ 1.000 June-94 1.318 1.195 1.118 1.071 1.045 1.038 1.022 1.016 1.016 1.016 1.015 1.016 June-95 1.050 1.035 1.039 1.023 1.006 1.000 1.000 1.039 1.009 1.029 1.013 1.000 1.018 1.058 1.000 1.008 1.017 1.000 1.000 1.000 1.000 June-96 1.260 1.214 1.275 1.026 1.045 1.003 1.046 $\frac{1.000}{1.000}$ 1.001 June-97 1.033 1.004 1.000 June-98 1.875 1.594 1 145 1 143 $\frac{1.096}{1.038}$ 1.028 1.029 1.020 1.000 1.013 1.003 1.023 1.034 1.222 1.100 1.053 1.023 1.000 1.000 1.411 1.091 June-00 2.024 1.840 1.059 1.046 1.032 1.000 June-01 1.140 1.012 1.925 1.225 1.173 1.113 1.074 1.033 1.095 1.048 1.017 1.019 1.018 1.004 1.000 1.006 June-04 1.940 1.154 1.082 1.043 1.024 1.018 1.000 June-05 1.915 1.286 1 119 1.029 1.025 1.014 June-06 June-07 1.733 1.069 1.162 1.027 1.015 1.044 June-08 June-09 1.549 1.692 1.711 1 147 1.078 1.030 1.185 1.061 June-10 June-11 1.685 276-288 300-312 312-324 324-336 336-348 Averages 12-24 24-36 36-48 48-60 60-72 72-84 84-96 96-108 108-120 120-132 132-144 144-156 156-168 168-180 180-192 192-204 204-216 216-228 228-240 240-252 252-264 264-276 288-300 348-360 To Ult Simple Avg All Yrs 2.011 1.336 1 168 1 117 1.078 1.056 1.043 1.041 1.032 1.022 1.026 1.020 1.019 1.015 1.018 1.016 1.016 1.015 1.014 1.010 1.012 1.014 1.013 1.012 1.013 1.016 1.016 1.012 1.025 1.010 1.004 Latest 5 1.659 1.696 1.213 1.099 1.103 1.058 1.030 1.023 1.018 1.004 1.006 1.010 1.006 1.009 1.006 1.009 1.008 1.009 1.008 1.008 1.008 1.011 1.009 1.002 1.013 1.007 1.005 1.013 1.016 Latest 3 1.030 1.017 1.012 1.008 1.005 1.010 1.000 1.000 1.006 1.009 1.009 1.006 1.010 1.011 1.006 1.008 2.024 1.354 1.182 1.121 1.075 1.053 1.036 1.032 1.023 1.025 1.021 1.019 1.017 1.018 1.016 1.013 1.013 1.011 1.010 1.011 1.011 1.009 1.010 1.014 1.017 1.012 1.025 Latest 5 1.656 1.209 1.101 1.063 1.032 1.025 1.019 1.010 1.005 1.007 1.012 1.008 1.012 1.005 1.007 1.010 1.007 1.010 1.009 1.010 1.009 1.009 1.009 1.007 1.004 1.010 1.192 1 104 1.051 1.030 1.019 1.014 1.008 1.006 1.012 1.010 1.000 1.000 1.006 1.009 1.008 1.005 1.007 1.010 1.011 1.008 1.006 1.012 1.017 Dev Factor Selection 2.781 1 499 1 187 1.039 1.019 1.012 1.029 1.020 1.746 1.126 1.085 1.062 1.010 1.003 1.002 1.004 1.123 1.025 1.020 1.027 1.027 1.025 1.025 1.010 1.010 1.013 1.012 1.014 1.014 1.006 1.006 1.010 1.010 1.007 1.006 1.013 1.009 1.010 1.010 1.010 1.010 1.010 1.010 1.010 1.034 1.010 Selected 1.209 1.101 1.085 1.030 1.039 1.030 1.019 1.006 1.009 1.013 1.010 1.010 1.010 1.010 1.010 1.010 1.010 FacToUlt 3.831 26.1% 2.142 46.7% 1.771 56.5% 1.608 1.482 67.5% 1 439 1 385 1 345 1 315 1.291 77.5% 1.257 79.6% 1 226 1.215 1.204 1 188 1.181 1 174 1 166 1 155 1.140 1.129 1.118 1.107 1.096 1.085 1.075 1.064 1.054 94.9% 1.043 1.033 96.8%

Section 3 Exhibit 1 Page 8

Department of Mental Health - Cluster 2 Indemnity

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	te Loss	Ultima	te Loss	Change in U	ltimate Loss	Change in U	ltimate Loss
Accident	As of	f 6/11	As of	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	22,486,642	23,896,348	22,819,387	24,223,911	332,745	1.5%	327,563	1.4%
6/30/82-83	2,461,742	2,587,985	2,516,785	2,645,851	55,043	2.2%	57,866	2.2%
6/30/83-84	2,803,627	2,947,403	2,800,083	2,943,677	(3,544)	-0.1%	(3,726)	-0.1%
6/30/84-85	4,115,000	4,508,000	4,192,000	4,596,000	77,000	1.9%	88,000	2.0%
6/30/85-86	4,891,000	4,904,000	4,885,000	4,898,000	(6,000)	-0.1%	(6,000)	-0.1%
6/30/86-87	6,333,000	6,457,000	6,333,000	6,457,000	0	0.0%	0	0.0%
6/30/87-88	12,455,203	12,687,000	12,516,985	12,752,000	61,781	0.5%	65,000	0.5%
6/30/88-89	13,128,566	13,362,000	13,243,733	13,483,000	115,167	0.9%	121,000	0.9%
6/30/89-90	12,248,000	12,785,000	12,340,000	12,892,000	92,000	0.8%	107,000	0.8%
6/30/90-91	7,948,000	8,102,000	7,978,000	8,133,000	30,000	0.4%	31,000	0.4%
6/30/91-92	4,388,000	4,473,000	4,388,000	4,473,000	0	0.0%	0	0.0%
6/30/92-93	3,867,000	3,872,000	3,884,000	3,890,000	17,000	0.4%	18,000	0.5%
6/30/93-94	2,648,000	2,650,000	2,676,000	2,679,000	28,000	1.1%	29,000	1.1%
6/30/94-95	3,239,000	3,363,000	3,225,000	3,350,000	(14,000)	-0.4%	(13,000)	-0.4%
6/30/95-96	1,961,000	2,000,000	1,962,000	2,000,000	1,000	0.1%	0	0.0%
6/30/96-97	1,788,000	1,797,000	1,776,000	1,783,000	(12,000)	-0.7%	(14,000)	-0.8%
6/30/97-98	3,391,000	3,398,000	3,320,000	3,328,000	(71,000)	-2.1%	(70,000)	-2.1%
6/30/98-99	1,985,000	1,995,000	1,946,000	1,954,000	(39,000)	-2.0%	(41,000)	-2.1%
6/30/99-00	2,756,000	2,762,000	2,692,000	2,695,000	(64,000)	-2.3%	(67,000)	-2.4%
6/30/00-01	3,956,000	3,968,000	3,857,000	3,870,000	(99,000)	-2.5%	(98,000)	-2.5%
6/30/01-02	3,304,000	3,307,000	3,182,000	3,186,000	(122,000)	-3.7%	(121,000)	-3.7%
6/30/02-03	2,357,000	2,376,000	2,359,000	2,372,000	2,000	0.1%	(4,000)	-0.2%
6/30/03-04	4,293,000	4,322,000	4,133,000	4,162,000	(160,000)	-3.7%	(160,000)	-3.7%
6/30/04-05	3,464,000	3,573,000	3,411,000	3,542,000	(53,000)	-1.5%	(31,000)	-0.9%
6/30/05-06	2,674,000	2,878,000	2,491,000	2,642,000	(183,000)	-6.8%	(236,000)	-8.2%
6/30/06-07	2,952,000	3,069,000	2,840,000	2,885,000	(112,000)	-3.8%	(184,000)	-6.0%
6/30/07-08	2,467,000	2,875,000	2,231,000	2,542,000	(236,000)	-9.6%	(333,000)	-11.6%
6/30/08-09	3,105,000	3,385,000	2,670,000	2,882,000	(435,000)	-14.0%	(503,000)	-14.9%
6/30/09-10	2,265,000	2,570,000	1,964,000	2,161,000	(301,000)	-13.3%	(409,000)	-15.9%
6/30/10-11	3,092,000	3,317,000	2,746,000	2,906,000	(346,000)	-11.2%	(411,000)	-12.4%
6/30/11-12								
Total	148,822,780	154,186,736	147,377,973	152,326,439	(1,444,807)	-1.0%	(1,860,297)	-1.2%

^{(2), (3)} From Aon analysis as of June 30, 2011

^{(4), (5)} From Section 3, Exhibit 1, Page 1, Columns 6, 7

^{(6) = (4) - (2)}

^{(7) = (4) / (2) - 1}

^{(8) = (5) - (3)}

^{(9) = (5) / (3) - 1}



Department of Mental Health - Cluster 2 Indemnity

Calculation of Ultimate Lump Sum Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Paid Loss	Implied	Ult Loss	Selected Incr	Cumulative	Total	Paid	Est Ult	Ultimate		Est Ult	Selected	Prior
Accident	Excluding	Cumulative	Excluding	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum -	Lump Sum	Lump Sum	Lump Sum -	Est Ultimate	Est Ultimate
Year	Lump Sum	LDF	Lump Sum	% Outstdg	% Outstdg	Outstdg	to Date	Incr Method	Percentage	LDF	Paid Method	Lump Sums	Lump Sums
All Prior Yrs	18,362,043	1.244	22,850,977	0.0%	0.0%	0	665,680	665,680	2.9%	1.015	675,665	670,673	670,673
6/30/82-83	2,407,755	1.033	2,486,613	0.0%	0.0%	0	94,000	94,000	3.8%	1.015	95,410	94,705	94,705
6/30/83-84	2,245,006	1.095	2,458,804	0.0%	0.0%	0	410,001	410,001	16.7%	1.015	416,151	413,076	413,076
6/30/84-85	3,486,893	1.159	4,040,824	0.0%	0.0%	0	551,083	551,083	13.6%	1.015	559,349	555,216	555,216
6/30/85-86	4,048,163	1.064	4,307,427	0.0%	0.0%	0	585,928	585,928	13.6%	1.015	594,717	590,322	590,322
6/30/86-87	5,376,022	1.075	5,777,532	0.0%	0.0%	0	832,391	832,391	14.4%	1.015	844,877	838,634	838,634
6/30/87-88	9,699,144	1.140	11,054,151	0.0%	0.0%	0	1,685,022	1,685,022	15.2%	1.015	1,710,297	1,697,660	1,697,660
6/30/88-89	9,984,126	1.151	11,492,736	0.0%	0.0%	0	1,975,642	1,975,642	17.2%	1.015	2,005,277	1,990,459	1,990,459
6/30/89-90	9,323,158	1.163	10,839,214	0.0%	0.0%	0	2,037,640	2,037,640	18.8%	1.015	2,068,205	2,052,922	2,052,922
6/30/90-91	6,079,918	1.174	7,139,271	0.0%	0.0%	0	1,665,464	1,665,464	23.3%	1.015	1,690,446	1,677,955	1,677,955
6/30/91-92	3,230,938	1.129	3,647,955	0.0%	0.0%	0	1,029,141	1,029,141	28.2%	1.015	1,044,578	1,036,860	1,036,860
6/30/92-93	2,710,104	1.140	3,089,603	0.0%	0.0%	0	794,079	794,079	25.7%	1.015	805,990	800,035	803,342
6/30/93-94	2,006,857	1.155	2,317,622	0.0%	0.0%	0	358,584	358,584	15.5%	1.015	364,063	361,323	371,840
6/30/94-95	2,340,974	1.224	2,864,829	0.2%	0.2%	5,972	476,424	482,396	16.8%	1.024	488,070	485,233	500,483
6/30/95-96	1,438,931	1.174	1,689,399	0.4%	0.6%	9,546	484,060	493,606	29.2%	1.031	498,868	496,237	506,616
6/30/96-97	1,057,037	1.181	1,248,410	0.0%	0.6%	7,054	514,500	521,554	41.8%	1.037	533,420	527,487	536,930
6/30/97-98	2,101,308	1.188	2,495,621	0.0%	0.6%	14,101	810,801	824,902	33.1%	1.037	840,618	832,760	875,856
6/30/98-99	1,254,410	1.204	1,510,659	0.4%	0.9%	14,146	420,250	434,396	28.8%	1.037	435,704	435,050	459,603
6/30/99-00	1,634,502	1.215	1,985,336	0.2%	1.1%	21,978	679,200	701,178	35.3%	1.049	712,627	706,903	749,746
6/30/00-01	2,469,209	1.226	3,027,986	0.0%	1.1%	33,520	796,500	830,020	27.4%	1.073	854,311	842,166	896,827
6/30/01-02	2,097,298	1.257	2,636,010	0.2%	1.3%	34,185	508,906	543,092	20.6%	1.096	557,852	550,472	595,762
6/30/02-03	1,404,611	1.291	1,813,065	0.7%	2.0%	35,995	497,000	532,995	29.4%	1.124	558,421	545,708	515,585
6/30/03-04	2,661,897	1.315	3,499,732	0.0%	2.0%	69,480	581,000	650,480	18.6%	1.162	674,997	662,738	724,839
6/30/04-05	2,083,828	1.345	2,802,877	0.5%	2.5%	69,329	635,000	704,329	25.1%	1.220	774,620	739,475	708,121
6/30/05-06	1,353,060	1.385	1,874,255	1.1%	3.6%	66,993	502,750	569,743	30.4%	1.321	664,000	616,872	713,135
6/30/06-07	1,702,117	1.439	2,448,943	1.3%	4.9%	120,101	280,751	400,852	16.4%	1.355	380,324	390,588	489,836
6/30/07-08	1,222,576	1.482	1,812,126	1.6%	6.5%	117,721	284,730	402,451	22.2%	1.531	435,820	419,135	521,275
6/30/08-09	1,347,802	1.608	2,167,548	3.1%	9.6%	207,305	269,500	476,805	22.0%	1.962	528,735	502,770	768,015
6/30/09-10	895,282	1.771	1,585,502	4.0%	13.5%	214,772	36,000	250,772	15.8%	3.004	108,141	179,456	362,511
6/30/10-11	1,099,134	2.142	2,354,286	4.8%	18.4%	432,080	37,030	469,110	19.9%	9.647	357,240	413,175	549,777
6/30/11-12	603,523	3.831	2,311,981	2.7%	21.1%	487,093	0	487,093	21.1%	45.101	0	487,093	
Total	107,727,626		131,631,293			1,961,370	20,499,058	22,460,427	17.1%		22,278,794	22,613,157	23,268,580

- (2) From Section 3, Exhibit 1, Page 2, Column 3
- (3) = (4) / (2)
- (4) From Section 3, Exhibit 1, Page 2, Column 6
- (5) From Section 3, Exhibit 1, Page 11
- (6) Downward sum of (5)
- $(7) = (6) \times (4)$
- (8) From Section 3, Exhibit 1, Page 10
- (9) = (7) + (8)
- (10) = (9) / (4)
- (11) From Section 3, Exhibit 1, Page 12
- $(12) = (8) \times (11)$
- (13) Selected based on (9) and (12)
- (14) From Aon analysis as of June 30, 2011



Commonwealth of Massachusetts Workers Compensation Department of Mental Health - Cluster 2 INDEMNITY

Lump Sum Development
Incremental Lump Sum Payments

Acc Yr Endine
All Prior Yrs
Jun-83
Jun-83
Jun-84
Jun-86
Jun-86
Jun-89
Jun-89
Jun-89
Jun-90
Jun-91
Jun-92
Jun-92
Jun-93
Jun-94
Jun-94
Jun-96
Jun-98
Jun-98
Jun-99
Jun-97
Jun-97
Jun-97
Jun-97
Jun-91
Jun-91 96-108 108-120 120-132 132-144 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 336-348 348-360 360-372 0-12 12-24 24-36 36-48 48-60 60-72 72-84 84-96 144-156 156-168 168-180 180-192 20,000 20,000 70,000 116,583 46,500 24,000 40,000 190,000 35,000 35,000 10,001 25,000 69,180 0 97,000 73,500 50,000 198,000 26,500 25,000 25,000 15,000 0 50,000 42,000 31,500 48,000 150,000 54.500 25.000 28.000 45.000 35.500 52,500 12,500 231,000 417,491 338,500 182,000 24,428 255,275 239,000 334,500 155,000 97,000 166,000 106,206 90,000 6,500 65,793 150,000 0 0 22,500 14,910 27,000 16,000 31,841 10,000 60,000 272,884 133,500 85,000 113,000 27,500 53,826 57,811 128,678 25,000 87,507 0 30,000 227,463 0 90,000 70,000 40,000 17,171 20.000 21,420 19,910 36.667 25,000 48.333 150,000 165,000 60,000 6,000 55,000 4,450 0 0 0 0 79,840 39,218 23,609 44,000 184,450 651,500 108,000 480,000 370,355 668,500 235,500 135,000 16,500 0 75,000 52.500 20,550 106,000 7,500 31,000 31,000 50,125 124,876 35,000 90,000 341,000 109,000 85,000 35,000 90,000 76,500 83,230 142,400 44,300 45,000 144,500 124,000 201,910 120,500 28,284 142,024 10,000 215,000 88,000 84,000 37,000 68,400 77,560 0 33,091 125,000 42,879 46,000 40,000 0 75.000 37,000 18,000 23,000 161,300 23,000 5,000 12,000 0 93,000 63,000 50,000 0 0 25,000 25,000 16.500 25,000 42,500 16,500 27,000 0 127,909 7,459 27,500 77,500 32,000 100,000 15,000 15,000 20,000 84,000 53,300 48,000 20,500 45,000 20,000 30,000 26,000 20,000 35,000 318,000 115,000 125,500 170,000 68,000 16,000 130,000 82,000 132,500 62,100 20,000 37,541 62,000 12,500 144,721 122,501 52,250 255,500 221,500 75,000 30,000 28,000 50,787 18,000 58,500 170,000 85,000 30,000 28,530 0 50,000 50.000 65,200 67,500 52,950 137,500 132,000 107,000 32,500 95,000 15,000 50,000 20,135 19.000 0 142,500 106,000 171,500 170,500 51,001 34,500 20,000 107,000 54,000 0 215,000 60,000 46,000 151,713 261,750 66,250 22,500 25,000 20,000 39,000 90.000 10,000 17,730 35,000 0 8,500 40,000 124,500 6,000 25,000 Sum Payments 12 0 Cumulative Lum 36 0 0 228 391,180 94,000 260,001 551,083 435,928 832,391 1,535,022 300 640,680 94,000 260,001 551,083 585,928 832,391 Acc Yr Ending
All Prior Yrs
Jun-83
Jun-84
Jun-85
Jun-86
Jun-87
Jun-89
Jun-99
Jun-90
Jun-91
Jun-92
Jun-92
Jun-93
Jun-99
Jun-90
Ju 24 48 0 0 60 72 0 0 120 20,000 35,000 112,000 156 101,500 94,000 210,001 168 175,000 94,000 210,001 180 225,000 94,000 260,001 204 294,180 94,000 260,001 240 589,180 94,000 260,001 252 589,180 94,000 260,001 276 589,180 94,000 260,001 288 615,680 94,000 260,001 312 665,680 94,000 260,001 336 665,680 94,000 410,001 348 665,680 94,000 410,001 360 665,680 94,000 66,500 59,000 152,000 101,500 94,000 162,001 294,180 94,000 260,001 294,180 94,000 260,001 589,180 94,000 260,001 551,083 435,928 832,391 665,680 94,000 410,001 665,680 15,000 42,000 15,000 42,000 112,000 152,000 162,001 162,001 162,001 162,001 161,003 161,00 210,001 210,001 461,083 461,083 435,928 435,928 632,991 722,391 1,405,112 1,405,112 1,890,639 1,831,639 1,630,464 1,630,464 992,140 776,079 308,584 433,924 433,924 433,924 25,000 49,500 30,910 70,432 25,000 102,000 43,410 301,432 53,000 112,000 103,410 574,316 53,000 136,428 358,685 813,316 84,500 129,500 269,928 435,928 443,685 549,891 926,316 1,016,316 461,083 435,928 792,391 1,425,022 515,583 435,928 792,391 1,425,022 551,083 435,928 792,391 1,461,689 551,083 435,928 832,391 1,486,689 551,083 435,928 832,391 1,535,022 551,083 435,928 832,391 1,535,022 551,083 585,928 832,391 1,685,022 551,083 435,928 832,391 551,083 585,928 832,391 551,083 585,928 551,083 22,500 14,910 17.171 38,591 1.685.022 1.685.022 1.685,022 1,425,022 1,461,689 1,486,689 1,535,022 1,535,022 1,595,042 1,996,042 1,991,042 1,971,042 1,975,642 1,802,639 1,862,639 1,912,764 2,037,640 2,037,640 2,037,640 92,140 992,140 1,029,140 1,029,141 1 813,316 1,652,331 1,432,668 1,459,464 862,140 683,079 245,584 358,924 349,060 415,500 1,016,316 1,823,831 1,558,461 1,465,464 992,140 776,079 308,584 408,924 449,060 430,500 1,425,022 1,950,642 1,862,639 1,665,464 992,140 776,079 358,584 476,424 1,317,831 1,277,668 1,362,464 737,140 640,200 79,840 39,218 123,840 223,668 675,109 231,840 703,668 649,331 1,042,168 1,817,331 1,492,668 1,975,642 2,037,640 1,975,642 2,037,640 1,975,642 1,045,464 626,140 394,900 162,584 234,024 244,500 415,500 23,609 341,000 132,000 90,000 47,000 1,465,464 917,140 683,079 308,584 358,924 1.227.464 1.665,464 1.665.464 424,230 274,400 134,300 92,000 714,140 478,900 199,584 302,424 322,060 415,500 23,000 5,000 12,000 0 199,584 318,924 349,060 415,500 90,000 76,500 234,500 200,500 449,060 430,500 464,060 430,500 484,060 514,500 484,060 514,500 484,060 514,500 484,060 514,500 484,060 514,500 484,060 53,300 48,000 20,500 45,000 175,801 100,250 276,000 266,500 493,801 215,250 401,500 436,500 509,801 345,250 483,500 569,000 542,892 345,250 548,700 636,500 670,801 352,709 576,200 714,000 690,801 390,250 638,200 726,500 710,801 420,250 679,200 796,500 760,801 420,250 679,200 810,801 420,250 710.801 710 801 710.801 710 801 810 801 420,250 664,200 746,500 420,250 679,200 796,500 420,250 679,200 796,500 420,250 679,200 796,500 75,000 50,000 28,000 143,000 157,000 82,000 205,100 299,500 188,000 258,050 437,000 320,000 481,000 290,050 437,000 535,000 434,771 437,000 535,000 469,771 437,000 581,000 489,906 437,000 581,000 508,906 497,000 508,906 20,000 50,787 202,500 374,000 506,000 545,000 635,000 18,000 68,500 187,730 120,000 30,000 37,030 279,750 134,750 450,250 185,751 244,730 482,750 280,751 502,750 280,751 10,000 17,730 35,000 210,230 284,730 244 500 269,500 36,000 8,500

110

Section 3 Exhibit 1 Page 10



Commonwealth of Massachusetts Workers Compensation Department of Mental Health - Cluster 2 INDEMNITY

Lump Sum Development
Incremental Lump Sums as a % of Ultimate Losses Excluding Lump Sums

 96-108
 108-120
 120-132
 132-144
 144-156
 156-168
 168-180
 180-192

 0.000
 0.001
 0.002
 0.002
 0.003
 0.002
 0.003

 0.000
 0.008
 0.010
 0.014
 0.000
 0.000
 0.000
 0.000

 0.000
 0.028
 0.016
 0.004
 0.020
 0.000
 0.020
 0.000
 0-12 0.000 0.000 0.000 36-48 0.000 0.000 0.000 60-72 0.000 0.000 0.000 360-372 Acc Yr Ending All Prior Yrs 12-24 24-36 72-84 84-96 348-360 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.006 0.017 0.001 0.000 0.000 0.000 0.000 0.000 0.000 Jun-83 Jun-84 0.000 0.007 0.002 0.010 0.025 0.058 0.022 0.019 0.020 0.000 0.000 0.012 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.014 0.000 0.000 0.035 0.000 0.000 0.000 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-93 Jun-94 Jun-95 Jun-99 Jun-00 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-04 Jun-05 Jun-04 Jun-05 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-07 Jun-08 Jun-09 Jun-01 Ju 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.004 0.000 0.002 0.002 0.002 0.002 0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.002 0.007 0.004 0.003 0.093 0.037 0.012 0.053 0.061 0.049 0.035 0.129 0.073 0.028 0.017 0.008 0.000 0.005 0.003 0.002 0.004 0.019 0.016 0.086 0.099 0.127 0.076 0.056 0.056 0.056 0.056 0.054 0.056 0.006 0.003 0.003 0.003 0.009 0.044 0.052 0.055 0.039 0.012 0.050 0.006 0.086 0.044 0.024 0.079 0.030 0.061 0.091 0.000 0.012 0.002 0.000 0.006 0.044 0.008 0.031 0.015 0.011 0.039 0.018 0.029 0.000 0.000 0.047 0.000 0.005 0.006 0.000 0.004 0.000 0.000 0.005 0.000 0.000 0.016 0.009 0.000 0.000 0.000 0.000 0.007 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.002 0.021 0.036 0.031 0.025 0.024 0.027 0.016 0.024 0.018 0.008 0.001 0.006 0.000 0.021 0.030 0.000 0.017 0.004 0.008 0.000 0.010 0.000 0.005 0.022 0.010 0.002 0.021 0.000 0.000 0.000 0.0000.003 0.002 0.004 0.000 0.000 0.000 0.029 0.014 0.000 0.000 0.000 0.000 0.029 0.014 0.014 0.006 0.001 0.000 0.003 0.012 0.013 0.000 0.000 0.000 0.003 0.003 0.005 0.000 0.000 0.005 0.002 0.012 0.000 0.000 0.000 0.000 0.000 0.034 0.014 0.020 0.014 0.006 0.052 0.000 0.006 0.000 0.000 0.000 0.009 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.011 0.000 0.000 0.000 0.011 0.015 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.015 0.000 0.027 0.010 0.006 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.024 0.046 0.000 0.013 0.000 0.033 0.022 0.006 0.000 0.051 0.005 0.014 0.026 0.017 0.000 0.000 0.000 0.000 0.008 0.017 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.020 0.000 0.000 0.009 0.012 0.067 0.000 0.000 0.000 0.059 0.000 0.008 0.025 0.031 0.004 0.012 0.008 0.020 0.013 0.007 0.000 0.000 0.000 0.000 0.007 0.000 0.000 0.000 0.020 0.000 0.000 0.000 0.022 0.020 0.076 0.038 0.038 0.012 0.000 0.061 0.009 0.055 0.000 0.000 0.014 0.008 0.000 0.000 0.007 0.033 0.000 0.011 0.000 0.000 0.000 0.004 0.010 0.016 0.000 0.004 0.013 0.000 0.000 0.032 0.018 0.010 0.024 0.094 0.039 0.017 0.011 0.000 0.022 0.012 0.039 0.019 0.012 0.004 Jun-12 0.000 Averages
Simple Avg
All Yrs (ex P)
Latest 5 24-36 36-48 48-60 60-72 72-84 84-96 96-108 108-120 120-132 132-144 144-156 156-168 168-180 180-192 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 336-348 348-360 360-372 12-24 0.005 0.006 0.022 0.031 0.016 0.016 0.014 0.014 0.014 0.013 0.001 0.001 0.002 0.002 0.003 0.005 0.000 0.030 0.040 0.036 $0.004 \\ 0.004$ 0.004 0.005 0.000 0.000 0.038 0.048 0.041 0.006 0.008 0.000 0.000 0.004 0.000 0.003 0.000 0.000 0.000 Latest 3 Olympic Avg All Yrs (ex P) 0.001 0.023 0.025 0.017 0.026 0.007 0.005 0.015 0.003 0.013 0.000 0.000 0.007 0.007 0.000 0.000 0.000 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.020 0.000 0.004 0.004 0.027 0.038 0.032 0.021 0.013 0.013 0.007 0.005 0.007 0.002 0.003 0.002 0.003 0.000 0.000 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Latest 10 0.021 0.038 0.040 0.029 0.016 0.010 0.015 0.004 0.003 0.001 0.000 0.000 0.002 0.002 0.000 0.000 0.002 0.001 0.000 0.000 0.004 0.027 0.032 0.034 0.033 0.007 0.005 0.011 0.005 0.002 0.000 0.000 0.000 0.000 0.004 0.000 0.000 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Dev Factor Selection Prior 0.003 0.027 0.056 0.047 0.031 0.016 0.014 0.011 0.005 0.000 0.007 0.002 0.000 0.002 0.004 0.000 0.000 0.004 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Selected FacToUlt 0.003 NA 0.027 0.048 0.184 0.040 0.135 0.031 0.016 0.065 0.013 0.049 0.011 0.036 0.005 0.025 0.000 0.007 0.020 0.002 0.013 0.000 0.011 0.002 0.011 0.004 0.000 0.000 0.004 0.002 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000



Commonwealth of Massachusetts Workers Compensation Department of Mental Health - Cluster 2 INDEMNITY

INDEMNITY
Paid Loss Development
Paid Loss - Lump Sum only

168 175,000 94,000 210,001 180 225,000 94,000 260,001 228 391,180 94,000 260,001 240 589,180 94,000 260,001 252 589,180 94,000 260,001 312 665,680 94,000 260,001 336 665,680 94,000 410,001 348 665,680 94,000 410,001 372 12 20,000 35,000 112,000 66,500 59,000 152,000 101,500 94,000 162,001 101,500 94,000 210,001 294,180 94,000 260,001 294,180 94,000 260,001 294,180 94,000 260,001 589,180 94,000 260,001 589,180 94,000 260,001 615,680 94,000 260,001 640,680 94,000 260,001 665,680 94,000 410,001 665,680 94,000 665,680 Jun-83 Jun-84 15,000 42,000 15,000 42,000 112,000 152,000 246,083 436,083 435,928 435,928 549,891 577,391 1,036,316 1,090,142 1,840,331 1,898,142 1,558,461 1,687,139 1,540,464 1,630,464 162,001 461,083 435,928 602,391 1,177,649 1,898,142 1,793,139 1,630,464 210,001 461,083 435,928 632,391 1,405,112 1,898,142 1,800,639 1,630,464 461,083 435,928 792,391 1,425,022 515,583 435,928 792,391 1,425,022 1,950,642 551,083 435,928 832,391 1,535,022 551,083 435,928 832,391 1,535,022 551,083 585,928 832,391 Jun-85 Jun-86 Jun-87 Jun-88 Jun-99 Jun-91 Jun-92 Jun-93 Jun-95 Jun-96 Jun-97 Jun-98 Jun-99 Jun-00 Jun-01 25,000 25 000 53,000 112,000 103,410 53,000 136,428 358,685 84,500 129,500 435,928 549,891 461,083 435,928 722,391 551,083 435,928 792,391 551,083 435,928 832,391 551,083 435,928 832,391 551,083 435,928 832,391 551,083 435,928 832,391 551,083 585,928 832,391 551,083 585,928 832,391 551,083 585,928 551,083 49,500 30,910 102,000 43,410 269,928 443,685 22,500 14,910 17,171 1.405.112 1.461.689 1.486,689 38,591 70,432 301.432 574.316 813,316 926,316 1.016.316 1.535,022 1.685.022 1.685,022 1.685.022 1.685,022 1,461,689 1,486,689 1,535,022 1,950,642 1,950,642 1,971,192 1,862,639 1,912,764 2,037,640 1,665,464 1,665,464 1,665,464 79 840 123,840 223,668 675,109 231.840 649 331 1.317.831 1.652,331 1.817.331 1,823,831 1,558,461 1,465,464 1,950,642 1,831,639 1,630,464 1.950,642 1.975.642 1.975.642 1 975 642 1.975,642 1.975,642 39,218 23,609 703,668 1,045,464 1,042,168 1,227,464 1,277,668 1,362,464 1,432,668 1,459,464 1,492,668 1,465,464 1,862,639 1,665,464 1,862,639 1,665,464 2,037,640 1,665,464 1,665,464 626,140 394,900 162,584 234,024 714,140 478,900 199,584 302,424 737,140 640,200 199,584 318,924 862,140 683,079 245,584 358,924 992,140 776,079 308,584 408,924 992,140 776,079 308,584 433,924 992,140 776,079 308,584 433,924 992,140 776,079 308,584 433,924 992,140 776,079 308,584 433,924 992,140 776,079 333,584 433,924 992,140 776,079 358,584 476,424 992,140 776,079 358,584 476,424 776,079 794,079 794,079 794,079 358,584 358,584 358,584 476,424 476,424 341,000 132,000 90,000 917,140 683,079 308,584 424,230 1,029,141 23,000 5,000 12,000 274,400 134,300 92,000 47,000 358 924 90,000 76,500 234,500 200,500 244,500 415,500 322,060 415,500 349,060 415,500 349,060 415,500 449,060 430,500 449,060 430,500 464,060 430,500 484,060 514,500 484,060 514,500 484,060 514,500 484,060 514,500 484,060 514,500 484,060 514,500 484,060 53,300 48,000 20,500 45,000 175,801 100,250 276,000 266,500 493,801 215,250 401,500 436,500 509,801 345,250 483,500 569,000 542,892 345,250 548,700 636,500 670,801 352,709 576,200 714,000 690,801 390,250 638,200 726,500 710.801 710.801 710 801 710,801 710 801 760 801 810 801 810.801 420,250 679,200 796,500 420,250 420,250 420,250 420.250 420.250 420,250 664,200 746,500 679,200 796,500 679,200 796,500 679,200 796,500 Jun-02 Jun-03 Jun-04 Jun-05 75,000 50,000 143,000 157,000 82,000 205,100 299,500 188,000 374,000 290,050 437,000 535,000 434,771 437,000 535,000 545,000 469,771 437,000 581,000 489,906 437,000 508,906 497,000 258 050 508,906 20,000 437,000 320,000 28,000 50,787 581,000 202,500 481,000 506,000 635,000 Jun-06 Jun-07 Jun-08 Jun-09 Jun-10 Jun-11 18,000 68,500 279,750 134,750 210,230 450,250 185,751 244,730 482,750 280,751 502,750 280,751 502,750 10,000 17,730 35,000 187,730 284,730 120,000 244 500 269,500 30,000 37,030 36,000 8,500 Jun-12 Age-to-Age Factors
Acc Yr Ending 12
All Prior Yrs 240-252 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 180-192 1.307 1.000 1.000
 192-204
 204-216
 216-228
 228-240

 1.000
 1.000
 1.330
 1.506

 1.000
 1.000
 1.000
 1.000

 1.000
 1.000
 1.000
 1.000
 252-264 1.000 1.000 1.000 1.000 1.000 1.000 1.098 264-276 1.000 1.000 1.000 1.000 1.000 1.000 1.000 276-288 1.045 1.000 1.000 1.000 1.344 1.000 1.000 288-300 1.041 1.000 1.000 1.000 1.000 1.000 1.000 300-312 1.039 1.000 1.000 1.000 1.000 24-36 36-48 84-96 96-108 168-180 1.286 312-324 1.000 1.000 1.577 324-336 1.000 1.000 1.000 12-24 48-60 60-72 72-84 108-120 120-132 132-144 144-156 156-168 1.724 336-348 348-360 360-372 To Ult 1.526 1.000 1.000 1.000 1.000 1.000 1.000 Jun-83 Jun-84 1.000 1.000 2.333 2.667 1.593 1.066 1.000 1.296 1.000 1.057 1.000 1.043 1.080 2.120 1.098 2.382 1.905 1.533 1.615 1.239 1.097 1.900 1.000 1.000 1.020 1.772 1.000 1.050 1.052 1.000 1.000 1.050 1.193 1.000 1.000 1.142 1.000 1.000 1.000 1.097 1.014 1.069 1.000 1.000 1.026 1.000 1.000 1.050 1.017 1.000 1.000 1.000 1.033 1.000 1.000 1.000 1.000 1.000 1.000 1.118 1.000 1.000 1.000 Jun-85 Jun-86 Jun-87 Jun-87 Jun-90 Jun-90 Jun-93 Jun-95 Jun-96 Jun-99 Jun-00 Jun-00 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Jun-09 Jun-09 Jun-01 Jun-09 Jun-01 Ju 2.061 1.404 4.280 1.218 3.469 1.416 1.979 1.237 1.139 1.000 1.000 1.000 2.200 2.073 1.872 3.146 1.549 1.476 1.439 1.211 2.544 1.043 2.072 1.032 1.604 1.304 1.304 1.304 1.304 1.347 1.609 1.378 1.160 2.247 1.000 1.063 1.000 1.000 1.000 1.004 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.027 1.000 1.037 1.011 1.065 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.551 5.703 28.595 1.244 2.079 1.492 1.957 2.606 2.621 2.809 2.147 1.455 1.638 1.907 3.140 2.929 3.987 2.801 1.481 1.174 1.141 1.213 1.228 1.292 1.317 1.000 1.065 1.000 1.135 1.119 1.258 1.459 1.702 1.286 1.072 1.511 1.163 2.030 1.226 1.110 1.032 1.337 1.000 1.055 1.084 1.000 1.236 1.022 1.124 1.000 1.672 1.052 1.052 1.254 1.121 1.071 1.170 1.067 1.230 1.125 1.000 1.000 1.030 1.106 1.108 1.018 1.499 1.000 1.000 1.000 1.100 1.042 1.004 1.064 1.000 1.257 1.000 1.286 1.036 1.029 1.077 1.041 1.028 1.081 1.000 1.086 1.086 1.004 1.044 1.000 1.082 1.136 1.000 1.139 1.000 1.000 1.000 1.023 1.067 1.043 1.000 1.000 1.009 1.000 1.051 1.000 1.000 1.000 1.061 1.033 1.000 1.000 1.000 1.000 1.000 1.039 1.137 1.031 1.083 1.058 1.000 1.000 1.000 1.043 1.195 1.000 1.000 1.000 1.000 1.000 1.028 1.017 1.000 1.017 1.021 1.000 1.000 1.075 1.098 1.000 1.000 1.000 1.000 1.000 1.000 1.081 1.000 1.000 1.000 1.066 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 5.739 18.000 3.917 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.023 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.070 1.000 1.000 3.298 2.089 13.463 5.922 1.000 2.500 15.542 1.967 1.120 2.038 1.000 6.850 10.588 3.429 1.200 4.357 12-24 36-48 48-60 60-72 72-84 84-96 96-108 108-120 120-132 132-144 144-156 156-168 168-180 180-192 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 336-348 348-360 360-372 24-36 To Ult Averages Simple Avg All Yrs (ex P) Latest 5 6.679 3.999 4.373 1.680 1.465 1.347 1.249 1 291 1 226 1 154 1.092 1.202 1 116 1.048 1.034 1.020 1.035 1.008 1.007 1.000 1.000 1.000 1.000 1.000 1.144 1.000 1.000 1.153 1.420 1.115 1.072 1.026 1.035 1.000 1.000 1.014 1.013 1.035 1.000 1.000 1.012 1.013 1.000 1.020 1.000 1.069 1.000 1.000 1.452 1.215 1.023 1.000 1.000 1.192 1.000 Latest 3 1.031 1.026 1.084 1.014 1.059 1.000 1.000 1.022 1.000 1.000 1.008 1.000 1.000 1.000 1.000 1.000 1.000 1.000 Volume Wtd All Yrs (ex P) 2.306 2.134 1.453 8.120 1.531 1.214 1.139 1.087 1.052 1.020 1.027 1.019 1.021 1.004 1.006 1.015 1.017 1.000 1.000 1.016 1.000 1.026 1.000 1.000 1.000 1.291 1.101 1.000 Latest 5 Latest 3 1.422 1.187 1.282 1.190 1.130 1.036 1.081 1.025 1.071 1.090 1.029 1.014 1.028 1.046 1.000 1.000 1.000 1.000 1.018 1.028 1.019 1.029 1.026 1.000 1.000 1.000 1.000 1.000 1.013 1.011 1.022 1.000 1.001 1.000 1.000 1.019 1.000 1.000 1.000 1.027 1.000 1.000 1.000 1.000 1.107 1.000 Dev Factor Selection Prior Selected FacToUlt 1.305 1.282 1.962 4.675 4.675 1.567 1.531 3.004 1.164 1.130 1.531 1.166 1.026 1.355 1.034 1.034 1.162 1.025 1.025 1.124 1.000 1.000 1.015 1.000 1.000 1.015 1.000 1.000 1.015 1.000 1.000 1.015 3.212 3.212 9.647 1.012 1.012 1.049 1.054 1.006 1.006 1.031 1.037 1.009 1.024 1.008 1.000 1.015 1.000 1.000 1.015 1.000 1.000 1.015 1.000 1.000 1.015 1.000 1.000 1.015 1.000 1.000 1.015 1.015 1.000 1.015 1.050 1.050 1.220 1.022 1.022 1.096 1.025 1.022 1.073 1.000 1.000 1.037 1.006 1.006 1.037 1.083 1.000 1.000 1.015 1.015 45.101 Percent of Ult 10.4% 33.3% 82.0% 86.1% 89.0% 91.2% 93.2% 95.3% 96.5% 96.5% 96.5% 97.0% 98.5% 98.5% 98.5%

Section 3

Exhibit 1

Page 12

Section 3 Exhibit 1 Page 13

Department of Mental Health - Cluster 2 Indemnity

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	3.2%	0.0%	1.0%	0.5%	1.000	1.000
360	96.8%	1.0%	3.2%	0.3%	0.2%	0.981	0.971
348	95.9%	0.9%	4.1%	0.3%	0.2%	0.952	0.929
336	94.9%	0.9%	5.1%	0.3%	0.2%	0.927	0.894
324	94.0%	0.9%	6.0%	0.3%	0.2%	0.906	0.864
312	93.1%	0.9%	6.9%	0.3%	0.2%	0.885	0.836
300	92.1%	0.9%	7.9%	0.3%	0.2%	0.866	0.810
288	91.2%	0.9%	8.8%	0.4%	0.2%	0.848	0.785
276	90.3%	0.9%	9.7%	0.4%	0.2%	0.831	0.762
264	89.4%	0.9%	10.6%	0.4%	0.2%	0.815	0.741
252	88.6%	0.9%	11.4%	0.4%	0.3%	0.798	0.719
240	87.7%	1.1%	12.3%	0.5%	0.4%	0.782	0.699
228	86.6%	0.8%	13.4%	0.4%	0.3%	0.771	0.685
216	85.8%	0.6%	14.2%	0.3%	0.2%	0.755	0.665
204	85.2%	0.5%	14.8%	0.3%	0.2%	0.737	0.641
192	84.7%	0.5%	15.3%	0.3%	0.2%	0.717	0.617
180	84.2%	1.2%	15.8%	0.7%	0.5%	0.698	0.594
168	83.0%	0.7%	17.0%	0.4%	0.3%	0.693	0.588
156	82.3%	0.8%	17.7%	0.5%	0.4%	0.679	0.572
144	81.5%	2.0%	18.5%	1.3%	1.0%	0.666	0.558
132	79.6%	2.1%	20.4%	1.4%	1.1%	0.674	0.569
120	77.5%	1.4%	22.5%	1.0%	0.8%	0.679	0.577
108	76.1%	1.7%	23.9%	1.2%	1.0%	0.672	0.570
96	74.3%	2.2%	25.7%	1.6%	1.4%	0.668	0.567
84	72.2%	2.7%	27.8%	2.1%	1.8%	0.669	0.568
72	69.5%	2.0%	30.5%	1.6%	1.5%	0.673	0.575
60	67.5%	5.3%	32.5%	4.4%	4.1%	0.668	0.569
48	62.2%	5.7%	37.8%	5.0%	4.7%	0.690	0.597
36	56.5%	9.8%	43.5%	8.9%	8.5%	0.705	0.617
24	46.7%	20.6%	53.3%	19.4%	18.9%	0.733	0.654
12	26.1%	26.1%	73.9%	25.6%	25.4%	0.782	0.715

Total 100.0%

NOTES:

(2) = 1 / Section 3, Exhibit 1, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)



Section 3 Exhibit 1 Page 14

Department of Mental Health - Cluster 2 Indemnity

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
		counted	Discount		ounted
Accident	Outstandi	ng Losses	Factor at	Outstandi	ng Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	3,791,665	5,196,189		3,316,134	4,544,509
6/30/82-83	15,030	144,095	0.981	14,738	141,297
6/30/83-84	145,076	288,670	0.952	138,058	274,705
6/30/84-85	154,024	558,024	0.927	142,822	517,440
6/30/85-86	250,909	263,909	0.906	227,198	238,970
6/30/86-87	124,587	248,587	0.885	110,308	220,096
6/30/87-88	1,132,818	1,367,834	0.866	981,547	1,185,179
6/30/88-89	1,283,965	1,523,232	0.848	1,089,382	1,292,388
6/30/89-90	979,202	1,531,202	0.831	813,894	1,272,706
6/30/90-91	232,618	387,618	0.815	189,477	315,730
6/30/91-92	127,921	212,921	0.798	102,069	169,891
6/30/92-93	379,817	385,817	0.782	297,021	301,713
6/30/93-94	310,559	313,559	0.771	239,481	241,795
6/30/94-95	407,602	532,602	0.755	307,656	402,005
6/30/95-96	39,009	77,009	0.737	28,731	56,719
6/30/96-97	204,463	211,463	0.717	146,629	151,649
6/30/97-98	407,891	415,891	0.698	284,802	290,388
6/30/98-99	271,340	279,340	0.693	187,921	193,461
6/30/99-00	378,298	381,298	0.679	256,692	258,728
6/30/00-01	591,291	604,291	0.666	394,013	402,676
6/30/01-02	575,796	579,796	0.674	387,917	390,612
6/30/02-03	457,389	470,389	0.679	310,427	319,250
6/30/03-04	890,103	919,103	0.672	598,086	617,572
6/30/04-05	692,172	823,172	0.668	462,671	550,236
6/30/05-06	635,190	786,190	0.669	424,877	525,880
6/30/06-07	857,132	902,132	0.673	576,771	607,052
6/30/07-08	723,694	1,034,694	0.668	483,369	691,092
6/30/08-09	1,052,698	1,264,698	0.690	725,852	872,029
6/30/09-10	1,032,718	1,229,718	0.705	727,738	866,561
6/30/10-11	1,609,836	1,769,836	0.733	1,180,274	1,297,580
6/30/11-12	2,195,477	2,449,477	0.782	1,716,278	1,914,838
Total	21,950,290	27,152,755		16,862,831	21,124,747

_	Discount Calculation for					
	All Pri	or Years				
_	(Low)	(High)				
(8) Estimated Total Reserve:	3,791,665	5,196,189				
(9) Projected Number of Years:	7	7				
(10) Projected Paid Loss per Year:	541,666	742,313				
(11) Discounted Value at 4%:	3,316,134	4,544,509				

0.768

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 3, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 3, Exhibit 1, Page 13, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.778



Section 3 Exhibit 1 Page 15

Department of Mental Health - Cluster 2 Indemnity

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
		counted	Discount		unted
Accident	Outstandi	ng Losses	Factor at	Outstandi	ng Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	3,791,665	5,196,189		3,114,502	4,268,189
6/30/82-83	15,030	144,095	0.971	14,598	139,958
6/30/83-84	145,076	288,670	0.929	134,786	268,195
6/30/84-85	154,024	558,024	0.894	137,728	498,984
6/30/85-86	250,909	263,909	0.864	216,666	227,892
6/30/86-87	124,587	248,587	0.836	104,107	207,724
6/30/87-88	1,132,818	1,367,834	0.810	917,283	1,107,583
6/30/88-89	1,283,965	1,523,232	0.785	1,008,477	1,196,406
6/30/89-90	979,202	1,531,202	0.762	746,597	1,167,472
6/30/90-91	232,618	387,618	0.741	172,275	287,067
6/30/91-92	127,921	212,921	0.719	91,972	153,084
6/30/92-93	379,817	385,817	0.699	265,336	269,528
6/30/93-94	310,559	313,559	0.685	212,814	214,869
6/30/94-95	407,602	532,602	0.665	270,880	353,952
6/30/95-96	39,009	77,009	0.641	25,024	49,400
6/30/96-97	204,463	211,463	0.617	126,195	130,516
6/30/97-98	407,891	415,891	0.594	242,230	246,981
6/30/98-99	271,340	279,340	0.588	159,660	164,368
6/30/99-00	378,298	381,298	0.572	216,309	218,024
6/30/00-01	591,291	604,291	0.558	329,788	337,038
6/30/01-02	575,796	579,796	0.569	327,835	330,112
6/30/02-03	457,389	470,389	0.577	264,116	271,622
6/30/03-04	890,103	919,103	0.570	507,276	523,803
6/30/04-05	692,172	823,172	0.567	392,198	466,425
6/30/05-06	635,190	786,190	0.568	361,029	446,854
6/30/06-07	857,132	902,132	0.575	492,467	518,322
6/30/07-08	723,694	1,034,694	0.569	411,722	588,655
6/30/08-09	1,052,698	1,264,698	0.597	628,932	755,591
6/30/09-10	1,032,718	1,229,718	0.617	637,331	758,907
6/30/10-11	1,609,836	1,769,836	0.654	1,052,161	1,156,734
6/30/11-12	2,195,477	2,449,477	0.715	1,570,606	1,752,313
Total	21,950,290	27,152,755		15,152,898	19,076,568

_	Discount C	alculation for
	All Pri	or Years
	(Low)	(High)
(8) Estimated Total Reserve:	3,791,665	5,196,189
(9) Projected Number of Years:	7	7
(10) Projected Paid Loss per Year:	541,666	742,313
(11) Discounted Value at 6%:	3,114,502	4,268,189

0.690

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 3, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 3, Exhibit 1, Page 13, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.703



Department of Mental Health - Cluster 2 Total Indemnity (Including Lump Sums) + Medical

Calculation of Fiscal Year 7/1/12 - 13 Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Cumulative	Increme	ntal Paid	Estimated P	ayments from	FY 7/1/12	2 - 6/30/13
Accident	Est Ult Losses	Est Ult Losses	Paid Losses	Reserves	Reserves	Percent	as a % of	as a % of	7/1/12 -	6/30/13	as a % of	Reserves
Year	(Low)	(High)	to Date	(Low)	(High)	Paid	Ultimates	Reserves	(Low)	(High)	(Low)	(High)
All Prior Yrs	23,661,979	25,084,938	19,840,435	3,821,544	5,244,503				351,611	386,772	9.2%	7.4%
6/30/82-83	2,656,434	2,786,897	2,639,490	16,945	147,407	97.0%	1.0%	33.1%	5,612	48,821	33.1%	33.1%
6/30/83-84	3,012,665	3,158,385	2,864,047	148,619	294,339	92.8%	1.0%	13.9%	20,705	41,006	13.9%	13.9%
6/30/84-85	4,694,000	5,098,000	4,529,831	164,169	568,169	92.5%	1.0%	13.4%	21,951	75,969	13.4%	13.4%
6/30/85-86	5,149,000	5,162,000	4,891,866	257,134	270,134	94.9%	1.0%	19.6%	50,284	52,826	19.6%	19.6%
6/30/86-87	7,054,000	7,179,000	6,911,248	142,752	267,752	97.1%	1.0%	34.7%	49,495	92,835	34.7%	34.7%
6/30/87-88	14,280,985	14,523,000	13,104,804	1,176,180	1,418,196	91.0%	1.0%	11.1%	130,585	157,455	11.1%	11.1%
6/30/88-89	15,356,733	15,596,000	14,006,331	1,350,402	1,589,669	90.5%	1.0%	10.5%	142,169	167,359	10.5%	10.5%
6/30/89-90	14,317,000	14,888,000	13,298,877	1,018,123	1,589,123	91.1%	1.0%	11.2%	114,045	178,005	11.2%	11.2%
6/30/90-91	9,785,000	9,941,000	9,486,260	298,740	454,740	96.2%	1.0%	26.2%	78,210	119,050	26.2%	26.2%
6/30/91-92	5,672,000	5,770,000	5,518,908	153,092	251,092	96.5%	1.0%	28.3%	43,339	71,081	28.3%	28.3%
6/30/92-93	4,979,000	4,986,000	4,549,833	429,167	436,167	91.3%	2.0%	23.0%	98,844	100,456	23.0%	23.0%
6/30/93-94	3,353,000	3,356,000	3,009,247	343,753	346,753	89.7%	2.0%	19.4%	66,799	67,381	19.4%	19.4%
6/30/94-95	4,103,000	4,229,000	3,648,607	454,393	580,393	87.6%	2.0%	16.1%	73,175	93,465	16.1%	16.1%
6/30/95-96	2,807,000	2,846,000	2,720,382	86,618	125,618	96.2%	2.0%	53.3%	46,142	66,918	53.3%	53.3%
6/30/96-97	2,335,000	2,343,000	2,094,352	240,648	248,648	89.5%	3.0%	28.7%	69,023	71,317	28.7%	28.7%
6/30/97-98	3,867,000	3,876,000	3,418,162	448,838	457,838	88.3%	3.0%	25.6%	114,992	117,298	25.6%	25.6%
6/30/98-99	2,641,000	2,649,000	2,311,900	329,100	337,100	87.4%	3.0%	23.8%	78,397	80,303	23.8%	23.8%
6/30/99-00	3,347,000	3,352,000	2,908,940	438,060	443,060	86.8%	3.0%	22.8%	99,915	101,055	22.8%	22.8%
6/30/00-01	4,598,600	4,694,000	4,005,912	592,688	688,088	86.2%	3.0%	21.8%	129,006	149,772	21.8%	21.8%
6/30/01-02	3,874,000	3,880,000	3,220,562	653,438	659,438	83.1%	3.1%	18.6%	121,522	122,638	18.6%	18.6%
6/30/02-03	3,126,000	3,141,000	2,575,320	550,680	565,680	82.2%	0.9%	4.9%	27,257	27,999	4.9%	4.9%
6/30/03-04	5,543,000	5,579,000	4,465,790	1,077,210	1,113,210	80.3%	1.9%	9.6%	102,893	106,332	9.6%	9.6%
6/30/04-05	4,420,000	4,575,000	3,584,877	835,123	990,123	79.7%	0.6%	2.9%	24,583	29,145	2.9%	2.9%
6/30/05-06	3,448,000	3,606,000	2,624,120	823,880	981,880	74.4%	5.3%	20.7%	170,810	203,567	20.7%	20.7%
6/30/06-07	3,715,000	3,788,000	2,646,961	1,068,040	1,141,040	70.6%	3.8%	13.1%	139,425	148,955	13.1%	13.1%
6/30/07-08	3,127,000	3,480,000	2,157,001	969,999	1,322,999	65.3%	5.3%	15.2%	147,097	200,628	15.2%	15.2%
6/30/08-09	3,551,000	3,811,000	2,222,752	1,328,248	1,588,248	60.4%	4.9%	12.4%	164,624	196,848	12.4%	12.4%
6/30/09-10	2,718,000	2,998,000	1,396,606	1,321,394	1,601,394	48.9%	11.5%	22.5%	297,646	360,717	22.5%	22.5%
6/30/10-11	3,756,000	4,009,000	1,716,835	2,039,165	2,292,165	44.2%	4.6%	8.3%	169,871	190,947	8.3%	8.3%
6/30/11-12	3,737,000	4,009,000	831,319	2,905,681	3,177,681	21.5%	22.8%	29.0%	841,910	920,721	29.0%	29.0%
Total	178,685,397	184,394,220	153,201,570	25,483,827	31,192,650				3,991,935	4,747,642	15.7%	15.2%

NOTES:

(2) Exhibit 1, Page 1, Column (4) + Exhibit 2, Page 1, Column (4)

(3) Exhibit 1, Page 1, Column (5) + Exhibit 2, Page 1, Column (5)

(4) Exhibit 1, Page 1, Column (2) + Exhibit 2, Page 1, Column (2)

(5) = (2) - (4)

(6) = (3) - (4)

(7) = (4) / Average of Columns (2), (3)

(8) = (7) - Prior Year's (7)

(9) = (8) / (1.00 - (7))

(10) = (5) * (9)

(11) = (6) * (9)(12) = (10) / (5)

(13) = (11) / (6)



Department of Mental Health - Cluster 2 Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll		Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Paid Loss	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		812,712			842,591	861,027	29,879	48,315		
6/30/82-83		137,734	139,649		139,649	141,046	1,915	3,312		
6/30/83-84		209,040	212,582		212,582	214,708	3,542	5,668		
6/30/84-85	142,561	491,855	501,691	501,917	502,000	502,000	10,145	10,145	0.352	0.352
6/30/85-86	153,298	257,775	263,719	263,752	264,000	264,000	6,225	6,225	0.172	0.172
6/30/86-87	176,136	702,835	721,198	721,536	721,000	722,000	18,165	19,165	0.409	0.410
6/30/87-88	206,319	1,720,638	1,770,888	1,763,786	1,764,000	1,771,000	43,362	50,362	0.855	0.858
6/30/88-89	222,806	2,046,563	2,112,651	2,112,637	2,113,000	2,113,000	66,437	66,437	0.948	0.948
6/30/89-90	223,751	1,938,078	2,006,665	2,007,137	1,977,000	1,996,000	38,922	57,922	0.884	0.892
6/30/90-91	210,162	1,740,878	1,807,893	1,807,482	1,807,000	1,808,000	66,122	67,122	0.860	0.860
6/30/91-92	205,241	1,258,829	1,312,517	1,312,011	1,284,000	1,297,000	25,171	38,171	0.626	0.632
6/30/92-93	176,705	1,045,649	1,095,696	1,095,027	1,095,000	1,096,000	49,351	50,351	0.620	0.620
6/30/93-94	173,075	643,805	677,318	677,182	677,000	677,000	33,195	33,195	0.391	0.391
6/30/94-95	178,317	831,209	878,848	878,204	878,000	879,000	46,792	47,792	0.492	0.493
6/30/95-96	175,996	797,390	845,621	844,953	845,000	846,000	47,610	48,610	0.480	0.481
6/30/96-97	190,083	522,815	559,248	560,003	559,000	560,000	36,185	37,185	0.294	0.295
6/30/97-98	177,278	506,053	546,979	547,818	547,000	548,000	40,947	41,947	0.309	0.309
6/30/98-99	189,080	637,239	694,902	695,268	695,000	695,000	57,761	57,761	0.368	0.368
6/30/99-00	194,494	595,238	655,408	656,521	655,000	657,000	59,762	61,762	0.337	0.338
6/30/00-01	201,568	740,203	823,930	824,052	741,600	824,000	1,397	83,797	0.368	0.409
6/30/01-02	203,105	614,358	691,627	693,524	692,000	694,000	77,642	79,642	0.341	0.342
6/30/02-03	202,515	673,709	767,441	768,992	767,000	769,000	93,291	95,291	0.379	0.380
6/30/03-04	189,588	1,222,893	1,417,127	1,409,649	1,410,000	1,417,000	187,107	194,107	0.744	0.747
6/30/04-05	186,990	866,048	1,033,415	1,008,828	1,009,000	1,033,000	142,952	166,952	0.540	0.552
6/30/05-06	193,254	768,311	963,981	956,678	957,000	964,000	188,689	195,689	0.495	0.499
6/30/06-07	203,359	664,093	874,544	902,611	875,000	903,000	210,907	238,907	0.430	0.444
6/30/07-08	212,083	649,695	896,114	938,211	896,000	938,000	246,305	288,305	0.422	0.442
6/30/08-09	204,679	605,449	881,100	928,697	881,000	929,000	275,551	323,551	0.430	0.454
6/30/09-10	184,688	465,324	753,942	837,192	754,000	837,000	288,676	371,676	0.408	0.453
6/30/10-11	169,689	580,670	1,103,260	1,009,779	1,010,000	1,103,000	429,330	522,330	0.595	0.650
6/30/11-12	177,399	227,796	938,286	955,695	938,000	956,000	710,204	728,204	0.529	0.539
Total	5,324,220	24,974,886	27,948,241	27,679,140	28,508,423	29,014,781	3,533,537	4,039,895		
Tot 6/30/84-12	5,324,220	23,815,400	27,596,009	27,679,140	27,313,600	27,798,000	3,498,200	3,982,600	0.513	0.522

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 3, Exhibit 2, Page 2, Column 3
- (4) From Section 3, Exhibit 2, Page 2, Column 8
- (5) From Section 3, Exhibit 2, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



Department of Mental Health - Cluster 2 Medical

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
-		-			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average
Accident	Payroll		Paid	Adjustment	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding
Year	(000's)	Paid Loss	LDF	for Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim
All Prior Yrs		812,712							3	0	
6/30/82-83		137,734	1.014	1.000	139,649	N/A	139,649		1	1	1,915
6/30/83-84		209,040	1.017	1.000	212,582	N/A	212,582		0	0	
6/30/84-85	142,561	491,855	1.020	1.000	501,691	N/A	501,691	0.352	3	1	9,836
6/30/85-86	153,298	257,775	1.023	1.000	263,719	N/A	263,719	0.172	0	0	
6/30/86-87	176,136	702,835	1.026	1.000	721,198	N/A	721,198	0.409	2	0	
6/30/87-88	206,319	1,720,638	1.029	1.000	1,770,888	N/A	1,770,888	0.858	4	3	16,750
6/30/88-89	222,806	2,046,563	1.032	1.000	2,112,651	N/A	2,112,651	0.948	3	3	22,029
6/30/89-90	223,751	1,938,078	1.035	1.000	2,006,665	N/A	2,006,665	0.897	0	0	
6/30/90-91	210,162	1,740,878	1.038	1.000	1,807,893	N/A	1,807,893	0.860	3	2	33,508
6/30/91-92	205,241	1,258,829	1.043	1.000	1,312,517	N/A	1,312,517	0.640	1	1	53,688
6/30/92-93	176,705	1,045,649	1.048	1.000	1,095,696	N/A	1,095,696	0.620	3	5	10,009
6/30/93-94	173,075	643,805	1.052	1.000	677,318	N/A	677,318	0.391	2	3	11,171
6/30/94-95	178,317	831,209	1.057	1.000	878,848	N/A	878,848	0.493	2	2	23,820
6/30/95-96	175,996	797,390	1.060	1.000	845,621	N/A	845,621	0.480	1	1	48,231
6/30/96-97	190,083	522,815	1.070	1.000	559,248	N/A	559,248	0.294	3	3	12,144
6/30/97-98	177,278	506,053	1.081	1.000	546,979	N/A	546,979	0.309	1	1	40,926
6/30/98-99	189,080	637,239	1.090	1.000	694,902	N/A	694,902	0.368	3	2	28,831
6/30/99-00	194,494	595,238	1.101	1.000	655,408	N/A	655,408	0.337	2	2	30,085
6/30/00-01	201,568	740,203	1.113	1.000	823,930	N/A	823,930	0.409	2	2	41,864
6/30/01-02	203,105	614,358	1.126	1.000	691,627	N/A	691,627	0.341	3	2	38,634
6/30/02-03	202,515	673,709	1.139	1.000	767,441	N/A	767,441	0.379	3	4	23,433
6/30/03-04	189,588	1,222,893	1.159	1.000	1,417,127	N/A	1,417,127	0.747	10	6	32,372
6/30/04-05	186,990	866,048	1.193	1.000	1,033,415	N/A	1,033,415	0.553	9	8	20,921
6/30/05-06	193,254	768,311	1.255	1.000	963,981	N/A	963,981	0.499	5	4	48,918
6/30/06-07	203,359	664,093	1.317	1.000	874,544	N/A	874,544	0.430	7	3	70,150
6/30/07-08	212,083	649,695	1.379	1.000	896,114	N/A	896,114	0.423	13	4	61,605
6/30/08-09	204,679	605,449	1.455	1.000	881,100	N/A	881,100	0.430	27	6	45,942
6/30/09-10	184,688	465,324	1.620	1.000	753,942	N/A	753,942	0.408	97	17	16,978
6/30/10-11	169,689	580,670	1.900	1.000	1,103,260	N/A	1,103,260	0.650	199	102	5,123
6/30/11-12	177,399	227,796	4.119	1.000	938,286	N/A	938,286	0.529		196	3,625
Total	5,324,220	24,974,886			27,948,241		27,948,241		412	384	

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 3, Exhibit 2, Page 7

⁽⁵⁾ Based on information from the MA WCRIB 9/1/12 filing. Consideration for development beyond 252 months made in selection of LDF's.

^{(6) = (3)} x (4) x (5)

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 3 Exhibit 2 Page 3

Department of Mental Health - Cluster 2 Medical

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss		Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Paid Loss	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	142,561	0.360	491,855	1.020	501,917	N/A	501,917	0.352	0.352
6/30/85-86	153,298	0.173	257,775	1.023	263,752	N/A	263,752	0.172	0.172
6/30/86-87	176,136	0.417	702,835	1.026	721,536	N/A	721,536	0.410	0.410
6/30/87-88	206,319	0.737	1,720,638	1.029	1,763,786	N/A	1,763,786	0.855	0.855
6/30/88-89	222,806	0.948	2,046,563	1.032	2,112,637	N/A	2,112,637	0.948	0.948
6/30/89-90	223,751	0.903	1,938,078	1.035	2,007,137	N/A	2,007,137	0.897	0.897
6/30/90-91	210,162	0.855	1,740,878	1.038	1,807,482	N/A	1,807,482	0.860	0.860
6/30/91-92	205,241	0.633	1,258,829	1.043	1,312,011	N/A	1,312,011	0.639	0.639
6/30/92-93	176,705	0.612	1,045,649	1.048	1,095,027	N/A	1,095,027	0.620	0.620
6/30/93-94	173,075	0.390	643,805	1.052	677,182	N/A	677,182	0.391	0.391
6/30/94-95	178,317	0.486	831,209	1.057	878,204	N/A	878,204	0.492	0.492
6/30/95-96	175,996	0.474	797,390	1.060	844,953	N/A	844,953	0.480	0.480
6/30/96-97	190,083	0.300	522,815	1.070	560,003	N/A	560,003	0.295	0.295
6/30/97-98	177,278	0.315	506,053	1.081	547,818	N/A	547,818	0.309	0.309
6/30/98-99	189,080	0.370	637,239	1.090	695,268	N/A	695,268	0.368	0.368
6/30/99-00	194,494	0.343	595,238	1.101	656,521	N/A	656,521	0.338	0.338
6/30/00-01	201,568	0.409	740,203	1.113	824,052	N/A	824,052	0.409	0.409
6/30/01-02	203,105	0.349	614,358	1.126	693,524	N/A	693,524	0.341	0.341
6/30/02-03	202,515	0.385	673,709	1.139	768,992	N/A	768,992	0.380	0.380
6/30/03-04	189,588	0.719	1,222,893	1.159	1,409,649	N/A	1,409,649	0.744	0.744
6/30/04-05	186,990	0.471	866,048	1.193	1,008,828	N/A	1,008,828	0.540	0.540
6/30/05-06	193,254	0.480	768,311	1.255	956,678	N/A	956,678	0.495	0.495
6/30/06-07	203,359	0.487	664,093	1.317	902,611	N/A	902,611	0.444	0.444
6/30/07-08	212,083	0.495	649,695	1.379	938,211	N/A	938,211	0.442	0.442
6/30/08-09	204,679	0.505	605,449	1.455	928,697	N/A	928,697	0.454	0.454
6/30/09-10	184,688	0.526	465,324	1.620	837,192	N/A	837,192	0.453	0.453
6/30/10-11	169,689	0.534	580,670	1.900	1,009,779	N/A	1,009,779	0.595	0.595
6/30/11-12	177,399	0.542	227,796	4.119	955,695	N/A	955,695	0.539	0.539
Total	5,324,220		23,815,400		27,679,140		27,679,140		

NOTES:

(9) = (8) / (2) / 10

(10) = (6) / (2) / 10

⁽²⁾ Provided by Commonwealth of Massachusetts

⁽³⁾ From Section 3, Exhibit 2, Page 4, Column 11

⁽⁴⁾ From Section 3, Exhibit 2, Page 2, Column 3

⁽⁵⁾ From Section 3, Exhibit 2, Page 2, Column 4

 $^{(6) = (4) + [\{1 - \{1/(5)\}\} \}times (3) \times (2) \times 10]$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

Section 3 Exhibit 2 Page 4

Department of Mental Health - Cluster 2 Medical

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Expected	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Ult Loss	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.360	0.360
6/30/85-86									0.173	0.173
6/30/86-87									0.417	0.417
6/30/87-88									0.737	0.737
6/30/88-89									0.948	0.948
6/30/89-90									0.903	0.903
6/30/90-91	210,162	1,807,893	0.860	1.194	1.027	1.388	1.425	0.332	0.869	0.855
6/30/91-92	205,241	1,312,517	0.640	1.189	0.760	1.367	1.039	0.338	0.644	0.633
6/30/92-93	176,705	1,095,696	0.620	1.189	0.737	1.347	0.993	0.343	0.612	0.612
6/30/93-94	173,075	677,318	0.391	1.178	0.461	1.327	0.612	0.352	0.394	0.390
6/30/94-95	178,317	878,848	0.493	1.170	0.577	1.307	0.754	0.360	0.490	0.486
6/30/95-96	175,996	845,621	0.480	1.155	0.555	1.288	0.715	0.370	0.484	0.474
6/30/96-97	190,083	559,248	0.294	1.137	0.334	1.269	0.424	0.381	0.304	0.300
6/30/97-98	177,278	546,979	0.309	1.135	0.350	1.250	0.438	0.388	0.322	0.315
6/30/98-99	189,080	694,902	0.368	1.135	0.417	1.232	0.514	0.393	0.361	0.370
6/30/99-00	194,494	655,408	0.337	1.135	0.382	1.214	0.464	0.399	0.350	0.343
6/30/00-01	201,568	823,930	0.409	1.109	0.453	1.196	0.542	0.415	0.418	0.409
6/30/01-02	203,105	691,627	0.341	1.101	0.375	1.178	0.442	0.424	0.339	0.349
6/30/02-03	202,515	767,441	0.379	1.073	0.407	1.161	0.472	0.442	0.383	0.385
6/30/03-04	189,588	1,417,127	0.747	1.046	0.782	1.143	0.894	0.460	0.722	0.719
6/30/04-05	186,990	1,033,415	0.553	1.036	0.572	1.126	0.645	0.471	0.479	0.471
6/30/05-06	193,254	963,981	0.499	1.032	0.515	1.110	0.571	0.480	0.487	0.480
6/30/06-07	203,359	874,544	0.430	1.032	0.444	1.093	0.485	0.487	0.495	0.487
6/30/07-08	212,083	896,114	0.423	1.032	0.436	1.077	0.470	0.495	0.502	0.495
6/30/08-09	204,679	881,100	0.430	1.027	0.442	1.061	0.469	0.505	0.512	0.505
6/30/09-10	184,688	753,942	0.408	1.000	0.408	1.046	0.427	0.526	0.534	0.526
6/30/10-11	169,689	1,103,260	0.650	1.000	0.650	1.030	0.670	0.534	0.542	0.534
6/30/11-12	177,399	938,286	0.529	1.000	0.529	1.015	0.537	0.542		0.542
Total	4,199,350	20,219,198								
			Trend L	ast 4 (ex 11-12):	11.8%	Avg 3 (x11-12):	0.522			
			Trend L	ast 8 (ex 11-12):	-4.0%	Avg 5 (x11-12):	0.504			
			Trend La	st 12 (ex 11-12):	1.6%	Avg 10 (x11-12):	0.554			
			Prior	Selected Trend:	1.5%	Prior Sel Avg:	0.550			

Selected Trend:

1.5%

Sel. Loss Cost:

0.550

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 3, Exhibit 2, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCIRB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6) $\,$
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- $\left(10\right)$ From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

(9) = (7) + (8)

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012

Section 3 Exhibit 2 Page 5

Department of Mental Health - Cluster 2 Medical

Calculation of 1982 & Prior Reserves (Page 1)

Method 1							
(1)	Average Payment Trend		0.950				
(2)	Credibility		34%				
(3)	Average Pmt Trend Statewide		0.950				
(4)	Credibility Weighted Trend		0.950				
		(Low)	(High)				
(5)	Selected Range	0.941	0.960				
(6)	Incremental Paid for 2012	0	0				
(7)	Estimated Reserve	0	0				
(8)	Paid to Date (82 & Prior)	812,712	812,712				
(9)	Est Ult Paid for 1982 & Prior	812,712	812,712				
Method 2							
	<u> </u>	(Current)	(Prior)				
(10)	Avg Incremental Paid (3 yrs)	8,537	13,804				
(11)	Projected Number of Years	7	7				
(12)	Estimated Reserve	59,759	96,629				
(13)	Paid to Date (82 & Prior)	812,712	812,712				
(14)	Est Ult Paid for 1982 & Prior	872,471	909,341				
(14a)	Paid Counts During Fiscal Year	0	3				
		(Low)	(High)				
(15)	Sel Ult Excluding Lump Sums	842,591	861,027				
(16)	Lump Sum Ultimates	N/A	N/A				
(17)	Ult Loss Including Lump Sums	842,591	861,027				
(19)	Invalid Tail	1.037	1.059				
(18)	Implied Tail						
(19)	Ult Loss Inc Lump Sums @ 6/11	897,434	903,928				
NOTES:							
(1) From Secti	on 3, Exhibit 2, Page 6		(10) Avg of 3 latest years from Section 3, Exhibit 2, Page 6, Column 3				
(2) = (Average)	of Section 3, Exhibit 2, Page 6, Column 3 / 175,000) ^ 0.5		(11) Selected judgmentally				
(3) Average St	atewide Trend		(12) = (10 x (11))				
$(4) = (1) \times (2)$	$+ (4) x \{1 - (2)\}$		(14) = (12) + (13)				
(5) Selected ju	dgmentally based on (4)		(15) = Average of (9) and (14)				
•	ided by Commonwealth of Massachusetts		(16) Lump Sums are considered in Indemnity analysis (Section 1)				
$(7) = (6) \times (5)$	•		(17) = (15) + (16)				
	Section 3, Exhibit 2, Page 2, Column 3	(18) = (15) / (8)					
(0) = (7) + (8)			(18) = (15) / (8)				

(19) From Prior Aon Analysis as of June 30, 2011



Section 3 Exhibit 2 Page 6

Department of Mental Health - Cluster 2 Medical

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	51,889	10.857			
1993	2	26,449	10.183	0.510		
1994	3	19,386	9.872	0.733		
1995	4	14,214	9.562	0.733		
1996	5	30,374	10.321	2.137		
1997	6	29,871	10.305	0.983		
1998	7	19,565	9.881	0.655		
1999	8	34,912	10.461	1.784		
2000	9	33,563	10.421	0.961	n =	20
2001	10	21,898	9.994	0.652	S(x) =	40,030
2002	11	10,530	9.262	0.481	S(x-sq) =	80,120,710
2003	12	13,888	9.539	1.319	S(xy) =	395,070
2004	13	14,770	9.600	1.064	S(y) =	197
2005	14	16,486	9.710	1.116	D =	13,300
2006	15	16,533	9.713	1.003	slope =	-0.050
2007	16	15,051	9.619	0.910	Avg Trend =	0.950
2008	17	15,931	9.676	1.058		
2009	18	15,802	9.668	0.992		
2010	19	17,686	9.781	1.119		
2011	20	7,925	8.978	0.448		
2012	21	0				

Selected Trend: 0.950

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2011: 0.448 = 7925 / 17686



Commonwealth of Massachusetts Workers Compensation
Department of Mental Health - Cluster 2
MEDICAL
Paid Loss Development
Paid Loss (Excluding Lump Sum)

Acc Y Ending June-83 June-84 June-85 June-85 June-85 June-86 June-87 June-89 June-91 June-91 June-91 June-92 June-93 June-94 June-95 June-95 June-96 June-90 June-01 June-02 June-03 June-04 June-05 June-11 June-12	391,215 258,020 182,635 212,717 161,311 135,202 160,545 177,752 185,350 241,669 174,410 106,077 258,429 223,896 251,300 262,300 216,046 336,085 227,796	24 16,771 36,685 199,301 76,036 186,273 502,531 786,1341 1,034,531 804,359 628,980 373,628 409,284 509,284 332,451 299,718 429,256 433,098 368,134 382,205 655,381 677,798 520,565 578,217 550,541 599,565 447,208	36 25,010 54,706 162,993 113,387 283,696 738,028 1,088,315 1,346,536 1,248,801 985,930 745,922 418,730 509,019 352,150 362,574 483,562 364,574 484,007 684,007		60 39,548 86,505 264,045 177,640 457,883 1,063,080 1,584,004 1,639,655 1,397,546 447,015 608,100 799,369 408,711 445,088 405,072 539,722 598,840 514,827 560,019 1,071,500 797,587 737,612 659,793 649,695	72 47,447 104,208 295,679 201,245 509,794 1,183,773 1,681,826 1,697,547 1,497,111 1,152,839 912,950 631,875 717,233 433,559 461,616 439,482 558,001 628,934 521,795 574,291 1,113,490 811,216 654,093	84 55,206 114,043 375,978 224,645 575,159 1,248,121 1,741,013 1,735,975 1,506,640 1,156,897 924,291 491,352 651,359 722,565 446,704 487,824 477,272 575,939 693,180 525,972 585,592 1,161,995 848,381 768,311	1,807,955 1,749,267 1,518,859 1,204,770 930,378 516,384 673,340 739,256 473,023 498,965 520,347 582,579 725,143 571,546 637,875	108 79,676 154,763 457,324 242,982 638,516 1,298,796 1,530,336 1,530,336 687,055 334,463 687,055 486,546 499,061 561,026 584,965 730,102 584,965 730,102 584,965 730,102 584,965 730,102		132 109,437 196,611 478,993 248,077 655,971 1,339,541 1,906,158 1,817,206 1,604,133 1,239,794 941,935 588,007 725,773 765,449 499,117 500,001 585,114 590,258 737,792 614,358	144 118,040 201,984 481,392 248,146 600,694 1,367,561 1,945,202 1,838,401 1,610,563 594,302 748,542 771,693 502,144 503,898 588,553 592,928 740,203	156 122,472 204,351 482,690 248,146 667,637 1,388,075 1,962,565 1,863,987 1,618,589 956,312 601,406 771,912 782,222 505,108 505,757 606,906 595,238	168 123,657 205,488 484,957 248,464 681,728 1.399,869 1.622,507 1.245,829 969,261 609,303 790,063 790,063 790,224 509,796 505,921 637,239	180 124,261 205,929 486,098 249,109 687,346 1,424,718 1,973,430 1,905,280 1,624,821 1,247,305 977,539 615,358 800,522 794,884 517,517 506,053	192 124,960 206,289 486,337 249,459 690,455 1,427,592 1,978,126 1,915,675 1,627,667 1,249,031 1,	204 125,364 207,062 486,602 249,459 693,082 1,445,010 1,981,710 1,921,866 1,633,766 1,251,673 1,003,269 630,803 823,958 797,390	216 127,246 207,303 486,918 249,734 696,366 1,498,101 1,986,429 1,934,997 1,732,296 638,628 831,209	1,736,277 1,256,737	240 128,594 207,590 488,092 250,509 699,573 1,550,835 2,035,745 1,938,078 1,737,397 1,257,214 1,045,649	252 128,869 207,590 488,848 253,317 700,478 1,609,155 2,040,920 1,938,078 1,738,820 1,258,829		276 130,978 207,590 489,458 253,317 701,978 1,663,246 2,045,069 1,938,078	288 131,631 207,590 490,407 257,775 702,712 1,690,901 2,046,563	300 133,115 207,590 490,672 257,775 702,835 1,720,638	312 134,239 209,040 490,804 257,775 702,835	324 135,539 209,040 491,592 257,775	336 136,526 209,040 491,855	348 137,668 209,040	360 137,734
Age-to-Age Fattle June-83 June-84 June-85 June-86 June-87 June-87 June-87 June-87 June-98 June-90 June-91 June-91 June-91 June-95 June-96 June-96 June-96 June-96 June-96 June-96 June-96 June-97 June-98 June-99 June	2.24 2.427 2.427 2.427 2.427 2.427 2.427 2.809 4.375 3.218 3.073 2.056 2.438 2.046 1.924 3.598 2.233 2.071 1.686 2.233 2.271 1.686 2.233 2.271 1.686 2.233 2.271 1.686 2.233 2.271 1.686 2.233 2.271 1.686 2.271 1.686 2.271 1.686 2.271 1.686 2.271 1.686 2.271 1.686 2.271 1.686 2.271 1.686 2.271 1.792 2.271 1.792 2.771 2	24-36 1.491 1.491 1.491 1.523 1.469 1.383 1.401 1.207 1.226 1.121 1.244 1.129 1.167 1.154 1.137 1.127 1.125 1.127 1.127 1.127 1.1287 1.131	36-48 1.278 1.278 1.278 1.278 1.213 1.213 1.213 1.212 1.072 1.116 1.145 1.042 1.120 1.059 1.150 1.059 1.150 1.059 1.150 1.059 1.194 1.060 1.060 1.074 1.106 1.074 1.106 1.074 1.106 1.074 1.106 1.074 1.106 1.074 1.106 1.074 1.106 1.074 1.106 1.074 1.106 1.106 1.074 1.106 1.074 1.106 1.074 1.106	48-60 1.237 1.237 1.268 1.190 1.176 1.187 1.024 1.027 1.024 1.053 1.027 1.081 1.026 1.123 1.034 1.044 1.026 1.123 1.034 1.034 1.031 1.034 1.031 1.034	60-72 1.200 1.205 1.120 1.133 1.114 1.062 1.035 1.071 1.019 1.019 1.050 1.039 1.011 1.061 1.037 1.050 1.039 1.011 1.050 1.039 1.011 1.050 1.039 1.011 1.050 1.039 1.011 1.050 1.039 1.011 1.050 1.039 1.011 1.050 1.039 1.011 1.050 1.039 1.011 1.050 1.039 1.031 1.039 1.031	72-84 1.164 1.094 1.272 1.116 1.128 1.054 1.035 1.006 1.004 1.012 1.046 1.031 1.007 1.030 1.057 1.086 1.032 1.102 1.046 1.031	84-96 1.195 1.188 1.161 1.045 1.080 1.025 1.038 1.008 1.008 1.041 1.059 1.051 1.059 1.023 1.059 1.023 1.059 1.023 1.023 1.023 1.034 1.023 1.034 1.034 1.034 1.034 1.034 1.034 1.034 1.034 1.035 1.034	96-108 1.208 1.208 1.035 1.025 1.021 1.011 1.001 1.001 1.001 1.002 1.005 1.025 1.020 1.035 1.020 1.035 1.020 1.035 1.030 1.035 1.030 1.035 1.030 1.035 1.030 1.035	108-120 1.228 1.097 1.097 1.026 1.007 1.017 1.012 1.034 1.008 1.004 1.030 1.032 1.008 1.017 1.012 1.034 1.008 1.001 1.035 1.008 1.017 1.012 1.025 1.025	120-132 1.118 1.158 1.021 1.014 1.008 1.002 1.016 1.015 1.014 1.018 1.003 1.062 1.024 1.015 1.016 1.015 1.016 1.015 1.016 1.015	132-144 1.079 1.027 1.005 1.000 1.007 1.021 1.020 1.012 1.004 1.002 1.005 1.016 1.031 1.006	144-156 1.038 1.012 1.003 1.000 1.011 1.013 1.009 1.014 1.005 1.003 1.010 1.012 1.031 1.014 1.006	156-168 1.010 1.006 1.005 1.001 1.001 1.001 1.001 1.001 1.001 1.001 1.002 1.000 1.014 1.013 1.024 1.010 1.019 1.000 1.050	168-180 1.005 1.002 1.002 1.003 1.008 1.018 1.019 1.001 1.001 1.001 1.001 1.001 1.001 1.001 1.001 1.001 1.001	180-192 1.006 1.002 1.000 1.001 1.001 1.002 1.002 1.002 1.002 1.001 1.00	192-204 1.003 1.004 1.001 1.000 1.004 1.012 1.002 1.002 1.003 1.004 1.012 1.002 1.013 1.004 1.010 1.011 1.011	204-216 1.015 1.001 1.001 1.001 1.001 1.003 1.037 1.002 1.007 1.060 1.004 1.012 1.012	216-228 1.009 1.001 1.001 1.001 1.003 1.008 1.008 1.001 1.000 1.002 1.000 1.008	228-240 1.001 1.000 1.000 1.003 1.002 1.017 1.017 1.001 1.000 1.000 1.007	240-252 1.002 1.000 1.000 1.011 1.011 1.021 1.031 1.003 1.000 1.001 1.001	252-264 1.011 1.000 1.000 1.000 1.001 1.015 1.001 1.001 1.000 1.001	264-276 1.006 1.000 1.001 1.000 1.001 1.011 1.011 1.000	276-288 1.005 1.000 1.000 1.012 1.018 1.001 1.017 1.001	288-300 1.011 1.000 1.001 1.000 1.000 1.018	300-312 1.008 1.007 1.007 1.000 1.000	312-324 1.010 1.000 1.000 1.002 1.000	324-336 1.007 1.000 1.001	336-348 1.008 1.000	348-360 1.000	
Averages Simple Avg All Yrs	12-24 2.440	24-36 1.254	36-48 1.134	48-60 1.095	60-72 1.063	72-84 1.060	84-96 1.059	96-108 1.035	108-120 1.030	120-132 1.029	132-144 1.014	144-156 1.012	156-168 1.011	168-180 1.007	180-192 1.005	192-204 1.005	204-216 1.013	216-228 1.005	228-240 1.006	240-252 1.006	252-264 1.003	264-276 1.003	276-288 1.006	288-300 1.005	300-312 1.003	312-324 1.003	324-336 1.003	336-348 1.004	348-360 1.000	To Ult
Latest 5 Latest 3 <u>Volume Wtd</u> All Yrs	1.964 1.894 2.389	1.120 1.061 1.225	1.037 1.027 1.113	1.031 1.025 1.077	1.022 1.015	1.027 1.036	1.054 1.045 1.038	1.016 1.024 1.020	1.017 1.013	1.012 1.019 1.019	1.006 1.005	1.012 1.013	1.019 1.020 1.010	1.009 1.007	1.010 1.009	1.009 1.009	1.020 1.011 1.017	1.005 1.007	1.007 1.006 1.007	1.008 1.001 1.007	1.004 1.001 1.003	1.004 1.006 1.005	1.008 1.006	1.004 1.006 1.009	1.003 1.000 1.002	1.001	1.003	1.003	1.000	
Latest 5 Latest 3	1.947 1.870	1.120 1.062	1.038 1.027	1.033 1.025	1.024 1.016	1.031 1.037	1.047 1.039	1.018 1.024	1.017 1.013	1.012 1.018	1.005 1.004	1.012 1.013	1.019 1.022	1.009	1.010 1.009	1.008 1.009	1.024 1.011	1.004 1.006	1.007 1.005	1.008 1.001	1.004 1.001	1.005 1.006	1.007 1.007	1.009	1.002 1.000	1.001	1.001	, and and and		
Dev Factor Selectindustry 1 Industry 2 Prior Selected FacToUlt Percent of Ult	1.968 2.229 2.168 4.119 24.3%	1.143 1.266 1.187 1.173 1.900 52.6%	1.054 1.074 1.117 1.113 1.620 61.7%	1.030 1.040 1.055 1.055 1.455 68.7%	1.018 1.013 1.049 1.047 1.379 72.5%	1.014 1.011 1.050 1.050 1.317 75.9%	1.012 1.010 1.051 1.051 1.255 79.7%	1.015 1.030 1.030 1.193 83.8%	1.008 1.013 1.017 1.159 86.3%	1.013 1.004 1.012 1.139 87.8%	1.013 1.012 1.011 1.126 88.8%	1.009 1.011 1.011 1.113 89.8%	1.008 1.008 1.010 1.101 90.8%	1.008 1.011 1.009 1.090 91.7%	1.008 1.009 1.010 1.081 92.5%	1.005 1.009 1.009 1.070 93.5%	1.004 1.003 1.003 1.060 94.3%	1.002 1.005 1.005 1.057 94.6%	1.004 1.004 1.004 1.052 95.1%	1.005 1.005 1.005 1.048 95.4%	1.004 1.004 1.043 95.9%	1.003 1.003 1.038 96.3%	1.003 1.003 1.035 96.6%	1.003 1.003 1.032 96.9%	1.003 1.003 1.029 97.2%	1.003 1.003 1.026 97.5%	1.003 1.003 1.023 97.7%	1.003 1.003 1.020 98.0%	1.031 1.003 1.017 98.3%	1.014 1.014 98.6%

Section 3 Exhibit 2 Page 7

Section 3 Exhibit 2 Page 8

Department of Mental Health - Cluster 2 Medical

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ite Loss	Ultima	ite Loss	Change in U	Iltimate Loss	Change in U	ltimate Loss
Accident	As o	f 6/11	As of	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	897,434	903,928	842,591	861,027	(54,843)	-6.1%	(42,901)	-4.7%
6/30/82-83	141,889	143,308	139,649	141,046	(2,239)	-1.6%	(2,262)	-1.6%
6/30/83-84	216,095	218,256	212,582	214,708	(3,512)	-1.6%	(3,547)	-1.6%
6/30/84-85	510,000	510,000	502,000	502,000	(8,000)	-1.6%	(8,000)	-1.6%
6/30/85-86	268,000	268,000	264,000	264,000	(4,000)	-1.5%	(4,000)	-1.5%
6/30/86-87	733,000	733,000	721,000	722,000	(12,000)	-1.6%	(11,000)	-1.5%
6/30/87-88	1,758,000	1,769,000	1,764,000	1,771,000	6,000	0.3%	2,000	0.1%
6/30/88-89	2,144,000	2,146,000	2,113,000	2,113,000	(31,000)	-1.4%	(33,000)	-1.5%
6/30/89-90	1,977,000	1,996,000	1,977,000	1,996,000	0	0.0%	0	0.0%
6/30/90-91	1,837,000	1,837,000	1,807,000	1,808,000	(30,000)	-1.6%	(29,000)	-1.6%
6/30/91-92	1,282,000	1,295,000	1,284,000	1,297,000	2,000	0.2%	2,000	0.2%
6/30/92-93	1,095,000	1,096,000	1,095,000	1,096,000	0	0.0%	0	0.0%
6/30/93-94	684,000	684,000	677,000	677,000	(7,000)	-1.0%	(7,000)	-1.0%
6/30/94-95	885,000	886,000	878,000	879,000	(7,000)	-0.8%	(7,000)	-0.8%
6/30/95-96	863,000	863,000	845,000	846,000	(18,000)	-2.1%	(17,000)	-2.0%
6/30/96-97	566,000	567,000	559,000	560,000	(7,000)	-1.2%	(7,000)	-1.2%
6/30/97-98	559,000	560,000	547,000	548,000	(12,000)	-2.1%	(12,000)	-2.1%
6/30/98-99	676,000	677,000	695,000	695,000	19,000	2.8%	18,000	2.7%
6/30/99-00	668,000	669,000	655,000	657,000	(13,000)	-1.9%	(12,000)	-1.8%
6/30/00-01	756,900	841,000	741,600	824,000	(15,300)	-2.0%	(17,000)	-2.0%
6/30/01-02	669,000	671,000	692,000	694,000	23,000	3.4%	23,000	3.4%
6/30/02-03	762,000	764,000	767,000	769,000	5,000	0.7%	5,000	0.7%
6/30/03-04	1,414,000	1,423,000	1,410,000	1,417,000	(4,000)	-0.3%	(6,000)	-0.4%
6/30/04-05	1,030,000	1,065,000	1,009,000	1,033,000	(21,000)	-2.0%	(32,000)	-3.0%
6/30/05-06	981,000	993,000	957,000	964,000	(24,000)	-2.4%	(29,000)	-2.9%
6/30/06-07	912,000	938,000	875,000	903,000	(37,000)	-4.1%	(35,000)	-3.7%
6/30/07-08	918,000	964,000	896,000	938,000	(22,000)	-2.4%	(26,000)	-2.7%
6/30/08-09	969,000	1,000,000	881,000	929,000	(88,000)	-9.1%	(71,000)	-7.1%
6/30/09-10	864,000	923,000	754,000	837,000	(110,000)	-12.7%	(86,000)	-9.3%
6/30/10-11	1,042,000	1,448,000	1,010,000	1,103,000	(32,000)	-3.1%	(345,000)	-23.8%
6/30/11-12								
Total	28,078,318	28,851,491	27,570,423	28,058,781	(507,894)	-1.8%	(792,711)	-2.7%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 3, Exhibit 2, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1

Section 3 Exhibit 2

Page 9

Department of Mental Health - Cluster 2 Medical

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	1.4%	0.0%	0.4%	0.2%	1.000	1.000
360	98.6%	0.3%	1.4%	0.1%	0.1%	0.981	0.971
348	98.3%	0.3%	1.7%	0.1%	0.1%	0.950	0.926
336	98.0%	0.3%	2.0%	0.1%	0.1%	0.923	0.888
324	97.7%	0.3%	2.3%	0.1%	0.1%	0.900	0.855
312	97.5%	0.3%	2.5%	0.1%	0.1%	0.878	0.826
300	97.2%	0.3%	2.8%	0.1%	0.1%	0.859	0.799
288	96.9%	0.3%	3.1%	0.1%	0.1%	0.840	0.774
276	96.6%	0.3%	3.4%	0.1%	0.1%	0.822	0.750
264	96.3%	0.4%	3.7%	0.2%	0.1%	0.805	0.729
252	95.9%	0.5%	4.1%	0.2%	0.1%	0.794	0.714
240	95.4%	0.4%	4.6%	0.2%	0.1%	0.786	0.705
228	95.1%	0.5%	4.9%	0.2%	0.2%	0.773	0.688
216	94.6%	0.3%	5.4%	0.1%	0.1%	0.764	0.677
204	94.3%	0.8%	5.7%	0.4%	0.3%	0.747	0.656
192	93.5%	1.0%	6.5%	0.5%	0.4%	0.751	0.662
180	92.5%	0.8%	7.5%	0.5%	0.4%	0.755	0.670
168	91.7%	0.9%	8.3%	0.5%	0.4%	0.751	0.665
156	90.8%	1.0%	9.2%	0.6%	0.5%	0.747	0.661
144	89.8%	1.0%	10.2%	0.6%	0.5%	0.744	0.657
132	88.8%	1.0%	11.2%	0.7%	0.6%	0.739	0.651
120	87.8%	1.5%	12.2%	1.0%	0.9%	0.734	0.645
108	86.3%	2.5%	13.7%	1.8%	1.5%	0.735	0.648
96	83.8%	4.1%	16.2%	3.1%	2.7%	0.749	0.667
84	79.7%	3.8%	20.3%	2.9%	2.6%	0.773	0.698
72	75.9%	3.4%	24.1%	2.8%	2.5%	0.780	0.708
60	72.5%	3.8%	27.5%	3.2%	2.9%	0.779	0.705
48	68.7%	7.0%	31.3%	6.1%	5.7%	0.777	0.702
36	61.7%	9.1%	38.3%	8.2%	7.9%	0.790	0.719
24	52.6%	28.4%	47.4%	26.7%	26.0%	0.802	0.735
12	24.3%	24.3%	75.7%	23.8%	23.6%	0.850	0.797

Total 100.0%

NOTES:

(2) = 1 / Section 3, Exhibit 2, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)



Section 3 Exhibit 2 Page 10

Department of Mental Health - Cluster 2 Medical

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
		ounted	Discount		unted
Accident		ng Losses	Factor at		ng Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	29,879	48,315	0.004	26,132	42,255
6/30/82-83	1,915	3,312	0.981	1,878	3,247
6/30/83-84	3,542	5,668	0.950	3,364	5,382
6/30/84-85	10,145	10,145	0.923	9,365	9,365
6/30/85-86	6,225	6,225	0.900	5,601	5,601
6/30/86-87	18,165	19,165	0.878	15,956	16,834
6/30/87-88	43,362	50,362	0.859	37,230	43,240
6/30/88-89	66,437	66,437	0.840	55,804	55,804
6/30/89-90	38,922	57,922	0.822	32,006	47,630
6/30/90-91	66,122	67,122	0.805	53,260	54,066
6/30/91-92	25,171	38,171	0.794	19,982	30,302
6/30/92-93	49,351	50,351	0.786	38,790	39,576
6/30/93-94	33,195	33,195	0.773	25,661	25,661
6/30/94-95	46,792	47,792	0.764	35,749	36,513
6/30/95-96	47,610	48,610	0.747	35,556	36,303
6/30/96-97	36,185	37,185	0.751	27,167	27,918
6/30/97-98	40,947	41,947	0.755	30,929	31,685
6/30/98-99	57,761	57,761	0.751	43,395	43,395
6/30/99-00	59,762	61,762	0.747	44,655	46,150
6/30/00-01	1,397	83,797	0.744	1,039	62,328
6/30/01-02	77,642	79,642	0.739	57,392	58,870
6/30/02-03	93,291	95,291	0.734	68,453	69,920
6/30/03-04	187,107	194,107	0.735	137,616	142,764
6/30/04-05	142,952	166,952	0.749	107,103	125,084
6/30/05-06	188,689	195,689	0.773	145,856	151,267
6/30/06-07	210,907	238,907	0.780	164,592	186,444
6/30/07-08	246,305	288,305	0.779	191,905	224,629
6/30/08-09	275,551	323,551	0.777	214,152	251,456
6/30/09-10	288,676	371,676	0.790	228,032	293,596
6/30/10-11	429,330	522,330	0.802	344,298	418,879
6/30/11-12	710,204	728,204	0.850	603,347	618,639
Total	3,533,537	4,039,895		2,806,264	3,204,801

_		
	Discount Ca	lculation for
	All Pri	or Years
_	(Low)	(High)
(8) Estimated Total Reserve:	29,879	48,315
(9) Projected Number of Years:	7	7
(10) Projected Paid Loss per Year:	4,268	6,902
(11) Discounted Value at 4%:	26,132	42,255

0.794

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 3, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 3, Exhibit 2, Page 9, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.793



Section 3 Exhibit 2 Page 11

Department of Mental Health - Cluster 2 Medical

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
A - 11 - 4		ounted	Discount		unted
Accident		ng Losses	Factor at		ng Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	29,879	48,315	0.071	24,543	39,686
6/30/82-83	1,915	3,312	0.971	1,860	3,217
6/30/83-84	3,542	5,668	0.926	3,280	5,249
6/30/84-85	10,145	10,145	0.888	9,011	9,011
6/30/85-86	6,225	6,225	0.855	5,324	5,324
6/30/86-87	18,165	19,165	0.826	15,000	15,826
6/30/87-88	43,362	50,362	0.799	34,638	40,229
6/30/88-89	66,437	66,437	0.774	51,410	51,410
6/30/89-90	38,922	57,922	0.750	29,209	43,468
6/30/90-91	66,122	67,122	0.729	48,170	48,899
6/30/91-92	25,171	38,171	0.714	17,970	27,251
6/30/92-93	49,351	50,351	0.705	34,773	35,477
6/30/93-94	33,195	33,195	0.688	22,847	22,847
6/30/94-95	46,792	47,792	0.677	31,697	32,374
6/30/95-96	47,610	48,610	0.656	31,210	31,866
6/30/96-97	36,185	37,185	0.662	23,968	24,630
6/30/97-98	40,947	41,947	0.670	27,421	28,090
6/30/98-99	57,761	57,761	0.665	38,419	38,419
6/30/99-00	59,762	61,762	0.661	39,475	40,796
6/30/00-01	1,397	83,797	0.657	918	55,036
6/30/01-02	77,642	79,642	0.651	50,576	51,878
6/30/02-03	93,291	95,291	0.645	60,167	61,457
6/30/03-04	187,107	194,107	0.648	121,237	125,772
6/30/04-05	142,952	166,952	0.667	95,293	111,292
6/30/05-06	188,689	195,689	0.698	131,722	136,608
6/30/06-07	210,907	238,907	0.708	149,219	169,029
6/30/07-08	246,305	288,305	0.705	173,746	203,373
6/30/08-09	275,551	323,551	0.702	193,572	227,292
6/30/09-10	288,676	371,676	0.719	207,593	267,280
6/30/10-11	429,330	522,330	0.735	315,384	383,702
6/30/11-12	710,204	728,204	0.797	566,185	580,535
Total	3,533,537	4,039,895		2,555,837	2,917,324

Discount C	alculation for
All Pr	ior Years
(Low)	(High)
29,879	48,315
7	7
4,268	6,902
24,543	39,686
	All Pr (Low) 29,879 7 4,268

0.723

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 3, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 3, Exhibit 2, Page 9, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.722



Department of Corrections - Cluster 3
Indemnity

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		3,708,250			4,351,042	4,857,957	642,792	1,149,707		
6/30/82-83		2,747,816	3,082,843		3,005,772	3,083,000	257,956	335,184		
6/30/83-84		1,405,260	1,449,446		1,413,209	1,449,000	7,949	43,740		
6/30/84-85	115,258	3,834,301	5,101,270	3,937,005	4,293,181	4,519,000	458,879	684,699	3.725	3.921
6/30/85-86	123,937	6,387,508	9,155,429	6,588,119	7,478,185	7,872,000	1,090,677	1,484,492	6.034	6.352
6/30/86-87	142,396	3,884,640	4,041,632	4,049,829	4,042,000	4,050,000	157,360	165,360	2.839	2.844
6/30/87-88	166,792	6,097,875	6,640,779	6,381,020	6,381,000	6,641,000	283,125	543,125	3.826	3.982
6/30/88-89	180,117	7,101,712	8,154,276	7,424,498	7,424,000	8,154,000	322,288	1,052,288	4.122	4.527
6/30/89-90	180,883	9,092,932	9,621,387	9,616,457	9,616,000	9,621,000	523,068	528,068	5.316	5.319
6/30/90-91	169,902	9,423,147	13,826,584	10,404,613	10,405,000	13,827,000	981,853	4,403,853	6.124	8.138
6/30/91-92	165,926	4,183,974	4,571,163	4,573,026	4,571,000	4,573,000	387,026	389,026	2.755	2.756
6/30/92-93	174,198	3,155,590	3,451,338	3,457,214	3,451,000	3,457,000	295,410	301,410	1.981	1.985
6/30/93-94	185,946	4,868,100	5,393,505	5,395,848	5,394,000	5,396,000	525,900	527,900	2.901	2.902
6/30/94-95	194,051	6,148,615	6,929,133	6,923,661	6,924,000	6,929,000	775,385	780,385	3.568	3.571
6/30/95-96	205,262	5,072,397	5,754,234	5,757,154	5,754,000	5,757,000	681,603	684,603	2.803	2.805
6/30/96-97	234,073	6,000,261	6,864,512	6,868,936	6,865,000	6,869,000	864,739	868,739	2.933	2.935
6/30/97-98	221,865	7,915,996	9,279,099	9,247,497	9,247,000	9,279,000	1,331,004	1,363,004	4.168	4.182
6/30/98-99	256,071	7,511,960	8,987,017	8,965,098	8,965,000	8,987,000	1,453,040	1,475,040	3.501	3.510
6/30/99-00	268,486	8,142,719	9,873,903	9,842,210	9,842,000	9,874,000	1,699,281	1,731,281	3.666	3.678
6/30/00-01	279,182	10,523,035	12,949,734	12,871,091	12,264,892	12,950,000	1,741,856	2,426,965	4.393	4.639
6/30/01-02	283,070	8,873,927	11,051,765	11,010,875	11,011,000	11,052,000	2,137,073	2,178,073	3.890	3.904
6/30/02-03	289,846	8,671,068	10,961,887	10,927,482	10,397,450	10,962,000	1,726,382	2,290,932	3.587	3.782
6/30/03-04	293,771	7,876,100	10,158,722	10,142,422	9,643,043	10,159,000	1,766,943	2,282,900	3.283	3.458
6/30/04-05	291,382	8,213,814	10,871,510	10,513,196	10,513,000	10,872,000	2,299,186	2,658,186	3.608	3.731
6/30/05-06	294,709	5,781,264	7,873,643	8,316,106	7,874,000	8,316,000	2,092,736	2,534,736	2.672	2.822
6/30/06-07	289,603	4,616,792	6,579,069	7,423,776	7,001,000	7,424,000	2,384,208	2,807,208	2.417	2.564
6/30/07-08	354,668	4,333,272	6,502,716	8,175,406	7,339,000	8,175,000	3,005,728	3,841,728	2.069	2.305
6/30/08-09	332,413	3,401,645	5,572,692	7,622,040	6,597,000	8,003,000	3,195,355	4,601,355	1.985	2.408
6/30/09-10	336,338	2,042,041	3,968,074	7,340,583	5,654,000	7,708,000	3,611,959	5,665,959	1.681	2.292
6/30/10-11	333,783	2,222,551	5,917,585	9,035,421	7,477,000	9,487,000	5,254,449	7,264,449	2.240	2.842
6/30/11-12	348,187	628,004	3,633,622	10,065,532	6,850,000	10,569,000	6,221,996	9,940,996	1.967	3.035
Total	6,712,116	173,866,566	218,218,569	222,876,114	222,043,774	240,871,957	48,177,208	67,005,390		
Tot 6/30/84-12	6,712,116	166,005,240	213,686,280	222,876,114	213,273,751	231,482,000	47,268,510	65,476,760	3.177	3.449

- (2) Provided by Commonwealth of Massachusetts
- (3) Sum of Section 4, Exhibit 1, Page 2, Column 3 and Section 4, Exhibit 1, Page 9, Column 8
- (4) From Section 4, Exhibit 1, Page 2, Column 8
- (5) From Section 4, Exhibit 1, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



Department of Corrections - Cluster 3 Indemnity

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Paid Loss		Adjstmnt for	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average	
Accident	Payroll	Excluding	Paid	Extra	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding	Average
Year	(000's)	Lump Sum	LDF	Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim	Age
All Prior Yrs		3,548,250							3	4		68
6/30/82-83		2,566,735	1.028	1.100	2,901,762	181,081	3,082,843		0	0		
6/30/83-84		1,386,759	1.032	1.000	1,430,945	18,501	1,449,446		0	0		
6/30/84-85	115,258	3,653,451	1.036	1.300	4,920,420	180,850	5,101,270	4.426	1	1	1,266,969	68
6/30/85-86	123,937	6,067,508	1.040	1.400	8,835,429	320,000	9,155,429	7.387	2	2	1,383,960	74
6/30/86-87	142,396	3,544,280	1.044	1.000	3,701,272	340,360	4,041,632	2.838	0	0		
6/30/87-88	166,792	5,380,873	1.048	1.050	5,923,777	717,002	6,640,779	3.981	1	0		
6/30/88-89	180,117	6,475,512	1.057	1.100	7,528,076	626,200	8,154,276	4.527	3	3	350,855	55
6/30/89-90	180,883	8,148,032	1.065	1.000	8,676,487	944,900	9,621,387	5.319	2	2	264,228	65
6/30/90-91	169,902	8,541,379	1.083	1.400	12,944,816	881,768	13,826,584	8.138	4	4	1,100,859	60
6/30/91-92	165,926	3,800,723	1.102	1.000	4,187,912	383,251	4,571,163	2.755	1	2	193,594	64
6/30/92-93	174,198	2,518,289	1.117	1.000	2,814,037	637,301	3,451,338	1.981	0	0		
6/30/93-94	185,946	4,025,425	1.131	1.000	4,550,830	842,675	5,393,505	2.901	2	2	262,702	53
6/30/94-95	194,051	5,416,002	1.144	1.000	6,196,520	732,613	6,929,133	3.571	1	1	780,518	52
6/30/95-96	205,262	4,620,397	1.148	1.000	5,302,234	452,000	5,754,234	2.803	1	2	340,919	51
6/30/96-97	234,073	5,232,660	1.165	1.000	6,096,911	767,601	6,864,512	2.933	0	1	864,251	65
6/30/97-98	221,865	7,484,278	1.182	1.000	8,846,934	432,165	9,279,099	4.182	6	4	340,664	52
6/30/98-99	256,071	7,335,907	1.200	1.000	8,806,193	180,824	8,987,017	3.510	1	4	367,571	59
6/30/99-00	268,486	7,878,617	1.218	1.000	9,598,439	275,464	9,873,903	3.678	4	2	859,911	53
6/30/00-01	279,182	10,107,752	1.235	1.000	12,484,513	465,221	12,949,734	4.638	2	2	1,188,380	53
6/30/01-02	283,070	8,597,046	1.246	1.000	10,710,621	341,145	11,051,765	3.904	2	4	528,394	53
6/30/02-03	289,846	8,307,565	1.266	1.000	10,515,697	446,189	10,961,887	3.782	2	2	1,104,066	53
6/30/03-04	293,771	7,548,670	1.288	1.000	9,725,641	433,081	10,158,722	3.458	2	2	1,088,485	55
6/30/04-05	291,382	7,944,264	1.318	1.000	10,467,318	404,193	10,871,510	3.731	12	9	280,339	49
6/30/05-06	294,709	5,520,760	1.359	1.000	7,501,641	372,002	7,873,643	2.672	10	7	282,983	47
6/30/06-07	289,603	4,409,792	1.421	1.000	6,266,398	312,671	6,579,069	2.272	13	7	265,229	49
6/30/07-08	354,668	4,162,771	1.490	1.000	6,202,805	299,911	6,502,716	1.833	23	14	145,717	49
6/30/08-09	332,413	3,295,878	1.615	1.000	5,323,909	248,784	5,572,692	1.676	30	18	112,668	46
6/30/09-10	336,338	1,983,041	1.907	1.000	3,781,036	187,038	3,968,074	1.180	44	15	119,866	48
6/30/10-11	333,783	2,210,801	2.560	1.000	5,659,825	257,760	5,917,585	1.773	165	73	47,247	41
6/30/11-12	348,187	628,004	5.503	1.000	3,455,693	177,929	3,633,622	1.044		106	26,676	41
Total	6,712,116	162,341,421			205,358,088	12,860,481	218,218,569		337	293		

- (2) Provided by Commonwealth of Massachusetts
- (3), (4) From Section 4, Exhibit 1, Page 7
- (5) Based on information from the MA WCRIB
- (6) = (3) x (4) x (5)
- (7) From Section 4, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10), (11) Provided by Commonwealth of Massachusetts
- $(12) = Maximum of [{(6) (3)} / (11)] and 0$

Section 4 Exhibit 1 Page 3

Department of Corrections - Cluster 3 Indemnity

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori	Paid Loss		Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss	Excluding	Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Lump Sum	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	115,258	2.565	3,653,451	1.036	3,756,155	180,850	3,937,005	3.416	3.259
6/30/85-86	123,937	4.195	6,067,508	1.040	6,268,119	320,000	6,588,119	5.316	5.057
6/30/86-87	142,396	2.735	3,544,280	1.044	3,709,469	340,360	4,049,829	2.844	2.605
6/30/87-88	166,792	3.672	5,380,873	1.048	5,664,018	717,002	6,381,020	3.826	3.396
6/30/88-89	180,117	3.331	6,475,512	1.057	6,798,298	626,200	7,424,498	4.122	3.774
6/30/89-90	180,883	4.752	8,148,032	1.065	8,671,557	944,900	9,616,457	5.316	4.794
6/30/90-91	169,902	7.577	8,541,379	1.083	9,522,845	881,768	10,404,613	6.124	5.605
6/30/91-92	165,926	2.536	3,800,723	1.102	4,189,775	383,251	4,573,026	2.756	2.525
6/30/92-93	174,198	1.648	2,518,289	1.117	2,819,913	637,301	3,457,214	1.985	1.619
6/30/93-94	185,946	2.458	4,025,425	1.131	4,553,173	842,675	5,395,848	2.902	2.449
6/30/94-95	194,051	3.171	5,416,002	1.144	6,191,048	732,613	6,923,661	3.568	3.190
6/30/95-96	205,262	2.594	4,620,397	1.148	5,305,154	452,000	5,757,154	2.805	2.585
6/30/96-97	234,073	2.618	5,232,660	1.165	6,101,335	767,601	6,868,936	2.935	2.607
6/30/97-98	221,865	3.895	7,484,278	1.182	8,815,332	432,165	9,247,497	4.168	3.973
6/30/98-99	256,071	3.388	7,335,907	1.200	8,784,274	180,824	8,965,098	3.501	3.430
6/30/99-00	268,486	3.509	7,878,617	1.218	9,566,746	275,464	9,842,210	3.666	3.563
6/30/00-01	279,182	4.324	10,107,752	1.235	12,405,870	465,221	12,871,091	4.610	4.444
6/30/01-02	283,070	3.711	8,597,046	1.246	10,669,731	341,145	11,010,875	3.890	3.769
6/30/02-03	289,846	3.571	8,307,565	1.266	10,481,292	446,189	10,927,482	3.770	3.616
6/30/03-04	293,771	3.286	7,548,670	1.288	9,709,341	433,081	10,142,422	3.452	3.305
6/30/04-05	291,382	3.082	7,944,264	1.318	10,109,003	404,193	10,513,196	3.608	3.469
6/30/05-06	294,709	3.114	5,520,760	1.359	7,944,104	372,002	8,316,106	2.822	2.696
6/30/06-07	289,603	3.148	4,409,792	1.421	7,111,104	312,671	7,423,776	2.563	2.455
6/30/07-08	354,668	3.183	4,162,771	1.490	7,875,495	299,911	8,175,406	2.305	2.221
6/30/08-09	332,413	3.220	3,295,878	1.615	7,373,257	248,784	7,622,040	2.293	2.218
6/30/09-10	336,338	3.233	1,983,041	1.907	7,153,545	187,038	7,340,583	2.183	2.127
6/30/10-11	333,783	3.228	2,210,801	2.560	8,777,660	257,760	9,035,421	2.707	2.630
6/30/11-12	348,187	3.250	628,004	5.503	9,887,603	177,929	10,065,532	2.891	2.840
Total	6,712,116		154,839,677		210,215,215	12,660,899	222,876,114		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 4, Exhibit 1, Page 4, Column 11
- (4) From Section 4, Exhibit 1, Page 2, Column 3
- (5) From Section 4, Exhibit 1, Page 2, Column 4
- $(6) = (4) + [\{1 \{1/(5)\}\} \times (3) \times (2) \times 10]$
- (7) From Section 4, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10

Section 4 Exhibit 1 Page 4

Department of Corrections - Cluster 3
Indemnity

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Exp Ult Loss	Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Excluding	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Lump Sum	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									2.565	2.565
6/30/85-86									4.195	4.195
6/30/86-87									2.735	2.735
6/30/87-88									3.672	3.672
6/30/88-89									3.331	3.331
6/30/89-90									4.752	4.752
6/30/90-91	169,902	12,944,816	7.619	0.946	7.208	1.000	7.208	3.435	8.231	7.577
6/30/91-92	165,926	4,187,912	2.524	1.038	2.620	1.000	2.620	3.131	2.563	2.536
6/30/92-93	174,198	2,814,037	1.615	1.210	1.955	1.000	1.955	2.685	1.682	1.648
6/30/93-94	185,946	4,550,830	2.447	1.195	2.924	1.000	2.924	2.720	2.492	2.458
6/30/94-95	194,051	6,196,520	3.193	1.184	3.780	1.000	3.780	2.746	3.234	3.171
6/30/95-96	205,262	5,302,234	2.583	1.174	3.033	1.000	3.033	2.768	2.663	2.594
6/30/96-97	234,073	6,096,911	2.605	1.163	3.029	1.000	3.029	2.795	2.714	2.618
6/30/97-98	221,865	8,846,934	3.988	1.148	4.577	1.000	4.577	2.832	3.992	3.895
6/30/98-99	256,071	8,806,193	3.439	1.133	3.895	1.000	3.895	2.869	3.511	3.388
6/30/99-00	268,486	9,598,439	3.575	1.114	3.984	1.000	3.984	2.916	3.648	3.509
6/30/00-01	279,182	12,484,513	4.472	1.086	4.857	1.000	4.857	2.992	4.490	4.324
6/30/01-02	283,070	10,710,621	3.784	1.065	4.030	1.000	4.030	3.052	3.873	3.711
6/30/02-03	289,846	10,515,697	3.628	1.061	3.850	1.000	3.850	3.063	3.759	3.571
6/30/03-04	293,771	9,725,641	3.311	1.061	3.513	1.000	3.513	3.063	3.485	3.286
6/30/04-05	291,382	10,467,318	3.592	1.054	3.788	1.000	3.788	3.082	3.757	3.082
6/30/05-06	294,709	7,501,641	2.545	1.044	2.657	1.000	2.657	3.114	3.834	3.114
6/30/06-07	289,603	6,266,398	2.164	1.032	2.234	1.000	2.234	3.148	3.914	3.148
6/30/07-08	354,668	6,202,805	1.749	1.021	1.786	1.000	1.786	3.183	3.997	3.183
6/30/08-09	332,413	5,323,909	1.602	1.009	1.617	1.000	1.617	3.220	4.084	3.220
6/30/09-10	336,338	3,781,036	1.124	1.005	1.130	1.000	1.130	3.233	4.141	3.233
6/30/10-11	333,783	5,659,825	1.696	1.007	1.707	1.000	1.707	3.228	4.208	3.228
6/30/11-12	348,187	3,455,693	0.992	1.000	0.992	1.000	0.992	3.250		3.250
Total	5,802,733	161,439,921			_	<u> </u>				
			Trend L	ast 4 (ex 11-12):	-4.8%	Avg 3 (x11-12):	1.485			
			Trend L	ast 8 (ex 11-12):	-14.1%	Avg 5 (x11-12):	1.695			
			Trend La	st 12 (ex 11-12):	-11.3%	Avg 10 (x11-12):	2.631			

1.0%

0.0%

Prior Sel Avg:

Sel. Loss Cost:

4.250

3.250

Prior Selected Trend:

Selected Trend:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 4, Exhibit 1, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCRIB $\,$
- (6) = (4) x (5)(7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$
- (6) = (0) X (7)
- (9) = Sel. Loss Cost / [(5) * (7)]
- $\left(10\right)$ From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

Section 4 Exhibit 1 Page 5

Department of Corrections - Cluster 3 Indemnity

Calculation of 1982 & Prior Reserves (Page 1)

Method 1			
(1)	Average Payment Trend		1.000
(2)	Credibility		19%
(3)	Average Pmt Trend Statewide		0.960
(4)	Credibility Weighted Trend		0.968
	-	(Low)	(High)
(5)	Selected Range	0.948	0.977
(6)	Incremental Paid for 2012	88,958	88,958
(7)	Estimated Reserve	1,632,580	3,839,730
(8)	Paid to Date (82 & Prior)	3,548,250	3,548,250
(9)	Est Ult Paid for 1982 & Prior	5,180,830	7,387,980
M.d. 12	<u> </u>		
Method 2	<u> </u>	(Current)	(Prior)
(10)	Avg Ingramental Paid (2 year)	104,287	113,997
(10) (11)	Avg Incremental Paid (3 yrs) Projected Number of Years	3	3
	Estimated Reserve	312,862	341,990
(12)			
(13)	Paid to Date (82 & Prior)	3,548,250	3,459,292
(14)	Est Ult Paid for 1982 & Prior	3,861,112	3,801,282
(14a)	Paid Counts During Fiscal Year	4	3
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	4,191,042	4,697,957
(16)	Lump Sum Ultimates	160,000	160,000
(17)	Ult Loss Including Lump Sums	4,351,042	4,857,957
(18)	Implied Tail	1.181	1.324
(19)	Ult Loss Inc Lump Sums @ 6/11	4,376,228	4,973,097
NOTES:			
	n 4, Exhibit 1, Page 6		(10) Avg of 3 latest years from Section 4, Exhibit 1, Page 6, Column 3
	of Section 4, Exhibit 1, Page 6, Column 3 / 3,000,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta			(12) = (10 x (11))
(3) Average Sta $(4) = (1) \times (2) +$			$(12) = (10 \times (11))$ $(14) = (12) + (13)$
	gmentally based on (4)		(14) - (12) + (13) (15) = Average of (9) and (14)
•	ded by Commonwealth of Massachusetts		(13) = Average of (9) and (14) (16) From Section 4, Exhibit 1, Page 9, Column 13
$(7) = (6) \times (5) /$	•		(10) From Section 4, Exhibit 1, Page 9, Column 13 $(17) = (15) + (16)$
	Section 4, Exhibit 1, Page 2, Column 3		(17) = (13) + (10) $(18) = (15) / (8)$
(8), (10) From S (9) = (7) + (8)	oction 4, Exhibit 1, rage 2, Column 3		(18) = (13) / (8) (19) From Aon analysis as of June 30, 2011
(2) - (1) + (8)			(17) From Aon analysis as of June 30, 2011



Section 4 Exhibit 1 Page 6

Department of Corrections - Cluster 3 Indemnity

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	188,569	12.147			
1993	2	151,483	11.928	0.803		
1994	3	104,509	11.557	0.690		
1995	4	93,428	11.445	0.894		
1996	5	94,858	11.460	1.015		
1997	6	35,075	10.465	0.370		
1998	7	103,538	11.548	2.952		
1999	8	96,697	11.479	0.934		
2000	9	73,478	11.205	0.760	n =	21
2001	10	66,717	11.108	0.908	S(x) =	42,042
2002	11	70,033	11.157	1.050	S(x-sq) =	84,168,854
2003	12	124,671	11.733	1.780	S(xy) =	484,900
2004	13	92,927	11.440	0.745	S(y) =	242
2005	14	283,599	12.555	3.052	D =	16,170
2006	15	99,838	11.511	0.352	slope =	0.003
2007	16	101,854	11.531	1.020	Avg Trend =	1.003
2008	17	110,209	11.610	1.082		
2009	18	118,086	11.679	1.071		
2010	19	114,911	11.652	0.973		
2011	20	108,994	11.599	0.949		
2012	21	88,958	11.396	0.816		

Selected Trend: 1.000

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.816 = 88958 / 108994



Commonwealth of Massachusetts Workers Compensation Department of Corrections - Cluster 3 INDEMNITY Paid Loss Development Paid Loss (Excluding Lump Sum)

AON

Acc Yr Ending June-83 June-84 June-85 June-88 June-88 June-89 June-90 June-91 June-91 June-91 June-92 June-93 June-94 June-95 June-96 June-97 June-98 June-90	1,000,517 963,115 801,947 875,165 1,066,149 1,138,070 1,262,694 1,638,670 1,336,118 1,879,439 2,226,443 2,226,43 2,226,43 2,224,570 2,245,70 2,417,949 1,249,960 1,249,960 1,249,960 1,249,960 1,249,960 1,249,960 1,249,960	24 374,220 331,713 647,928 1,389,906 1,057,238 1,737,832 1,738,581,07 2,462,230 1,684,344 1,527,666 1,819,302 2,306,245 2,306,245 2,905,519 4,927,848 4,640,913 5,029,957 4,500,943 4,614,395 3,095,519 4,614,395 3,097,999 2,815,182 2,815,182 2,223,832 1,619,359 2,223,832 1,619,359 2,223,832 1,619,359 2,223,832 1,619,359 2,210,801	1,522,773 2,686,963 2,435,784 3,953,901 3,477,661 2,020,505 1,907,058 2,941,602 2,766,267 3,329,480 4,206,538 4,075,622 5,337,812 6,754,618 6,255,872 6,520,088 4,213,87 3,556,899 3,332,948	4,227,150 2,282,563 2,209,630 2,739,772 3,493,104 3,096,876 3,919,297 4,955,846 4,979,874 6,367,281 8,128,201 7,251,577 7,358,736 6,696,306 6,941,629 4,926,296	2,928,617 2,261,898 4,220,441 3,492,498 5,310,648 4,729,807 2,488,454 2,348,676 2,916,720 3,941,201 3,400,508 4,322,162 5,569,408 5,569,408 5,569,408 5,721,19 8,912,524 7,963,011 7,139,497 7,354,316 5,233,916 4,280,218	845,012 1,636,071 3,253,763 2,491,874 4,682,677 3,784,686 5,694,385 5,106,814 2,659,321 2,429,818 3,056,071 4,297,491 3,669,768 4,636,666 6,119,997 7,368,789 9,501,364 8,205,089 8,162,267 7,374,551 7,648,410 5,403,1457	84 973,143 1.810,725 3.464,240 2.659,729 4.070,002 6.073,411 5.363,266 2.775,749 2.460,521 3.202,146 4.665,184 3.910,958 4.943,217 6.488,625 6.542,142 7.595,232 9.916,815 8.352,527 8.271,915 7.595,328 8.352,527 8.271,915 7.518,148 7.859,634 5.520,760	1,100,933 1,948,970 3,764,813 2,799,050 5,026,539 4,251,487 6,354,690 5,600,518 2,916,157 2,483,853 3,363,364 4,944,044 4,114,697 6,776,193 7,618,785 10,090,085 8,442,240 8,286,330 7,544,299	108 1,471,217 1,224,966 2,082,835 3,935,847 2,901,503 5,141,074 4,490,766 6,596,629 5,854,394 3,056,759 2,505,893 3,490,849 2,605,893 3,490,849 4,277,458 6,853,928 6,959,053 7,768,614 10,093,706 8,504,072 8	1,294,374 2,178,082 4,097,154 3,021,876 5,202,833 4,687,032 6,831,981 6,102,795 3,187,754 2,512,506 3,617,239 5,143,804 4,365,040 5,193,663 7,016,935 7,099,219 7,812,460 10,098,792	1,350,379 2,319,274 4,211,904 3,103,922 5,239,349 4,846,109 7,007,542 6,340,515 3,331,193 2,512,506 3,691,543 5,226,875 4,414,632 5,222,438 7,118,193 7,215,948 7,834,124 10,102,701	1,377,980 2,402,755 4,374,071 3,271,697 5,242,532 4,998,762 7,150,038 6,600,177 3,457,174 2,515,387 3,766,820 5,309,969 4,445,368 5,229,461 7,210,560 7,278,599 7,857,055	1,386,759 2,445,792 4,479,419 3,314,455 5,243,019 5,152,745 7,296,131 6,839,938 3,499,791 2,517,666 3,806,934 5,385,490 4,479,763 5,229,461 7,304,495	4,611,691 3,410,332 5,243,019 5,318,978 7,414,103 7,070,212 3,525,037 2,518,289 3,840,602 5,413,698	1,386,759 2,628,105 4,746,846 3,452,632 5,260,048 5,453,186 7,526,903 7,325,430 3,564,269 2,518,289 3,876,771 5,413,698 4,547,750	2,728,723 4,891,689 3,495,733 5,288,978 5,596,167 7,637,465 7,572,623 3,587,669 2,518,289	1,386,759 2,834,546 5,026,555 3,527,775 5,318,482 5,742,890 7,757,732 7,805,418 3,612,762 2,518,289 3,951,801 5,415,952	216 1.386,759 2.914,527 5.162,645 3.544,280 5.326,859 5.326,859 5.82,925 3.61,736 2.518,289 3,987,674 5,416,002	1,386,759 2,998,669	1,386,759 3,082,607 5,417,172 3,544,280 5,361,539 6,031,181 7,972,756 8,354,608 3,755,041	1,386,759 3,169,057 5,551,316 3,544,280 5,362,873 6,137,243 8,030,743	1,386,759 3,258,902 5,691,506 3,544,280 5,362,873 6,244,608	1,386,759 3,352,791 5,810,912 3,544,280 5,362,873 6,352,619	288 1.386,759 3.451,011 5.380,873 6.475,512	1,386,759 3,510,756 6,004,210		1,386,759 3,604,884		348 2,566,735 1,386,759	360 2,566,735
Age-to-Age Face Acc Y Ending June-84 June-84 June-85 June-86 June-86 June-87 June-88 June-90 June-91 June-92 June-92 June-93 June-94 June-95 June-95 June-96 June-97 June-98 June-90 June-01 June-01 June-01 June-04 June-05 June-05 June-06 June-07 June-08 June-09 June-10 June-11	12-24 2.326 2.222 2.326 2.326 2.326 2.326 2.326 2.326 2.326 2.326 2.328 2.461 1.749 1.1905 2.079 2.163 1.163 1.1950 2.227 2.132 2.213 2.214 2.214 2.244	24-36 1.428 1.408 1.428 1.428 1.428 1.428 1.546 1.546 1.546 1.546 1.311 1.275 1.217 1.316 1.370 1.370 1.370 1.371 1.371 1.372	36-48 1-264 1-263 1-252 1-247 1-270 1-305 1-305 1-1255 1-222 1-130 1-149 1-149 1-149 1-159 1-149 1-159 1-122 1-122 1-123 1-124 1-124 1-125	48-60 1.202 1.188 1.200 1.183 1.169 1.204 1.142 1.095 1.119 1.093 1.195 1.124 1.153 1.095	60-72 1.175 1.205 1.215 1.117 1.111 1.110 1.1108 1.1080 1.069 1.035 1.048 1.090 1.073 1.073 1.079 1.073 1.090 1.075 1.040 1.045 1.040 1.055 1.040 1.055 1.040 1.055 1.040 1.055 1.040 1.055 1.040 1.055 1.040 1.055 1.040 1.055 1.05	72-84 1.171 1.152 1.165 1.067 1.045 1.075 1.075 1.075 1.075 1.075 1.075 1.086 1.086 1.086 1.086 1.096 1.095 1.091	84-96 1.168 1.168 1.1076 1.087 1.087 1.082 1.027 1.027 1.027 1.045 1.044 1.051 1.040 1.052 1.034 1.031 1.031 1.031 1.031 1.031 1.031 1.031	96-108 1.128 1.113 1.113 1.069 1.045 1.037 1.023 1.038 1.045 1.048 1.049 1.040 1	108-120 1.111 1.057 1.046 1.041 1.041 1.012 1.043 1.043 1.043 1.043 1.043 1.043 1.043 1.043 1.043 1.043 1.043 1.043 1.044 1.042 1.043 1.044 1.043 1.044 1.043 1.044 1.043 1.043 1.044 1.04	120-132 1.075 1.043 1.065 1.028 1.028 1.039 1.045 1.039 1.045 1.040 1.021 1.016 1.011 1.016 1.016 1.016 1.016	132-144 1.058 1.020 1.036 1.039 1.031 1.001 1.001 1.001 1.001 1.001 1.001 1.000 1.00	144-156 1.048 1.006 1.008 1.002 1.013 1.003 1.003 1.000 1.013 1.020 1.013 1.014 1.014 1.008 1.000 1.013 1.000 1.013	156-168 1.041 1.000 1.037 1.030 1.029 1.000 1.032 1.016 1.034 1.007 1.009 1.005 1.005 1.008	168-180 1.058 1.000 1.036 1.029 1.025 1.015 1.015 1.015 1.015 1.015 1.016 1.011 1.000 1.000 1.000 1.003	180-192 1.014 1.000 1.000 1.038 1.031 1.031 1.012 1.005 1.026 1.015 1.034 1.007 1.000 1.010 1.000 1.010	192-294 1.012 1.003 1.039 1.028 1.009 1.026 1.006 1.016 1.016 1.016 1.016 1.000 1.000	204-216 1.014 1.000 1.028 1.027 1.005 1.005 1.009 1.009 1.009 1.000 1.000	216-228 1.037 1.000 1.029 1.024 1.020 1.000 1.000 1.000 1.017 1.011 1.014 1.014 1.000 1.000	228-240 1.015 1.000 1.000 1.028 1.024 1.024 1.000 1.001 1.001 1.007 1.007 1.006	240-252 1.015 1.000 1.028 1.025 1.020 1.000 1.000 1.018 1.011 1.011	252-264 1.015 1.000 1.000 1.028 1.025 1.000 1.000 1.017 1.017	264-276 1.015 1.005 1.0029 1.021 1.000 1.000 1.007	276-288 1.015 1.000 1.029 1.019 1.000 1.003 1.019	288-200 1.016 1.000 1.007 1.017 1.014 1.000 1.000	300-312 1.011 1.000 1.013 1.010 1.000	312-324 1.000 1.000 1.013 1.000	324-336 1.000 1.000 1.013	336-348 1.000 1.000	348-360 1.000	
Averages Simple Avg All Yrs	12-24 2.149	24-36 1.343	36-48 1.193	48-60 1.116	60-72 1.081	72-84 1.059	84-96 1.046	96-108 1.036	108-120 1.029	120-132 1.024	132-144 1.022	144-156 1.015	156-168 1.016	168-180 1.016	180-192 1.013	192-204 1.014	204-216 1.012	216-228 1.014	228-240 1.011	240-252 1.012	252-264 1.012	264-276 1.011	276-288 1.012	288-300 1.008	300-312 1.007	312-324 1.003	324-336 1.004	336-348 1.000	348-360 1.000	To Ult
Latest 5 Latest 3 <u>Volume Wtd</u> All Yrs	2.061 2.049 2.118	1.289 1.259 1.332	1.152 1.146 1.180	1.067 1.071 1.102	1.032 1.034	1.020 1.023	1.009 1.005	1.006 1.003	1.007 1.003	1.008 1.003	1.005 1.004 1.017	1.005 1.006 1.014	1.006 1.005	1.006 1.007	1.003 1.003 1.015	1.005 1.006 1.015	1.010 1.003	1.012 1.008	1.010 1.009	1.010 1.010	1.007 1.012	1.009 1.008	1.014 1.008	1.006 1.005	1.007 1.008	1.004	1.004	1.000	1.000	
Latest 5 Latest 3	2.067 2.057	1.297 1.263	1.154 1.145	1.066 1.070	1.032 1.035	1.020 1.023	1.009 1.005	1.005 1.003	1.006 1.003	1.007 1.003	1.005 1.004	1.006 1.006	1.006 1.006	1.006 1.007	1.003 1.002	1.005 1.006	1.013 1.003	1.015 1.009	1.012 1.012	1.010 1.010	1.008 1.011	1.012 1.010 1.009	1.014	1.005 1.005	1.008 1.008	1.004	1.006			
Dev Factor Select Industry 1 Industry 2 Prior Selected FacToUlt Percent of Ult	2.781 2.781 2.120 2.149 5.503 18.2%	1.499 1.746 1.334 1.343 2.560 39.1%	1.187 1.300 1.181 1.180 1.907 52.4%	1.084 1.126 1.085 1.084 1.615 61.9%	1.039 1.062 1.051 1.049 1.490 67.1%	1.019 1.029 1.047 1.046 1.421 70.4%	1.012 1.020 1.033 1.031 1.359 73.6%	1.009 1.023 1.023 1.318 75.9%	1.008 1.020 1.018 1.288 77.6%	1.005 1.016 1.016 1.266 79.0%	1.006 1.011 1.009 1.246 80.3%	1.010 1.015 1.014 1.235 81.0%	1.003 1.016 1.015 1.218 82.1%	1.002 1.016 1.016 1.200 83.3%	1.004 1.016 1.015 1.182 84.6%	1.003 1.016 1.015 1.165 85.8%	1.001 1.008 1.003 1.148 87.1%	1.001 1.013 1.012 1.144 87.4%	1.001 1.011 1.012 1.131 88.5%	1.001 1.014 1.014 1.117 89.5%	1.018 1.018 1.102 90.8%	1.017 1.017 1.083 92.4%	1.008 1.008 1.065 93.9%	1.008 1.008 1.057 94.6%	1.004 1.004 1.048 95.4%	1.004 1.004 1.044 95.8%	1.004 1.004 1.040 96.1%	1.004 1.004 1.036 96.5%	1.039 1.004 1.032 96.9%	1.028 1.028 97.3%

Commonwealth of Massachusetts Workers Compensation

Reserve Analysis at June 30, 2012

Department of Corrections - Cluster 3 Indemnity

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ite Loss	Ultima	ite Loss	Change in U	ltimate Loss	Change in Ul	timate Loss
Accident	As of	f 6/11	As of	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	4,376,228	4,973,097	4,351,042	4,857,957	(25,187)	-0.6%	(115,140)	-2.3%
6/30/82-83	3,037,503	3,115,000	3,005,772	3,083,000	(31,731)	-1.0%	(32,000)	-1.0%
6/30/83-84	1,428,857	1,465,000	1,413,209	1,449,000	(15,648)	-1.1%	(16,000)	-1.1%
6/30/84-85	4,279,940	4,505,000	4,293,181	4,519,000	13,240	0.3%	14,000	0.3%
6/30/85-86	7,548,280	7,946,000	7,478,185	7,872,000	(70,095)	-0.9%	(74,000)	-0.9%
6/30/86-87	4,083,000	4,091,000	4,042,000	4,050,000	(41,000)	-1.0%	(41,000)	-1.0%
6/30/87-88	6,469,000	6,731,000	6,381,000	6,641,000	(88,000)	-1.4%	(90,000)	-1.3%
6/30/88-89	7,374,000	8,111,000	7,424,000	8,154,000	50,000	0.7%	43,000	0.5%
6/30/89-90	9,745,000	9,763,000	9,616,000	9,621,000	(129,000)	-1.3%	(142,000)	-1.5%
6/30/90-91	10,714,000	14,946,000	10,405,000	13,827,000	(309,000)	-2.9%	(1,119,000)	-7.5%
6/30/91-92	4,609,000	4,612,000	4,571,000	4,573,000	(38,000)	-0.8%	(39,000)	-0.8%
6/30/92-93	3,502,000	3,510,000	3,451,000	3,457,000	(51,000)	-1.5%	(53,000)	-1.5%
6/30/93-94	5,440,000	5,445,000	5,394,000	5,396,000	(46,000)	-0.8%	(49,000)	-0.9%
6/30/94-95	7,026,000	7,029,000	6,924,000	6,929,000	(102,000)	-1.5%	(100,000)	-1.4%
6/30/95-96	5,864,000	5,872,000	5,754,000	5,757,000	(110,000)	-1.9%	(115,000)	-2.0%
6/30/96-97	7,046,000	7,059,000	6,865,000	6,869,000	(181,000)	-2.6%	(190,000)	-2.7%
6/30/97-98	9,417,000	9,444,000	9,247,000	9,279,000	(170,000)	-1.8%	(165,000)	-1.7%
6/30/98-99	9,222,000	9,232,000	8,965,000	8,987,000	(257,000)	-2.8%	(245,000)	-2.7%
6/30/99-00	10,146,000	10,162,000	9,842,000	9,874,000	(304,000)	-3.0%	(288,000)	-2.8%
6/30/00-01	13,269,000	13,734,000	12,264,892	12,950,000	(1,004,108)	-7.6%	(784,000)	-5.7%
6/30/01-02	11,389,000	11,407,000	11,011,000	11,052,000	(378,000)	-3.3%	(355,000)	-3.1%
6/30/02-03	11,404,000	11,411,000	10,397,450	10,962,000	(1,006,550)	-8.8%	(449,000)	-3.9%
6/30/03-04	10,630,000	10,647,000	9,643,043	10,159,000	(986,957)	-9.3%	(488,000)	-4.6%
6/30/04-05	11,366,000	11,367,000	10,513,000	10,872,000	(853,000)	-7.5%	(495,000)	-4.4%
6/30/05-06	8,807,000	9,344,000	7,874,000	8,316,000	(933,000)	-10.6%	(1,028,000)	-11.0%
6/30/06-07	7,711,000	8,541,000	7,001,000	7,424,000	(710,000)	-9.2%	(1,117,000)	-13.1%
6/30/07-08	8,241,000	9,796,000	7,339,000	8,175,000	(902,000)	-10.9%	(1,621,000)	-16.5%
6/30/08-09	7,822,000	9,774,000	6,597,000	8,003,000	(1,225,000)	-15.7%	(1,771,000)	-18.1%
6/30/09-10	7,418,000	10,412,000	5,654,000	7,708,000	(1,764,000)	-23.8%	(2,704,000)	-26.0%
6/30/10-11	9,259,000	12,775,000	7,477,000	9,487,000	(1,782,000)	-19.2%	(3,288,000)	-25.7%
6/30/11-12								
Total	228,643,808	247,219,097	215,193,774	230,302,957	(13,450,034)	-5.9%	(16,916,140)	-6.8%

NOTES:

Section 4

Exhibit 1

Page 8

^{(2), (3)} From Aon analysis as of June 30, 2011

^{(4), (5)} From Section 4, Exhibit 1, Page 1, Columns 6, 7

^{(6) = (4) - (2)}

^{(7) = (4) / (2) - 1}

^{(8) = (5) - (3)}

^{(9) = (5) / (3) - 1}



Department of Corrections - Cluster 3 Indemnity

Calculation of Ultimate Lump Sum Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
·	Paid Loss	Implied	Ult Loss	Selected Incr	Cumulative	Total	Paid	Est Ult	Ultimate		Est Ult	Selected	Prior
Accident	Excluding	Cumulative	Excluding	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum -	Lump Sum	Lump Sum	Lump Sum -	Est Ultimate	Est Ultimate
Year	Lump Sum	LDF	Lump Sum	% Outstdg	% Outstdg	Outstdg	to Date	Incr Method	Percentage	LDF	Paid Method	Lump Sums	Lump Sums
All Prior Yrs	3,548,250	1.253	4,444,499	0.0%	0.0%	0	160,000	160,000	3.6%	1.000	160,000	160,000	160,000
6/30/82-83	2,566,735	1.131	2,901,762	0.0%	0.0%	0	181,081	181,081	6.2%	1.000	181,081	181,081	181,081
6/30/83-84	1,386,759	1.032	1,430,945	0.0%	0.0%	0	18,501	18,501	1.3%	1.000	18,501	18,501	18,501
6/30/84-85	3,653,451	1.347	4,920,420	0.0%	0.0%	0	180,850	180,850	3.7%	1.000	180,850	180,850	180,850
6/30/85-86	6,067,508	1.456	8,835,429	0.0%	0.0%	0	320,000	320,000	3.6%	1.000	320,000	320,000	318,000
6/30/86-87	3,544,280	1.044	3,701,272	0.0%	0.0%	0	340,360	340,360	9.2%	1.000	340,360	340,360	340,360
6/30/87-88	5,380,873	1.101	5,923,777	0.0%	0.0%	0	717,002	717,002	12.1%	1.000	717,002	717,002	717,002
6/30/88-89	6,475,512	1.163	7,528,076	0.0%	0.0%	0	626,200	626,200	8.3%	1.000	626,200	626,200	616,200
6/30/89-90	8,148,032	1.065	8,676,487	0.0%	0.0%	0	944,900	944,900	10.9%	1.000	944,900	944,900	944,900
6/30/90-91	8,541,379	1.516	12,944,816	0.0%	0.0%	0	881,768	881,768	6.8%	1.000	881,768	881,768	881,768
6/30/91-92	3,800,723	1.102	4,187,912	0.0%	0.0%	0	383,251	383,251	9.2%	1.000	383,251	383,251	383,251
6/30/92-93	2,518,289	1.117	2,814,037	0.0%	0.0%	0	637,301	637,301	22.6%	1.000	637,301	637,301	637,301
6/30/93-94	4,025,425	1.131	4,550,830	0.0%	0.0%	0	842,675	842,675	18.5%	1.000	842,675	842,675	842,675
6/30/94-95	5,416,002	1.144	6,196,520	0.0%	0.0%	0	732,613	732,613	11.8%	1.000	732,613	732,613	732,613
6/30/95-96	4,620,397	1.148	5,302,234	0.0%	0.0%	0	452,000	452,000	8.5%	1.000	452,000	452,000	452,000
6/30/96-97	5,232,660	1.165	6,096,911	0.0%	0.0%	0	767,601	767,601	12.6%	1.000	767,601	767,601	768,453
6/30/97-98	7,484,278	1.182	8,846,934	0.0%	0.0%	0	431,718	431,718	4.9%	1.002	432,612	432,165	437,187
6/30/98-99	7,335,907	1.200	8,806,193	0.1%	0.1%	8,806	176,053	184,859	2.1%	1.004	176,789	180,824	186,300
6/30/99-00	7,878,617	1.218	9,598,439	0.1%	0.2%	19,197	264,102	283,299	3.0%	1.013	267,629	275,464	287,347
6/30/00-01	10,107,752	1.235	12,484,513	0.2%	0.4%	49,938	415,283	465,221	3.7%	1.026	425,990	465,221	492,334
6/30/01-02	8,597,046	1.246	10,710,621	0.2%	0.6%	64,264	276,881	341,145	3.2%	1.040	287,834	341,145	361,521
6/30/02-03	8,307,565	1.266	10,515,697	0.2%	0.8%	82,686	363,503	446,189	4.2%	1.055	383,443	446,189	482,995
6/30/03-04	7,548,670	1.288	9,725,641	0.3%	1.1%	105,651	327,430	433,081	4.5%	1.085	355,343	433,081	458,978
6/30/04-05	7,944,264	1.318	10,467,318	0.2%	1.3%	134,643	269,550	404,193	3.9%	1.105	297,882	404,193	422,975
6/30/05-06	5,520,760	1.359	7,501,641	0.2%	1.5%	111,498	260,504	372,002	5.0%	1.145	298,168	372,002	393,881
6/30/06-07	4,409,792	1.421	6,266,398	0.2%	1.7%	105,671	207,000	312,671	5.0%	1.229	254,308	312,671	325,252
6/30/07-08	4,162,771	1.490	6,202,805	0.4%	2.1%	129,410	170,501	299,911	4.8%	1.357	231,334	299,911	316,571
6/30/08-09	3,295,878	1.615	5,323,909	0.6%	2.7%	143,017	105,767	248,784	4.7%	1.757	185,813	248,784	249,490
6/30/09-10	1,983,041	1.907	3,781,036	0.7%	3.4%	128,038	59,000	187,038	4.9%	3.047	179,757	187,038	180,917
6/30/10-11	2,210,801	2.560	5,659,825	1.0%	4.3%	246,010	11,750	257,760	4.6%	11.240	132,065	257,760	273,478
6/30/11-12	628,004	5.503	3,455,693	0.8%	5.1%	177,929	0	177,929	5.1%	55.523	0	177,929	
Total	162,341,421		209,802,587	•		1,506,759	11,525,145	13,031,903	6.2%	•	12,095,069	13,020,481	13,044,181

- (2) From Section 4, Exhibit 1, Page 2, Column 3
- (3) = (4) / (2)
- (4) From Section 4, Exhibit 1, Page 2, Column 6
- (5) From Section 4, Exhibit 1, Page 11
- (6) Downward sum of (5)
- $(7) = (6) \times (4)$
- (8) From Section 4, Exhibit 1, Page 10
- (9) = (7) + (8)
- (10) = (9) / (4)
- (11) From Section 4, Exhibit 1, Page 12
- $(12) = (8) \times (11)$
- (13) Selected based on (9) and (12)
- (14) From Aon analysis as of June 30, 2011



Commonwealth of Massachusetts Workers Compensation Department of Corrections - Cluster 3 INDEMNITY

Lump Sum Development
Incremental Lump Sum Payments

84-96 108-120 120-132 132-144 Acc Yr Ending 0-12 12-24 24-36 36-48 48-60 60-72 72-84 96-108 144-156 156-168 168-180 180-192 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 336-348 15,000 26,000 60,000 1,500 17,500 35,000 41,581 41,000 46,000 18 500 Jun-84
Jun-85
Jun-86
Jun-87
Jun-88
Jun-90
Jun-91
Jun-92
Jun-93
Jun-95
Jun-95
Jun-96
Jun-97
Jun-98
Jun-90
Jun-01
Jun-01
Jun-02
Jun-03
Jun-04
Jun-05
Jun-05
Jun-06
Jun-07
Jun-08
Jun-08
Jun-09
Jun-01
Jun-11
Jun-12
Jun-11
Jun-12 11,000 20,000 69,000 42,000 38,850 68,000 22,500 40,000 10,000 40,000 27,000 25,001 23,000 48,000 2,000 30,000 50,000 45,000 20,000 31,500 25,000 17,000 22,500 27,000 191,500 38,250 199,000 11,250 102,000 85,000 37,000 14,859 12 000 60,000 3,000 30,000 17,000 70,500 104,500 27,700 94,000 116,000 181,925 187,000 32,000 190,500 125,715 4,500 133,000 321,471 95,000 160,700 221,000 125,000 151,700 173,500 50,000 27,000 101,000 5,000 16,700 86,200 139,500 157,000 73,000 70,000 98,000 30,000 40,000 49,500 170,000 18,500 10.000 12,500 1,000 5,000 19,996 30,500 122,600 162,000 181,000 90,000 80,001 77,500 68,000 40.000 40,000 100 10,000 11,250 12,501 119,000 7,500 12,000 52,000 7,500 15,750 4,500 6.000 6.000 172,000 35,000 268,000 160,501 82,000 335,000 120,000 25,000 15,000 9,001 8,001 18,613 135,000 70,000 10,000 1,000 0 32,000 12,000 23,000 24,000 29,000 12,800 17,500 73,389 66,000 21,500 65,000 59,500 56,500 43,000 10,000 16,000 20,800 17,000 20,600 12,201 9.000 20,500 28,500 33,503 7,000 10,001 35,000 15,000 4,500 20,500 8,001 10,000 4,000 20,000 5,000 74,500 43,880 110,001 84,502 108,002 24,502 69,500 37,000 42,767 56,000 91,750 78,101 93,000 47,501 77,501 26,003 37,546 81,500 50,000 25,500 8,001 1 85,500 89,900 99,500 81,000 80,002 89,501 113,501 32,500 72,000 47,000 27,501 7,500 8,490 0 18,000 10,000 58,500 21,923 12,500 35,001 36,000 36,001 16,000 3,000 11,750 3,000 5,000 15,000 12,000 10,001 6,000 19,000 Cumulative Lump Sum Payments Acc Yr Ending 12 24 36 0 0 72 0 0 Ace Yr Ending
All Prior Yr.
Al 120 312 324 336 264 158,500 181,081 18,501 180,850 270,000 340,360 717,001 616,200 944,900 881,768 15,000 52,500 18,500 72,500 181,081 18,500 180,850 270,000 328,360 2/6 160,000 181,081 18,501 180,850 270,000 340,360 717,001 616,200 944,900 160,000 181,081 18,501 180,850 270,000 340,360 717,002 626,200 160,000 181,081 18,501 180,850 270,000 340,360 717,002 160,000 181,081 18,501 180,850 15,000 94,081 18,500 142,000 15,000 135,081 18,500 142,000 270,000 313,501 98,500 181,081 18,501 180,850 160,000 181,081 18,501 180,850 318,000 340,360 160,000 181,081 18,501 180,850 15,000 17,500 18,500 160,000 181,081 18,501 160,000 181,081 98,500 181,081 18,501 180,850 270,000 328,360 714,000 597,700 927,400 871,668 383,251 637,301 836,675 732,613 452,000 767,601 158,500 181,081 18,501 180,850 270,000 328,360 714,000 616,200 927,400 871,768 383,251 637,301 836,675 732,613 452,000 767,601 158,500 181,081 18,501 180,850 270,000 328,360 714,000 616,200 927,400 871,768 383,251 637,301 842,675 732,613 452,000 158,500 181,081 18,501 180,850 270,000 340,360 717,000 616,200 927,400 871,768 383,251 637,301 842,675 732,613 158,500 181,081 18,501 180,850 270,000 340,360 717,000 616,200 932,400 881,768 383,251 637,301 842,675 158,500 181,081 18,501 180,850 270,000 340,360 717,001 616,200 944,900 881,768 383,251 637,301 158,500 181,081 18,501 180,850 270,000 340,360 717,001 616,200 944,900 881,768 383,251 160,000 17,500 31,000 175,000 180,251 11,000 98,000 90,000 11,000 108,000 117,000 11.000 31,000 148,000 155,250 499,000 448,200 618,400 791,667 359,500 625,301 802,925 674,613 402,000 721,000 100,000 100,000 225,000 191,501 225,000 276,501 270,000 276,501 270,000 328,360 30,000 67,500 68,500 80,000 254,200 369,167 219,500 399,300 616,925 459,613 402,000 638,000 342,716 20,001 118,001 172,891 320,000 45,000 48,500 75,500 121,200 47,696 124,500 395,925 377,613 67,000 518,000 342,716 20,000 32,501 82,991 20,000 31,500 5,000 16,700 19,996 30,500 122,600 214,000 190,613 35,000 327,500 217,001 313,501 714,000 597,700 927,400 871,668 370,750 637,301 830,675 700,613 452,000 767,601 90,000 108,500 205,000 405,900 542,667 269,500 426,300 717,925 594,613 402,000 681,000 117,000 300,000 291,200 545,400 723,667 359,500 506,301 795,425 664,613 402,000 705,000 714,000 597,700 927,400 871,668 359,500 637,301 826,175 699,613 452,000 750,601 431,718 168,052 264,102 415,283 522,000 518,200 716,400 791,667 359,500 625,301 810,425 674,613 402,000 741,600 414,717 160,051 246,602 393,283 624,000 548,200 756,400 831,667 359,500 625,301 810,425 674,613 414,000 741,600 423,717 168,052 256,602 397,283 273,881 363,503 363,503 327,430 654,000 597,700 926,400 871,667 359,500 625,301 826,175 699,613 429,000 750,601 431,718 168,052 256,602 415,283 714,000 597,700 927,400 871,668 370,750 637,301 836,675 700,613 452,000 767,601 431,718 176,053 264,102 714,000 597,700 927,400 871,668 370,750 637,301 836,675 732,613 452,000 767,601 431,718 176,053 52,000 18,613 59,500 352,716 111,751 196,102 265,891 381,716 124,551 213,602 339,280 402,516 145,051 242,102 372,783 431,718 176,053 264,102 415,283 56,500 431,718 27,501 8,491 8,490 53,880 168,501 106,425 120,502 59,503 105,500 73,001 58,767 59,000 172,891 153,380 249,501 186,427 210,003 173,004 138,000 145,001 105,767 265,891 200,881 327,002 212,430 247,549 254,504 188,000 170,501 266,881 348,502 277,430 247,549 260,504 207,000 273,881 358,503 312,430 259,549 260,504 273,881 363,503 327,430 269,550 273,881 363,503 10,000 58,500 21,923 12,500 35,001 36,000 36,001 16,000 3,000 11,750 276,881

Section 4

Exhibit 1 Page 10



Commonwealth of Massachusetts Workers Compensation
Department of Corrections - Cluster 3
INDEMNITY
Lump Sum Development
Incremental Lump Sums as 4% of Utilimate Losses Excluding Lump Sums

Incremental Lump Sums as a % of Ultimate Losses Excluding Lump Sums

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-85 Jun-85 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-93 Jun-95 Jun-95 Jun-96 Jun-91 Jun-95 Jun-96 Jun-90 Jun-01 Jun-01 Jun-01 Jun-01 Jun-01 Jun-05 Jun-05 Jun-05 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Jun-09 Jun-01 Jun-01 Jun-01 Jun-01 Jun-01 Jun-01 Jun-01 Jun-01 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Jun-01 Jun-01 Jun-01 Jun-01 Jun-01 Jun-11 Jun-12	0-12 0.000	12-24 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.005 0.001 0.002 0.002 0.002 0.002 0.002 0.003 0.001 0.001 0.001 0.001 0.002 0.001 0.005	24-36 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.007 0.003 0.009 0.012 0.002 0.041 0.030 0.006 0.031 0.001 0.001 0.006 0.001 0.006 0.001 0.006 0.003 0.006 0.003	36-48 0.000 0.000 0.000 0.002 0.003 0.006 0.003 0.001 0.015 0.025 0.023 0.057 0.049 0.013 0.063 0.000	48-60 0.000 0.000 0.000 0.000 0.000 0.000 0.007 0.017 0.012 0.012 0.022 0.022 0.000 0.007 0.010 0.001	60-72 0.000 0.000 0.000 0.000 0.001 0.001 0.001 0.014 0.014 0.012 0.017 0.010 0.001 0.000	72-84 0.000 0.000 0.000 0.000 0.004 0.005 0.014 0.005 0.000 0.002 0.002 0.002 0.002 0.002 0.002 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.003	84-96 0.000	96-108 0.003 0.000 0.013 0.014 0.006 0.003 0.017 0.004 0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	108-120 0.000 0.012 0.000 0.000 0.000 0.000 0.005 0.005 0.005 0.000 0.000 0.003 0.000 0.003 0.000 0.003 0.000 0.00	120-132 0.000 0.014 0.000 0.005 0.005 0.000 0.001 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	132-144 0.000 0.014 0.000 0.00	144-156 0.013 0.016 0.000 0.008 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	156-168 0.006 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	168-180 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	180-192 0.013 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	192-204 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	204-216 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	216-228 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.001 0.001 0.000 0.000	228-240 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	240-252 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	252-264 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	264-276 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	276-288 0.000 0.000 0.000 0.000 0.000 0.000 0.000	288-300 0.000 0.000 0.000 0.000 0.000 0.000	300-312 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	312-324 0.000 0.000 0.000 0.000 0.000	324-336 0.000 0.000 0.000 0.000	336-348 0.000 0.000 0.000	348-360 0.000 0.000	360-372 0.000
Averages Simple Avg All Yrs (ex P) Latest 5 Latest 3 Olympic Avg All Yrs (ex P) Latest 10		12-24 0.008 0.003 0.002 0.007 0.003	24-36 0.011 0.009 0.010 0.010 0.008	36-48 0.014 0.010 0.009 0.012 0.009	48-60 0.008 0.006 0.008 0.008	60-72 0.008 0.003 0.001 0.007 0.003	72-84 0.006 0.001 0.002 0.005 0.002	84-96 0.002 0.001 0.001 0.002 0.001	96-108 0.003 0.000 0.000 0.003 0.000	0.004 0.000 0.000 0.000 0.003 0.001	0.002 0.000 0.000 0.000 0.002	0.002 0.001 0.000 0.001 0.001	0.002 0.000 0.000 0.000 0.001 0.000	0.000 0.001 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000	192-204 0.000 0.000 0.000 0.000	204-216 0.000 0.000 0.000 0.000 0.000	216-228 0.000 0.000 0.000 0.000	228-240 0.000 0.000 0.000 0.000	240-252 0.000 0.000 0.000 0.000	252-264 0.000 0.000 0.000 0.000	264-276 0.000 0.000 0.000 0.000	276-288 0.000 0.000 0.000 0.000	288-300 0.000 0.000 0.000 0.000	300-312 0.001 0.001 0.002 0.000	312-324 0.000 0.000 0.000	324-336 0.000 0.000 0.000	336-348 0.000	348-360 0.000	360-372
Latest 5 Dev Factor Selectic Prior Selected FacToUlt	NA NA NA	0.004 0.008 0.008 0.051	0.008 0.008 0.010 0.043	0.007 0.007 0.007 0.034	0.005 0.006 0.006 0.027	0.002 0.004 0.004 0.021	0.002 0.001 0.002 0.002 0.017	0.001 0.001 0.002 0.002 0.015	0.000 0.000 0.002 0.002 0.013	0.000 0.003 0.003 0.011	0.001 0.000 0.002 0.002 0.008	0.000 0.000 0.002 0.002 0.006	0.000 0.000 0.002 0.002 0.004	0.000 0.001 0.001 0.002	0.000 0.001 0.001 0.001	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000

Section 4 Exhibit 1 Page 11



Commonwealth of Massachusetts Workers Compensation Department of Corrections - Cluster 3 INDEMNITY Paid Loss Development Paid Loss - Lump Sum only

Section 4 Exhibit 1 Page 12

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-85 Jun-96 Jun-91 Jun-91 Jun-95 Jun-95 Jun-96 Jun-97 Jun-95 Jun-96 Jun-97 Jun-95 Jun-96 Jun-97 Jun-98 Jun-99 Ju	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24 0 0 0 0 20,000 31,500 16,700 19,996 30,500 122,600 214,000 30,500 214,000 327,500 227,500 227,501 8,491 10,000 58,500 21,923 12,500 35,000 36,000 36,000 36,000 36,000 36,000 36,000 36,000 36,000 31,500	36 0 0 0 0 45,000 48,500 75,500 121,200 47,696 124,500 338,600 395,925 377,613 67,000 518,000 342,716 20,000 32,501 82,991 53,880 108,501 106,425 120,502 59,503 105,500 73,001 58,767 59,000	48 0 0 11,000 30,000 67,500 68,500 80,000 254,200 369,167 219,500 399,300 618,000 342,716 20,001 118,001 172,891 153,380 249,501 186,427 210,003 173,000 186,427 173,000 187,767	60 0 0 11,000 98,000 98,000 108,500 205,000 405,900 426,300 717,925 594,613 402,000 681,000 352,716 111,751 196,102 265,891 200,881 327,002 212,430 247,549 2254,504 188,000 170,501	72 0 0 11,000 108,000 117,000 300,000 291,200 545,400 795,425 664,613 402,000 705,000 381,716 124,551 213,602 239,280 266,881 348,502 277,430 247,549 260,504	84 0 0 0 148,000 155,250 499,000 791,667 359,500 625,301 802,925 674,613 402,000 721,000 402,516 145,051 242,102 372,783 312,430 259,549 260,504	96 0 17,500 31,000 175,000 180,251 522,000 518,200 716,400 7359,500 625,301 810,425 674,613 402,000 741,600 393,283 273,881 363,503 327,430 269,550	108 15,000 17,500 18,500 100,000 225,000 191,501 624,000 831,667 359,500 625,301 810,425 674,613 414,000 741,600 423,717 168,052 256,602 397,283 277,283 277,283 277,430	120 15,000 52,500 18,500 100,000 225,000 597,700 926,400 871,667 359,500 625,301 826,175 699,613 429,000 750,601 431,718 168,052 256,602 415,283 273,881 363,503	132 15,000 94,081 18,500 142,000 270,000 276,501 714,000 597,700 927,400 637,301 826,175 699,613 452,000 750,601 431,718 168,052 264,102 415,283 276,881	144 15,000 135,081 18,500 142,000 270,000 313,501 714,000 597,700 927,400 871,668 370,750 637,301 830,675 700,613 452,000 767,601 431,718 176,053 264,102 415,283	156 72,500 181,081 18,500 180,850 270,000 228,360 714,000 597,700 927,400 871,668 370,750 637,301 836,675 700,613 452,000 767,601 431,661 452,000 767,601 431,615 264,102	168 98,500 181,081 18,501 180,850 270,000 328,360 714,000 597,700 927,400 871,668 370,750 637,301 836,675 732,613 452,000 767,601 431,053	98,500 181,081 18,501 180,850 270,000 328,360 714,000 597,700 927,400 871,668 383,251 637,301 836,675 732,613 452,000 767,601 431,718	192 158,500 181,081 18,501 180,850 270,000 328,360 714,000 871,768 383,251 637,301 833,251 637,301 452,000 767,601	204 158,500 181,081 18,501 180,850 270,000 328,360 714,000 871,768 383,251 637,301 842,675 732,613 452,000	216 158,500 181,081 18,501 180,850 270,000 340,360 717,000 871,768 383,251 637,301 842,675 732,613	228 158,500 181,081 18,501 180,850 270,000 340,360 717,000 811,768 383,251 637,301 842,675	240 158,500 181,081 18,501 180,850 270,000 340,360 717,001 616,200 944,900 881,768 383,251 637,301	252 158,500 181,081 18,501 180,850 270,000 340,360 717,001 616,200 944,900 881,768 383,251	264 158,500 181,081 18,501 180,850 270,000 340,360 717,001 616,200 944,900 881,768	276 160,000 181,081 18,501 180,850 270,000 340,360 717,001 616,200 944,900	288 160,000 181,081 18,501 180,850 270,000 340,360 717,002 626,200	300 160,000 181,081 18,501 180,850 270,000 340,360 717,002	312 160,000 181,081 18,501 180,850 318,000 340,360	324 160,000 181,081 18,501 180,850 320,000	336 160,000 181,081 18,501 180,850	348 160,000 181,081 18,501	360 160,000 181,081	372 160,000
Age-to-Age Facti Act Y Ending Jun-84 Jun-85 Jun-85 Jun-87 Jun-89 Jun-90 Jun-91 Jun-91 Jun-92 Jun-95	4.115 10.241 5.504 3.841 1.000	2.250 1.540 15.100 7.257 2.385 4.082 1.982 1.914 1.589 1.1579 1.187 2.388 2.880 2.880 2.890 2.931 2.93	1.500 1.412 1.060 2.097 7.740 1.763 1.674 1.558 1.217 6.000 1.303 2.083 2.083 2.083 1.481 1.752 1.481 1.752 1.300	1.000 3.267 1.333 1.584 2.563 1.597 1.470 1.228 1.000 1.000 1.007 1.662 1.530 1.139 1.139 1.179 1.179	1.000 1.102 1.300 2.765 1.424 1.334 1.138 1.118 1.000 1.035 1.108	72-84 2.818 1.370 1.327 1.663 1.539 1.134 1.094 1.000 1.235 1.000 1.003 1.003 1.004 1.163 1.000 1.003 1.004 1.163 1.009 1.005 1.000 1.003 1.004 1.166 1.009 1.000	84-96 1.000 1.182 1.161 1.046 1.156 1.158 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	96-108 1.000 3.226 1.286 1.062 1.195 1.058 1.056 1.051 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	108-120 3.000 1.000 1.000 1.000 1.000 1.444 1.098 1.090 1.000	120-132 1:000 1:792 1:000 1:420 1:000 1:200 1:000	132-144 1.000 1.436 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.001 1.001 1.005 1.001 1.000 1.00	144-156 4.833 1.341 1.000 1.274 1.000 1.00	156-168 1.359 1.000 1.00	168-180 1.000	180-192 1.609 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	192-204 1.000	204-216 1.000 1.000 1.000 1.000 1.000 1.000 1.004 1.000 1.000 1.000 1.000 1.000 1.000	216-228 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	228-240 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	240-252 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	252-264 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	264-276 1.009 1.000 1.000 1.000 1.000 1.000 1.000 1.000	276-288 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	288-300 1.000 1.000 1.000 1.000 1.000 1.000 1.000	300-312 1.000 1.000 1.000 1.000 1.100 1.178 1.000	312-324 1.000 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000 1.000	336-348 1.000 1.000 1.000	348-360 1.000 1.000	360-372 1.000	To Ult
Averages Simple Avg All Yrs (ex P) Latest 5 Latest 3	12-24 4.940	24-36 4.660 6.000 8.456	36-48 2.208 1.949 1.698	48-60 1.600 1.266 1.336	1.236 1.099 1.042	72-84 1.223 1.046 1.058	84-96 1.050 1.031 1.033	96-108 1.147 1.010 1.000	1.144 1.009 1.015	1.081 1.008 1.013	132-144 1.036 1.014 1.016	1.037 1.000 1.000	1.003 1.009 1.000	1.002 1.000 1.000	1.002 1.000 1.000	192-204 1.001 1.001 1.002	204-216 1.003 1.000 1.000	216-228 1.001 1.003 1.000	228-240 1.001 1.003 1.000	240-252 1.000 1.000 1.000	252-264 1.000 1.000 1.000	264-276 1.000 1.000 1.000	276-288 1.002 1.003 1.005	288-300 1.000 1.000 1.000	300-312 1.036 1.036 1.059	312-324 1.002 1.002	324-336 1.000 1.000	336-348 1.000	348-360 1.000	360-372	To Ult
Volume Wtd All Yrs (ex P) Latest 5 Latest 3	7.725	2.236 2.824 3.468	1.715 1.850 1.639	1.281 1.259 1.344	1.186 1.091 1.036	1.115 1.046 1.060	1.043 1.032 1.032	1.046 1.009 1.000	1.057 1.012 1.017	1.026 1.007 1.011	1.013 1.012 1.009	1.012 1.000 1.000	1.004 1.013 1.000	1.002 1.000 1.000	1.002 1.000 1.000	1.001 1.002 1.003	1.002 1.000 1.000	1.003 1.004 1.000	1.002 1.004 1.000	1.000 1.000 1.000	1.000 1.000 1.000	1.000 1.000 1.000	1.004 1.005 1.006	1.000 1.000 1.000	1.048 1.048 1.061	1.003	1.000	1.000	1.000		
Dev Factor Select Prior Selected FacToUlt Percent of Ult	4.940 4.940 55.523 1.8%	3.689 3.689 11.240 8.9%	1.817 1.734 3.047 32.8%	1.298 1.295 1.757 56.9%	1.139 1.104 1.357 73.7%	1.083 1.073 1.229 81.4%	1.030 1.036 1.145 87.4%	1.022 1.018 1.105 90.5%	1.032 1.029 1.085 92.1%	1.013 1.015 1.055 94.8%	1.014 1.013 1.040 96.2%	1.013 1.012 1.026 97.5%	1.009 1.009 1.013 98.7%	1.002 1.002 1.004 99.6%	1.002 1.002 1.002 99.8%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 100.0%

Section 4 Exhibit 1 Page 13

Department of Corrections - Cluster 3 Indemnity

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	2.7%	0.0%	0.8%	0.5%	1.000	1.000
360	97.3%	0.4%	2.7%	0.1%	0.1%	0.981	0.971
348	96.9%	0.4%	3.1%	0.1%	0.1%	0.948	0.923
336	96.5%	0.4%	3.5%	0.1%	0.1%	0.919	0.882
324	96.1%	0.4%	3.9%	0.1%	0.1%	0.893	0.846
312	95.8%	0.4%	4.2%	0.1%	0.1%	0.870	0.814
300	95.4%	0.8%	4.6%	0.3%	0.2%	0.848	0.785
288	94.6%	0.7%	5.4%	0.3%	0.2%	0.839	0.773
276	93.9%	1.5%	6.1%	0.6%	0.4%	0.827	0.757
264	92.4%	1.6%	7.6%	0.7%	0.5%	0.832	0.766
252	90.8%	1.3%	9.2%	0.6%	0.4%	0.832	0.766
240	89.5%	1.0%	10.5%	0.5%	0.3%	0.822	0.753
228	88.5%	1.1%	11.5%	0.5%	0.4%	0.807	0.734
216	87.4%	0.3%	12.6%	0.1%	0.1%	0.793	0.715
204	87.1%	1.3%	12.9%	0.7%	0.5%	0.767	0.681
192	85.8%	1.2%	14.2%	0.7%	0.5%	0.760	0.673
180	84.6%	1.3%	15.4%	0.7%	0.6%	0.751	0.662
168	83.3%	1.2%	16.7%	0.7%	0.6%	0.742	0.651
156	82.1%	1.1%	17.9%	0.7%	0.5%	0.732	0.639
144	81.0%	0.7%	19.0%	0.4%	0.4%	0.720	0.624
132	80.3%	1.3%	19.7%	0.8%	0.7%	0.702	0.602
120	79.0%	1.4%	21.0%	1.0%	0.8%	0.694	0.592
108	77.6%	1.7%	22.4%	1.2%	1.0%	0.686	0.584
96	75.9%	2.3%	24.1%	1.7%	1.5%	0.683	0.581
84	73.6%	3.2%	26.4%	2.5%	2.2%	0.685	0.585
72	70.4%	3.3%	29.6%	2.6%	2.4%	0.694	0.598
60	67.1%	5.2%	32.9%	4.4%	4.0%	0.698	0.604
48	61.9%	9.5%	38.1%	8.2%	7.7%	0.713	0.625
36	52.4%	13.4%	47.6%	12.1%	11.6%	0.745	0.665
24	39.1%	20.9%	60.9%	19.7%	19.1%	0.774	0.703
12	18.2%	18.2%	81.8%	17.8%	17.7%	0.805	0.742

Total 100.0%

NOTES:

(2) = 1 / Section 4, Exhibit 1, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)



Section 4 Exhibit 1 Page 14

Department of Corrections - Cluster 3
Indemnity

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
A 11 /		counted	Discount		ounted
Accident		ng Losses	Factor at		ing Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	642,792	1,149,707		606,494	1,084,784
6/30/82-83	257,956	335,184	0.981	252,947	328,675
6/30/83-84	7,949	43,740	0.948	7,533	41,448
6/30/84-85	458,879	684,699	0.919	421,651	629,150
6/30/85-86	1,090,677	1,484,492	0.893	974,196	1,325,952
6/30/86-87	157,360	165,360	0.870	136,878	143,837
6/30/87-88	283,125	543,125	0.848	240,171	460,725
6/30/88-89	322,288	1,052,288	0.839	270,356	882,726
6/30/89-90	523,068	528,068	0.827	432,524	436,659
6/30/90-91	981,853	4,403,853	0.832	817,290	3,665,747
6/30/91-92	387,026	389,026	0.832	322,001	323,664
6/30/92-93	295,410	301,410	0.822	242,742	247,673
6/30/93-94	525,900	527,900	0.807	424,502	426,117
6/30/94-95	775,385	780,385	0.793	615,036	619,002
6/30/95-96	681,603	684,603	0.767	522,896	525,197
6/30/96-97	864,739	868,739	0.760	657,374	660,415
6/30/97-98	1,331,004	1,363,004	0.751	999,387	1,023,414
6/30/98-99	1,453,040	1,475,040	0.742	1,078,167	1,094,491
6/30/99-00	1,699,281	1,731,281	0.732	1,243,332	1,266,746
6/30/00-01	1,741,856	2,426,965	0.720	1,253,854	1,747,020
6/30/01-02	2,137,073	2,178,073	0.702	1,500,912	1,529,707
6/30/02-03	1,726,382	2,290,932	0.694	1,197,590	1,589,218
6/30/03-04	1,766,943	2,282,900	0.686	1,212,875	1,567,040
6/30/04-05	2,299,186	2,658,186	0.683	1,570,119	1,815,281
6/30/05-06	2,092,736	2,534,736	0.685	1,433,264	1,735,979
6/30/06-07	2,384,208	2,807,208	0.694	1,653,583	1,946,957
6/30/07-08	3,005,728	3,841,728	0.698	2,097,951	2,681,465
6/30/08-09	3,195,355	4,601,355	0.713	2,279,607	3,282,665
6/30/09-10	3,611,959	5,665,959	0.745	2,689,400	4,218,772
6/30/10-11	5,254,449	7,264,449	0.774	4,067,333	5,623,222
6/30/11-12	6,221,996	9,940,996	0.805	5,006,328	7,998,701
Total	48,177,208	67,005,390		36,228,291	50,922,450

(7) Total Discount Factor:	0.752	0.760

_		
	Discount Ca	alculation for
	All Pri	or Years
_	(Low)	(High)
(8) Estimated Total Reserve:	642,792	1,149,707
(9) Projected Number of Years:	3	3
(10) Projected Paid Loss per Year:	214,264	383,236
(11) Discounted Value at 4%:	606,494	1,084,784

NOTES:

(2), (3) From Section 4, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 4, Exhibit 1, Page 13, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



Section 4 Exhibit 1 Page 15

Department of Corrections - Cluster 3 Indemnity

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
A 21		counted	Discount		ounted
Accident		ng Losses	Factor at		ng Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	642,792	1,149,707		589,912	1,055,125
6/30/82-83	257,956	335,184	0.971	250,549	325,559
6/30/83-84	7,949	43,740	0.923	7,339	40,381
6/30/84-85	458,879	684,699	0.882	404,779	603,975
6/30/85-86	1,090,677	1,484,492	0.846	922,755	1,255,937
6/30/86-87	157,360	165,360	0.814	128,057	134,567
6/30/87-88	283,125	543,125	0.785	222,117	426,092
6/30/88-89	322,288	1,052,288	0.773	249,012	813,039
6/30/89-90	523,068	528,068	0.757	396,059	399,845
6/30/90-91	981,853	4,403,853	0.766	752,098	3,373,346
6/30/91-92	387,026	389,026	0.766	296,559	298,092
6/30/92-93	295,410	301,410	0.753	222,374	226,890
6/30/93-94	525,900	527,900	0.734	385,787	387,254
6/30/94-95	775,385	780,385	0.715	554,669	558,246
6/30/95-96	681,603	684,603	0.681	464,121	466,164
6/30/96-97	864,739	868,739	0.673	581,894	584,586
6/30/97-98	1,331,004	1,363,004	0.662	880,638	901,811
6/30/98-99	1,453,040	1,475,040	0.651	946,037	960,361
6/30/99-00	1,699,281	1,731,281	0.639	1,085,104	1,105,538
6/30/00-01	1,741,856	2,426,965	0.624	1,087,129	1,514,719
6/30/01-02	2,137,073	2,178,073	0.602	1,287,115	1,311,809
6/30/02-03	1,726,382	2,290,932	0.592	1,022,833	1,357,313
6/30/03-04	1,766,943	2,282,900	0.584	1,032,702	1,334,257
6/30/04-05	2,299,186	2,658,186	0.581	1,336,616	1,545,318
6/30/05-06	2,092,736	2,534,736	0.585	1,224,874	1,483,575
6/30/06-07	2,384,208	2,807,208	0.598	1,425,151	1,677,997
6/30/07-08	3,005,728	3,841,728	0.604	1,816,368	2,321,565
6/30/08-09	3,195,355	4,601,355	0.625	1,996,791	2,875,407
6/30/09-10	3,611,959	5,665,959	0.665	2,403,678	3,770,569
6/30/10-11	5,254,449	7,264,449	0.703	3,695,227	5,108,773
6/30/11-12	6,221,996	9,940,996	0.742	4,616,921	7,376,539
Total	48,177,208	67,005,390		32,285,268	45,594,651

(7) To	otal Discount Factor:	0.670	0.680

_						
_	Discount Calculation for					
	All Prior Years					
_	(Low)	(High)				
(8) Estimated Total Reserve:	642,792	1,149,707				
(9) Projected Number of Years:	3	3				
(10) Projected Paid Loss per Year:	214,264	383,236				
(11) Discounted Value at 6%:	589,912	1,055,125				

NOTES:

(2), (3) From Section 4, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 4, Exhibit 1, Page 13, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



Department of Corrections - Cluster 3
Total Indemnity (Including Lump Sums) + Medical

Calculation of Fiscal Year 7/1/12 - 13 Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
						Cumulative	Increme	ntal Paid	Estimated Payments from		FY 7/1/12 - 6/30/13		
Accident	Est Ult Losses	Est Ult Losses	Paid Losses	Reserves	Reserves	Percent	as a % of	as a % of	7/1/12 -	7/1/12 - 6/30/13		as a % of Reserves	
Year	(Low)	(High)	to Date	(Low)	(High)	Paid	Ultimates	Reserves	(Low)	(High)	(Low)	(High)	
All Prior Yrs	5,663,083	7,212,566	4,290,520	1,372,563	2,922,046				88,958	97,854	6.5%	3.3%	
6/30/82-83	3,170,521	3,255,901	2,912,565	257,956	343,336	90.6%	0.5%	5.3%	13,785	18,347	5.3%	5.3%	
6/30/83-84	2,143,623	2,218,623	2,135,674	7,949	82,949	97.9%	0.5%	24.0%	1,907	19,904	24.0%	24.0%	
6/30/84-85	4,737,181	4,969,000	4,268,609	468,571	700,391	88.0%	1.0%	8.3%	38,907	58,155	8.3%	8.3%	
6/30/85-86	8,056,185	8,455,000	6,947,276	1,108,909	1,507,724	84.2%	1.0%	6.3%	69,973	95,139	6.3%	6.3%	
6/30/86-87	4,720,000	4,728,000	4,532,911	187,089	195,089	96.0%	1.0%	24.7%	46,251	48,229	24.7%	24.7%	
6/30/87-88	7,584,000	7,847,000	7,243,616	340,384	603,384	93.9%	2.0%	32.7%	111,308	197,312	32.7%	32.7%	
6/30/88-89	8,715,000	9,447,000	8,328,858	386,142	1,118,142	91.7%	2.0%	24.1%	93,242	269,998	24.1%	24.1%	
6/30/89-90	11,580,000	11,587,000	10,949,384	630,616	637,616	94.5%	2.0%	36.5%	230,391	232,949	36.5%	36.5%	
6/30/90-91	12,988,000	16,411,000	11,850,879	1,137,121	4,560,121	80.6%	2.0%	10.3%	117,356	470,624	10.3%	10.3%	
6/30/91-92	6,517,000	6,520,000	6,003,883	513,117	516,117	92.1%	2.0%	25.3%	129,990	130,750	25.3%	25.3%	
6/30/92-93	4,899,000	4,906,000	4,479,265	419,735	426,735	91.4%	2.0%	23.2%	97,239	98,861	23.2%	23.2%	
6/30/93-94	7,012,000	7,016,000	6,326,608	685,392	689,392	90.2%	2.0%	20.4%	139,872	140,688	20.4%	20.4%	
6/30/94-95	8,413,000	8,419,000	7,472,050	940,950	946,950	88.8%	2.0%	17.8%	167,785	168,855	17.8%	17.8%	
6/30/95-96	7,405,000	7,410,000	6,528,672	876,328	881,328	88.1%	2.0%	16.9%	147,729	148,571	16.9%	16.9%	
6/30/96-97	8,853,000	8,860,000	7,745,712	1,107,288	1,114,288	87.5%	2.0%	15.9%	176,572	177,688	15.9%	15.9%	
6/30/97-98	11,427,000	11,465,000	9,816,106	1,610,894	1,648,894	85.8%	2.0%	14.0%	226,251	231,589	14.0%	14.0%	
6/30/98-99	11,089,000	11,114,000	9,332,079	1,756,921	1,781,921	84.1%	2.0%	12.5%	220,461	223,599	12.5%	12.5%	
6/30/99-00	12,223,000	12,262,000	10,146,176	2,076,824	2,115,824	82.9%	2.0%	11.7%	242,572	247,128	11.7%	11.7%	
6/30/00-01	15,707,892	16,417,000	13,383,124	2,324,768	3,033,876	83.3%	2.0%	12.0%	278,738	363,760	12.0%	12.0%	
6/30/01-02	13,313,000	13,356,000	10,725,098	2,587,902	2,630,902	80.4%	2.0%	10.2%	264,493	268,887	10.2%	10.2%	
6/30/02-03	13,023,450	13,736,000	10,855,528	2,167,922	2,880,472	81.1%	2.0%	10.6%	229,825	305,364	10.6%	10.6%	
6/30/03-04	12,101,043	12,750,000	9,864,841	2,236,203	2,885,159	79.4%	1.7%	8.5%	189,069	243,937	8.5%	8.5%	
6/30/04-05	13,589,000	14,147,000	10,678,073	2,910,927	3,468,927	77.0%	2.4%	10.4%	302,940	361,012	10.4%	10.4%	
6/30/05-06	10,611,000	11,131,000	7,825,917	2,785,083	3,305,083	72.0%	5.0%	17.9%	498,035	591,022	17.9%	17.9%	
6/30/06-07	9,165,000	9,694,000	6,122,321	3,042,679	3,571,679	64.9%	7.1%	20.1%	612,621	719,131	20.1%	20.1%	
6/30/07-08	9,582,000	10,714,000	5,807,518	3,774,482	4,906,482	57.2%	7.7%	18.0%	679,423	883,188	18.0%	18.0%	
6/30/08-09	8,708,000	10,517,000	4,740,542	3,967,458	5,776,458	49.3%	7.9%	15.6%	619,325	901,712	15.6%	15.6%	
6/30/09-10	7,213,000	9,949,000	2,831,389	4,381,611	7,117,611	33.0%	6.0%	9.0%	392,360	637,360	9.0%	9.0%	
6/30/10-11	9,498,000	12,332,500	3,086,264	6,411,736	9,246,236	28.3%	4.7%	6.6%	422,046	608,624	6.6%	6.6%	
6/30/11-12	8,801,000	13,772,550	921,493	7,879,507	12,851,057	8.2%	20.1%	21.9%	1,725,477	2,814,161	21.9%	21.9%	
Total	278,507,978	302,619,140	218,152,954	60,355,024	84,466,186				8,574,901	11,774,396	14.2%	13.9%	

NOTES:

(2) Exhibit 1, Page 1, Column (4) + Exhibit 2, Page 1, Column (4)

(3) Exhibit 1, Page 1, Column (5) + Exhibit 2, Page 1, Column (5)

(4) Exhibit 1, Page 1, Column (2) + Exhibit 2, Page 1, Column (2)

(5) = (2) - (4)

(6) = (3) - (4)

(7) = (4) / Average of Columns (2), (3)

(8) = (7) - Prior Year's (7)

(9) = (8) / (1.00 - (7))

(10) = (5) * (9)

(11) = (6) * (9)

(12) = (10) / (5)(13) = (11) / (6)

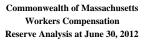


Department of Corrections - Cluster 3 Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll		Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Paid Loss	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		582,270			1,312,041	2,354,609	729,771	1,772,339		
6/30/82-83		164,749	169,511		164,749	172,901	0	8,152		
6/30/83-84		730,414	754,532		730,414	769,623	0	39,209		
6/30/84-85	115,258	434,308	450,444	443,846	444,000	450,000	9,692	15,692	0.385	0.390
6/30/85-86	123,937	559,768	582,887	578,448	578,000	583,000	18,232	23,232	0.466	0.470
6/30/86-87	142,396	648,271	677,745	678,491	678,000	678,000	29,729	29,729	0.476	0.476
6/30/87-88	166,792	1,145,741	1,202,624	1,206,408	1,203,000	1,206,000	57,259	60,259	0.721	0.723
6/30/88-89	180,117	1,227,147	1,293,224	1,291,385	1,291,000	1,293,000	63,853	65,853	0.717	0.718
6/30/89-90	180,883	1,856,452	1,966,198	1,963,976	1,964,000	1,966,000	107,548	109,548	1.086	1.087
6/30/90-91	169,902	2,427,731	2,584,104	2,583,198	2,583,000	2,584,000	155,269	156,269	1.520	1.521
6/30/91-92	165,926	1,819,909	1,946,818	1,945,683	1,946,000	1,947,000	126,091	127,091	1.173	1.173
6/30/92-93	174,198	1,323,675	1,448,779	1,447,980	1,448,000	1,449,000	124,325	125,325	0.831	0.832
6/30/93-94	185,946	1,458,508	1,619,731	1,618,223	1,618,000	1,620,000	159,492	161,492	0.870	0.871
6/30/94-95	194,051	1,323,435	1,490,136	1,489,169	1,489,000	1,490,000	165,565	166,565	0.767	0.768
6/30/95-96	205,262	1,456,275	1,652,925	1,651,299	1,651,000	1,653,000	194,725	196,725	0.804	0.805
6/30/96-97	234,073	1,745,451	1,990,881	1,988,098	1,988,000	1,991,000	242,549	245,549	0.849	0.851
6/30/97-98	221,865	1,900,110	2,186,398	2,180,250	2,180,000	2,186,000	279,890	285,890	0.983	0.985
6/30/98-99	256,071	1,820,118	2,126,962	2,123,556	2,124,000	2,127,000	303,882	306,882	0.829	0.831
6/30/99-00	268,486	2,003,457	2,387,927	2,381,271	2,381,000	2,388,000	377,543	384,543	0.887	0.889
6/30/00-01	279,182	2,860,089	3,467,010	3,443,465	3,443,000	3,467,000	582,911	606,911	1.233	1.242
6/30/01-02	283,070	1,851,171	2,304,392	2,302,133	2,302,000	2,304,000	450,829	452,829	0.813	0.814
6/30/02-03	289,846	2,184,461	2,774,168	2,764,582	2,626,000	2,774,000	441,539	589,539	0.906	0.957
6/30/03-04	293,771	1,988,740	2,590,955	2,587,412	2,458,000	2,591,000	469,260	602,260	0.837	0.882
6/30/04-05	291,382	2,464,260	3,275,311	3,075,524	3,076,000	3,275,000	611,740	810,740	1.056	1.124
6/30/05-06	294,709	2,044,654	2,814,831	2,737,006	2,737,000	2,815,000	692,346	770,346	0.929	0.955
6/30/06-07	289,603	1,505,529	2,163,815	2,269,564	2,164,000	2,270,000	658,471	764,471	0.747	0.784
6/30/07-08	354,668	1,474,245	2,243,385	2,539,272	2,243,000	2,539,000	768,755	1,064,755	0.632	0.716
6/30/08-09	332,413	1,338,898	2,222,096	2,513,907	2,111,000	2,514,000	772,102	1,175,102	0.635	0.756
6/30/09-10	336,338	789,348	1,484,311	2,241,365	1,559,000	2,241,000	769,652	1,451,652	0.464	0.666
6/30/10-11	333,783	863,714	2,127,648	2,710,301	2,021,000	2,845,500	1,157,287	1,981,787	0.605	0.852
6/30/11-12	348,187	293,489	1,857,656	3,051,096	1,951,000	3,203,550	1,657,511	2,910,061	0.560	0.920
Total	6,712,116	44,286,388	55,857,403	57,806,907	56,464,204	61,747,183	12,177,817	17,460,796		
Γot 6/30/84-12	6,712,116	42,808,954	54,933,360	57,806,907	54,257,000	58,450,050	11,448,046	15,641,096	0.808	0.871

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 4, Exhibit 2, Page 2, Column 3
- (4) From Section 4, Exhibit 2, Page 2, Column 8
- (5) From Section 4, Exhibit 2, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10





Department of Corrections - Cluster 3 Medical

Paid Loss Development Method

Accident Payroll Paid Loss LDF For Tail Lump Sum Payments Lump Sum Cost 71/10-11 71/11-12 Claim Num Cost Counts Claim Num Cost Claim Num Cost Claim Num Cost Claim Num Claim Num Cost Claim Num Claim Num Cost Claim Num Claim	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Vear	-		<u></u>				Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average
All Prior Yrs	Accident	Payroll		Paid	Adjustment	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding
630/82-83	Year	(000's)	Paid Loss	LDF	for Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim
63088-84 730,414 1,033 1,000 754,532 N/A 754,532 0 0 0 63088-85 115,258 434,308 1,037 1,000 450,444 N/A 450,444 0,391 1 1 1,613 63085-86 123,937 559,768 1,041 1,000 677,745 N/A 582,887 N/A 582,887 N/A 51,0476 1 1 2,311* 63085-87 142,396 648,271 1,045 1,000 677,745 N/A 677,745 0,476 1 1 2,23,11* 63087-88 166,792 1,145,741 1,050 1,000 1,202,624 N/A 1,202,624 0,721 1 1 1 56,88* 63088-89 180,117 1,227,147 1,054 1,000 1,203,224 N/A 1,203,224 0,718 2 2 2 33,03* 63089-90 180,883 1,856,452 1,059 1,000 1,566,198 N/A 1,296,198 1,087 4 2 54,87* 63090-91 169,902 2,427,731 1,064 1,000 2,584,104 N/A 2,584,104 1,521 8 8 19,54* 63091-92 165,926 1,819,909 1,070 1,000 1,946,818 N/A 1,946,818 1,173 4 2 63,45* 63093-94 185,946 1,458,508 1,111 1,000 1,488,78 N/A 1,448,779 0,832 2 1 1,251,06* 63093-94 185,946 1,458,508 1,111 1,000 1,619,731 N/A 1,619,731 0,871 7 7 2 3,03* 63094-95 194,051 1,323,435 1,126 1,000 1,490,136 N/A 1,490,136 0,768 3 2 2 83,35* 63099-90 203,262 1,456,275 1,135 1,000 1,652,925 N/A 1,652,925 0,805 3 3 3 65,55* 63099-97 234,073 1,745,451 1,141 1,000 1,509,881 N/A 1,990,881 0,851 4 4 4 61,35* 63099-90 256,071 1,820,118 1,169 1,000 2,186,398 N/A 2,186,398 0,985 6 8 35,78* 63099-00 288,866 2,003,457 1,192 1,000 2,287,927 N/A 2,387,927 0,889 11 8 8 48,05* 63000-01 279,182 2,860,089 1,212 1,000 3,467,010 N/A 3,467,010 1,242 10 7 86,700 63000-02 283,070 1,881,171 1,245 1,000 2,238,7927 N/A 2,387,927 0,889 11 8 7 43,88* 63000-01 279,182 2,860,089 1,121 1,000 2,238,7927 N/A 2,387,927 0,889 11 8 7 43,88* 63000-01 289,846 2,184,461 1,270 1,000 2,774,168 N/A 2,774,168 0,957 11 8 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	All Prior Yrs		582,270							5	4	
63084-85 115,258 434,308 1.037 1.000 450,444 N/A 450,444 0.391 1 1 1.61,613 63086-86 122,937 559,68 1.041 1.000 582,887 N/A 582,887 0.470 3 1 23,117 63086-86 122,937 648,271 1.045 1.000 677,745 N/A 677,745 0.476 1 1 1 2,947 63087-88 166,792 1,145,741 1.050 1.000 1.202,624 N/A 1.202,624 0.721 1 1 1 56,88 63088-89 180,117 1.227,147 1.054 1.000 1.293,224 N/A 1.203,224 0.718 2 2 33,03 63089-9 180,183 1.856,452 1.059 1.000 1.966,198 N/A 1.966,198 1.087 4 2 54,87 63090-91 169,902 2,427,731 1.064 1.000 2,584,104 N/A 2,584,104 1.521 8 8 19,54 63091-92 165,926 1.819,909 1.070 1.000 1.448,77 N/A 1.946,818 1.173 4 2 63,45 63093-94 185,946 1.458,508 1.111 1.000 1.619,731 N/A 1.619,731 0.871 7 7 22,303 63094-95 194,051 1.323,435 1.126 1.000 1.619,731 N/A 1.619,731 0.871 7 7 22,303 63094-95 205,262 1.456,275 1.135 1.000 1.652,925 N/A 1.990,881 0.851 4 4 61,355 63095-96 205,262 1.456,275 1.135 1.000 1.652,925 N/A 1.990,881 0.851 4 4 61,355 63095-97 234,073 1.745,451 1.141 1.000 1.990,881 N/A 1.990,881 0.851 4 4 61,355 63099-90 266,486 2.003,457 1.192 1.000 2,186,398 N/A 2,186,398 0.995 6 8 35,788 63009-00 268,486 2.003,457 1.192 1.000 2,186,398 N/A 2,186,398 0.995 6 8 35,788 63009-00 283,466 1.890,110 1.151 1.000 2,186,398 N/A 2,186,398 0.995 6 8 35,788 63009-00 283,466 2.003,457 1.192 1.000 2,186,398 N/A 2,186,398 0.995 6 8 35,788 63009-00 283,466 2.184,461 1.270 1.000 2,186,398 N/A 2,186,398 0.995 6 8 35,788 63009-00 289,846 2.184,461 1.270 1.000 2,274,168 N/A 2,274,168 0.957 11 8 73,711 6300-00 283,070 1.851,171 1.245 1.000 2,387,927 N/A 2,387,927 0.889 11 8 73,711 6300-00 283,070 1.851,171 1.245 1.000 2,484,811 N/A 2,284,831 0.955 23 21 36,670 6300-00 283,070 1.851,171 1.245 1.000 2,484,811 N/A 2,250,055 0.885 12 8 75,271 6300-00 283,070 1.851,171 1.245 1.000 2,484,811 N/A 2,250,055 0.882 12 8 75,271 6300-00 283,070 2,846,64 1.377 1.000 2,212,696 N/A 2,222,096 0.668 65 25 35,32 63000-01 336,338 89,348 1.880 1.000 1.484,311 N/A 1,484,311 0.441 134 28 24,82 63001-11 333,783 863,714 2,463 1.000 1.185,666 N/A 1.857,666 N/A 1.	6/30/82-83		164,749	1.029	1.000	169,511	N/A	169,511		0	0	
630/85-86 123,937 559,768 1.041 1.000 582,887 N/A 582,887 0.470 3 1 23,111 630/86-87 142,396 648,271 1.045 1.000 677,745 N/A 677,745 0.476 1 1 2.947 630/87-88 166,792 1.145,741 1.050 1.000 1.202,624 N/A 1.202,624 0.721 1 1 1 56,88 630/88-89 180,117 1,227,147 1.054 1.000 1.298,224 N/A 1.293,224 0.718 2 2 33,03 630/89-90 180,883 1.856,452 1.059 1.000 1.966,198 N/A 1.966,198 1.087 4 2 54,87 630/9-91 169,902 2,427,731 1.064 1.000 2,584,104 N/A 2,584,104 1.521 8 8 8 19,54 630/9-92 165,526 1.819,909 1.070 1.000 1.946,818 N/A 1.946,818 1.173 4 2 63,45 630/92-93 174,198 1.323,675 1.095 1.000 1.448,779 N/A 1.448,779 0.832 2 1 1 125,10 630/93-94 185,946 1.458,508 1.111 1.000 1.498,713 N/A 1.490,136 0.768 3 2 2 33,33 630/95-96 205,262 1.456,275 1.135 1.000 1.619,731 N/A 1.652,925 0.805 3 3 3 65,559 630/96-97 234,073 1.745,451 1.141 1.000 1.990,81 N/A 1.990,881 0.851 4 4 61,235 630/98-99 221,85 1.900,110 1.151 1.000 2.186,398 N/A 1.990,881 0.851 4 4 61,235 630/98-99 2256,071 1.820,118 1.169 1.000 2.186,398 N/A 2.186,398 0.985 6 8 8 35,788 630/99-00 268,486 2.003,457 1.192 1.000 2.387,927 N/A 2.186,398 0.985 6 8 8 35,788 63009-00 268,486 2.003,457 1.192 1.000 2.387,927 N/A 2.186,398 0.985 6 8 8 35,786 63000-01 279,182 2.860,089 1.212 1.000 3.467,010 N/A 3.467,010 1.242 10 7 86,70 6300-01 279,182 2.860,089 1.212 1.000 2.387,927 N/A 2.387,927 0.889 11 8 8 48,05 63000-01 279,182 2.860,089 1.212 1.000 3.467,010 N/A 3.467,010 1.242 10 7 86,70 6300-01 2283,070 1.851,171 1.245 1.000 2.387,927 N/A 2.387,927 0.889 11 8 7,371 6300-01 2283,070 1.851,171 1.245 1.000 2.774,168 N/A 2.774,168 0.957 11 8 7,371 6300-04 293,771 1.988,740 1.303 1.000 2.774,168 N/A 2.774,168 0.957 11 8 7,371 6300-04 293,771 1.988,740 1.303 1.000 2.774,168 N/A 2.284,831 0.955 2.33 21 1.366,76 6300-04 293,771 1.988,740 1.303 1.000 2.774,168 N/A 2.284,831 0.955 2.33 21 1.366,76 6300-04 293,771 1.988,740 1.303 1.000 2.264,838 N/A 2.274,385 0.633 3.2 21 3.667,6300-04 293,771 1.988,740 1.303 1.000 2.243,385 N/A 2.243,385 0.633 3.2 21 3.666,76 6300-04 294,799 2.044,6	6/30/83-84		730,414	1.033	1.000	754,532	N/A	754,532		0	0	
6/30/86-87	6/30/84-85	115,258	434,308	1.037	1.000	450,444	N/A	450,444	0.391	1	1	16,135
6/30/87-88 166,792 1,145,741 1.050 1.000 1,202,624 N/A 1,202,624 0.721 1 1 56,88 6/30/88-89 180,117 1,227,147 1.054 1.000 1,293,224 N/A 1,293,224 0.718 2 2 33,03 6/30/89-90 180,883 1,856,452 1.059 1.000 1,966,198 N/A 1,966,198 1.087 4 2 54,87 6/30/99-91 169,902 2,427,731 1.064 1.000 2,584,104 N/A 2,584,104 1.521 8 8 19,54 6/30/91-92 165,926 1,819,909 1.070 1.000 1,946,818 N/A 1,946,818 1.173 4 2 63,45 6/30/92-93 174,198 1,323,675 1.095 1.000 1,448,779 N/A 1,448,779 0.832 2 1 125,10 6/30/93-94 185,946 1,458,508 1.111 1.000 1.619,731 N/A 1,619,731 0.871 7 7 7 23,03 6/30/94-95 194,051 1,323,435 1.126 1.000 1,490,136 N/A 1,490,136 0.768 3 2 83,35 6/30/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 65,55 6/30/95-98 221,865 1.900,110 1.151 1.000 2,126,962 N/A 1,990,881 0.851 4 4 61,35 6/30/95-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,186,398 0.985 6 8 35,78 6/30/95-90 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,05 6/30/01-02 283,070 1,851,171 1.245 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,05 6/30/01-02 283,070 1,851,171 1.245 1.000 2,387,927 N/A 2,304,392 0.814 13 14 32,37 6/30/01-02 283,070 1,851,171 1.245 1.000 2,374,188 N/A 2,304,392 0.814 13 14 32,37 6/30/01-02 283,070 1,851,171 1.245 1.000 2,374,168 N/A 2,774,168 0.957 11 8 75,771 6/30/01-03 289,846 2,184,461 1.270 1.000 2,234,385 N/A 2,343,381 0.955 23 21 36,67 6/30/01-03 289,846 2,184,461 1.377 1.000 2,243,385 N/A 2,243,385 0.668 65 25 35,32 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,32 6/30/08-09 332,413 1,338,898	6/30/85-86	123,937	559,768	1.041	1.000	582,887	N/A	582,887	0.470	3	1	23,119
630/88-89 180,117 1,227,147 1.054 1.000 1,293,224 N/A 1,293,224 0.718 2 2 33,033 630/89-90 180,883 1,856,452 1.059 1.000 1,966,198 N/A 1,966,198 1.087 4 2 54,87 670/90-91 169,902 2,427,731 1.064 1.000 2,584,104 N/A 2,584,104 1.521 8 8 8 19,54 6730/91-92 165,926 1,819,909 1.070 1.000 1,946,818 N/A 1,946,818 1.173 4 2 63,45 6730/92-93 174,198 1,323,675 1.095 1.000 1,448,779 N/A 1,448,779 0.832 2 1 125,10 6730/93-94 185,946 1,458,508 1.111 1.000 1,619,731 N/A 1,619,731 0.871 7 7 23,03 6730/94-95 194,051 1,323,435 1.126 1.000 1,490,136 N/A 1,490,136 0.768 3 2 2 83,35 6730/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 65,55 6730/95-96 224,073 1,745,451 1.141 1.000 1,990,881 N/A 1,990,881 0.851 4 4 61,355 6730/97-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,788 6730/95-90 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,186,598 0.985 6 8 35,788 6730/95-90 268,486 2,003,457 1.192 1.000 2,287,927 N/A 2,387,927 0.889 11 8 48,05 6730/90-0 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,05 6730/90-0 288,466 2,003,457 1.192 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,70 6730/01-02 283,070 1,851,171 1.245 1.000 2,774,168 N/A 2,774,168 0.957 11 8 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,70 6730/01-02 283,070 1,851,171 1.245 1.000 2,774,168 N/A 2,774,168 0.957 11 8 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,70 6730/01-02 283,070 1,851,171 1.245 1.000 2,774,168 N/A 2,774,168 0.957 11 8 7 11 8 73,71 1.000 2,784,181 N/A 2,774,168 0.957 11 8 7 11 8 73,71 1.000 2,784,181 N/A 2,784,381 0.955 23 21 36,67 6730/01-06 294,709 2,044,654 1.377 1.000 2,784,831 N/A 2,243,385 0.633 32 21 36,67 6730/01-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,67 6730/01-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,67 6730/01-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,67 6730/01-01 333,783 863,714 2,463 1.000 1,887,656 N/A 1,857,656 0.534 218 7,175	6/30/86-87	142,396	648,271	1.045	1.000	677,745	N/A	677,745	0.476	1	1	29,474
6/30/89-90 180,883 1,856,452 1.059 1.000 1,966,198 N/A 1,966,198 1.087 4 2 54,877 6/30/90-91 169,902 2,427,731 1.064 1.000 2,584,104 N/A 2,584,104 1.521 8 8 8 19,547 6/30/91-92 165,926 1,819,909 1.070 1.000 1,946,818 N/A 1,946,818 1.173 4 2 63,455 6/30/92-93 174,198 1,323,675 1.095 1.000 1,448,779 N/A 1,448,779 0.832 2 1 125,100 6/30/93-94 185,946 1,458,508 1.111 1.000 1,619,731 N/A 1,619,731 0.871 7 7 22,303 6/30/94-95 194,051 1,323,435 1.126 1.000 1,490,136 N/A 1,490,136 0.768 3 2 83,351 6/30/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 3 65,559 6/30/97-98 221,865 1,900,110 1.151 1.000 1,908,81 N/A 1,990,881 0.851 4 4 61,355 6/30/99-90 256,071 1,820,118 1.169 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,788 6/30/99-00 268,486 2,003,457 1.192 1.000 2,2186,962 N/A 2,126,962 0.831 8 7 43,833 6/30/99-00 268,486 2,2860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 7 86,700 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,387,927 0.889 11 8 48,059 6/30/02-03 289,846 2,184,461 1.270 1.000 2,374,168 N/A 2,774,168 0.957 11 8 73,711 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 6/30/08-09 332,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 6/30/08-09 352,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 6/30/08-09 352,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 6/30/08-09 352,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 6/30/08-09 352,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 6/30/08-09 352,413 1,338,898 1.660 1.000 1,242,686 N/A 2,222,096 0.668 65 25 35,522 6/30/10-11 333,783 863,714 2,463 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,82	6/30/87-88	166,792	1,145,741	1.050	1.000	1,202,624	N/A	1,202,624	0.721	1	1	56,883
6/30/90-91 169,902 2,427,731 1.064 1.000 2,584,104 N/A 2,584,104 1.521 8 8 19,54 6/30/91-92 165,926 1,819,909 1.070 1.000 1.946,818 N/A 1.946,818 1.173 4 2 63,45 6/30/92-93 174,198 1,323,675 1.095 1.000 1,448,779 N/A 1,448,779 0.832 2 1 125,10 6/30/93-94 185,946 1,458,508 1.111 1.000 1,619,731 N/A 1,619,731 0.871 7 7 23,03 6/30/94-95 194,051 1,323,435 1.126 1.000 1,490,136 N/A 1,490,136 0.768 3 2 83,351 6/30/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 3 65,555 6/30/95-97 234,073 1,745,451 1.141 1.000 1,990,881 N/A 1,990,881 0.851 4 4 61,355 6/30/95-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 1,990,881 0.851 4 4 4 61,355 6/30/95-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,126,962 0.831 8 7 43,833 6/30/95-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 111 8 48,055 6/30/09-00 268,486 2,003,457 1.192 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,700 6/30/01-02 283,070 1,851,171 1.245 1.000 2,374,168 N/A 2,304,392 0.814 13 14 32,377 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,777 6/30/03-04 293,771 1,988,740 1.303 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,777 6/30/03-04 293,771 1,988,740 1.303 1.000 2,259,955 N/A 2,259,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,677 6/30/08-09 352,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,677 6/30/08-09 352,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,673 6/30/01-11 333,783 863,714 2,463 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,826 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/88-89	180,117	1,227,147	1.054	1.000	1,293,224	N/A	1,293,224	0.718	2	2	33,039
6/30/91-92 165,926 1,819,909 1.070 1.000 1,946,818 N/A 1,946,818 1.173 4 2 63,455 6/30/92-93 174,198 1,323,675 1.095 1.000 1,448,779 N/A 1,448,779 0.832 2 1 1 125,105 6/30/93-94 185,946 1,458,508 1.111 1.000 1,619,731 N/A 1,619,731 0.871 7 7 23,033 6/30/94-95 194,051 1,323,435 1.126 1.000 1,490,136 N/A 1,490,136 0.768 3 2 83,355 6/30/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 3 65,555 6/30/96-97 234,073 1,745,451 1.141 1.000 1,990,881 N/A 1,990,881 0.851 4 4 61,355 6/30/97-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,788 6/30/98-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,126,962 0.831 8 7 43,833 6/30/98-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,287,927 0.889 111 8 48,055 6/30/09-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 111 8 48,055 6/30/00-01 279,182 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,700 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,37 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,712 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,27 6/30/06-06 294,709 2,044,654 1.377 1.000 2,438,181 N/A 2,814,831 0.955 23 21 36,673 6/30/07-08 354,668 1.474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,673 6/30/07-08 354,668 1.474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,673 6/30/07-08 354,668 1.474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,673 6/30/07-08 354,668 1.474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,673 6/30/07-08 354,668 1.474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,673 6/30/07-08 354,668 1.474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,673 6/30/07-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,212,648 N/A 2,127,648 0.637 280 157 8,051 6/30/10-11 333,783 863,714 2.463 1.000 1,857,656 N/A 1,857,656 0.534 1.184 1.34 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 1,8	6/30/89-90	180,883	1,856,452	1.059	1.000	1,966,198	N/A	1,966,198	1.087	4	2	54,873
6/30/92-93 174,198 1,323,675 1.095 1.000 1,448,779 N/A 1,448,779 0.832 2 1 125,106/30/93-94 185,946 1,458,508 1.111 1.000 1,619,731 N/A 1,619,731 0.871 7 7 23,035 (6/30/94-95 194,051 1,323,435 1.126 1.000 1,490,136 N/A 1,490,136 0.768 3 2 83,355 (6/30/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 3 65,555 (6/30/96-97 234,073 1,745,451 1.141 1.000 1,990,881 N/A 1,990,881 0.851 4 4 4 61,355 (6/30/97-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,78 (6/30/98-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,126,962 0.831 8 7 43,833 (6/30/99-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,055 (6/30/01-02 283,070 1,851,171 1.245 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,055 (6/30/02-03 289,846 2,184,461 1.270 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,37 (6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,711 (6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 8 75,277 (6/30/06-07 289,603 1,505,529 1.437 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,67 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,67 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,67 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,67 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,67 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,67 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 (6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 (6/30/08-09 332,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,62 (6/30/08-09 332,413 1,338,898 1.660 1.000 2,243,385 N/A 2,243,385 0.637 280 157 8,801 14 2,463 1.000 2,244,648 N/A 2,24	6/30/90-91	169,902	2,427,731	1.064	1.000	2,584,104	N/A	2,584,104	1.521	8	8	19,547
6/30/93-94 185,946 1,458,508 1.111 1.000 1,619,731 N/A 1,619,731 0.871 7 7 23,03 6/30/94-95 194,051 1,323,435 1.126 1.000 1,490,136 N/A 1,490,136 0.768 3 2 83,356 6/30/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 3 65,556 6/30/96-97 234,073 1,745,451 1.141 1.000 1,990,881 N/A 1,990,881 0.851 4 4 4 61,356 6/30/97-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,786 6/30/98-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,126,962 0.831 8 7 43,833 6/30/99-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,055 6/30/00-01 279,182 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,700 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,377 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,711 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,555 N/A 2,590,955 0.882 12 8 75,227 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,672 6/30/06-07 289,603 1,505,529 1.437 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,627 6/30/07-08 354,668 1,474,245 1.522 1.000 2,224,3385 N/A 2,222,096 0.668 65 25 35,322 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0,441 134 28 24,885 6/30/10-11 333,783 863,714 2,463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/91-92	165,926	1,819,909	1.070	1.000	1,946,818	N/A	1,946,818	1.173	4	2	63,454
6/30/94-95 194,051 1,323,435 1.126 1.000 1,490,136 N/A 1,490,136 0.768 3 2 83,355 6/30/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 3 65,555 6/30/96-97 234,073 1,745,451 1.141 1.000 1,990,881 N/A 1,990,881 0.851 4 4 4 61,355 6/30/97-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,78 6/30/98-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,126,962 0.831 8 7 43,835 6/30/99-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,055 6/30/00-01 279,182 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,700 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,37 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,711 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,687 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,675 6/30/06-07 2,896,03 1,505,529 1.437 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,675 6/30/06-07 2,896,03 1,505,529 1.437 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,675 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,826 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,826 6/30/10-11 333,783 863,714 2,463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/92-93	174,198	1,323,675	1.095	1.000	1,448,779	N/A	1,448,779	0.832	2	1	125,103
6/30/95-96 205,262 1,456,275 1.135 1.000 1,652,925 N/A 1,652,925 0.805 3 3 65,556 6/30/96-97 234,073 1,745,451 1.141 1.000 1,990,881 N/A 1,990,881 0.851 4 4 4 61,355 6/30/97-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,786 6/30/98-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,126,962 0.831 8 7 43,833 6/30/99-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,05 6/30/00-01 279,182 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,700 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,373 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,711 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,27 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,670 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,670 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,620 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/93-94	185,946	1,458,508	1.111	1.000	1,619,731	N/A	1,619,731	0.871	7	7	23,032
6/30/96-97 234,073 1,745,451 1.141 1.000 1,990,881 N/A 1,990,881 0.851 4 4 4 61,355 6/30/97-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,786 6/30/98-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,126,962 0.831 8 7 43,835 6/30/99-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,055 6/30/00-01 279,182 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,705 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,377 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,712 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,672 6/30/06-07 289,603 1,505,529 1.437 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,625 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,322 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,826 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,826 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/94-95	194,051	1,323,435	1.126	1.000	1,490,136	N/A	1,490,136	0.768	3	2	83,350
6/30/97-98 221,865 1,900,110 1.151 1.000 2,186,398 N/A 2,186,398 0.985 6 8 35,788 6/30/98-99 256,071 1,820,118 1.169 1.000 2,126,962 N/A 2,126,962 0.831 8 7 43,833 6/30/99-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,055 6/30/00-01 279,182 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,700 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,373 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,713 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,683 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,673 6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 16 41,143 6/30/07-08 354,668 1,474,245 1.522 1.000 2,224,3385 N/A 2,243,385 0.633 32 21 36,673 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,323 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/95-96	205,262	1,456,275	1.135	1.000	1,652,925	N/A	1,652,925	0.805	3	3	65,550
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6/30/96-97	234,073	1,745,451	1.141	1.000	1,990,881	N/A	1,990,881	0.851	4	4	61,358
6/30/99-00 268,486 2,003,457 1.192 1.000 2,387,927 N/A 2,387,927 0.889 11 8 48,055 6/30/00-01 279,182 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,705 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,373 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,711 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,673 6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 41,144 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,624 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,324 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/97-98	221,865	1,900,110	1.151	1.000	2,186,398	N/A	2,186,398	0.985	6	8	35,786
6/30/00-01 279,182 2,860,089 1.212 1.000 3,467,010 N/A 3,467,010 1.242 10 7 86,700 6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,373 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,713 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,673 6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 41,143 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,623 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,323 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/98-99	256,071	1,820,118	1.169	1.000	2,126,962	N/A	2,126,962	0.831	8	7	43,835
6/30/01-02 283,070 1,851,171 1.245 1.000 2,304,392 N/A 2,304,392 0.814 13 14 32,37. 6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,711 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,673 6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 41,144 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,620 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,323 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/99-00	268,486	2,003,457	1.192	1.000	2,387,927	N/A	2,387,927	0.889	11	8	48,059
6/30/02-03 289,846 2,184,461 1.270 1.000 2,774,168 N/A 2,774,168 0.957 11 8 73,711 6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,271 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,673 6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 41,144 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,620 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,324 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/00-01	279,182	2,860,089	1.212	1.000	3,467,010	N/A	3,467,010	1.242	10	7	86,703
6/30/03-04 293,771 1,988,740 1.303 1.000 2,590,955 N/A 2,590,955 0.882 12 8 75,277 6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,673 6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 41,144 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,623 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,323 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/01-02	283,070	1,851,171	1.245	1.000	2,304,392	N/A	2,304,392	0.814	13	14	32,373
6/30/04-05 291,382 2,464,260 1.329 1.000 3,275,311 N/A 3,275,311 1.124 24 19 42,68 6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0.955 23 21 36,673 6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 41,14 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,623 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,323 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/02-03	289,846	2,184,461	1.270	1.000	2,774,168	N/A	2,774,168	0.957	11	8	73,713
6/30/05-06 294,709 2,044,654 1.377 1.000 2,814,831 N/A 2,814,831 0,955 23 21 36,675 6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 41,145 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,625 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,325 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,826 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/03-04	293,771	1,988,740	1.303	1.000	2,590,955	N/A	2,590,955	0.882	12	8	75,277
6/30/06-07 289,603 1,505,529 1.437 1.000 2,163,815 N/A 2,163,815 0.747 26 16 41,14: 6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,620: 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,320: 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,820: 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051: 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/04-05	291,382	2,464,260	1.329	1.000	3,275,311	N/A	3,275,311	1.124	24	19	42,687
6/30/07-08 354,668 1,474,245 1.522 1.000 2,243,385 N/A 2,243,385 0.633 32 21 36,620 6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,320 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,820 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/05-06	294,709	2,044,654	1.377	1.000	2,814,831	N/A	2,814,831	0.955	23	21	36,675
6/30/08-09 332,413 1,338,898 1.660 1.000 2,222,096 N/A 2,222,096 0.668 65 25 35,322 6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,824 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/06-07	289,603	1,505,529	1.437	1.000	2,163,815	N/A	2,163,815	0.747	26	16	41,143
6/30/09-10 336,338 789,348 1.880 1.000 1,484,311 N/A 1,484,311 0.441 134 28 24,820 6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/07-08	354,668	1,474,245	1.522	1.000	2,243,385	N/A	2,243,385	0.633	32	21	36,626
6/30/10-11 333,783 863,714 2.463 1.000 2,127,648 N/A 2,127,648 0.637 280 157 8,051 6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/08-09	332,413	1,338,898	1.660	1.000	2,222,096	N/A	2,222,096	0.668	65	25	35,328
6/30/11-12 348,187 293,489 6.330 1.000 1,857,656 N/A 1,857,656 0.534 218 7,175	6/30/09-10	336,338	789,348	1.880	1.000	1,484,311	N/A	1,484,311	0.441	134	28	24,820
	6/30/10-11	333,783	863,714	2.463	1.000	2,127,648	N/A	2,127,648	0.637	280	157	8,051
Total 6,712,116 44,286,388 55,857,403 55,857,403 703 604	6/30/11-12	348,187	293,489	6.330	1.000	1,857,656	N/A	1,857,656	0.534		218	7,175
	Total	6,712,116	44,286,388			55,857,403		55,857,403		703	604	

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 4, Exhibit 2, Page 7

⁽⁵⁾ Based on information from the MA WCRIB 9/1/12 filing. Consideration for development beyond 252 months made in selection of LDF's.

 $^{(6) = (3) \}times (4) \times (5)$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Commonwealth of Massachusetts **Workers Compensation**

Reserve Analysis at June 30, 2012

Department of Corrections - Cluster 3 Medical

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss		Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Paid Loss	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	115,258	0.231	434,308	1.037	443,846	N/A	443,846	0.385	0.385
6/30/85-86	123,937	0.380	559,768	1.041	578,448	N/A	578,448	0.467	0.467
6/30/86-87	142,396	0.488	648,271	1.045	678,491	N/A	678,491	0.476	0.476
6/30/87-88	166,792	0.769	1,145,741	1.050	1,206,408	N/A	1,206,408	0.723	0.723
6/30/88-89	180,117	0.698	1,227,147	1.054	1,291,385	N/A	1,291,385	0.717	0.717
6/30/89-90	180,883	1.065	1,856,452	1.059	1,963,976	N/A	1,963,976	1.086	1.086
6/30/90-91	169,902	1.512	2,427,731	1.064	2,583,198	N/A	2,583,198	1.520	1.520
6/30/91-92	165,926	1.163	1,819,909	1.070	1,945,683	N/A	1,945,683	1.173	1.173
6/30/92-93	174,198	0.826	1,323,675	1.095	1,447,980	N/A	1,447,980	0.831	0.831
6/30/93-94	185,946	0.863	1,458,508	1.111	1,618,223	N/A	1,618,223	0.870	0.870
6/30/94-95	194,051	0.763	1,323,435	1.126	1,489,169	N/A	1,489,169	0.767	0.767
6/30/95-96	205,262	0.799	1,456,275	1.135	1,651,299	N/A	1,651,299	0.804	0.804
6/30/96-97	234,073	0.841	1,745,451	1.141	1,988,098	N/A	1,988,098	0.849	0.849
6/30/97-98	221,865	0.964	1,900,110	1.151	2,180,250	N/A	2,180,250	0.983	0.983
6/30/98-99	256,071	0.821	1,820,118	1.169	2,123,556	N/A	2,123,556	0.829	0.829
6/30/99-00	268,486	0.874	2,003,457	1.192	2,381,271	N/A	2,381,271	0.887	0.887
6/30/00-01	279,182	1.194	2,860,089	1.212	3,443,465	N/A	3,443,465	1.233	1.233
6/30/01-02	283,070	0.810	1,851,171	1.245	2,302,133	N/A	2,302,133	0.813	0.813
6/30/02-03	289,846	0.942	2,184,461	1.270	2,764,582	N/A	2,764,582	0.954	0.954
6/30/03-04	293,771	0.877	1,988,740	1.303	2,587,412	N/A	2,587,412	0.881	0.881
6/30/04-05	291,382	0.847	2,464,260	1.329	3,075,524	N/A	3,075,524	1.055	1.055
6/30/05-06	294,709	0.859	2,044,654	1.377	2,737,006	N/A	2,737,006	0.929	0.929
6/30/06-07	289,603	0.867	1,505,529	1.437	2,269,564	N/A	2,269,564	0.784	0.784
6/30/07-08	354,668	0.876	1,474,245	1.522	2,539,272	N/A	2,539,272	0.716	0.716
6/30/08-09	332,413	0.889	1,338,898	1.660	2,513,907	N/A	2,513,907	0.756	0.756
6/30/09-10	336,338	0.922	789,348	1.880	2,241,365	N/A	2,241,365	0.666	0.666
6/30/10-11	333,783	0.931	863,714	2.463	2,710,301	N/A	2,710,301	0.812	0.812
6/30/11-12	348,187	0.941	293,489	6.330	3,051,096	N/A	3,051,096	0.876	0.876
Total	6,712,116		42,808,954		57,806,907		57,806,907		

NOTES:

Section 4

Exhibit 2

Page 3

⁽²⁾ Provided by Commonwealth of Massachusetts

⁽³⁾ From Section 4, Exhibit 2, Page 4, Column 11

⁽⁴⁾ From Section 4, Exhibit 2, Page 2, Column 3

⁽⁵⁾ From Section 4, Exhibit 2, Page 2, Column 4

 $^{(6) = (4) + [\{1 - \{1/(5)\}\} \}times (3) \times (2) \times 10]$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10) = (6) / (2) / 10}

Section 4 Exhibit 2 Page 4

Department of Corrections - Cluster 3 Medical

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Expected	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Ult Loss	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.231	0.231
6/30/85-86									0.380	0.380
6/30/86-87									0.488	0.488
6/30/87-88									0.769	0.769
6/30/88-89									0.698	0.698
6/30/89-90									1.065	1.065
6/30/90-91	169,902	2,584,104	1.521	1.194	1.816	1.245	2.260	0.639	1.460	1.512
6/30/91-92	165,926	1,946,818	1.173	1.189	1.395	1.232	1.719	0.649	1.094	1.163
6/30/92-93	174,198	1,448,779	0.832	1.189	0.989	1.220	1.207	0.655	0.830	0.826
6/30/93-94	185,946	1,619,731	0.871	1.178	1.026	1.208	1.240	0.667	0.860	0.863
6/30/94-95	194,051	1,490,136	0.768	1.170	0.898	1.196	1.075	0.679	0.761	0.763
6/30/95-96	205,262	1,652,925	0.805	1.155	0.930	1.184	1.102	0.694	0.794	0.799
6/30/96-97	234,073	1,990,881	0.851	1.137	0.967	1.173	1.134	0.713	0.826	0.841
6/30/97-98	221,865	2,186,398	0.985	1.135	1.118	1.161	1.299	0.721	0.943	0.964
6/30/98-99	256,071	2,126,962	0.831	1.135	0.943	1.149	1.084	0.728	0.820	0.821
6/30/99-00	268,486	2,387,927	0.889	1.135	1.009	1.138	1.149	0.735	0.869	0.874
6/30/00-01	279,182	3,467,010	1.242	1.109	1.377	1.127	1.552	0.760	1.182	1.194
6/30/01-02	283,070	2,304,392	0.814	1.101	0.896	1.116	1.000	0.773	0.819	0.810
6/30/02-03	289,846	2,774,168	0.957	1.073	1.027	1.105	1.134	0.802	0.953	0.942
6/30/03-04	293,771	2,590,955	0.882	1.046	0.923	1.094	1.009	0.830	0.896	0.877
6/30/04-05	291,382	3,275,311	1.124	1.036	1.164	1.083	1.260	0.847	0.914	0.847
6/30/05-06	294,709	2,814,831	0.955	1.032	0.986	1.072	1.057	0.859	0.930	0.859
6/30/06-07	289,603	2,163,815	0.747	1.032	0.771	1.062	0.819	0.867	0.944	0.867
6/30/07-08	354,668	2,243,385	0.633	1.032	0.653	1.051	0.686	0.876	0.959	0.876
6/30/08-09	332,413	2,222,096	0.668	1.027	0.686	1.041	0.714	0.889	0.978	0.889
6/30/09-10	336,338	1,484,311	0.441	1.000	0.441	1.030	0.455	0.922	1.019	0.922
6/30/10-11	333,783	2,127,648	0.637	1.000	0.637	1.020	0.650	0.931	1.034	0.931
6/30/11-12	348,187	1,857,656	0.534	1.000	0.534	1.010	0.539	0.941		0.941
Total	5,802,733	48,760,238		<u> </u>						
			Trend L	ast 4 (ex 11-12):	-5.0%	Avg 3 (x11-12):	0.606			
			Trend L	ast 8 (ex 11-12):	-9.8%	Avg 5 (x11-12):	0.665			
			Trend La	st 12 (ex 11-12):	-6.8%	Avg 10 (x11-12):	0.878			
			Prior	Selected Trend:	1.5%	Prior Sel Avg:	1.050			

1.0%

Sel. Loss Cost:

0.950

Selected Trend:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 4, Exhibit 2, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCIRB $\,$
- $(6) = (4) \times (5)$
- $(7) \ Based \ on \ Selected \ Trend \ from \ (6)$
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- $\left(10\right)$ From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

Section 4 Exhibit 2 Page 5

Department of Corrections - Cluster 3 Medical

Calculation of 1982 & Prior Reserves (Page 1)

Method 1			
(1)	Account December Transis		0.950
(1)	Average Payment Trend		37%
(2)	Credibility		
(3)	Average Pmt Trend Statewide		0.950
(4)	Credibility Weighted Trend	(Low)	0.950 (High)
(5)	Selected Range	0.941	0.960
(6)	Incremental Paid for 2012	74,810	74,810
(7)	Estimated Reserve	1,182,493	1,772,339
(8)	Paid to Date (82 & Prior)	582,270	582,270
(9)	Est Ult Paid for 1982 & Prior	1,764,764	2,354,609
Method 2	<u> </u>		
	_	(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	92,350	100,913
(11)	Projected Number of Years	3	3
(12)	Estimated Reserve	277,049	302,740
(13)	Paid to Date (82 & Prior)	582,270	507,461
(14)	Est Ult Paid for 1982 & Prior	859,319	810,201
(14a)	Paid Counts During Fiscal Year	4	3
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	1,312,041	2,354,609
(16)	Lump Sum Ultimates	N/A	N/A
(17)	Ult Loss Including Lump Sums	1,312,041	2,354,609
(18)	Implied Tail	2.253	4.044
(19)	Ult Loss Inc Lump Sums @ 6/11	1,113,295	1,667,901
NOTES:			
(1) From Sectio	on 4, Exhibit 2, Page 6		(10) Avg of 3 latest years from Section 4, Exhibit 2, Page 6, Column 3
(2) = (Average	of Section 4, Exhibit 2, Page 6, Column 3 / 175,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta	stewide Trend		(12) = (10 x (11))
$(4) = (1) \times (2) +$	- (4) x {1 - (2)}		(14) = (12) + (13)
(5) Selected jud	gmentally based on (4)		(15) = Average of (9) and (14)
(6), (14a) Provi	ded by Commonwealth of Massachusetts		(16) Lump Sums are considered in Indemnity analysis (Section 1)
$(7) = (6) \times (5) /$	{1 - (5)}		(17) = (15) + (16)
(8), (16) From S	Section 4, Exhibit 2, Page 2, Column 3		(18) = (15) / (8)
(9) = (7) + (8)			(19) From Prior Aon Analysis as of June 30, 2011



Section 4 Exhibit 2 Page 6

Department of Corrections - Cluster 3 Medical

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	24,180	10.093			
1993	2	4,649	8.444	0.192		
1994	3	4,226	8.349	0.909		
1995	4	2,463	7.809	0.583		
1996	5	3,867	8.260	1.570		
1997	6	12,692	9.449	3.282		
1998	7	3,736	8.226	0.294		
1999	8	1,455	7.283	0.389		
2000	9	13,993	9.546	9.617	n =	21
2001	10	18,860	9.845	1.348	S(x) =	42,042
2002	11	1,907	7.553	0.101	S(x-sq) =	84,168,854
2003	12	725	6.586	0.380	S(xy) =	378,882
2004	13	1,808	7.500	2.494	S(y) =	189
2005	14	2,687	7.896	1.486	D =	16,170
2006	15	3,792	8.241	1.411	slope =	0.115
2007	16	10,343	9.244	2.728	Avg Trend =	1.115
2008	17	8,983	9.103	0.869		
2009	18	100,501	11.518	11.187		
2010	19	110,847	11.616	1.103		
2011	20	91,392	11.423	0.824		
2012	21	74,810	11.223	0.819		

Selected Trend: 0.950

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.819 = 74810 / 91392



Commonwealth of Massachusetts Workers Compensation Department of Corrections - Cluster 3 MEDICAL Paid Loss Development Paid Loss (Excluding Lump Sum)

Section 4 Exhibit 2 Page 7

Acc Yr Ending June-83 June-84 June-85 June-86 June-87 June-88 June-89 June-91 June-91 June-92 June-93 June-94 June-95 June-99 June-90 June-91	504,986 456,471	811,780 901,476 816,076 722,998 709,731 880,944 850,419 780,685 1,118,525 1,161,108	1,192,208 1,023,022 1,061,794 959,344 906,028 859,884 1,029,045 1,071,815 1,009,719 1,328,041 1,486,434 1,190,752 1,552,091 1,612,636 1,809,319 1,564,242 1,218,822	1,052,996 985,528 962,823 1,129,661 1,188,934 1,120,546 1,481,979 1,729,264 1,457,269 1,775,257 1,744,790 2,048,757 1,729,098 1,380,770 1,419,250	1,530,020 1,141,810 1,198,560 1,141,756 1,057,961 1,085,060 1,192,806 1,283,207 1,237,603 1,601,386 2,113,882 1,628,226 1,904,289 1,811,022		2,045,138 1,965,029	96 83,440 501,855 184,340 319,414 485,578 1,039,983 955,349 1,536,324 1,139,025 1,296,482 1,186,110 1,213,854 1,332,755 1,486,280 1,561,531 1,812,535 2,501,361 1,769,478 2,103,051 1,975,226 2,464,260	1,529,830 1,613,648 1,852,179 2,567,715 1,813,443		1,032,040 1,637,523 1,748,257 1,445,752 1,300,910 1,357,475 1,266,835 1,334,696 1,534,845 1,615,592 1,683,574 1,683,574	1,376,074 1,285,546 1,371,532 1,608,334 1,716,755	1,390,533 1,294,524 1,394,601 1,629,854 1,772,391 1,791,004	1,838,516	1,752,807 1,951,997 1,553,065 1,319,110 1,413,794 1,305,920 1,433,202	192 141,596 728,709 238,016 433,663 621,890 1,131,576 1,126,235 1,778,979 2,058,075 1,526,283 1,321,122 1,423,336 1,312,490 1,445,908 1,745,451	1,147,403 1,821,497 2,109,105 1,573,916 1,322,034 1,430,519	216 141,914 728,709 257,231 480,856 627,889 1,139,881 1,157,458 1,836,832 1,589,949 1,323,404 1,446,576 1,323,435	228 142,318 729,143 266,584 494,886 633,482 1,139,671 1,164,985 1,849,519 2,230,499 1,615,152 1,323,509 1,458,508	1,178,930 1,851,871 2,269,406	252 142,318 729,143 298,608 523,474 638,336 11,93,712 11,853,228 11,853,283 11,859,909			288 154,891 730,414 352,978 554,546 642,212 1,145,004 1,227,147	300 160,448 730,414 369,873 57,077 643,694 1,145,741	312 164,749 730,414 394,344 558,277 648,271	324 164,749 730,414 415,317 559,768	336 164,749 730,414 434,308	348 164,749 730,414	360 164,749
Are-to	12-24 2.326 2.619 2.326 2.326 2.326 2.326 2.300 3.155 2.978 3.984 2.072 2.614 1.892 2.058 2.069 2.178 2.414 2.414 2.414 2.414 3.436 3.463	24-36 1.428 1.477 1.428 1.268 1.624 1.389 1.512 1.265 1.260 1.176 1.253 1.212 1.168 1.260 1.273 1.212 1.168 1.253 1.212 1.265 1.273 1.212 1.265 1.274	36-48 1.264 1.266 1.264 1.290 1.277 1.311 1.311 1.269 1.169 1.088 1.088 1.088 1.120 1.098 1.106 1.110 1.110 1.110 1.110 1.124 1.144 1.082 1.132 1.132 1.133 1.133	48-60 1.202 1.232 1.246 1.126 1.257 1.209 1.107 1.078 1.083 1.033 1.037 1.084 1.073 1.079 1.108 1.081 1.27 1.058 1.053 1.037 1.059 1.079 1.108 1.059 1.079 1.109 1.107 1.079 1.107 1.079 1.107 1.079 1	60-72 1.175 1.109 1.109 1.109 1.194 1.194 1.034 1.034 1.034 1.024 1.026 1.026 1.041 1.087 1.087 1.087 1.087 1.087 1.046 1.041 1.053 1.054 1.053 1.054	72-84 1.097 1.209 1.098 1.146 1.074 1.042 1.025 1.021 1.033 1.026 1.028 1.043 1.043 1.043 1.043 1.049 1.043 1.049 1.049 1.049 1.059	84-96 1.146 1.187 1.115 1.057 1.025 1.041 1.020 1.032 1.014 1.102 1.005 1.020 1.032 1.014 1.102 1.005 1.020 1.032 1.030 1.041 1.027 1.032 1.056 1.076	96-108 1.288 1.179 1.045 1.062 1.050 1.019 1.047 1.020 1.038 1.016 1.014 1.020 1.036 1.015 1.022 1.036 1.055 1.017 1.027 1.027	108-120 1.104 1.094 1.094 1.095 1.017 1.017 1.017 1.014 1.019	120-132 1.086 1.065 1.032 1.039 1.044 1.037 1.015 1.020 1.029 1.013 1.003 1.017 1.022 1.045 1.022 1.045 1.022 1.045 1.022 1.045 1.04	132-144 1.054 1.047 1.015 1.035 1.031 1.004 1.027 1.011 1.021 1.001 1.014 1.015 1.028 1.04	144-156 1.015 1.004 1.029 1.023 1.036 1.006 1.013 1.013 1.015 1.017 1.004 1.011 1.007 1.017 1.013 1.032 1.027 1.018	156-168 1.002 1.006 1.012 1.029 1.020 1.003 1.015 1.020 1.024 1.027 1.003 1.009 1.005 1.015 1.016 1.016 1.016 1.016 1.016 1.016	168-180 1.019 1.000 1.041 1.020 1.001 1.017 1.022 1.033 1.007 1.006 1.008 1.003 1.011 1.022 1.033	180-192 1.006 1.000 1.000 1.003 1.025 1.027 1.006 1.016 1.016 1.016 1.054 1.002 1.002 1.002 1.002 1.002	192-204 1.000 1.000 1.040 1.040 1.063 1.005 1.004 1.019 1.024 1.025 1.007 1.001 1.005 1.007	204-216 1.002 1.000 1.040 1.043 1.005 1.005 1.009 1.008 1.014 1.010 1.011 1.010	216-228 1.003 1.001 1.036 1.029 1.000 1.007 1.007 1.043 1.016 1.000 1.008	228-240 1.000 1.000 1.000 1.005 1.034 1.036 1.005 1.001 1.012 1.001 1.007 1.009	240-252 1.000 1.000 1.063 1.021 1.002 1.001 1.013 1.011 1.031 1.031 1.031 1.031 1.031	252-264 1.003 1.001 1.067 1.034 1.002 1.000 1.010 1.000 1.039	264-276 1.012 1.000 1.061 1.016 1.002 1.002 1.009 1.001	276-288 1.072 1.000 1.044 1.008 1.002 1.001 1.008	288-300 1.036 1.000 1.048 1.005 1.002 1.001	300-312 1.027 1.000 1.006 1.005 1.007	3/2-324 1.000 1.000 1.053 1.003	324-336 1.000 1.000 1.004 1.046	336-348 1.000 1.000	348-360 1.000	
Averages Simple Avg All Yrs	12-24 2.569	24-36 1.310	36-48 1.161	48-60 1.113	60-72 1.077	72-84 1.058	84-96 1.050	96-108 1.049	108-120 1.035	120-132 1.030	132-144 1.028	144-156 1.017	156-168 1.018	168-180 1.016	180-192 1.014	192-204 1.015	204-216 1.012	216-228 1.013	228-240 1.016	240-252 1.021	252-264 1.017	264-276 1.013	276-288 1.019	288-300 1.015	300-312 1.020	312-324 1.014	324-336 1.015	336-348 1.000	348-360 1.000	To Ult
Latest 5 Latest 3 <u>Volume Wtd</u> All Yrs	1.873 1.833 2.378	1.215 1.183 1.279	1.112 1.107 1.133	1.053 1.052 1.091	1.045 1.045 1.059	1.037 1.044 1.044	1.024 1.021 1.036	1.020 1.018 1.030	1.026 1.026 1.028	1.020 1.019 1.024	1.039 1.028 1.027	1.022 1.026 1.017	1.020 1.026 1.019	1.015 1.022 1.016	1.009 1.012 1.015	1.005 1.006 1.013	1.008 1.005 1.009	1.015 1.008 1.014	1.016 1.022 1.015	1.024 1.035 1.023	1.010 1.016 1.016	1.006 1.004 1.007	1.013 1.004 1.009	1.011 1.003 1.008	1.020 1.025 1.014	1.019 1.012	1.015 1.014	1.000	1.000	
Latest 5 Latest 3 Dev Factor Selec	1.878 1.837	1.224 1.190	1.113 1.106	1.055 1.054	1.046 1.046	1.037 1.044	1.024 1.022	1.020 1.017	1.027 1.028	1.021 1.020	1.037 1.028	1.022 1.026	1.021 1.026	1.017 1.023	1.010 1.013	1.005 1.006	1.009 1.005	1.017 1.009	1.016 1.023	1.026 1.034	1.015 1.019	1.005 1.004	1.008 1.004	1.006 1.002	1.014 1.019	1.013	1.014			
Industry 1 Industry 2 Prior Selected FacToUlt Percent of Ult	1.968 2.599 2.569 6.330 15.8%	1.143 1.266 1.317 1.310 2.463 40.6%	1.054 1.074 1.135 1.133 1.880 53.2%	1.030 1.040 1.093 1.091 1.660 60.3%	1.018 1.013 1.060 1.059 1.522 65.7%	1.014 1.011 1.043 1.044 1.437 69.6%	1.012 1.010 1.036 1.036 1.377 72.6%	1.015 1.026 1.020 1.329 75.2%	1.008 1.028 1.026 1.303 76.8%	1.013 1.027 1.020 1.270 78.7%	1.013 1.026 1.027 1.245 80.3%	1.009 1.017 1.017 1.212 82.5%	1.008 1.020 1.020 1.192 83.9%	1.008 1.014 1.016 1.169 85.6%	1.008 1.006 1.009 1.151 86.9%	1.005 1.008 1.005 1.141 87.7%	1.004 1.009 1.008 1.135 88.1%	1.002 1.015 1.014 1.126 88.8%	1.004 1.017 1.015 1.111 90.0%	1.005 1.013 1.023 1.095 91.4%	1.005 1.005 1.070 93.5%	1.005 1.005 1.064 93.9%	1.005 1.005 1.059 94.4%	1.004 1.004 1.054 94.9%	1.004 1.004 1.050 95.3%	1.004 1.004 1.045 95.7%	1.004 1.004 1.041 96.0%	1.004 1.004 1.037 96.4%	1.031 1.004 1.033 96.8%	1.029 1.029 97.2%

Section 4 Exhibit 2 Page 8

Department of Corrections - Cluster 3 Medical

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		ate Loss		ite Loss	Change in U		=	Itimate Loss
Accident	As o	f 6/11	As o	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	1,113,295	1,667,901	1,312,041	2,354,609	198,747	17.9%	686,708	41.2%
6/30/82-83	164,749	173,195	164,749	172,901	0	0.0%	(294)	-0.2%
6/30/83-84	730,414	770,933	730,414	769,623	0	0.0%	(1,310)	-0.2%
6/30/84-85	425,000	431,000	444,000	450,000	19,000	4.5%	19,000	4.4%
6/30/85-86	578,000	582,000	578,000	583,000	0	0.0%	1,000	0.2%
6/30/86-87	674,000	675,000	678,000	678,000	4,000	0.6%	3,000	0.4%
6/30/87-88	1,204,000	1,208,000	1,203,000	1,206,000	(1,000)	-0.1%	(2,000)	-0.2%
6/30/88-89	1,284,000	1,286,000	1,291,000	1,293,000	7,000	0.5%	7,000	0.5%
6/30/89-90	1,966,000	1,969,000	1,964,000	1,966,000	(2,000)	-0.1%	(3,000)	-0.2%
6/30/90-91	2,494,000	2,495,000	2,583,000	2,584,000	89,000	3.6%	89,000	3.6%
6/30/91-92	1,829,000	1,830,000	1,946,000	1,947,000	117,000	6.4%	117,000	6.4%
6/30/92-93	1,454,000	1,455,000	1,448,000	1,449,000	(6,000)	-0.4%	(6,000)	-0.4%
6/30/93-94	1,612,000	1,613,000	1,618,000	1,620,000	6,000	0.4%	7,000	0.4%
6/30/94-95	1,483,000	1,484,000	1,489,000	1,490,000	6,000	0.4%	6,000	0.4%
6/30/95-96	1,639,000	1,641,000	1,651,000	1,653,000	12,000	0.7%	12,000	0.7%
6/30/96-97	1,947,000	1,949,000	1,988,000	1,991,000	41,000	2.1%	42,000	2.2%
6/30/97-98	2,123,000	2,128,000	2,180,000	2,186,000	57,000	2.7%	58,000	2.7%
6/30/98-99	2,111,000	2,114,000	2,124,000	2,127,000	13,000	0.6%	13,000	0.6%
6/30/99-00	2,357,000	2,362,000	2,381,000	2,388,000	24,000	1.0%	26,000	1.1%
6/30/00-01	3,397,000	3,419,000	3,443,000	3,467,000	46,000	1.4%	48,000	1.4%
6/30/01-02	2,316,000	2,316,000	2,302,000	2,304,000	(14,000)	-0.6%	(12,000)	-0.5%
6/30/02-03	2,646,000	2,792,000	2,626,000	2,774,000	(20,000)	-0.8%	(18,000)	-0.6%
6/30/03-04	2,502,000	2,634,000	2,458,000	2,591,000	(44,000)	-1.8%	(43,000)	-1.6%
6/30/04-05	3,129,000	3,307,000	3,076,000	3,275,000	(53,000)	-1.7%	(32,000)	-1.0%
6/30/05-06	2,780,000	2,796,000	2,737,000	2,815,000	(43,000)	-1.5%	19,000	0.7%
6/30/06-07	2,216,000	2,395,000	2,164,000	2,270,000	(52,000)	-2.3%	(125,000)	-5.2%
6/30/07-08	2,371,000	2,784,000	2,243,000	2,539,000	(128,000)	-5.4%	(245,000)	-8.8%
6/30/08-09	2,217,000	2,768,000	2,111,000	2,514,000	(106,000)	-4.8%	(254,000)	-9.2%
6/30/09-10	1,854,000	2,763,000	1,559,000	2,241,000	(295,000)	-15.9%	(522,000)	-18.9%
6/30/10-11	3,063,000	3,418,000	2,021,000	2,845,500	(1,042,000)	-34.0%	(572,500)	-16.7%
6/30/11-12								
Total	55,679,458	59,226,030	54,513,204	58,543,633	(1,166,253)	-2.1%	(682,397)	-1.2%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 4, Exhibit 2, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1



Section 4 Exhibit 2 Page 9

Department of Corrections - Cluster 3 Medical

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	2.8%	0.0%	0.8%	0.5%	1.000	1.000
360	97.2%	0.4%	2.8%	0.1%	0.1%	0.981	0.971
348	96.8%	0.4%	3.2%	0.1%	0.1%	0.947	0.923
336	96.4%	0.4%	3.6%	0.1%	0.1%	0.918	0.882
324	96.0%	0.4%	4.0%	0.1%	0.1%	0.893	0.845
312	95.7%	0.4%	4.3%	0.1%	0.1%	0.869	0.813
300	95.3%	0.4%	4.7%	0.1%	0.1%	0.847	0.783
288	94.9%	0.5%	5.1%	0.2%	0.1%	0.827	0.756
276	94.4%	0.5%	5.6%	0.2%	0.1%	0.811	0.735
264	93.9%	0.5%	6.1%	0.2%	0.1%	0.795	0.715
252	93.5%	2.1%	6.5%	0.9%	0.6%	0.780	0.696
240	91.4%	1.3%	8.6%	0.6%	0.4%	0.807	0.734
228	90.0%	1.2%	10.0%	0.6%	0.4%	0.803	0.729
216	88.8%	0.7%	11.2%	0.4%	0.3%	0.795	0.719
204	88.1%	0.4%	11.9%	0.2%	0.2%	0.777	0.696
192	87.7%	0.8%	12.3%	0.4%	0.3%	0.755	0.667
180	86.9%	1.3%	13.1%	0.8%	0.6%	0.741	0.650
168	85.6%	1.7%	14.4%	1.0%	0.8%	0.738	0.646
156	83.9%	1.4%	16.1%	0.9%	0.7%	0.737	0.647
144	82.5%	2.2%	17.5%	1.4%	1.1%	0.731	0.639
132	80.3%	1.6%	19.7%	1.1%	0.9%	0.733	0.644
120	78.7%	2.0%	21.3%	1.4%	1.1%	0.726	0.634
108	76.8%	1.5%	23.2%	1.1%	0.9%	0.722	0.630
96	75.2%	2.6%	24.8%	1.9%	1.7%	0.712	0.618
84	72.6%	3.1%	27.4%	2.4%	2.1%	0.712	0.620
72	69.6%	3.9%	30.4%	3.1%	2.8%	0.715	0.624
60	65.7%	5.5%	34.3%	4.6%	4.2%	0.720	0.631
48	60.3%	7.1%	39.7%	6.2%	5.8%	0.732	0.647
36	53.2%	12.6%	46.8%	11.4%	10.9%	0.746	0.665
24	40.6%	24.8%	59.4%	23.4%	22.7%	0.773	0.700
12	15.8%	15.8%	84.2%	15.5%	15.3%	0.813	0.752

Total 100.0%

NOTES:

(2) = 1 / Section 4, Exhibit 2, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)



Section 4 Exhibit 2 Page 10

Department of Corrections - Cluster 3 Medical

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount		ounted
Accident	Outstandi	ě .	Factor at		ing Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	729,771	1,772,339		688,562	1,672,257
6/30/82-83	0	8,152	0.981	0	7,994
6/30/83-84	0	39,209	0.947	0	37,148
6/30/84-85	9,692	15,692	0.918	8,902	14,413
6/30/85-86	18,232	23,232	0.893	16,274	20,737
6/30/86-87	29,729	29,729	0.869	25,836	25,836
6/30/87-88	57,259	60,259	0.847	48,515	51,057
6/30/88-89	63,853	65,853	0.827	52,808	54,462
6/30/89-90	107,548	109,548	0.811	87,209	88,831
6/30/90-91	155,269	156,269	0.795	123,484	124,280
6/30/91-92	126,091	127,091	0.780	98,374	99,154
6/30/92-93	124,325	125,325	0.807	100,286	101,093
6/30/93-94	159,492	161,492	0.803	128,036	129,641
6/30/94-95	165,565	166,565	0.795	131,608	132,403
6/30/95-96	194,725	196,725	0.777	151,348	152,902
6/30/96-97	242,549	245,549	0.755	183,244	185,510
6/30/97-98	279,890	285,890	0.741	207,485	211,932
6/30/98-99	303,882	306,882	0.738	224,121	226,333
6/30/99-00	377,543	384,543	0.737	278,394	283,556
6/30/00-01	582,911	606,911	0.731	426,002	443,542
6/30/01-02	450,829	452,829	0.733	330,573	332,040
6/30/02-03	441,539	589,539	0.726	320,405	427,802
6/30/03-04	469,260	602,260	0.722	338,764	434,778
6/30/04-05	611,740	810,740	0.712	435,390	577,023
6/30/05-06	692,346	770,346	0.712	493,287	548,861
6/30/06-07	658,471	764,471	0.715	470,685	546,455
6/30/07-08	768,755	1,064,755	0.720	553,779	767,005
6/30/08-09	772,102	1,175,102	0.732	565,346	860,429
6/30/09-10	769,652	1,451,652	0.746	574,034	1,082,694
6/30/10-11	1,157,287	1,981,787	0.773	894,532	1,531,834
6/30/11-12	1,657,511	2,910,061	0.813	1,347,762	2,366,240
Total	12,177,817	17,460,796		9,305,040	13,538,239

_		
_	Discount Ca	alculation for
	All Pri	or Years
_	(Low)	(High)
(8) Estimated Total Reserve:	729,771	1,772,339
(9) Projected Number of Years:	3	3
(10) Projected Paid Loss per Year:	243,257	590,780
(11) Discounted Value at 4%:	688,562	1,672,257

0.764

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 4, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 4, Exhibit 2, Page 9, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.775



Section 4 Exhibit 2 Page 11

Department of Corrections - Cluster 3 Medical

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount		ounted
Accident	Outstandi	ng Losses	Factor at	Outstandi	ing Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	729,771	1,772,339		669,736	1,626,536
6/30/82-83	0	8,152	0.971	0	7,918
6/30/83-84	0	39,209	0.923	0	36,189
6/30/84-85	9,692	15,692	0.882	8,544	13,833
6/30/85-86	18,232	23,232	0.845	15,409	19,635
6/30/86-87	29,729	29,729	0.813	24,159	24,159
6/30/87-88	57,259	60,259	0.783	44,841	47,191
6/30/88-89	63,853	65,853	0.756	48,278	49,790
6/30/89-90	107,548	109,548	0.735	79,058	80,528
6/30/90-91	155,269	156,269	0.715	111,025	111,740
6/30/91-92	126,091	127,091	0.696	87,740	88,436
6/30/92-93	124,325	125,325	0.734	91,207	91,941
6/30/93-94	159,492	161,492	0.729	116,283	117,741
6/30/94-95	165,565	166,565	0.719	119,052	119,771
6/30/95-96	194,725	196,725	0.696	135,499	136,891
6/30/96-97	242,549	245,549	0.667	161,891	163,893
6/30/97-98	279,890	285,890	0.650	181,836	185,734
6/30/98-99	303,882	306,882	0.646	196,306	198,244
6/30/99-00	377,543	384,543	0.647	244,291	248,821
6/30/00-01	582,911	606,911	0.639	372,709	388,055
6/30/01-02	450,829	452,829	0.644	290,182	291,470
6/30/02-03	441,539	589,539	0.634	280,135	374,034
6/30/03-04	469,260	602,260	0.630	295,815	379,656
6/30/04-05	611,740	810,740	0.618	377,942	500,887
6/30/05-06	692,346	770,346	0.620	429,074	477,413
6/30/06-07	658,471	764,471	0.624	410,596	476,694
6/30/07-08	768,755	1,064,755	0.631	485,402	672,300
6/30/08-09	772,102	1,175,102	0.647	499,770	760,626
6/30/09-10	769,652	1,451,652	0.665	511,924	965,547
6/30/10-11	1,157,287	1,981,787	0.700	810,470	1,387,884
6/30/11-12	1,657,511	2,910,061	0.752	1,246,693	2,188,795
Total	12,177,817	17,460,796		8,345,866	12,232,349

0.685

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 4, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 4, Exhibit 2, Page 9, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.701

Section 5

Exhibit 1

Page 1



Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2011

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		2,098,860			2,492,484	2,614,353	393,624	515,493		
6/30/82-83		134,406	136,792		138,000	140,000	3,594	5,594		
6/30/83-84		188,031	190,881		192,000	196,000	3,969	7,969		
6/30/84-85	176,924	1,782,901	2,167,723	1,810,180	1,810,000	2,168,000	27,099	385,099	1.023	1.225
6/30/85-86	188,662	1,624,227	2,225,064	1,644,826	1,645,000	1,934,945	20,773	310,718	0.872	1.026
6/30/86-87	212,277	2,286,636	3,148,506	2,317,293	2,317,000	3,149,000	30,364	862,364	1.092	1.483
6/30/87-88	243,118	2,057,591	2,092,545	2,091,556	2,092,000	2,093,000	34,409	35,409	0.860	0.861
6/30/88-89	248,990	1,802,395	1,842,009	1,842,149	1,842,000	1,842,000	39,605	39,605	0.740	0.740
6/30/89-90	250,404	522,038	537,628	544,561	538,000	545,000	15,962	22,962	0.215	0.218
6/30/90-91	235,170	2,242,794	2,365,772	2,364,826	2,365,000	2,366,000	122,206	123,206	1.006	1.006
6/30/91-92	235,607	2,373,362	2,787,600	2,571,849	2,572,000	2,788,000	198,638	414,638	1.092	1.183
6/30/92-93	241,161	450,365	482,627	482,847	455,000	473,000	4,635	22,635	0.189	0.196
6/30/93-94	254,321	710,933	920,492	802,642	719,000	747,000	8,067	36,067	0.283	0.294
6/30/94-95	256,665	761,806	860,739	858,757	770,000	800,000	8,194	38,194	0.300	0.312
6/30/95-96	265,739	591,722	679,914	678,869	598,000	622,000	6,278	30,278	0.225	0.234
6/30/96-97	296,336	512,528	613,105	612,326	518,000	539,000	5,473	26,473	0.175	0.182
6/30/97-98	296,982	463,804	541,872	543,737	469,000	487,000	5,196	23,196	0.158	0.164
6/30/98-99	299,530	670,669	803,154	801,638	802,000	803,000	131,331	132,331	0.268	0.268
6/30/99-00	323,627	1,216,150	1,540,149	1,521,899	1,522,000	1,540,000	305,850	323,850	0.470	0.476
6/30/00-01	338,348	1,284,014	1,648,739	1,628,169	1,628,000	1,649,000	343,986	364,986	0.481	0.487
6/30/01-02	329,555	775,125	983,288	979,131	979,000	983,000	203,875	207,875	0.297	0.298
6/30/02-03	329,179	759,940	981,231	976,972	977,000	981,000	217,060	221,060	0.297	0.298
6/30/03-04	344,547	268,295	357,051	366,991	357,000	367,000	88,705	98,705	0.104	0.107
6/30/04-05	325,530	624,705	837,709	828,577	829,000	838,000	204,295	213,295	0.255	0.257
6/30/05-06	403,750	353,027	493,795	609,868	494,000	610,000	140,973	256,973	0.122	0.151
6/30/06-07	420,219	439,328	634,416	742,356	634,000	742,000	194,672	302,672	0.151	0.177
6/30/07-08	425,998	367,025	580,305	708,294	580,000	708,000	212,975	340,975	0.136	0.166
6/30/08-09	420,566	647,624	1,267,275	1,224,336	1,224,000	1,267,000	576,376	619,376	0.291	0.301
6/30/09-10	433,206	373,835	1,091,389	1,236,652	1,091,000	1,237,000	717,165	863,165	0.252	0.286
6/30/10-11	444,673	361,140	1,166,402	1,101,228	1,101,000	1,166,000	739,860	804,860	0.248	0.262
6/30/11-12	467,753	198,403	1,411,063	1,230,023	1,230,000	1,411,000	1,031,597	1,212,597	0.263	0.302
Total	8,708,837	28,943,679	35,389,231	33,122,553	34,980,484	37,806,298	6,036,805	8,862,619	·	-
Tot 6/30/84-12	8,708,837	26,522,382	35,061,559	33,122,553	32,158,000	34,855,945	5,635,618	8,333,563	0.369	0.400

- (2) Provided by Commonwealth of Massachusetts
- (3) Sum of Section 5, Exhibit 1, Page 2, Column 3 and Section 5, Exhibit 1, Page 9, Column 8
- (4) From Section 5, Exhibit 1, Page 2, Column 8
- (5) From Section 5, Exhibit 1, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



University of Massachusetts (Amherst) - Cluster 4 Indemnity

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Paid Loss		Adjstmnt for	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average	
Accident	Payroll	Excluding	Paid	Extra	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding	Average
Year	(000's)	Lump Sum	LDF	Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim	Age
All Prior Yrs		2,010,820							1	1		77
6/30/82-83		134,406	1.018	1.000	136,792	0	136,792		0	0		
6/30/83-84		160,531	1.018	1.000	163,381	27,500	190,881		0	0		
6/30/84-85	176,924	1,738,901	1.018	1.200	2,123,723	44,000	2,167,723	1.225	1	1	384,822	73
6/30/85-86	188,662	1,414,227	1.018	1.400	2,015,064	210,000	2,225,064	1.179	1	0		
6/30/86-87	212,277	2,028,636	1.018	1.400	2,890,506	258,000	3,148,506	1.483	1	1	861,870	61
6/30/87-88	243,118	1,969,091	1.018	1.000	2,004,045	88,500	2,092,545	0.861	1	1	34,954	62
6/30/88-89	248,990	1,734,395	1.023	1.000	1,774,009	68,000	1,842,009	0.740	1	1	39,614	63
6/30/89-90	250,404	471,448	1.033	1.000	487,038	50,590	537,628	0.215	0	0		
6/30/90-91	235,170	2,034,294	1.060	1.000	2,157,272	208,500	2,365,772	1.006	1	1	122,979	73
6/30/91-92	235,607	2,124,362	1.086	1.100	2,538,600	249,000	2,787,600	1.183	1	1	414,238	71
6/30/92-93	241,161	292,355	1.110	1.000	324,617	158,010	482,627	0.200	0	0		
6/30/93-94	254,321	580,633	1.134	1.200	790,192	130,300	920,492	0.362	0	0		
6/30/94-95	256,665	624,606	1.158	1.000	723,539	137,200	860,739	0.335	0	0		
6/30/95-96	265,739	475,722	1.185	1.000	563,914	116,000	679,914	0.256	0	0		
6/30/96-97	296,336	472,528	1.213	1.000	573,105	40,000	613,105	0.207	0	1	100,577	65
6/30/97-98	296,982	320,304	1.241	1.000	397,654	144,218	541,872	0.182	0	0		
6/30/98-99	299,530	477,169	1.273	1.000	607,405	195,748	803,154	0.268	0	1	130,236	63
6/30/99-00	323,627	1,036,650	1.308	1.000	1,355,895	184,253	1,540,149	0.476	0	0		
6/30/00-01	338,348	1,114,014	1.320	1.000	1,470,875	177,864	1,648,739	0.487	1	1	356,861	50
6/30/01-02	329,555	582,625	1.342	1.000	781,968	201,320	983,288	0.298	0	1	199,343	62
6/30/02-03	329,179	569,968	1.367	1.000	779,073	202,158	981,231	0.298	1	1	209,105	49
6/30/03-04	344,547	212,295	1.390	1.000	295,076	61,974	357,051	0.104	0	0		
6/30/04-05	325,530	457,755	1.417	1.000	648,482	189,227	837,709	0.257	2	1	190,726	60
6/30/05-06	403,750	276,027	1.452	1.000	400,747	93,048	493,795	0.122	0	0		
6/30/06-07	420,219	324,328	1.471	1.000	477,234	157,181	634,416	0.151	2	1	152,906	39
6/30/07-08	425,998	304,525	1.537	1.000	468,020	112,285	580,305	0.136	2	2	81,747	41
6/30/08-09	420,566	555,124	1.691	1.000	938,488	328,786	1,267,275	0.301	10	6	63,894	57
6/30/09-10	433,206	286,244	1.992	1.000	570,058	521,331	1,091,389	0.252	18	9	31,535	51
6/30/10-11	444,673	361,140	2.731	1.000	986,286	180,116	1,166,402	0.262	55	15	41,676	50
6/30/11-12	467,753	198,403	5.817	1.000	1,154,130	256,933	1,411,063	0.302		64	14,933	45
Total	8,708,837	25,343,526			30,597,188	4,792,043	35,389,231		99	110		

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 5, Exhibit 1, Page 7

⁽⁵⁾ Based on information from the MA WCRIB

^{(6) = (3)} x (4) x (5)

⁽⁷⁾ From Section 5, Exhibit 1, Page 9, Column 13

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 5 Exhibit 1 Page 3

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori	Paid Loss		Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss	Excluding	Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Lump Sum	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	176,924	0.884	1,738,901	1.018	1,766,180	44,000	1,810,180	1.023	0.998
6/30/85-86	188,662	0.626	1,414,227	1.018	1,434,826	210,000	1,644,826	0.872	0.761
6/30/86-87	212,277	0.828	2,028,636	1.018	2,059,293	258,000	2,317,293	1.092	0.970
6/30/87-88	243,118	0.801	1,969,091	1.018	2,003,056	88,500	2,091,556	0.860	0.824
6/30/88-89	248,990	0.715	1,734,395	1.023	1,774,149	68,000	1,842,149	0.740	0.713
6/30/89-90	250,404	0.281	471,448	1.033	493,971	50,590	544,561	0.217	0.197
6/30/90-91	235,170	0.910	2,034,294	1.060	2,156,326	208,500	2,364,826	1.006	0.917
6/30/91-92	235,607	1.060	2,124,362	1.086	2,322,849	249,000	2,571,849	1.092	0.986
6/30/92-93	241,161	0.136	292,355	1.110	324,837	158,010	482,847	0.200	0.135
6/30/93-94	254,321	0.305	580,633	1.134	672,342	130,300	802,642	0.316	0.264
6/30/94-95	256,665	0.276	624,606	1.158	721,557	137,200	858,757	0.335	0.281
6/30/95-96	265,739	0.210	475,722	1.185	562,869	116,000	678,869	0.255	0.212
6/30/96-97	296,336	0.192	472,528	1.213	572,326	40,000	612,326	0.207	0.193
6/30/97-98	296,982	0.137	320,304	1.241	399,519	144,218	543,737	0.183	0.135
6/30/98-99	299,530	0.200	477,169	1.273	605,890	195,748	801,638	0.268	0.202
6/30/99-00	323,627	0.395	1,036,650	1.308	1,337,645	184,253	1,521,899	0.470	0.413
6/30/00-01	338,348	0.410	1,114,014	1.320	1,450,305	177,864	1,628,169	0.481	0.429
6/30/01-02	329,555	0.232	582,625	1.342	777,811	201,320	979,131	0.297	0.236
6/30/02-03	329,179	0.232	569,968	1.367	774,815	202,158	976,972	0.297	0.235
6/30/03-04	344,547	0.096	212,295	1.390	305,016	61,974	366,991	0.107	0.089
6/30/04-05	325,530	0.190	457,755	1.417	639,350	189,227	828,577	0.255	0.196
6/30/05-06	403,750	0.192	276,027	1.452	516,820	93,048	609,868	0.151	0.128
6/30/06-07	420,219	0.194	324,328	1.471	585,175	157,181	742,356	0.177	0.139
6/30/07-08	425,998	0.196	304,525	1.537	596,009	112,285	708,294	0.166	0.140
6/30/08-09	420,566	0.198	555,124	1.691	895,550	328,786	1,224,336	0.291	0.213
6/30/09-10	433,206	0.199	286,244	1.992	715,321	521,331	1,236,652	0.285	0.165
6/30/10-11	444,673	0.199	361,140	2.731	921,112	180,116	1,101,228	0.248	0.207
6/30/11-12	467,753	0.200	198,403	5.817	973,090	256,933	1,230,023	0.263	0.208
Total	8,708,837		23,037,769		28,358,010	4,764,543	33,122,553		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 5, Exhibit 1, Page 4, Column 11
- (4) From Section 5, Exhibit 1, Page 2, Column 3
- (5) From Section 5, Exhibit 1, Page 2, Column 4
- $(6) = (4) + [\{1 \{1 / (5)\}\} \ x \ (3) \ x \ (2) \ x \ 10]$
- (7) From Section 5, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10

Section 5 Exhibit 1 Page 4

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Exp Ult Loss	Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Excluding	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Lump Sum	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.884	0.884
6/30/85-86									0.626	0.626
6/30/86-87									0.828	0.828
6/30/87-88									0.801	0.801
6/30/88-89									0.715	0.715
6/30/89-90									0.281	0.281
6/30/90-91	235,170	2,157,272	0.917	0.946	0.868	1.000	0.868	0.211	0.923	0.910
6/30/91-92	235,607	2,538,600	1.077	1.038	1.118	1.000	1.118	0.193	1.076	1.060
6/30/92-93	241,161	324,617	0.135	1.210	0.163	1.000	0.163	0.165	0.139	0.136
6/30/93-94	254,321	790,192	0.311	1.195	0.371	1.000	0.371	0.167	0.314	0.305
6/30/94-95	256,665	723,539	0.282	1.184	0.334	1.000	0.334	0.169	0.285	0.276
6/30/95-96	265,739	563,914	0.212	1.174	0.249	1.000	0.249	0.170	0.216	0.210
6/30/96-97	296,336	573,105	0.193	1.163	0.225	1.000	0.225	0.172	0.198	0.192
6/30/97-98	296,982	397,654	0.134	1.148	0.154	1.000	0.154	0.174	0.142	0.137
6/30/98-99	299,530	607,405	0.203	1.133	0.230	1.000	0.230	0.177	0.208	0.200
6/30/99-00	323,627	1,355,895	0.419	1.114	0.467	1.000	0.467	0.179	0.404	0.395
6/30/00-01	338,348	1,470,875	0.435	1.086	0.472	1.000	0.472	0.184	0.409	0.410
6/30/01-02	329,555	781,968	0.237	1.065	0.253	1.000	0.253	0.188	0.238	0.232
6/30/02-03	329,179	779,073	0.237	1.061	0.251	1.000	0.251	0.188	0.227	0.232
6/30/03-04	344,547	295,076	0.086	1.061	0.091	1.000	0.091	0.188	0.099	0.096
6/30/04-05	325,530	648,482	0.199	1.054	0.210	1.000	0.210	0.190	0.190	0.190
6/30/05-06	403,750	400,747	0.099	1.044	0.104	1.000	0.104	0.192	0.192	0.192
6/30/06-07	420,219	477,234	0.114	1.032	0.117	1.000	0.117	0.194	0.194	0.194
6/30/07-08	425,998	468,020	0.110	1.021	0.112	1.000	0.112	0.196	0.196	0.196
6/30/08-09	420,566	938,488	0.223	1.009	0.225	1.000	0.225	0.198	0.198	0.198
6/30/09-10	433,206	570,058	0.132	1.005	0.132	1.000	0.132	0.199	0.199	0.199
6/30/10-11	444,673	986,286	0.222	1.007	0.223	1.000	0.223	0.199	0.200	0.199
6/30/11-12	467,753	1,154,130	0.247	1.000	0.247	1.000	0.247	0.200		0.200
Total	7,388,463	19,002,631				<u> </u>				
			Trend L	ast 4 (ex 11-12):	16.6%	Avg 3 (x11-12):	0.194			
			Trend L	ast 8 (ex 11-12):	7.7%	Avg 5 (x11-12):	0.162			
			Trend La	st 12 (ex 11-12):	-8.2%	Avg 10 (x11-12):	0.172			
			Prior	Selected Trend:	0.0%	Prior Sel Avg:	0.200			

Selected Trend:

0.0%

0.200

Sel. Loss Cost:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 5, Exhibit 1, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCRIB $\,$
- (6) = (4) x (5)(7) Based on Selected Trend from (6)
- (8) = (6) x (7)(9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

(9) = (7) + (8)

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2011

Section 5 Exhibit 1 Page 5

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	_		
-	_		
(1)	Average Payment Trend		0.940
(2)	Credibility		15%
(3)	Average Pmt Trend Statewide		0.960
(4)	Credibility Weighted Trend		0.957
	_	(Low)	(High)
(5)	Selected Range	0.947	0.976
(6)	Incremental Paid for 2012	32,723	32,723
(7)	Estimated Reserve	590,236	1,341,224
(8)	Paid to Date (82 & Prior)	2,010,820	2,010,820
(9)	Est Ult Paid for 1982 & Prior	2,601,056	3,352,044
36.1.10	<u> </u>		
Method 2	_	(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	32,835	32,389
(11)	Projected Number of Years	6	6
(12)	Estimated Reserve	197,012	194,331
(13)	Paid to Date (82 & Prior)	2,010,820	1,978,098
(14)	Est Ult Paid for 1982 & Prior	2,207,832	2,172,429
(14a)	Paid Counts During Fiscal Year	1	1
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	2,404,444	2,526,313
(16)	Lump Sum Ultimates	88,040	88,040
(17)	Ult Loss Including Lump Sums	2,492,484	2,614,353
(18)	Implied Tail	1.196	1.256
(19)	Ult Loss Inc Lump Sums @ 6/11	2,448,480	2,568,345
NOTES.			
NOTES:	on 5 Evhikit 1 Daga 6		(10) Avg of 2 latest years from Section 5 Exhibit 1 Dags 6 Column 2
	on 5, Exhibit 1, Page 6		(10) Avg of 3 latest years from Section 5, Exhibit 1, Page 6, Column 3
, , ,	of Section 5, Exhibit 1, Page 6, Column 3 / 3,000,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta $(4) = (1) \times (2) + (4) = (4) \times (4) \times$			$(12) = (10 \times (11))$ $(14) = (12) + (13)$
	lgmentally based on (4)		(14) = (12) + (13) (15) = Average of (9) and (14)
•	ded by Commonwealth of Massachusetts		(16) From Section 5, Exhibit 1, Page 9, Column 13
$(7) = (6) \times (5) /$	•		(17) = (15) + (16)
	Section 5, Exhibit 1, Page 2, Column 3		(17) = (15) + (16) $(18) = (15) / (8)$
(5), (15) 110111	500000 5, 2.mott 1, 1 ugo 2, Column 5		

(19) From Aon analysis as of June 30, 2011



Section 5 Exhibit 1 Page 6

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	105,743	11.569			
1993	2	106,772	11.578	1.010		
1994	3	104,490	11.557	0.979		
1995	4	93,231	11.443	0.892		
1996	5	83,819	11.336	0.899		
1997	6	71,966	11.184	0.859		
1998	7	75,700	11.235	1.052		
1999	8	69,564	11.150	0.919		
2000	9	65,140	11.084	0.936	n =	21
2001	10	69,462	11.149	1.066	S(x) =	42,042
2002	11	72,621	11.193	1.045	S(x-sq) =	84,168,854
2003	12	73,534	11.206	1.013	S(xy) =	462,447
2004	13	73,411	11.204	0.998	S(y) =	231
2005	14	77,899	11.263	1.061	D =	16,170
2006	15	44,021	10.692	0.565	slope =	-0.067
2007	16	28,745	10.266	0.653	Avg Trend =	0.933
2008	17	31,541	10.359	1.097		
2009	18	31,382	10.354	0.995		
2010	19	34,140	10.438	1.088		
2011	20	31,644	10.362	0.927		
2012	21	32,723	10.396	1.034		

Selected Trend: 0.940

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 1.034 = 32723 / 31644



Commonwealth of Massachusetts Workers Compensation University of Massachusetts (Amherst) - Cluster 4 INDEMNITY Paid Loss Development Paid Loss (Excluding Lump Sum)

Acc Yr Ending June-83 June-84 June-85 June-86 June-87 June-88 June-99 June-91 June-92 June-93 June-94 June-95 June-96 June-96 June-96 June-96 June-96 June-10	12 9.901 12,002 96,162 62,242 114,930 145,512 149,323 147,842 221,834 172,146 81,038 106,895 150,379 106,295 89,150 79,713 194,152 195,153 119,754 1118,177 109,288 113,754 1118,177 109,288 136,333 157,634 158,333 158,333 158,333 158,333 158,333 158,333 158,333 158,434 178,444 188,674 84,674 84,674 84,674 203,344 198,403	24 27,199 32,972 264,176 170,991 315,736 388,262 412,040 316,313 316,313 316,313 316,313 381,167 222,727 214,639 225,748 423,727 423,7	36 38,094 46,180 369,998 239,486 434,426 585,718 418,270 912,374 705,718 212,374 705,718 214,665 206,345 206,841 209,266 363,483 630,483 630,483 201,272 206,841 207,710 211,354 227,1354 227,1354 237,568 249,266 256,244	48, 47,389 57,447 460,278 289,205 540,241 742,458 734,611 483,765 1,121,784 916,461 310,192 3344,957 435,702 3345,702 3345,702 3345,702 3345,702 3373,32 22,631 410,110 721,978 728,970 510,454 379,354 211,562 349,273 276,027 307,382 288,690 5555,124	862,714 493,004 1,264,030	72 76,567 92,840 675,356 436,793 728,426 1,023,389 940,958 500,207 1,316,233 1,097,913 348,662 373,504 605,733 469,932 412,255 318,681 457,432 936,681 874,675 576,982 478,317 212,295 448,205 244,225	84 110,541 110,643 769,715 545,340 816,220 1,122,499 1,000,308 470,618 1,389,392 1,173,097 351,823 398,819 622,315 470,508 429,409 318,681 318,681 303,662 350	96 128,600 140,015 839,890 637,721 883,030 1,187,899 1,091,299 470,618 447,121 1,245,97 447,618 422,133 624,606 475,072 446,564 318,681 476,062 1,021,874 967,811 579,568 523,384 212,295 457,755	1,155,714 471,448 1,486,680 1,399,954 276,708 440,603 624,606 475,222 464,289 319,304 476,685 1,036,650	120 128,600 160,531 972,316 742,718 1,087,438 1,209,050 471,448 1,250,949 1,481,116 292,355 460,274 6475,722 7320,304 476,775 1,036,650 1,061,416 581,568 569,968	132 128,600 160,531 1,027,903 771,694 1,157,085 1,363,345 1,258,035 471,448 1,590,832 1,564,487 292,355 479,091 624,6762 475,762 475,762 475,762 1,036,650 1,036,650 1,036,650	144 134,406 160,531 1,068,427 801,514 1,228,783 1,426,364 1,312,045 471,448 1,657,948 1,649,535 292,355 292,355 292,355 292,355 292,355 292,355 1,14,016 1,036,655 1,114,014	156 134,406 160,531 1,096,448 833,158 1,294,957 1,496,845 1,364,494 471,448 717,507 1,732,035 518,330 64,666 475,722 472,427 320,304 476,815 1,036,650	168 134,406 160,531 1,126,464 865,475 1,353,217 1,533,376 471,448 471,448 472,427 320,304 477,169	180 134,406 160,531 1,157,182 902,795 1,408,627 1,582,716 1,470,732 471,448 1,801,084 1,869,935 292,355 559,634 624,606 475,722 472,427 320,304	192 134,406 160,531 1,193,170 941,906 1,466,232 1,627,788 1,496,093 471,448 1,841,720 1,921,123 292,355 580,633 624,606 472,528 472,528	984,064 1,524,982 1,673,942 1,522,212 471,448 1,882,581	216 134,406 160,531 1,270,584 1,026,987 1,583,672 1,720,105 471,448 471,448 292,355 580,633 624,606	1,578,865 471,448 1,943,013	240 134,406 160,531 1,352,093 1,113,907 1,705,167 1,788,805 1608,540 471,448 1,973,183 2,095,831 292,355	252 134,406 160,531 1,394,014 1,159,474 1,769,184 1,821,696 1,639,511 471,448 2,003,226 2,124,362		276 134,406 160,531 1,483,09 1,257,125 1,908,370 1,892,584 471,448	288 134,406 160,531 1,530,726 1,309,416 1,963,226 1,734,395	1,362,366	312 134,406 160,531 1,636,270 1,414,227 2,028,636	324 134,406 160,531 1,687,070 1,414,227	336 134,406 160,531 1,738,901	348 134,406 160,531	360 134,406
Age to-Age Fated Ace Yr Ending June-84 June-84 June-85 June-85 June-86 June-87 June-89 June-91 June-91 June-92 June-93 June-93 June-93 June-93 June-94 June-94 June-95 June-95 June-95 June-95 June-96 June-97 June-90 June-01 June-01 June-01 June-03 June-04 June-05 June-04 June-05 June-05 June-06 June-07 June-08 June-09	22-24 27-47 27-47 27-47 27-47 27-47 27-47 27-47 27-47 27-47 27-47 27-48 2-688 2-789 2-140 2-780 2-780 2-780 2-783 2-748 2-008 2-534 1-635 2-009 2-311 2-987 2-123 2-233 2-233 2-123 2-233 2-231 2-081 1-608 1-1635 1-608 2-17-7 1-621	24-36 1.401 1.401 1.401 1.401 1.401 1.401 1.402 1.376 1.479 1.488 1.488 1.489 1.351 1.350 1.351	36-48 1.244 1.244 1.244 1.248 1.280 1.281 1.280 1.295 1.192 1.102 1.102 1.105	48-60 1.319 1.319 1.323 1.335 1.182 1.231 1.174 1.019 1.127 1.088 1.065 1.050 1.050 1.056 1.051 1.075	60-72 1.225 1.225 1.109 1.109 1.1091 1.015 1.015 1.015 1.034 1.034 1.038	72-84 1.444 1.192 1.140 1.249 1.063 0.941 1.055 1.068 1.009 1.068 1.001 1.047 1.041 1.041 1.041 1.059 1.001 1.059 1.001 1.059	84-96 1.163 1.265 1.091 1.169 1.169 1.169 1.082 1.058 1.058 1.058 1.058 1.050 1.040 1.042 1.062 0.786 1.058	96-108 1.000 1.057 1.083 1.103 1.083 1.103 1.087 1.047 1.047 1.059 1.002 1.027 1.024 1.104 1.040 1.000 1.040 1.053 1.001 1.011 1.053 1.003	108-120 1.000 1.0805 1.085 1.056 1.133 1.056 1.133 1.046 1.000 1.043 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.045 1.057 1.0	120-132 1.000 1.000 1.000 1.000 1.003 1.039 1.064 1.041 1.041 1.000 1.026 1.056 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	132-144 1.045 1.000 1.030 1.039 1.039 1.062 1.044 1.043 1.000 1.042 1.054 1.050 1.05	144-156 1.000 1.000 1.000 1.026 1.039 1.054 1.040 1.040 1.000 1.030 1.05	156-168 1.000 1.000 1.000 1.000 1.000 1.003 1.039 1.045 1.028 1.044 1.000 1.029 1.045 1.000 1.029 1.045 1.000 1.000 1.000 1.000 1.000 1.000	168-180 1.000 1.000 1.000 1.000 1.027 1.041 1.032 1.000 1.000 1.000 1.000 1.000 1.000	180-192 1.000 1.000 1.000 1.001 1.041 1.041 1.023 1.017 1.000 1.023 1.027 1.000 1.000 1.000	192-204 1.000 1.000 1.000 1.000 1.001 1.040 1.040 1.040 1.040 1.040 1.040 1.000 1.000 1.000	204-216 1.000 1.000 1.000 1.000 1.033 1.044 1.038 1.028 1.019 1.000 1.016 1.000 1.000	216-228 1.000 1.000 1.000 1.002 1.042 1.032 1.042 1.037 1.022 1.018 1.016 1.016 1.000	228-240 1.000 1.000 1.000 1.001 1.001 1.001 1.001 1.001 1.001 1.015 1.019 1.000	240-252 1.000 1.000 1.000 1.031 1.041 1.038 1.038 1.019 1.019 1.019	252-264 1.000 1.000 1.001 1.031 1.041 1.039 1.019 1.019 1.019	264-276 1.000 1.000 1.000 1.032 1.041 1.038 1.020 1.020 1.000	276-288 1.000 1.000 1.032 1.042 1.032 1.042 1.030 1.022 1.019	288-300 1.000 1.000 1.000 1.003 1.040 1.016 1.016	300-312 1.000 1.000 1.035 1.035 1.038 1.016	312-324 1.000 1.000 1.031 1.000	324-336 1.000 1.000 1.031	336-348 1.000 1.000	348-360 1.000	
Averages Simple Avg All Yrs	12-24 2.333	24-36 1.355	36-48 1.168	48-60 1.128	60-72 1.078	72-84 1.072	84-96 1.046	96-108 1.036	108-120	120-132	132-144	144-156	156-168 1.017	168-180 1.017	180-192 1.017	192-204 1.015	204-216	216-228 1.015	228-240 1.016	240-252 1.018	252-264 1.018	264-276 1.019	276-288 1.021	288-300 1.018	300-312 1.018	312-324 1.008	324-336 1.010	336-348 1.000	348-360 1,000	To Ult
Latest 5 Latest 3 Volume Wtd	1.987 2.266	1.268 1.286	1.109 1.118	1.045 1.031	1.044 1.051	1.014 1.007	1.019 1.016	1.023 1.016	1.017 1.028	1.005 1.009	1.005 1.008	1.000	1.000	1.008 1.000	1.008	1.006 1.000	1.009	1.007 1.006	1.010 1.010	1.013	1.019 1.012	1.023 1.013	1.029 1.024	1.022 1.025	1.018 1.029	1.010	1.010			
All Yrs Latest 5 Latest 3	2.274 1.933 2.152	1.371 1.273 1.292	1.178 1.113 1.121	1.123 1.052 1.031	1.075 1.055 1.059	1.061 1.016 1.009	1.045 1.025 1.020	1.046 1.028 1.019	1.041 1.018 1.031	1.029 1.008 1.010	1.031 1.008 1.010	1.028 1.000 1.000	1.028 1.000 1.000	1.025 1.009 1.000	1.024 1.009 1.000	1.023 1.014 1.000	1.023 1.016 1.000	1.021 1.012 1.012	1.021 1.014 1.013	1.022 1.015 1.013	1.024 1.022 1.015	1.027 1.027 1.017	1.027 1.028 1.024	1.024 1.025 1.023	1.026 1.026 1.028	1.015	1.026 1.026	1.000	1.000	
Dev Factor Select Industry 1 Industry 2 Prior Selected FacToUlt Percent of Ult	2.781 2.130 2.130 5.817 17.2%	1.499 1.746 1.374 1.371 2.731 36.6%	1.187 1.300 1.180 1.178 1.992 50.2%	1.084 1.126 1.100 1.100 1.691 59.2%	1.039 1.062 1.049 1.044 1.537 65.1%	1.019 1.029 1.025 1.014 1.471 68.0%	1.012 1.020 1.029 1.025 1.452 68.9%	1.009 1.037 1.019 1.417 70.6%	1.008 1.009 1.017 1.390 71.9%	1.005 1.019 1.018 1.367 73.2%	1.006 1.011 1.017 1.342 74.5%	1.010 1.010 1.009 1.320 75.7%	1.003 1.028 1.028 1.308 76.5%	1.002 1.026 1.025 1.273 78.6%	1.004 1.024 1.024 1.241 80.5%	1.003 1.024 1.023 1.213 82.5%	1.001 1.024 1.023 1.185 84.4%	1.001 1.022 1.021 1.158 86.3%	1.001 1.022 1.021 1.134 88.2%	1.001 1.024 1.022 1.110 90.1%	1.027 1.024 1.086 92.1%	1.028 1.027 1.060 94.3%	1.010 1.010 1.033 96.8%	1.005 1.005 1.023 97.8%	1.000 1.000 1.018 98.3%	1.000 1.000 1.018 98.3%	1.000 1.000 1.018 98.3%	1.000 1.000 1.018 98.3%	1.019 1.000 1.018 98.3%	1.018 1.018 98.3%

Section 5 Exhibit 1 Page 8

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ate Loss	Ultima	te Loss	Change in U	Iltimate Loss	Change in U	ltimate Loss
Accident	As o	f 6/11	As of	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	2,448,480	2,568,345	2,492,484	2,614,353	44,005	1.8%	46,009	1.8%
6/30/82-83	138,000	140,000	138,000	140,000	0	0.0%	0	0.0%
6/30/83-84	192,000	196,000	192,000	196,000	0	0.0%	0	0.0%
6/30/84-85	1,761,000	2,108,000	1,810,000	2,168,000	49,000	2.8%	60,000	2.8%
6/30/85-86	1,647,000	1,937,325	1,645,000	1,934,945	(2,000)	-0.1%	(2,380)	-0.1%
6/30/86-87	2,288,000	3,108,000	2,317,000	3,149,000	29,000	1.3%	41,000	1.3%
6/30/87-88	2,068,000	2,069,000	2,092,000	2,093,000	24,000	1.2%	24,000	1.2%
6/30/88-89	1,829,000	1,830,000	1,842,000	1,842,000	13,000	0.7%	12,000	0.7%
6/30/89-90	552,000	564,000	538,000	545,000	(14,000)	-2.5%	(19,000)	-3.4%
6/30/90-91	2,394,000	2,396,000	2,365,000	2,366,000	(29,000)	-1.2%	(30,000)	-1.3%
6/30/91-92	2,612,000	2,826,000	2,572,000	2,788,000	(40,000)	-1.5%	(38,000)	-1.3%
6/30/92-93	492,000	492,000	455,000	473,000	(37,000)	-7.5%	(19,000)	-3.9%
6/30/93-94	826,000	944,000	719,000	747,000	(107,000)	-13.0%	(197,000)	-20.9%
6/30/94-95	770,000	800,000	770,000	800,000	0	0.0%	0	0.0%
6/30/95-96	598,000	622,000	598,000	622,000	0	0.0%	0	0.0%
6/30/96-97	518,000	539,000	518,000	539,000	0	0.0%	0	0.0%
6/30/97-98	469,000	487,000	469,000	487,000	0	0.0%	0	0.0%
6/30/98-99	827,000	829,000	802,000	803,000	(25,000)	-3.0%	(26,000)	-3.1%
6/30/99-00	1,554,000	1,574,000	1,522,000	1,540,000	(32,000)	-2.1%	(34,000)	-2.2%
6/30/00-01	1,630,000	1,652,000	1,628,000	1,649,000	(2,000)	-0.1%	(3,000)	-0.2%
6/30/01-02	1,001,000	1,006,000	979,000	983,000	(22,000)	-2.2%	(23,000)	-2.3%
6/30/02-03	964,000	968,000	977,000	981,000	13,000	1.3%	13,000	1.3%
6/30/03-04	371,000	381,000	357,000	367,000	(14,000)	-3.8%	(14,000)	-3.7%
6/30/04-05	843,000	863,000	829,000	838,000	(14,000)	-1.7%	(25,000)	-2.9%
6/30/05-06	528,000	649,000	494,000	610,000	(34,000)	-6.4%	(39,000)	-6.0%
6/30/06-07	681,000	795,000	634,000	742,000	(47,000)	-6.9%	(53,000)	-6.7%
6/30/07-08	739,000	880,000	580,000	708,000	(159,000)	-21.5%	(172,000)	-19.5%
6/30/08-09	1,323,000	1,419,000	1,224,000	1,267,000	(99,000)	-7.5%	(152,000)	-10.7%
6/30/09-10	1,021,000	1,163,000	1,091,000	1,237,000	70,000	6.9%	74,000	6.4%
6/30/10-11	1,240,000	1,528,000	1,101,000	1,166,000	(139,000)	-11.2%	(362,000)	-23.7%
6/30/11-12								
Total	34,324,480	37,333,670	33,750,484	36,395,298	(573,995)	-1.7%	(938,372)	-2.5%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 5, Exhibit 1, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1



University of Massachusetts (Amherst) - Cluster 4 Indemnity

Calculation of Ultimate Lump Sum Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Paid Loss	Implied	Ult Loss	Selected Incr	Cumulative	Total	Paid	Est Ult	Ultimate		Est Ult	Selected	Prior
Accident	Excluding	Cumulative	Excluding	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum -	Lump Sum	Lump Sum	Lump Sum -	Est Ultimate	Est Ultimate
Year	Lump Sum	LDF	Lump Sum	% Outstdg	% Outstdg	Outstdg	to Date	Incr Method	Percentage	LDF	Paid Method	Lump Sums	Lump Sums
All Prior Yrs	2,010,820	1.226	2,465,379	0.0%	0.0%	0	88,040	88,040	3.6%	1.000	88,040	88,040	88,040
6/30/82-83	134,406	1.018	136,792	0.0%	0.0%	0	0	0	0.0%	1.000	0	0	0
6/30/83-84	160,531	1.018	163,381	0.0%	0.0%	0	27,500	27,500	16.8%	1.000	27,500	27,500	27,500
6/30/84-85	1,738,901	1.221	2,123,723	0.0%	0.0%	0	44,000	44,000	2.1%	1.000	44,000	44,000	44,000
6/30/85-86	1,414,227	1.425	2,015,064	0.0%	0.0%	0	210,000	210,000	10.4%	1.000	210,000	210,000	210,000
6/30/86-87	2,028,636	1.425	2,890,506	0.0%	0.0%	0	258,000	258,000	8.9%	1.000	258,000	258,000	258,000
6/30/87-88	1,969,091	1.018	2,004,045	0.0%	0.0%	0	88,500	88,500	4.4%	1.000	88,500	88,500	88,500
6/30/88-89	1,734,395	1.023	1,774,009	0.0%	0.0%	0	68,000	68,000	3.8%	1.000	68,000	68,000	68,000
6/30/89-90	471,448	1.033	487,038	0.0%	0.0%	0	50,590	50,590	10.4%	1.000	50,590	50,590	50,590
6/30/90-91	2,034,294	1.060	2,157,272	0.0%	0.0%	0	208,500	208,500	9.7%	1.000	208,500	208,500	208,500
6/30/91-92	2,124,362	1.195	2,538,600	0.0%	0.0%	0	249,000	249,000	9.8%	1.000	249,000	249,000	249,000
6/30/92-93	292,355	1.110	324,617	0.0%	0.0%	0	158,010	158,010	48.7%	1.000	158,010	158,010	158,010
6/30/93-94	580,633	1.361	790,192	0.0%	0.0%	0	130,300	130,300	16.5%	1.000	130,300	130,300	130,300
6/30/94-95	624,606	1.158	723,539	0.0%	0.0%	0	137,200	137,200	19.0%	1.000	137,200	137,200	137,200
6/30/95-96	475,722	1.185	563,914	0.0%	0.0%	0	116,000	116,000	20.6%	1.000	116,000	116,000	116,000
6/30/96-97	472,528	1.213	573,105	0.0%	0.0%	0	40,000	40,000	7.0%	1.000	40,000	40,000	40,200
6/30/97-98	320,304	1.241	397,654	0.0%	0.0%	0	143,500	143,500	36.1%	1.010	144,935	144,218	145,148
6/30/98-99	477,169	1.273	607,405	0.1%	0.1%	607	193,500	194,107	32.0%	1.020	197,389	195,748	197,379
6/30/99-00	1,036,650	1.308	1,355,895	0.2%	0.3%	4,068	179,500	183,568	13.5%	1.030	184,939	184,253	187,305
6/30/00-01	1,114,014	1.320	1,470,875	0.3%	0.6%	8,825	170,000	178,825	12.2%	1.041	176,903	177,864	181,687
6/30/01-02	582,625	1.342	781,968	0.4%	1.0%	7,820	192,500	200,320	25.6%	1.051	202,319	201,320	204,937
6/30/02-03	569,968	1.367	779,073	0.5%	1.5%	11,686	189,972	201,658	25.9%	1.067	202,657	202,158	207,878
6/30/03-04	212,295	1.390	295,076	0.7%	2.2%	6,492	56,000	62,492	21.2%	1.097	61,457	61,974	64,877
6/30/04-05	457,755	1.417	648,482	0.7%	2.9%	18,806	166,950	185,756	28.6%	1.154	192,698	189,227	185,102
6/30/05-06	276,027	1.452	400,747	0.8%	3.7%	14,828	77,000	91,828	22.9%	1.224	94,269	93,048	108,115
6/30/06-07	324,328	1.471	477,234	1.0%	4.7%	22,443	115,000	137,443	28.8%	1.538	176,919	157,181	172,071
6/30/07-08	304,525	1.537	468,020	3.4%	8.1%	37,794	62,500	100,294	21.4%	1.988	124,276	112,285	232,022
6/30/08-09	555,124	1.691	938,488	2.8%	10.9%	102,007	92,500	194,507	20.7%	5.006	463,065	328,786	401,539
6/30/09-10	286,244	1.992	570,058	4.5%	15.4%	87,614	87,591	175,205	30.7%	9.904	867,457	521,331	379,421
6/30/10-11	361,140	2.731	986,286	2.9%	18.3%	180,116	0	180,116	18.3%	27.568	0	180,116	293,899
6/30/11-12	198,403	5.817	1,154,130	4.0%	22.3%	256,933	0	256,933	22.3%	27.568	0	256,933	
Total	25,343,526		33,062,567			760,039	3,600,153	4,360,192	13.2%		4,962,924	4,880,083	4,835,222

- (2) From Section 5, Exhibit 1, Page 2, Column 3
- (3) = (4) / (2)
- (4) From Section 5, Exhibit 1, Page 2, Column 6
- (5) From Section 5, Exhibit 1, Page 11
- (6) Downward sum of (5)
- $(7) = (6) \times (4)$
- (8) From Section 5, Exhibit 1, Page 10
- (9) = (7) + (8)
- (10) = (9) / (4)
- (11) From Section 5, Exhibit 1, Page 12
- $(12) = (8) \times (11)$
- (13) Selected based on (9) and (12)
- (14) From Aon analysis as of June 30, 2011



Commonwealth of Massachusetts Workers Compensation University of Massachusetts (Amherst) - Cluster 4 INDEMNITY

Lump Sum Development

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-85 Jun-85 Jun-87 Jun-88 Jun-89 Jun-90 Ju 348-360 360-372 0-12 12-24 24-36 36-48 48-60 60-72 72-84 84-96 96-108 108-120 120-132 132-144 144-156 156-168 168-180 180-192 192-204 204-216 216-228 228-240 240-252 252-264 300-312 312-324 324-336 27,040 7,000 54,000 27,500 16,500 50,000 10,000 10,000 150,000 10,000 37,500 43,500 19.000 135,000 46,500 12,500 14,000 8,000 20,000 12,500 20,000 9,000 45,000 33,000 30,000 9,590 60,000 46,500 27,000 25,000 100,500 10,000 80,000 0 5,000 36,000 75,000 20,010 43,000 10,000 10,300 120,000 40,000 37,200 35,000 25,000 37,500 0 16,000 25,000 37,500 40,000 30,000 93,500 23,000 72,500 27,500 27,500 50,000 22,500 40,000 10,000 75,000 0 24,000 30,000 17,500 24,000 9,000 6,000 24,450 30,000 18,000 26,500 52,500 32,000 63,000 30,000 50,000 35,000 35,000 92,472 18,500 12,000 65,000 12,000 14,000 60,000 35,000 28,000 40,000 15,000 0 17,500 30,000 25,000 45,000 62,500 62,591 Cumulative Lump Sum Payments 24 228 61,000 312 88,040 0 27,500 Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-89 Jun-90 Ju 72 0 132 7,000 168 7,000 180 61,000 192 61,000 216 61,000 240 61,000 252 61,000 264 61,000 276 61,000 288 61,000 300 88,040 324 88,040 336 88,040 84 0 108 7,000 120 156 7,000 360 88,040 372 88,040 7,000 7,000 61,000 88,040 0 27,500 27,500 27,500 27,500 27,500 27,500 27,500 27,500 27,500 27,500 27,500 27,500 27,300 44,000 60,000 123,000 88,500 68,000 50,590 208,500 249,000 44,000 60,000 123,000 88,500 68,000 50,590 208,500 16,500 50,000 57,500 68,500 16,500 50,000 57,500 68,500 16,500 60,000 57,500 68,500 44,000 60,000 123,000 68,500 44,000 60,000 123,000 68,500 44,000 60,000 123,000 88,500 44,000 60,000 123,000 88,500 44,000 60,000 123,000 88,500 68,000 50,590 44,000 60,000 258,000 88,500 68,000 44,000 60,000 258,000 88,500 16,500 16,500 16,500 44 000 44 000 44.000 44,000 44,000 44,000 210,000 258,000 44,000 44,000 60,000 57,500 68,500 60,000 76,500 68,500 60,000 123,000 68,500 60,000 123,000 60,000 123,000 210,000 10,000 25,000 14,000 50,590 110,000 105,500 47,500 68,500 47,500 68,500 12,500 25,000 68,500 68,500 68,500 68,000 50,590 183,500 133,000 158,010 10,300 137,200 40,000 143,500 14,000 50,590 156,500 105,500 23,000 50,590 156,500 133,000 68,000 50,590 183,500 133,000 68,000 50,590 183,500 133,000 68,000 50,590 183,500 133,000 68,000 50,590 208,500 169,000 158,010 10,300 68,000 50,590 208,500 169,000 158,010 130,300 68,500 68,000 50,590 208,500 169,000 158,010 130,300 137,200 116,000 68,500 68,000 50,590 208,500 169,000 158,010 130,300 137,200 68,000 50,590 208,500 249,000 158,010 130,300 14,000 41,000 68,000 50,590 183,500 68,000 50,590 183,500 68,000 50,590 208,500 33,000 30,000 105,500 50,000 105,500 5.000 5,000 133,000 169,000 249,000 133,000 158,010 10,300 137,200 116,000 40,000 143,500 193,500 179,500 170,000 192,500 158,010 10,300 137,200 116,000 40,000 143,500 158,010 10,300 137,200 116,000 40,000 143,500 20,010 63,010 73,010 73,010 83,010 83,010 158,010 158,010 158,010 10,300 158,010 137,200 116,000 40,000 143,500 37,200 137,200 116,000 137,200 116,000 40,000 143,500 72,200 16,000 112,200 16,000 137,200 41,000 137,200 78,500 137,200 116,000 137,200 116,000 137,200 116,000 40,000 0 143,500 183,500 125,500 170,000 192,500 189,972 56,000 89,950 77,000 115,000 143,500 183,500 149,500 170,000 192,500 189,972 56,000 166,950 88,500 118,500 143,500 143,500 88,500 88,500 133,500 23,000 90,000 42,000 35,500 6,000 42,950 118,500 161,000 125,500 140,000 157,500 97,500 56,000 77,950 77,000 100,000 62,500 143,500 183,500 149,500 170,000 192,500 189,972 56,000 154,950 40,000 161,000 50,500 140,000 94,500 67,500 6,000 42,950 77,000 60,000 62,500 92,500 183,500 179,500 170,000 193,500 179,500 170,000 193,500 179,500 193,500 179,500 193,500 17,500 24,000 9,000 6,000 24,450 170,000 192,500 189,972 56,000 192,500 35,000 63,000 77,000 0 17,500 92,500 87,591 62,500 62,591

Section 5 Exhibit 1 Page 10



Commonwealth of Massachusetts Workers Compensation University of Massachusetts (Amberst) - Cluster 4 INDEMNITY Lump Sum Development Incremental Lump Sums as 3 % of Ultimate Losses Excluding Lump Sums

												mere		p oums us .	a 70 or Citin	inte Educati	Actually 1	ump oums													
Acc Yr Ending	0-12	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324		336-348	348-360	360-372
All Prior Yrs	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000
Jun-83	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Jun-84 Jun-85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Jun-86	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Jun-87	0.000	0.000	0.000	0.000	0.000	0.003	0.013	0.000	0.003	0.000	0.000	0.000	0.007	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000				
Jun-88	0.000	0.000	0.000	0.006	0.006	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000						
Jun-89	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.005	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
Jun-90	0.000	0.000	0.000	0.068	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
Jun-91	0.000	0.000	0.000	0.014	0.009	0.028	0.022	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000									
Jun-92	0.000	0.002	0.000	0.040	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.032	0.000	0.000										
Jun-93 Jun-94	0.000	0.062	0.132	0.031	0.000	0.031	0.000	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000 0.152	0.000	0.000	0.000	0.000											
Jun-95	0.000	0.051	0.000	0.055	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.132	0.000	0.000	0.000												
Jun-96	0.000	0.000	0.028	0.000	0.033	0.066	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000													
Jun-97	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.000	0.000	0.000	0.000	0.000	0.000															
Jun-98	0.000	0.000	0.223	0.000	0.075	0.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																
Jun-99	0.000	0.066	0.154	0.045	0.000	0.037	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000																	
Jun-00	0.000	0.000	0.017	0.020	0.055	0.000	0.018	0.000	0.022	0.000	0.000	0.000	0.000																		
Jun-01	0.000	0.012	0.049	0.034	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000																			
Jun-02 Jun-03	0.000	0.031	0.023	0.067	0.081	0.045 0.119	0.000	0.000	0.000	0.000	0.000																				
Jun-03 Jun-04	0.000	0.012	0.034	0.000	0.059	0.000	0.000	0.000	0.000	0.000																					
Jun-05	0.000	0.020	0.000	0.000	0.054	0.019	0.100	0.019	0.000																						
Jun-06	0.000	0.087	0.070	0.035	0.000	0.000	0.000																								
Jun-07	0.000	0.000	0.000	0.126	0.084	0.031																									
Jun-08	0.000	0.000	0.037	0.096	0.000																										
Jun-09	0.000	0.067	0.032	0.000																											
Jun-10	0.000	0.110	0.044																												
Jun-11 Jun-12	0.000	0.000																													
Juli-12	0.000																														
Averages		12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	348-372
Simple Avg																															
All Yrs (ex P)	0.000	0.019	0.033	0.025	0.026	0.020	0.010	0.012	0.004	0.005	0.000	0.001	0.000	0.002	0.001	0.010	0.012	0.000	0.003	0.000	0.000	0.000	0.000	0.007	0.000	0.015	0.000	0.000	0.000	0.000	
Latest 5	0.000	0.035	0.037	0.051	0.061	0.034	0.020	0.004	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.009	0.000	0.015	0.000	0.000			
Latest 3 Olympic Avg	0.000	0.059	0.038	0.074	0.028	0.017	0.033	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.016	0.000	0.025	0.000	0.000			
All Yrs (ex P)	0.000	0.017	0.027	0.022	0.021	0.016	0.006	0.002	0.003	0.002	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Latest 10	0.000	0.032	0.031	0.022	0.039	0.027	0.002	0.002	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Latest 5	0.000	0.022	0.038	0.044	0.046	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
n n . a																															
Dev Factor Selecti		0.040	0.026	0.045	0.043	0.037	0.010	0.008	0.007	0.007	0.005	0.004	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Prior Selected	NA NA	0.040	0.026	0.045	0.043	0.037	0.010	0.008	0.007	0.007	0.005	0.004	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FacToUlt	NA	0.223	0.029	0.154	0.109	0.034	0.017	0.008	0.007	0.007	0.003	0.010	0.005	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Section 5 Exhibit 1 Page 11



														versity of Ma		(Amherst) - TY lopment	Compensatio - Cluster 4	n													Section 5 Exhibit 1 Page 12
Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-91 Jun-92 Jun-95 Jun-95 Jun-95 Jun-95 Jun-97 Jun-98 Jun-90 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-06 Jun-07 Jun-08 Jun-09 Jun-01 Jun-01 Jun-05 Jun-06 Jun-07 Jun-08 Jun-08 Jun-09 Jun-01 Jun-01 Jun-08 Jun-09 Jun-01 Ju	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	36 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	48 0 0 0 0 0 12,500 0 33,000 33,000 30,000 105,500 73,010 112,200 16,000 50,500 114,500 67,500 77,000 6,000 4,500 77,000 60,000 92,500 92,500	60 0 0 0 0 0 25,000 14,000 50,000 105,500 73,010 137,200 41,000 125,500 141,000 125,500 140,000 157,500 97,500 77,950 77,950 77,950 77,950 77,950 77,950	72 0 0 16,500 10,000 25,000 14,000 15,500 183,010 183,500 137,200 143,500 125,500 177,000 192,500 189,972 56,000 155,000 177,000 115,000	84 0 0 16,500 47,500 14,000 150,590 156,500 83,010 101,500 137,200 143,500 149,500 179,500 192,500 192,500 154,950 77,000	96 0 0 16,500 23,000 50,590 150,590 153,000 158,010 161,000 0 143,500 149,500 179,500 179,500 179,500 189,972 56,000 166,950	108 7,000 0 16,500 50,000 57,500 68,500 68,500 68,500 68,500 133,000 133,000 133,000 134,500 137,200 143,500 179,500 179,500 179,500 179,500	7,000 7,000 0 16,500 50,000 57,500 68,500 68,500 68,500 133,000 138,010 10,300 138,010 10,300 134,500 193,500 193,500 193,500 193,500 193,500 192,500 189,972	132 7,000 0 16,500 60,000 57,500 68,500 68,500 68,500 133,000 138,300 116,000 143,500 199,500 179,500 179,500	744 7,000 0 44,000 57,500 86,500 86,500 133,000 138,010 10,300 116,000 40,000 119,500 179,500 170,000	156 7,000 0 44,000 76,500 86,500 88,500 133,000 138,010 10,300 116,000 40,000 1193,500 179,500	168 7,000 0 44,000 60,000 123,000 88,000 88,000 183,500 103,000 135,000 136,000 143,500 143,500 193,500	180 61,000 0 44,000 60,000 123,000 88,000 88,000 199,000 138,010 10,300 137,200 40,000 143,500	192 61,000 0 44,000 69,000 123,000 88,000 88,000 208,500 199,000 130,300 137,200 40,000	204 61,000 0 27,500 44,000 12,000 12,000 12,000 88,000 88,000 19,000 129,000 130,300 137,200 116,000	216 61,000 27,500 44,000 60,200 123,000 123,000 50,590 208,500 159,000 158,010 130,300 137,200	228 61,000 0 27,500 44,000 123,000 123,000 58,000 28,000 29,000 158,010 130,300	240 61,000 0 27,500 44,000 123,000 123,000 88,000 88,000 58,500 208,500 158,010	252 61,000 0 27,500 44,000 123,000 123,000 88,000 88,000 208,500 208,500 208,500	264 61,000 0 27,500 44,000 122,500 88,500 88,500 50,590 208,500	276 61,000 0 27,500 44,000 123,000 68,000 50,590	288 61,000 0 27,500 44,000 00,000 258,000 68,000	300 88,040 0 27,500 44,000 00,000 258,000 88,500	3/2 88,040 0 0 27,500 44,000 210,000 258,000	324 88,040 0 0 27,500 44,000 210,000	336 88,040 0 27,500 44,000	348 88,040 0 27,500	360 88,040 0	372 88,040
Age-to-Age Factor Acc Yr Ending All Prior Yrs	r <u>s</u> 12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120 1.000	120-132 1.000	132-144 1.000	144-156 1.000	156-168 1.000	168-180 8.714	180-192 1.000	192-204 1.000	204-216 1.000	216-228 1.000	228-240 1.000	240-252 1.000	252-264 1.000	264-276 1.000	276-288 1.000	288-300 1.443	300-312 1.000	312-324 1.000	324-336 1.000	336-348 1.000	348-360 1.000	360-372 1.000	To Ult
Jun-83 Jun-84 Jun-84 Jun-85 Jun-86 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-95 Jun-96 Jun-90 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Jun-10 Jun-08 Jun-09 Jun-10 Jun-10 Jun-11		1.000 3.149 1.941 3.338 5.143 1.750 3.944 1.000 1.757 1.800	21.100 1.159 1.554 1.000 1.000 2.196 1.556 2.250 1.901 1.000 1.000 1.222 3.571 1.000	2.000 1.242 1.667 1.000 1.000 1.223 2.563 1.339 1.000 2.485 1.000 1.667 1.444 9.333 1.815 1.000 1.667 1.000	1.000 1.000 1.234 2.200 1.000 1.137 1.000 1.915 1.211 1.140 1.000 1.214 1.222 1.948 1.000 1.154 1.000 1.159	1.000 4.750 2.740 1.000 1.000 1.000 1.423 1.000 1.423 1.000 1.478 1.000 1.000 1.100 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.001 1.643 1.000 1.261 1.904 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.211 1.000 2.957 1.000 1.173 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.200 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	2.667 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.330 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.608 1.000 1.000 1.000 1.000 1.271 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.136 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.292 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000 2.098 1.000 1.000	1.000 1.000 1.000 1.000 1.000	1.000 1.000 3.500 1.000	1.000 1.000 1.000	1.000	1.000			
Averages Simple Avg All Yrs (ex P) Latest 5	12-24	24-36 2.308 1.560	36-48 2.848 1.698	48-60 1.914 2.963	60-72 1.251 1.250	72-84 1.384 1.145	84-96 1.105 1.015	96-108 1.149 1.040	1.003 1.011	120-132 1.011 1.000	132-144 1.098 1.000	1.021 1.000	156-168 1.059 1.000	1.010 1.000	180-192 1.896 3.330	192-204 1.000 1.000	204-216 1.000 1.000	216-228 1.070 1.095	228-240 1.000 1.000	240-252 1.000 1.000	252-264 1.000 1.000	264-276 1.000 1.000	276-288 1.183 1.220	288-300 1.000 1.000	300-312 1.625 1.625	312-324 1.000	324-336 1.000	336-348 1.000	348-360	360-372	To Ult
Latest 3 Volume Wtd All Yrs (ex P)		1.440	2.286	1.222	1.101	1.241	1.026	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.158	1.000	1.000	1.000	1.000	1.366	1.000	1.833	1.000	1.000	1.000			
Latest 5 Latest 3		1.628 1.580	1.551 1.955	1.503 1.201	1.293 1.106	1.107 1.292	1.016 1.030	1.040 1.000	1.029 1.011 1.000	1.005 1.000 1.000	1.000 1.000	1.000 1.000	1.000 1.000	1.000 1.000	1.260 1.000	1.021 1.000 1.000	1.000 1.000 1.000	1.112 1.175	1.000 1.000 1.000	1.000 1.000 1.000	1.000 1.000 1.000	1.000 1.000 1.000	1.352 1.483	1.000 1.000 1.000	1.385 1.414	1.000	1.000	1.000			
Dev Factor Selecti Prior Selected FacToUlt Percent of Ult	1.000 1.000 1.000 27.568 3.6%	3.009 2.784 27.568 3.6%	1.835 1.978 9.904 10.1%	2.676 2.518 5.006 20.0%	1.299 1.293 1.988 50.3%	1.264 1.257 1.538 65.0%	1.059 1.061 1.224 81.7%	1.053 1.052 1.154 86.6%	1.032 1.029 1.097 91.1%	1.015 1.015 1.067 93.7%	1.010 1.010 1.051 95.1%	1.010 1.010 1.041 96.1%	1.010 1.010 1.030 97.1%	1.010 1.010 1.020 98.0%	1.010 1.010 1.010 99.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 100.0%

Section 5 Exhibit 1 Page 13

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	1.7%	0.0%	0.5%	0.3%	1.000	1.000
360	98.3%	0.0%	1.7%	0.0%	0.0%	0.981	0.971
348	98.3%	0.0%	1.7%	0.0%	0.0%	0.943	0.916
336	98.3%	0.0%	1.7%	0.0%	0.0%	0.907	0.864
324	98.3%	0.0%	1.7%	0.0%	0.0%	0.872	0.816
312	98.3%	0.0%	1.7%	0.0%	0.0%	0.838	0.769
300	98.3%	0.5%	1.7%	0.2%	0.1%	0.806	0.726
288	97.8%	1.0%	2.2%	0.4%	0.2%	0.820	0.747
276	96.8%	2.5%	3.2%	1.0%	0.7%	0.847	0.786
264	94.3%	2.2%	5.7%	1.0%	0.6%	0.887	0.842
252	92.1%	2.0%	7.9%	0.9%	0.6%	0.889	0.844
240	90.1%	1.9%	9.9%	0.9%	0.6%	0.880	0.832
228	88.2%	1.8%	11.8%	0.9%	0.6%	0.868	0.814
216	86.3%	2.0%	13.7%	1.0%	0.7%	0.854	0.796
204	84.4%	1.9%	15.6%	1.0%	0.7%	0.841	0.778
192	82.5%	1.9%	17.5%	1.0%	0.8%	0.828	0.760
180	80.5%	2.0%	19.5%	1.1%	0.9%	0.814	0.742
168	78.6%	2.1%	21.4%	1.2%	1.0%	0.801	0.725
156	76.5%	0.7%	23.5%	0.4%	0.3%	0.789	0.710
144	75.7%	1.2%	24.3%	0.8%	0.6%	0.765	0.678
132	74.5%	1.3%	25.5%	0.9%	0.7%	0.747	0.656
120	73.2%	1.2%	26.8%	0.8%	0.7%	0.732	0.637
108	71.9%	1.4%	28.1%	1.0%	0.8%	0.716	0.617
96	70.6%	1.7%	29.4%	1.3%	1.1%	0.702	0.600
84	68.9%	0.9%	31.1%	0.7%	0.6%	0.692	0.588
72	68.0%	2.9%	32.0%	2.3%	2.1%	0.674	0.567
60	65.1%	5.9%	34.9%	5.0%	4.6%	0.676	0.571
48	59.2%	8.9%	40.8%	7.8%	7.3%	0.698	0.601
36	50.2%	13.6%	49.8%	12.3%	11.8%	0.726	0.640
24	36.6%	19.4%	63.4%	18.3%	17.8%	0.759	0.682
12	17.2%	17.2%	82.8%	16.9%	16.7%	0.789	0.721

Total 100.0%

NOTES:

(2) = 1 / Section 5, Exhibit 1, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)

Section 5 Exhibit 1 Page 14

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
		ounted	Discount	Disco	
Accident		ng Losses	Factor at	Outstandi	
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	393,624	515,493		350,783	459,388
6/30/82-83	3,594	5,594	0.981	3,524	5,485
6/30/83-84	3,969	7,969	0.943	3,742	7,514
6/30/84-85	27,099	385,099	0.907	24,568	349,131
6/30/85-86	20,773	310,718	0.872	18,109	270,863
6/30/86-87	30,364	862,364	0.838	25,451	722,837
6/30/87-88	34,409	35,409	0.806	27,733	28,539
6/30/88-89	39,605	39,605	0.820	32,475	32,475
6/30/89-90	15,962	22,962	0.847	13,513	19,438
6/30/90-91	122,206	123,206	0.887	108,401	109,288
6/30/91-92	198,638	414,638	0.889	176,596	368,626
6/30/92-93	4,635	22,635	0.880	4,079	19,919
6/30/93-94	8,067	36,067	0.868	6,998	31,291
6/30/94-95	8,194	38,194	0.854	6,998	32,618
6/30/95-96	6,278	30,278	0.841	5,281	25,470
6/30/96-97	5,473	26,473	0.828	4,529	21,907
6/30/97-98	5,196	23,196	0.814	4,228	18,877
6/30/98-99	131,331	132,331	0.801	105,180	105,981
6/30/99-00	305,850	323,850	0.789	241,280	255,480
6/30/00-01	343,986	364,986	0.765	263,184	279,251
6/30/01-02	203,875	207,875	0.747	152,396	155,386
6/30/02-03	217,060	221,060	0.732	158,865	161,793
6/30/03-04	88,705	98,705	0.716	63,489	70,646
6/30/04-05	204,295	213,295	0.702	143,351	149,666
6/30/05-06	140,973	256,973	0.692	97,484	177,700
6/30/06-07	194,672	302,672	0.674	131,201	203,989
6/30/07-08	212,975	340,975	0.676	143,882	230,356
6/30/08-09	576,376	619,376	0.698	402,041	432,035
6/30/09-10	717,165	863,165	0.726	520,901	626,945
6/30/10-11	739,860	804,860	0.759	561,502	610,832
6/30/11-12	1,031,597	1,212,597	0.789	813,500	956,233
Total	6,036,805	8,862,619		4,615,264	6,939,963

_	Discount C	alculation for
	All Pr	ior Years
_	(Low)	(High)
(8) Estimated Total Reserve:	393,624	515,493
(9) Projected Number of Years:	6	6
(10) Projected Paid Loss per Year:	65,604	85,916
(11) Discounted Value at 4%:	350,783	459,388

0.765

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 5, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 5, Exhibit 1, Page 13, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.783



Section 5 Exhibit 1 Page 15

University of Massachusetts (Amherst) - Cluster 4 Indemnity

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
A		counted	Discount		unted
Accident		ng Losses	Factor at		ng Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	393,624	515,493	0.054	332,274	435,149
6/30/82-83	3,594	5,594	0.971	3,491	5,433
6/30/83-84	3,969	7,969	0.916	3,637	7,302
6/30/84-85	27,099	385,099	0.864	23,425	332,895
6/30/85-86	20,773	310,718	0.816	16,941	253,394
6/30/86-87	30,364	862,364	0.769	23,360	663,459
6/30/87-88	34,409	35,409	0.726	24,974	25,700
6/30/88-89	39,605	39,605	0.747	29,603	29,603
6/30/89-90	15,962	22,962	0.786	12,540	18,040
6/30/90-91	122,206	123,206	0.842	102,905	103,747
6/30/91-92	198,638	414,638	0.844	167,738	350,136
6/30/92-93	4,635	22,635	0.832	3,854	18,823
6/30/93-94	8,067	36,067	0.814	6,569	29,369
6/30/94-95	8,194	38,194	0.796	6,520	30,390
6/30/95-96	6,278	30,278	0.778	4,887	23,568
6/30/96-97	5,473	26,473	0.760	4,160	20,122
6/30/97-98	5,196	23,196	0.742	3,855	17,210
6/30/98-99	131,331	132,331	0.725	95,231	95,956
6/30/99-00	305,850	323,850	0.710	217,074	229,850
6/30/00-01	343,986	364,986	0.678	233,388	247,636
6/30/01-02	203,875	207,875	0.656	133,756	136,380
6/30/02-03	217,060	221,060	0.637	138,185	140,732
6/30/03-04	88,705	98,705	0.617	54,699	60,865
6/30/04-05	204,295	213,295	0.600	122,516	127,913
6/30/05-06	140,973	256,973	0.588	82,898	151,111
6/30/06-07	194,672	302,672	0.567	110,320	171,523
6/30/07-08	212,975	340,975	0.571	121,563	194,623
6/30/08-09	576,376	619,376	0.601	346,492	372,342
6/30/09-10	717,165	863,165	0.640	458,758	552,152
6/30/10-11	739,860	804,860	0.682	504,863	549,217
6/30/11-12	1,031,597	1,212,597	0.721	743,353	873,779
Total	6,036,805	8,862,619		4,133,829	6,268,420

_					
	Discount C	alculation for			
	All Prior Years				
	(Low)	(High)			
(8) Estimated Total Reserve:	393,624	515,493			
(9) Projected Number of Years:	6	6			
(10) Projected Paid Loss per Year:	65,604	85,916			
(11) Discounted Value at 6%:	332,274	435,149			

0.685

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 5, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 5, Exhibit 1, Page 13, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.707



University of Massachusetts (Amherst) - Cluster 4 Total Indemnity (Including Lump Sums) + Medical

Calculation of Fiscal Year 7/1/12 - 13 Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Cumulative	Increme	ntal Paid	Estimated Pa	ayments from	FY 7/1/12	- 6/30/13
Accident	Est Ult Losses	Est Ult Losses	Paid Losses	Reserves	Reserves	Percent	as a % of	as a % of	7/1/12 -	6/30/13	as a % of	Reserves
Year	(Low)	(High)	to Date	(Low)	(High)	Paid	Ultimates	Reserves	(Low)	(High)	(Low)	(High)
All Prior Yrs	2,600,897	2,724,843	2,207,273	393,624	517,570				30,759	33,835	7.8%	6.5%
6/30/82-83	229,124	232,625	225,530	3,594	7,095	97.7%	0.0%	0.0%	0	0	0.0%	0.0%
6/30/83-84	224,907	230,145	220,938	3,969	9,207	97.1%	0.0%	0.0%	0	0	0.0%	0.0%
6/30/84-85	1,884,805	2,243,546	1,856,966	27,839	386,580	90.0%	0.5%	5.0%	1,387	19,255	5.0%	5.0%
6/30/85-86	1,697,741	1,988,208	1,676,445	21,296	311,763	91.0%	0.5%	5.5%	1,178	17,251	5.5%	5.5%
6/30/86-87	2,515,000	3,347,000	2,482,506	32,494	864,494	84.7%	0.5%	3.3%	1,062	28,248	3.3%	3.3%
6/30/87-88	2,315,000	2,316,000	2,277,944	37,056	38,056	98.4%	0.5%	30.8%	11,423	11,732	30.8%	30.8%
6/30/88-89	2,142,000	2,143,000	2,098,825	43,175	44,175	98.0%	0.5%	24.5%	10,590	10,835	24.5%	24.5%
6/30/89-90	696,890	705,463	679,355	17,535	26,108	96.9%	0.5%	16.1%	2,817	4,195	16.1%	16.1%
6/30/90-91	2,881,000	2,882,000	2,750,093	130,907	131,907	95.4%	0.5%	11.0%	14,353	14,462	11.0%	11.0%
6/30/91-92	3,132,000	3,348,000	2,922,997	209,003	425,003	90.2%	0.5%	5.1%	10,681	21,719	5.1%	5.1%
6/30/92-93	719,696	740,317	712,440	7,256	27,877	97.6%	0.5%	20.8%	1,508	5,792	20.8%	20.8%
6/30/93-94	1,218,000	1,246,000	1,195,789	22,211	50,211	97.1%	0.5%	17.0%	3,778	8,542	17.0%	17.0%
6/30/94-95	1,078,423	1,111,476	1,067,175	11,248	44,301	97.5%	0.5%	19.7%	2,217	8,732	19.7%	19.7%
6/30/95-96	844,425	870,865	835,707	8,718	35,158	97.4%	0.5%	19.5%	1,704	6,872	19.5%	19.5%
6/30/96-97	707,847	730,726	700,495	7,352	30,232	97.4%	0.5%	19.1%	1,407	5,786	19.1%	19.1%
6/30/97-98	666,000	685,000	651,817	14,183	33,183	96.5%	0.5%	14.3%	2,023	4,732	14.3%	14.3%
6/30/98-99	1,022,000	1,024,000	879,447	142,553	144,553	86.0%	2.0%	14.3%	20,317	20,603	14.3%	14.3%
6/30/99-00	1,901,000	1,919,000	1,572,444	328,556	346,556	82.3%	2.0%	11.3%	37,182	39,218	11.3%	11.3%
6/30/00-01	2,031,000	2,052,000	1,658,822	372,178	393,178	81.3%	2.0%	10.7%	39,710	41,950	10.7%	10.7%
6/30/01-02	1,418,000	1,423,000	1,179,755	238,245	243,245	83.1%	2.0%	11.8%	28,115	28,705	11.8%	11.8%
6/30/02-03	1,252,000	1,256,000	1,010,210	241,790	245,790	80.6%	2.0%	10.3%	24,874	25,286	10.3%	10.3%
6/30/03-04	520,000	533,000	414,340	105,660	118,660	78.7%	2.0%	9.4%	9,920	11,140	9.4%	9.4%
6/30/04-05	1,169,000	1,180,000	912,330	256,670	267,670	77.7%	2.0%	9.0%	22,997	23,983	9.0%	9.0%
6/30/05-06	847,000	980,000	640,143	206,857	339,857	70.1%	2.0%	6.7%	13,825	22,715	6.7%	6.7%
6/30/06-07	896,000	1,048,000	646,248	249,752	401,752	66.5%	3.6%	10.7%	26,749	43,029	10.7%	10.7%
6/30/07-08	1,077,000	1,209,000	749,181	327,819	459,819	65.5%	2.0%	5.8%	19,029	26,691	5.8%	5.8%
6/30/08-09	1,859,000	1,955,000	1,150,260	708,740	804,740	60.3%	5.2%	13.2%	93,363	106,009	13.2%	13.2%
6/30/09-10	1,503,000	1,694,000	630,280	872,720	1,063,720	39.4%	5.0%	8.3%	72,042	87,808	8.3%	8.3%
6/30/10-11	1,668,000	1,743,000	663,244	1,004,756	1,079,756	38.9%	5.0%	8.2%	82,207	88,343	8.2%	8.2%
6/30/11-12	1,835,000	2,044,000	354,598	1,480,402	1,689,402	18.3%	20.6%	25.2%	373,295	425,996	25.2%	25.2%
Total	44,551,754	47,605,214	37,023,597	7,528,157	10,581,616				960,511	1,193,465	12.8%	11.3%

NOTES:

(2) Exhibit 1, Page 1, Column (4) + Exhibit 2, Page 1, Column (4)

(3) Exhibit 1, Page 1, Column (5) + Exhibit 2, Page 1, Column (5)

(4) Exhibit 1, Page 1, Column (2) + Exhibit 2, Page 1, Column (2)

(5) = (2) - (4)

(6) = (3) - (4)

(7) = (4) / Average of Columns (2), (3)

(8) = (7) - Prior Year's (7)

(9) = (8) / (1.00 - (7))

(10) = (5) * (9)

(11) = (6) * (9)

(12) = (10) / (5)(13) = (11) / (6)



University of Massachusetts (Amherst) - Cluster 4 Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll		Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Paid Loss	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		108,413			108,413	110,490	0	2,077		
6/30/82-83		91,124	91,708		91,124	92,625	0	1,501		
6/30/83-84		32,907	33,151		32,907	34,145	0	1,238		
6/30/84-85	176,924	74,065	74,688	74,818	74,805	75,546	741	1,481	0.042	0.043
6/30/85-86	188,662	52,218	52,711	52,835	52,741	53,263	522	1,044	0.028	0.028
6/30/86-87	212,277	195,870	197,914	197,909	198,000	198,000	2,130	2,130	0.093	0.093
6/30/87-88	243,118	220,354	222,876	222,885	223,000	223,000	2,646	2,646	0.092	0.092
6/30/88-89	248,990	296,430	300,123	300,872	300,000	301,000	3,570	4,570	0.120	0.121
6/30/89-90	250,404	157,317	159,436	160,113	158,890	160,463	1,573	3,146	0.063	0.064
6/30/90-91	235,170	507,299	515,675	515,618	516,000	516,000	8,701	8,701	0.219	0.219
6/30/91-92	235,607	549,635	560,386	560,236	560,000	560,000	10,365	10,365	0.238	0.238
6/30/92-93	241,161	262,075	268,537	268,472	264,696	267,317	2,621	5,242	0.110	0.111
6/30/93-94	254,321	484,855	499,295	498,940	499,000	499,000	14,145	14,145	0.196	0.196
6/30/94-95	256,665	305,369	316,036	315,839	308,423	311,476	3,054	6,107	0.120	0.121
6/30/95-96	265,739	243,985	253,770	253,677	246,425	248,865	2,440	4,880	0.093	0.094
6/30/96-97	296,336	187,967	196,483	196,636	189,847	191,726	1,880	3,759	0.064	0.065
6/30/97-98	296,982	188,013	197,337	197,546	197,000	198,000	8,987	9,987	0.066	0.067
6/30/98-99	299,530	208,778	220,389	220,577	220,000	221,000	11,222	12,222	0.073	0.074
6/30/99-00	323,627	356,294	379,442	378,875	379,000	379,000	22,706	22,706	0.117	0.117
6/30/00-01	338,348	374,808	403,150	402,514	403,000	403,000	28,192	28,192	0.119	0.119
6/30/01-02	329,555	404,630	439,580	438,574	439,000	440,000	34,370	35,370	0.133	0.134
6/30/02-03	329,179	250,270	274,605	275,071	275,000	275,000	24,730	24,730	0.084	0.084
6/30/03-04	344,547	146,045	163,451	165,525	163,000	166,000	16,955	19,955	0.047	0.048
6/30/04-05	325,530	287,625	340,291	341,604	340,000	342,000	52,375	54,375	0.104	0.105
6/30/05-06	403,750	287,115	353,498	370,262	353,000	370,000	65,885	82,885	0.087	0.092
6/30/06-07	420,219	206,920	261,883	305,571	262,000	306,000	55,080	99,080	0.062	0.073
6/30/07-08	425,998	382,156	500,570	497,132	497,000	501,000	114,844	118,844	0.117	0.118
6/30/08-09	420,566	502,636	688,417	635,423	635,000	688,000	132,364	185,364	0.151	0.164
6/30/09-10	433,206	256,446	411,639	456,521	412,000	457,000	155,554	200,554	0.095	0.105
6/30/10-11	444,673	302,104	576,884	566,759	567,000	577,000	264,896	274,896	0.128	0.130
6/30/11-12	467,753	156,195	633,497	605,363	605,000	633,000	448,805	476,805	0.129	0.135
Total	8,708,837	8,079,918	9,587,422	9,476,168	9,571,270	9,798,915	1,491,352	1,718,997		
Tot 6/30/84-12	8,708,837	7,847,474	9,462,563	9,476,168	9,338,826	9,561,656	1,491,352	1,714,182	0.107	0.110

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 5, Exhibit 2, Page 2, Column 3
- (4) From Section 5, Exhibit 2, Page 2, Column 8
- (5) From Section 5, Exhibit 2, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



University of Massachusetts (Amherst) - Cluster 4 Medical

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average
Accident	Payroll		Paid	Adjustment	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding
Year	(000's)	Paid Loss	LDF	for Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim
All Prior Yrs		108,413							0	0	
6/30/82-83		91,124	1.006	1.000	91,708	N/A	91,708		0	0	
6/30/83-84		32,907	1.007	1.000	33,151	N/A	33,151		0	0	
6/30/84-85	176,924	74,065	1.008	1.000	74,688	N/A	74,688	0.042	1	0	
6/30/85-86	188,662	52,218	1.009	1.000	52,711	N/A	52,711	0.028	1	0	
6/30/86-87	212,277	195,870	1.010	1.000	197,914	N/A	197,914	0.093	2	2	1,022
6/30/87-88	243,118	220,354	1.011	1.000	222,876	N/A	222,876	0.092	2	2	1,261
6/30/88-89	248,990	296,430	1.012	1.000	300,123	N/A	300,123	0.121	1	0	
6/30/89-90	250,404	157,317	1.013	1.000	159,436	N/A	159,436	0.064	0	0	
6/30/90-91	235,170	507,299	1.017	1.000	515,675	N/A	515,675	0.219	1	1	8,376
6/30/91-92	235,607	549,635	1.020	1.000	560,386	N/A	560,386	0.238	2	1	10,751
6/30/92-93	241,161	262,075	1.025	1.000	268,537	N/A	268,537	0.111	0	0	
6/30/93-94	254,321	484,855	1.030	1.000	499,295	N/A	499,295	0.196	1	1	14,440
6/30/94-95	256,665	305,369	1.035	1.000	316,036	N/A	316,036	0.123	0	0	
6/30/95-96	265,739	243,985	1.040	1.000	253,770	N/A	253,770	0.095	0	0	
6/30/96-97	296,336	187,967	1.045	1.000	196,483	N/A	196,483	0.066	0	0	
6/30/97-98	296,982	188,013	1.050	1.000	197,337	N/A	197,337	0.066	1	1	9,324
6/30/98-99	299,530	208,778	1.056	1.000	220,389	N/A	220,389	0.074	1	1	11,611
6/30/99-00	323,627	356,294	1.065	1.000	379,442	N/A	379,442	0.117	2	2	11,574
6/30/00-01	338,348	374,808	1.076	1.000	403,150	N/A	403,150	0.119	3	2	14,171
6/30/01-02	329,555	404,630	1.086	1.000	439,580	N/A	439,580	0.133	5	4	8,737
6/30/02-03	329,179	250,270	1.097	1.000	274,605	N/A	274,605	0.083	1	1	24,336
6/30/03-04	344,547	146,045	1.119	1.000	163,451	N/A	163,451	0.047	1	0	
6/30/04-05	325,530	287,625	1.183	1.000	340,291	N/A	340,291	0.105	1	1	52,666
6/30/05-06	403,750	287,115	1.231	1.000	353,498	N/A	353,498	0.088	0	1	66,383
6/30/06-07	420,219	206,920	1.266	1.000	261,883	N/A	261,883	0.062	11	3	18,321
6/30/07-08	425,998	382,156	1.310	1.000	500,570	N/A	500,570	0.118	7	5	23,683
6/30/08-09	420,566	502,636	1.370	1.000	688,417	N/A	688,417	0.164	25	7	26,540
6/30/09-10	433,206	256,446	1.605	1.000	411,639	N/A	411,639	0.095	102	15	10,346
6/30/10-11	444,673	302,104	1.910	1.000	576,884	N/A	576,884	0.130	196	93	2,955
6/30/11-12	467,753	156,195	4.056	1.000	633,497	N/A	633,497	0.135		185	2,580
Total	8,708,837	8,079,918			9,587,422		9,587,422		367	328	

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 5, Exhibit 2, Page 7

⁽⁵⁾ Based on information from the MA WCRIB 9/1/12 filing. Consideration for development beyond 252 months made in selection of LDF's.

 $^{(6) = (3) \}times (4) \times (5)$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 5 Exhibit 2 Page 3

University of Massachusetts (Amherst) - Cluster 4 Medical

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss		Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Paid Loss	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	176,924	0.051	74,065	1.008	74,818	N/A	74,818	0.042	0.042
6/30/85-86	188,662	0.035	52,218	1.009	52,835	N/A	52,835	0.028	0.028
6/30/86-87	212,277	0.093	195,870	1.010	197,909	N/A	197,909	0.093	0.093
6/30/87-88	243,118	0.092	220,354	1.011	222,885	N/A	222,885	0.092	0.092
6/30/88-89	248,990	0.145	296,430	1.012	300,872	N/A	300,872	0.121	0.121
6/30/89-90	250,404	0.084	157,317	1.013	160,113	N/A	160,113	0.064	0.064
6/30/90-91	235,170	0.218	507,299	1.017	515,618	N/A	515,618	0.219	0.219
6/30/91-92	235,607	0.235	549,635	1.020	560,236	N/A	560,236	0.238	0.238
6/30/92-93	241,161	0.110	262,075	1.025	268,472	N/A	268,472	0.111	0.111
6/30/93-94	254,321	0.192	484,855	1.030	498,940	N/A	498,940	0.196	0.196
6/30/94-95	256,665	0.121	305,369	1.035	315,839	N/A	315,839	0.123	0.123
6/30/95-96	265,739	0.095	243,985	1.040	253,677	N/A	253,677	0.095	0.095
6/30/96-97	296,336	0.067	187,967	1.045	196,636	N/A	196,636	0.066	0.066
6/30/97-98	296,982	0.068	188,013	1.050	197,546	N/A	197,546	0.067	0.067
6/30/98-99	299,530	0.075	208,778	1.056	220,577	N/A	220,577	0.074	0.074
6/30/99-00	323,627	0.114	356,294	1.065	378,875	N/A	378,875	0.117	0.117
6/30/00-01	338,348	0.116	374,808	1.076	402,514	N/A	402,514	0.119	0.119
6/30/01-02	329,555	0.130	404,630	1.086	438,574	N/A	438,574	0.133	0.133
6/30/02-03	329,179	0.085	250,270	1.097	275,071	N/A	275,071	0.084	0.084
6/30/03-04	344,547	0.053	146,045	1.119	165,525	N/A	165,525	0.048	0.048
6/30/04-05	325,530	0.107	287,625	1.183	341,604	N/A	341,604	0.105	0.105
6/30/05-06	403,750	0.110	287,115	1.231	370,262	N/A	370,262	0.092	0.092
6/30/06-07	420,219	0.112	206,920	1.266	305,571	N/A	305,571	0.073	0.073
6/30/07-08	425,998	0.114	382,156	1.310	497,132	N/A	497,132	0.117	0.117
6/30/08-09	420,566	0.117	502,636	1.370	635,423	N/A	635,423	0.151	0.151
6/30/09-10	433,206	0.123	256,446	1.605	456,521	N/A	456,521	0.105	0.105
6/30/10-11	444,673	0.125	302,104	1.910	566,759	N/A	566,759	0.127	0.127
6/30/11-12	467,753	0.127	156,195	4.056	605,363	N/A	605,363	0.129	0.129
Total	8,708,837		7,847,474		9,476,168		9,476,168		

NOTES:

(9) = (8) / (2) / 10

(10) = (6) / (2) / 10

⁽²⁾ Provided by Commonwealth of Massachusetts

⁽³⁾ From Section 5, Exhibit 2, Page 4, Column 11

⁽⁴⁾ From Section 5, Exhibit 2, Page 2, Column 3

⁽⁵⁾ From Section 5, Exhibit 2, Page 2, Column 4

 $^{(6) = (4) + [\{1 - \{1/(5)\}\} \}times (3) \times (2) \times 10]$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

Section 5 Exhibit 2 Page 4

University of Massachusetts (Amherst) - Cluster 4 Medical

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Expected	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Ult Loss	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.051	0.051
6/30/85-86									0.035	0.035
6/30/86-87									0.093	0.093
6/30/87-88									0.092	0.092
6/30/88-89									0.145	0.145
6/30/89-90									0.084	0.084
6/30/90-91	235,170	515,675	0.219	1.194	0.262	1.546	0.405	0.070	0.219	0.218
6/30/91-92	235,607	560,386	0.238	1.189	0.283	1.516	0.428	0.072	0.234	0.235
6/30/92-93	241,161	268,537	0.111	1.189	0.132	1.486	0.197	0.074	0.111	0.110
6/30/93-94	254,321	499,295	0.196	1.178	0.231	1.457	0.337	0.076	0.188	0.192
6/30/94-95	256,665	316,036	0.123	1.170	0.144	1.428	0.206	0.078	0.122	0.121
6/30/95-96	265,739	253,770	0.095	1.155	0.110	1.400	0.154	0.080	0.096	0.095
6/30/96-97	296,336	196,483	0.066	1.137	0.075	1.373	0.103	0.083	0.068	0.067
6/30/97-98	296,982	197,337	0.066	1.135	0.075	1.346	0.102	0.085	0.069	0.068
6/30/98-99	299,530	220,389	0.074	1.135	0.084	1.319	0.110	0.087	0.075	0.075
6/30/99-00	323,627	379,442	0.117	1.135	0.133	1.294	0.172	0.089	0.113	0.114
6/30/00-01	338,348	403,150	0.119	1.109	0.132	1.268	0.168	0.092	0.117	0.116
6/30/01-02	329,555	439,580	0.133	1.101	0.147	1.243	0.183	0.095	0.124	0.130
6/30/02-03	329,179	274,605	0.083	1.073	0.090	1.219	0.109	0.099	0.086	0.085
6/30/03-04	344,547	163,451	0.047	1.046	0.050	1.195	0.059	0.104	0.057	0.053
6/30/04-05	325,530	340,291	0.105	1.036	0.108	1.172	0.127	0.107	0.118	0.107
6/30/05-06	403,750	353,498	0.088	1.032	0.090	1.149	0.104	0.110	0.120	0.110
6/30/06-07	420,219	261,883	0.062	1.032	0.064	1.126	0.072	0.112	0.123	0.112
6/30/07-08	425,998	500,570	0.118	1.032	0.121	1.104	0.134	0.114	0.125	0.114
6/30/08-09	420,566	688,417	0.164	1.027	0.168	1.082	0.182	0.117	0.129	0.117
6/30/09-10	433,206	411,639	0.095	1.000	0.095	1.061	0.101	0.123	0.135	0.123
6/30/10-11	444,673	576,884	0.130	1.000	0.130	1.040	0.135	0.125	0.137	0.125
6/30/11-12	467,753	633,497	0.135	1.000	0.135	1.020	0.138	0.127		0.127
Total	7,388,463	8,454,816								
			Trend L	ast 4 (ex 11-12):	-3.6%	Avg 3 (x11-12):	0.139			
				ast 8 (ex 11-12):	10.7%	Avg 5 (x11-12):	0.125			
				st 12 (ex 11-12):	-0.1%	Avg 10 (x11-12):	0.121			
				Selected Trend:	2.0%	Prior Sel Avg:	0.140			

2.0%

Sel. Loss Cost:

0.130

Selected Trend:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 5, Exhibit 2, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCIRB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6) $\,$
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- $\left(10\right)$ From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)



Section 5 Exhibit 2 Page 5

University of Massachusetts (Amherst) - Cluster 4 Medical

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	<u> </u>		
(1)	Average Payment Trend	0.95	50
(2)	Credibility	129	
(3)	Average Pmt Trend Statewide	0.95	
(4)	Credibility Weighted Trend	0.95	
()		(Low)	(High)
(5)	Selected Range	0.941	0.960
(6)	Incremental Paid for 2012	0	0
(7)	Estimated Reserve	0	0
(8)	Paid to Date (82 & Prior)	108,413	108,413
(9)	Est Ult Paid for 1982 & Prior	108,413	108,413
	<u> </u>		
Method 2	<u> </u>		
		(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	1,027	2,077
(11)	Projected Number of Years	2	2
(12)	Estimated Reserve	2,053	4,153
(13)	Paid to Date (82 & Prior)	108,413	108,413
(14)	Est Ult Paid for 1982 & Prior	110,466	112,566
(14a)	Paid Counts During Fiscal Year	0	0
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	108,413	110,490
(16)	Lump Sum Ultimates	N/A	N/A
(17)	Ult Loss Including Lump Sums	108,413	110,490
` '		,	
(18)	Implied Tail	1.000	1.019
(19)	Ult Loss Inc Lump Sums @ 6/11	108,413	111,105

- (1) From Section 5, Exhibit 2, Page 6
- (2) = (Average of Section 5, Exhibit 2, Page 6, Column 3 / 175,000) ^ 0.5
- (3) Average Statewide Trend
- $(4) = (1) \times (2) + (4) \times \{1 (2)\}$
- (5) Selected judgmentally based on (4)
- (6), (14a) Provided by Commonwealth of Massachusetts
- $(7) = (6) \times (5) / \{1 (5)\}$
- (8), (16) From Section 5, Exhibit 2, Page 2, Column 3
- (9) = (7) + (8)

- (10) Avg of 3 latest years from Section 5, Exhibit 2, Page 6, Column 3
- (11) Selected judgmentally
- $(12) = (10 \times (11))$
- (14) = (12) + (13)
- (15) = Average of (9) and (14)
- (16) Lump Sums are considered in Indemnity analysis (Section 1)
- (17) = (15) + (16)
- (18) = (15) / (8)
- (19) From Prior Aon Analysis as of June 30, 2011



Section 5 Exhibit 2 Page 6

University of Massachusetts (Amherst) - Cluster 4 Medical

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	9,975	9.208			
1993	2	1,394	7.240	0.140		
1994	3	30,337	10.320	21.763		
1995	4	-7,026		-0.232		
1996	5	2,087	7.643	-0.297		
1997	6	418	6.035	0.200		
1998	7	0				
1999	8	390	5.966			
2000	9	1,546	7.343	3.964	n =	13
2001	10	0			S(x) =	26,015
2002	11	0			S(x-sq) =	52,060,521
2003	12	0			S(xy) =	192,691
2004	13	1,400	7.244		S(y) =	96
2005	14	0			D =	6,548
2006	15	424	6.050		slope =	0
2007	16	284	5.649	0.670	Avg Trend =	0.932
2008	17	1,845	7.520	6.499		
2009	18	3,150	8.055	1.707		
2010	19	3,080	8.033	0.978		
2011	20	0				
2012	21	0				

Selected Trend: 0.950

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2010: 0.978 = 3080 / 3150



FacToUlt

Percent of Ult

1.910

52.4%

1.605

73.0%

62.3%

1.310

76.3%

1.266

79.0%

1.231

81.2%

1.183

84.5%

1.119

91.1%

89.4%

1.086

92.0%

1.076

93.0%

1.065

93.9%

1.056

94.7%

1.050

95.3%

1.045

95.7%

1.040

96.1%

1.035

96.6%

1.030

97.1%

1.025

97.6%

1.020

98.1%

1.017

98.4%

1.012

98.8%

1.011

1.010

99.0%

1.009

99.1%

1.008

99.2%

1.007

99.3%

1.006

99.4%

Commonwealth of Massachusetts Workers Compensation University of Massachusetts (Amherst) - Cluster 4 MEDICAL.

Paid Loss Development Paid Loss (Excluding Lump Sum)

Acc Yr Ending 91,124 27,620 69,695 47,123 144,778 170,433 91,124 29,236 65,951 47,123 146,075 91,124 32,907 71,427 49,375 89,009 27,620 65,690 47,123 142,828 169,300 91,124 29,236 67,047 47,123 91,124 32,907 June-83 June-84 19,272 5,673 14,673 26,992 7,945 20,551 33,578 9,884 25,565 44,296 13,039 69,123 22,112 86.430 87,691 27,259 51,440 91,124 29,236 67,047 91,124 29,774 67,485 91,124 33,170 69,103 91,124 32,907 70,577 91,124 32,907 71,777 91,124 32,907 71,777 91,124 32,907 73,027 91,124 32,907 73,027 91,124 32,907 73,027 91,124 32,907 74,065 54 254 91 124 91 124 91,124 91 124 91 124 25,109 45,751 32,907 70,526 32,907 71,777 2,065 5,341 15,948 29,774 32,019 33,757 36,080 42,108 74,065 June-85 67,068 June-86 June-87 4.254 45,896 138,193 165,770 47 123 49,375 11.686 16,367 29.076 37.603 39 971 43,583 48 153 48,153 48 153 48 153 48 503 49 375 50.070 50.670 50.670 52 218 52,218 150,159 173,563 152,431 176,155 175,836 201,522 47,614 115,240 124,178 130,253 135,326 148,983 151,984 153,300 179,540 154,154 156,424 159,661 193,501 182,412 189,688 194,323 17,332 21,776 96,432 167,912 195,870 June-88 71.312 105,389 144,783 150.052 156,889 162,436 164,340 171,904 172,900 174,460 184.256 189,906 195,901 207.981 215.719 220,354 260,621 157,317 266,739 157,317 270,947 157,317 353,310 508,720 278,041 157,317 355,602 511,219 262,075 284,182 157,317 288,891 157,317 359,042 518,976 291,536 157,317 361,717 521,249 262,075 292,751 157,317 294,094 157,317 31,748 113,449 180,690 213,618 227,584 232,537 247,318 252,055 293,625 293,975 294,069 295,364 295,364 296,430 296,430 19,060 49,629 157,317 157,317 157,317 157,317 June-90 117,509 146,705 152,013 155,556 157,028 157,217 157,317 157,317 157,317 201,675 266,883 315,231 382,754 324,767 413,527 338,441 344,037 469,869 344,920 498,257 345,667 502,052 349,590 506,299 262,036 356,167 517,091 262,075 364,813 523,045 262,075 366,594 376,706 532,841 462,325 536,465 499,976 544,719 507,147 507,299 216,421 309,712 528,030 June-92 93,121 441,551 549,635 93,121 81,970 77,508 86,716 81,054 61,666 262,075 357,217 305,369 June-93 229,344 254,404 256,957 260.901 261.422 261.544 261.544 261.544 262,075 262.075 262.075 262,075 262.075 June-94 222,213 284,148 282,819 295,763 289,168 301,706 318,109 303,344 326,227 303,490 327,931 339,521 345,752 305,369 392,989 305,369 403,792 305,369 437,920 305,369 445,327 462,395 305,369 472,317 484,855 June-95 239,689 305,369 305,369 305,369 305,369 305,369 June-96 June-97 187,654 103,895 205,831 215,693 181,008 219,869 185,516 225,627 187,189 237,068 187,267 241,239 187,617 242,923 187,617 243,938 187,967 243,985 187,967 243,985 187,967 243,985 187,967 243,985 187,967 243,985 187,967 243,985 187,967 243,985 June-98 40,014 57,055 78,904 98,284 119,324 134,344 139,107 141,779 147,819 148,338 149,621 183,281 184,542 185 346 186,264 187,193 188,013 165,175 211.117 189,893 311.888 145,931 161,873 173,370 179,001 181,785 183,278 186,735 194,365 198,821 204,465 208,778 June-99 272,440 June-00 144,101 178,359 245.711 260,589 284,728 298,320 326,984 344,501 356,294 June-01 78,435 42,493 185,081 107,557 235,180 182,137 264,482 222,791 271,555 235,866 289,614 244,961 313,258 262,574 334,076 293,121 349,005 350,090 361,767 378,624 371,025 404,630 374,808 June-02 June-03 June-04 25,041 58,014 162,035 131,529 238,598 146,045 124.452 187 240 223,402 231 574 235,669 245,618 250,270 133,995 134,242 145,534 146,045 June-05 90 145 204 953 256 853 271 491 281 203 284 263 285 428 287 625 104,747 286,559 286,907 June-06 287,115 June-07 90.114 168,280 184.018 193,167 200.918 206,920 174,365 175,201 329,758 332,994 353,009 476,353 367,373 502,636 June-08 382,156 June-09 June-10 June-11 71,728 188,496 205.753 256,446 302,104 June-12 156,195 Age-to-Age Factors 108-120 1.015 1.013 1.277 1.027 1.034 1.021 1.023 Acc Yr Ending June-83 24-36 1.401 96-108 1.015 120-132 1.024 132-144 1.000 156-168 1.000 252-264 1.000 264-276 1.000 36-48 1.244 144-156 168-180 180-192 192-204 204-216 216-228 228-240 276-288 1.000 288-300 300-312 312-324 324-336 336-348 348-360 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.136 1.087 1.090 1.039 1.244 1.244 1.777 1.295 1.086 1.124 1.053 1.021 1.009 1.034 1.059 0.946 1.000 1.009 1.009 1.026 1.000 1.000 1.000 1.047 June-84 2.747 1.400 1 319 1 387 1.000 1.000 1.000 1.018 1.000 1 114 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 2.747 2.747 2.747 2.747 1.000 1.017 1.000 1.020 1.000 1.000 1.022 1.012 1.006 1.000 1.014 1.037 1.032 1.004 1.017 1.012 1.040 1.037 1.000 1.000 1.024 1.000 June-85 1.401 1.252 1.127 1.167 1.061 1.000 1.014 1.007 1.016 1.000 1.011 1.005 1.000 1.033 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.004 1.048 1.024 1.024 1.000 1.006 1.021 1.012 1.005 1.000 1.014 1.000 1.161 1.195 1.114 1.063 1.000 1.007 1.018 1.000 June-86 June-87 1 564 1.078 1.049 1.008 1.003 1.006 1.015 1.021 1.052 1.012 1.004 1.008 3.275 3.573 1.478 1.374 1.036 1.046 1.012 1.026 1.004 1.005 1.010 1.019 1.029 June-88 1.021 June-89 1.593 1.064 1.001 1.000 1.000 1.000 1.026 1.000 1.006 1.005 1.000 1.100 1.000 1.009 1.042 1.068 1.002 1.100 1.001 1.003 1.060 1.000 1.005 1.000 1.005 1.010 1.000 1.017 1.000 June-90 6.165 1.248 1.036 1.181 1.023 1.001 1.017 1.000 1.002 1.008 1.000 1.035 1.000 1.007 1.000 1.009 1.019 1.048 1.045 1.000 1.011 1.008 1.002 1.018 1.000 1.004 1.002 1.225 1.017 1.045 1.037 1.000 1.000 1.000 1.000 1.028 1.000 1.000 1.000 1.000 1.030 1.000 1.002 1.011 1.000 1.323 1.007 1.014 June-91 4.064 2.324 1.008 1.004 1.000 1.009 1.081 1.000 June-92 1.431 1.236 1.010 1.273 1.064 1.004 1.003 1.009 1.007 1.009 1.015 1.000 June-93 2.798 1.109 1.000 1.000 1.027 1.085 June-94 2.088 1.026 1.017 1.020 1.021 1.027 June-95 2.764 1.185 1.041 1.020 1.005 1.000 1.006 1.000 1.000 1.000 1.000 1.000 June-96 1.000 1.009 1.019 1.032 1.002 1.004 1.008 1.045 1.066 June-97 1.685 1.248 1.396 1.025 1.000 1.000 1.000 1.000 1.000 1.000 2.456 2.558 1.035 1.005 1.005 1.004 June-98 1.214 June-99 1.109 1.020 1.184 1.125 1.050 1.164 1.027 1.016 1.045 1.082 1.023 1.028 1.021 1.238 June-00 1.826 1.061 1.067 1.054 1.034 June-01 2.360 1.010 2.531 4.970 1.693 1.223 1.059 1.072 1.116 1.194 1.082 June-02 1.039 1.037 1.069 June-03 June-04 June-05 2.127 1.019 1.002 1.084 1.066 1.253 1.003 1.000 1.000 1.008 June-06 2 571 1.054 1.009 1.050 1.041 1.001 1.000 1.001 June-07 1.867 1.094 1.040 June-08 June-09 June-10 1.431 1.901 2.869 1.055 June-11 1.603 12-24 24-36 36-48 48.60 60-72 72-84 84-96 96.108 108-120 120-132 132-144 144-156 156-168 168-180 180-102 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300,312 312,324 324,336 336,348 348-360 To Ult Averages Simple Avg All Yrs Latest 5 1.296 1.179 1.172 1.062 1.043 1.034 1.006 1.004 1.008 1.008 1.008 1.004 1.000 1.000 1.000 1.042 1.040 1.004 1.015 1.020 1.004 1.008 1.008 1.000 Latest 3 2.124 1 249 1.049 1.027 1.014 1.003 1.007 1.075 1.046 1.048 1.029 1.023 1.009 1.001 1.000 1.006 1.007 1.011 1.032 1.008 1.000 1.012 1.026 1.015 1.013 1.005 Volume Wtd 1.251 1.041 1.019 1.014 1.008 1.018 1.014 1.007 1.004 1.000 1.000 1.000 All Yrs 1.120 1.036 1.030 1.030 1.031 1.018 1.012 1.006 1.005 1.011 1.041 1.024 1.012 1.009 1.014 Latest 5 1 913 1.190 1.043 1.026 1.025 1.020 1.045 1.071 1.044 1.039 1.021 1.016 1.005 1.006 1.006 1.007 1.013 1.057 1.027 1.009 1.010 1.017 1.021 1.016 1.007 1.049 1.003 1.008 1.094 1.049 1.048 1.029 1.025 1.010 1.000 1.012 1.022 1.020 Latest 3 1.931 1.250 1.012 1.009 1.001 1.000 1.008 1.010 1.013 1.010 1.007 1.000 Dev Factor Selection Industry 1 1.968 1.143 1.054 1.014 Industry 2 1.266 1.191 1.190 1.074 1.176 1.172 1.040 1.013 1.011 1.010 1.015 1.008 1.013 1.010 1.010 1.097 1.013 1.009 1.008 1.008 1.008 1.005 1.004 1.002 1.004 1.006 1.054 1.032 1.039 1.032 1.067 1.020 1.010 1.010 1.008 1.005 1.005 1.005 Prior 1.005 1.005 1.003 1.003 1.001 1.001 1.001 1.001 1.001 1.001 1.005 1.001 1.013 Selected 2.124 1.046 1.370 1.035 1.028 1.041 1.020 1.010 1.010 1.009 1.005 1.005 1.005 1.003 1.003 1.001 1.001 1.001 1.001 1.001 1.001 1.006

Exhibit 2

Page 7

Section 5 Exhibit 2 Page 8

University of Massachusetts (Amherst) - Cluster 4 Medical

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ite Loss	Ultima	te Loss	Change in U	Iltimate Loss	Change in U	ltimate Loss
Accident	As of	f 6/11	As of	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	108,413	111,105	108,413	110,490	0	0.0%	(615)	-0.6%
6/30/82-83	91,124	92,786	91,124	92,625	0	0.0%	(161)	-0.2%
6/30/83-84	32,907	34,205	32,907	34,145	0	0.0%	(59)	-0.2%
6/30/84-85	74,805	75,546	74,805	75,546	0	0.0%	0	0.0%
6/30/85-86	52,741	53,263	52,741	53,263	0	0.0%	0	0.0%
6/30/86-87	197,000	197,000	198,000	198,000	1,000	0.5%	1,000	0.5%
6/30/87-88	219,000	219,000	223,000	223,000	4,000	1.8%	4,000	1.8%
6/30/88-89	301,000	301,000	300,000	301,000	(1,000)	-0.3%	0	0.0%
6/30/89-90	158,890	160,463	158,890	160,463	0	0.0%	0	0.0%
6/30/90-91	517,000	517,000	516,000	516,000	(1,000)	-0.2%	(1,000)	-0.2%
6/30/91-92	558,000	559,000	560,000	560,000	2,000	0.4%	1,000	0.2%
6/30/92-93	264,696	267,317	264,696	267,317	0	0.0%	0	0.0%
6/30/93-94	489,000	489,000	499,000	499,000	10,000	2.0%	10,000	2.0%
6/30/94-95	308,423	311,476	308,423	311,476	0	0.0%	0	0.0%
6/30/95-96	246,425	248,865	246,425	248,865	0	0.0%	0	0.0%
6/30/96-97	189,847	191,726	189,847	191,726	0	0.0%	0	0.0%
6/30/97-98	198,000	198,000	197,000	198,000	(1,000)	-0.5%	0	0.0%
6/30/98-99	218,000	218,000	220,000	221,000	2,000	0.9%	3,000	1.4%
6/30/99-00	370,000	371,000	379,000	379,000	9,000	2.4%	8,000	2.2%
6/30/00-01	403,000	403,000	403,000	403,000	0	0.0%	0	0.0%
6/30/01-02	415,000	416,000	439,000	440,000	24,000	5.8%	24,000	5.8%
6/30/02-03	275,000	276,000	275,000	275,000	0	0.0%	(1,000)	-0.4%
6/30/03-04	175,000	178,000	163,000	166,000	(12,000)	-6.9%	(12,000)	-6.7%
6/30/04-05	352,000	358,000	340,000	342,000	(12,000)	-3.4%	(16,000)	-4.5%
6/30/05-06	368,000	394,000	353,000	370,000	(15,000)	-4.1%	(24,000)	-6.1%
6/30/06-07	266,000	327,000	262,000	306,000	(4,000)	-1.5%	(21,000)	-6.4%
6/30/07-08	512,000	518,000	497,000	501,000	(15,000)	-2.9%	(17,000)	-3.3%
6/30/08-09	687,000	781,000	635,000	688,000	(52,000)	-7.6%	(93,000)	-11.9%
6/30/09-10	402,000	490,000	412,000	457,000	10,000	2.5%	(33,000)	-6.7%
6/30/10-11	658,000	817,000	567,000	577,000	(91,000)	-13.8%	(240,000)	-29.4%
6/30/11-12								
Total	9,108,270	9,573,751	8,966,270	9,165,915	(142,000)	-1.6%	(407,836)	-4.3%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 5, Exhibit 2, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1

Section 5 Exhibit 2

Page 9

University of Massachusetts (Amherst) - Cluster 4 Medical

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental	_	Pres Value	Pres Value		_
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	0.6%	0.0%	0.2%	0.1%	1.000	1.000
360	99.4%	0.1%	0.6%	0.0%	0.0%	0.981	0.971
348	99.3%	0.1%	0.7%	0.0%	0.0%	0.948	0.924
336	99.2%	0.1%	0.8%	0.0%	0.0%	0.920	0.883
324	99.1%	0.1%	0.9%	0.0%	0.0%	0.895	0.848
312	99.0%	0.1%	1.0%	0.0%	0.0%	0.872	0.816
300	98.9%	0.1%	1.1%	0.0%	0.0%	0.851	0.788
288	98.8%	0.1%	1.2%	0.0%	0.0%	0.831	0.761
276	98.7%	0.3%	1.3%	0.1%	0.1%	0.812	0.737
264	98.4%	0.3%	1.6%	0.1%	0.1%	0.817	0.746
252	98.1%	0.5%	1.9%	0.2%	0.1%	0.816	0.744
240	97.6%	0.5%	2.4%	0.2%	0.2%	0.824	0.757
228	97.1%	0.5%	2.9%	0.2%	0.2%	0.824	0.757
216	96.6%	0.5%	3.4%	0.2%	0.2%	0.819	0.751
204	96.1%	0.5%	3.9%	0.3%	0.2%	0.812	0.741
192	95.7%	0.4%	4.3%	0.2%	0.2%	0.803	0.729
180	95.3%	0.5%	4.7%	0.3%	0.2%	0.789	0.712
168	94.7%	0.8%	5.3%	0.5%	0.4%	0.782	0.702
156	93.9%	0.9%	6.1%	0.6%	0.4%	0.783	0.705
144	93.0%	0.9%	7.0%	0.6%	0.5%	0.783	0.705
132	92.0%	0.9%	8.0%	0.6%	0.5%	0.779	0.701
120	91.1%	1.8%	8.9%	1.2%	1.0%	0.773	0.693
108	89.4%	4.8%	10.6%	3.5%	2.9%	0.783	0.707
96	84.5%	3.3%	15.5%	2.5%	2.1%	0.824	0.762
84	81.2%	2.2%	18.8%	1.7%	1.5%	0.825	0.763
72	79.0%	2.7%	21.0%	2.2%	1.9%	0.813	0.746
60	76.3%	3.3%	23.7%	2.8%	2.6%	0.804	0.734
48	73.0%	10.7%	27.0%	9.3%	8.7%	0.799	0.727
36	62.3%	9.9%	37.7%	9.0%	8.6%	0.829	0.767
24	52.4%	27.7%	47.6%	26.1%	25.4%	0.835	0.775
12	24.7%	24.7%	75.3%	24.2%	23.9%	0.868	0.820

NOTES:

(2) = 1 / Section 5, Exhibit 2, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)

Section 5 Exhibit 2 Page 10

University of Massachusetts (Amherst) - Cluster 4 Medical

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount	Disco	
Accident	Outstandi	· ·	Factor at	Outstandi	
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	0	2,077		0	1,998
6/30/82-83	0	1,501	0.981	0	1,472
6/30/83-84	0	1,238	0.948	0	1,174
6/30/84-85	741	1,481	0.920	681	1,362
6/30/85-86	522	1,044	0.895	467	934
6/30/86-87	2,130	2,130	0.872	1,857	1,857
6/30/87-88	2,646	2,646	0.851	2,251	2,251
6/30/88-89	3,570	4,570	0.831	2,967	3,797
6/30/89-90	1,573	3,146	0.812	1,278	2,556
6/30/90-91	8,701	8,701	0.817	7,113	7,113
6/30/91-92	10,365	10,365	0.816	8,456	8,456
6/30/92-93	2,621	5,242	0.824	2,160	4,320
6/30/93-94	14,145	14,145	0.824	11,657	11,657
6/30/94-95	3,054	6,107	0.819	2,502	5,004
6/30/95-96	2,440	4,880	0.812	1,981	3,962
6/30/96-97	1,880	3,759	0.803	1,509	3,018
6/30/97-98	8,987	9,987	0.789	7,091	7,880
6/30/98-99	11,222	12,222	0.782	8,771	9,553
6/30/99-00	22,706	22,706	0.783	17,774	17,774
6/30/00-01	28,192	28,192	0.783	22,070	22,070
6/30/01-02	34,370	35,370	0.779	26,777	27,556
6/30/02-03	24,730	24,730	0.773	19,115	19,115
6/30/03-04	16,955	19,955	0.783	13,276	15,625
6/30/04-05	52,375	54,375	0.824	43,154	44,802
6/30/05-06	65,885	82,885	0.825	54,379	68,410
6/30/06-07	55,080	99,080	0.813	44,797	80,582
6/30/07-08	114,844	118,844	0.804	92,382	95,600
6/30/08-09	132,364	185,364	0.799	105,764	148,113
6/30/09-10	155,554	200,554	0.829	128,897	166,186
6/30/10-11	264,896	274,896	0.835	221,211	229,562
6/30/11-12	448,805	476,805	0.868	389,695	414,007
Total	1,491,352	1,718,997		1,240,031	1,427,764

_			
_	Discount Calculation for		
	All Prior Years		
_	(Low)	(High)	
(8) Estimated Total Reserve:	0	2,077	
(9) Projected Number of Years:	2	2	
(10) Projected Paid Loss per Year:	0	1,038	
(11) Discounted Value at 4%:	0	1,998	

0.831

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 5, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 5, Exhibit 2, Page 9, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.831

Section 5 Exhibit 2 Page 11

University of Massachusetts (Amherst) - Cluster 4 Medical

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount	Disco	
Accident	Outstandi	· ·	Factor at	Outstandi	
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	0	2,077		0	1,961
6/30/82-83	0	1,501	0.971	0	1,458
6/30/83-84	0	1,238	0.924	0	1,144
6/30/84-85	741	1,481	0.883	654	1,308
6/30/85-86	522	1,044	0.848	443	886
6/30/86-87	2,130	2,130	0.816	1,739	1,739
6/30/87-88	2,646	2,646	0.788	2,085	2,085
6/30/88-89	3,570	4,570	0.761	2,718	3,480
6/30/89-90	1,573	3,146	0.737	1,160	2,319
6/30/90-91	8,701	8,701	0.746	6,487	6,487
6/30/91-92	10,365	10,365	0.744	7,716	7,716
6/30/92-93	2,621	5,242	0.757	1,983	3,967
6/30/93-94	14,145	14,145	0.757	10,710	10,710
6/30/94-95	3,054	6,107	0.751	2,294	4,587
6/30/95-96	2,440	4,880	0.741	1,809	3,618
6/30/96-97	1,880	3,759	0.729	1,371	2,742
6/30/97-98	8,987	9,987	0.712	6,394	7,106
6/30/98-99	11,222	12,222	0.702	7,880	8,582
6/30/99-00	22,706	22,706	0.705	15,998	15,998
6/30/00-01	28,192	28,192	0.705	19,882	19,882
6/30/01-02	34,370	35,370	0.701	24,084	24,785
6/30/02-03	24,730	24,730	0.693	17,138	17,138
6/30/03-04	16,955	19,955	0.707	11,988	14,109
6/30/04-05	52,375	54,375	0.762	39,906	41,430
6/30/05-06	65,885	82,885	0.763	50,283	63,257
6/30/06-07	55,080	99,080	0.746	41,114	73,958
6/30/07-08	114,844	118,844	0.734	84,332	87,270
6/30/08-09	132,364	185,364	0.727	96,246	134,784
6/30/09-10	155,554	200,554	0.767	119,319	153,837
6/30/10-11	264,896	274,896	0.775	205,367	213,119
6/30/11-12	448,805	476,805	0.820	367,851	390,801
Total	1,491,352	1,718,997		1,148,951	1,322,261

_											
_	Discount Ca	alculation for									
	All Prior Years										
_	(Low)	(High)									
(8) Estimated Total Reserve:	0	2,077									
(9) Projected Number of Years:	2	2									
(10) Projected Paid Loss per Year:	0	1,038									
(11) Discounted Value at 6%:	0	1,961									

0.770

0.769

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 5, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 5, Exhibit 2, Page 9, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		1,329,412			1,329,412	1,329,412	0	0		
6/30/82-83		306,340	307,765		306,340	313,999	0	7,659		
6/30/83-84		1,443,839	1,450,245		1,472,716	1,501,593	28,877	57,754		
6/30/84-85	116,303	852,745	857,144	858,772	869,800	886,855	17,055	34,110	0.748	0.763
6/30/85-86	123,981	2,517,941	2,530,657	2,533,453	2,531,000	2,533,000	13,059	15,059	2.041	2.043
6/30/86-87	139,388	3,297,460	3,914,208	3,313,203	3,313,000	3,613,705	15,540	316,245	2.377	2.593
6/30/87-88	159,499	2,967,363	3,244,591	2,980,503	2,981,000	3,112,547	13,637	145,184	1.869	1.951
6/30/88-89	180,644	2,623,646	2,646,724	2,655,439	2,676,119	2,754,828	52,473	131,182	1.481	1.525
6/30/89-90	142,494	3,243,583	3,292,688	3,310,823	3,308,455	3,405,762	64,872	162,179	2.322	2.390
6/30/90-91	143,694	1,101,823	1,124,448	1,124,282	1,123,859	1,156,914	22,036	55,091	0.782	0.805
6/30/91-92	155,170	1,518,304	1,559,636	1,558,976	1,548,670	1,594,219	30,366	75,915	0.998	1.027
6/30/92-93	163,283	638,167	660,872	660,482	650,930	670,075	12,763	31,908	0.399	0.410
6/30/93-94	177,184	1,795,090	1,873,050	1,870,455	1,870,000	1,873,000	74,910	77,910	1.055	1.057
6/30/94-95	188,391	521,127	538,394	538,322	538,000	538,000	16,873	16,873	0.286	0.286
6/30/95-96	201,751	491,723	508,525	508,598	501,557	511,392	9,834	19,669	0.249	0.253
6/30/96-97	231,872	422,390	430,306	431,303	430,838	439,286	8,448	16,896	0.186	0.189
6/30/97-98	232,237	545,727	579,207	578,479	556,642	567,556	10,915	21,829	0.240	0.244
6/30/98-99	232,075	631,001	655,246	655,545	655,000	656,000	23,999	24,999	0.282	0.283
6/30/99-00	211,819	687,583	729,802	728,285	728,000	730,000	40,417	42,417	0.344	0.345
6/30/00-01	215,099	737,973	778,516	777,586	778,000	779,000	40,027	41,027	0.362	0.362
6/30/01-02	227,797	341,709	366,404	367,379	366,000	367,000	24,291	25,291	0.161	0.161
6/30/02-03	242,008	822,359	898,968	895,464	895,000	899,000	72,641	76,641	0.370	0.371
6/30/03-04	276,758	962,971	1,052,691	1,050,052	1,050,000	1,053,000	87,029	90,029	0.379	0.380
6/30/04-05	260,378	192,745	216,506	260,189	217,000	260,000	24,255	67,255	0.083	0.100
6/30/05-06	317,741	778,823	890,919	887,911	888,000	891,000	109,177	112,177	0.279	0.280
6/30/06-07	325,922	368,698	434,851	488,507	435,000	489,000	66,302	120,302	0.133	0.150
6/30/07-08	354,130	1,284,003	1,590,733	1,517,884	1,518,000	1,591,000	233,998	306,998	0.429	0.449
6/30/08-09	362,309	479,096	677,532	736,435	678,000	736,000	198,904	256,904	0.187	0.203
6/30/09-10	383,298	496,986	852,134	907,220	852,000	907,000	355,014	410,014	0.222	0.237
6/30/10-11	394,924	411,900	1,055,583	1,049,179	1,049,000	1,056,000	637,100	644,100	0.266	0.267
6/30/11-12	381,943	169,232	1,008,945	1,044,543	1,009,000	1,045,000	839,768	875,768	0.264	0.274
Total	6,542,094	33,981,758	36,727,288	34,289,267	37,126,338	38,261,143	3,144,580	4,279,385		
Tot 6/30/84-12	6,542,094	30,902,167	34,969,278	34,289,267	34,017,870	35,116,140	3,115,703	4,213,973	0.520	0.537

- (2) Provided by Commonwealth of Massachusetts
- (3) Sum of Section 6, Exhibit 1, Page 2, Column 3 and Section 6, Exhibit 1, Page 9, Column 8
- (4) From Section 6, Exhibit 1, Page 2, Column 8
- (5) From Section 6, Exhibit 1, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Paid Loss		Adjstmnt for	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average	
Accident	Payroll	Excluding	Paid	Extra	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding	Average
Year	(000's)	Lump Sum	LDF	Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim	Age
All Prior Yrs		1,242,912							0	0		
6/30/82-83		271,340	1.005	1.000	272,765	35,000	307,765		0	0		
6/30/83-84		1,219,902	1.005	1.000	1,226,308	223,937	1,450,245		0	0		
6/30/84-85	116,303	837,745	1.005	1.000	842,144	15,000	857,144	0.737	0	0		
6/30/85-86	123,981	2,421,446	1.005	1.000	2,434,162	96,495	2,530,657	2.041	0	0		
6/30/86-87	139,388	2,989,542	1.005	1.200	3,606,290	307,918	3,914,208	2.808	1	1	616,748	81
6/30/87-88	159,499	2,620,881	1.005	1.100	2,898,109	346,482	3,244,591	2.034	2	1	277,228	84
6/30/88-89	180,644	2,245,396	1.010	1.000	2,268,474	378,250	2,646,724	1.465	0	0		
6/30/89-90	142,494	2,830,333	1.017	1.000	2,879,438	413,250	3,292,688	2.311	0	0		
6/30/90-91	143,694	887,647	1.025	1.000	910,272	214,176	1,124,448	0.783	0	0		
6/30/91-92	155,170	1,163,553	1.036	1.000	1,204,885	354,751	1,559,636	1.005	0	0		
6/30/92-93	163,283	494,916	1.046	1.000	517,621	143,251	660,872	0.405	0	0		
6/30/93-94	177,184	1,383,838	1.056	1.000	1,461,798	411,252	1,873,050	1.057	1	1	77,960	70
6/30/94-95	188,391	273,127	1.063	1.000	290,394	248,000	538,394	0.286	0	0		
6/30/95-96	201,751	253,697	1.066	1.000	270,499	238,026	508,525	0.252	0	0		
6/30/96-97	231,872	113,590	1.070	1.000	121,506	308,800	430,306	0.186	0	0		
6/30/97-98	232,237	445,227	1.075	1.000	478,707	100,500	579,207	0.249	0	0		
6/30/98-99	232,075	289,251	1.084	1.000	313,496	341,750	655,246	0.282	1	0		
6/30/99-00	211,819	489,166	1.084	1.000	530,168	199,633	729,802	0.345	0	1	41,002	63
6/30/00-01	215,099	431,926	1.086	1.000	469,033	309,483	778,516	0.362	0	0		
6/30/01-02	227,797	246,210	1.093	1.000	269,165	97,239	366,404	0.161	0	0		
6/30/02-03	242,008	720,943	1.101	1.000	793,956	105,012	898,968	0.371	1	1	73,012	51
6/30/03-04	276,758	635,971	1.125	1.000	715,190	337,501	1,052,691	0.380	0	0		
6/30/04-05	260,378	125,745	1.164	1.000	146,396	70,110	216,506	0.083	0	1	20,651	58
6/30/05-06	317,741	498,323	1.179	1.000	587,702	303,217	890,919	0.280	0	0		
6/30/06-07	325,922	238,698	1.213	1.000	289,605	145,246	434,851	0.133	0	0		
6/30/07-08	354,130	799,003	1.263	1.000	1,009,429	581,304	1,590,733	0.449	6	1	210,426	44
6/30/08-09	362,309	345,595	1.422	1.000	491,505	186,027	677,532	0.187	4	5	29,182	51
6/30/09-10	383,298	367,986	1.620	1.000	596,205	255,929	852,134	0.222	11	4	57,055	47
6/30/10-11	394,924	361,900	2.158	1.000	781,093	274,489	1,055,583	0.267	50	12	34,933	52
6/30/11-12	381,943	169,232	4.193	1.000	709,575	299,370	1,008,945	0.264		76	7,110	42
Total	6,542,094	27,415,040			29,385,890	7,341,399	36,727,288		77	104	<u> </u>	

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 6, Exhibit 1, Page 7

⁽⁵⁾ Based on information from the MA WCRIB

^{(6) = (3)} x (4) x (5)

⁽⁷⁾ From Section 6, Exhibit 1, Page 9, Column 13

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 6 Exhibit 1 Page 3

University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori	Paid Loss		Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss	Excluding	Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Lump Sum	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	116,303	0.992	837,745	1.005	843,772	15,000	858,772	0.738	0.725
6/30/85-86	123,981	2.395	2,421,446	1.005	2,436,958	96,495	2,533,453	2.043	1.966
6/30/86-87	139,388	2.162	2,989,542	1.005	3,005,285	307,918	3,313,203	2.377	2.156
6/30/87-88	159,499	1.577	2,620,881	1.005	2,634,021	346,482	2,980,503	1.869	1.651
6/30/88-89	180,644	1.730	2,245,396	1.010	2,277,189	378,250	2,655,439	1.470	1.261
6/30/89-90	142,494	2.767	2,830,333	1.017	2,897,573	413,250	3,310,823	2.323	2.033
6/30/90-91	143,694	0.629	887,647	1.025	910,106	214,176	1,124,282	0.782	0.633
6/30/91-92	155,170	0.764	1,163,553	1.036	1,204,225	354,751	1,558,976	1.005	0.776
6/30/92-93	163,283	0.312	494,916	1.046	517,231	143,251	660,482	0.405	0.317
6/30/93-94	177,184	0.798	1,383,838	1.056	1,459,203	411,252	1,870,455	1.056	0.824
6/30/94-95	188,391	0.153	273,127	1.063	290,322	248,000	538,322	0.286	0.154
6/30/95-96	201,751	0.135	253,697	1.066	270,572	238,026	508,598	0.252	0.134
6/30/96-97	231,872	0.059	113,590	1.070	122,503	308,800	431,303	0.186	0.053
6/30/97-98	232,237	0.202	445,227	1.075	477,979	100,500	578,479	0.249	0.206
6/30/98-99	232,075	0.137	289,251	1.084	313,795	341,750	655,545	0.282	0.135
6/30/99-00	211,819	0.241	489,166	1.084	528,651	199,633	728,285	0.344	0.250
6/30/00-01	215,099	0.213	431,926	1.086	468,103	309,483	777,586	0.362	0.218
6/30/01-02	227,797	0.123	246,210	1.093	270,140	97,239	367,379	0.161	0.119
6/30/02-03	242,008	0.312	720,943	1.101	790,452	105,012	895,464	0.370	0.327
6/30/03-04	276,758	0.250	635,971	1.125	712,551	337,501	1,050,052	0.379	0.257
6/30/04-05	260,378	0.175	125,745	1.164	190,078	70,110	260,189	0.100	0.073
6/30/05-06	317,741	0.179	498,323	1.179	584,694	303,217	887,911	0.279	0.184
6/30/06-07	325,922	0.183	238,698	1.213	343,260	145,246	488,507	0.150	0.105
6/30/07-08	354,130	0.186	799,003	1.263	936,580	581,304	1,517,884	0.429	0.264
6/30/08-09	362,309	0.190	345,595	1.422	550,408	186,027	736,435	0.203	0.152
6/30/09-10	383,298	0.193	367,986	1.620	651,291	255,929	907,220	0.237	0.170
6/30/10-11	394,924	0.195	361,900	2.158	774,690	274,489	1,049,179	0.266	0.196
6/30/11-12	381,943	0.198	169,232	4.193	745,173	299,370	1,044,543	0.273	0.195
Total	6,542,094		24,680,886		27,206,805	7,082,462	34,289,267		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 6, Exhibit 1, Page 4, Column 11
- (4) From Section 6, Exhibit 1, Page 2, Column 3
- (5) From Section 6, Exhibit 1, Page 2, Column 4
- $(6) = (4) + [\{1 \{1/(5)\}\} \times (3) \times (2) \times 10]$
- (7) From Section 6, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10

Section 6 Exhibit 1 Page 4

University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Exp Ult Loss	Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Excluding	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Lump Sum	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.992	0.992
6/30/85-86									2.395	2.395
6/30/86-87									2.162	2.162
6/30/87-88									1.577	1.577
6/30/88-89									1.730	1.730
6/30/89-90									2.767	2.767
6/30/90-91	143,694	910,272	0.633	0.946	0.599	1.245	0.746	0.170	0.637	0.629
6/30/91-92	155,170	1,204,885	0.776	1.038	0.806	1.232	0.993	0.156	0.775	0.764
6/30/92-93	163,283	517,621	0.317	1.210	0.384	1.220	0.468	0.135	0.317	0.312
6/30/93-94	177,184	1,461,798	0.825	1.195	0.986	1.208	1.191	0.139	0.790	0.798
6/30/94-95	188,391	290,394	0.154	1.184	0.182	1.196	0.218	0.141	0.155	0.153
6/30/95-96	201,751	270,499	0.134	1.174	0.157	1.184	0.186	0.144	0.137	0.135
6/30/96-97	231,872	121,506	0.052	1.163	0.061	1.173	0.071	0.147	0.062	0.059
6/30/97-98	232,237	478,707	0.206	1.148	0.237	1.161	0.275	0.150	0.206	0.202
6/30/98-99	232,075	313,496	0.135	1.133	0.153	1.149	0.176	0.154	0.141	0.137
6/30/99-00	211,819	530,168	0.250	1.114	0.279	1.138	0.317	0.158	0.246	0.241
6/30/00-01	215,099	469,033	0.218	1.086	0.237	1.127	0.267	0.163	0.219	0.213
6/30/01-02	227,797	269,165	0.118	1.065	0.126	1.116	0.140	0.168	0.129	0.123
6/30/02-03	242,008	793,956	0.328	1.061	0.348	1.105	0.385	0.171	0.300	0.312
6/30/03-04	276,758	715,190	0.258	1.061	0.274	1.094	0.300	0.172	0.261	0.250
6/30/04-05	260,378	146,396	0.056	1.054	0.059	1.083	0.064	0.175	0.221	0.175
6/30/05-06	317,741	587,702	0.185	1.044	0.193	1.072	0.207	0.179	0.226	0.179
6/30/06-07	325,922	289,605	0.089	1.032	0.092	1.062	0.097	0.183	0.230	0.183
6/30/07-08	354,130	1,009,429	0.285	1.021	0.291	1.051	0.306	0.186	0.235	0.186
6/30/08-09	362,309	491,505	0.136	1.009	0.137	1.041	0.142	0.190	0.240	0.190
6/30/09-10	383,298	596,205	0.156	1.005	0.156	1.030	0.161	0.193	0.244	0.193
6/30/10-11	394,924	781,093	0.198	1.007	0.199	1.020	0.203	0.195	0.248	0.195
6/30/11-12	381,943	709,575	0.186	1.000	0.186	1.010	0.188	0.198		0.198
Total	5,679,784	12,958,200								
			Trend L	Trend Last 4 (ex 11-12):		Avg 3 (x11-12):	0.169			
				ast 8 (ex 11-12):	-9.6% 3.3%	Avg 5 (x11-12):	0.182			
			Trend Last 12 (ex 11-12):		-3.4%	Avg 10 (x11-12):	0.201			
			Prior	Selected Trend:	1.0%	Prior Sel Avg:	0.250			

Selected Trend:

1.0%

Sel. Loss Cost:

0.200

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 6, Exhibit 1, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCRIB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)



(9) = (7) + (8)

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012

Section 6 Exhibit 1 Page 5

University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	<u> </u>		
(1)	Average Payment Trend		0.860
(2)	Credibility		10%
(3)	Average Pmt Trend Statewide		0.960
(4)	Credibility Weighted Trend		0.950
()	, , ,	(Low)	(High)
(5)	Selected Range	0.940	0.969
(6)	Incremental Paid for 2012	0	0
(7)	Estimated Reserve	0	0
(8)	Paid to Date (82 & Prior)	1,242,912	1,242,912
(9)	Est Ult Paid for 1982 & Prior	1,242,912	1,242,912
Method 2	_		
Wethou 2	<u> </u>	(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	0	0
(11)	Projected Number of Years	1	1
(12)	Estimated Reserve	0	0
(13)	Paid to Date (82 & Prior)	1,242,912	1,242,912
(14)	Est Ult Paid for 1982 & Prior	1,242,912	1,242,912
(14a)	Paid Counts During Fiscal Year	0	0
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	1,242,912	1,242,912
(16)	Lump Sum Ultimates	86,500	86,500
(17)	Ult Loss Including Lump Sums	1,329,412	1,329,412
(18)	Implied Tail	1.000	1.000
(19)	Ult Loss Inc Lump Sums @ 6/11	1,329,412	1,329,412
NOTES:			
<u> </u>	on 6, Exhibit 1, Page 6		(10) Avg of 3 latest years from Section 6, Exhibit 1, Page 6, Column 3
` ′	of Section 6, Exhibit 1, Page 6, Column 3 / 3,000,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta			$(12) = (10 \times (11))$
$(4) = (1) \times (2) - (3) \times (3) $			(12) = (10 K(11)) $(14) = (12) + (13)$
	Igmentally based on (4)		(15) = Average of (9) and (14)
•	ded by Commonwealth of Massachusetts		(16) From Section 6, Exhibit 1, Page 9, Column 13
$(7) = (6) \times (5) / (6)$	•		(17) = (15) + (16)
(8), (16) From	Section 6, Exhibit 1, Page 2, Column 3		(18) = (15) / (8)

(19) From Aon analysis as of June 30, 2011



Section 6 Exhibit 1 Page 6

University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	92,878	11.439			
1993	2	83,290	11.330	0.897		
1994	3	82,744	11.324	0.993		
1995	4	76,872	11.250	0.929		
1996	5	73,496	11.205	0.956		
1997	6	42,425	10.655	0.577		
1998	7	43,683	10.685	1.030		
1999	8	44,262	10.698	1.013		
2000	9	49,469	10.809	1.118	n =	12
2001	10	47,733	10.773	0.965	S(x) =	23,970
2002	11	28,782	10.268	0.603	S(x-sq) =	47,880,218
2003	12	12,543	9.437	0.436	S(xy) =	259,401
2004	13	0			S(y) =	130
2005	14	0			D =	1,716
2006	15	0			slope =	-0.137
2007	16	0			Avg Trend =	0.863
2008	17	0				
2009	18	0				
2010	19	0				
2011	20	0				
2012	21	0				

Selected Trend: 0.860

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2003: 0.436 = 12543 / 28782



Commonwealth of Massachusetts Workers Compensation University of Massachusetts (Medical Center) - Cluster 4 INDEMNITY Paid Loss Development Paid Loss (Excluding Lunn Sum)

AON

Percent of Ult

23.8%

46.3%

79.2%

84.8%

85.9%

88.9%

90.8%

91.5%

92.1%

92.3%

92.3%

93.0%

93.5%

93.8%

94.1%

94.7%

95.6%

96.6%

99.0%

99.5%

99.5%

99.5%

99.5%

Acc Yr Ending 271,340 1,052,979 837,745 271,340 1,095,405 837,745 271,340 1,138,804 837,745 271,340 1,219,902 837,745 June-83 June-84 51,116 144,806 103,773 293,981 325,415 176,965 537,475 199,729 627,523 232,715 756,969 258,415 803,646 263,521 882,478 753,001 253,827 912,918 779,914 271.340 271.340 271 340 271.340 271.340 271.340 80.072 130.398 141 779 221.812 258 415 259 034 264 240 271.340 271 340 271 340 271 340 258,415 836,058 726,654 1,854,218 2,093,920 226,837 251,092 343,659 403,737 702,624 663,935 1,013,642 837,165 1,183,544 837,745 1,219,902 837,745 1,219,902 837,745 1,219,902 837,745 1,219,902 837,745 1,219,902 837,745 432,433 944,937 977,381 1,219,902 160,290 509,752 570,921 613,784 693,110 702,075 840,064 June-85 809,196 837,745 1,636,065 1,875,672 1,751,114 1,986,394 June-86 154.113 387 438 606 915 783 976 961 962 1.132.149 1 274 833 1 393 763 1.502.381 1.962.657 2.114.127 2.191.041 2.271.411 2 297 923 2 325 043 2 352 163 2 379 342 2,408,086 2.421.446 2 421 446 2 421 446 2 421 446 2 421 446 2,421,446 854,284 1,072,274 1,249,198 1,388,337 1,542,716 1,758,390 2,135,258 2,199,362 2,260,862 2,284,043 2,302,892 2,321,741 2,340,539 2,359,336 2,708,676 2,762,266 2,818,196 2,874,830 641,668 2,989,542 June-88 174,358 435.032 660,480 866,856 1,054,956 1.195,356 1.302.385 1.395,569 1.488,786 1.568,531 1.652.757 1.723,638 1.803.152 1.884.392 1.957.379 2.019.197 2.082.510 2.146.026 2.212.010 2.280.936 2.353.096 2.428.406 2.506.612 2.583.636 2.620.881 1,207,778 1,405,394 1,739,540 2,053,362 2,208,386 2,830,333 887,647 1,163,553 244,759 583,650 955,229 1,580,598 1,710,863 1,867,443 1,974,910 2,078,269 2,163,384 2,233,112 2,239,652 2,239,652 2,245,396 2,245,396 2,245,396 2,245,396 2,245,396 2,245,396 2,245,396 2,245,396 2,245,396 2,830,333 2,830,333 887,647 887,647 1,163,553 1,163,553 1,353,747 2,740,214 2,830,333 2,830,333 June-90 351,648 811,854 2,300,598 2,503,649 2,605,537 2,726,706 2,654,988 2,830,333 2,830,333 2,830,333 2,830,333 2,830,333 2,830,333 2,830,333 156,076 357,539 669,245 517,757 900,334 630,387 728,239 1,044,793 1,152,142 832,901 1,241,017 871,395 1,237,974 947,686 1,112,699 887,647 1,137,295 887,647 1,163,553 887,647 1,163,553 887,647 887,647 887,647 887,647 887,647 887,647 1,163,553 1,163,553 1,163,553 1,163,553 1,163,553 887,647 887,647 1,163,553 June-92 261,100 494,916 1,246,051 273,127 494,916 1,265,620 273,127 494,916 1,304,675 273,127 206,631 247,518 205,179 597.393 June-93 396,390 480,534 554.071 614,181 494,916 494,916 494,916 494,916 494,916 494,916 494,916 494,916 494,916 494,916 494,916 643,612 254,027 941,958 345,287 1,088,319 1,200,112 1,123,946 1,143,130 1,179,142 1,181,321 1,181,499 1,181,499 286,111 1,286,180 273,127 1,323,640 1,345,114 273,127 273,127 June-94 June-95 285,940 285,940 285,940 286.111 286,111 286,111 273.127 June-96 June-97 155,417 97,433 406,013 256,318 576,300 57,502 245,663 85,876 246,118 119,079 246,118 124,761 246,697 113,590 246,697 113,590 253,697 113,590 253,697 113,590 253,697 113,590 253,697 113,590 253,697 113,590 253,697 113,590 253,697 113,590 253,697 113,590 253,697 June-98 240,727 58,149 139,725 143,983 232,600 419,169 444,399 445,227 445,227 445,227 445,227 287,796 445,227 445,227 445,227 287,796 445,227 445 227 445,227 274,795 425,910 287,796 487,559 286,087 287,658 287,796 289,251 223,119 288,604 287,457 289,251 June-99 198,506 319,021 487,559 487,559 June-00 396,283 459,317 480,109 487,559 487,559 487,559 489,166 103,272 111,843 231,200 169,158 298,053 211,386 357,230 237,447 397,007 244,070 413,694 244,070 429,139 244,070 431,926 244,070 431,926 246,210 431,926 431,926 431,926 246,210 246,210 June-02 June-03 June-04 103,346 158,939 214,476 366,873 266,732 493,674 299,619 593,313 671,238 635,971 422,566 501.970 559 245 599,400 720,943 624,409 635,971 103.442 June-05 66 383 111.589 111.589 111 589 111.589 111 589 125,745 299,710 222,028 June-06 498,323 498,323 June-07 129,667 238,698 238,698 238,698 238,698 199,585 126,394 456,548 222,250 645,562 303,425 768,096 345,595 June-08 799,003 June-09 June-10 173,596 323,966 367,986 361,900 169,232 June-12 Age-to-Age Factors Acc Yr Ending June-83 24-36 1.566 96-108 1.111 120-132 1.110 132-144 1.000 156-168 0.963 108-120 1.049 1.077 1.044 1.089 1.067 1.054 1.052 0.974 1.000 1.023 1.000 1.000 1.000 1.000 1.000 1.000 144-156 168-180 180-192 192-204 204-216 228-240 264-276 300-312 312-324 324-336 336-348 1.021 1.020 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.296 1.296 1.292 1.331 1.168 1.075 1.120 1.082 1.078 June-84 1.566 1.258 1.243 1.062 1.013 1.070 1.059 1.054 1.041 1.032 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.040 1.056 1.034 1.035 1.034 1.037 1.039 1.040 1.040 1.039 1.031 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.241 1.227 1.255 1.035 1.059 1.054 1.043 1.021 1.036 1.036 1.058 1.020 1.036 1.077 1.030 1.000 1.000 1.000 1.000 1.020 1.000 2.514 1.566 1.566 1.531 1.263 1.177 1.120 1.038 1.038 0.997 1.012 1.000 1.000 1.012 1.000 1.006 1.020 1.000 1.000 1.000 1.000 2.514 1.126 1.093 1.111 1.036 1.012 1.012 1.012 June-86 1.000 June-87 2 514 1 165 1.140 1.067 1.058 1.028 1.010 1.008 1.008 1.008 1.008 1.148 1.020 1.032 1.000 1.020 1.020 1.518 1.312 1.217 1.133 1.072 1.046 1.032 1.032 1.032 1.031 June-88 2.495 2.385 1.090 1.082 1.031 1.000 1.014 June-89 1.003 1.000 1.000 1.000 1.000 1.000 1.058 1.047 0.937 1.022 1.000 1.002 1.000 1.028 1.021 1.033 1.000 1.000 1.000 1.055 0.955 1.000 1.180 2.309 1.667 1.285 1.120 1.088 1.041 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.218 1.088 0.899 1.000 1.032 1.000 1.000 1.000 1.000 June-91 2.291 1.448 1.144 1.046 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 June-92 1.345 1.103 1.077 0.998 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.153 1.078 1.028 1.000 June-93 1.918 1.000 1.000 1.000 1.000 1.017 June-94 2,600 1.464 1.155 1.016 1.016 1.014 1.015 1.016 1.014 1.014 1.238 1.359 1.203 0.689 1.000 1.000 1.001 1.000 1.000 1.000 June-95 June-96 1.000 1.000 1.028 1.000 1.000 1.000 1.000 June-97 2.631 0.224 1.493 1 387 1.048 0.910 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 June-98 0.598 1.615 1.802 1.232 1.060 1.002 June-99 3 414 1.124 1.050 0.991 1.005 1.001 1.000 1.005 1.000 1.078 1.045 1.016 June-00 2.283 1.242 1.075 1.000 1.003 2.239 1.289 1.006 June-01 1.199 1.000 1.512 1.250 1.123 1.028 1.000 1.000 1.000 1.009 1.000 1.000 June-03 June-04 June-05 2.308 1.558 1.346 1.202 1.052 1.019 1.000 1.000 1.000 June-06 2.013 1.412 1 177 1.000 1.000 1.000 June-07 1.712 1.075 June-08 1.190 1.040 June-09 June-10 1.758 1.365 1.139 June-11 1 773 12-24 24-36 36-48 48.60 60-72 72.84 84-96 96.108 108-120 120-132 132-144 144-156 156-168 168-180 180-102 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 To Ult Averages Simple Avg All Yrs Latest 5 1 346 1.202 1.101 1.118 1.074 1.044 1.013 1.004 1.000 1.000 1.000 1.000 1.879 1.280 1.026 1.015 1.003 1.023 1.000 1.004 1.000 1.000 Latest 3 1 799 1.305 1.110 1.013 1.000 1.000 1.066 1.043 1.025 1.000 1.000 1.003 1.000 1.000 1.000 1.005 1.005 1.005 1.000 1.000 1.000 1.011 1.017 1.011 1.007 2.123 1.385 1.032 1.021 1.010 1.009 1.008 1.000 1.000 1.000 All Yrs 1.126 1.089 1.056 1.047 1.030 1.029 1.019 1.016 1.014 1.009 1.009 1.030 1.011 1.009 1.011 1.000 Latest 5 1 904 1 298 1 139 1.028 1.048 1.029 1.029 1.031 1.023 1.000 1.000 1.002 1.000 1.008 1.008 1.006 1.005 1.003 1.000 1.008 1.012 1.011 1.012 1.009 1.008 1.313 1.000 1.042 1.050 1.037 1.000 1.000 1.018 Latest 3 1.139 1.000 1.000 1.003 1.000 1.000 1.000 1.009 1.000 1.010 1.012 1.009 1.000 1.000 Dev Factor Selection Industry 1 2.781 1.499 1.187 Industry 2 1.746 1.344 1.332 1.126 1.062 1.029 1.020 1.009 1.008 1.005 1.006 1.010 1.003 1.002 1.004 1.003 1.001 1.001 1.001 1.155 1.131 1.041 1.013 1.036 1.007 1.008 1.007 1.010 1.038 1.007 1.001 1.003 1.011 1.008 1.007 1.000 1.000 1.000 1.000 Prior 1.009 1.008 1.003 1.000 1.010 1.005 Selected 1.139 1.126 1.041 1.029 1.013 1.021 1.007 1.002 1.000 1.008 1.005 1.003 1.003 1.007 1.010 1.010 1.008 1.005 1.000 1.000 1.000 1.000 1.000 FacToUlt 2.158 1.422 1.213 1.179 1.164 1.125 1.101 1.093 1.084 1.075 1.070 1.046 1.036 1.025 1.017 1.010 1.005 1.005 1.005 1.005 1.005 1.005



Section 6 Exhibit 1 Page 8

University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ate Loss	Ultima	te Loss	Change in U	Iltimate Loss	Change in U	Itimate Loss
Accident	As o	f 6/11	As of	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	1,329,412	1,329,412	1,329,412	1,329,412	0	0.0%	0	0.0%
6/30/82-83	306,340	313,999	306,340	313,999	0	0.0%	0	0.0%
6/30/83-84	1,472,716	1,501,593	1,472,716	1,501,593	0	0.0%	0	0.0%
6/30/84-85	869,800	886,855	869,800	886,855	0	0.0%	0	0.0%
6/30/85-86	2,534,000	2,538,000	2,531,000	2,533,000	(3,000)	-0.1%	(5,000)	-0.2%
6/30/86-87	3,259,000	3,554,330	3,313,000	3,613,705	54,000	1.7%	59,375	1.7%
6/30/87-88	2,901,000	3,032,767	2,981,000	3,112,547	80,000	2.8%	79,779	2.6%
6/30/88-89	2,676,119	2,754,828	2,676,119	2,754,828	0	0.0%	0	0.0%
6/30/89-90	3,308,455	3,405,762	3,308,455	3,405,762	0	0.0%	0	0.0%
6/30/90-91	1,123,859	1,156,914	1,123,859	1,156,914	0	0.0%	0	0.0%
6/30/91-92	1,548,670	1,594,219	1,548,670	1,594,219	0	0.0%	0	0.0%
6/30/92-93	650,930	670,075	650,930	670,075	0	0.0%	0	0.0%
6/30/93-94	1,854,000	1,856,000	1,870,000	1,873,000	16,000	0.9%	17,000	0.9%
6/30/94-95	538,000	538,000	538,000	538,000	0	0.0%	0	0.0%
6/30/95-96	501,557	511,392	501,557	511,392	0	0.0%	0	0.0%
6/30/96-97	430,838	439,286	430,838	439,286	0	0.0%	0	0.0%
6/30/97-98	556,642	567,556	556,642	567,556	0	0.0%	0	0.0%
6/30/98-99	659,000	660,000	655,000	656,000	(4,000)	-0.6%	(4,000)	-0.6%
6/30/99-00	733,000	734,000	728,000	730,000	(5,000)	-0.7%	(4,000)	-0.5%
6/30/00-01	786,000	786,000	778,000	779,000	(8,000)	-1.0%	(7,000)	-0.9%
6/30/01-02	371,000	373,000	366,000	367,000	(5,000)	-1.3%	(6,000)	-1.6%
6/30/02-03	853,000	856,000	895,000	899,000	42,000	4.9%	43,000	5.0%
6/30/03-04	1,077,000	1,079,000	1,050,000	1,053,000	(27,000)	-2.5%	(26,000)	-2.4%
6/30/04-05	205,000	270,000	217,000	260,000	12,000	5.9%	(10,000)	-3.7%
6/30/05-06	927,000	947,000	888,000	891,000	(39,000)	-4.2%	(56,000)	-5.9%
6/30/06-07	464,000	558,000	435,000	489,000	(29,000)	-6.3%	(69,000)	-12.4%
6/30/07-08	1,689,000	1,770,000	1,518,000	1,591,000	(171,000)	-10.1%	(179,000)	-10.1%
6/30/08-09	621,000	766,000	678,000	736,000	57,000	9.2%	(30,000)	-3.9%
6/30/09-10	967,000	1,085,000	852,000	907,000	(115,000)	-11.9%	(178,000)	-16.4%
6/30/10-11	1,140,000	1,182,000	1,049,000	1,056,000	(91,000)	-8.0%	(126,000)	-10.7%
6/30/11-12								
Total	36,353,338	37,716,988	36,117,338	37,216,143	(236,000)	-0.6%	(500,845)	-1.3%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 6, Exhibit 1, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1



University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Calculation of Ultimate Lump Sum Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Paid Loss	Implied	Ult Loss	Selected Incr	Cumulative	Total	Paid	Est Ult	Ultimate		Est Ult	Selected	Prior
Accident	Excluding	Cumulative	Excluding	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum -	Lump Sum	Lump Sum	Lump Sum -	Est Ultimate	Est Ultimate
Year	Lump Sum	LDF	Lump Sum	% Outstdg	% Outstdg	Outstdg	to Date	Incr Method	Percentage	LDF	Paid Method	Lump Sums	Lump Sums
All Prior Yrs	1,242,912	1.000	1,242,912	0.0%	0.0%	0	86,500	86,500	7.0%	1.000	86,500	86,500	86,500
6/30/82-83	271,340	1.005	272,765	0.0%	0.0%	0	35,000	35,000	12.8%	1.000	35,000	35,000	35,000
6/30/83-84	1,219,902	1.005	1,226,308	0.0%	0.0%	0	223,937	223,937	18.3%	1.000	223,937	223,937	223,937
6/30/84-85	837,745	1.005	842,144	0.0%	0.0%	0	15,000	15,000	1.8%	1.000	15,000	15,000	15,000
6/30/85-86	2,421,446	1.005	2,434,162	0.0%	0.0%	0	96,495	96,495	4.0%	1.000	96,495	96,495	96,495
6/30/86-87	2,989,542	1.206	3,606,290	0.0%	0.0%	0	307,918	307,918	8.5%	1.000	307,918	307,918	307,918
6/30/87-88	2,620,881	1.106	2,898,109	0.0%	0.0%	0	346,482	346,482	12.0%	1.000	346,482	346,482	288,482
6/30/88-89	2,245,396	1.010	2,268,474	0.0%	0.0%	0	378,250	378,250	16.7%	1.000	378,250	378,250	378,250
6/30/89-90	2,830,333	1.017	2,879,438	0.0%	0.0%	0	413,250	413,250	14.4%	1.000	413,250	413,250	413,250
6/30/90-91	887,647	1.025	910,272	0.0%	0.0%	0	214,176	214,176	23.5%	1.000	214,176	214,176	214,176
6/30/91-92	1,163,553	1.036	1,204,885	0.0%	0.0%	0	354,751	354,751	29.4%	1.000	354,751	354,751	354,751
6/30/92-93	494,916	1.046	517,621	0.0%	0.0%	0	143,251	143,251	27.7%	1.000	143,251	143,251	143,251
6/30/93-94	1,383,838	1.056	1,461,798	0.0%	0.0%	0	411,252	411,252	28.1%	1.000	411,252	411,252	411,252
6/30/94-95	273,127	1.063	290,394	0.0%	0.0%	0	248,000	248,000	85.4%	1.000	248,000	248,000	248,000
6/30/95-96	253,697	1.066	270,499	0.0%	0.0%	0	238,026	238,026	88.0%	1.000	238,026	238,026	238,026
6/30/96-97	113,590	1.070	121,506	0.0%	0.0%	0	308,800	308,800	254.1%	1.000	308,800	308,800	308,800
6/30/97-98	445,227	1.075	478,707	0.0%	0.0%	0	100,500	100,500	21.0%	1.000	100,500	100,500	100,500
6/30/98-99	289,251	1.084	313,496	0.0%	0.0%	0	341,750	341,750	109.0%	1.000	341,750	341,750	343,603
6/30/99-00	489,166	1.084	530,168	0.1%	0.1%	449	198,417	198,866	37.5%	1.010	200,401	199,633	200,848
6/30/00-01	431,926	1.086	469,033	0.1%	0.2%	720	306,047	306,767	65.4%	1.020	312,199	309,483	311,237
6/30/01-02	246,210	1.093	269,165	0.1%	0.2%	586	95,499	96,085	35.7%	1.030	98,393	97,239	98,002
6/30/02-03	720,943	1.101	793,956	0.2%	0.4%	3,075	101,416	104,491	13.2%	1.041	105,534	105,012	106,214
6/30/03-04	635,971	1.125	715,190	0.1%	0.5%	3,800	327,000	330,800	46.3%	1.053	344,201	337,501	343,012
6/30/04-05	125,745	1.164	146,396	0.2%	0.7%	1,063	67,000	68,063	46.5%	1.077	72,157	70,110	74,127
6/30/05-06	498,323	1.179	587,702	1.6%	2.3%	13,428	280,500	293,928	50.0%	1.114	312,507	303,217	321,262
6/30/06-07	238,698	1.213	289,605	1.0%	3.3%	9,431	130,000	139,431	48.1%	1.162	151,062	145,246	161,202
6/30/07-08	799,003	1.263	1,009,429	2.3%	5.5%	55,822	485,000	540,822	53.6%	1.282	621,786	581,304	670,020
6/30/08-09	345,595	1.422	491,505	5.2%	10.7%	52,825	133,501	186,326	37.9%	1.391	185,728	186,027	118,620
6/30/09-10	367,986	1.620	596,205	12.0%	22.7%	135,622	129,000	264,622	44.4%	1.917	247,236	255,929	246,550
6/30/10-11	361,900	2.158	781,093	11.5%	34.3%	267,679	50,000	317,679	40.7%	4.626	231,300	274,489	216,213
6/30/11-12	169,232	4.193	709,575	7.9%	42.2%	299,370	0	299,370	42.2%	4.626	0	299,370	
Total	27,415,040	•	30,628,802			843,867	6,566,718	7,410,585	24.2%	•	7,145,842	7,427,899	7,074,498

- (2) From Section 6, Exhibit 1, Page 2, Column 3
- (3) = (4) / (2)
- (4) From Section 6, Exhibit 1, Page 2, Column 6
- (5) From Section 6, Exhibit 1, Page 11
- (6) Downward sum of (5)
- $(7) = (6) \times (4)$
- (8) From Section 6, Exhibit 1, Page 10
- (9) = (7) + (8)
- (10) = (9) / (4)
- (11) From Section 6, Exhibit 1, Page 12
- $(12) = (8) \times (11)$
- (13) Selected based on (9) and (12)
- (14) From Aon analysis as of June 30, 2011



Commonwealth of Massachusetts Workers Compensation University of Massachusetts (Medical Center) - Cluster 4 INDEMNITY Lump Sum Development Incremental Lump Sum Payments

Section 6 Exhibit 1 Page 10

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-85 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Ju	0-12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12-24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 28,000 68,500 158,500 25,000 158,500 72,513 71,047 9,000 16,416 65,000 0 15,000 70,000 170,000 0 0 36,000 50,000	24-36 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	36-48 0 0 0 0 76,750 50,000 22,500 39,375 35,000 22,670 0 0 160,000 18,750 60,000 125,000 177,500 15,000 15,000 15,000 113,501	48-60 0 0 25,750 0 0 0 10,482 23,000 88,375 25,000 0 23,000 21,500 23,000 0 0 17,500 0 0 40,000 0	60-72 0 0000 0 0 0 43,000 13,000 13,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	72-84 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	84-96 0 0 36,687 15,000 15,000 15,000 41,500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	96-108 0 0 25,000 0 10,995 0 29,000 0 77,200 7,000 0 0 12,500 0 0 0 0 0 0 0	108-120 0 0 0 10,000 30,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0	120-132 0 0 35,500 5,000 0 38,424 45,000 143,000 0 0 0 0 0 0 0 0 0	132-144 0 0 17,000 0 0 0 25,671 132,500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	144-156 0 0 0 0 112,500 25,000 0 0 0 0 0 0 0	156-168 26,500 15,000 0 37,500 36,000 0 0 0 0 0 0 0	168-180 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	180-192 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	192-204 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	204-216 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	216-228 0 0 0 10,000 0 0 0 0 0 0	228-240 0 0 0 0 0 0 0 0 0 0 0 0	240-252 0 0 0 0 0 0 0 0 0 0	252-264 60,000 84,000 0 0 0 0 0 0	264-276 0 0 0 0 0 0 0 0 0	276-288 0 0 0 0 0 0 0 58,000 0	288-300 0 0 0 0 0 0 0 58,000	300-312 0 0 0 0 0	312-324 0 0 0 0 0	324-336 0 0 0 0	336-348 0 0 0	348-360 0 0	360-372 0
Cumulative Luming ACN YE Ending ACN YE Finding ACN YE Finding ACN YE Finding ACN YE Finding Jun-84 Jun-85 Jun-85 Jun-85 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 J	Payment	24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	36 0 0 0 0 0 0 16,000 47,500 34,300 18,700 18,700 18,700 19,000 158,75 151,04 47,999 71,416 95,000 67,000 115,000 33,000 115,000 0 129,000	48 0 0 0 0 0 0 8,323 92,750 97,590 34,390 123,691 223,090 210,026 238,890 210,026 238,890 210,026 238,890 210,026 238,890 210,026 238,890 210,026 238,890 210,026 238,890 210,026 238,890 210,026 238,890 210,026 238,890 210,026 238,890 210,026 210,000 210,	60 0 0 0 0 0 0 0 0 8.323 10.482 120.250 100.500 122.675 1103.251 202.751 103.251 202.751 103.251 202.86 202.751 103.251 203.86 2	72 0 20,000 25,750 0 51,323 16,982 120,250 133,673 134,751 143,251 398,752 248,000 100,500 341,753 100,500 341,754 795,499 71,416 261,000 270,000 280,500 130,000	84 0 20,000 25,750 0 23,000 60,323 75,922 195,250 165,675 354,751 145,251 105,500 364,751 145,251 105,500 364,751 261,000 374,751 261,000 67,000 280,500	96 0 20,000 62,437 0 38,000 65,323 210,250 274,750 207,775 144,251 144,251 248,000 304,800 341,750 100,500 341,750 95,499 101,460 67,000	108 0 20,000 87,437 0 48,995 65,323 112,982 210,259 351,959 214,176 354,751 145,252 248,000 361,259 308,800 361,759 95,499 101,416 327,000	120 0 20,000 87,437 0 58,995 95,323 112,982 210,259 214,175 143,251 248,000 341,753 308,800 341,75 306,400 198,417 306,041 95,499 101,416	132 0 20,000 122,937 5,000 58,995 133,747 103,250 214,175 143,251 248,000 341,753 100,600 341,753 341,	144 0 20,000 139,937 5,000 58,995 159,418 190,482 354,751 143,250 214,175 248,000 361,250 361,	156 0 20,000 139,937 5,000 58,995 271,918 190,482 378,250 214,176 144,252 244,175 144,252 248,026 308,802 301,750 198,417	168 26,500 35,000 139,937 5,000 5,00	180 26,500 35,000 139,937 5,000 5,000 50,000 507,918 230,482 378,250 211,751 143,251 143,251 248,000 238,026 308,800 100,500	192 26,500 35,000 139,937 5,000 96,495 39,2482 230,482 230,482 214,175 143,250 214,175 141,250 238,026 308,800	204 26,500 35,000 139,937 5,000 96,495 30,482 378,250 214,175 1143,251 143,251 143,251 244,175 248,000 238,026	216 26,500 35,000 13,9937 5,000 5,000 307,918 230,482 378,250 214,175 143,250 244,175 141,252 248,000	228 26,500 35,000 13,9937 15,000 36,495 307,918 230,482 378,250 214,175 143,251 141,252	240 26,500 35,000 139,937 15,000 139,937 15,000 149,230 149,230 141,250 214,175 145,251	252 26,500 35,000 13,937 15,000 13,937 15,000 15,000 15,000 15,000 16,00	264 86.500 35.000 23.937 15.000 307.918 230.482 378,250 214,176	276 86.500 35.000 23.937 15.000 96.495 332.250 413.250	288 86,500 35,000 23,937 15,000 307,918 288,482 377,918	300 86,500 35,000 223,937 15,000 96,495 307,918 346,482	312 86,500 35,000 223,937 15,000 96,495 307,918	324 86,500 35,000 223,937 15,000 96,495	336 86,500 35,000 223,937 15,000	348 86.500 35.000 223,937	360 86,500 35,000	372 86,500



Commonwealth of Massachusetts Workers Compensation University of Massachusetts (Medical Center) - Cluster 4 INDENNITY Lump Sum Development Incremental Lump Sums as a 5% of Ultimate Losses Excluding Lump Sums

Section 6 Exhibit 1 Page 11

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94	0-12 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	12-24 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.005 4	24-36 0.000 0.000 0.000 0.000 0.000 0.002 0.000 0.007 0.016 0.031 0.066 0.000	36-48 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.034 0.017 0.000 0.036 0.043	48-60 0.000 0.000 0.021 0.000 0.000 0.000 0.004 0.012 0.001 0.097 0.066 0.102	60-72 0.000 0.073 0.000 0.000 0.000 0.012 0.002 0.000 0.025 0.014 0.029 0.077	72-84 0.000 0.000 0.000 0.000 0.009 0.002 0.007 0.033 0.018 0.033 0.097 0.000	84-96 0.000 0.000 0.030 0.000 0.006 0.001 0.007 0.018 0.046 0.000 0.000	96-108 0.000 0.000 0.020 0.000 0.005 0.000 0.010 0.027 0.008 0.000 0.000 0.000	108-120 0.000 0.000 0.000 0.000 0.004 0.008 0.000 0.000 0.018 0.000 0.000 0.000 0.000	120-132 0.000 0.000 0.029 0.006 0.001 0.011 0.016 0.063 0.000 0.000 0.000 0.000 0.000	132-144 0.000 0.000 0.014 0.000 0.007 0.011 0.000 0.003 0.000 0.000 0.000 0.000	144-156 0.000 0.000 0.000 0.000 0.001 0.001 0.011 0.000 0.000 0.000 0.000 0.000	156-168 0.021 0.055 0.000 0.000 0.015 0.010 0.000 0.000 0.000 0.000 0.000 0.000	168-180 0.000 0.000 0.000 0.000 0.000 0.000 0.014 0.000 0.000 0.000 0.000	180-192 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	192-204 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	204-216 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	216-228 0.000 0.000 0.012 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	228-240 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	240-252 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	252-264 0.048 0.000 0.068 0.000 0.000 0.000 0.000 0.000 0.000 0.000	264-276 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	276-288 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.020 0.000	288-300 0.000 0.000 0.000 0.000 0.000 0.000 0.000	300-312 0.000 0.000 0.000 0.000 0.000 0.000	312-324 0.000 0.000 0.000 0.000 0.000	324-336 0.000 0.000 0.000 0.000	336-348 0.000 0.000 0.000	348-360 0.000 0.000	360-372 0.000
Jun-95 Jun-96 Jun-97 Jun-98 Jun-98 Jun-99 Jun-00 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Jun-10 Jun-11 Jun-12	0.000 0.000 0.123 0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.546 0.092 0.937 0.131 0.108 0.137 0.151 0.033 0.021 0.000 0.026 0.242 0.168 0.000 0.060	0.102 0.600 0.905 0.031 0.399 0.089 0.171 0.145 0.069 0.042 0.458 0.031 0.155 0.149 0.000 0.156	0.121 0.084 0.000 0.000 0.510 0.035 0.128 0.111 0.000 0.175 0.000 0.302 0.302 0.303 0.	0.086 0.000 0.576 0.045 0.073 0.000 0.065 0.000 0.077 0.000 0.068 0.000	0.000 0.000 0.000 0.000 0.000 0.000 0.107 0.000 0.073 0.000 0.051	0.000 0.000 0.000 0.000 0.000 0.047 0.000 0.038 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.005 0.057 0.096 0.000 0.000	0.000 0.104 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000	0.000	0.000													
Averages Simple Avg Alimple Avg Latest 5 Latest 3 Olympic Avg All Yrs (ex P) Latest 10 Latest 5 Dev Factor Selection	0.005 0.000 0.000 0.000 0.000 0.000	12-24 0.100 0.107 0.041 0.073 0.058 0.098	24-36 0.132 0.098 0.102 0.108 0.115 0.112	36-48 0.078 0.158 0.162 0.064 0.117 0.162	48-60 0.052 0.029 0.023 0.033 0.026 0.023	60-72 0.021 0.025 0.017 0.018 0.015 0.017	72-84 0.012 0.008 0.000 0.009 0.005 0.000	84-96 0.012 0.019 0.000 0.009 0.007 0.000	96-108 0.008 0.000 0.000 0.004 0.000 0.000	0.001 0.000 0.000 0.000 0.001 0.000 0.000	0.006 0.000 0.000 0.000 0.003 0.000 0.000	0.002 0.000 0.000 0.000 0.001 0.000 0.000	0.002 0.000 0.000 0.000 0.001 0.000 0.000	156-168 0.005 0.000 0.000 0.000 0.002 0.000 0.000	0.001 0.000 0.000 0.000 0.000 0.000 0.000	180-192 0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000 0.000	204-216 0.000 0.000 0.000 0.000 0.000 0.000 0.000	216-228 0.001 0.000 0.000 0.000 0.000 0.000 0.000	228-240 0.000 0.000 0.000 0.000 0.000 0.000 0.000	240-252 0.000 0.000 0.000 0.000 0.000 0.000 0.000	252-264 0.008 0.000 0.000 0.000 0.000	264-276 0.000 0.000 0.000 0.000 0.000	276-288 0.003 0.004 0.007 0.000 0.000	288-300 0.003 0.004 0.007 0.000 0.000	300-312 0.000 0.000 0.000 0.000 0.000	312-324 0.000 0.000 0.000	324-336 0.000 0.000 0.000	336-348 0.000	348-360 0.000	348-372
Prior Selected FacToUlt	NA NA NA	0.083 0.079 0.422	0.149 0.115 0.343	0.120 0.120 0.227	0.054 0.052 0.107	0.023 0.023 0.055	0.010 0.010 0.033	0.021 0.016 0.023	0.003 0.002 0.007	0.002 0.001 0.005	0.002 0.002 0.004	0.001 0.001 0.002	0.001 0.001 0.002	0.001 0.001 0.001	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000



														ty of Massaci Paid		pment															Section 6 Exhibit 1 Page 12
Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-85 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-90 Jun-91 Jun-90 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-09 Ju	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	36 0 0 0 0 0 0 0 0 8,323 16,000 47,500 34,300 187,356 238,800 79,000 187,356 238,800 79,000 124,667 151,104 47,999 71,141 69,500 67,000 33,000 115,000 320,000 0 129,000	48 0 0 0 0 0 0 0 8.323 92.750 97.500 34.300 123.501 26.375 223.000 79.000 318.750 143.417 211.047 77.999 71.416 220.000 67.000 210.500 130.000 210.500 130.000 485.000 485.000	60 0 0 0 25,750 0 0 0 8.323 10.482 120.250 100.500 122.676 202.751 319.252 248.000 100.256 308.800 100.500 143.417 95.499 71.416 275.000 67.000 485,000	72 0 20,000 25,750 0 0 51,323 16,982 120,250 173,000 135,676 237,751 143,251 308,752 248,000 100,26 308,000 100,500 341,509 75,409 75,409 75,409 76,700 200,20	84 0 20,000 25,750 0 23,000 60,323 37,982 195,250 224,250 165,676 354,751 143,251 308,752 248,000 100,266 308,800 100,500 341,750 168,417 268,417 95,499 101,400 210,266 368,417 268,4	96 0 20,000 62,437 0 38,000 65,323 83,982 210,259 2071,76 354,751 143,251 398,752 248,000 100,266 308,800 100,500 341,750 198,417 308,417 308,417 308,417 308,417 308,417	108 0 20,000 87,437 0 48,995 65,323 112,982 210,250 351,950 214,176 354,751 411,252 248,000 100,500 341,500 100,500 341,700 100,500 10	120 0 20,000 87,437 0 58,995 95,323 112,982 210,259 403,259 214,176 354,751 431,252 248,000 100,500 361,750 198,417 95,499 101,416	132 0 20,000 122,937 5,000 58,995 133,747 157,982 353,250 403,250 214,176 354,751 411,252 248,000 100,500 341,750 198,417 366,047 95,499	144 0 20,000 139,937 5,000 58,995 159,418 190,482 353,250 413,250 214,176 354,751 411,252 248,000 100,500 341,703 198,417 306,047	156 0 20,000 139,937 5,000 58,995 271,918 190,482 378,250 413,250 413,250 414,176 354,751 411,252 248,000 238,026 308,026 308,026 301,750 198,417	168 26.500 35.000 139.937 5.000 96.495 307.918 190.482 378.250 413.251 411.252 418.000 238.026 300.100.500 341.750	180 26,500 35,000 139,937 5,000 96,495 302,482 378,250 413,250 214,176 354,751 411,252 248,000 238,026 308,800 100,500	192 26,500 35,000 139,937 5,000 96,495 306,495 378,250 413,250 214,176 354,751 411,252 248,000 238,026 308,800	204 26.500 35.000 139.937 5.000 96.495 307.918 230.482 378.250 413.250 214.176 354.751 411.252 248.000 238,026	216 26.500 35.000 139.937 5.000 96.495 307.8250 413.250 214.176 354.751 411.252 248,000	228 26,500 35,000 139,937 15,000 96,495 30,482 378,250 413,250 214,176 354,751 441,252	240 26,500 35,000 139,937 15,000 96,495 302,482 378,250 413,251 143,251	252 26.500 35.000 139.937 15.000 96.495 307.918 230.482 378.250 413.250 214,175 354,751	264 86.500 35.000 232,937 15.000 96,495 307,495 378,245 413,250 214,176	276 86.500 35.000 223,937 15.000 96,495 306,495 370,482 370,482 413,250	288 86.500 35.000 23.937 15.000 96.495 307.498 288.482 378.250	300 86,500 35,000 223,937 15,000 96,495 304,495 346,482	312 86,500 35,000 223,937 15,000 96,495 307,918	324 86,500 35,000 233,937 15,000 96,495	336 86,500 35,000 223,937 15,000	348 86.500 35.000 223,937	360 86,500 35,000	372 86,500
Age-to-Age Factor Act Yr Ending All Prior Yr Jun-84 Jun-84 Jun-85 Jun-85 Jun-85 Jun-87 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-01 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Jun-06 Jun-07 Jun-08 Jun-06 Jun-09 Jun-10 Jun-11	8.587 42.667 15.503	5.444 1.000 2.730 1.186 7.494 4.704 4.708 2.126 3.333 4.350 1.462 2.200 1.643 1.882 3.583	1.000 5.797 2.053 1.000 1.544 1.804 1.211 1.186 1.121 1.000 2.088 1.150 1.150 1.000 1.397 1.625 1.000	1.000 1.296 1.031 3.577 1.642 2.045 1.4110 1.1112 1.000 1.293 1.272 1.022 1.022 1.020 1.000 1.000 1.199 1.000	60-72 1.000 6.166 1.620 1.000 1.721 1.106 1.173 1.387 1.000 1.000 1.000 1.000 1.189 1.000 1.120 1.1000	72-84 1.000 1.000 1.175 2.237 1.624 1.296 1.221 1.492 1.000	84-96 1.000 2.425 1.652 1.652 1.081 1.007 1.225 1.230 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	96-108 1.000 1.400 1.289 1.000 1.345 1.000 1.001 1.001 1.001 1.000 1.000 1.000 1.000 1.000 1.000 1.000	108-120 1.000 1.204 1.459 1.000 1.00	120-132 1.000 1.406 1.000 1.403 1.398 1.680 1.000	132-144 1.000 1.138 1.000 1.190 1.000 1.192 1.206 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	144-156 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	156-168 1.750 1.000 1.000 1.001 1.635 1.132 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	168-180 1.000 1.000 1.000 1.000 1.000 1.000 1.210 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	180-192 1.000	192-204 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	204-216 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	216-228 1.000 1.000 3.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	228-240 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	240-252 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	252-264 3.264 1.000 1.600 1.000 1.000 1.000 1.000 1.000 1.000	264-276 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	276-288 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.252 1.000	288-300 1.000 1.000 1.000 1.000 1.000 1.000 1.201	300-312 1.000 1.000 1.000 1.000 1.000 1.000	312-324 1.000 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000 1.000	336-348 1.000 1.000 1.000	348-360 1.000 1.000	360-372 1.000	To Ult
Averages Simple Avg All Yrs (ex P) Latest 5 Latest 3	12-24 22.252	24-36 2.931 2.327 2.733	36-48 1.821 2.506 1.323	48-60 1.305 1.088 1.063	1.362 1.062 1.040	72-84 1.165 1.084 1.000	84-96 1.194 1.034 1.000	96-108 1.072 1.000 1.000	1.040 1.000 1.000	1.099 1.000 1.000	132-144 1.030 1.000 1.000	1.043 1.000 1.000	156-168 1.089 1.000 1.000	1.013 1.000 1.000	1.000 1.000 1.000 1.000	192-204 1.000 1.000 1.000	204-216 1.000 1.000 1.000	216-228 1.167 1.000 1.000	228-240 1.000 1.000 1.000	240-252 1.000 1.000 1.000	252-264 1.067 1.000 1.000	264-276 1.000 1.000 1.000	276-288 1.036 1.050 1.084	288-300 1.034 1.040 1.067	300-312 1.000 1.000 1.000	312-324 1.000 1.000	324-336 1.000 1.000	336-348 1.000	348-360 1.000	360-372	To Ult
Volume Wtd All Yrs (ex P) Latest 5 Latest 3	50.829	2.308 2.052 2.180	1.516 1.918 1.721	1.190 1.085 1.048	1.127 1.103 1.067	1.101 1.036 1.000	1.073 1.053 1.000	1.046 1.000 1.000	1.023 1.000 1.000	1.068 1.000 1.000	1.021 1.000 1.000	1.035 1.000 1.000	1.023 1.000 1.000	1.011 1.000 1.000	1.000 1.000 1.000	1.000 1.000 1.000	1.000 1.000 1.000	1.004 1.000 1.000	1.000 1.000 1.000	1.000 1.000 1.000	1.046 1.000 1.000	1.000 1.000 1.000	1.045 1.056 1.063	1.060 1.062 1.084	1.000 1.000 1.000	1.000	1.000 1.000	1.000	1.000		
Dev Factor Selecti Prior Selected FacToUlt Percent of Ult	1.000 1.000 4.626 21.6%	2.414 2.414 4.626 21.6%	1.378 1.378 1.917 52.2%	1.123 1.085 1.391 71.9%	1.108 1.103 1.282 78.0%	1.043 1.043 1.162 86.1%	1.070 1.034 1.114 89.8%	1.025 1.023 1.077 92.9%	1.012 1.012 1.053 95.0%	1.010 1.010 1.041 96.1%	1.010 1.010 1.030 97.1%	1.010 1.010 1.020 98.0%	1.010 1.010 1.010 99.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 100.0%

Section 6 Exhibit 1 Page 13

University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	0.5%	0.0%	0.2%	0.1%	1.000	1.000
360	99.5%	0.0%	0.5%	0.0%	0.0%	0.981	0.971
348	99.5%	0.0%	0.5%	0.0%	0.0%	0.943	0.916
336	99.5%	0.0%	0.5%	0.0%	0.0%	0.907	0.864
324	99.5%	0.0%	0.5%	0.0%	0.0%	0.872	0.816
312	99.5%	0.0%	0.5%	0.0%	0.0%	0.838	0.769
300	99.5%	0.5%	0.5%	0.2%	0.1%	0.806	0.726
288	99.0%	0.7%	1.0%	0.3%	0.2%	0.875	0.824
276	98.3%	0.8%	1.7%	0.3%	0.2%	0.898	0.856
264	97.5%	0.9%	2.5%	0.4%	0.3%	0.900	0.859
252	96.6%	1.0%	3.4%	0.4%	0.3%	0.897	0.855
240	95.6%	0.9%	4.4%	0.4%	0.3%	0.888	0.842
228	94.7%	0.6%	5.3%	0.3%	0.2%	0.877	0.826
216	94.1%	0.3%	5.9%	0.1%	0.1%	0.857	0.799
204	93.8%	0.3%	6.2%	0.2%	0.1%	0.831	0.763
192	93.5%	0.5%	6.5%	0.3%	0.2%	0.807	0.732
180	93.0%	0.7%	7.0%	0.4%	0.3%	0.790	0.709
168	92.3%	0.0%	7.7%	0.0%	0.0%	0.781	0.698
156	92.3%	0.2%	7.7%	0.1%	0.1%	0.751	0.659
144	92.1%	0.6%	7.9%	0.4%	0.3%	0.728	0.629
132	91.5%	0.7%	8.5%	0.4%	0.4%	0.720	0.621
120	90.8%	1.9%	9.2%	1.3%	1.1%	0.713	0.614
108	88.9%	3.0%	11.1%	2.2%	1.8%	0.736	0.646
96	85.9%	1.1%	14.1%	0.8%	0.7%	0.766	0.687
84	84.8%	2.4%	15.2%	1.8%	1.6%	0.754	0.671
72	82.4%	3.3%	17.6%	2.6%	2.4%	0.760	0.679
60	79.2%	8.8%	20.8%	7.4%	6.8%	0.770	0.692
48	70.3%	8.6%	29.7%	7.5%	7.0%	0.812	0.748
36	61.7%	15.4%	38.3%	14.0%	13.3%	0.825	0.765
24	46.3%	22.5%	53.7%	21.2%	20.6%	0.847	0.793
12	23.8%	23.8%	76.2%	23.4%	23.2%	0.864	0.814

Total 100.0%

NOTES:

(2) = 1 / Section 6, Exhibit 1, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)

Section 6 Exhibit 1 Page 14

University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
		counted	Discount		unted
Accident	Outstandi	ng Losses	Factor at	Outstandi	ng Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	0	0		0	0
6/30/82-83	0	7,659	0.981	0	7,510
6/30/83-84	28,877	57,754	0.943	27,227	54,454
6/30/84-85	17,055	34,110	0.907	15,462	30,924
6/30/85-86	13,059	15,059	0.872	11,384	13,128
6/30/86-87	15,540	316,245	0.838	13,026	265,078
6/30/87-88	13,637	145,184	0.806	10,991	117,013
6/30/88-89	52,473	131,182	0.875	45,914	114,784
6/30/89-90	64,872	162,179	0.898	58,224	145,559
6/30/90-91	22,036	55,091	0.900	19,831	49,577
6/30/91-92	30,366	75,915	0.897	27,240	68,100
6/30/92-93	12,763	31,908	0.888	11,337	28,343
6/30/93-94	74,910	77,910	0.877	65,663	68,293
6/30/94-95	16,873	16,873	0.857	14,461	14,461
6/30/95-96	9,834	19,669	0.831	8,170	16,340
6/30/96-97	8,448	16,896	0.807	6,820	13,639
6/30/97-98	10,915	21,829	0.790	8,625	17,250
6/30/98-99	23,999	24,999	0.781	18,742	19,523
6/30/99-00	40,417	42,417	0.751	30,350	31,851
6/30/00-01	40,027	41,027	0.728	29,133	29,861
6/30/01-02	24,291	25,291	0.720	17,494	18,214
6/30/02-03	72,641	76,641	0.713	51,820	54,673
6/30/03-04	87,029	90,029	0.736	64,050	66,258
6/30/04-05	24,255	67,255	0.766	18,586	51,535
6/30/05-06	109,177	112,177	0.754	82,371	84,634
6/30/06-07	66,302	120,302	0.760	50,379	91,411
6/30/07-08	233,998	306,998	0.770	180,132	236,328
6/30/08-09	198,904	256,904	0.812	161,467	208,550
6/30/09-10	355,014	410,014	0.825	293,049	338,449
6/30/10-11	637,100	644,100	0.847	539,810	545,741
6/30/11-12	839,768	875,768	0.864	725,289	756,381
Total	3,144,580	4,279,385		2,607,045	3,557,863

_	Discount Ca	alculation for
	All Pri	or Years
	(Low)	(High)
(8) Estimated Total Reserve:	0	0
(9) Projected Number of Years:	1	1
(10) Projected Paid Loss per Year:	0	0
(11) Discounted Value at 4%:	0	0

0.829

(7) Total Discount Factor:

0.831

NOTES:

(2), (3) From Section 6, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 6, Exhibit 1, Page 13, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



Section 6 Exhibit 1 Page 15

University of Massachusetts (Medical Center) - Cluster 4 Indemnity

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
A: J 4		ounted	Discount		unted
Accident Year	(Low)	ng Losses	Factor at 6.0%	Outstandi (Low)	
	` ′	(High)	0.0%	. ,	(High)
All Prior Yrs	0	0	0.071	0	0
6/30/82-83	0	7,659	0.971		7,439
6/30/83-84	28,877	57,754	0.916	26,460	52,920
6/30/84-85	17,055	34,110	0.864	14,743	29,486
6/30/85-86	13,059	15,059	0.816	10,650	12,281
6/30/86-87	15,540	316,245	0.769	11,956	243,303
6/30/87-88	13,637	145,184	0.726	9,898	105,375
6/30/88-89	52,473	131,182	0.824	43,245	108,111
6/30/89-90	64,872	162,179	0.856	55,509	138,773
6/30/90-91	22,036	55,091	0.859	18,923	47,308
6/30/91-92	30,366	75,915	0.855	25,948	64,870
6/30/92-93	12,763	31,908	0.842	10,749	26,871
6/30/93-94	74,910	77,910	0.826	61,865	64,343
6/30/94-95	16,873	16,873	0.799	13,480	13,480
6/30/95-96	9,834	19,669	0.763	7,504	15,007
6/30/96-97	8,448	16,896	0.732	6,180	12,359
6/30/97-98	10,915	21,829	0.709	7,742	15,485
6/30/98-99	23,999	24,999	0.698	16,754	17,452
6/30/99-00	40,417	42,417	0.659	26,618	27,936
6/30/00-01	40,027	41,027	0.629	25,184	25,813
6/30/01-02	24,291	25,291	0.621	15,082	15,703
6/30/02-03	72,641	76,641	0.614	44,582	47,037
6/30/03-04	87,029	90,029	0.646	56,186	58,123
6/30/04-05	24,255	67,255	0.687	16,659	46,194
6/30/05-06	109,177	112,177	0.671	73,302	75,316
6/30/06-07	66,302	120,302	0.679	45,016	81,680
6/30/07-08	233,998	306,998	0.692	162,014	212,557
6/30/08-09	198,904	256,904	0.748	148,763	192,141
6/30/09-10	355,014	410,014	0.765	271,663	313,750
6/30/10-11	637,100	644,100	0.793	505,483	511,037
6/30/11-12	839,768	875,768	0.814	683,804	713,118
Total	3,144,580	4,279,385		2,415,963	3,295,270

_		alculation for or Years
_	(Low)	(High)
(8) Estimated Total Reserve:	0	0
(9) Projected Number of Years:	1	1
(10) Projected Paid Loss per Year:	0	0
(11) Discounted Value at 6%:	0	0

0.768

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 6, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 6, Exhibit 1, Page 13, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.770



University of Massachusetts (Medical Center) - Cluster 4 Total Indemnity (Including Lump Sums) + Medical

Calculation of Fiscal Year 7/1/12 - 13 Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Cumulative	Increme	ntal Paid	Estimated Pa	ayments from	FY 7/1/12	2 - 6/30/13
Accident	Est Ult Losses	Est Ult Losses	Paid Losses	Reserves	Reserves	Percent	as a % of	as a % of	7/1/12 -	6/30/13	as a % of	Reserves
Year	(Low)	(High)	to Date	(Low)	(High)	Paid	Ultimates	Reserves	(Low)	(High)	(Low)	(High)
All Prior Yrs	1,455,812	1,455,812	1,455,812	0	0				0	0		
6/30/82-83	327,672	335,649	327,566	106	8,083	98.8%	0.5%	40.5%	43	3,274	40.5%	40.5%
6/30/83-84	1,523,932	1,553,573	1,494,800	29,132	58,773	97.1%	0.5%	17.5%	5,099	10,288	17.5%	17.5%
6/30/84-85	1,033,339	1,052,834	1,015,470	17,869	37,364	97.4%	0.5%	18.9%	3,375	7,056	18.9%	18.9%
6/30/85-86	2,747,432	2,752,662	2,733,296	14,136	19,367	99.4%	0.5%	82.1%	11,604	15,897	82.1%	82.1%
6/30/86-87	3,712,000	4,012,705	3,694,816	17,184	317,889	95.7%	1.0%	23.1%	3,961	73,286	23.1%	23.1%
6/30/87-88	3,330,000	3,462,547	3,315,292	14,708	147,255	97.6%	1.0%	41.9%	6,168	61,757	41.9%	41.9%
6/30/88-89	3,167,349	3,268,054	3,112,432	54,917	155,622	96.7%	1.0%	30.6%	16,786	47,568	30.6%	30.6%
6/30/89-90	3,865,186	3,987,422	3,797,545	67,641	189,877	96.7%	1.0%	30.5%	20,626	57,900	30.5%	30.5%
6/30/90-91	1,427,065	1,473,696	1,403,520	23,545	70,176	96.8%	1.0%	31.0%	7,287	21,720	31.0%	31.0%
6/30/91-92	2,221,204	2,296,867	2,187,492	33,712	109,375	96.8%	1.0%	31.6%	10,645	34,536	31.6%	31.6%
6/30/92-93	1,048,102	1,085,031	1,033,363	14,739	51,668	96.9%	1.0%	32.1%	4,735	16,597	32.1%	32.1%
6/30/93-94	2,570,000	2,573,000	2,489,918	80,082	83,082	96.8%	1.0%	31.5%	25,242	26,188	31.5%	31.5%
6/30/94-95	958,000	958,000	937,761	20,239	20,239	97.9%	1.0%	47.3%	9,580	9,580	47.3%	47.3%
6/30/95-96	886,424	913,492	874,675	11,749	38,817	97.2%	1.0%	35.6%	4,182	13,817	35.6%	35.6%
6/30/96-97	628,838	647,186	618,302	10,535	28,883	96.9%	1.0%	32.4%	3,410	9,350	32.4%	32.4%
6/30/97-98	1,019,642	1,054,756	1,004,193	15,448	50,563	96.8%	1.0%	31.4%	4,855	15,889	31.4%	31.4%
6/30/98-99	966,000	967,000	937,877	28,123	29,123	97.0%	1.0%	33.8%	9,496	9,834	33.8%	33.8%
6/30/99-00	916,000	918,000	872,750	43,250	45,250	95.2%	2.0%	41.4%	17,926	18,754	41.4%	41.4%
6/30/00-01	987,000	988,000	940,632	46,368	47,368	95.3%	2.0%	42.1%	19,539	19,961	42.1%	42.1%
6/30/01-02	574,000	575,000	543,177	30,823	31,823	94.5%	2.0%	36.7%	11,307	11,673	36.7%	36.7%
6/30/02-03	1,099,000	1,104,000	1,019,063	79,937	84,937	92.5%	2.0%	26.7%	21,362	22,698	26.7%	26.7%
6/30/03-04	1,367,000	1,385,850	1,259,226	107,774	126,624	91.5%	2.0%	23.5%	25,315	29,742	23.5%	23.5%
6/30/04-05	403,000	466,850	357,969	45,031	108,881	82.3%	2.0%	11.3%	5,090	12,307	11.3%	11.3%
6/30/05-06	1,250,000	1,271,100	1,097,498	152,502	173,602	87.1%	2.0%	15.5%	23,580	26,842	15.5%	15.5%
6/30/06-07	708,000	790,350	605,124	102,876	185,226	80.8%	2.0%	10.4%	10,701	19,266	10.4%	10.4%
6/30/07-08	2,084,000	2,217,850	1,783,468	300,532	434,382	82.9%	2.0%	11.7%	35,184	50,853	11.7%	11.7%
6/30/08-09	1,032,000	1,121,350	769,974	262,026	351,376	71.5%	11.4%	40.0%	104,883	140,648	40.0%	40.0%
6/30/09-10	1,191,000	1,291,300	761,973	429,027	529,327	61.4%	10.1%	26.2%	112,476	138,771	26.2%	26.2%
6/30/10-11	1,514,000	1,551,600	718,633	795,367	832,967	46.9%	14.5%	27.3%	217,256	227,527	27.3%	27.3%
6/30/11-12	1,413,000	1,516,450	308,565	1,104,435	1,207,885	21.1%	25.8%	32.7%	361,234	395,071	32.7%	32.7%
Total	47,425,996	49,047,985	43,472,183	3,953,813	5,575,802				1,112,947	1,548,650	28.1%	27.8%

NOTES:

(2) Exhibit 1, Page 1, Column (4) + Exhibit 2, Page 1, Column (4)

(3) Exhibit 1, Page 1, Column (5) + Exhibit 2, Page 1, Column (5)

(4) Exhibit 1, Page 1, Column (2) + Exhibit 2, Page 1, Column (2)

(5) = (2) - (4)

(6) = (3) - (4)

(7) = (4) / Average of Columns (2), (3)

(8) = (7) - Prior Year's (7)

(9) = (8) / (1.00 - (7))

(10) = (5) * (9)

(11) = (6) * (9)(12) = (10) / (5)

(13) = (11) / (6)



University of Massachusetts (Medical Center) - Cluster 4 Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll		Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Paid Loss	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		126,400			126,400	126,400	0	0		
6/30/82-83		21,226	21,309		21,332	21,651	106	425		
6/30/83-84		50,961	51,160		51,216	51,980	255	1,019		
6/30/84-85	116,303	162,725	163,360	163,607	163,539	165,980	814	3,255	0.141	0.143
6/30/85-86	123,981	215,355	216,196	216,507	216,432	219,662	1,077	4,307	0.175	0.177
6/30/86-87	139,388	397,356	398,908	399,433	399,000	399,000	1,644	1,644	0.286	0.286
6/30/87-88	159,499	347,929	349,287	349,672	349,000	350,000	1,071	2,071	0.219	0.219
6/30/88-89	180,644	488,786	490,694	491,238	491,230	513,225	2,444	24,439	0.272	0.284
6/30/89-90	142,494	553,962	556,125	557,093	556,732	581,660	2,770	27,698	0.391	0.408
6/30/90-91	143,694	301,697	303,178	303,169	303,205	316,782	1,508	15,085	0.211	0.220
6/30/91-92	155,170	669,188	673,145	673,081	672,534	702,647	3,346	33,459	0.433	0.453
6/30/92-93	163,283	395,196	397,930	397,877	397,172	414,956	1,976	19,760	0.243	0.254
6/30/93-94	177,184	694,829	700,336	700,164	700,000	700,000	5,172	5,172	0.395	0.395
6/30/94-95	188,391	416,634	420,356	420,245	420,000	420,000	3,366	3,366	0.223	0.223
6/30/95-96	201,751	382,952	386,574	386,461	384,867	402,100	1,915	19,148	0.191	0.199
6/30/96-97	231,872	195,912	197,871	197,885	198,000	207,900	2,088	11,988	0.085	0.090
6/30/97-98	232,237	458,466	463,700	463,480	463,000	487,200	4,534	28,734	0.199	0.210
6/30/98-99	232,075	306,876	310,690	310,592	311,000	311,000	4,124	4,124	0.134	0.134
6/30/99-00	211,819	185,166	188,134	188,161	188,000	188,000	2,834	2,834	0.089	0.089
6/30/00-01	215,099	202,659	209,204	209,223	209,000	209,000	6,341	6,341	0.097	0.097
6/30/01-02	227,797	201,469	208,391	208,469	208,000	208,000	6,531	6,531	0.091	0.091
6/30/02-03	242,008	196,704	204,480	204,673	204,000	205,000	7,296	8,296	0.084	0.085
6/30/03-04	276,758	296,255	317,056	316,959	317,000	332,850	20,745	36,595	0.115	0.120
6/30/04-05	260,378	165,224	185,546	197,013	186,000	206,850	20,776	41,626	0.071	0.079
6/30/05-06	317,741	318,675	362,301	361,900	362,000	380,100	43,325	61,425	0.114	0.120
6/30/06-07	325,922	236,426	273,399	286,719	273,000	301,350	36,574	64,924	0.084	0.092
6/30/07-08	354,130	499,466	597,001	566,142	566,000	626,850	66,534	127,384	0.160	0.177
6/30/08-09	362,309	290,878	354,460	366,929	354,000	385,350	63,122	94,472	0.098	0.106
6/30/09-10	383,298	264,987	338,566	366,050	339,000	384,300	74,013	119,313	0.088	0.100
6/30/10-11	394,924	306,733	465,202	471,581	465,000	495,600	158,267	188,867	0.118	0.125
6/30/11-12	381,943	139,332	403,786	448,921	404,000	471,450	264,668	332,118	0.106	0.123
Total	6,542,094	9,490,425	10,208,348	10,223,244	10,299,658	10,786,842	809,233	1,296,417	·	
Tot 6/30/84-12	6,542,094	9,291,838	10,135,879	10,223,244	10,100,710	10,586,812	808,872	1,294,974	0.154	0.162

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 6, Exhibit 2, Page 2, Column 3
- (4) From Section 6, Exhibit 2, Page 2, Column 8
- (5) From Section 6, Exhibit 2, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



University of Massachusetts (Medical Center) - Cluster 4 Medical

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average
Accident	Payroll		Paid	Adjustment	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding
Year	(000's)	Paid Loss	LDF	for Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim
All Prior Yrs		126,400							0	0	
6/30/82-83		21,226	1.004	1.000	21,309	N/A	21,309		0	0	
6/30/83-84		50,961	1.004	1.000	51,160	N/A	51,160		0	0	
6/30/84-85	116,303	162,725	1.004	1.000	163,360	N/A	163,360	0.140	0	0	
6/30/85-86	123,981	215,355	1.004	1.000	216,196	N/A	216,196	0.174	0	0	
6/30/86-87	139,388	397,356	1.004	1.000	398,908	N/A	398,908	0.286	0	0	
6/30/87-88	159,499	347,929	1.004	1.000	349,287	N/A	349,287	0.219	1	1	1,358
6/30/88-89	180,644	488,786	1.004	1.000	490,694	N/A	490,694	0.272	0	0	
6/30/89-90	142,494	553,962	1.004	1.000	556,125	N/A	556,125	0.390	0	0	
6/30/90-91	143,694	301,697	1.005	1.000	303,178	N/A	303,178	0.211	0	0	
6/30/91-92	155,170	669,188	1.006	1.000	673,145	N/A	673,145	0.434	0	0	
6/30/92-93	163,283	395,196	1.007	1.000	397,930	N/A	397,930	0.244	0	0	
6/30/93-94	177,184	694,829	1.008	1.000	700,336	N/A	700,336	0.395	1	0	
6/30/94-95	188,391	416,634	1.009	1.000	420,356	N/A	420,356	0.223	1	1	3,722
6/30/95-96	201,751	382,952	1.009	1.000	386,574	N/A	386,574	0.192	0	0	
6/30/96-97	231,872	195,912	1.010	1.000	197,871	N/A	197,871	0.085	1	1	1,959
6/30/97-98	232,237	458,466	1.011	1.000	463,700	N/A	463,700	0.200	1	1	5,233
6/30/98-99	232,075	306,876	1.012	1.000	310,690	N/A	310,690	0.134	1	1	3,813
6/30/99-00	211,819	185,166	1.016	1.000	188,134	N/A	188,134	0.089	1	1	2,968
6/30/00-01	215,099	202,659	1.032	1.000	209,204	N/A	209,204	0.097	1	1	6,545
6/30/01-02	227,797	201,469	1.034	1.000	208,391	N/A	208,391	0.091	1	1	6,923
6/30/02-03	242,008	196,704	1.040	1.000	204,480	N/A	204,480	0.084	1	1	7,776
6/30/03-04	276,758	296,255	1.070	1.000	317,056	N/A	317,056	0.115	1	1	20,801
6/30/04-05	260,378	165,224	1.123	1.000	185,546	N/A	185,546	0.071	1	2	10,161
6/30/05-06	317,741	318,675	1.137	1.000	362,301	N/A	362,301	0.114	3	3	14,542
6/30/06-07	325,922	236,426	1.156	1.000	273,399	N/A	273,399	0.084	1	0	
6/30/07-08	354,130	499,466	1.195	1.000	597,001	N/A	597,001	0.169	13	6	16,256
6/30/08-09	362,309	290,878	1.219	1.000	354,460	N/A	354,460	0.098	19	6	10,597
6/30/09-10	383,298	264,987	1.278	1.000	338,566	N/A	338,566	0.088	140	20	3,679
6/30/10-11	394,924	306,733	1.517	1.000	465,202	N/A	465,202	0.118	222	90	1,761
6/30/11-12	381,943	139,332	2.898	1.000	403,786	N/A	403,786	0.106		221	1,197
Total	6,542,094	9,490,425			10,208,348		10,208,348		410	358	

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 6, Exhibit 2, Page 7

⁽⁵⁾ Based on information from the MA WCRIB 9/1/12 filing. Consideration for development beyond 252 months made in selection of LDF's.

 $^{(6) = (3) \}times (4) \times (5)$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 6 Exhibit 2 Page 3

University of Massachusetts (Medical Center) - Cluster 4 Medical

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss		Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Paid Loss	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	116,303	0.195	162,725	1.004	163,607	N/A	163,607	0.141	0.141
6/30/85-86	123,981	0.239	215,355	1.004	216,507	N/A	216,507	0.175	0.175
6/30/86-87	139,388	0.383	397,356	1.004	399,433	N/A	399,433	0.287	0.287
6/30/87-88	159,499	0.281	347,929	1.004	349,672	N/A	349,672	0.219	0.219
6/30/88-89	180,644	0.349	488,786	1.004	491,238	N/A	491,238	0.272	0.272
6/30/89-90	142,494	0.565	553,962	1.004	557,093	N/A	557,093	0.391	0.391
6/30/90-91	143,694	0.210	301,697	1.005	303,169	N/A	303,169	0.211	0.211
6/30/91-92	155,170	0.427	669,188	1.006	673,081	N/A	673,081	0.434	0.434
6/30/92-93	163,283	0.239	395,196	1.007	397,877	N/A	397,877	0.244	0.244
6/30/93-94	177,184	0.383	694,829	1.008	700,164	N/A	700,164	0.395	0.395
6/30/94-95	188,391	0.216	416,634	1.009	420,245	N/A	420,245	0.223	0.223
6/30/95-96	201,751	0.186	382,952	1.009	386,461	N/A	386,461	0.192	0.192
6/30/96-97	231,872	0.086	195,912	1.010	197,885	N/A	197,885	0.085	0.085
6/30/97-98	232,237	0.191	458,466	1.011	463,480	N/A	463,480	0.200	0.200
6/30/98-99	232,075	0.130	306,876	1.012	310,592	N/A	310,592	0.134	0.134
6/30/99-00	211,819	0.090	185,166	1.016	188,161	N/A	188,161	0.089	0.089
6/30/00-01	215,099	0.098	202,659	1.032	209,223	N/A	209,223	0.097	0.097
6/30/01-02	227,797	0.093	201,469	1.034	208,469	N/A	208,469	0.092	0.092
6/30/02-03	242,008	0.087	196,704	1.040	204,673	N/A	204,673	0.085	0.085
6/30/03-04	276,758	0.114	296,255	1.070	316,959	N/A	316,959	0.115	0.115
6/30/04-05	260,378	0.111	165,224	1.123	197,013	N/A	197,013	0.076	0.076
6/30/05-06	317,741	0.113	318,675	1.137	361,900	N/A	361,900	0.114	0.114
6/30/06-07	325,922	0.114	236,426	1.156	286,719	N/A	286,719	0.088	0.088
6/30/07-08	354,130	0.115	499,466	1.195	566,142	N/A	566,142	0.160	0.160
6/30/08-09	362,309	0.117	290,878	1.219	366,929	N/A	366,929	0.101	0.101
6/30/09-10	383,298	0.121	264,987	1.278	366,050	N/A	366,050	0.096	0.096
6/30/10-11	394,924	0.123	306,733	1.517	471,581	N/A	471,581	0.119	0.119
6/30/11-12	381,943	0.124	139,332	2.898	448,921	N/A	448,921	0.118	0.118
Total	6,542,094		9,291,838		10,223,244		10,223,244		

⁽²⁾ Provided by Commonwealth of Massachusetts

⁽³⁾ From Section 6, Exhibit 2, Page 4, Column 11

⁽⁴⁾ From Section 6, Exhibit 2, Page 2, Column 3

⁽⁵⁾ From Section 6, Exhibit 2, Page 2, Column 4

 $^{(6) = (4) + [\{1 - \{1/(5)\}\} \}times (3) \times (2) \times 10]$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10) = (6) / (2) / 10}

Section 6 Exhibit 2 Page 4

University of Massachusetts (Medical Center) - Cluster 4 Medical

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Expected	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Ult Loss	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.195	0.195
6/30/85-86									0.239	0.239
6/30/86-87									0.383	0.383
6/30/87-88									0.281	0.281
6/30/88-89									0.349	0.349
6/30/89-90									0.565	0.565
6/30/90-91	143,694	303,178	0.211	1.194	0.252	1.245	0.314	0.084	0.210	0.210
6/30/91-92	155,170	673,145	0.434	1.189	0.516	1.232	0.635	0.085	0.428	0.427
6/30/92-93	163,283	397,930	0.244	1.189	0.290	1.220	0.354	0.086	0.240	0.239
6/30/93-94	177,184	700,336	0.395	1.178	0.466	1.208	0.563	0.088	0.384	0.383
6/30/94-95	188,391	420,356	0.223	1.170	0.261	1.196	0.312	0.089	0.217	0.216
6/30/95-96	201,751	386,574	0.192	1.155	0.221	1.184	0.262	0.091	0.187	0.186
6/30/96-97	231,872	197,871	0.085	1.137	0.097	1.173	0.114	0.094	0.087	0.086
6/30/97-98	232,237	463,700	0.200	1.135	0.227	1.161	0.263	0.095	0.191	0.191
6/30/98-99	232,075	310,690	0.134	1.135	0.152	1.149	0.175	0.096	0.132	0.130
6/30/99-00	211,819	188,134	0.089	1.135	0.101	1.138	0.115	0.097	0.088	0.090
6/30/00-01	215,099	209,204	0.097	1.109	0.108	1.127	0.122	0.100	0.098	0.098
6/30/01-02	227,797	208,391	0.091	1.101	0.101	1.116	0.112	0.102	0.088	0.093
6/30/02-03	242,008	204,480	0.084	1.073	0.091	1.105	0.100	0.105	0.087	0.087
6/30/03-04	276,758	317,056	0.115	1.046	0.120	1.094	0.131	0.109	0.121	0.114
6/30/04-05	260,378	185,546	0.071	1.036	0.074	1.083	0.080	0.111	0.126	0.111
6/30/05-06	317,741	362,301	0.114	1.032	0.118	1.072	0.126	0.113	0.128	0.113
6/30/06-07	325,922	273,399	0.084	1.032	0.087	1.062	0.092	0.114	0.129	0.114
6/30/07-08	354,130	597,001	0.169	1.032	0.174	1.051	0.183	0.115	0.130	0.115
6/30/08-09	362,309	354,460	0.098	1.027	0.100	1.041	0.105	0.117	0.132	0.117
6/30/09-10	383,298	338,566	0.088	1.000	0.088	1.030	0.091	0.121	0.137	0.121
6/30/10-11	394,924	465,202	0.118	1.000	0.118	1.020	0.120	0.123	0.139	0.123
6/30/11-12	381,943	403,786	0.106	1.000	0.106	1.010	0.107	0.124		0.124
Total	5,679,784	7,961,308								
			Trend L	ast 4 (ex 11-12):	-12.2%	Avg 3 (x11-12):	0.105			
				ast 8 (ex 11-12):	1.2%	Avg 5 (x11-12):	0.118			
				st 12 (ex 11-12):	0.9%	Avg 10 (x11-12):	0.114			
				Selected Trend:	1.0%	Prior Sel Avg:	0.140			

1.0%

Sel. Loss Cost:

0.125

Selected Trend:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 6, Exhibit 2, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCIRB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6) $\,$
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

(9) = (7) + (8)

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012

Section 6 Exhibit 2

Page 5

University of Massachusetts (Medical Center) - Cluster 4 Medical

Calculation of 1982 & Prior Reserves (Page 1)

Method 1			
(1)	Average Payment Trend		0.750
(2)	Credibility		15%
(3)	Average Pmt Trend Statewide		0.950
(4)	Credibility Weighted Trend		0.919
		(Low)	(High)
(5)	Selected Range	0.910	0.928
(6)	Incremental Paid for 2012	0	0
(7)	Estimated Reserve	0	0
(8)	Paid to Date (82 & Prior)	126,400	126,400
(9)	Est Ult Paid for 1982 & Prior	126,400	126,400
Method 2	_		
	_	(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	0	
(11)	Projected Number of Years	2	2
(12)	Estimated Reserve	0	0
(13)	Paid to Date (82 & Prior)	126,400	126,400
(14)	Est Ult Paid for 1982 & Prior	126,400	126,400
(14a)	Paid Counts During Fiscal Year	0	0
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	126,400	126,400
(16)	Lump Sum Ultimates	N/A	N/A
(17)	Ult Loss Including Lump Sums	126,400	126,400
(18)	Implied Tail	1.000	1.000
(19)	Ult Loss Inc Lump Sums @ 6/11	126,400	126,400
NOTES:			
(1) From Sectio	on 6, Exhibit 2, Page 6		(10) Avg of 3 latest years from Section 6, Exhibit 2, Page 6, Column 3
(2) = (Average of	of Section 6, Exhibit 2, Page 6, Column 3 / 175,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta	-		$(12) = (10 \times (11))$
$(4) = (1) \times (2) +$			(14) = (12) + (13)
(5) Selected jud	gmentally based on (4)		(15) = Average of (9) and (14)
(6), (14a) Provid	ded by Commonwealth of Massachusetts		(16) Lump Sums are considered in Indemnity analysis (Section 1)
$(7) = (6) \times (5) /$	{1 - (5)}		(17) = (15) + (16)
(8), (16) From S	Section 6, Exhibit 2, Page 2, Column 3		(18) = (15) / (8)

(19) From Prior Aon Analysis as of June 30, 2011



Section 6 Exhibit 2 Page 6

University of Massachusetts (Medical Center) - Cluster 4 Medical

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	1,277	7.152			
1993	2	1,933	7.567	1.514		
1994	3	2,959	7.993	1.531		
1995	4	30,696	10.332	10.374		
1996	5	1,619	7.390	0.053		
1997	6	7,074	8.864	4.369		
1998	7	5,136	8.544	0.726		
1999	8	26,679	10.192	5.195		
2000	9	8,683	9.069	0.325	n =	12
2001	10	453	6.116	0.052	S(x) =	23,970
2002	11	573	6.351	1.265	S(x-sq) =	47,880,218
2003	12	16	2.773	0.028	S(xy) =	184,417
2004	13	0	0.000	0.000	S(y) =	92
2005	14	0	0.000	0.000	D =	1,716
2006	15	0	0.000	0.000	slope =	-0.246
2007	16	0	0.000	0.000	Avg Trend =	0.754
2008	17	0	0.000	0.000		
2009	18	0	0.000	0.000		
2010	19	0	0.000	0.000		
2011	20	0	0.000	0.000		
2012	21	0	0.000	0.000		

Selected Trend: 0.750

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2003: 0.028 = 16 / 573



Commonwealth of Massachusetts Workers Compensation University of Massachusetts (Medical Center) - Cluster 4 MEDICAL Paid Loss Development Paid Loss (Excluding Lump Sum)

Section 6 Exhibit 2 Page 7

Acc Yr Ending June 83 June 84 June 84 June 85 June 86 June 87 June 87 June 89 June 90 June 91 June 92 June 93 June 94 June 95 June 95 June 96 June 97 June 96 June 97 June 98 June 90 June 10 June 11 June 12	12 1,234 2,116 20,894 31,042 38,803 23,530 50,815 100,348 214,704 170,873 300,512 224,267 167,358 130,080 153,489 74,499 42,966 66,977 51,704 24,338 83,690 70,794 111,267 135,214 163,349 147,783 151,041 207,552 139,332	24 3.103 5.327 78.039 100,851 123,605 273,859 2255,116 524,294 375,060 596,595 373,734 249,584 144,828 112,847 99,105 126,639 216,265 151,773 210,888 354,750 237,019 216,544 306,733	36 4,861 8,344 82,283 169,323 224,861 359,066 278,654 598,233 407,456 433,955 501,689 170,451 126,046 187,509 129,805 134,111 124,129 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 266,643 167,817 267,817	48 6,300 10,814 61,836 109,226 409,029 220,047 220,047 240,059 299,094 430,949 713,591 437,533 378,074 178,673 301,383 205,383 178,673 178,673 301,383 178,673 178,673 301,383 178,673 178,673 301,383 178,673 301,383 178,673 301,383	60 7,916 13,588 82,871 113,177 225,534 246,044 314,169 305,642 699,896 444,131 730,452 308,237 213,634 149,847 186,272 308,237 213,634 149,847 186,172 308,237 213,634 202,325 166,046 309,466	72 9.821 16.986 90.557 157,428 253,273 269,806 353,786 534,786 311,577 707,764 448,308 676,827 410,827 189,102 314,372 2314,372 25,795 191,353 144,909 176,926 295,052 162,449 304,040 236,426	84 13,039 18,288 102,192 181,217 298,617 415,231 577,742 415,231 324,200 334,918 679,845 411,003 378,667 189,531 326,267 262,895 156,525 193,575 146,854 181,096 295,295 166,525	96 13.611 23.611 194.111 194.111 199.822 307.936 996.162 331.717 668.555 395.196 681.410 411.481 379.037 190.062 379.647 277.050 163.267 190.062 379.647 277.050 163.267 186.492 296.029 165.224	108 14,794 25,737 126,162 201,338 307,535 313,205 431,205 604,078 300,441 669,244 390,441 669,244 379,508 1190,822 11,686,121 197,111 108,112 197,112 198,212 296,255	120 16.517 314.269 202.188 317.782 433.102 543.745 301.585 669.244 3301.585 669.244 341.08 412.616 382.952 191.531 420,822 301.615 177.868 200.449 189.334 196.704	132 16,901 49,301 144,586 203,815 343,535 319,598 439,481 548,041 301,697 395,196 684,108 413,407 382,952 192,270 440,261 304,333 177,868 202,529 201,469	144 19,950 49,951 146,053 204,040 347,855 522,343 459,225 553,962 301,697 669,188 392,952 193,209 400,569 305,569 305,569 305,569	156 21,086 49,616 155,423 204,688 391,585 225,039 462,320 553,962 301,697 669,188 392,952 194,029 452,424 305,166	168 21,192 49,616 156,868 207,774 394,847 229,817 479,638 553,962 301,697 669,188 395,952 194,724 455,322 306,876	180 21,226 49,616 159,570 211,957 396,769 329,817 484,373 553,962 301,697 690,014 415,394 415,394 415,394 415,394 458,466	192 21,226 49,911 160,025 212,780 397,163 329,817 488,387 553,962 301,697 691,979 416,151 382,952 195,912	204 21,226 50,261 160,725 212,780 397,163 331,017 488,786 553,962 301,697 693,434 416,388 382,952	216 21,226 521,2780 397,163 332,429 488,786 553,962 301,697 699,188 395,196 694,829 416,634	228 21,226 50,611 102,725 215,180 397,163 332,429 488,786 553,962 301,697 669,188 395,186 694,829	240 21,226 50,611 162,725 215,335 397,163 333,094 488,786 553,962 301,697 669,188 395,196	252 21,226 50,961 162,725 215,335 397,336 334,344 488,786 553,962 301,697 669,188	264 21,226 50,961 102,725 215,335 397,336 338,304 488,786 553,962 301,697	276 21,226 50,961 162,725 215,335 397,335 341,814 488,786 553,962	288 21,226 50,961 162,725 215,335 397,335 346,679 488,786	300 21,226 50,961 162,725 215,335 397,336 347,929	312 21,226 50,961 162,725 215,335 397,336	324 21,226 50,961 162,725 215,355	336 21,226 30,961 162,725	348 21,226 50,961	360 21,226
Age to-Age Facts Ace Y Ending June 83 June 84 June 84 June 85 June 86 June 87 June 88 June 88 June 89 June 90 June 91 June 91 June 91 June 92 June 93 June 94 June 95 June 95 June 95 June 96 June 97 June 98 June 99 June 90	2.515 2.514 2.514 2.514 2.514 2.514 2.514 2.514 2.599 3.5389 2.343 2.442 2.195 1.985 1.985 2.354 2.105 1.626 1.957 2.717 1.685 1.917 5.203 1.917 5.203 1.917 5.203 1.921 1.666 1.478	24-36 1.567 1.566 1.566 1.566 1.652 1.679 1.819 1.311 1.185 1.141 1.120 1.119 1.146 1.274 0.623 1.106 1.295 1.112 1.122 1.325	36-48 1.296 1.296 1.296 1.296 1.297 1.277 1.277 1.277 1.277 1.147 1.105 1.105 1.054 1.075 1.081 1.098 1.098 1.098 1.098 1.098 1.005 1.051 1.105 1.105 1.105 1.105 1.105 1.105 1.105 1.105 1.105 1.106	48-60 1.257 1.257 1.340 1.036 1.370 1.118 1.169 1.022 1.049 1.031 1.023 1.033 1.035 1.043 1.035	60-72 1.241 1.250 1.250 1.393 1.391 1.123 1.123 1.156 1.118 1.118 1.019 1.011 1.009 1.003 1.000 1.005 1.002 1.005	72-84 1.328 1.077 1.128 1.151 1.065 1.107 1.144 1.080 1.041 1.033 0.881 1.004 1.000 1.000 1.002 1.038 1.165 1.024 1.013 1.024 1.013 1.024 1.002 1.048	84-96 1.044 1.280 1.137 1.071 1.071 1.078 1.032 1.032 1.032 1.032 1.001 1.001 1.001 1.001 1.003 1.164 1.054 1.054 1.032 1.033 1.033 1.035	96-108 1.087 1.100 1.088 1.037 1.057 1.017 1.007 1.001 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.001 1.001 1.005 1.001 1.005 1.001 1.004 1.005	108-120 1.116 1.207 1.064 1.004 1.004 1.004 1.005 1.015 1.004 1.000 1.000 1.000 1.000 1.000 1.000 1.001 1.001 1.001 1.001 1.003 1.003 1.003 1.003 1.003	120-132 1.023 1.587 1.077 1.008 1.006 1.015 1.000	132-144 1.180 1.000 1.000 1.010 1.010 1.013 1.013 1.045 1.045 1.040 1.00	144-156 1.057 1.006 1.064 1.003 1.126 1.000 1.00	156-168 1.005 1.000 1.000 1.000 1.010 1.015 1.015 1.015 1.015 1.015 1.000	168-189 1.002 1.000 1.017 1.020 1.005 1.005 1.000 1.010 1.000 1.000 1.000 1.000 1.000 1.000 1.000	180-192 1.000 1.006 1.003 1.003 1.001 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	192-204 1.000 1.007 1.004 1.000 1.000 1.001 1.000 1.000 1.000 1.000 1.000 1.000	204-216 1.000 1.007 1.007 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	216-228 1.000 1.000 1.012 1.011 1.000 1.000 1.000 1.000 1.000 1.000 1.000	228-240 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	240-252 1.000 1.007 1.000 1.000 1.000 1.000 1.000 1.000 1.000	252-264 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	264-276 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	276-288 1.000 1.000 1.000 1.000 1.000 1.000 1.001	288-300 1.000 1.000 1.000 1.000 1.000 1.000	300-312 1.000 1.000 1.000 1.000 1.000	312-324 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000	336-348 1.000 1.000	348-360 1.000	
Averages Simple Avg All Yrs Latest 5 Latest 3 Volume Wtd All Yrs Latest 5 Latest 5 Latest 5	12-24 2.454 1.696 1.583 2.099 1.691 1.571	24-36 1.277 1.166 1.190 1.187 1.180 1.204	36-48 1.115 1.048 1.021 1.067 1.050 1.026	48-60 1.086 1.016 1.017 1.051 1.020 1.020	1.067 1.009 1.010 1.034 1.010 1.012	72-84 1.057 1.018 1.017 1.036 1.020 1.020	84-96 1.042 1.012 1.016 1.019 1.012 1.013	96-108 1.032 1.049 1.070 1.016 1.038 1.051	1.030 1.041 1.044 1.006 1.037 1.042	1.046 1.026 1.025 1.016 1.028 1.025	132-144 1.016 1.007 1.002 1.008 1.010 1.002	1.018 1.010 1.016 1.012 1.007 1.011	1.006 1.002 1.004 1.006 1.002 1.004	1.004 1.003 1.004 1.003 1.003 1.003 1.003	1.002 1.001 1.001 1.002 1.002 1.002 1.001	192-204 1.001 1.001 1.001 1.001 1.001 1.001	204-216 1.001 1.001 1.001 1.001 1.001 1.001	216-228 1.002 1.000 1.000 1.001 1.000 1.000	1.000 1.000 1.000 1.000 1.000 1.000 1.000	240-252 1.001 1.001 1.000 1.001 1.001 1.000	252-264 1.001 1.002 1.000 1.002 1.002 1.000	264-276 1.001 1.002 1.003 1.002 1.002 1.003	276-288 1.002 1.003 1.005 1.003 1.003 1.004	288-300 1.001 1.001 1.001 1.001 1.001 1.001	300-312 1.000 1.000 1.000 1.000 1.000 1.000	312-324 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000 1.000	336-348 1.000 1.000	348-360 1.000 1.000	To Ult
Dev Factor Select Industry 1 Industry 2 Prior Selected FacToUlt Percent of Ult	1.968 2.030 1.911 2.898 34.5%	1.143 1.266 1.193 1.187 1.517 65.9%	1.054 1.074 1.073 1.048 1.278 78.3%	1.030 1.040 1.014 1.020 1.219 82.1%	1.018 1.013 1.035 1.034 1.195 83.7%	1.014 1.011 1.009 1.017 1.156 86.5%	1.012 1.010 1.018 1.012 1.137 88.0%	1.015 1.063 1.049 1.123 89.0%	1.008 1.029 1.030 1.070 93.4%	1.013 1.005 1.005 1.040 96.2%	1.013 1.002 1.002 1.034 96.7%	1.009 1.004 1.016 1.032 96.9%	1.008 1.003 1.004 1.016 98.4%	1.008 1.001 1.001 1.012 98.8%	1.008 1.001 1.001 1.011 98.9%	1.005 1.001 1.001 1.010 99.0%	1.004 1.000 1.001 1.009 99.1%	1.002 1.001 1.001 1.009 99.1%	1.004 1.001 1.001 1.008 99.2%	1.005 1.001 1.001 1.007 99.3%	1.001 1.001 1.006 99.4%	1.001 1.001 1.005 99.5%	1.000 1.000 1.004 99.6%	1.000 1.000 1.004 99.6%	1.000 1.000 1.004 99.6%	1.000 1.000 1.004 99.6%	1.000 1.000 1.004 99.6%	1.000 1.000 1.004 99.6%	1.006 1.000 1.004 99.6%	1.004 1.004 99.6%

Section 6



Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012

University of Massachusetts (Medical Center) - Cluster 4 Medical

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ate Loss	Ultima	ite Loss	Change in U	Iltimate Loss	Change in U	Itimate Loss
Accident	As o	f 6/11	As o	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	126,400	126,400	126,400	126,400	0	0.0%	0	0.0%
6/30/82-83	21,332	21,651	21,332	21,651	0	0.0%	0	0.0%
6/30/83-84	51,216	51,980	51,216	51,980	0	0.0%	0	0.0%
6/30/84-85	163,539	165,980	163,539	165,980	0	0.0%	0	0.0%
6/30/85-86	216,432	219,662	216,432	219,662	0	0.0%	0	0.0%
6/30/86-87	400,000	400,000	399,000	399,000	(1,000)	-0.2%	(1,000)	-0.2%
6/30/87-88	349,000	349,000	349,000	350,000	0	0.0%	1,000	0.3%
6/30/88-89	491,230	513,225	491,230	513,225	0	0.0%	0	0.0%
6/30/89-90	556,732	581,660	556,732	581,660	0	0.0%	0	0.0%
6/30/90-91	303,205	316,782	303,205	316,782	0	0.0%	0	0.0%
6/30/91-92	672,534	702,647	672,534	702,647	0	0.0%	0	0.0%
6/30/92-93	397,172	414,956	397,172	414,956	0	0.0%	0	0.0%
6/30/93-94	702,000	702,000	700,000	700,000	(2,000)	-0.3%	(2,000)	-0.3%
6/30/94-95	421,000	421,000	420,000	420,000	(1,000)	-0.2%	(1,000)	-0.2%
6/30/95-96	384,867	402,100	384,867	402,100	0	0.0%	0	0.0%
6/30/96-97	198,000	207,900	198,000	207,900	0	0.0%	0	0.0%
6/30/97-98	461,000	485,100	463,000	487,200	2,000	0.4%	2,100	0.4%
6/30/98-99	312,000	312,000	311,000	311,000	(1,000)	-0.3%	(1,000)	-0.3%
6/30/99-00	182,000	182,000	188,000	188,000	6,000	3.3%	6,000	3.3%
6/30/00-01	207,000	207,000	209,000	209,000	2,000	1.0%	2,000	1.0%
6/30/01-02	195,000	195,000	208,000	208,000	13,000	6.7%	13,000	6.7%
6/30/02-03	202,000	202,000	204,000	205,000	2,000	1.0%	3,000	1.5%
6/30/03-04	333,000	349,650	317,000	332,850	(16,000)	-4.8%	(16,800)	-4.8%
6/30/04-05	187,000	215,250	186,000	206,850	(1,000)	-0.5%	(8,400)	-3.9%
6/30/05-06	351,000	376,950	362,000	380,100	11,000	3.1%	3,150	0.8%
6/30/06-07	283,000	320,250	273,000	301,350	(10,000)	-3.5%	(18,900)	-5.9%
6/30/07-08	565,000	617,400	566,000	626,850	1,000	0.2%	9,450	1.5%
6/30/08-09	371,000	415,800	354,000	385,350	(17,000)	-4.6%	(30,450)	-7.3%
6/30/09-10	391,000	460,950	339,000	384,300	(52,000)	-13.3%	(76,650)	-16.6%
6/30/10-11	581,000	686,700	465,000	495,600	(116,000)	-20.0%	(191,100)	-27.8%
6/30/11-12								
Total	10,075,658	10,622,992	9,895,658	10,315,392	(180,000)	-1.8%	(307,600)	-2.9%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 6, Exhibit 2, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1

Section 6 Exhibit 2

Page 9

University of Massachusetts (Medical Center) - Cluster 4 Medical

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	0.4%	0.0%	0.1%	0.1%	1.000	1.000
360	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
348	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
336	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
324	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
312	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
300	99.6%	0.0%	0.4%	0.0%	0.0%	0.806	0.726
288	99.6%	0.0%	0.4%	0.0%	0.0%	0.775	0.685
276	99.6%	0.1%	0.4%	0.0%	0.0%	0.745	0.646
264	99.5%	0.1%	0.5%	0.0%	0.0%	0.770	0.683
252	99.4%	0.1%	0.6%	0.0%	0.0%	0.781	0.700
240	99.3%	0.1%	0.7%	0.0%	0.0%	0.784	0.705
228	99.2%	0.1%	0.8%	0.0%	0.0%	0.783	0.704
216	99.1%	0.1%	0.9%	0.0%	0.0%	0.778	0.698
204	99.1%	0.1%	0.9%	0.0%	0.0%	0.761	0.676
192	99.0%	0.1%	1.0%	0.1%	0.1%	0.745	0.656
180	98.9%	0.1%	1.1%	0.1%	0.0%	0.749	0.662
168	98.8%	0.4%	1.2%	0.2%	0.2%	0.741	0.652
156	98.4%	1.6%	1.6%	0.9%	0.7%	0.772	0.694
144	96.9%	0.2%	3.1%	0.1%	0.1%	0.860	0.812
132	96.7%	0.5%	3.3%	0.3%	0.3%	0.836	0.778
120	96.2%	2.8%	3.8%	1.9%	1.6%	0.826	0.764
108	93.4%	4.4%	6.6%	3.1%	2.7%	0.873	0.826
96	89.0%	1.1%	11.0%	0.8%	0.7%	0.896	0.856
84	88.0%	1.5%	12.0%	1.1%	1.0%	0.872	0.823
72	86.5%	2.8%	13.5%	2.3%	2.0%	0.854	0.797
60	83.7%	1.6%	16.3%	1.3%	1.2%	0.849	0.790
48	82.1%	3.8%	17.9%	3.3%	3.1%	0.831	0.765
36	78.3%	12.3%	21.7%	11.2%	10.7%	0.831	0.766
24	65.9%	31.4%	34.1%	29.6%	28.8%	0.865	0.812
12	34.5%	34.5%	65.5%	33.8%	33.5%	0.903	0.865

Total 100.0%

NOTES:

(2) = 1 / Section 6, Exhibit 2, Page 2, Column 4

(7), (8) Discount factor based on (5), (6)

⁽³⁾ Incremental % based on (2)

^{(4) = 1 - (2)}

 $^{(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}}$

 $^{(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}}$

Section 6 Exhibit 2 Page 10

University of Massachusetts (Medical Center) - Cluster 4 Medical

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
		counted	Discount		ounted
Accident	Outstand	ing Losses	Factor at	Outstand	ing Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	0	0		0	0
6/30/82-83	106	425	1.000	106	425
6/30/83-84	255	1,019	1.000	255	1,019
6/30/84-85	814	3,255	1.000	814	3,255
6/30/85-86	1,077	4,307	1.000	1,077	4,307
6/30/86-87	1,644	1,644	1.000	1,644	1,644
6/30/87-88	1,071	2,071	0.806	863	1,669
6/30/88-89	2,444	24,439	0.775	1,894	18,940
6/30/89-90	2,770	27,698	0.745	2,064	20,640
6/30/90-91	1,508	15,085	0.770	1,162	11,620
6/30/91-92	3,346	33,459	0.781	2,614	26,140
6/30/92-93	1,976	19,760	0.784	1,550	15,499
6/30/93-94	5,172	5,172	0.783	4,048	4,048
6/30/94-95	3,366	3,366	0.778	2,619	2,619
6/30/95-96	1,915	19,148	0.761	1,457	14,572
6/30/96-97	2,088	11,988	0.745	1,555	8,931
6/30/97-98	4,534	28,734	0.749	3,395	21,517
6/30/98-99	4,124	4,124	0.741	3,056	3,056
6/30/99-00	2,834	2,834	0.772	2,188	2,188
6/30/00-01	6,341	6,341	0.860	5,456	5,456
6/30/01-02	6,531	6,531	0.836	5,462	5,462
6/30/02-03	7,296	8,296	0.826	6,030	6,856
6/30/03-04	20,745	36,595	0.873	18,106	31,940
6/30/04-05	20,776	41,626	0.896	18,614	37,294
6/30/05-06	43,325	61,425	0.872	37,789	53,576
6/30/06-07	36,574	64,924	0.854	31,242	55,459
6/30/07-08	66,534	127,384	0.849	56,474	108,123
6/30/08-09	63,122	94,472	0.831	52,443	78,489
6/30/09-10	74,013	119,313	0.831	61,475	99,100
6/30/10-11	158,267	188,867	0.865	136,824	163,278
6/30/11-12	264,668	332,118	0.903	238,973	299,875
Total	809,233	1,296,417		701,247	1,106,995

	0.04	
(7) Total Discount Factor:	0.867	0.854

-		Discount Calculation for All Prior Years (Low) (High) 0 0 2 2			
_					
(8) Estimated Total Reserve:	0	0			
(9) Projected Number of Years:	2	2			
(10) Projected Paid Loss per Year:	0	0			
(11) Discounted Value at 4%:	0	0			

NOTES

(2), (3) From Section 6, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 6, Exhibit 2, Page 9, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $\left(7\right)=Sum\ of\ \left(5\right)/\ Sum\ of\ \left(2\right)\ and\ Sum\ of\ \left(6\right)/\ Sum\ of\ \left(3\right)$

(10) = (8) / (9)

Section 6 Exhibit 2 Page 11

University of Massachusetts (Medical Center) - Cluster 4 Medical

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
Accident		counted	Discount Factor at		ounted
Year	(Low)	ing Losses (High)	Factor at 6.0%	(Low)	ing Losses (High)
All Prior Yrs	0	(Higii) 0	0.0%	0	(Higii)
	106	425	1.000	106	425
6/30/82-83			1.000		
6/30/83-84	255	1,019		255	1,019
6/30/84-85	814	3,255	1.000	814	3,255
6/30/85-86	1,077	4,307	1.000	1,077	4,307
6/30/86-87	1,644	1,644	1.000	1,644	1,644
6/30/87-88	1,071	2,071	0.726	777	1,503
6/30/88-89	2,444	24,439	0.685	1,673	16,734
6/30/89-90	2,770	27,698	0.646	1,789	17,892
6/30/90-91	1,508	15,085	0.683	1,030	10,305
6/30/91-92	3,346	33,459	0.700	2,341	23,413
6/30/92-93	1,976	19,760	0.705	1,393	13,933
6/30/93-94	5,172	5,172	0.704	3,640	3,640
6/30/94-95	3,366	3,366	0.698	2,351	2,351
6/30/95-96	1,915	19,148	0.676	1,294	12,944
6/30/96-97	2,088	11,988	0.656	1,369	7,859
6/30/97-98	4,534	28,734	0.662	3,000	19,016
6/30/98-99	4,124	4,124	0.652	2,690	2,690
6/30/99-00	2,834	2,834	0.694	1,968	1,968
6/30/00-01	6,341	6,341	0.812	5,148	5,148
6/30/01-02	6,531	6,531	0.778	5,080	5,080
6/30/02-03	7,296	8,296	0.764	5,573	6,337
6/30/03-04	20,745	36,595	0.826	17,135	30,227
6/30/04-05	20,776	41,626	0.856	17,790	35,642
6/30/05-06	43,325	61,425	0.823	35,637	50,525
6/30/06-07	36,574	64,924	0.797	29,164	51,770
6/30/07-08	66,534	127,384	0.790	52,562	100,633
6/30/08-09	63,122	94,472	0.765	48,316	72,313
6/30/09-10	74,013	119,313	0.766	56,666	91,348
6/30/10-11	158,267	188,867	0.812	128,580	153,441
6/30/11-12	264,668	332,118	0.865	228,869	287,196
Total	809,233	1,296,417		659,730	1,034,554

_		alculation for or Years
-	(Low)	(High)
(8) Estimated Total Reserve:	0	0
(9) Projected Number of Years:	2	2
(10) Projected Paid Loss per Year:	0	0
(11) Discounted Value at 6%:	0	0

0.815

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 6, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 6, Exhibit 2, Page 9, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.798



Massachusetts Colleges & Universities - Cluster 4 Indemnity

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		2,967,806			3,542,262	3,834,860	574,456	867,054		
6/30/82-83		743,272	745,243		758,137	773,003	14,865	29,731		
6/30/83-84		917,731	920,036		936,086	954,440	18,355	36,709		
6/30/84-85	357,749	1,492,038	1,495,871	1,497,790	1,521,879	1,551,720	29,841	59,682	0.425	0.434
6/30/85-86	380,112	1,868,907	1,873,953	1,875,676	1,874,000	1,876,000	5,093	7,093	0.493	0.494
6/30/86-87	423,770	2,558,251	2,809,301	2,565,727	2,566,000	2,809,000	7,749	250,749	0.606	0.663
6/30/87-88	480,405	4,089,678	4,861,175	4,100,791	4,171,472	4,294,162	81,794	204,484	0.868	0.894
6/30/88-89	495,261	1,515,210	1,520,101	1,522,934	1,545,514	1,590,971	30,304	75,761	0.312	0.321
6/30/89-90	502,691	3,466,866	3,481,697	3,481,577	3,536,203	3,640,209	69,337	173,343	0.703	0.724
6/30/90-91	482,143	1,393,607	1,400,293	1,400,273	1,400,000	1,400,000	6,393	6,393	0.290	0.290
6/30/91-92	492,539	1,391,536	1,858,034	1,403,764	1,467,809	1,630,899	76,274	239,363	0.298	0.331
6/30/92-93	524,541	1,147,496	1,162,117	1,161,990	1,170,446	1,204,871	22,950	57,375	0.223	0.230
6/30/93-94	584,853	1,066,933	1,460,616	1,096,982	1,097,000	1,461,000	30,067	394,067	0.188	0.250
6/30/94-95	587,701	1,502,678	1,540,254	1,539,710	1,540,000	1,540,000	37,322	37,322	0.262	0.262
6/30/95-96	614,868	1,269,047	1,316,725	1,316,461	1,294,428	1,332,499	25,381	63,452	0.211	0.217
6/30/96-97	700,686	1,098,628	1,159,331	1,159,753	1,159,000	1,160,000	60,372	61,372	0.165	0.166
6/30/97-98	684,415	1,905,371	2,057,750	2,052,648	2,053,000	2,058,000	147,629	152,629	0.300	0.301
6/30/98-99	707,796	1,282,862	1,422,218	1,420,921	1,421,000	1,493,000	138,138	210,138	0.201	0.211
6/30/99-00	760,477	1,182,336	1,320,052	1,323,083	1,320,000	1,323,000	137,664	140,664	0.174	0.174
6/30/00-01	811,600	1,518,858	1,757,687	1,755,233	1,755,000	1,758,000	236,142	239,142	0.216	0.217
6/30/01-02	835,038	2,185,889	2,571,207	2,558,423	2,558,000	2,571,000	372,111	385,111	0.306	0.308
6/30/02-03	825,340	1,176,505	1,439,770	1,442,768	1,440,000	1,443,000	263,495	266,495	0.174	0.175
6/30/03-04	849,216	1,486,953	1,855,095	1,853,866	1,854,000	1,948,000	367,047	461,047	0.218	0.229
6/30/04-05	992,508	1,023,493	1,332,030	1,494,234	1,332,000	1,494,000	308,507	470,507	0.134	0.151
6/30/05-06	962,878	1,259,806	1,738,716	1,805,672	1,739,000	1,896,000	479,194	636,194	0.181	0.197
6/30/06-07	1,032,930	891,612	1,311,446	1,567,168	1,311,000	1,567,000	419,388	675,388	0.127	0.152
6/30/07-08	1,063,597	1,646,106	2,517,154	2,501,936	2,502,000	2,517,000	855,895	870,895	0.235	0.237
6/30/08-09	1,073,805	1,131,874	2,016,868	2,159,267	2,017,000	2,159,000	885,126	1,027,126	0.188	0.201
6/30/09-10	1,084,749	1,560,776	3,500,163	3,250,187	3,250,000	3,500,000	1,689,224	1,939,224	0.300	0.323
6/30/10-11	1,134,164	979,293	2,967,953	2,743,592	2,744,000	2,968,000	1,764,707	1,988,707	0.242	0.262
6/30/11-12	1,202,674	412,473	2,898,096	2,801,490	2,801,000	2,898,000	2,388,527	2,485,527	0.233	0.241
Total	20,648,505	48,133,892	58,310,951	54,853,916	59,677,236	62,646,634	11,543,345	14,512,742		
Tot 6/30/84-12	20,648,505	43,505,083	56,645,673	54,853,916	54,440,751	57,084,330	10,935,668	13,579,248	0.264	0.276

- (2) Provided by Commonwealth of Massachusetts
- (3) Sum of Section 7, Exhibit 1, Page 2, Column 3 and Section 7, Exhibit 1, Page 9, Column 8
- (4) From Section 7, Exhibit 1, Page 2, Column 8
- (5) From Section 7, Exhibit 1, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



Massachusetts Colleges & Universities - Cluster 4 Indemnity

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Paid Loss		Adjstmnt for	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average	
Accident	Payroll	Excluding	Paid	Extra	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding	Average
Year	(000's)	Lump Sum	LDF	Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim	Age
All Prior Yrs		2,952,056							2	2		82
6/30/82-83		716,272	1.003	1.000	718,243	27,000	745,243		0	0		
6/30/83-84		837,731	1.003	1.000	840,036	80,000	920,036		0	0		
6/30/84-85	357,749	1,393,062	1.003	1.000	1,396,895	98,976	1,495,871	0.418	0	0		
6/30/85-86	380,112	1,833,907	1.003	1.000	1,838,953	35,000	1,873,953	0.493	0	0		
6/30/86-87	423,770	2,436,751	1.003	1.100	2,687,801	121,500	2,809,301	0.663	1	1	251,050	86
6/30/87-88	480,405	3,794,835	1.003	1.200	4,566,332	294,843	4,861,175	1.012	2	2	385,748	72
6/30/88-89	495,261	1,302,910	1.004	1.000	1,307,801	212,300	1,520,101	0.307	0	0		
6/30/89-90	502,691	3,117,154	1.005	1.000	3,131,985	349,712	3,481,697	0.693	1	2	7,416	69
6/30/90-91	482,143	1,160,107	1.006	1.000	1,166,793	233,500	1,400,293	0.290	0	0		
6/30/91-92	492,539	1,135,353	1.008	1.400	1,601,851	256,183	1,858,034	0.377	0	0		
6/30/92-93	524,541	986,496	1.015	1.000	1,001,117	161,000	1,162,117	0.222	0	0		
6/30/93-94	584,853	907,933	1.024	1.400	1,301,616	159,000	1,460,616	0.250	1	1	393,683	53
6/30/94-95	587,701	1,133,473	1.033	1.000	1,170,864	369,390	1,540,254	0.262	1	1	37,391	75
6/30/95-96	614,868	927,586	1.051	1.000	974,923	341,803	1,316,725	0.214	0	0		
6/30/96-97	700,686	873,746	1.068	1.000	932,999	226,332	1,159,331	0.165	2	2	29,627	63
6/30/97-98	684,415	1,640,371	1.091	1.000	1,790,036	267,714	2,057,750	0.301	3	3	49,888	75
6/30/98-99	707,796	1,077,612	1.127	1.000	1,214,843	207,375	1,422,218	0.201	1	1	137,231	66
6/30/99-00	760,477	844,236	1.160	1.000	979,036	341,017	1,320,052	0.174	0	0		
6/30/00-01	811,600	1,245,356	1.189	1.000	1,480,673	277,014	1,757,687	0.217	1	1	235,317	62
6/30/01-02	835,038	1,742,639	1.217	1.000	2,121,483	449,724	2,571,207	0.308	1	1	378,843	68
6/30/02-03	825,340	1,004,005	1.256	1.000	1,261,260	178,511	1,439,770	0.174	1	1	257,254	62
6/30/03-04	849,216	1,163,453	1.303	1.000	1,516,256	338,838	1,855,095	0.218	2	0		
6/30/04-05	992,508	825,393	1.353	1.000	1,116,773	215,258	1,332,030	0.134	4	1	291,380	78
6/30/05-06	962,878	1,059,134	1.406	1.000	1,489,160	249,556	1,738,716	0.181	3	3	143,342	61
6/30/06-07	1,032,930	741,612	1.482	1.000	1,099,336	212,110	1,311,446	0.127	4	2	178,862	59
6/30/07-08	1,063,597	1,327,356	1.527	1.000	2,026,278	490,876	2,517,154	0.237	14	11	63,538	59
6/30/08-09	1,073,805	1,006,874	1.682	1.000	1,693,592	323,276	2,016,868	0.188	21	10	68,672	59
6/30/09-10	1,084,749	1,315,276	1.977	1.000	2,600,375	899,788	3,500,163	0.323	53	23	55,874	59
6/30/10-11	1,134,164	954,293	2.689	1.000	2,566,115	401,839	2,967,953	0.262	107	53	30,412	54
6/30/11-12	1,202,674	412,473	6.054	1.000	2,497,253	400,843	2,898,096	0.241		79	26,390	52
Total	20,648,505	41,869,455			50,090,675	8,220,276	58,310,951		225	200		

- (2) Provided by Commonwealth of Massachusetts
- (3), (4) From Section 7, Exhibit 1, Page 7
- (5) Based on information from the MA WCRIB
- (6) = (3) x (4) x (5)
- (7) From Section 7, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10), (11) Provided by Commonwealth of Massachusetts
- $(12) = Maximum of [{(6) (3)} / (11)] and 0$

Section 7 Exhibit 1 Page 3

Massachusetts Colleges & Universities - Cluster 4 Indemnity

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori	Paid Loss		Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss	Excluding	Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Lump Sum	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	357,749	0.586	1,393,062	1.003	1,398,814	98,976	1,497,790	0.419	0.391
6/30/85-86	380,112	0.649	1,833,907	1.003	1,840,676	35,000	1,875,676	0.493	0.484
6/30/86-87	423,770	0.643	2,436,751	1.003	2,444,227	121,500	2,565,727	0.605	0.577
6/30/87-88	480,405	0.843	3,794,835	1.003	3,805,948	294,843	4,100,791	0.854	0.792
6/30/88-89	495,261	0.417	1,302,910	1.004	1,310,634	212,300	1,522,934	0.308	0.265
6/30/89-90	502,691	0.618	3,117,154	1.005	3,131,865	349,712	3,481,577	0.693	0.623
6/30/90-91	482,143	0.241	1,160,107	1.006	1,166,773	233,500	1,400,273	0.290	0.242
6/30/91-92	492,539	0.322	1,135,353	1.008	1,147,581	256,183	1,403,764	0.285	0.233
6/30/92-93	524,541	0.189	986,496	1.015	1,000,990	161,000	1,161,990	0.222	0.191
6/30/93-94	584,853	0.219	907,933	1.024	937,982	159,000	1,096,982	0.188	0.160
6/30/94-95	587,701	0.196	1,133,473	1.033	1,170,320	369,390	1,539,710	0.262	0.199
6/30/95-96	614,868	0.158	927,586	1.051	974,658	341,803	1,316,461	0.214	0.159
6/30/96-97	700,686	0.134	873,746	1.068	933,421	226,332	1,159,753	0.166	0.133
6/30/97-98	684,415	0.253	1,640,371	1.091	1,784,934	267,714	2,052,648	0.300	0.261
6/30/98-99	707,796	0.170	1,077,612	1.127	1,213,546	207,375	1,420,921	0.201	0.171
6/30/99-00	760,477	0.132	844,236	1.160	982,066	341,017	1,323,083	0.174	0.129
6/30/00-01	811,600	0.181	1,245,356	1.189	1,478,219	277,014	1,755,233	0.216	0.182
6/30/01-02	835,038	0.245	1,742,639	1.217	2,108,699	449,724	2,558,423	0.306	0.253
6/30/02-03	825,340	0.155	1,004,005	1.256	1,264,257	178,511	1,442,768	0.175	0.153
6/30/03-04	849,216	0.178	1,163,453	1.303	1,515,028	338,838	1,853,866	0.218	0.178
6/30/04-05	992,508	0.175	825,393	1.353	1,278,976	215,258	1,494,234	0.151	0.129
6/30/05-06	962,878	0.179	1,059,134	1.406	1,556,116	249,556	1,805,672	0.188	0.162
6/30/06-07	1,032,930	0.183	741,612	1.482	1,355,059	212,110	1,567,168	0.152	0.131
6/30/07-08	1,063,597	0.186	1,327,356	1.527	2,011,060	490,876	2,501,936	0.235	0.189
6/30/08-09	1,073,805	0.190	1,006,874	1.682	1,835,991	323,276	2,159,267	0.201	0.171
6/30/09-10	1,084,749	0.193	1,315,276	1.977	2,350,399	899,788	3,250,187	0.300	0.217
6/30/10-11	1,134,164	0.195	954,293	2.689	2,341,754	401,839	2,743,592	0.242	0.206
6/30/11-12	1,202,674	0.198	412,473	6.054	2,400,647	400,843	2,801,490	0.233	0.200
Total	20,648,505		37,363,396		46,740,639	8,113,276	54,853,916		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 7, Exhibit 1, Page 4, Column 11
- (4) From Section 7, Exhibit 1, Page 2, Column 3
- (5) From Section 7, Exhibit 1, Page 2, Column 4
- $(6) = (4) + [\{1 \{1/(5)\}\} \times (3) \times (2) \times 10]$
- (7) From Section 7, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10

Section 7



Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012

Massachusetts Colleges & Universities - Cluster 4 Indemnity

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Exp Ult Loss	Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Excluding	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Lump Sum	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.586	0.586
6/30/85-86									0.649	0.649
6/30/86-87									0.643	0.643
6/30/87-88									0.843	0.843
6/30/88-89									0.417	0.417
6/30/89-90									0.618	0.618
6/30/90-91	482,143	1,166,793	0.242	0.946	0.229	1.245	0.285	0.170	0.242	0.241
6/30/91-92	492,539	1,601,851	0.325	1.038	0.338	1.232	0.416	0.156	0.325	0.322
6/30/92-93	524,541	1,001,117	0.191	1.210	0.231	1.220	0.282	0.135	0.192	0.189
6/30/93-94	584,853	1,301,616	0.223	1.195	0.266	1.208	0.321	0.139	0.215	0.219
6/30/94-95	587,701	1,170,864	0.199	1.184	0.236	1.196	0.282	0.141	0.191	0.196
6/30/95-96	614,868	974,923	0.159	1.174	0.186	1.184	0.221	0.144	0.159	0.158
6/30/96-97	700,686	932,999	0.133	1.163	0.155	1.173	0.182	0.147	0.133	0.134
6/30/97-98	684,415	1,790,036	0.262	1.148	0.300	1.161	0.349	0.150	0.244	0.253
6/30/98-99	707,796	1,214,843	0.172	1.133	0.194	1.149	0.223	0.154	0.166	0.170
6/30/99-00	760,477	979,036	0.129	1.114	0.143	1.138	0.163	0.158	0.133	0.132
6/30/00-01	811,600	1,480,673	0.182	1.086	0.198	1.127	0.223	0.163	0.178	0.181
6/30/01-02	835,038	2,121,483	0.254	1.065	0.271	1.116	0.302	0.168	0.241	0.245
6/30/02-03	825,340	1,261,260	0.153	1.061	0.162	1.105	0.179	0.171	0.154	0.155
6/30/03-04	849,216	1,516,256	0.179	1.061	0.189	1.094	0.207	0.172	0.182	0.178
6/30/04-05	992,508	1,116,773	0.113	1.054	0.119	1.083	0.128	0.175	0.177	0.175
6/30/05-06	962,878	1,489,160	0.155	1.044	0.161	1.072	0.173	0.179	0.180	0.179
6/30/06-07	1,032,930	1,099,336	0.106	1.032	0.110	1.062	0.117	0.183	0.184	0.183
6/30/07-08	1,063,597	2,026,278	0.191	1.021	0.195	1.051	0.204	0.186	0.188	0.186
6/30/08-09	1,073,805	1,693,592	0.158	1.009	0.159	1.041	0.166	0.190	0.192	0.190
6/30/09-10	1,084,749	2,600,375	0.240	1.005	0.241	1.030	0.248	0.193	0.195	0.193
6/30/10-11	1,134,164	2,566,115	0.226	1.007	0.228	1.020	0.232	0.195	0.198	0.195
6/30/11-12	1,202,674	2,497,253	0.208	1.000	0.208	1.010	0.210	0.198		0.198
Total	18,008,517	33,602,629								
			Trend L	ast 4 (ex 11-12):	9.3%	Avg 3 (x11-12):	0.215			
				ast 8 (ex 11-12):	6.6%	Avg 5 (x11-12):	0.193			
				st 12 (ex 11-12):	1.0%	Avg 10 (x11-12):	0.196			
			Prior	Selected Trend:	1.0%	Prior Sel Avg:	0.200			

Selected Trend:

1.0%

Sel. Loss Cost:

0.200

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 7, Exhibit 1, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCRIB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

Section 7 Exhibit 1 Page 5

Massachusetts Colleges & Universities - Cluster 4 Indemnity

Calculation of 1982 & Prior Reserves (Page 1)

Method 1								
(1)	Average Payment Trend		1.015					
(2)	Credibility		18%					
(3)	Average Pmt Trend Statewide		0.960					
(4)	Credibility Weighted Trend		0.970					
	<u>-</u>	(Low)	(High)					
(5)	Selected Range	0.960	0.979					
(6)	Incremental Paid for 2012	42,013	42,013					
(7)	Estimated Reserve	1,009,382	2,000,980					
(8)	Paid to Date (82 & Prior)	2,952,056	2,952,056					
(9)	Est Ult Paid for 1982 & Prior	3,961,438	4,953,036					
Method 2	<u> </u>							
		(Current)	(Prior)					
(10)	Avg Incremental Paid (3 yrs)	61,354	75,870					
(11)	Projected Number of Years	7	7					
(12)	Estimated Reserve	429,481	531,092					
(13)	Paid to Date (82 & Prior)	2,952,056	2,910,043					
(14)	Est Ult Paid for 1982 & Prior	3,381,537	3,441,135					
(14a)	Paid Counts During Fiscal Year	2	2					
	_	(Low)	(High)					
(15)	Sel Ult Excluding Lump Sums	3,526,512	3,819,110					
(16)	Lump Sum Ultimates	15,750	15,750					
(17)	Ult Loss Including Lump Sums	3,542,262	3,834,860					
(18)	Implied Tail	1.195	1.294					
(19)	Ult Loss Inc Lump Sums @ 6/11	3,751,294	4,207,953					
NOTES:								
` '	n 7, Exhibit 1, Page 6		(10) Avg of 3 latest years from Section 7, Exhibit 1, Page 6, Column 3					
. , .	of Section 7, Exhibit 1, Page 6, Column 3 / 3,000,000) ^ 0.5		(11) Selected judgmentally					
(3) Average Sta			(12) = (10 x (11)					
$(4) = (1) \times (2) +$			(14) = (12) + (13)					
•	gmentally based on (4)		(15) = Average of (9) and (14)					
	ded by Commonwealth of Massachusetts		(16) From Section 7, Exhibit 1, Page 9, Column 13					
$(7) = (6) \times (5) /$			(17) = (15) + (16)					
	Section 7, Exhibit 1, Page 2, Column 3		(18) = (15) / (8)					
(9) = (7) + (8)			(19) From Aon analysis as of June 30, 2011					



Section 7 Exhibit 1 Page 6

Massachusetts Colleges & Universities - Cluster 4 Indemnity

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	96,383	11.476			
1993	2	98,686	11.500	1.024		
1994	3	90,507	11.413	0.917		
1995	4	91,599	11.425	1.012		
1996	5	82,524	11.321	0.901		
1997	6	95,179	11.464	1.153		
1998	7	100,117	11.514	1.052		
1999	8	101,445	11.527	1.013		
2000	9	91,541	11.425	0.902	n =	21
2001	10	95,087	11.463	1.039	S(x) =	42,042
2002	11	101,860	11.531	1.071	S(x-sq) =	84,168,854
2003	12	103,466	11.547	1.016	S(xy) =	480,563
2004	13	103,217	11.545	0.998	S(y) =	240
2005	14	106,270	11.574	1.030	D =	16,170
2006	15	111,087	11.618	1.045	slope =	-0.012
2007	16	115,666	11.658	1.041	Avg Trend =	0.988
2008	17	120,810	11.702	1.044		
2009	18	85,560	11.357	0.708		
2010	19	71,175	11.173	0.832		
2011	20	70,876	11.169	0.996		
2012	21	42,013	10.646	0.593		

Selected Trend: 1.015

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.593 = 42013 / 70876



Commonwealth of Massachusetts Workers Compensation Massachusetts Colleges & Universities - Cluster 4 INDEMNITY Paid Loss Development Paid Loss (Excluding Lump Sum)

Section 7 Exhibit 1 Page 7

Acc Yr Ending June 83 June 84 June 84 June 85 June 86 June 86 June 87 June 89 June 90 June 91 June 92 June 93 June 94 June 95 June 95 June 94 June 96 June 96 June 96 June 96 June 96 June 96 June 97 June 98 June 99 June 90 June 10 June 11 June 12	12 54,010 99,917 145,363 146,844 205,350 204,730 203,700 251,034 210,725 230,185 220,256 115,982 206,256 184,229 204,733 178,965 277,497 211,789 204,733 206,256 217,497 217,4	24 142,576 266,700 393,892 542,065 647,871 458,930 593,345 476,992 473,793 541,198 335,638 327,962 426,449 328,446 326,969 393,824 570,937 540,199 645,495 554,149 487,010 418,799 638,840 517,910 683,370 692,698 997,028 9954,293	689,280 658,712 624,539 855,565 631,652 951,226	48 264.888 485.764 702.017 7141.824 964.915 1.332.415 873.071 1.070.415 747.971 709.857 695.349 540.452 510.570 632.734 555.024 555.024 727.9101 907.942 1.190.744 758.177 817.060 726.139 960.239 710.911 1.163.168 1.036.874	1,140,809 1,600,031 1,047,827 1,170,169 826,820 752,262 761,795 602,360 656,919 711,202 612,566 656,266 656,266 656,266 656,266 61,241 982,546 1,315,603 839,325 1,008,366 1,008,366	72 357,219 646,670 944,094 1,013,300 1,789,064 1,143,271 1,310,507 788,923 896,967 665,759 704,734 763,750 653,987 750,818 801,143 899,009 1,034,355 1,438,839 895,935 1,101,139 895,935 1,101,139 895,935 1,101,139 895,935 1,101,139 895,935	84 371,053 708,919 1,041,045 1,126,822 1,366,787 2,016,553 1,198,464 1,405,772 964,982 831,701 960,498 700,338 751,757 825,421 680,550 946,526 828,610 1,086,105 1,086,105 1,095,966 923,456 1,150,675 824,654 1,059,134	96 469,928 756,240 1,113,616 1,223,737 1,443,695 2,144,780 1,232,178 1,541,316 1,043,288 862,151 986,209 683,894 811,410 867,895 699,551 1,035,878 857,804 844,236 1,123,788 1,1	1,510,844 2,273,154 1,250,874 1,646,975 1,062,987 886,987 986,209 702,764 863,231 906,744 720,522 1,116,871 888,093 844,236 1,153,822 1,633,082	120 527,760 798,348 1,204,638 1,350,669 1,568,560 2,384,070 1,282,165 1,788,90 914,044 986,209 722,297 899,192 927,586 739,692 1,200,899 943,651 1,84,076 1,184,076 1,	132 \$53,935 \$07,607 1,251,307 1,397,048 1,627,834 2,485,765 1,992,473 968,299 986,496 742,006 899,252 927,586 759,525 1,288,861 979,256 844,236 1,214,203 1,742,639	1,689,585 2,581,511 1,298,047	156 597,183 809,636 1,298,633 1,502,309 2,687,118 1,302,239 986,496 779,419 916,017 927,586 805,205 1,471,075 1,044,136 844,236	1,302,910 2,240,435 1,136,365 1,067,423 986,496 799,569	180 652,652 830,411 1,393,062 1,632,671 1,862,691 2,927,359 1,362,910 2,354,155 1,154,741 1,091,523 986,496 819,773 1,001,523 927,586 851,586 1,640,371	192 668,547 841,202 1,393,062 1,697,735 3,052,144 1,302,910 2,465,796 1,159,007 1,120,923 986,496 841,452 1,046,791 927,586 873,746	1,756,102 1,995,204 3,156,171 1,302,910 2,583,494	216 676,026 837,731 1,393,062 1,781,294 2,043,636 3,229,466 1,302,910 1,160,107 1,133,853 986,496 885,787 1,133,473	228 716,272 837,731 1,393,062 1,805,911 2,086,293 3,302,225 1,302,910 2,807,976 1,160,107 1,135,353 986,496 907,933	2,127,530 3,377,918 1,302,910 2,928,761 1,160,107	252 716,272 837,731 1,393,062 1,833,907 2,170,638 3,456,925 1,302,910 3,000,834 1,160,107 1,135,353	2,215,734 3,541,131 1,302,910	276 716.272 837,731 1.393,062 1.833,907 2.269,157 3.624,626 1.302,910 3,117,154	3,707,957	300 716,272 837,731 1,393,062 1,833,907 2,389,183 3,794,835	1,833,907	324 716.272 837.731 1.393.062 1.833.907	336 716,272 83,737 13,393,062	348 716.272 837,731	360 716,272
Arche-Age Facta Acc Y Infaline June 83 June 84 June 84 June 85 June 85 June 85 June 85 June 89 June 90 June 91 June 92 June 92 June 92 June 93 June 99 June 99 June 99 June 99 June 99 June 90	12-24 2.640 2.669 2.587 2.682 2.640 2.447 2.253 2.364 2.253 2.364 2.264 2.058 2.159 2.362 2.382 2.382 2.382 2.088 1.783 1.597 2.201 2.207	24-36 1.460 1.438 1.493 1.423 1.443 1.478 1.446 1.293 1.294 1.386 1.294 1.374 1.274 1.354 1.354 1.351 1.491 1.353 1.491 1.353 1.491 1.353 1.491 1.292 1.493	36-48 1.273 1.266 1.260 1.250 1.275 1.274 1.315 1.290 1.234 1.315 1.290 1.231 1.315 1.159 1.159 1.151 1.151 1.152 1.163 1.165 1.248 1.100 1.240 1.163 1.163 1.163 1.163 1.163 1.163 1.125 1.212 1.125 1.221	48-60 1.189 1.187 1.149 1.192 1.201 1.200 1.093 1.105 1.060 1.195 1.060 1.195 1.080 1.195 1.287 1.124 1.104 1.105	60-72 1.134 1.121 1.121 1.189 1.189 1.199 1.106 1.118 1.107 1.107 1.107 1.073 1.074 1.073 1.074 1.074 1.075 1.073 1.074 1.075 1.073 1.074 1.075 1.074 1.075	72-84 1.039 1.096 1.103 1.112 1.084 1.127 1.048 1.073 1.100 1.054 1.081 1.081 1.081 1.061 1.061 1.061 1.061 1.061 1.061 1.061 1.062 1.063 1.064 1.063 1.064 1.064 1.065 1.064 1.065 1.065 1.066 1.065	84-96 1.266 1.067 1.070 1.086 1.056 1.063 1.028 1.096 1.081 1.037 1.017 1.077 1.079 1.051 1.028 1.094 1.035 1.046 1.030 1.031	96-108 1.040 1.036 1.046 1.065 1.047 1.069 1.015 1.019 1.029 1.000 1.028 1.045 1.030 1.078 1.030 1.034 1.034 1.034 1.034 1.035 1.030 1.034	108-120 1.080 1.019 1.019 1.034 1.034 1.036 1.049 1.025 1.084 1.015 1.015 1.027 1.027 1.027 1.027 1.027 1.029 1.02	120-132 1.050 1.012 1.039 1.034 1.043 1.066 1.013 1.059 1.000 1.027 1.000 1.027 1.000 1.027 1.000 1.023 1.033 1.033 1.033 1.033 1.033 1.033 1.033 1.033 1.033 1.033 1.034	132-144 1.032 0.990 0.990 1.036 1.038 1.039 1.094 1.064 1.064 1.064 1.072 1.090 1.025 1.090 1.032 1.033 1.030 1.032 1.032 1.032	144-156 1.044 1.012 1.019 1.038 1.041 1.003 1.053 1.013 1.034 1.000 1.025 1.015 1.010 1.027 1.010 1.027 1.010 1.027 1.010	156-168 1.059 1.013 1.020 1.035 1.027 1.043 1.001 1.052 1.013 1.034 1.000 1.026 1.046 1.040 1.040 1.052	168-180 1.032 1.013 1.052 1.050 1.034 1.044 1.000 1.051 1.016 1.024 1.000 1.025 1.045 1.040 1.051	180-192 1.024 1.013 1.013 1.040 1.040 1.040 1.043 1.043 1.043 1.045 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.0	192-204 1.000 0.996 1.000 1.034 1.035 1.034 1.000 1.048 1.001 1.011 1.000 1.026 1.042 1.000	204-216 1.011 1.000 1.014 1.024 1.024 1.023 1.023 1.020 1.040 1.040 1.040 1.040 1.040	216-228 1.060 1.000 1.000 1.014 1.021 1.023 1.000 1.042 1.000 1.001 1.001 1.001	228-240 1.000 1.000 1.000 1.014 1.020 1.023 1.000 1.043 1.000	240-252 1.000 1.000 1.000 1.002 1.023 1.023 1.000 1.025 1.000	252-264 1.000 1.000 1.000 1.001 1.021 1.024 1.000 1.019 1.000	264-276 1.000 1.000 1.000 1.000 1.024 1.024 1.000 1.019	276-288 1.000 1.000 1.000 1.000 1.032 1.023 1.023	288-300 1.000 1.000 1.000 1.000 1.000 1.020 1.023	300-312 1.000 1.000 1.000 1.000 1.000 1.020	3/2-324 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000	336-348 1.000 1.000	348-360 1.000	
Averages Simple Avg All Yrs Latest 5 Latest 3	12-24 2.302 2.201 2.178	24-36 1.382 1.338 1.377	36-48 1.206 1.175 1.197	48-60 1.130 1.102 1.067	1.090 1.050 1.030	72-84 1.070 1.035 1.032	84-96 1.055 1.024 1.014	96-108 1.036 1.018 1.021	1.036 1.030 1.029	120-132 1.029 1.034 1.019	132-144 1.024 1.032 1.020	1.026 1.025 1.033	1.029 1.033 1.040	1.029 1.030 1.027	180-192 1.022 1.020 1.024	192-204 1.016 1.016 1.023	204-216 1.014 1.013 1.022	216-228 1.015 1.014 1.009	228-240 1.009 1.009 1.000	240-252 1.007 1.010 1.008	252-264 1.007 1.013 1.006	264-276 1.008 1.013 1.014	276-288 1.008 1.011 1.018	288-300 1.007 1.009 1.015	300-312 1.004 1.004 1.007	312-324 1.000 1.000	324-336 1.000 1.000	336-348 1.000	348-360 1.000	To Ult
Volume Wtd All Yrs Latest 5 Latest 3	2.254 2.210 2.200	1.376 1.339 1.367	1.205 1.179 1.204	1.127 1.106 1.077	1.090 1.051 1.029	1.072 1.037 1.033	1.051 1.027 1.014	1.038 1.019 1.022	1.037 1.030 1.030	1.032 1.036 1.023	1.028 1.035 1.021	1.029 1.030 1.039	1.031 1.036 1.044	1.033 1.033 1.032	1.026 1.019 1.024	1.022 1.016 1.023	1.017 1.012 1.022	1.018 1.020 1.008	1.015 1.016 1.000	1.012 1.015 1.014	1.012 1.017 1.010	1.013 1.016 1.018	1.013 1.015 1.022	1.012 1.013 1.017	1.007 1.007 1.008	1.000	1.000	1.000	1.000	
Dev Factor Select Industry 1 Industry 2 Prior Selected FacToUlt Percent of Ult	2.781 2.254 2.252 6.054 16.5%	1.499 1.746 1.378 1.360 2.689 37.2%	1.187 1.300 1.175 1.175 1.977 50.6%	1.084 1.126 1.095 1.102 1.682 59.5%	1.039 1.062 1.050 1.030 1.527 65.5%	1.019 1.029 1.058 1.054 1.482 67.5%	1.012 1.020 1.040 1.039 1.406 71.1%	1.009 1.040 1.038 1.353 73.9%	1.008 1.038 1.037 1.303 76.7%	1.005 1.032 1.032 1.256 79.6%	1.006 1.024 1.024 1.217 82.1%	1.010 1.028 1.025 1.189 84.1%	1.003 1.028 1.029 1.160 86.2%	1.002 1.020 1.033 1.127 88.7%	1.004 1.022 1.022 1.091 91.6%	1.003 1.015 1.016 1.068 93.6%	1.001 1.016 1.017 1.051 95.1%	1.001 1.009 1.033 96.8%	1.001 1.009 1.024 97.7%	1.001 1.008 1.007 1.015 98.5%	1.002 1.002 1.008 99.2%	1.001 1.001 1.006 99.4%	1.001 1.001 1.005 99.5%	1.001 1.001 1.004 99.6%	1.000 1.000 1.003 99.7%	1.000 1.000 1.003 99.7%	1.000 1.000 1.003 99.7%	1.000 1.000 1.003 99.7%	1.004 1.000 1.003 99.7%	1.003 1.003 99.7%

Section 7 Exhibit 1 Page 8

Massachusetts Colleges & Universities - Cluster 4 Indemnity

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
		ate Loss		ite Loss	_	Iltimate Loss	Change in U	Itimate Loss	
Accident	As o	f 6/11	As o	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)	
Year	Low	High	Low	High	Low	Low	High	High	
All Prior Yrs	3,751,294	4,207,953	3,542,262	3,834,860	(209,031)	-5.6%	(373,093)	-8.9%	
6/30/82-83	758,137	773,003	758,137	773,003	0	0.0%	0	0.0%	
6/30/83-84	936,086	954,440	936,086	954,440	0	0.0%	0	0.0%	
6/30/84-85	1,521,879	1,551,720	1,521,879	1,551,720	0	0.0%	0	0.0%	
6/30/85-86	1,877,000	1,879,000	1,874,000	1,876,000	(3,000)	-0.2%	(3,000)	-0.2%	
6/30/86-87	2,522,000	2,761,000	2,566,000	2,809,000	44,000	1.7%	48,000	1.7%	
6/30/87-88	4,082,856	4,202,940	4,171,472	4,294,162	88,616	2.2%	91,222	2.2%	
6/30/88-89	1,545,514	1,590,971	1,545,514	1,590,971	0	0.0%	0	0.0%	
6/30/89-90	3,396,000	3,397,000	3,536,203	3,640,209	140,203	4.1%	243,209	7.2%	
6/30/90-91	1,404,000	1,404,000	1,400,000	1,400,000	(4,000)	-0.3%	(4,000)	-0.3%	
6/30/91-92	1,481,153	1,645,725	1,467,809	1,630,899	(13,344)	-0.9%	(14,826)	-0.9%	
6/30/92-93	1,170,446	1,204,871	1,170,446	1,204,871	0	0.0%	0	0.0%	
6/30/93-94	1,079,000	1,434,000	1,097,000	1,461,000	18,000	1.7%	27,000	1.9%	
6/30/94-95	1,508,000	1,508,000	1,540,000	1,540,000	32,000	2.1%	32,000	2.1%	
6/30/95-96	1,294,428	1,332,499	1,294,428	1,332,499	0	0.0%	0	0.0%	
6/30/96-97	1,149,000	1,150,000	1,159,000	1,160,000	10,000	0.9%	10,000	0.9%	
6/30/97-98	1,987,000	1,992,000	2,053,000	2,058,000	66,000	3.3%	66,000	3.3%	
6/30/98-99	1,393,000	1,464,000	1,421,000	1,493,000	28,000	2.0%	29,000	2.0%	
6/30/99-00	1,328,000	1,331,000	1,320,000	1,323,000	(8,000)	-0.6%	(8,000)	-0.6%	
6/30/00-01	1,728,000	1,730,000	1,755,000	1,758,000	27,000	1.6%	28,000	1.6%	
6/30/01-02	2,527,000	2,539,000	2,558,000	2,571,000	31,000	1.2%	32,000	1.3%	
6/30/02-03	1,435,000	1,438,000	1,440,000	1,443,000	5,000	0.3%	5,000	0.3%	
6/30/03-04	1,900,000	1,997,000	1,854,000	1,948,000	(46,000)	-2.4%	(49,000)	-2.5%	
6/30/04-05	1,381,000	1,551,000	1,332,000	1,494,000	(49,000)	-3.5%	(57,000)	-3.7%	
6/30/05-06	1,796,000	1,961,000	1,739,000	1,896,000	(57,000)	-3.2%	(65,000)	-3.3%	
6/30/06-07	1,353,000	1,632,000	1,311,000	1,567,000	(42,000)	-3.1%	(65,000)	-4.0%	
6/30/07-08	2,528,000	2,545,000	2,502,000	2,517,000	(26,000)	-1.0%	(28,000)	-1.1%	
6/30/08-09	1,919,000	2,148,000	2,017,000	2,159,000	98,000	5.1%	11,000	0.5%	
6/30/09-10	2,909,000	3,293,000	3,250,000	3,500,000	341,000	11.7%	207,000	6.3%	
6/30/10-11	2,604,000	2,995,000	2,744,000	2,968,000	140,000	5.4%	(27,000)	-0.9%	
6/30/11-12									
Total	56,264,792	59,613,121	56,876,236	59,748,634	611,444	1.1%	135,512	0.2%	

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 7, Exhibit 1, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1



Massachusetts Colleges & Universities - Cluster 4 Indemnity

Calculation of Ultimate Lump Sum Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Paid Loss	Implied	Ult Loss	Selected Incr	Cumulative	Total	Paid	Est Ult	Ultimate		Est Ult	Selected	Prior
Accident	Excluding	Cumulative	Excluding	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum -	Lump Sum	Lump Sum	Lump Sum -	Est Ultimate	Est Ultimate
Year	Lump Sum	LDF	Lump Sum	% Outstdg	% Outstdg	Outstdg	to Date	Incr Method	Percentage	LDF	Paid Method	Lump Sums	Lump Sums
All Prior Yrs	2,952,056	1.244	3,672,811	0.0%	0.0%	0	15,750	15,750	0.4%	1.000	15,750	15,750	15,750
6/30/82-83	716,272	1.003	718,243	0.0%	0.0%	0	27,000	27,000	3.8%	1.000	27,000	27,000	27,000
6/30/83-84	837,731	1.003	840,036	0.0%	0.0%	0	80,000	80,000	9.5%	1.000	80,000	80,000	80,000
6/30/84-85	1,393,062	1.003	1,396,895	0.0%	0.0%	0	98,976	98,976	7.1%	1.000	98,976	98,976	98,976
6/30/85-86	1,833,907	1.003	1,838,953	0.0%	0.0%	0	35,000	35,000	1.9%	1.000	35,000	35,000	35,000
6/30/86-87	2,436,751	1.103	2,687,801	0.0%	0.0%	0	121,500	121,500	4.5%	1.000	121,500	121,500	121,500
6/30/87-88	3,794,835	1.203	4,566,332	0.0%	0.0%	0	294,843	294,843	6.5%	1.000	294,843	294,843	294,843
6/30/88-89	1,302,910	1.004	1,307,801	0.0%	0.0%	0	212,300	212,300	16.2%	1.000	212,300	212,300	212,300
6/30/89-90	3,117,154	1.005	3,131,985	0.0%	0.0%	0	349,712	349,712	11.2%	1.000	349,712	349,712	316,379
6/30/90-91	1,160,107	1.006	1,166,793	0.0%	0.0%	0	233,500	233,500	20.0%	1.000	233,500	233,500	233,500
6/30/91-92	1,135,353	1.411	1,601,851	0.0%	0.0%	0	256,183	256,183	16.0%	1.000	256,183	256,183	256,183
6/30/92-93	986,496	1.015	1,001,117	0.0%	0.0%	0	161,000	161,000	16.1%	1.000	161,000	161,000	161,000
6/30/93-94	907,933	1.434	1,301,616	0.0%	0.0%	0	159,000	159,000	12.2%	1.000	159,000	159,000	159,080
6/30/94-95	1,133,473	1.033	1,170,864	0.0%	0.0%	0	369,205	369,205	31.5%	1.001	369,574	369,390	369,574
6/30/95-96	927,586	1.051	974,923	0.0%	0.0%	0	341,461	341,461	35.0%	1.002	342,144	341,803	343,290
6/30/96-97	873,746	1.068	932,999	0.2%	0.2%	1,999	224,882	226,881	24.3%	1.004	225,783	226,332	226,633
6/30/97-98	1,640,371	1.091	1,790,036	0.0%	0.2%	3,835	265,000	268,835	15.0%	1.006	266,593	267,714	268,071
6/30/98-99	1,077,612	1.127	1,214,843	0.0%	0.2%	2,603	205,250	207,853	17.1%	1.008	206,897	207,375	207,765
6/30/99-00	844,236	1.160	979,036	0.0%	0.2%	2,098	338,100	340,198	34.7%	1.011	341,836	341,017	341,629
6/30/00-01	1,245,356	1.189	1,480,673	0.0%	0.2%	3,173	273,502	276,675	18.7%	1.014	277,354	277,014	277,840
6/30/01-02	1,742,639	1.217	2,121,483	0.0%	0.2%	4,546	443,250	447,796	21.1%	1.019	451,652	449,724	457,675
6/30/02-03	1,004,005	1.256	1,261,260	0.2%	0.4%	4,972	172,500	177,472	14.1%	1.041	179,550	178,511	183,227
6/30/03-04	1,163,453	1.303	1,516,256	0.4%	0.8%	12,016	323,500	335,516	22.1%	1.058	342,161	338,838	351,471
6/30/04-05	825,393	1.353	1,116,773	0.7%	1.5%	16,746	198,100	214,846	19.2%	1.089	215,670	215,258	237,953
6/30/05-06	1,059,134	1.406	1,489,160	1.8%	3.3%	49,480	200,673	250,153	16.8%	1.241	248,959	249,556	283,541
6/30/06-07	741,612	1.482	1,099,336	2.0%	5.4%	59,007	150,000	209,007	19.0%	1.435	215,212	212,110	246,344
6/30/07-08	1,327,356	1.527	2,026,278	1.3%	6.7%	135,818	318,750	454,568	22.4%	1.654	527,185	490,876	568,347
6/30/08-09	1,006,874	1.682	1,693,592	3.8%	10.5%	177,786	125,000	302,786	17.9%	2.750	343,765	323,276	316,694
6/30/09-10	1,315,276	1.977	2,600,375	3.4%	13.9%	362,167	245,500	607,667	23.4%	4.855	1,191,909	899,788	572,153
6/30/10-11	954,293	2.689	2,566,115	5.1%	19.1%	489,212	25,000	514,212	20.0%	11.579	289,465	401,839	282,094
6/30/11-12	412,473	6.054	2,497,253	2.3%	21.4%	534,457	0	534,457	21.4%	25.421	0	400,843	
Total	41,869,455	•	53,763,486		•	1,859,914	6,264,437	8,124,351	15.1%	•	8,080,473	8,236,026	7,545,811

- (2) From Section 7, Exhibit 1, Page 2, Column 3
- (3) = (4) / (2)
- (4) From Section 7, Exhibit 1, Page 2, Column 6
- (5) From Section 7, Exhibit 1, Page 11
- (6) Downward sum of (5)
- $(7) = (6) \times (4)$
- (8) From Section 7, Exhibit 1, Page 10
- (9) = (7) + (8)
- (10) = (9) / (4)
- (11) From Section 7, Exhibit 1, Page 12
- $(12) = (8) \times (11)$
- (13) Selected based on (9) and (12)
- (14) From Aon analysis as of June 30, 2011



Commonwealth of Massachusetts Workers Compensation Massachusetts Colleges & Universities - Cluster 4 INDEMNITY Lump Sum Development Incremental Lump Sum Payments

INDEMNITY
imp Sum Development

Acc Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-85 Jun-87 Jun-89 Jun-90 Jun-91 Jun-91 Jun-95 Jun-95 Jun-95 Jun-97 Jun-98 Jun-99 Jun-00 Jun-01 Jun-01 Jun-02 Jun-03 Jun-04 Jun-05 Ju	0-12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12-24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24-36 0 0 0 0 0 0 22,500 25,211 48,000 15,000 110,000 113,000 100,000 113,000 100,000 136,850 62,500 0 0 30,000 75,000 10,000 138,850 64,500 30,000 175,000 183,860 10,000 174,000	36-48 0 0 0 0 19,976 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	48-60 0 0 0 0 0 37,000 0 35,001 0 37,000 0 37,000 16,000 40,405 70,461 20,000 44,250 47,000 44,250 47,000 987,500 49,500 75,673 0 74,750	60-72 0 0 0 5,000 27,500 30,000 67,500 76,500 0 0 0 65,000 22,500 20,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	72-84 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	84-96 0 0 46,500 7,500 0 20,000 43,343 33,43 30,00 12,000 12,000 0 0 0 40,000 0 0 0 50,000 0 0	96-108 0 12,000 16,000 15,000 35,000 35,000 0 53,000 0 0 0 0 20,625 40,000 0 0 0	108-120 0 0 0 51,500 0 0 31,000 0 0 0 20,000 0 0 22,875 66,000 0 0 0	120-132 0 0 0 0 0 0 0 75,000 0 0 9,683 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	132-144 0 0 17,500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	144-156 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	156-168 2,750 0 0 0 0 0 44,000 0 0 0 0 0 0 0 0 0 0 0	168-180 13,000 15,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	180-192 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	192-204 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	204-216 0 0 0 0 0 0 0 0 17,000 0 0 25,000 0 0 0	216-228 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	228-240 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	240-252 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	252-264 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	264-276 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	276-288 0 0 0 0 0 0 0 0	288-300 0 0 0 0 0 0 0	300-312 0 0 0 0 0 0	312-324 0 0 0 0 0 0	324-336 0 0 0 0	336-348 0 0 0	348-360 0 0 0	360-372 0
Cumulative Lump Acx Yr Ending All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-86 Jun-87 Jun-88 Jun-89 Jun-90 Jun-91 Jun-92	0 0 0 0 0 0 0 0 0	24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	36 0 0 0 0 0 0 22,500 33,000 25,211	48 0 0 0 19,976 0 0 22,500 39,800	60 0 0 0 19,976 0 0 59,500 39,800	72 0 0 0 24,976 0 27,500 89,500	84 0 0 0 24,976 0 27,500 171,500	96 0 0 46,500 32,476 0 47,500	108 0 12,000 62,500 47,476 35,000 77,500	120 0 12,000 62,500 98,976 35,000 77,500	132 0 12,000 62,500 98,976 35,000 77,500	144 0 12,000 80,000 98,976 35,000 77,500	156 0 12,000 80,000 98,976 35,000	2,750 12,000 80,000 98,976 35,000	180 15,750 27,000 80,000 98,976 35,000	192 15,750 27,000 80,000 98,976 35,000	204 15,750 27,000 80,000 98,976 35,000	216 15,750 27,000 80,000 98,976 35,000	228 15,750 27,000 80,000 98,976 35,000	240 15,750 27,000 80,000 98,976 35,000	252 15,750 27,000 80,000 98,976 35,000	264 15,750 27,000 80,000 98,976 35,000	276 15,750 27,000 80,000 98,976 35,000	288 15,750 27,000 80,000 98,976 35,000	300 15,750 27,000 80,000 98,976 35,000	312 15,750 27,000 80,000 98,976 35,000	324 15,750 27,000 80,000 98,976 35,000	336 15,750 27,000 80,000 98,976	348 15,750 27,000 80,000	360 15,750 27,000	372 15,750
Jun-93 Jun-94 Jun-95 Jun-96 Jun-97 Jun-99 Jun-00 Jun-01 Jun-02	0 0 3,000 0 22,500 0 0 0 27,500 48,000	62,500 3,000 105,500 119,500 49,500 80,000 6,250 95,000 30,000 66,250	48,000 15,000 80,500 28,000 208,000 129,500 162,500 170,000 16,250 231,850 92,500 130,750	55,211 80,500 104,500 112,000 43,000 262,800 145,000 174,882 195,000 108,250 243,850 166,501 243,250	90,212 80,500 104,500 149,000 59,000 303,205 215,461 194,882 220,000 173,250 288,100 213,501 318,250	107,300 166,712 80,500 104,500 149,000 124,000 325,705 235,461 224,882 220,000 173,250 308,100 213,501 423,250	107,300 196,712 80,500 104,500 149,000 124,000 325,705 235,461 224,882 220,000 173,250 338,100 223,502 443,250	214,843 137,300 196,712 153,500 116,500 161,000 159,000 325,705 235,461 224,882 260,000 173,250 338,100 273,502 443,250	229,843 137,300 249,712 153,500 116,500 161,000 159,000 346,330 275,461 224,882 260,000 173,250 338,100 273,502 443,250	260,843 137,300 249,712 153,500 136,500 161,000 159,000 369,205 341,461 224,882 260,000 173,250 338,100 273,502 443,250	260,843 212,300 249,712 153,500 146,183 161,000 159,000 369,205 341,461 224,882 260,000 205,250 338,100 273,502 443,250	260,843 212,300 249,712 153,500 146,183 161,000 159,000 369,205 341,461 224,882 260,000 205,250 338,100 273,502	77,500 260,843 212,300 249,712 153,500 146,183 161,000 159,000 369,205 341,461 224,882 265,000 205,250 338,100	121,500 260,843 212,300 249,712 153,500 146,183 161,000 159,000 369,205 341,461 224,882 265,000 205,250	121,500 260,843 212,300 249,712 153,500 146,183 161,000 159,000 369,205 341,461 224,882 265,000	121,500 260,843 212,300 249,712 178,500 146,183 161,000 159,000 369,205 341,461 224,882	121,500 260,843 212,300 249,712 208,500 221,183 161,000 159,000 369,205 341,461	121,500 277,843 212,300 249,712 233,500 256,183 161,000 159,000 369,205	121,500 294,843 212,300 249,712 233,500 256,183 161,000 159,000	121,500 294,843 212,300 249,712 233,500 256,183 161,000		121,500 294,843 212,300 316,379 233,500	121,500 294,843 212,300 349,712	121,500 294,843 212,300	121,500 294,843	121,500					

Section 7 Exhibit 1 Page 10



Commonwealth of Massachusetts Workers Compensation Massachusetts Colleges & Universities - Cluster 4 INDEMNITY

Lump Sum Development
Incremental Lump Sums as a % of Ultimate Losses Excluding Lump Sums

96-108 108-120 120-132 132-144 144-156 156-168 168-180 180-192 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 348-360 360-372 Acc Yr Ending 336-348 24-36 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.004 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.014 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.004 0.000 0.000 0.055 0.019 0.000 0.000 0.021 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Jun-84
Jun-85
Jun-86
Jun-87
Jun-88
Jun-89
Jun-90
Jun-91
Jun-92
Jun-93
Jun-94
Jun-95
Jun-93
Jun-94
Jun-95
Jun-93
Jun-94
Jun-95
Jun-90
Jun-01
Jun-01
Jun-02
Jun-03
Jun-04
Jun-05
Jun-04
Jun-05
Jun-07
Jun-08
Jun-09
Ju 0.000 0.000 0.000 0.000 0.000 0.000 0.005 0.011 0.000 0.019 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.010 0.000 0.007 0.011 0.000 0.000 0.000 0.000 0.016 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.003 0.007 0.000 0.000 0.004 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.004 0.000 0.000 0.025 0.000 0.000 0.000 0.062 0.000 0.090 0.000 0.000 0.000 0.000 0.008 0.041 0.009 0.018 0.019 0.088 0.010 0.121 0.050 0.008 0.140 0.042 0.030 0.024 0.005 0.010 0.028 0.056 0.031 0.012 0.047 0.016 0.013 0.014 0.076 0.012 0.050 0.053 0.000 0.052 0.024 0.000 0.000 0.050 0.019 0.021 0.032 0.000 0.020 0.000 0.049 0.028 0.000 0.023 0.000 0.017 0.000 0.057 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.037 0.012 0.063 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.021 0.026 0.021 0.000 0.000 0.000 0.000 0.000 0.000 0.007 0.012 0.000 0.000 0.047 0.000 0.022 0.000 0.012 0.006 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.002 0.000 0.027 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.012 0.035 0.072 0.021 0.014 0.000 0.018 0.020 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.099 0.053 0.045 0.005 0.097 0.002 0.009 0.042 0.023 0.000 0.000 0.000 0.000 $0.000 \\ 0.000$ 0.041 0.068 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.022 0.000 0.000 0.000 0.000 0.003 0.000 0.000 0.000 0.054 0.045 0.032 0.035 0.000 0.000 0.031 0.007 0.000 0.000 0.034 0.000 0.000 0.026 0.000 0.000 0.000 0.000 0.019 0.000 0.000 0.000 0.000 0.023 0.009 0.000 0.000 0.000 0.000 0.042 0.005 0.013 0.020 0.036 0.016 0.024 0.000 0.035 0.013 0.068 0.091 0.015 0.040 0.050 0.032 0.014 0.058 0.044 0.051 0.000 0.000 0.021 0.018 0.066 0.027 0.049 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.037 0.000 0.021 0.018 0.035 Jun-11 Jun-12 0.000 0.010 0.000 60-72 72-84 84-96 96-108 108-120 120-132 132-144 144-156 156-168 168-180 180-192 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 336-348 Averages 12-24 24-36 36-48 48-60 Simple Avg All Yrs (ex P) 0.032 0.002 0.023 0.024 0.022 0.014 0.004 0.000 0.001 0.001 0.001 0.005 0.004 0.000 0.000 0.000 Latest 5 Latest 3 0.000 0.022 0.051 0.034 0.038 0.013 0.020 0.018 0.000 0.000 0.005 0.000 0.001 0.000 0.000 0.000 0.009 0.009 0.000 0.000 0.002 0.002 0.002 0.000 0.000 0.000 0.000 0.019 0.058 0.027 0.029 0.006 0.031 0.019 0.000 0.000 0.000 0.000 0.001 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.004 0.004 0.004 0.000 0.000 0.000 0.000 0.000 Olympic Avg All Yrs (ex P) 0.002 0.000 0.021 0.019 0.029 0.037 0.023 0.034 0.021 0.037 0.013 0.005 0.004 0.002 0.000 0.000 0.000 0.000 0.000 0.002 0.003 0.002 0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.011 0.009 0.002 0.002 0.000 0.000 0.000 Latest 10 0.008 0.000 0.000 0.000 0.000 0.000 Latest 5 0.000 0.021 0.051 0.036 0.044 0.013 0.012 0.014 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.007 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Dev Factor Selection Prior Selected 0.045 0.051 0.000 0.000 $N\!A$ 0.024 0.030 0.030 0.023 0.021 0.018 0.007 0.004 0.002 0.000 0.000 0.000 0.000 0.000 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.023 0.034 0.038 0.004 0.002 0.000 0.000 0.000 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 NΔ FacTol IIt 0.214 0.191 0.139 0.105 0.067 0.054 0.033 0.015 0.008 0.004 0.002 0.002 0.002 0.002 0.002 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

Section 7

Exhibit 1 Page 11



														sachusetts C Pai	Iassachusett Colleges & U INDEMNI d Loss Deve Loss - Lump	niversities - TY lopment	Compensatio Cluster 4	n													Section 7 Exhibit 1 Page 12
Acc Yr Ending All Prior Yrs Jum-83 Jum-84 Jum-85 Jum-85 Jum-87 Jum-89 Jum-90 Jum-91 Jum-92 Jum-92 Jum-92 Jum-92 Jum-94 Jum-95 Jum-96 Jum-96 Jum-96 Jum-96 Jum-96 Jum-96 Jum-96 Jum-00 Jum-01 Jum-02 Jum-04 Jum-05 Jum-06 Jum-06 Jum-06 Jum-06 Jum-06 Jum-06 Jum-08 Ju	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24 0 0 0 0 0 0 0 33,000 0 0 62,500 3,000 49,500 80,000 6,250 95,000 105,500 119,500 30,000 49,500 30,000 49,500 30,000 49,500 30,000 49,500 30,000 49,500 30,000 49,500 30,000 49,500 30,000 40	36 0 0 0 0 0 0 22,500 33,000 25,211 48,000 15,000 28,000 28,000 162,500 170,000 16,250 231,850 7,000 53,600 50,000 115,000 50,000 115,000 50,000 115,000 50,	48 0 0 0 19,976 0 0 22,500 39,800 55,211 80,500 104,500 112,000 43,000 174,882 195,000 174,882 195,000 1243,250 243,850 29,000 98,600 125,000 125,000 125,000 125,000	60 0 0 19,976 0 0 59,500 39,800 90,212 80,500 104,500 104,500 104,500 1194,882 220,000 173,250 2215,461 194,882 220,000 113,250 115,501 116,500 116,500 1148,100 200,673 115,000 318,750	72 0 0 0 0 24,976 89,500 107,300 164,500 104,500 124,000 325,705 235,461 124,882 220,000 173,250 308,100 143,250 162,500 162,500 162,500 168,500 168,500 168,500 168,500 168,500 168,500 168,500 168,500 168,500 168,500 168,500	84 0 0 0 24,976 0 171,500 191,500 196,712 80,500 144,000 124,000 124,000 125,705 235,461 224,882 220,000 173,250 338,100 238,100 248,500 198,500 248,500 248,500 248,500 298,500 200,673	96 0 0 46,500 32,570 47,500 214,843 137,300 196,712 153,702 155,000 159,000 325,000 159,000 325,000 32	108 0 12,000 62,500 47,476 35,000 77,500 229,843 137,300 249,712 153,500 161,000 159,000 346,330 275,461 124,882 260,000 173,250 338,100 273,502 443,250 172,500 323,500	120 0 12,000 62,500 98,976 35,000 77,500 260,843 137,300 136,500 136,500 136,500 136,500 136,000 139,000 369,205 341,461 224,461 232,260,000 173,250 321,461 244,461 273,500 273,500	132 0 12,000 98,976 35,000 77,500 260,843 212,300 249,712 153,500 146,183 161,000 159,000 369,205 341,461 224,882 260,000 205,250 331,260 207,350 244,3250	1444 0 12,000 80,000 98,976 35,000 77,500 260,843 212,300 249,712 153,500 146,183 161,000 159,000 369,205 341,461 224,882 260,000 273,502	156 0 12,000 80,000 98,976 35,000 77,500 260,843 212,300 249,712 153,500 146,183 161,000 159,000 369,205 341,461 224,882 265,000 205,250 338,100	168 2,750 12,000 80,000 80,000 80,000 80,976 35,000 121,500 260,843 212,300 146,183 146,183 146,183 146,183 244,882 265,000 205,250	180 15,750 27,000 80,000 98,976 35,000 121,500 260,843 212,300 146,183 146,183 146,183 369,205 341,461 224,882 265,000	192 15,750 27,000 80,000 98,976 35,000 121,500 260,843 212,300 249,712 178,500 146,183 161,000 159,000 369,205 341,461 224,882	204 15,750 27,000 80,000 98,976 35,000 121,500 260,843 212,300 221,183 161,103 249,712 208,500 369,205 341,461	216 15,750 27,000 80,000 98,976 35,000 121,500 277,843 212,300 249,712 233,500 256,183 161,000 369,205	228 15.750 27.000 80.000 98.976 35.000 121.500 294.843 212.300 249.712 233.500 156.183 161.000 159,000	240 15,750 27,000 80,000 98,976 35,000 121,500 294,843 212,300 249,712 233,500 256,183 161,000	252 15,750 27,000 80,000 98,976 35,000 121,500 294,843 212,300 283,045 233,500 256,183	264 15,750 27,000 80,000 98,976 35,000 1294,843 212,300 316,379 233,500	276 15,750 27,000 80,000 98,976 35,000 121,500 294,843 212,300 349,712	288 15,750 27,000 80,000 98,976 35,000 121,500 294,843 212,300	300 15,750 27,000 80,000 98,976 35,000 121,500 294,843	312 15,750 27,000 80,000 80,000 35,000 121,500	324 15,750 27,000 80,000 98,976 35,000	336 15,750 57,900 80,000 98,976	348 15,750 27,000 80,000	360 15,750 27,000	372 15,750
Age-to-Age Facto Act Y Ending All Frior YE Jun-84 Jun-84 Jun-85 Jun-85 Jun-85 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-94 Jun-95 Jun-96 Jun-96 Jun-97 Jun-98 Jun-97 Jun-98 Jun-97 Jun-98 Jun-97 Jun-98 Jun-97 Jun-98 Jun-97 Jun-98 Jun-99 J	1.000 5.311 1.091	1.000 1.288 9.333 1.972 1.084 3.283 2.125 2.600 2.441 3.083 1.974 1.571 1.000 3.573 1.667 2.875 6.561 1.837	1.000 1.206 2.190 1.677 6.967 1.391 1.536 1.120 1.126 1.147 1.147 1.860 1.545 4.143 1.840 2.500 1.304 1.127 1.127	1.000 2.644 1.000 1.634 1.000 1.330 1.372 1.154 1.486 1.128 1.308 1.000 4.017 1.502 1.005 1.000 1.306	1.250 1.504 2.696 1.848 1.000 1.000 2.102 1.074 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.275 1.275 1.275 1.275 1.275	1.000 1.000 1.916 1.000 1.916 1.000	84-96 1.300 1.727 1.253 1.280 1.907 1.115 1.081 1.282 1.000 1.000 1.000 1.182 1.000 1.000 1.224 1.000 1.002 1.302 1.000	96-108 1.344 1.462 1.632 1.070 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	108-120 1.000 1.000 2.085 1.000	120-132 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.001 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	132-144 1.000 1.280 1.000 1.200 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	144-156 1.000	156-168 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	168-180 5.727 2.250 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	180-192 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	192-204 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	204-216 1.000 1.000 1.000 1.000 1.000 1.000 1.005 1.005 1.000 1.120 1.1158 1.000 1.000	216-228 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.001 1.000 1.000 1.000 1.000	228-240 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	240-252 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.133 1.000 1.000	252-264 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.118 1.000	264-276 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	276-288 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	288-300 1.000 1.000 1.000 1.000 1.000 1.000 1.000	300-312 1.000 1.000 1.000 1.000 1.000 1.000	312-324 1.000 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000 1.000	336-348 1.000 1.000 1.000	348-360 1.000 1.000	360-372 1.000	To Uli
Averages Simple Avg All Yrs (ex P) Latest 5 Latest 3	12-24 2.196	24-36 2.775 3.279 3.950	36-48 2.106 1.739 1.451	48-60 1.439 1.886 1.304	60-72 1.276 1.137 1.045	72-84 1.102 1.180 1.284	84-96 1.186 1.117 1.121	96-108 1.100 1.000 1.000	1.081 1.000 1.000	1.040 1.037 1.000	132-144 1.015 1.000 1.000	1.001 1.004 1.006	1.033 1.000 1.000	1.078 1.000 1.000	1.011 1.000 1.000	192-204 1.049 1.103 1.000	204-216 1.026 1.056 1.000	216-228 1.005 1.000 1.000	228-240 1.000 1.000 1.000	240-252 1.013 1.027 1.044	252-264 1.013 1.024 1.039	264-276 1.013 1.021 1.035	276-288 1.000 1.000 1.000	288-300 1.000 1.000 1.000	300-312 1.000 1.000 1.000	312-324 1.000 1.000	324-336 1.000 1.000	336-348 1.000	348-360 1.000	360-372	To Ult
Volume Wtd All Yrs (ex P) Latest 5 Latest 3	9.500	2.385 3.303 3.778	1.470 1.485 1.309	1.286 1.445 1.290	1.170 1.117 1.040	1.082 1.136 1.251	1.120 1.106 1.140	1.059 1.000 1.000	1.048 1.000 1.000	1.029 1.022 1.000	1.005 1.000 1.000	1.001 1.004 1.006	1.014 1.000 1.000	1.005 1.000 1.000	1.009 1.000 1.000	1.043 1.064 1.000	1.035 1.054 1.000	1.009 1.000 1.000	1.000 1.000 1.000	1.021 1.027 1.045	1.024 1.029 1.046	1.028 1.034 1.040	1.000 1.000 1.000	1.000 1.000 1.000	1.000 1.000 1.000	1.000 1.000	1.000	1.000	1.000		
Dev Factor Select Prior Selected FacToUlt Percent of Ult	2.196 2.196 2.196 25.421 3.9%	2.298 2.385 11.579 8.6%	1.913 1.765 4.855 20.6%	1.635 1.663 2.750 36.4%	1.210 1.153 1.654 60.5%	1.167 1.156 1.435 69.7%	1.100 1.140 1.241 80.6%	1.032 1.029 1.089 91.9%	1.017 1.016 1.058 94.5%	1.025 1.022 1.041 96.1%	1.005 1.005 1.019 98.1%	1.003 1.003 1.014 98.6%	1.003 1.003 1.011 98.9%	1.002 1.002 1.008 99.2%	1.002 1.002 1.006 99.4%	1.002 1.002 1.004 99.6%	1.001 1.001 1.002 99.8%	1.001 1.001 1.001 99.9%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 1.000 100.0%	1.000 1.000 100.0%

Section 7 Exhibit 1 Page 13

Massachusetts Colleges & Universities - Cluster 4 Indemnity

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	0.3%	0.0%	0.1%	0.0%	1.000	1.000
360	99.7%	0.0%	0.3%	0.0%	0.0%	0.981	0.971
348	99.7%	0.0%	0.3%	0.0%	0.0%	0.943	0.916
336	99.7%	0.0%	0.3%	0.0%	0.0%	0.907	0.864
324	99.7%	0.0%	0.3%	0.0%	0.0%	0.872	0.816
312	99.7%	0.0%	0.3%	0.0%	0.0%	0.838	0.769
300	99.7%	0.1%	0.3%	0.0%	0.0%	0.806	0.726
288	99.6%	0.1%	0.4%	0.0%	0.0%	0.830	0.761
276	99.5%	0.1%	0.5%	0.0%	0.0%	0.836	0.771
264	99.4%	0.2%	0.6%	0.1%	0.1%	0.835	0.770
252	99.2%	0.7%	0.8%	0.3%	0.2%	0.848	0.789
240	98.5%	0.9%	1.5%	0.4%	0.3%	0.894	0.852
228	97.7%	0.8%	2.3%	0.4%	0.3%	0.905	0.867
216	96.8%	1.7%	3.2%	0.8%	0.6%	0.900	0.858
204	95.1%	1.5%	4.9%	0.8%	0.6%	0.904	0.865
192	93.6%	2.0%	6.4%	1.1%	0.8%	0.896	0.853
180	91.6%	2.9%	8.4%	1.7%	1.3%	0.890	0.845
168	88.7%	2.5%	11.3%	1.5%	1.1%	0.888	0.842
156	86.2%	2.1%	13.8%	1.3%	1.0%	0.877	0.826
144	84.1%	2.0%	15.9%	1.3%	1.0%	0.861	0.805
132	82.1%	2.5%	17.9%	1.7%	1.4%	0.845	0.783
120	79.6%	2.9%	20.4%	2.0%	1.7%	0.833	0.767
108	76.7%	2.8%	23.3%	2.0%	1.7%	0.824	0.755
96	73.9%	2.8%	26.1%	2.1%	1.8%	0.812	0.740
84	71.1%	3.7%	28.9%	2.8%	2.5%	0.800	0.724
72	67.5%	2.0%	32.5%	1.6%	1.4%	0.793	0.716
60	65.5%	6.1%	34.5%	5.1%	4.7%	0.775	0.692
48	59.5%	8.9%	40.5%	7.7%	7.2%	0.780	0.700
36	50.6%	13.4%	49.4%	12.1%	11.6%	0.792	0.717
24	37.2%	20.7%	62.8%	19.5%	18.9%	0.808	0.739
12	16.5%	16.5%	83.5%	16.2%	16.0%	0.827	0.765

Total 100.0%

NOTES:

(2) = 1 / Section 7, Exhibit 1, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)

Section 7 Exhibit 1 Page 14

Massachusetts Colleges & Universities - Cluster 4 Indemnity

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount		unted
Accident	Outstandi		Factor at		ng Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	574,456	867,054		502,411	758,313
6/30/82-83	14,865	29,731	0.981	14,577	29,154
6/30/83-84	18,355	36,709	0.943	17,306	34,612
6/30/84-85	29,841	59,682	0.907	27,054	54,107
6/30/85-86	5,093	7,093	0.872	4,440	6,183
6/30/86-87	7,749	250,749	0.838	6,496	210,179
6/30/87-88	81,794	204,484	0.806	65,923	164,807
6/30/88-89	30,304	75,761	0.830	25,144	62,861
6/30/89-90	69,337	173,343	0.836	57,982	144,956
6/30/90-91	6,393	6,393	0.835	5,336	5,336
6/30/91-92	76,274	239,363	0.848	64,709	203,072
6/30/92-93	22,950	57,375	0.894	20,506	51,265
6/30/93-94	30,067	394,067	0.905	27,208	356,599
6/30/94-95	37,322	37,322	0.900	33,571	33,571
6/30/95-96	25,381	63,452	0.904	22,957	57,393
6/30/96-97	60,372	61,372	0.896	54,082	54,978
6/30/97-98	147,629	152,629	0.890	131,393	135,844
6/30/98-99	138,138	210,138	0.888	122,697	186,649
6/30/99-00	137,664	140,664	0.877	120,700	123,331
6/30/00-01	236,142	239,142	0.861	203,421	206,005
6/30/01-02	372,111	385,111	0.845	314,455	325,441
6/30/02-03	263,495	266,495	0.833	219,616	222,116
6/30/03-04	367,047	461,047	0.824	302,273	379,684
6/30/04-05	308,507	470,507	0.812	250,592	382,180
6/30/05-06	479,194	636,194	0.800	383,490	509,135
6/30/06-07	419,388	675,388	0.793	332,685	535,760
6/30/07-08	855,895	870,895	0.775	663,392	675,018
6/30/08-09	885,126	1,027,126	0.780	690,764	801,583
6/30/09-10	1,689,224	1,939,224	0.792	1,337,391	1,535,321
6/30/10-11	1,764,707	1,988,707	0.808	1,425,932	1,606,931
6/30/11-12	2,388,527	2,485,527	0.827	1,976,198	2,056,453
Total	11,543,345	14,512,742		9,424,701	11,908,836

_		
_	Discount Ca	alculation for
	All Pri	or Years
_	(Low)	(High)
(8) Estimated Total Reserve:	574,456	867,054
(9) Projected Number of Years:	7	7
(10) Projected Paid Loss per Year:	82,065	123,865
(11) Discounted Value at 4%:	502,411	758,313

0.816

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 7, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 7, Exhibit 1, Page 13, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.821



Section 7 Exhibit 1 Page 15

Massachusetts Colleges & Universities - Cluster 4 Indemnity

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount		unted
Accident	Outstandi	ŭ	Factor at		ng Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	574,456	867,054		471,863	712,205
6/30/82-83	14,865	29,731	0.971	14,439	28,877
6/30/83-84	18,355	36,709	0.916	16,818	33,637
6/30/84-85	29,841	59,682	0.864	25,796	51,591
6/30/85-86	5,093	7,093	0.816	4,153	5,784
6/30/86-87	7,749	250,749	0.769	5,962	192,914
6/30/87-88	81,794	204,484	0.726	59,366	148,415
6/30/88-89	30,304	75,761	0.761	23,063	57,658
6/30/89-90	69,337	173,343	0.771	53,474	133,684
6/30/90-91	6,393	6,393	0.770	4,921	4,921
6/30/91-92	76,274	239,363	0.789	60,203	188,931
6/30/92-93	22,950	57,375	0.852	19,543	48,858
6/30/93-94	30,067	394,067	0.867	26,057	341,520
6/30/94-95	37,322	37,322	0.858	32,040	32,040
6/30/95-96	25,381	63,452	0.865	21,958	54,895
6/30/96-97	60,372	61,372	0.853	51,479	52,331
6/30/97-98	147,629	152,629	0.845	124,679	128,901
6/30/98-99	138,138	210,138	0.842	116,325	176,956
6/30/99-00	137,664	140,664	0.826	113,736	116,214
6/30/00-01	236,142	239,142	0.805	190,109	192,524
6/30/01-02	372,111	385,111	0.783	291,287	301,463
6/30/02-03	263,495	266,495	0.767	202,224	204,526
6/30/03-04	367,047	461,047	0.755	276,952	347,879
6/30/04-05	308,507	470,507	0.740	228,266	348,130
6/30/05-06	479,194	636,194	0.724	347,121	460,849
6/30/06-07	419,388	675,388	0.716	300,194	483,436
6/30/07-08	855,895	870,895	0.692	592,308	602,688
6/30/08-09	885,126	1,027,126	0.700	619,953	719,412
6/30/09-10	1,689,224	1,939,224	0.717	1,210,346	1,389,474
6/30/10-11	1,764,707	1,988,707	0.739	1,303,978	1,469,497
6/30/11-12	2,388,527	2,485,527	0.765	1,827,193	1,901,397
Total	11,543,345	14,512,742		8,635,806	10,931,610

_		
	Discount Ca	lculation for
	All Pri	or Years
_	(Low)	(High)
(8) Estimated Total Reserve:	574,456	867,054
(9) Projected Number of Years:	7	7
(10) Projected Paid Loss per Year:	82,065	123,865
(11) Discounted Value at 6%:	471,863	712,205

0.748

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 7, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 7, Exhibit 1, Page 13, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.753



Massachusetts Colleges & Universities - Cluster 4 Total Indemnity (Including Lump Sums) + Medical

Calculation of Fiscal Year 7/1/12 - 13 Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Cumulative	Increme	ntal Paid	Estimated Pa	nyments from	FY 7/1/12	- 6/30/13
Accident	Est Ult Losses	Est Ult Losses	Paid Losses	Reserves	Reserves	Percent	as a % of	as a % of	7/1/12 -	6/30/13	as a % of	Reserves
Year	(Low)	(High)	to Date	(Low)	(High)	Paid	Ultimates	Reserves	(Low)	(High)	(Low)	(High)
All Prior yrs	3,934,062	4,271,741	3,304,559	629,503	967,182				42,643	46,907	6.8%	4.8%
6/30/82-83	811,448	826,578	796,317	15,131	30,261	97.2%	0.5%	18.0%	2,730	5,460	18.0%	18.0%
6/30/83-84	963,997	982,491	945,504	18,493	36,987	97.1%	0.5%	17.5%	3,244	6,488	17.5%	17.5%
6/30/84-85	1,635,334	1,665,739	1,604,929	30,405	60,810	97.2%	0.5%	18.1%	5,502	11,004	18.1%	18.1%
6/30/85-86	2,260,269	2,264,190	2,253,254	7,015	10,936	99.6%	0.2%	50.4%	3,536	5,513	50.4%	50.4%
6/30/86-87	2,805,246	3,049,437	2,796,307	8,940	253,130	95.5%	0.5%	11.2%	999	28,275	11.2%	11.2%
6/30/87-88	4,810,472	4,934,162	4,726,075	84,397	208,088	97.0%	0.5%	16.7%	14,059	34,664	16.7%	16.7%
6/30/88-89	1,973,514	2,018,971	1,941,183	32,331	77,788	97.2%	0.5%	18.1%	5,861	14,101	18.1%	18.1%
6/30/89-90	4,079,203	4,184,209	4,008,247	70,956	175,962	97.0%	0.5%	16.7%	11,873	29,444	16.7%	16.7%
6/30/90-91	1,875,000	1,875,000	1,866,079	8,921	8,921	99.5%	0.2%	42.0%	3,750	3,750	42.0%	42.0%
6/30/91-92	2,230,809	2,394,899	2,150,562	80,247	244,337	93.0%	0.5%	7.1%	5,718	17,410	7.1%	7.1%
6/30/92-93	1,679,326	1,716,282	1,653,844	25,482	62,438	97.4%	0.5%	19.3%	4,921	12,057	19.3%	19.3%
6/30/93-94	1,671,000	2,035,000	1,634,641	36,359	400,359	88.2%	1.0%	8.5%	3,085	33,975	8.5%	8.5%
6/30/94-95	2,096,000	2,097,000	2,051,520	44,480	45,480	97.9%	1.0%	46.6%	20,732	21,198	46.6%	46.6%
6/30/95-96	1,879,180	1,920,160	1,850,889	28,290	69,271	97.4%	1.0%	38.9%	11,017	26,976	38.9%	38.9%
6/30/96-97	1,849,000	1,850,000	1,771,425	77,575	78,575	95.8%	2.0%	47.4%	36,753	37,227	47.4%	47.4%
6/30/97-98	2,497,000	2,502,000	2,334,210	162,790	167,790	93.4%	2.0%	30.2%	49,234	50,746	30.2%	30.2%
6/30/98-99	1,773,000	1,846,000	1,619,506	153,494	226,494	89.5%	3.0%	28.6%	43,856	64,714	28.6%	28.6%
6/30/99-00	1,832,000	1,836,000	1,665,822	166,178	170,178	90.8%	3.0%	32.7%	54,366	55,674	32.7%	32.7%
6/30/00-01	2,363,000	2,367,000	2,082,026	280,974	284,974	88.0%	4.0%	33.4%	93,931	95,269	33.4%	33.4%
6/30/01-02	3,135,000	3,148,000	2,719,111	415,889	428,889	86.6%	4.0%	29.7%	123,726	127,594	29.7%	29.7%
6/30/02-03	2,046,000	2,050,000	1,735,208	310,792	314,792	84.7%	1.8%	12.0%	37,190	37,669	12.0%	12.0%
6/30/03-04	2,617,000	2,712,000	2,177,378	439,622	534,622	81.7%	3.0%	16.5%	72,353	87,989	16.5%	16.5%
6/30/04-05	2,063,000	2,228,000	1,677,822	385,178	550,178	78.2%	3.5%	16.1%	62,131	88,747	16.1%	16.1%
6/30/05-06	2,552,000	2,716,000	1,985,327	566,673	730,673	75.4%	2.8%	11.5%	65,092	83,930	11.5%	11.5%
6/30/06-07	2,035,000	2,305,000	1,524,823	510,177	780,177	70.3%	5.1%	17.2%	87,595	133,952	17.2%	17.2%
6/30/07-08	3,475,000	3,503,000	2,496,649	978,351	1,006,351	71.6%	5.0%	17.6%	171,989	176,911	17.6%	17.6%
6/30/08-09	2,986,000	3,135,000	1,948,636	1,037,364	1,186,364	63.7%	7.9%	21.7%	225,215	257,563	21.7%	21.7%
6/30/09-10	4,378,000	4,677,000	2,426,627	1,951,373	2,250,373	53.6%	10.1%	21.7%	423,601	488,508	21.7%	21.7%
6/30/10-11	3,981,000	4,303,000	1,822,430	2,158,570	2,480,570	44.0%	9.6%	17.1%	369,983	425,174	17.1%	17.1%
6/30/11-12	3,975,000	4,087,000	742,790	3,232,210	3,344,210	18.4%	25.6%	31.3%	1,013,247	1,048,357	31.3%	31.3%
Total	78,261,860	81,500,860	64,313,701	13,948,159	17,187,159				3,069,933	3,557,246	22.0%	20.7%

NOTES:

(2) Exhibit 1, Page 1, Column (4) + Exhibit 2, Page 1, Column (4)

 $(3) \ Exhibit \ 1, Page \ 1, Column \ (5) \ + \ Exhibit \ 2, Page \ 1, Column \ (5)$

(4) Exhibit 1, Page 1, Column (2) + Exhibit 2, Page 1, Column (2)

(5) = (2) - (4)

(6) = (3) - (4)

(7) = (4) / Average of Columns (2), (3)

(8) = (7) - Prior Year's (7)

(9) = (8) / (1.00 - (7))

(10) = (5) * (9)

(11) = (6) * (9)

(12) = (10) / (5)(13) = (11) / (6)



Massachusetts Colleges & Universities - Cluster 4 Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll		Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Paid Loss	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		336,753			391,800	436,881	55,047	100,128		
6/30/82-83		53,045	53,252		53,310	53,575	265	530		
6/30/83-84		27,773	27,881		27,912	28,051	139	278		
6/30/84-85	357,749	112,891	113,332	113,573	113,455	114,020	564	1,129	0.032	0.032
6/30/85-86	380,112	384,347	385,848	386,343	386,269	388,190	1,922	3,843	0.102	0.102
6/30/86-87	423,770	238,056	238,985	239,407	239,246	240,437	1,190	2,381	0.056	0.057
6/30/87-88	480,405	636,396	638,881	639,610	639,000	640,000	2,604	3,604	0.133	0.133
6/30/88-89	495,261	425,973	427,636	428,303	428,000	428,000	2,027	2,027	0.086	0.086
6/30/89-90	502,691	541,381	543,495	544,334	543,000	544,000	1,619	2,619	0.108	0.108
6/30/90-91	482,143	472,472	474,791	474,778	475,000	475,000	2,528	2,528	0.099	0.099
6/30/91-92	492,539	759,027	763,515	763,452	763,000	764,000	3,973	4,973	0.155	0.155
6/30/92-93	524,541	506,348	510,361	510,298	508,880	511,411	2,532	5,063	0.097	0.097
6/30/93-94	584,853	567,707	573,923	573,797	574,000	574,000	6,293	6,293	0.098	0.098
6/30/94-95	587,701	548,842	556,516	556,335	556,000	557,000	7,158	8,158	0.095	0.095
6/30/95-96	614,868	581,842	591,747	591,477	584,752	587,661	2,909	5,818	0.095	0.096
6/30/96-97	700,686	672,797	690,449	689,901	690,000	690,000	17,203	17,203	0.098	0.098
6/30/97-98	684,415	428,839	444,150	443,993	444,000	444,000	15,161	15,161	0.065	0.065
6/30/98-99	707,796	336,644	352,356	352,596	352,000	353,000	15,356	16,356	0.050	0.050
6/30/99-00	760,477	483,486	512,762	512,439	512,000	513,000	28,514	29,514	0.067	0.067
6/30/00-01	811,600	563,168	608,669	607,955	608,000	609,000	44,832	45,832	0.075	0.075
6/30/01-02	835,038	533,222	576,744	576,527	577,000	577,000	43,778	43,778	0.069	0.069
6/30/02-03	825,340	558,702	606,755	606,482	606,000	607,000	47,298	48,298	0.073	0.074
6/30/03-04	849,216	690,426	764,022	762,654	763,000	764,000	72,574	73,574	0.090	0.090
6/30/04-05	992,508	654,330	731,162	733,833	731,000	734,000	76,670	79,670	0.074	0.074
6/30/05-06	962,878	725,521	820,018	812,944	813,000	820,000	87,479	94,479	0.084	0.085
6/30/06-07	1,032,930	633,211	723,837	738,161	724,000	738,000	90,789	104,789	0.070	0.071
6/30/07-08	1,063,597	850,544	986,267	972,885	973,000	986,000	122,456	135,456	0.091	0.093
6/30/08-09	1,073,805	816,761	976,159	968,525	969,000	976,000	152,239	159,239	0.090	0.091
6/30/09-10	1,084,749	865,851	1,176,778	1,128,141	1,128,000	1,177,000	262,149	311,149	0.104	0.109
6/30/10-11	1,134,164	843,137	1,335,489	1,237,265	1,237,000	1,335,000	393,863	491,863	0.109	0.118
6/30/11-12	1,202,674	330,317	1,189,301	1,173,660	1,174,000	1,189,000	843,683	858,683	0.098	0.099
Total	20,648,505	16,179,809	18,395,082	18,139,667	18,584,624	18,854,226	2,404,814	2,674,417	- 	
Tot 6/30/84-12	20,648,505	15,762,238	18,313,949	18,139,667	18,111,602	18,335,719	2,349,363	2,573,481	0.088	0.089

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 7, Exhibit 2, Page 2, Column 3
- (4) From Section 7, Exhibit 2, Page 2, Column 8
- (5) From Section 7, Exhibit 2, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



Massachusetts Colleges & Universities - Cluster 4 Medical

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average
Accident	Payroll		Paid	Adjustment	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding
Year	(000's)	Paid Loss	LDF	for Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim
All Prior Yrs		336,753							1	1	
6/30/82-83		53,045	1.004	1.000	53,252	N/A	53,252		0	0	
6/30/83-84		27,773	1.004	1.000	27,881	N/A	27,881		0	0	
6/30/84-85	357,749	112,891	1.004	1.000	113,332	N/A	113,332	0.032	0	0	
6/30/85-86	380,112	384,347	1.004	1.000	385,848	N/A	385,848	0.102	0	0	
6/30/86-87	423,770	238,056	1.004	1.000	238,985	N/A	238,985	0.056	0	0	
6/30/87-88	480,405	636,396	1.004	1.000	638,881	N/A	638,881	0.133	2	2	1,242
6/30/88-89	495,261	425,973	1.004	1.000	427,636	N/A	427,636	0.086	1	1	1,663
6/30/89-90	502,691	541,381	1.004	1.000	543,495	N/A	543,495	0.108	0	1	2,114
6/30/90-91	482,143	472,472	1.005	1.000	474,791	N/A	474,791	0.098	0	0	
6/30/91-92	492,539	759,027	1.006	1.000	763,515	N/A	763,515	0.155	1	1	4,488
6/30/92-93	524,541	506,348	1.008	1.000	510,361	N/A	510,361	0.097	0	0	
6/30/93-94	584,853	567,707	1.011	1.000	573,923	N/A	573,923	0.098	2	2	3,108
6/30/94-95	587,701	548,842	1.014	1.000	556,516	N/A	556,516	0.095	1	1	7,674
6/30/95-96	614,868	581,842	1.017	1.000	591,747	N/A	591,747	0.096	0	0	
6/30/96-97	700,686	672,797	1.026	1.000	690,449	N/A	690,449	0.099	3	3	5,884
6/30/97-98	684,415	428,839	1.036	1.000	444,150	N/A	444,150	0.065	3	1	15,311
6/30/98-99	707,796	336,644	1.047	1.000	352,356	N/A	352,356	0.050	1	0	
6/30/99-00	760,477	483,486	1.061	1.000	512,762	N/A	512,762	0.067	0	0	
6/30/00-01	811,600	563,168	1.081	1.000	608,669	N/A	608,669	0.075	1	2	22,750
6/30/01-02	835,038	533,222	1.082	1.000	576,744	N/A	576,744	0.069	2	1	43,522
6/30/02-03	825,340	558,702	1.086	1.000	606,755	N/A	606,755	0.074	3	3	16,017
6/30/03-04	849,216	690,426	1.107	1.000	764,022	N/A	764,022	0.090	4	1	73,597
6/30/04-05	992,508	654,330	1.117	1.000	731,162	N/A	731,162	0.074	7	5	15,366
6/30/05-06	962,878	725,521	1.130	1.000	820,018	N/A	820,018	0.085	8	6	15,750
6/30/06-07	1,032,930	633,211	1.143	1.000	723,837	N/A	723,837	0.070	10	4	22,657
6/30/07-08	1,063,597	850,544	1.160	1.000	986,267	N/A	986,267	0.093	20	14	9,695
6/30/08-09	1,073,805	816,761	1.195	1.000	976,159	N/A	976,159	0.091	50	23	6,930
6/30/09-10	1,084,749	865,851	1.359	1.000	1,176,778	N/A	1,176,778	0.108	180	54	5,758
6/30/10-11	1,134,164	843,137	1.584	1.000	1,335,489	N/A	1,335,489	0.118	239	163	3,021
6/30/11-12	1,202,674	330,317	3.600	1.000	1,189,301	N/A	1,189,301	0.099		253	3,395
Total	20,648,505	16,179,809			18,395,082		18,395,082		539	542	

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 7, Exhibit 2, Page 7

⁽⁵⁾ Based on information from the MA WCRIB 9/1/12 filing. Consideration for development beyond 252 months made in selection of LDF's.

 $^{(6) = (3) \}times (4) \times (5)$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0

Section 7 Exhibit 2 Page 3

Massachusetts Colleges & Universities - Cluster 4 Medical

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss		Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Paid Loss	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	357,749	0.049	112,891	1.004	113,573	N/A	113,573	0.032	0.032
6/30/85-86	380,112	0.135	384,347	1.004	386,343	N/A	386,343	0.102	0.102
6/30/86-87	423,770	0.082	238,056	1.004	239,407	N/A	239,407	0.056	0.056
6/30/87-88	480,405	0.172	636,396	1.004	639,610	N/A	639,610	0.133	0.133
6/30/88-89	495,261	0.121	425,973	1.004	428,303	N/A	428,303	0.086	0.086
6/30/89-90	502,691	0.151	541,381	1.004	544,334	N/A	544,334	0.108	0.108
6/30/90-91	482,143	0.098	472,472	1.005	474,778	N/A	474,778	0.098	0.098
6/30/91-92	492,539	0.153	759,027	1.006	763,452	N/A	763,452	0.155	0.155
6/30/92-93	524,541	0.096	506,348	1.008	510,298	N/A	510,298	0.097	0.097
6/30/93-94	584,853	0.096	567,707	1.011	573,797	N/A	573,797	0.098	0.098
6/30/94-95	587,701	0.092	548,842	1.014	556,335	N/A	556,335	0.095	0.095
6/30/95-96	614,868	0.094	581,842	1.017	591,477	N/A	591,477	0.096	0.096
6/30/96-97	700,686	0.095	672,797	1.026	689,901	N/A	689,901	0.098	0.098
6/30/97-98	684,415	0.064	428,839	1.036	443,993	N/A	443,993	0.065	0.065
6/30/98-99	707,796	0.051	336,644	1.047	352,596	N/A	352,596	0.050	0.050
6/30/99-00	760,477	0.067	483,486	1.061	512,439	N/A	512,439	0.067	0.067
6/30/00-01	811,600	0.074	563,168	1.081	607,955	N/A	607,955	0.075	0.075
6/30/01-02	835,038	0.069	533,222	1.082	576,527	N/A	576,527	0.069	0.069
6/30/02-03	825,340	0.073	558,702	1.086	606,482	N/A	606,482	0.073	0.073
6/30/03-04	849,216	0.088	690,426	1.107	762,654	N/A	762,654	0.090	0.090
6/30/04-05	992,508	0.076	654,330	1.117	733,833	N/A	733,833	0.074	0.074
6/30/05-06	962,878	0.079	725,521	1.130	812,944	N/A	812,944	0.084	0.084
6/30/06-07	1,032,930	0.081	633,211	1.143	738,161	N/A	738,161	0.071	0.071
6/30/07-08	1,063,597	0.084	850,544	1.160	972,885	N/A	972,885	0.091	0.091
6/30/08-09	1,073,805	0.087	816,761	1.195	968,525	N/A	968,525	0.090	0.090
6/30/09-10	1,084,749	0.092	865,851	1.359	1,128,141	N/A	1,128,141	0.104	0.104
6/30/10-11	1,134,164	0.094	843,137	1.584	1,237,265	N/A	1,237,265	0.109	0.109
6/30/11-12	1,202,674	0.097	330,317	3.600	1,173,660	N/A	1,173,660	0.098	0.098
Total	20,648,505		15,762,238		18,139,667		18,139,667		

NOTES:

(9) = (8) / (2) / 10

(10) = (6) / (2) / 10

⁽²⁾ Provided by Commonwealth of Massachusetts

⁽³⁾ From Section 7, Exhibit 2, Page 4, Column 11

⁽⁴⁾ From Section 7, Exhibit 2, Page 2, Column 3

⁽⁵⁾ From Section 7, Exhibit 2, Page 2, Column 4

 $^{(6) = (4) + [\{1 - \{1/(5)\}\} \}times (3) \times (2) \times 10]$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

Section 7 Exhibit 2 Page 4

Massachusetts Colleges & Universities - Cluster 4 Medical

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Expected	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Ult Loss	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.049	0.049
6/30/85-86									0.135	0.135
6/30/86-87									0.082	0.082
6/30/87-88									0.172	0.172
6/30/88-89									0.121	0.121
6/30/89-90									0.151	0.151
6/30/90-91	482,143	474,791	0.098	1.194	0.118	1.916	0.225	0.044	0.098	0.098
6/30/91-92	492,539	763,515	0.155	1.189	0.184	1.860	0.343	0.045	0.151	0.153
6/30/92-93	524,541	510,361	0.097	1.189	0.116	1.806	0.209	0.047	0.097	0.096
6/30/93-94	584,853	573,923	0.098	1.178	0.116	1.754	0.203	0.048	0.094	0.096
6/30/94-95	587,701	556,516	0.095	1.170	0.111	1.702	0.189	0.050	0.092	0.092
6/30/95-96	614,868	591,747	0.096	1.155	0.111	1.653	0.184	0.052	0.095	0.094
6/30/96-97	700,686	690,449	0.099	1.137	0.112	1.605	0.180	0.055	0.091	0.095
6/30/97-98	684,415	444,150	0.065	1.135	0.074	1.558	0.115	0.057	0.066	0.064
6/30/98-99	707,796	352,356	0.050	1.135	0.057	1.513	0.085	0.058	0.052	0.051
6/30/99-00	760,477	512,762	0.067	1.135	0.077	1.469	0.112	0.060	0.069	0.067
6/30/00-01	811,600	608,669	0.075	1.109	0.083	1.426	0.119	0.063	0.075	0.074
6/30/01-02	835,038	576,744	0.069	1.101	0.076	1.384	0.105	0.066	0.070	0.069
6/30/02-03	825,340	606,755	0.074	1.073	0.079	1.344	0.106	0.069	0.075	0.073
6/30/03-04	849,216	764,022	0.090	1.046	0.094	1.305	0.123	0.073	0.091	0.088
6/30/04-05	992,508	731,162	0.074	1.036	0.076	1.267	0.097	0.076	0.084	0.076
6/30/05-06	962,878	820,018	0.085	1.032	0.088	1.230	0.108	0.079	0.086	0.079
6/30/06-07	1,032,930	723,837	0.070	1.032	0.072	1.194	0.086	0.081	0.088	0.081
6/30/07-08	1,063,597	986,267	0.093	1.032	0.096	1.159	0.111	0.084	0.090	0.084
6/30/08-09	1,073,805	976,159	0.091	1.027	0.093	1.126	0.105	0.087	0.092	0.087
6/30/09-10	1,084,749	1,176,778	0.108	1.000	0.108	1.093	0.119	0.092	0.096	0.092
6/30/10-11	1,134,164	1,335,489	0.118	1.000	0.118	1.061	0.125	0.094	0.098	0.094
6/30/11-12	1,202,674	1,189,301	0.099	1.000	0.099	1.030	0.102	0.097		0.097
Total	18,008,517	15,965,772								
			Trend L	ast 4 (ex 11-12):	8.0%	Avg 3 (x11-12):	0.116			
			Trend L	ast 8 (ex 11-12):	4.6%	Avg 5 (x11-12):	0.109			
			Trend La	st 12 (ex 11-12):	3.2%	Avg 10 (x11-12):	0.108			
			Prior	Selected Trend:	2.0%	Prior Sel Avg:	0.100			

Selected Trend:

3.0%

Sel. Loss Cost:

0.100

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 7, Exhibit 2, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCIRB
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

(8), (16) From Section 7, Exhibit 2, Page 2, Column 3

(9) = (7) + (8)

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012

Section 7 Exhibit 2 Page 5

Massachusetts Colleges & Universities - Cluster 4 Medical

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	 		
(1)	Average Payment Trend		0.985
(2)	Credibility		24%
(3)	Average Pmt Trend Statewide		0.950
(4)	Credibility Weighted Trend		0.958
		(Low)	(High)
(5)	Selected Range	0.949	0.968
(6)	Incremental Paid for 2012	3,318	3,318
(7)	Estimated Reserve	61,436	100,128
(8)	Paid to Date (82 & Prior)	336,753	336,753
(9)	Est Ult Paid for 1982 & Prior	398,188	436,881
Method 2	<u> </u>		
		(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	6,951	8,989
(11)	Projected Number of Years	7	7
(12)	Estimated Reserve	48,658	62,924
(13)	Paid to Date (82 & Prior)	336,753	333,435
(14)	Est Ult Paid for 1982 & Prior	385,411	396,359
(14a)	Paid Counts During Fiscal Year	1	1
		(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	391,800	436,881
(16)	Lump Sum Ultimates	N/A	N/A
(17)	Ult Loss Including Lump Sums	391,800	436,881
(18)	Implied Tail	1.163	1.297
(19)	Ult Loss Inc Lump Sums @ 6/11	415,895	463,204
NOTES:			
	on 7, Exhibit 2, Page 6		(10) Avg of 3 latest years from Section 7, Exhibit 2, Page 6, Column 3
	of Section 7, Exhibit 2, Page 6, Column 3 / 175,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta			$(12) = (10 \times (11))$
$(4) = (1) \times (2) + (4) = (4) \times (2) + (4) \times (2) $			(14) = (12) + (13)
	dgmentally based on (4)		(15) = Average of (9) and (14)
•	ided by Commonwealth of Massachusetts		(16) Lump Sums are considered in Indemnity analysis (Section 1)
$(7) = (6) \times (5) /$	•		(17) = (15) + (16)

(18) = (15) / (8)

(19) From Prior Aon Analysis as of June 30, 2011



Section 7 Exhibit 2

Page 6

Massachusetts Colleges & Universities - Cluster 4 Medical

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	31,197	10.348			
1993	2	17,697	9.781	0.567		
1994	3	8,752	9.077	0.495		
1995	4	6,932	8.844	0.792		
1996	5	3,727	8.223	0.538		
1997	6	2,222	7.706	0.596		
1998	7	9,087	9.115	4.090		
1999	8	5,853	8.675	0.644		
2000	9	12,069	9.398	2.062	n =	21
2001	10	7,279	8.893	0.603	S(x) =	42,042
2002	11	8,308	9.025	1.141	S(x-sq) =	84,168,854
2003	12	8,142	9.005	0.980	S(xy) =	380,163
2004	13	19,519	9.879	2.397	S(y) =	190
2005	14	7,873	8.971	0.403	D =	16,170
2006	15	11,471	9.348	1.457	slope =	-0.015
2007	16	10,042	9.215	0.875	Avg Trend =	0.985
2008	17	8,213	9.014	0.818		
2009	18	9,432	9.152	1.148		
2010	19	7,136	8.873	0.757		
2011	20	10,399	9.249	1.457		
2012	21	3,318	8.107	0.319		

Selected Trend: 0.985

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.319 = 3318 / 10399



Commonwealth of Massachusetts Workers Compensation Massachusetts Colleges & Universities - Cluster 4 MEDICAL

Section 7 Exhibit 2

Page 7 Paid Loss Development
Paid Loss (Excluding Lump Sum) Acc Yr Ending 40,003 27,281 95,092 297,883 226,928 554,667 21,113 14,025 51,552 27,654 17,952 65,364 159,111 167,433 350,533 30,220 20,550 72,959 250,739 32,596 23,119 79,579 286,799 49,390 27,458 106,398 299,398 230,316 558,927 49,452 27,458 110,557 302,212 231,634 578,241 49,902 27,458 111,969 307,822 233,141 580,791 49,902 27,773 111,969 320,541 233,163 582,947 52,680 27,773 112,891 364,047 53,045 27,773 112,891 380,765 237,211 621,465 53,045 27,773 112,891 53,045 27,773 112,891 384,347 53,045 27,773 112,891 53,045 27,773 112,891 53,045 27,773 112,891 384,347 238,056 631,767 53,045 27,773 112,891 53,045 27,773 112,891 38,756 24,788 86,331 294,926 221,836 513,908 49,902 27,773 112,255 325,361 235,329 585,666 52,680 27,773 112,573 342,239 236,440 587,383 53,045 27,773 112,891 384,347 238,056 636,396 June-83 June-84 5,425 3,642 13,476 33,919 33,322 59,518 62,198 50,219 73,392 221,188 150,073 156,060 109,792 187,362 169,255 13,479 9,520 35,975 90,663 88,558 204,414 211,475 295,860 311,241 477,478 407,193 302,215 244,835 52,680 27,773 112,891 52,680 27,773 112,891 53,045 27,773 112,891 53,045 27,773 112,891 53,045 27,773 53,045 June-85 June-86 June-87 344,332 236,440 588,760 384,347 238,056 627,525 130,143 133,068 290,147 384,347 237,211 627,240 347,860 376 849 383,694 384 347 384,347 236,440 590,429 237,211 623,951 202,414 217,655 236,440 237,211 238,056 June-88 381.836 423,661 611.904 620,480 623,581 558,927 397,103 511,410 456,911 653,117 501,701 461,708 345,737 578,241 398,291 519,157 463,872 658,289 503,184 470,189 404,548 575,372 519,848 580,791 400,332 521,054 466,034 666,600 504,152 479,925 417,872 578,197 535,734 582,947 413,505 521,523 467,206 671,991 505,509 489,958 419,186 581,714 556,260 585,666 414,824 523,073 468,330 681,366 506,348 504,404 507,915 587,383 415,958 526,415 470,247 690,612 506,348 513,367 517,682 294,554 408,825 360,552 560,364 322,576 438,277 400,955 598,339 478,264 391,897 501,254 415,958 531,243 472,258 701,403 424,869 532,370 472,472 710,623 506,348 425,154 537,636 472,472 747,976 506,348 356,178 387,366 394,643 425,154 425,154 425,154 425,154 425,154 425,840 425,973 487,856 437,552 641,232 496,554 508,956 451,717 650,216 534,177 472,472 728,531 June-90 June-91 June-92 June-93 June-94 June-95 465,544 532,613 535,910 540,156 541,381 540,156 419,114 631,891 445,905 646,926 472,472 719,185 472,472 738,270 506,348 472,472 759,027 472,472 449,884 335,354 298,417 498,889 452,877 336,940 506,348 522,984 526,590 506,348 489,794 498,030 506,348 369,121 304,966 403,159 313,919 421,734 317,775 441,218 323,966 528,697 533,675 539,677 537,590 552,169 548,842 June-96 June-97 423,531 306,866 463,708 359,926 493,442 403,511 512,072 440,040 523,060 450,988 559,979 458,674 563,249 483,346 572,255 503,475 581,842 578,975 581,842 602,453 581,842 632,460 581,842 672,797 581,842 June-98 June-99 June-00 130,372 97,937 149,711 302,957 205,527 324,594 329,001 244,127 339,295 246,679 408,387 398,588 383,389 363,480 296,667 446,980 383,927 310,533 388,726 318,692 474,595 540,381 522,029 391,919 324,215 478,979 417,459 326,063 417,733 327,858 418,585 331,461 482,147 562,831 532,387 421,666 334,241 483,486 427,310 334,867 427,449 336,644 428,766 336,644 428,839 464,695 480,612 480.853 483,486 483,486 June-01 June-02 146,796 113,531 483,338 485,433 524,021 511,686 553,789 525,064 559,032 528,876 562,148 530,895 562,932 533,222 563,168 68,006 226,665 267,264 266,086 237,774 374,633 540,314 502,730 533,067 472,669 486,597 676,213 634,553 June-03 June-04 451,946 613,339 472,102 657,569 492,733 687,448 520,395 689,931 535,451 690,265 548,996 690,426 558,702 569,792 616 429 643,543 651.061 June-05 654,330 688,237 596,123 829,701 816,761 700,485 625,421 June-06 604,845 725,521 June-07 580.019 633,211 June-08 June-09 254,702 295,106 419,730 454,614 330,317 609,536 650,179 775,749 843,137 722,745 756,525 850,544 June-10 June-11 865,851 June-12 Age-to-Age Factors 24-36 1.566 1.473 1.433 1.435 1.503 108-120 1.001 1.000 1.039 1.009 1.006 1.035 1.003 1.015 1.015 120-132 1.009 1.000 1.013 1.019 1.007 1.004 1.005 1.004 1.005 1.013 132-144 1.000 1.011 1.000 1.041 1.000 1.004 1.033 252-264 1.000 1.000 1.000 1.000 1.000 1.000 1.000 288-300 1.000 1.000 1.000 1.000 1.000 84-96 1.032 1.101 1.101 1.010 1.023 1.079 1.007 156-168 1.056 1.000 1.003 1.052 1.005 1.003 264-276 1.000 1.000 1.000 1.000 1.004 1.000 1.002 276-288 1.000 1.000 1.000 1.000 1.000 1.007 1.000 324-336 1.000 1.000 1.000 Acc Yr Ending June-83 96-108 1.235 144-156 1.000 168-180 1.000 180-192 1.000 192-204 1.000 204-216 1.007 228-240 1.000 240-252 1.000 300-312 1.000 312-324 1.000 216-228 336-348 1.000 1.000 1.000 1.145 1.116 1.576 1.209 1.089 1.104 1.000 1.000 1.003 1.015 1.009 1.280 1.268 1.223 1.258 1.208 1.095 1.125 1.091 1.144 1.075 1.006 1.119 1.005 1.015 1.008 1.006 1.005 1.011 1.000 1.003 1.006 1.000 1.000 1.000 June-84 2.614 1.072 1.000 1.000 1.000 1.000 1.000 1.000 2.670 2.673 1.072 1.085 1.028 1.019 1.000 1.000 1.000 1.047 1.000 1.000 1.000 1.000 1.000 1.008 1.000 1.003 1.000 1.000 1.000 1.000 June-86 June-87 June-88 2.658 1.000 1.002 1.000 1.000 1.003 1.000 1.000 1.001 1.000 1.000 1.000 1.036 1.001 1.000 1.000 1.012 3.434 3.400 1.419 1.110 1.213 1.005 1.003 1.002 1.007 June-89 1.000 5.891 1.382 1.072 1.062 1.048 1.027 1.001 1.003 1.006 1.009 1.000 1.015 1.002 1.003 1.003 1.003 1.005 1.002 1.013 1.000 1.000 1.000 1.000 June-91 1.000

June-92	2.159	1.174	1.068	1.056	1.015	1.009	1.005	1.004	1.008	1.013	1.008	1.014	1.014	1.016	1.013	1.012	1.013	1.013	1.013	1.015										
June-93	2.713	1.105	1.063	1.024	1.014	1.003	1.002	1.006	1.003	1.002	1.003	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000											
June-94	1.937	1.110	1.101	1.092	1.046	1.046	1.026	1.019	1.018	1.021	1.021	1.029	1.018	1.019	1.011	1.021	1.023	1.028												
June-95	2.230	1.219	1.022	1.029	1.012	1.019	1.040	1.026	1.170	1.033	1.003	1.212	1.019	1.017	1.013	1.007	1.021													
June-96	2.260	1.095	1.064	1.038	1.021	1.071	1.006	1.016	1.005	1.005	1.006	1.000	1.000	1.000	1.000	1.000														
June-97	1.813	1.173	1.121	1.091	1.025	1.017	1.054	1.042	1.033	1.031	1.038	1.041	1.041	1.050	1.064															
June-98	2.324	1.120	1.071	1.056	1.012	1.008	1.065	1.001	1.002	1.007	1.013	1.000	1.003	1.000																
June-99	2.099	1.200	1.203	1.047	1.026	1.017	1.006	1.006	1.011	1.008	1.002	1.005	1.000																	
June-00	2.168	1.258	1.095	1.040	1.021	1.009	1.003	1.001	1.003	1.003	1.000	1.000																		
June-01	2.241	1.212	1.213	1.084	1.031	1.025	1.009	1.006	1.001	1.000	1.000																			
June-02	2.150	1.570	1.266	1.054	1.020	1.006	1.007	1.004	1.003	1.002																				
June-03	5.509	1.206	1.045	1.031	1.013	1.056	1.029	1.025	1.018																					
June-04	2.384	1.135	1.072	1.028	1.017	1.004	1.000	1.000																						
June-05	1.881	1.133	1.082	1.029	1.014	1.012	1.005																							
June-06	2.003	1.135	1.138	1.018	1.017	1.019																								
June-07	1.988	1.227	1.028	1.049	1.012																									
June-08	2.393	1.186	1.148	1.025																										
June-09	2.203	1.164	1.080																											
June-10	1.848	1.116																												
June-11	1.855																													
Averages	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	To Ult
Simple Avg																														
All Yrs	2.628	1.261	1.137	1.086	1.045	1.041	1.028	1.026	1.019	1.009	1.010	1.019	1.013	1.008	1.009	1.009	1.009	1.005	1.002	1.002	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	
Latest 5	2.057	1.165	1.095	1.030	1.014	1.019	1.010	1.007	1.007	1.004	1.011	1.009	1.013	1.017	1.018	1.008	1.011	1.009	1.003	1.004	1.001	1.002	1.001	1.001	1.000					
Latest 3	1.969	1.155	1.085	1.031	1.014	1.011	1.011	1.010	1.007	1.002	1.001	1.002	1.015	1.017	1.026	1.009	1.015	1.014	1.004	1.006	1.000	1.001	1.002	1.002	1.000	1.000	1.000			
Volume Wtd																														
All Yrs	2.273	1.196	1.108	1.059	1.032	1.030	1.020	1.012	1.018	1.009	1.010	1.021	1.012	1.011	1.012	1.011	1.011	1.007	1.004	1.004	1.001	1.001	1.002	1.003	1.000	1.000	1.000	1.000	1.000	
Latest 5	2.016	1.161	1.097	1.029	1.015	1.018	1.009	1.007	1.007	1.003	1.012	1.010	1.014	1.018	1.019	1.008	1.012	1.010	1.004	1.005	1.001	1.001	1.002	1.003	1.000					
Latest 3	1.940	1.152	1.089	1.030	1.014	1.011	1.010	1.009	1.007	1.001	1.001	1.002	1.018	1.019	1.027	1.009	1.015	1.014	1.006	1.008	1.000	1.001	1.003	1.004	1.000	1.000	1.000			
Dev Factor Selecti																														
Industry 1	1.968	1.143	1.054	1.030	1.018	1.014	1.012																							
Industry 2		1.266	1.074	1.040	1.013	1.011	1.010	1.015	1.008	1.013	1.013	1.009	1.008	1.008	1.008	1.005	1.004	1.002	1.004	1.005										
										1.010	1.005	1.020	1.014	1.011	1.005	1.009	1.003	1.003	1.003	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.006	
Prior	2.321	1.169	1.139	1.032	1.016	1.024	1.012	1.012	1.019																					
Prior Selected	2.273	1.165	1.137	1.031	1.014	1.011	1.011	1.010	1.019	1.004	1.001	1.019	1.013	1.011	1.009	1.009	1.003	1.003	1.003	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.004
Prior Selected FacToUlt	2.273 3.600	1.165 1.584	1.137 1.359	1.031 1.195	1.014 1.160	1.011 1.143	1.011 1.130	1.010 1.117	1.019 1.107	1.004 1.086	1.001 1.082	1.019 1.081	1.013 1.061	1.011 1.047	1.009 1.036	1.009 1.026	1.017	1.014	1.011	1.008	1.006	1.005	1.004	1.004	1.004	1.000 1.004	1.000 1.004	1.000 1.004	1.000 1.004	1.004
Prior Selected	2.273	1.165	1.137	1.031	1.014	1.011	1.011	1.010	1.019	1.004	1.001	1.019	1.013	1.011	1.009	1.009										1.000	1.000	1.000	1.000	
Prior Selected FacToUlt	2.273 3.600	1.165 1.584	1.137 1.359	1.031 1.195	1.014 1.160	1.011 1.143	1.011 1.130	1.010 1.117	1.019 1.107	1.004 1.086	1.001 1.082	1.019 1.081	1.013 1.061	1.011 1.047	1.009 1.036	1.009 1.026	1.017	1.014	1.011	1.008	1.006	1.005	1.004	1.004	1.004	1.000 1.004	1.000 1.004	1.000 1.004	1.000 1.004	1.004



Massachusetts Colleges & Universities - Cluster 4 Medical

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	te Loss	Ultima	te Loss	Change in U	Iltimate Loss	Change in U	ltimate Loss
Accident	As of	f 6/11	As of	6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	415,895	463,204	391,800	436,881	(24,095)	-5.8%	(26,324)	-5.7%
6/30/82-83	53,310	53,575	53,310	53,575	0	0.0%	0	0.0%
6/30/83-84	27,912	28,051	27,912	28,051	0	0.0%	0	0.0%
6/30/84-85	113,455	114,020	113,455	114,020	0	0.0%	0	0.0%
6/30/85-86	386,269	388,190	386,269	388,190	0	0.0%	0	0.0%
6/30/86-87	239,246	240,437	239,246	240,437	0	0.0%	0	0.0%
6/30/87-88	635,000	636,000	639,000	640,000	4,000	0.6%	4,000	0.6%
6/30/88-89	428,000	429,000	428,000	428,000	0	0.0%	(1,000)	-0.2%
6/30/89-90	544,000	545,000	543,000	544,000	(1,000)	-0.2%	(1,000)	-0.2%
6/30/90-91	476,000	476,000	475,000	475,000	(1,000)	-0.2%	(1,000)	-0.2%
6/30/91-92	755,000	755,000	763,000	764,000	8,000	1.1%	9,000	1.2%
6/30/92-93	508,880	511,411	508,880	511,411	0	0.0%	0	0.0%
6/30/93-94	561,000	561,000	574,000	574,000	13,000	2.3%	13,000	2.3%
6/30/94-95	548,000	548,000	556,000	557,000	8,000	1.5%	9,000	1.6%
6/30/95-96	584,752	587,661	584,752	587,661	0	0.0%	0	0.0%
6/30/96-97	653,000	654,000	690,000	690,000	37,000	5.7%	36,000	5.5%
6/30/97-98	448,000	448,000	444,000	444,000	(4,000)	-0.9%	(4,000)	-0.9%
6/30/98-99	357,000	358,000	352,000	353,000	(5,000)	-1.4%	(5,000)	-1.4%
6/30/99-00	523,000	523,000	512,000	513,000	(11,000)	-2.1%	(10,000)	-1.9%
6/30/00-01	612,000	612,000	608,000	609,000	(4,000)	-0.7%	(3,000)	-0.5%
6/30/01-02	585,000	585,000	577,000	577,000	(8,000)	-1.4%	(8,000)	-1.4%
6/30/02-03	614,000	615,000	606,000	607,000	(8,000)	-1.3%	(8,000)	-1.3%
6/30/03-04	780,000	781,000	763,000	764,000	(17,000)	-2.2%	(17,000)	-2.2%
6/30/04-05	746,000	757,000	731,000	734,000	(15,000)	-2.0%	(23,000)	-3.0%
6/30/05-06	834,000	835,000	813,000	820,000	(21,000)	-2.5%	(15,000)	-1.8%
6/30/06-07	745,000	771,000	724,000	738,000	(21,000)	-2.8%	(33,000)	-4.3%
6/30/07-08	1,008,000	1,020,000	973,000	986,000	(35,000)	-3.5%	(34,000)	-3.3%
6/30/08-09	1,039,000	1,060,000	969,000	976,000	(70,000)	-6.7%	(84,000)	-7.9%
6/30/09-10	1,182,000	1,271,000	1,128,000	1,177,000	(54,000)	-4.6%	(94,000)	-7.4%
6/30/10-11	1,274,000	1,728,000	1,237,000	1,335,000	(37,000)	-2.9%	(393,000)	-22.7%
6/30/11-12								
Total	17,676,718	18,354,550	17,410,624	17,665,226	(266,095)	-1.5%	(689,324)	-3.8%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 7, Exhibit 2, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1

Section 7 Exhibit 2

Page 9

Massachusetts Colleges & Universities - Cluster 4 Medical

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	0.4%	0.0%	0.1%	0.1%	1.000	1.000
360	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
348	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
336	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
324	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
312	99.6%	0.0%	0.4%	0.0%	0.0%	1.000	1.000
300	99.6%	0.0%	0.4%	0.0%	0.0%	0.806	0.726
288	99.6%	0.0%	0.4%	0.0%	0.0%	0.775	0.685
276	99.6%	0.1%	0.4%	0.0%	0.0%	0.745	0.646
264	99.5%	0.1%	0.5%	0.0%	0.0%	0.770	0.683
252	99.4%	0.2%	0.6%	0.1%	0.1%	0.781	0.700
240	99.2%	0.3%	0.8%	0.1%	0.1%	0.809	0.739
228	98.9%	0.3%	1.1%	0.1%	0.1%	0.833	0.772
216	98.6%	0.3%	1.4%	0.1%	0.1%	0.840	0.780
204	98.3%	0.9%	1.7%	0.5%	0.3%	0.838	0.778
192	97.4%	0.9%	2.6%	0.5%	0.4%	0.866	0.816
180	96.6%	1.0%	3.4%	0.6%	0.4%	0.871	0.822
168	95.5%	1.3%	4.5%	0.7%	0.6%	0.870	0.820
156	94.3%	1.8%	5.7%	1.1%	0.9%	0.868	0.817
144	92.5%	0.1%	7.5%	0.0%	0.0%	0.869	0.818
132	92.5%	0.4%	7.5%	0.2%	0.2%	0.837	0.773
120	92.1%	1.7%	7.9%	1.2%	1.0%	0.813	0.741
108	90.4%	0.9%	9.6%	0.6%	0.5%	0.817	0.748
96	89.5%	1.0%	10.5%	0.8%	0.7%	0.802	0.727
84	88.5%	1.0%	11.5%	0.8%	0.7%	0.790	0.711
72	87.5%	1.2%	12.5%	1.0%	0.9%	0.777	0.695
60	86.2%	2.6%	13.8%	2.2%	2.0%	0.768	0.684
48	83.7%	10.1%	16.3%	8.8%	8.2%	0.777	0.697
36	73.6%	10.4%	26.4%	9.5%	9.0%	0.836	0.777
24	63.1%	35.4%	36.9%	33.3%	32.4%	0.854	0.801
12	27.8%	27.8%	72.2%	27.2%	27.0%	0.899	0.861

Total 100.0%

NOTES:

(2) = 1 / Section 7, Exhibit 2, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)

Section 7 Exhibit 2 Page 10

Massachusetts Colleges & Universities - Cluster 4 Medical

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
A		counted	Discount		unted
Accident		ng Losses	Factor at	Outstandi	
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	55,047	100,128	1.000	48,143	87,571
6/30/82-83	265	530	1.000	265	530
6/30/83-84	139	278	1.000	139	278
6/30/84-85	564	1,129	1.000	564	1,129
6/30/85-86	1,922	3,843	1.000	1,922	3,843
6/30/86-87	1,190	2,381	1.000	1,190	2,381
6/30/87-88	2,604	3,604	0.806	2,098	2,904
6/30/88-89	2,027	2,027	0.775	1,571	1,571
6/30/89-90	1,619	2,619	0.745	1,206	1,951
6/30/90-91	2,528	2,528	0.770	1,947	1,947
6/30/91-92	3,973	4,973	0.781	3,104	3,885
6/30/92-93	2,532	5,063	0.809	2,048	4,097
6/30/93-94	6,293	6,293	0.833	5,245	5,245
6/30/94-95	7,158	8,158	0.840	6,012	6,852
6/30/95-96	2,909	5,818	0.838	2,438	4,876
6/30/96-97	17,203	17,203	0.866	14,900	14,900
6/30/97-98	15,161	15,161	0.871	13,205	13,205
6/30/98-99	15,356	16,356	0.870	13,359	14,229
6/30/99-00	28,514	29,514	0.868	24,752	25,620
6/30/00-01	44,832	45,832	0.869	38,966	39,835
6/30/01-02	43,778	43,778	0.837	36,646	36,646
6/30/02-03	47,298	48,298	0.813	38,461	39,274
6/30/03-04	72,574	73,574	0.817	59,310	60,127
6/30/04-05	76,670	79,670	0.802	61,491	63,898
6/30/05-06	87,479	94,479	0.790	69,076	74,604
6/30/06-07	90,789	104,789	0.777	70,532	81,408
6/30/07-08	122,456	135,456	0.768	94,054	104,039
6/30/08-09	152,239	159,239	0.777	118,226	123,662
6/30/09-10	262,149	311,149	0.836	219,169	260,136
6/30/10-11	393,863	491,863	0.854	336,339	420,027
6/30/11-12	843,683	858,683	0.899	758,623	772,110
Total	2,404,814	2,674,417		2,045,004	2,272,780

_						
<u>-</u>	Discount Ca	alculation for				
	All Prior Years					
_	(Low)	(High)				
_						
(8) Estimated Total Reserve:	55,047	100,128				
(9) Projected Number of Years:	7	7				
(10) Projected Paid Loss per Year:	7,864	14,304				
(11) Discounted Value at 4%:	48,143	87,571				

0.850

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 7, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 7, Exhibit 2, Page 9, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.850

Section 7 Exhibit 2 Page 11

Massachusetts Colleges & Universities - Cluster 4 Medical

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount	Disco	
Accident	Outstandi	ng Losses	Factor at	Outstandi	· ·
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	55,047	100,128		45,216	82,246
6/30/82-83	265	530	1.000	265	530
6/30/83-84	139	278	1.000	139	278
6/30/84-85	564	1,129	1.000	564	1,129
6/30/85-86	1,922	3,843	1.000	1,922	3,843
6/30/86-87	1,190	2,381	1.000	1,190	2,381
6/30/87-88	2,604	3,604	0.726	1,890	2,616
6/30/88-89	2,027	2,027	0.685	1,388	1,388
6/30/89-90	1,619	2,619	0.646	1,045	1,691
6/30/90-91	2,528	2,528	0.683	1,727	1,727
6/30/91-92	3,973	4,973	0.700	2,780	3,480
6/30/92-93	2,532	5,063	0.739	1,870	3,740
6/30/93-94	6,293	6,293	0.772	4,858	4,858
6/30/94-95	7,158	8,158	0.780	5,587	6,367
6/30/95-96	2,909	5,818	0.778	2,262	4,525
6/30/96-97	17,203	17,203	0.816	14,033	14,033
6/30/97-98	15,161	15,161	0.822	12,457	12,457
6/30/98-99	15,356	16,356	0.820	12,587	13,406
6/30/99-00	28,514	29,514	0.817	23,286	24,102
6/30/00-01	44,832	45,832	0.818	36,667	37,485
6/30/01-02	43,778	43,778	0.773	33,860	33,860
6/30/02-03	47,298	48,298	0.741	35,050	35,791
6/30/03-04	72,574	73,574	0.748	54,250	54,998
6/30/04-05	76,670	79,670	0.727	55,768	57,950
6/30/05-06	87,479	94,479	0.711	62,226	67,205
6/30/06-07	90,789	104,789	0.695	63,095	72,824
6/30/07-08	122,456	135,456	0.684	83,770	92,663
6/30/08-09	152,239	159,239	0.697	106,052	110,928
6/30/09-10	262,149	311,149	0.777	203,734	241,815
6/30/10-11	393,863	491,863	0.801	315,341	393,803
6/30/11-12	843,683	858,683	0.861	726,451	739,367
Total	2,404,814	2,674,417		1,911,329	2,123,486

_	Discount C	alculation for
	All Pri	or Years
_	(Low)	(High)
_		
(8) Estimated Total Reserve:	55,047	100,128
(9) Projected Number of Years:	7	7
(10) Projected Paid Loss per Year:	7,864	14,304
(11) Discounted Value at 6%:	45,216	82,246

0.795

0.794

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 7, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 7, Exhibit 2, Page 9, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



All Other - Clusters 5-17 & 95 Indemnity

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Pd Loss	Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll	Including	Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Lump Sum	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		42,562,317			49,394,764	54,287,417	6,832,447	11,725,100		
6/30/82-83		5,482,086	5,913,127		5,765,299	6,208,783	283,213	726,697		
6/30/83-84		7,892,322	8,595,169		8,380,290	9,024,928	487,969	1,132,606		
6/30/84-85	732,729	16,396,522	18,099,214	17,123,253	17,123,000	18,099,000	726,478	1,702,478	2.337	2.470
6/30/85-86	787,208	19,299,192	21,167,008	20,378,106	20,378,000	21,167,000	1,078,808	1,867,808	2.589	2.689
6/30/86-87	902,483	19,547,905	21,679,100	20,902,041	20,902,000	21,679,000	1,354,095	2,131,095	2.316	2.402
6/30/87-88	1,366,586	26,792,704	29,342,050	29,300,606	29,301,000	30,076,000	2,508,296	3,283,296	2.144	2.201
6/30/88-89	1,486,478	24,503,255	27,130,460	26,775,783	26,776,000	27,809,000	2,272,745	3,305,745	1.801	1.871
6/30/89-90	1,494,463	23,121,467	26,045,422	25,993,826	25,994,000	26,697,000	2,872,533	3,575,533	1.739	1.786
6/30/90-91	1,405,560	20,360,200	23,311,895	23,290,727	23,291,000	23,895,000	2,930,800	3,534,800	1.657	1.700
6/30/91-92	1,364,510	12,207,364	14,234,746	14,210,498	14,210,000	14,946,000	2,002,636	2,738,636	1.041	1.095
6/30/92-93	1,347,359	9,171,606	11,817,012	10,989,614	10,990,000	12,408,000	1,818,394	3,236,394	0.816	0.921
6/30/93-94	1,424,410	10,042,039	12,133,020	12,088,337	12,088,000	12,740,000	2,045,961	2,697,961	0.849	0.894
6/30/94-95	1,497,829	9,056,940	11,119,577	11,075,434	11,075,000	11,676,000	2,018,060	2,619,060	0.739	0.780
6/30/95-96	1,582,635	9,310,729	11,791,470	11,727,578	11,728,000	12,381,000	2,417,271	3,070,271	0.741	0.782
6/30/96-97	1,979,748	9,782,874	12,539,206	12,487,658	12,488,000	13,166,000	2,705,126	3,383,126	0.631	0.665
6/30/97-98	1,917,994	8,625,521	11,111,434	11,091,303	11,091,000	11,667,000	2,465,479	3,041,479	0.578	0.608
6/30/98-99	2,081,524	8,640,902	11,489,759	11,472,088	11,472,000	12,064,000	2,831,098	3,423,098	0.551	0.580
6/30/99-00	2,207,243	9,935,745	13,676,673	13,613,676	13,614,000	14,361,000	3,678,255	4,425,255	0.617	0.651
6/30/00-01	2,201,008	9,193,961	13,075,565	13,032,474	13,032,000	13,729,000	3,838,039	4,535,039	0.592	0.624
6/30/01-02	2,292,592	9,994,625	14,554,552	14,510,176	14,510,000	15,282,000	4,515,375	5,287,375	0.633	0.667
6/30/02-03	2,260,534	9,572,220	14,388,743	14,345,968	14,346,000	15,108,000	4,773,780	5,535,780	0.635	0.668
6/30/03-04	2,255,942	8,555,058	13,228,308	13,237,874	13,228,000	13,900,000	4,672,942	5,344,942	0.586	0.616
6/30/04-05	2,309,083	9,621,847	15,232,461	15,087,900	15,088,000	15,232,000	5,466,153	5,610,153	0.653	0.660
6/30/05-06	2,480,693	9,212,575	15,287,826	15,805,697	15,288,000	15,806,000	6,075,425	6,593,425	0.616	0.637
6/30/06-07	2,612,577	7,797,213	13,871,811	15,405,200	13,872,000	15,405,000	6,074,787	7,607,787	0.531	0.590
6/30/07-08	2,783,717	10,279,740	20,126,974	19,963,548	18,965,000	20,127,000	8,685,260	9,847,260	0.681	0.723
6/30/08-09	2,750,907	9,391,181	21,216,610	20,695,372	20,695,000	21,217,000	11,303,819	11,825,819	0.752	0.771
6/30/09-10	2,806,048	8,360,727	23,909,029	22,298,610	22,299,000	23,909,000	13,938,273	15,548,273	0.795	0.852
6/30/10-11	2,942,638	6,862,614	26,794,633	24,262,900	24,263,000	26,795,000	17,400,386	19,932,386	0.825	0.911
6/30/11-12	3,006,849	3,091,255	28,674,353	24,995,322	24,995,000	28,674,000	21,903,745	25,582,745	0.831	0.954
Total	54,281,345	394,664,707	511,557,206	486,161,568	546,642,353	579,536,128	151,977,647	184,871,422		
Tot 6/30/84-12	54,281,345	338,727,982	497,048,910	486,161,568	483,102,000	510,015,000	144,374,018	171,287,018	0.890	0.940

- (2) Provided by Commonwealth of Massachusetts
- (3) Sum of Section 8, Exhibit 1, Page 2, Column 3 and Section 8, Exhibit 1, Page 9, Column 8
- (4) From Section 8, Exhibit 1, Page 2, Column 8
- (5) From Section 8, Exhibit 1, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10



All Other - Clusters 5-17 & 95 Indemnity

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Paid Loss		Adjstmnt for	Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average	
Accident	Payroll	Excluding	Paid	Extra	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding	Average
Year	(000's)	Lump Sum	LDF	Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim	Age
All Prior Yrs		40,902,103							18	16		81
6/30/82-83		5,438,336	1.028	1.050	5,868,721	44,406	5,913,127		3	2	215,192	73
6/30/83-84		7,408,772	1.042	1.050	8,104,366	490,803	8,595,169		1	1	695,595	66
6/30/84-85	732,729	15,650,018	1.055	1.050	17,341,512	757,702	18,099,214	2.470	3	3	563,831	80
6/30/85-86	787,208	18,192,658	1.070	1.030	20,043,876	1,123,132	21,167,008	2.689	6	5	370,244	78
6/30/86-87	902,483	18,028,041	1.084	1.030	20,136,438	1,542,662	21,679,100	2.402	7	7	301,200	74
6/30/87-88	1,366,586	24,721,300	1.102	1.000	27,234,241	2,107,809	29,342,050	2.147	10	9	279,216	71
6/30/88-89	1,486,478	21,577,022	1.119	1.000	24,145,226	2,985,234	27,130,460	1.825	10	10	256,820	72
6/30/89-90	1,494,463	20,405,842	1.140	1.000	23,256,351	2,789,071	26,045,422	1.743	9	8	356,314	64
6/30/90-91	1,405,560	17,862,598	1.161	1.000	20,730,180	2,581,715	23,311,895	1.659	6	6	477,930	76
6/30/91-92	1,364,510	10,865,629	1.182	1.000	12,838,049	1,396,698	14,234,746	1.043	9	7	281,774	69
6/30/92-93	1,347,359	7,957,233	1.204	1.100	10,540,461	1,276,550	11,817,012	0.877	8	7	369,033	64
6/30/93-94	1,424,410	8,735,517	1.230	1.000	10,741,322	1,391,697	12,133,020	0.852	7	6	334,301	70
6/30/94-95	1,497,829	7,524,723	1.260	1.000	9,481,206	1,638,371	11,119,577	0.742	5	6	326,081	68
6/30/95-96	1,582,635	8,065,046	1.292	1.000	10,419,727	1,371,743	11,791,470	0.745	8	5	470,936	74
6/30/96-97	1,979,748	7,874,055	1.325	1.000	10,431,315	2,107,891	12,539,206	0.633	4	8	319,658	63
6/30/97-98	1,917,994	6,223,326	1.359	1.000	8,459,898	2,651,536	11,111,434	0.579	3	6	372,762	64
6/30/98-99	2,081,524	6,587,838	1.396	1.000	9,196,699	2,293,060	11,489,759	0.552	6	5	521,772	53
6/30/99-00	2,207,243	8,042,197	1.433	1.000	11,525,175	2,151,498	13,676,673	0.620	5	7	497,568	55
6/30/00-01	2,201,008	7,654,033	1.475	1.000	11,287,561	1,788,004	13,075,565	0.594	6	8	454,191	58
6/30/01-02	2,292,592	8,009,207	1.521	1.000	12,181,779	2,372,773	14,554,552	0.635	9	6	695,429	51
6/30/02-03	2,260,534	7,842,222	1.566	1.000	12,279,652	2,109,091	14,388,743	0.637	12	9	493,048	51
6/30/03-04	2,255,942	6,893,294	1.618	1.000	11,155,209	2,073,099	13,228,308	0.586	13	9	473,546	51
6/30/04-05	2,309,083	7,449,646	1.673	1.000	12,460,149	2,772,312	15,232,461	0.660	20	15	334,033	51
6/30/05-06	2,480,693	7,041,075	1.750	1.000	12,319,743	2,968,083	15,287,826	0.616	36	24	219,945	51
6/30/06-07	2,612,577	6,226,124	1.845	1.000	11,489,053	2,382,758	13,871,811	0.531	43	27	194,923	51
6/30/07-08	2,783,717	8,430,592	1.992	1.000	16,789,949	3,337,025	20,126,974	0.723	70	54	154,803	52
6/30/08-09	2,750,907	7,998,181	2.237	1.000	17,893,768	3,322,842	21,216,610	0.771	104	96	103,079	50
6/30/09-10	2,806,048	7,589,725	2.693	1.000	20,441,861	3,467,169	23,909,029	0.852	238	114	112,738	49
6/30/10-11	2,942,638	6,236,233	3.652	1.000	22,773,981	4,020,652	26,794,633	0.911	557	252	65,626	47
6/30/11-12	3,006,849	3,091,255	7.971	1.000	24,641,658	4,032,695	28,674,353	0.954		561	38,414	44
Total	54,281,345	346,523,841			446,209,125	65,348,082	511,557,206		1,236	1,299		

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 8, Exhibit 1, Page 7

⁽⁵⁾ Based on information from the MA WCRIB

^{(6) = (3)} x (4) x (5)

⁽⁷⁾ From Section 8, Exhibit 1, Page 9, Column 13

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 8 Exhibit 1 Page 3

All Other - Clusters 5-17 & 95 Indemnity

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori	Paid Loss		Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss	Excluding	Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Lump Sum	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	732,729	1.863	15,650,018	1.055	16,365,552	757,702	17,123,253	2.337	2.234
6/30/85-86	787,208	2.072	18,192,658	1.070	19,254,974	1,123,132	20,378,106	2.589	2.446
6/30/86-87	902,483	1.895	18,028,041	1.084	19,359,379	1,542,662	20,902,041	2.316	2.145
6/30/87-88	1,366,586	1.960	24,721,300	1.102	27,192,797	2,107,809	29,300,606	2.144	1.990
6/30/88-89	1,486,478	1.400	21,577,022	1.119	23,790,549	2,985,234	26,775,783	1.801	1.600
6/30/89-90	1,494,463	1.528	20,405,842	1.140	23,204,755	2,789,071	25,993,826	1.739	1.553
6/30/90-91	1,405,560	1.464	17,862,598	1.161	20,709,012	2,581,715	23,290,727	1.657	1.473
6/30/91-92	1,364,510	0.929	10,865,629	1.182	12,813,801	1,396,698	14,210,498	1.041	0.939
6/30/92-93	1,347,359	0.768	7,957,233	1.204	9,713,064	1,276,550	10,989,614	0.816	0.721
6/30/93-94	1,424,410	0.737	8,735,517	1.230	10,696,640	1,391,697	12,088,337	0.849	0.751
6/30/94-95	1,497,829	0.619	7,524,723	1.260	9,437,063	1,638,371	11,075,434	0.739	0.630
6/30/95-96	1,582,635	0.641	8,065,046	1.292	10,355,835	1,371,743	11,727,578	0.741	0.654
6/30/96-97	1,979,748	0.516	7,874,055	1.325	10,379,767	2,107,891	12,487,658	0.631	0.524
6/30/97-98	1,917,994	0.437	6,223,326	1.359	8,439,767	2,651,536	11,091,303	0.578	0.440
6/30/98-99	2,081,524	0.439	6,587,838	1.396	9,179,028	2,293,060	11,472,088	0.551	0.441
6/30/99-00	2,207,243	0.513	8,042,197	1.433	11,462,178	2,151,498	13,613,676	0.617	0.519
6/30/00-01	2,201,008	0.507	7,654,033	1.475	11,244,470	1,788,004	13,032,474	0.592	0.511
6/30/01-02	2,292,592	0.526	8,009,207	1.521	12,137,403	2,372,773	14,510,176	0.633	0.529
6/30/02-03	2,260,534	0.538	7,842,222	1.566	12,236,876	2,109,091	14,345,968	0.635	0.541
6/30/03-04	2,255,942	0.496	6,893,294	1.618	11,164,774	2,073,099	13,237,874	0.587	0.495
6/30/04-05	2,309,083	0.524	7,449,646	1.673	12,315,588	2,772,312	15,087,900	0.653	0.533
6/30/05-06	2,480,693	0.545	7,041,075	1.750	12,837,614	2,968,083	15,805,697	0.637	0.518
6/30/06-07	2,612,577	0.568	6,226,124	1.845	13,022,442	2,382,758	15,405,200	0.590	0.498
6/30/07-08	2,783,717	0.591	8,430,592	1.992	16,626,522	3,337,025	19,963,548	0.717	0.597
6/30/08-09	2,750,907	0.616	7,998,181	2.237	17,372,529	3,322,842	20,695,372	0.752	0.632
6/30/09-10	2,806,048	0.637	7,589,725	2.693	18,831,441	3,467,169	22,298,610	0.795	0.671
6/30/10-11	2,942,638	0.655	6,236,233	3.652	20,242,248	4,020,652	24,262,900	0.825	0.688
6/30/11-12	3,006,849	0.680	3,091,255	7.971	20,962,627	4,032,695	24,995,322	0.831	0.697
Total	54,281,345		292,774,630		421,348,696	64,812,872	486,161,568		

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 8, Exhibit 1, Page 4, Column 11
- (4) From Section 8, Exhibit 1, Page 2, Column 3
- (5) From Section 8, Exhibit 1, Page 2, Column 4
- $(6) = (4) + [\{1 \{1/(5)\}\} \times (3) \times (2) \times 10]$
- (7) From Section 8, Exhibit 1, Page 9, Column 13
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10

Section 8 Exhibit 1 Page 4

All Other - Clusters 5-17 & 95 Indemnity

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Exp Ult Loss	Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Excluding	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Lump Sum	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									1.863	1.863
6/30/85-86									2.072	2.072
6/30/86-87									1.895	1.895
6/30/87-88									1.960	1.960
6/30/88-89									1.400	1.400
6/30/89-90									1.528	1.528
6/30/90-91	1,405,560	20,730,180	1.475	0.946	1.395	1.916	2.674	0.386	1.503	1.464
6/30/91-92	1,364,510	12,838,049	0.941	1.038	0.977	1.860	1.817	0.363	0.945	0.929
6/30/92-93	1,347,359	10,540,461	0.782	1.210	0.947	1.806	1.710	0.320	0.781	0.768
6/30/93-94	1,424,410	10,741,322	0.754	1.195	0.901	1.754	1.580	0.334	0.759	0.737
6/30/94-95	1,497,829	9,481,206	0.633	1.184	0.749	1.702	1.276	0.347	0.635	0.619
6/30/95-96	1,582,635	10,419,727	0.658	1.174	0.773	1.653	1.278	0.361	0.659	0.641
6/30/96-97	1,979,748	10,431,315	0.527	1.163	0.613	1.605	0.983	0.375	0.534	0.516
6/30/97-98	1,917,994	8,459,898	0.441	1.148	0.506	1.558	0.789	0.391	0.454	0.437
6/30/98-99	2,081,524	9,196,699	0.442	1.133	0.500	1.513	0.757	0.409	0.458	0.439
6/30/99-00	2,207,243	11,525,175	0.522	1.114	0.582	1.469	0.855	0.428	0.535	0.513
6/30/00-01	2,201,008	11,287,561	0.513	1.086	0.557	1.426	0.794	0.452	0.524	0.507
6/30/01-02	2,292,592	12,181,779	0.531	1.065	0.566	1.384	0.783	0.475	0.550	0.526
6/30/02-03	2,260,534	12,279,652	0.543	1.061	0.576	1.344	0.775	0.491	0.564	0.538
6/30/03-04	2,255,942	11,155,209	0.494	1.061	0.525	1.305	0.685	0.506	0.514	0.496
6/30/04-05	2,309,083	12,460,149	0.540	1.054	0.569	1.267	0.721	0.524	0.521	0.524
6/30/05-06	2,480,693	12,319,743	0.497	1.044	0.518	1.230	0.637	0.545	0.534	0.545
6/30/06-07	2,612,577	11,489,053	0.440	1.032	0.454	1.194	0.542	0.568	0.548	0.568
6/30/07-08	2,783,717	16,789,949	0.603	1.021	0.616	1.159	0.714	0.591	0.562	0.591
6/30/08-09	2,750,907	17,893,768	0.650	1.009	0.657	1.126	0.739	0.616	0.578	0.616
6/30/09-10	2,806,048	20,441,861	0.728	1.005	0.732	1.093	0.800	0.637	0.589	0.637
6/30/10-11	2,942,638	22,773,981	0.774	1.007	0.779	1.061	0.827	0.655	0.601	0.655
6/30/11-12	3,006,849	24,641,658	0.820	1.000	0.820	1.030	0.844	0.680		0.680
Total	47,511,399	300,078,393								
			Trend L	ast 4 (ex 11-12):	8.5%	Avg 3 (x11-12):	0.789			
				ast 8 (ex 11-12):	6.2%	Avg 5 (x11-12):	0.724			
				st 12 (ex 11-12):	2.3%	Avg 10 (x11-12):	0.722			
				Selected Trend:	1.5%	Prior Sel Avg:	0.610			

Selected Trend:

3.0%

Sel. Loss Cost:

0.700

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 8, Exhibit 1, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCRIB $\,$
- (6) = (4) x (5)(7) Based on Selected Trend from (6)
- $(8) = (6) \times (7)$ (9) = Sel. Loss Cost / [(5) * (7)]
- (10) From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

Section 8 Exhibit 1 Page 5

All Other - Clusters 5-17 & 95 Indemnity

Calculation of 1982 & Prior Reserves (Page 1)

Method 1			
(1)	Average Payment Trend		0.950
(2)	Credibility		62%
(3)	Average Pmt Trend Statewide		0.960
(4)	Credibility Weighted Trend		0.954
(1)	Credibility Weighted Trend	(Low)	(High)
(5)	Selected Range	0.949	0.973
(6)	Incremental Paid for 2012	659,520	659,520
(7)	Estimated Reserve	12,273,189	23,767,151
(8)	Paid to Date (82 & Prior)	40,902,103	40,902,103
(9)	Est Ult Paid for 1982 & Prior	53,175,292	64,669,254
Method 2	<u></u>		
		(Current)	(Prior)
(10)	Avg Incremental Paid (3 yrs)	712,238	731,364
(11)	Projected Number of Years	7	7
(12)	Estimated Reserve	4,985,663	5,119,545
(13)	Paid to Date (82 & Prior)	40,902,103	40,242,583
(14)	Est Ult Paid for 1982 & Prior	45,887,765	45,362,127
(14a)	Paid Counts During Fiscal Year	16	18
	_	(Low)	(High)
(15)	Sel Ult Excluding Lump Sums	47,709,647	52,602,300
(16)	Lump Sum Ultimates	1,685,117	1,685,117
(17)	Ult Loss Including Lump Sums	49,394,764	54,287,417
(18)	Implied Tail	1.166	1.286
(19)	Ult Loss Inc Lump Sums @ 6/11	48,924,937	54,023,336
NOTES:			
(1) From Sectio	on 8, Exhibit 1, Page 6		(10) Avg of 3 latest years from Section 8, Exhibit 1, Page 6, Column 3
(2) = (Average of Average of Av	of Section 8, Exhibit 1, Page 6, Column 3 / 3,000,000) ^ 0.5		(11) Selected judgmentally
(3) Average Sta	tewide Trend		(12) = (10 x (11))
$(4) = (1) \times (2) +$	- (4) x {1 - (2)}		(14) = (12) + (13)
(5) Selected jud	gmentally based on (4)		(15) = Average of (9) and (14)
(6), (14a) Provid	ded by Commonwealth of Massachusetts		(16) From Section 8, Exhibit 1, Page 9, Column 13
$(7) = (6) \times (5) /$	{1 - (5)}		(17) = (15) + (16)
(8), (16) From S	Section 8, Exhibit 1, Page 2, Column 3		(18) = (15) / (8)
(9) = (7) + (8)			(19) From Aon analysis as of June 30, 2011



Section 8 Exhibit 1 Page 6

All Other - Clusters 5-17 & 95 Indemnity

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	1,836,769	14.424			
1993	2	1,798,132	14.402	0.979		
1994	3	1,805,622	14.406	1.004		
1995	4	1,547,567	14.252	0.857		
1996	5	1,421,249	14.167	0.918		
1997	6	1,347,840	14.114	0.948		
1998	7	1,296,821	14.075	0.962		
1999	8	1,188,256	13.988	0.916		
2000	9	1,366,125	14.127	1.150	n =	21
2001	10	1,385,608	14.142	1.014	S(x) =	42,042
2002	11	1,127,515	13.936	0.814	S(x-sq) =	84,168,854
2003	12	1,046,115	13.861	0.928	S(xy) =	584,994
2004	13	1,007,259	13.823	0.963	S(y) =	292
2005	14	889,985	13.699	0.884	D =	16,170
2006	15	854,725	13.659	0.960	slope =	-0.052
2007	16	901,012	13.711	1.054	Avg Trend =	0.948
2008	17	757,677	13.538	0.841		
2009	18	716,898	13.483	0.946		
2010	19	794,268	13.585	1.108		
2011	20	682,924	13.434	0.860		
2012	21	659,520	13.399	0.966		

Selected Trend: 0.950

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.966 = 659520 / 682924



Commonwealth of Massachusetts Workers Compensation All Other - Clusters 5-17 & 95 INDEMNITY Paid Loss Development Paid Loss (Excluding Lump Sum)

Section 8 Exhibit 1 Page 7

3,307,827 5,268,212 11,178,862 13,464,328 13,820,597 324 5,125,598 7,339,786 336 5,253,262 84 1,752,282 3,593,923 6,920,369 9,113,471 9,956,299 231,024 474,232 977,090 1,346,949 850,794 1,079,038 1,738,838 2,206,285 3,464,586 4,349,747 4,829,702 6,090,487 5,503,885 7,082,566 1,313,630 2,688,699 5,275,439 7,340,375 8,405,662 1,547,045 3,194,391 6,134,761 8,352,083 3,710,205 5,953,029 12,599,733 14,899,857 4,831,991 7,234,716 3,539,243 5,713,715 June-83
June-84
June-85
June-86
June-87
June-88
June-90
June-91
June-91
June-92
June-95
June-96
June-96
June-90
June-01
June-02
June-03
June-03
June-04
June-05
June-05
June-06
June-07
June-07
June-07
June-08
June-09
June-09 575.253 88.07.94 1,177.837 1,738.838 2,372.578 3,464.586 3,07.907 4,829.702 3,880.011 5,503.885 5,007.777 7,745.041 5,080.03 7,663.780 5,721.042 8,298.538 4,739.981 6,742.583 1,990.073 4,248.177 2,645.187 3,499.107 2,642.119 3,617.627 2,442.239 3,499.107 2,642.119 3,617.627 2,462.3584 3,489.908 2,350.834 3,488.998 2,350.834 3,488.998 2,389.804 3,488.998 3,488.998 2,389.804 3,488.998 3,488.988 3,488.988 3,488.988 3,488.988 3 575,253 2,008,011 2,253,139 2,495,680 4,483,497 2,697,289 4,692,563 2,900,500 3,128,719 3,431,589 3,863,378 3,993,953 4,130,963 4,277,923 4,408,084 4,548,681 4,684,745 4,987,790 7,305,169 5,365,011 5,438,336 3,979,171 7,655,499 9,830,455 4 253 324 4,887,962 10,145,930 12,298,057 12,632,595 5 105 946 5,510,171 11,641,664 13,904,681 14,335,672 6,114,581 13,016,766 15,315,399 15,661,703 6,330,589 6,551,091 13,778,892 16,043,093 6,749,135 14,131,892 16,396,498 6 911 821 7,056,179 14,710,082 17,081,069 17,127,747 7,158,846 14,949,032 17,430,688 7 374 258 7,408,772 8,408,427 10,384,747 11,085,673 8,983,219 11,054,823 9,607,477 11,652,485 10,640,204 12,995,823 13,327,657 12,100,236 14,437,279 14,795,690 13,426,358 15,687,156 14,427,029 16,749,018 15,141,235 17,722,515 15,309,397 15,476,853 17,979,439 18,192,658 1.601.233 9,270,533 10.556,456 11,623,420 16,687,795 12,106,294 15.267.959 15,953,801 16.321.920 16,607,046 16.861.857 17.450.228 17.735.296 18.028.041 11,085,673 15,990,897 14,433,962 14,556,408 12,022,048 6,955,659 5,783,566 6,596,878 5,928,230 6,066,925 6,877,491 5,538,593 5,858,839 12,106,294 17,326,343 15,605,979 15,898,180 13,141,453 7,617,889 6,275,882 7,108,040 6,322,277 6,633,555 7,147,793 5,803,895 13,327,657 18,710,472 16,752,699 16,919,598 14,329,913 8,298,781 6,664,357 7,629,538 6,695,050 7,184,823 7,473,882 5,992,596 13,820,597 19,340,236 17,314,807 17,383,167 14,888,135 8,572,496 6,833,263 7,841,336 6,862,701 7,415,770 7,593,508 17,991,163 16,156,892 16,435,568 13,738,283 7,987,140 19,962,128 17,864,824 17,777,202 15,354,127 20,594,429 18,333,675 18,153,288 15,837,750 9,365,337 7,177,333 21,738,131 19,180,530 18,829,999 16,689,475 10,024,920 7,520,747 2 137 513 10.041,912 9.679,037 10.219,139 8.047,589 5.126,895 4,149,352 4,117,213 4,377,145 3,817,744 4,263,196 5,433,894 5,525,999 6,321,376 6,651,765 5,714,500 12 075 717 13,478,064 12,173,513 12,281,818 10,318,373 5,823,625 4,966,351 5,345,023 5,146,590 4,928,644 5,991,102 4,913,580 5,080,496 6,679,071 6,527,511 7,056,349 7,231,292 6,318,306 14 314 633 15 200 521 21 200 720 22 267 656 22 756 365 23 248 699 23 645 371 23 973 193 24 351 090 24 721 300 15,200,521 13,862,567 13,878,235 11,411,152 6,617,495 5,423,620 6,350,297 5,690,639 5,709,230 6,730,818 5,377,292 5,694,351 16,687,795 15,035,025 15,345,419 12,546,665 7,247,236 6,064,338 6,825,808 6,125,266 6,359,154 7,036,406 5,683,480 6,093,043 2,137,513 1,712,857 2,296,897 1,963,238 1,567,027 1,093,248 12,075,717 11,203,387 11,305,744 9,308,882 5,548,304 21,200,720 18,761,144 18,514,019 16,311,134 9,715,209 7,331,914 22,267,656 19,588,446 19,129,560 17,129,945 10,338,595 22,756,365 20,011,654 19,445,117 17,375,269 10,607,880 23,248,699 20,402,670 19,770,540 17,615,173 23,645,371 20,798,618 20,083,209 17,862,598 13,105,806 13,134,163 10,933,284 6,278,092 5,148,147 5,784,388 5,470,951 5,324,160 6,443,225 5,187,189 5,423,838 7,051,320 6,768,096 7,305,019 7,459,850 6,512,915 7,108,767 21,197,603 20,405,842 21,577,022 8,940,354 7,010,090 10,865,629 6,484,665 7,401,172 6,510,106 6,919,769 7,354,650 5,909,062 4,610,531 7 748 152 7 957 233 1,093,248 1,108,341 1,320,706 1,108,821 1,085,126 760,353 4,610,531 4,786,813 4,799,858 4,427,598 5,289,243 4,535,498 7,010,090 8,036,532 7,023,885 7,649,372 7,713,847 6,223,326 7,177,333 8,208,058 7,185,394 7,874,542 7,874,055 7,331,914 8,388,758 7,342,550 8,065,046 8 566 268 8,735,517 6.108.804 4,763,871 6,170,827 6,126,399 6,748,539 7,013,996 6,081,077 5,694,351 7,313,676 7,002,422 7,488,627 7,624,463 6,733,332 6,235,873 7,749,526 7,426,582 8,009,207 1.160,394 5.858.839 6.377.337 6,494,424 6,587,838 1,478,087 1,609,875 1,821,131 2,185,619 1,753,076 3,369,760 3,605,278 4,134,238 4,646,586 3,756,461 3,933,297 4,601,283 4,700,879 5,441,659 6,055,662 4,930,176 7,476,289 7,073,145 7,707,068 7,742,363 7,629,742 7,226,294 7,893,060 7,842,222 7,893,815 8,042,197 6,893,294 3,756,461 4,930,176 3,933,297 5,289,170 3,829,026 4,910,437 3,632,388 4,091,097 4,505,431 6,126,330 4,646,609 6,562,837 5,635,921 7,589,725 5,714,366 6,002,168 5,443,647 4,999,633 7,479,871 7,998,181 6,318,763 5,995,523 5,805,615 8,430,592 1,819,778 1,788,326 1,734,963 2,020,827 1,952,179 2,633,117 6,666,265 6,675,753 6,226,124 7,449,646 7,041,075 June-08 June-09 June-10 June-11 June-12 3.051.305 6.236.233 Age-to-Age Factors 84-96 1.146 1.107 1.106 1.079 1.060 1.062 1.058 60-72 1.178 1.188 1.163 1.138 1.103 1.116 1.087 Acc Yr Ending June-83 June-84 June-85 24-36 1.476 1.460 1.419 1.547 1.599 1.451 1.422 1.328 1.328 1.329 1.433 1.349 1.431 1.503 1.365 1.304 1.316 1.304 1.316 1.305 1.304 1.316 48-60 1.217 1.219 1.213 1.205 1.187 1.203 1.157 1.066 1.157 1.066 1.157 1.163 1.097 1.160 1.191 1.153 1.117 1.136 1.109 1.064 1.054 144-156 156-168 168-180 1.037 216-228 1.034 228-240 312-324 324-336 336-348 1.021 36-48
1.268
1.269
1.255
1.261
1.287
1.297
1.297
1.293
1.194
1.207
1.188
1.177
1.210
1.177
1.210
1.177
1.210
1.176
1.162
1.159
1.159
1.159
1.159
1.159
1.159
1.159
1.1222
1.221
1.221 64-276 1.032 1.021 1.020 1.020 1.016 1.014 1.019 1.016 1.030 1.015 1.016 1.020 1.019 1.016 1.018 1.057 1.032 1.051 1.036 1.037 1.034 1.034 1.031 1.011 1.013 1.017 1.016 1.032 1.010 1.011 1.014 1.017 1.028 1.005 1.011 1.012 2.490 2.484 2.428 2.428 2.423 2.343 2.343 2.414 2.420 2.204 2.172 2.280 2.172 2.280 2.172 2.280 2.172 2.280 2.172 2.280 2.172 2.280 2.239 2.270 2.126 2.141 2.141 2.094 2.141 2.094 2.141 2.094 2.141 2.094 2.141 1.079 1.045 1.049 1.057 1.055 1.040 1.037 1.029 1.043 1.039 1.028 1.031 1.028 1.038 1.016 1.014 1.041 1.025 1.014 1.075 1.042 1.056 1.055 1.043 1.038 1.035 1.044 1.045 1.048 1.033 1.041 1.030 1.043 1.029 1.018 1.125 1.128 1.091 1.074 1.069 1.098 1.056 1.050 1.052 1.041 1.035 1.005 1.005 1.042 1.041 1.032 1.032 1.029 1.023 1.020 1.030 1.037 1.022 1.022 1.022 1.027 1.033 1.028 1.026 1.025 1.022 1.017 1.023 1.032 1.026 1.021 1.025 1.035 1.031 1.024 1.019 1.024 1.021 1.016 1.026 1.031 1.030 1.020 1.024 1.021 1.021 1.015 1.017 1.019 1.016 1.014 1.069 1.054 1.042 1.038 1.038 1.039 1.038 1.032 1.032 1.026 1.026 1.023 1.023 1.022 1.022 1.026 1.022 1.017 1.022 1.020 1.068 1.065 1.049 1.041 1.033 1.037 June-8€ June-87 June-88 June-89 June-90 June-91 June-93 June-93 June-95 June-97 June-99 June-00 June-01 June-02 June-03 June-04 June-05 June-05 June-05 June-05 June-05 June-06 June-07 June-06 June-07 June-08 June-07 June-08 June-09 1.044 1.062 1.032 1.015 1.016 1.014 1.026 1.027 1.049 1.054 1.051 1.017 1.014 1.024 1.086 1.108 1.050 1.077 1.117 1.072 1.113 1.133 1.083 1.066 1.082 1.065 1.046 1.031 1.039 1.055 1.069 1.078 1.037 1.082 1.063 1.080 1.075 1.056 1.068 1.057 1.044 1.054 1.054 1.098 1.040 1.072 1.045 1.037 1.050 1.037 1.035 1.025 1.022 1.034 1.048 1.054 1.044 1.042 1.049 1.039 1.033 1.048 1.023 1.026 1.040 1.021 1.036 1.047 1.051 1.035 1.037 1.032 1.043 1.016 1.021 1.023 1.016 1.028 1.015 1.027 1.039 1.033 1.025 1.028 1.025 1.032 1.016 1.019 1.014 1.023 1.031 1.043 1.026 1.025 1.023 1.032 1.016 1.019 1.021 1.031 1.048 1.024 1.021 1.023 1.029 1.021 1.066 1.039 1.042 1.063 1.022 1.030 1.029 1.022 1.010 1.029 1.015 1.024 1.024 1.056 1.035 1.032 1.031 1.024 1.066 1.055 1.072 June-10 June-11 12-24 60-72 72-84 Averages Simple Avg All Yrs 48-60 132-144 216-228 228-240 300-312 2.301 1.210 1.139 1.070 1.059 1.032 1.031 1.024 1.017 1.095 1.030 1.026 1.023 1.020 1.020 1.014 1.014 1.013 2.178 1.181 1.021 Latest 5 1.306 1.101 1.062 1.044 1.033 1.020 1.024 1.021 1.024 1.021 1.021 1.023 1.024 1.025 1.025 1.025 1.019 1.016 1.017 1.018 1.014 1.017 Latest 3 1.373 1.130 1.080 1.051 1.035 1.023 1.020 1.019 1.024 1.017 1.017 1.022 1.024 1.023 1.024 1.027 1.018 1.016 1.016 1.017 1.016 1.014 1.009 1.014 Volume Wtd All Yrs 1.384 1.316 1.371 1.045 1.020 1.023 1.031 1.023 1.022 1.022 1.020 1.021 1.018 1.017 1.016 2.273 2.164 2.163 1.056 1.033 1.034 1.039 1.024 1.024 1.025 1.025 1.024 1.021 1.012 1.012 1.012 Latest 5 1.183 1.101 1.061 1.044 1.023 1.020 1.021 1.022 1.024 1.026 1.024 1.019 1.016 1.018 1.015 1.015 1.010 1.012 Latest 3 1.016 1.014 Dev Factor Selection Industry 1 Industry 2 Prior 1.499 1.746 1.332 1.019 1.029 1.051 1.012 1.020 1.045 1.046 1.750 1.187 1.300 1.176 1.204 2.693 1.084 1.126 1.110 1.039 1.062 1.074 1.002 1.028 1.027 1.396 1.009 1.035 1.008 1.031 1.006 1.033 1.010 1.031 1.004 1.028 1.001 1.027 2.224 1.015 1.028 1.026 1.020 1.021 1.230 1.018 1.019 1.020 1.020 1.020 1.020 1.020 1.030 1.0261.014 1.042 96.0% Selected 2.183 7.971 1.356 3.652 1.123 2.237 1.079 1.992 1.034 1.673 1.033 1.029 1.031 1.521 1.029 1.475 1.027 1.433 1.026 1.359 1.025 1.025 1.025 1.019 1.204 1.018 1.182 1.018 1.161 1.018 1.016 1.119 1.016 1.102 1.014 1.084 1.014 1.070 1.013 1.028 97.3% 1 325 1 292 FacToI IIt 1 845 1.618 1.260 1.140 87.7%

Section 8 Exhibit 1 Page 8

All Other - Clusters 5-17 & 95 Indemnity

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ite Loss	Ultima	ite Loss	Change in U	Iltimate Loss	Change in U	ltimate Loss
Accident	As o	f 6/11	As o	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	48,924,937	54,023,336	49,394,764	54,287,417	469,827	1.0%	264,081	0.5%
6/30/82-83	5,765,190	6,208,666	5,765,299	6,208,783	109	0.0%	118	0.0%
6/30/83-84	8,461,302	9,112,172	8,380,290	9,024,928	(81,012)	-1.0%	(87,244)	-1.0%
6/30/84-85	17,166,000	18,199,000	17,123,000	18,099,000	(43,000)	-0.3%	(100,000)	-0.5%
6/30/85-86	20,514,000	21,396,000	20,378,000	21,167,000	(136,000)	-0.7%	(229,000)	-1.1%
6/30/86-87	21,068,000	21,944,000	20,902,000	21,679,000	(166,000)	-0.8%	(265,000)	-1.2%
6/30/87-88	29,732,000	31,340,000	29,301,000	30,076,000	(431,000)	-1.4%	(1,264,000)	-4.0%
6/30/88-89	27,104,000	27,637,000	26,776,000	27,809,000	(328,000)	-1.2%	172,000	0.6%
6/30/89-90	26,463,000	26,614,000	25,994,000	26,697,000	(469,000)	-1.8%	83,000	0.3%
6/30/90-91	23,847,000	23,872,000	23,291,000	23,895,000	(556,000)	-2.3%	23,000	0.1%
6/30/91-92	14,427,000	15,176,000	14,210,000	14,946,000	(217,000)	-1.5%	(230,000)	-1.5%
6/30/92-93	11,159,000	11,967,000	10,990,000	12,408,000	(169,000)	-1.5%	441,000	3.7%
6/30/93-94	12,415,000	12,464,000	12,088,000	12,740,000	(327,000)	-2.6%	276,000	2.2%
6/30/94-95	11,377,000	11,422,000	11,075,000	11,676,000	(302,000)	-2.7%	254,000	2.2%
6/30/95-96	12,049,000	12,721,000	11,728,000	12,381,000	(321,000)	-2.7%	(340,000)	-2.7%
6/30/96-97	12,797,000	13,488,000	12,488,000	13,166,000	(309,000)	-2.4%	(322,000)	-2.4%
6/30/97-98	11,312,000	11,890,000	11,091,000	11,667,000	(221,000)	-2.0%	(223,000)	-1.9%
6/30/98-99	11,987,000	12,597,000	11,472,000	12,064,000	(515,000)	-4.3%	(533,000)	-4.2%
6/30/99-00	14,271,000	15,052,000	13,614,000	14,361,000	(657,000)	-4.6%	(691,000)	-4.6%
6/30/00-01	13,514,000	14,234,000	13,032,000	13,729,000	(482,000)	-3.6%	(505,000)	-3.5%
6/30/01-02	15,045,000	15,855,000	14,510,000	15,282,000	(535,000)	-3.6%	(573,000)	-3.6%
6/30/02-03	15,056,000	15,874,000	14,346,000	15,108,000	(710,000)	-4.7%	(766,000)	-4.8%
6/30/03-04	13,620,000	14,306,000	13,228,000	13,900,000	(392,000)	-2.9%	(406,000)	-2.8%
6/30/04-05	15,529,000	15,878,000	15,088,000	15,232,000	(441,000)	-2.8%	(646,000)	-4.1%
6/30/05-06	15,244,000	15,530,000	15,288,000	15,806,000	44,000	0.3%	276,000	1.8%
6/30/06-07	14,690,000	15,966,000	13,872,000	15,405,000	(818,000)	-5.6%	(561,000)	-3.5%
6/30/07-08	18,050,000	20,677,000	18,965,000	20,127,000	915,000	5.1%	(550,000)	-2.7%
6/30/08-09	19,807,000	20,777,000	20,695,000	21,217,000	888,000	4.5%	440,000	2.1%
6/30/09-10	20,148,000	22,613,000	22,299,000	23,909,000	2,151,000	10.7%	1,296,000	5.7%
6/30/10-11	20,774,000	26,302,000	24,263,000	26,795,000	3,489,000	16.8%	493,000	1.9%
6/30/11-12								
Total	522,316,429	555,135,173	521,647,353	550,862,128	(669,076)	-0.1%	(4,273,045)	-0.8%

⁽²⁾, (3) From Aon analysis as of June 30, 2011

^{(4), (5)} From Section 8, Exhibit 1, Page 1, Columns 6, 7

^{(6) = (4) - (2)}

^{(7) = (4) / (2) - 1}

^{(8) = (5) - (3)}

^{(9) = (5) / (3) - 1}



All Other - Clusters 5-17 & 95 Indemnity

Calculation of Ultimate Lump Sum Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Paid Loss	Implied	Ult Loss	Selected Incr	Cumulative	Total	Paid	Est Ult	Ultimate		Est Ult	Selected	Prior
Accident	Excluding	Cumulative	Excluding	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum -	Lump Sum	Lump Sum	Lump Sum -	Est Ultimate	Est Ultimate
Year	Lump Sum	LDF	Lump Sum	% Outstdg	% Outstdg	Outstdg	to Date	Incr Method	Percentage	LDF	Paid Method	Lump Sums	Lump Sums
All Prior Yrs	40,902,103	1.226	50,155,973	0.0%	0.0%	0	1,660,214	1,660,214	3.3%	1.030	1,710,020	1,685,117	1,669,892
6/30/82-83	5,438,336	1.079	5,868,721	0.0%	0.0%	0	43,750	43,750	0.7%	1.030	45,063	44,406	44,406
6/30/83-84	7,408,772	1.094	8,104,366	0.0%	0.0%	0	483,550	483,550	6.0%	1.030	498,057	490,803	490,803
6/30/84-85	15,650,018	1.108	17,341,512	0.0%	0.0%	0	746,504	746,504	4.3%	1.030	768,899	757,702	757,702
6/30/85-86	18,192,658	1.102	20,043,876	0.0%	0.0%	0	1,106,534	1,106,534	5.5%	1.030	1,139,730	1,123,132	1,123,132
6/30/86-87	18,028,041	1.117	20,136,438	0.0%	0.0%	0	1,519,864	1,519,864	7.5%	1.030	1,565,460	1,542,662	1,546,576
6/30/87-88	24,721,300	1.102	27,234,241	0.0%	0.0%	0	2,071,404	2,071,404	7.6%	1.035	2,144,214	2,107,809	2,113,169
6/30/88-89	21,577,022	1.119	24,145,226	0.0%	0.0%	0	2,926,233	2,926,233	12.1%	1.040	3,044,236	2,985,234	3,005,161
6/30/89-90	20,405,842	1.140	23,256,351	0.1%	0.1%	23,256	2,715,625	2,738,881	11.8%	1.046	2,839,260	2,789,071	2,808,347
6/30/90-91	17,862,598	1.161	20,730,180	0.1%	0.2%	41,460	2,497,602	2,539,062	12.2%	1.051	2,624,368	2,581,715	2,596,361
6/30/91-92	10,865,629	1.182	12,838,049	0.1%	0.3%	34,775	1,341,736	1,376,511	10.7%	1.056	1,416,885	1,396,698	1,413,021
6/30/92-93	7,957,233	1.325	10,540,461	0.1%	0.4%	39,092	1,214,373	1,253,465	11.9%	1.070	1,299,636	1,276,550	1,279,317
6/30/93-94	8,735,517	1.230	10,741,322	0.1%	0.5%	51,726	1,306,522	1,358,248	12.6%	1.091	1,425,147	1,391,697	1,431,830
6/30/94-95	7,524,723	1.260	9,481,206	0.1%	0.6%	56,152	1,532,217	1,588,369	16.8%	1.102	1,688,372	1,638,371	1,723,554
6/30/95-96	8,065,046	1.292	10,419,727	0.1%	0.7%	74,891	1,245,683	1,320,574	12.7%	1.142	1,422,913	1,371,743	1,439,672
6/30/96-97	7,874,055	1.325	10,431,315	0.0%	0.7%	74,974	1,908,819	1,983,793	19.0%	1.169	2,231,989	2,107,891	2,092,781
6/30/97-98	6,223,326	1.359	8,459,898	0.2%	0.9%	75,336	2,402,195	2,477,531	29.3%	1.176	2,825,541	2,651,536	2,569,374
6/30/98-99	6,587,838	1.396	9,196,699	0.1%	0.9%	86,804	2,053,064	2,139,868	23.3%	1.192	2,446,251	2,293,060	2,425,028
6/30/99-00	8,042,197	1.433	11,525,175	0.2%	1.1%	130,343	1,893,548	2,023,891	17.6%	1.204	2,279,105	2,151,498	2,345,404
6/30/00-01	7,654,033	1.475	11,287,561	0.2%	1.3%	149,049	1,539,928	1,688,977	15.0%	1.225	1,887,031	1,788,004	1,905,531
6/30/01-02	8,009,207	1.521	12,181,779	0.4%	1.7%	211,896	1,985,418	2,197,314	18.0%	1.283	2,548,231	2,372,773	2,343,628
6/30/02-03	7,842,222	1.566	12,279,652	0.2%	1.9%	237,037	1,729,998	1,967,035	16.0%	1.301	2,251,148	2,109,091	2,215,957
6/30/03-04	6,893,294	1.618	11,155,209	0.3%	2.2%	249,888	1,661,764	1,911,652	17.1%	1.345	2,234,547	2,073,099	2,015,282
6/30/04-05	7,449,646	1.673	12,460,149	0.5%	2.7%	336,765	2,172,201	2,508,966	20.1%	1.398	3,035,659	2,772,312	3,066,597
6/30/05-06	7,041,075	1.750	12,319,743	1.1%	3.8%	471,845	2,171,500	2,643,345	21.5%	1.516	3,292,822	2,968,083	2,598,256
6/30/06-07	6,226,124	1.845	11,489,053	1.1%	5.0%	569,460	1,571,089	2,140,549	18.6%	1.671	2,624,967	2,382,758	2,877,986
6/30/07-08	8,430,592	1.992	16,789,949	1.8%	6.8%	1,139,691	1,849,148	2,988,839	17.8%	1.993	3,685,212	3,337,025	2,793,197
6/30/08-09	7,998,181	2.237	17,893,768	2.1%	8.9%	1,595,532	1,393,000	2,988,532	16.7%	2.625	3,657,152	3,322,842	3,332,677
6/30/09-10	7,589,725	2.693	20,441,861	3.5%	12.4%	2,536,881	771,002	3,307,883	16.2%	4.704	3,626,455	3,467,169	2,662,269
6/30/10-11	6,236,233	3.652	22,773,981	2.5%	14.9%	3,394,271	626,381	4,020,652	17.7%	13.916	8,716,916	4,020,652	2,285,039
6/30/11-12	3,091,255	7.971	24,641,658	1.5%	16.4%	4,032,695	0	4,032,695	16.4%	59.631	0	4,032,695	
Total	346,523,841		496,365,098			15,613,816	48,140,866	63,754,682	12.8%		70,975,285	67,033,199	60,971,947

- (2) From Section 8, Exhibit 1, Page 2, Column 3
- (3) = (4) / (2)
- (4) From Section 8, Exhibit 1, Page 2, Column 6
- (5) From Section 8, Exhibit 1, Page 11
- (6) Downward sum of (5)
- $(7) = (6) \times (4)$
- (8) From Section 8, Exhibit 1, Page 10
- (9) = (7) + (8)
- (10) = (9) / (4)
- (11) From Section 8, Exhibit 1, Page 12
- $(12) = (8) \times (11)$
- (13) Selected based on (9) and (12)
- (14) From Aon analysis as of June 30, 2011



Commonwealth of Massachusetts Workers Compensation All Other - Clusters 5-17 & 95 INDEANITY Lump Sum Development Incremental Lump Sum Payments

Section 8 Exhibit 1 Page 10

Ace Yr Fooling All Prior Yrs Jun-83 Jun-84 Jun-85 Jun-85 Jun-87 Jun-89 Jun-91 Jun-91 Jun-92 Jun-92 Jun-92 Jun-92 Jun-92 Jun-93 Jun-93 Jun-94 Jun-95 J	0-12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12-24 0 0 0 0 0 0 25,000 49,000 69,855 114,301 173,750 110,012 137,948 273,155 223,402 246,050 498,701 356,478 182,428 114,545 77,201 25,277 60,876 19,500 238,583 282,500 140,000 385,501 319,191	24-36 0 0 0 0 12,000 130,000 448,08 143,500 182,635 181,424 204,001 373,500 285,460 487,181 307,037 335,500 362,081 596,801 294,987 417,500 370,000 574,002 346,648 501,500 385,501	36-48 0 0 0 30,000 40,559 100,666 39,958 275,776 342,440 399,501 189,365 231,001 189,365 231,001 198,365 242,900 269,800 242,900 243,539 430,835 242,900 243,000 243,000 244,900 243,000 244,900 245,0	48-60 0 0 0 3,000 73,500 150,501 205,752 374,100 535,751 281,850 76,000 188,500 99,965 104,430 294,000 281,500 440,001 218,1500 440,001 218,1600 378,670 281,500 281,5	60-72 0 0 0 22,500 60,866 408,847 341,500 231,565 319,500 29,001 11,6600 25,501 108,251 108,251 108,251 1189,000 286,251 25,000 29,000 29,000 1180,000 29,000 1180,000 20,	72-84 0 0 91,600 34,554 75,000 192,525 243,000 203,500 150,800 203,500 17,000 3,000 60,535 201,000 184,884 44,000 27,000 184,884 145,000 27,000 105,000	84-96 22,500 053,250 34,000 175,399 168,500 223,039 238,502 494,500 25,001 112,000 16,000 0 40,000 105,000 110,118 20,000 265,000 65,000 65,000 100,000 105,000	96-108 0 0 15,000 58,000 179,500 91,501 222,500 46,300 46,300 143,000 0 0 0 0 10,501 20,000 65,500 53,001 80,000 100,000	108-120 0 0 0,55,000 215,750 0 59,806 62,000 170,500 0 98,000 85,000 14,000 62,000 14,000 60,000 76,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	120-132 137,500 35,000 59,700 30,200 22,000 22,000 0 10,000 10,000 0 0 83,000 35,000 83,000 83,000 24,000 0 50,000	132-144 40,000 7,750 7,7000 92,500 92,500 93,0000 30,0000 157,000 54,000 20,000 23,0000 23,0000 24,000 62,500 0 022,750 65,000 0	144-156 80,500 1,000 0 0 50,000 12,500 0 12,500 0 0 13,500 0 0 65,000 0 75,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	156-168 250,234 0 57,000 40,000 0 65,000 0 40,000 0 86,268 0 0 86,268 0 0 97,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	168-180 367,000 0 0 0 0 0 25,000 0 0 10,000 0 0 10,000 0 0 10,000 0 0 10,000 0 0 0	180-192 139,604 0 0 49,000 0 164,999 0 0 25,000 153,000 0 12,500 0 40,000	192-204 85,000 0 0 32,000 50,000 155,000 63,500 166,000 72,500 86,500 90,000 0 0	204-216 0 0 85,000 0 30,000 80,000 20,000 185,000 61,000 255,000 0 0 0	216-228 57.500 0 25.000 55.000 80.000 0 120.000 0	228-240 \$5,001 0 0 0 64,000 10,000 110,000 15,000 0 35,000	240-252 30,000 0 0 16,000 0 90,000 62,500 0	252-264 12,250 0 0 0 45,000 0 0 0	264-276 84,000 0 0 0 58,275 0 0	276-288 140,000 0 10,000 0 87,801 0 0	288-300 66,000 0 0 0 0 0 0	300-312 0 0 0 0 0 0	312-324 78.125 0 0 0 0	324-336 0 0 0	336-348 0 0 0	348-360 7,500 0	360-372 7,500
Cumulative Lump Acx Yt Ending All Prior Yrs Jun-84 Jun-85 Jun-85 Jun-85 Jun-87 Jun-88 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95	Sum Payment I I I I I I I I I	24 0 0 0 0 0 25,000 49,000 69,855 114,301 172,201 2143,948 282,655 408,752 252,050 522,066 643,985 258,000 584,209 192,428 114,545 77,201 77,201 77,01 77,01 77,01 77,01 70,03 159,500 390,000 390,000 385,501 626,381	715,550 844,566 929,445 815,181 891,246 527,928 476,626 674,002 367,764 484,523 529,500 838,585 629,148	48 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	60 0 0 0 0 126,059 406,167 333,518 863,231 1,274,460 1,132,101 516,233 714,373 844,521 1,151,717 1,044,681 1,245,764 843,928 1,244,063 1,245,764 1,245,764 1,245,764 1,245,764 1,245,764 1,481,201 1,482,800 1,418,087 1,849,148	1,506,025 1,451,601 667,234 772,373 873,522 1,268,317 1,070,182 1,474,318 1,797,945 1,412,046 1,445,545 1,094,928 1,486,417 1,577,998	1,655,101 667,234 821,373 901,522 1,285,317 1,073,182 1,474,318 1,867,480 1,613,064 1,630,429 1,239,928 1,595,417 1,652,998 1,461,764 2,067,201	96 22,500 0 144,850 154,054 408,958 828,058 1,210,404 1,698,233 2,151,325 1,680,102 779,234 837,373 997,522 1,288,317 1,113,182 1,579,318 1,956,445 1,733,064 1,740,547 1,740,54		2,337,625 1,823,102 953,734 999,373 1,011,522 1,347,317 1,113,183 1,745,819 1,976,445 1,968,064 1,869,548 1,539,928	1,833,102 1,058,734 999,373 1,011,522 1,405,717 1,148,183 1,828,819 1,986,445 1,988,064 1,893,548 1,539,928	2,494,625 1,887,102 1,078,734 1,054,373 1,241,522 1,439,717 1,210,683 1,828,819 2,189,195	1,887,102 1,092,234 1,054,373 1,306,522 1,439,717 1,210,683 1,828,819 2,264,195 2,053,064	168 530,734 43,750 388,550 640,504 750,458 1,084,865 1,706,404 2,430,233 2,509,625 1,178,502 1,178,502 1,178,502 1,229,083 1,828,819 2,2333,195 2,053,064	180 897,734 43,750 388,550 640,504 750,458 1,134,865 1,706,040 2,455,233 2,509,625 1,897,102 1,199,369 1,054,373 1,306,522 1,519,717 1,245,683 1,245,683 1,245,683 1,245,683	43,750 388,550 689,504 750,458 1,299,864 1,706,404 2,455,233 2,534,625 2,050,102 1,220,236 1,054,373 1,306,522 1,532,217	2,640,625 2,122,602 1,306,736 1,104,373 1,306,522	216 1,122,338 43,750 473,550 721,504 780,458 1,429,864 1,881,404 2,703,733 2,700,625 2,377,602 1,341,736 1,144,373 1,306,522 1,532,217	1,341,736 1,179,373	2,863,733 2,715,625 2,497,602 1,341,736	2,715,625 2,497,602		276 1,361,089 43,750 473,550 746,504 1,018,733 1,519,864 2,071,404 2,926,233 2,715,625	288 1,501,089 43,750 483,550 746,504 1,106,534 1,106,534 1,2071,404 2,926,233	43,750 483,550 746,504	43,750 483,550 746,504 1,106,534	43,750 483,550 746,504	336 1.645.214 43.750 483.550 746.504	348 1,645,214 43,750 483,550	360 1,652,714 43,750	372 1.660,214



Commonwealth of Massachusetts Workers Compensation All Other - Clusters 5-17 & 95 INDEMNITY Lump Sum Development Incremental Lump Sums as a "50 of Ultimate Losses Excluding Lump Sums

Section 8 Exhibit 1 Page 11

Acc Yr Ending All Prior Yrs June 35 June 35 June 36 June 36 June 36 June 37 June 38 June 30 Ju	0-12 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.001 0.002 0.002 0.002 0.003 0.002 0.004 0.000	12-24 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.002 0.003 0.005 0.004 0.009 0.013 0.025 0.024 0.024 0.042 0.044 0.042 0.016 0.009 0.013 0.015 0.016 0.000 0.017 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001	24-36 0.000 0.000 0.000 0.000 0.001 0.001 0.001 0.001 0.011 0.014 0.017 0.019 0.039 0.041 0.031 0.034 0.053 0.021 0.030 0.	36-48 0.000 0.000 0.000 0.000 0.002 0.005 0.001 0.015 0.019 0.019 0.018 0.030 0.022 0.030 0.022 0.030 0.023 0.023 0.023 0.023 0.035 0.	48-60 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.001 0.013 0.015 0.016 0.016 0.010 0.016 0.010 0.020 0.033 0.020 0.033 0.020 0.036 0.018 0.018 0.018 0.018 0.019	60-72 0.000 0.000 0.000 0.0003 0.003 0.015 0.015 0.015 0.016 0.003 0.012 0.002 0.002 0.010 0.010 0.010 0.010 0.012 0.023 0.021 0.017 0.012 0.029 0.013	72-84 0.000 0.000 0.011 0.002 0.004 0.010 0.009 0.011 0.000 0.003 0.003 0.002 0.000 0.008 0.022 0.016 0.016 0.008 0.022 0.000 0.008 0.022 0.009 0.000	84-96 0.000 0.000 0.000 0.007 0.002 0.008 0.008 0.010 0.021 0.001 0.002 0.002 0.009 0.000 0.004 0.010 0.011 0.011 0.011 0.011 0.011 0.013 0.019 0.02	96-108 0.000 0.000 0.002 0.003 0.005 0.010 0.005 0.010 0.005 0.007 0.006 0.007 0.0000 0.00	108-120 0.000 0.000 0.000 0.001 0.012 0.002 0.007 0.002 0.003 0.002 0.007 0.006 0.000 0.008 0.001 0.007 0.000 0.008	120-132 0.003 0.006 0.007 0.002 0.005 0.001 0.003 0.006 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	132-144 0.001 0.001 0.007 0.005 0.001 0.000 0.001 0.001 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.	144-156 0.002 0.000 0.000 0.003 0.002 0.001 0.002 0.001 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	156-168 0.005 0.000 0.007 0.002 0.000 0.003 0.000 0.002 0.001 0.000 0.002 0.001 0.000 0.000 0.000 0.000 0.000	168-180 0.007 0.000 0.000 0.000 0.000 0.002 0.000 0.001 0.000 0.00	180-192 0.003 0.000 0.000 0.003 0.000 0.00	192-204 0.002 0.000 0.000 0.002 0.000 0.002 0.006 0.003 0.005 0.003 0.005 0.000 0.000	204-216 0.000 0.000 0.000 0.001 0.000 0.001 0.001 0.003 0.003 0.012 0.003 0.003 0.000 0.000	216-228 0.001 0.000 0.000 0.001 0.003 0.004 0.000 0.002 0.000 0.000 0.000 0.000 0.000	228-240 0.001 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.000 0.003	240-252 0.001 0.000 0.000 0.000 0.001 0.000 0.003 0.000 0.000 0.000	252-264 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	264-276 0.002 0.000 0.000 0.000 0.000 0.000 0.000 0.000	276-288 0.003 0.000 0.001 0.000 0.004 0.000 0.000 0.000	288-300 0.001 0.000 0.000 0.000 0.000 0.000 0.000	300-312 0.000 0.000 0.000 0.000 0.000 0.000 0.000	312-324 0.002 0.000 0.000 0.000 0.000	324-336 0.000 0.000 0.000 0.000 0.000	336-348 0.000 0.000 0.000	348-360 0.000 0.000	360-372 0.000
Averages		12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372
Simple Avg All Yrs (ex P)	0.004	0.013	0.023	0.024	0.016	0.012	0.008	0.009	0.005	0.005	0.003	0.005	0.002	0.002	0.001	0.002	0.002	0.004	0.002	0.001	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	
Latest 5	0.005	0.016	0.030	0.047	0.026	0.018	0.011	0.013	0.005	0.006	0.002	0.006	0.002	0.004	0.003	0.001	0.002	0.004	0.002	0.002	0.001	0.000	0.001	0.001	0.000	0.000					
Latest 3 Olympic Avg	0.004	0.014	0.023	0.034	0.022	0.018	0.013	0.008	0.004	0.002	0.002	0.002	0.003	0.003	0.005	0.002	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
All Yrs (ex P)	0.003	0.012	0.023	0.023	0.016	0.011	0.007	0.008	0.005	0.004	0.003	0.004	0.001	0.002	0.001	0.001	0.002	0.003	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Latest 10	0.003	0.011	0.031	0.036	0.024	0.018	0.011	0.011	0.004	0.003	0.002	0.006	0.001	0.002	0.001	0.001	0.003	0.003	0.002	0.001	0.000										
Latest 5	0.004	0.017	0.026	0.044	0.026	0.017	0.008	0.012	0.005	0.004	0.002	0.002	0.000	0.003	0.002	0.000	0.002	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000					
Dev Factor Selectio																															
Prior Selected	NA NA	0.012 0.015	0.027 0.025	0.037	0.022	0.016 0.018	0.011 0.011	0.011	0.004	0.003	0.003	0.005 0.004	0.002	0.002	0.001	0.000	0.002	0.002	0.004	0.000	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FacToUlt	NA	0.164	0.149	0.124	0.089	0.068	0.050	0.038	0.027	0.022	0.019	0.017	0.013	0.011	0.009	0.009	0.007	0.007	0.006	0.005	0.004	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000



Commonwealth of Massachusetts Workers Compensation All Other - Clusters 5-17 & 95 INDEAINITY Paid Loss Development Paid Loss - Lump Sum only

Section 8 Exhibit 1 Page 12

Acc Yr Ending All Prior Yrs Jun-83 Jun-85 Jun-85 Jun-85 Jun-87 Jun-89 Jun-90 Jun-91 Jun-92 Jun-93 Jun-94 Jun-95 Jun-96 Jun-96 Jun-96 Jun-90 Ju	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24 0 0 0 0 25,000 49,000 69,855 114,301 77,250 122,012 143,948 282,655 282,050 522,066 643,985 328,000 192,428 114,545 77,201 77	929,445 815,181 891,246 527,928 476,626 674,002 367,764 484,523 529,500 838,585 629,148		1,812,201	1,474,318 1,797,945 1,412,064 1,445,545 1,094,928 1,486,417 1,577,998 1,434,764 1,962,201 1,812,000	1,459,731 1,656,825 1,655,101 667,234 821,373 901,522 1,285,317 1,073,182 1,474,318 1,867,480 1,613,064 1,630,429 1,239,928 1,595,417 1,652,998 1,461,764	1,579,318 1,956,445 1,733,064 1,740,547 1,459,928 1,860,417 1,717,998	1,920,733 2,197,625 1,823,102 855,734 914,373 997,522 1,285,317 1,113,182 1,685,819 1,976,445 1,798,064 1,793,548 1,539,928 1,885,418	2,091,233 2,337,625 1,823,102 953,734 999,373 1,011,522 1,347,317 1,113,183 1,745,819 1,976,445 1,968,064 1,869,548	132 160,000 35,000 274,550 458,004 680,458 1,007,365 1,615,404 2,237,233 2,337,625 1,833,3102 1,058,734 1,998,373 1,145,183 1,145,183 1,148,183 1,	2,267,233 2,494,625 1,887,102 1,078,734 1,054,373 1,241,522 1,439,717 1,210,683 1,828,819 2,189,195 2,053,064	2,390,233 2,494,625 1,887,102 1,092,234 1,054,373 1,306,522 1,439,717 1,210,683 1,828,819 2,264,195	1,054,373 1,306,522 1,519,717 1,229,083 1,828,819 2,333,195	43,750 388,550 640,504 750,458 1,134,865 1,706,404 2,455,233 2,509,625 1,897,102 1,199,369 1,054,373 1,306,522 1,519,717 1,245,683	43,750 388,550 689,504 750,458 1,299,864 1,706,404 2,455,233 2,534,625 2,050,102 1,220,236 1,054,373 1,306,522 1,532,217	43,750 388,550 721,504 750,458 1,349,864 1,861,404 2,518,733 2,640,625 2,122,602 1,306,736 1,104,373 1,306,522	43,750 473,550 721,504 780,458 1,429,864 1,881,404 2,703,733 2,700,625 2,377,602 1,341,736 1,144,373	43,750 473,550 746,504 835,458 1,509,864 1,881,404 2,753,733 2,700,625 2,497,602 1,341,736	43,750 473,550 746,504 899,458 1,519,864 1,981,404 2,863,733 2,715,625	2,497,602	264 1,277,089 43,750 746,504 960,458 1,519,864 2,071,404 2,926,233 2,715,625 2,497,602	43,750 473,550 746,504 1,018,733 1,519,864 2,071,404	43,750 483,550 746,504 1,106,534	43,750 483,550 746,504 1,106,534 1,519,864	43,750 483,550 746,504	43,750 483,550 746,504	336 1,645,214 43,750 483,550 746,504	348 1,645,214 43,750 483,550	360 11,652,714 43,750	372 .660,214
Age-to-Age Fac Age-to-Age Jac Age-Tag- Age-Tag-Tag- Age-Tag- Age-Tag-Tag- Age-Tag-	22.071 10.168 23.991 29.753 2.205 42.008 42.024 2.244 2.244 2.244 2.1612 5.978 19.283 1.532 10.886 10.176 1.560 2.039	6.200 1.833 3.054 3.467 5.835 2.497 2.260 2.839 1.618 1.443 2.485 1.526 2.744 4.161 8.730 5.053 7.229 3.169 2.227 2.286 2.000	4.380 1.649 1.445 2.293 1.864 1.346 1.314 1.376 1.298 1.303 1.135 1.595 1.639 2.414 2.959 2.350 1.590 1.590 1.590	1.100 2.398 1.589 2.586 1.765 1.313 1.284 1.173 1.284 1.116 1.176 1.196 1.196 1.197 1.081 1.408 1.579 1.403 1.264 1.1264 1.1264 1.1264 1.1264 1.1264	2.591 1.258 1.150 2.219 1.396 1.182 1.293 1.081 1.034 1.101 1.024 1.079 1.152 1.297 1.297 1.239 1.152 1.293 1.152 1.293 1.152 1.293 1.152 1.293 1.152 1.293 1.152 1.293 1.153	72-84 1.404 1.473 1.412 1.326 1.212 1.100 1.100 1.032 1.013 1.003 1.003 1.003 1.003 1.003 1.003 1.003 1.003 1.003 1.005 1.128 1.132 1.013 1.048 1.139 1.048 1.198	84-96 1.581 1.283 1.751 1.255 1.226 1.163 1.095 1.106 1.000 1.007 1.074 1.	96-108 1.000 1.104 1.376 1.439 1.111 1.221 1.131 1.002 1.098 1.090 1.000	108-120 1.000 1.344 2.017 1.000 1.065 1.082 1.084 1.093 1.093 1.014 1.000 1.015 1.000 1.015 1.000 1.015 1.000 1.00	120-132 7.111 1.278 1.071 1.156 1.029 1.049 1.070 1.000 1.000 1.001 1.000 1.010 1.000 1.011 1.000 1.011 1.000 1.013 1.013 1.013 1.013 1.013	132-144 1.250 1.221 1.221 1.208 1.202 1.029 1.000 1.019 1.013 1.067 1.029 1.010 1.019 1.015 1.024 1.000 1.000 1.000	144-156 1.403 1.023 1.000 1.091 1.091 1.012 1.037 1.052 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	156-168 1.892 1.000 1.100 1.172 1.067 1.067 1.060 1.061 1.000 1.017 1.006 1.000 1.017 1.006 1.000 1.007 1.000 1.007 1.000	168-180 1.691 1.000 1.000 1.000 1.000 1.000 1.010 1.010 1.010 1.010 1.010 1.010 1.010 1.010 1.010 1.010 1.010 1.010 1.010 1.010	180-192 1.156 1.000 1.000 1.007 1.077 1.000 1.077 1.000 1.101 1.000 1.000 1.000 1.000 1.000 1.001 1.001 1.001 1.001 1.001 1.002	192-204 1.082 1.000 1.000 1.046 1.040 1.031 1.021 1.021 1.022 1.035 1.071 1.047 1.040 1.000	204-216 1.000 1.000 1.000 1.000 1.040 1.059 1.011 1.073 1.120 1.023 1.120 1.020 1.059 1.000 1.000	216-228 1.051 1.000 1.000 1.035 1.035 1.070 1.056 1.000 1.018 1.000 1.031 1.000 1.031	228-240 1.047 1.000 1.000 1.000 1.000 1.007 1.007 1.007 1.007 1.007 1.007 1.007	240-252 1.024 1.000 1.000 1.000 1.000 1.018 1.000 1.045 1.002 1.000 1.000	252-264 1.010 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	264-276 1.066 1.000 1.000 1.000 1.000 1.001 1.000 1.000 1.000	276-288 1.103 1.000 1.000 1.000 1.086 1.000 1.090	288-300 1.044 1.000 1.000 1.000 1.000 1.000	300-312 1.000 1.000 1.000 1.000 1.000 1.000	312-324 1.050 1.000 1.000 1.000 1.000	324-336 1.000 1.000 1.000 1.000	336-348 1.000 1.000 1.000	348-360 1.005 1.000	360-372 1.005	To Ult
Averages Simple Avg All Yrs (ex P) Latest 5	12-24 12.988	24-36 3.317 2.600	36-48 1.808 2.070	48-60 1.402 1.290	60-72 1.276 1.157	72-84 1.137 1.078	84-96 1.167 1.100	96-108 1.093 1.033	108-120 1.105 1.033	1.050	132-144 1.069 1.027	1.022 1.007	156-168 1.030 1.020	168-180 1.009 1.013	180-192 1.024 1.006	192-204 1.028 1.024	1.047 1.037	216-228 1.022 1.016	1.019	1.009 1.013	252-264 1.005 1.000	264-276 1.008 1.012	276-288 1.015 1.017	1.000 1.000	1.000 1.000	1.000	324-336 1.000	336-348 1.000	348-360 1.000	360-372	To Ult
Volume Wtd All Yrs (ex P) Latest 5 Latest 3	4.224	2.416 2.469 2.166	1.634 1.949 1.652	1.286 1.281 1.259	1.146 1.172 1.153 1.141	1.090 1.102 1.082 1.094	1.053 1.109 1.094 1.052	1.027 1.061 1.032 1.025	1.010 1.049 1.035 1.011	1.013 1.033 1.011 1.014	1.011 1.044 1.029 1.012	1.011 1.018 1.008 1.012	1.010 1.020 1.019 1.011	1.022 1.011 1.015 1.023	1.010 1.024 1.008 1.011	1.000 1.034 1.021 1.000	1.012 1.045 1.045 1.010	1.010 1.022 1.017 1.009	1.010 1.021 1.015 1.007	1.000 1.011 1.013 1.000	1.000 1.003 1.000 1.000	1.000 1.005 1.006 1.000	1.000 1.011 1.011 1.000	1.000 1.000 1.000 1.000	1.000 1.000 1.000 1.000	1.000	1.000	1.000	1.000		
Dev Factor Sele Prior Selected FacToUlt	4.346 4.285 59.631	3.466 2.959 13.916	1.857 1.792 4.704	1.304 1.317 2.625	1.191 1.193 1.993	1.092 1.102 1.671	1.096 1.085 1.516	1.037 1.039 1.398	1.027 1.033 1.345	1.008 1.014	1.047 1.047 1.283	1.022 1.018	1.005 1.010 1.204	1.003 1.013 1.192	1.005 1.006 1.176	1.032 1.024	1.041 1.037 1.142	1.034 1.010 1.102	1.018 1.019 1.091	1.013 1.013 1.070	1.005 1.005 1.056	1.005 1.005 1.051	1.005 1.005 1.046	1.005 1.005 1.040	1.005 1.005 1.035	1.000 1.000 1.030	1.000 1.000 1.030	1.000 1.000 1.030	1.000 1.000 1.030	1.030 1.000 1.030	1.030
Percent of Ult	1.7%	7.2%	21.3%	38.1%	50.2%	59.9%	65.9%	71.6%	74.4%	76.8%	77.9%	81.6%	83.1%	83.9%	85.0%	85.5%	87.5%	90.8%	91.7%	93.4%	94.7%	95.2%	95.6%	96.1%	96.6%	97.1%	97.1%	97.1%	97.1%	97.1%	97.1%

Section 8 Exhibit 1 Page 13

All Other - Clusters 5-17 & 95 Indemnity

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	2.7%	0.0%	0.8%	0.5%	1.000	1.000
360	97.3%	1.3%	2.7%	0.4%	0.2%	0.981	0.971
348	96.0%	1.2%	4.0%	0.4%	0.2%	0.955	0.934
336	94.8%	1.3%	5.2%	0.4%	0.3%	0.933	0.902
324	93.5%	1.3%	6.5%	0.4%	0.3%	0.913	0.875
312	92.2%	1.4%	7.8%	0.5%	0.3%	0.895	0.849
300	90.8%	1.4%	9.2%	0.5%	0.3%	0.879	0.828
288	89.4%	1.6%	10.6%	0.6%	0.4%	0.863	0.806
276	87.7%	1.6%	12.3%	0.7%	0.4%	0.850	0.788
264	86.2%	1.5%	13.8%	0.7%	0.4%	0.836	0.770
252	84.6%	1.6%	15.4%	0.7%	0.5%	0.821	0.750
240	83.0%	1.7%	17.0%	0.8%	0.6%	0.808	0.733
228	81.3%	2.0%	18.7%	0.9%	0.7%	0.795	0.717
216	79.4%	2.0%	20.6%	1.0%	0.7%	0.785	0.704
204	77.4%	1.9%	22.6%	1.0%	0.7%	0.775	0.691
192	75.5%	1.9%	24.5%	1.0%	0.8%	0.763	0.677
180	73.6%	1.9%	26.4%	1.1%	0.8%	0.752	0.663
168	71.6%	1.9%	28.4%	1.1%	0.8%	0.741	0.649
156	69.8%	2.0%	30.2%	1.2%	1.0%	0.729	0.634
144	67.8%	2.1%	32.2%	1.3%	1.1%	0.718	0.621
132	65.7%	1.9%	34.3%	1.2%	1.0%	0.708	0.609
120	63.9%	2.1%	36.1%	1.4%	1.2%	0.696	0.595
108	61.8%	2.0%	38.2%	1.4%	1.2%	0.686	0.584
96	59.8%	2.6%	40.2%	2.0%	1.7%	0.676	0.572
84	57.2%	3.0%	42.8%	2.3%	2.0%	0.670	0.566
72	54.2%	4.0%	45.8%	3.2%	2.9%	0.666	0.562
60	50.2%	5.5%	49.8%	4.6%	4.2%	0.668	0.566
48	44.7%	7.6%	55.3%	6.6%	6.2%	0.676	0.577
36	37.1%	9.7%	62.9%	8.8%	8.4%	0.690	0.596
24	27.4%	14.8%	72.6%	14.0%	13.6%	0.706	0.617
12	12.5%	12.5%	87.5%	12.3%	12.2%	0.730	0.648

Total 100.0%

NOTES:

(2) = 1 / Section 8, Exhibit 1, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)

Section 8 Exhibit 1 Page 14

All Other - Clusters 5-17 & 95 Indemnity

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
		counted	Discount	Disco	
Accident	Outstandi	ing Losses	Factor at	Outstandi	ng Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	6,832,447	11,725,100		5,975,557	10,254,598
6/30/82-83	283,213	726,697	0.981	277,713	712,585
6/30/83-84	487,969	1,132,606	0.955	466,107	1,081,863
6/30/84-85	726,478	1,702,478	0.933	677,827	1,588,466
6/30/85-86	1,078,808	1,867,808	0.913	985,417	1,706,114
6/30/86-87	1,354,095	2,131,095	0.895	1,211,926	1,907,348
6/30/87-88	2,508,296	3,283,296	0.879	2,205,655	2,887,146
6/30/88-89	2,272,745	3,305,745	0.863	1,962,329	2,854,240
6/30/89-90	2,872,533	3,575,533	0.850	2,441,911	3,039,524
6/30/90-91	2,930,800	3,534,800	0.836	2,450,107	2,955,042
6/30/91-92	2,002,636	2,738,636	0.821	1,645,055	2,249,639
6/30/92-93	1,818,394	3,236,394	0.808	1,468,872	2,614,313
6/30/93-94	2,045,961	2,697,961	0.795	1,627,444	2,146,072
6/30/94-95	2,018,060	2,619,060	0.785	1,584,897	2,056,896
6/30/95-96	2,417,271	3,070,271	0.775	1,872,736	2,378,636
6/30/96-97	2,705,126	3,383,126	0.763	2,064,986	2,582,544
6/30/97-98	2,465,479	3,041,479	0.752	1,853,862	2,286,972
6/30/98-99	2,831,098	3,423,098	0.741	2,096,519	2,534,914
6/30/99-00	3,678,255	4,425,255	0.729	2,679,672	3,223,874
6/30/00-01	3,838,039	4,535,039	0.718	2,754,321	3,254,514
6/30/01-02	4,515,375	5,287,375	0.708	3,194,749	3,740,960
6/30/02-03	4,773,780	5,535,780	0.696	3,322,397	3,852,725
6/30/03-04	4,672,942	5,344,942	0.686	3,205,937	3,666,971
6/30/04-05	5,466,153	5,610,153	0.676	3,693,425	3,790,724
6/30/05-06	6,075,425	6,593,425	0.670	4,070,840	4,417,926
6/30/06-07	6,074,787	7,607,787	0.666	4,045,913	5,066,917
6/30/07-08	8,685,260	9,847,260	0.668	5,798,214	6,573,957
6/30/08-09	11,303,819	11,825,819	0.676	7,637,800	7,990,507
6/30/09-10	13,938,273	15,548,273	0.690	9,610,916	10,721,066
6/30/10-11	17,400,386	19,932,386	0.706	12,278,255	14,064,913
6/30/11-12	21,903,745	25,582,745	0.730	15,984,177	18,668,914
Total	151,977,647	184,871,422		111,145,535	136,870,882

_	Discount Ca	alculation for	
	All Pri	or Years	
_	(Low)	(High)	
(8) Estimated Total Reserve:	6,832,447	11,725,100	
(9) Projected Number of Years:	7	7	
(10) Projected Paid Loss per Year:	976,064	1,675,014	
(11) Discounted Value at 4%:	5,975,557	10,254,598	

0.731

(7) Total Discount Factor:

0.740

NOTES:

(2), (3) From Section 8, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 8, Exhibit 1, Page 13, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



Section 8 Exhibit 1 Page 15

All Other - Clusters 5-17 & 95 Indemnity

Outstanding Loss Discounting - 6.0%

(1)			(4)	(5)	(6)
			Discount		ounted
Accident	Outstandi	ng Losses	Factor at	Outstandi	ing Losses
Year	(Low)	(High)	6.0%	(Low)	(High)
All Prior Yrs	6,832,447	11,725,100		5,612,224	9,631,086
6/30/82-83	283,213	726,697	0.971	275,081	705,831
6/30/83-84	487,969	1,132,606	0.934	455,901	1,058,176
6/30/84-85	726,478	1,702,478	0.902	655,636	1,536,462
6/30/85-86	1,078,808	1,867,808	0.875	943,742	1,633,960
6/30/86-87	1,354,095	2,131,095	0.849	1,149,810	1,809,589
6/30/87-88	2,508,296	3,283,296	0.828	2,076,069	2,717,521
6/30/88-89	2,272,745	3,305,745	0.806	1,831,983	2,664,650
6/30/89-90	2,872,533	3,575,533	0.788	2,264,461	2,818,646
6/30/90-91	2,930,800	3,534,800	0.770	2,255,611	2,720,463
6/30/91-92	2,002,636	2,738,636	0.750	1,502,969	2,055,334
6/30/92-93	1,818,394	3,236,394	0.733	1,332,466	2,371,535
6/30/93-94	2,045,961	2,697,961	0.717	1,466,977	1,934,468
6/30/94-95	2,018,060	2,619,060	0.704	1,421,634	1,845,012
6/30/95-96	2,417,271	3,070,271	0.691	1,670,870	2,122,238
6/30/96-97	2,705,126	3,383,126	0.677	1,831,518	2,290,561
6/30/97-98	2,465,479	3,041,479	0.663	1,634,388	2,016,223
6/30/98-99	2,831,098	3,423,098	0.649	1,837,156	2,221,316
6/30/99-00	3,678,255	4,425,255	0.634	2,332,785	2,806,539
6/30/00-01	3,838,039	4,535,039	0.621	2,383,943	2,816,874
6/30/01-02	4,515,375	5,287,375	0.609	2,750,643	3,220,925
6/30/02-03	4,773,780	5,535,780	0.595	2,842,149	3,295,819
6/30/03-04	4,672,942	5,344,942	0.584	2,728,302	3,120,650
6/30/04-05	5,466,153	5,610,153	0.572	3,125,465	3,207,802
6/30/05-06	6,075,425	6,593,425	0.566	3,438,562	3,731,739
6/30/06-07	6,074,787	7,607,787	0.562	3,415,316	4,277,186
6/30/07-08	8,685,260	9,847,260	0.566	4,912,646	5,569,908
6/30/08-09	11,303,819	11,825,819	0.577	6,525,158	6,826,484
6/30/09-10	13,938,273	15,548,273	0.596	8,306,567	9,266,053
6/30/10-11	17,400,386	19,932,386	0.617	10,738,078	12,300,619
6/30/11-12	21,903,745	25,582,745	0.648	14,198,089	16,582,831
Total	151,977,647	184,871,422		97,916,198	121,176,500

(7)	Total Discount Factor:	0.644	0.655

Discount Calculation for				
All Pr	ior Years			
(Low)	(High)			
6,832,447	11,725,100			
7	7			
976,064	1,675,014			
5,612,224	9,631,086			
	All Pr (Low) 6,832,447 7 976,064			

NOTES:

(2), (3) From Section 8, Exhibit 1, Page 1, Columns 8, 9

(4) From Section 8, Exhibit 1, Page 13, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)



All Other - Clusters 5-17 & 95 Total Indemnity (Including Lump Sums) + Medical

Calculation of Fiscal Year 7/1/12 - 13 Payments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Cumulative	Increme	ntal Paid	Estimated Pa	ayments from	FY 7/1/12	2 - 6/30/13
Accident	Est Ult Losses	Est Ult Losses	Paid Losses	Reserves	Reserves	Percent	as a % of	as a % of	7/1/12 -	6/30/13	as a % of	Reserves
Year	(Low)	(High)	to Date	(Low)	(High)	Paid	Ultimates	Reserves	(Low)	(High)	(Low)	(High)
All Prior Yrs	52,532,169	57,450,234	45,483,234	7,048,935	11,967,000				626,544	689,199	8.9%	5.8%
6/30/82-83	6,269,885	6,730,618	5,986,672	283,213	743,945	92.1%	1.5%	19.0%	53,768	141,239	19.0%	19.0%
6/30/83-84	9,171,103	9,838,804	8,683,135	487,969	1,155,669	91.4%	1.5%	17.3%	84,656	200,493	17.3%	17.3%
6/30/84-85	18,274,000	19,250,000	17,520,104	753,896	1,729,896	93.4%	1.5%	22.7%	170,843	392,017	22.7%	22.7%
6/30/85-86	22,285,730	23,094,000	21,171,883	1,113,847	1,922,117	93.3%	1.0%	14.9%	166,491	287,306	14.9%	14.9%
6/30/86-87	22,587,000	23,365,000	21,176,627	1,410,373	2,188,373	92.2%	1.0%	12.8%	180,089	279,431	12.8%	12.8%
6/30/87-88	32,548,000	33,328,000	29,916,547	2,631,453	3,411,453	90.8%	1.0%	10.9%	286,865	371,895	10.9%	10.9%
6/30/88-89	30,470,000	31,507,000	28,038,885	2,431,115	3,468,115	90.5%	1.0%	10.5%	255,412	364,358	10.5%	10.5%
6/30/89-90	29,976,000	30,686,000	26,914,010	3,061,990	3,771,990	88.7%	1.5%	13.3%	407,697	502,233	13.3%	13.3%
6/30/90-91	26,867,870	27,509,000	23,785,512	3,082,358	3,723,488	87.5%	1.5%	12.0%	369,408	446,245	12.0%	12.0%
6/30/91-92	17,078,000	17,815,000	14,910,428	2,167,572	2,904,572	85.5%	1.5%	10.3%	223,672	299,723	10.3%	10.3%
6/30/92-93	13,587,000	15,007,000	11,600,559	1,986,441	3,406,441	81.1%	1.5%	8.0%	157,987	270,923	8.0%	8.0%
6/30/93-94	15,168,000	15,825,000	12,902,123	2,265,877	2,922,877	83.3%	1.5%	9.0%	203,015	261,880	9.0%	9.0%
6/30/94-95	13,692,000	14,297,000	11,468,381	2,223,619	2,828,619	81.9%	1.5%	8.3%	184,780	235,055	8.3%	8.3%
6/30/95-96	13,994,000	14,649,000	11,365,333	2,628,667	3,283,667	79.4%	1.5%	7.3%	191,023	238,622	7.3%	7.3%
6/30/96-97	15,226,000	15,906,000	12,240,212	2,985,788	3,665,788	78.6%	1.5%	7.0%	209,620	257,360	7.0%	7.0%
6/30/97-98	13,313,000	13,891,000	10,583,746	2,729,254	3,307,254	77.8%	1.5%	6.8%	184,494	223,566	6.8%	6.8%
6/30/98-99	14,307,000	14,900,000	11,100,202	3,206,798	3,799,798	76.0%	1.8%	7.5%	240,570	285,057	7.5%	7.5%
6/30/99-00	16,850,000	17,600,000	12,692,069	4,157,931	4,907,931	73.7%	2.3%	8.8%	367,596	433,903	8.8%	8.8%
6/30/00-01	16,250,000	16,947,000	11,887,335	4,362,665	5,059,665	71.6%	2.1%	7.3%	317,723	368,484	7.3%	7.3%
6/30/01-02	17,542,000	18,323,000	12,486,586	5,055,414	5,836,414	69.6%	2.0%	6.5%	330,584	381,655	6.5%	6.5%
6/30/02-03	17,910,000	18,675,000	12,416,251	5,493,749	6,258,749	67.9%	1.8%	5.5%	300,112	341,902	5.5%	5.5%
6/30/03-04	16,985,000	17,661,000	11,461,024	5,523,976	6,199,976	66.2%	1.7%	5.1%	280,033	314,302	5.1%	5.1%
6/30/04-05	19,688,000	20,699,000	13,723,153	5,964,847	6,975,847	68.0%	2.0%	6.2%	372,317	435,423	6.2%	6.2%
6/30/05-06	19,388,000	20,357,000	12,453,221	6,934,779	7,903,779	62.7%	5.3%	14.2%	983,102	1,120,471	14.2%	14.2%
6/30/06-07	19,472,000	22,027,000	12,409,304	7,062,696	9,617,696	59.8%	2.9%	7.1%	502,586	684,402	7.1%	7.1%
6/30/07-08	23,965,000	25,709,000	13,944,759	10,020,241	11,764,241	56.1%	3.7%	8.3%	836,308	981,866	8.3%	8.3%
6/30/08-09	25,995,000	27,455,000	13,148,407	12,846,593	14,306,593	49.2%	6.9%	13.7%	1,756,557	1,956,187	13.7%	13.7%
6/30/09-10	27,899,000	30,463,000	11,893,306	16,005,694	18,569,694	40.8%	8.4%	14.2%	2,280,746	2,646,105	14.2%	14.2%
6/30/10-11	30,763,000	34,450,000	10,201,933	20,561,067	24,248,067	31.3%	9.5%	13.8%	2,833,458	3,341,552	13.8%	13.8%
6/30/11-12	31,995,000	38,222,000	4,669,718	27,325,282	33,552,282	13.3%	18.0%	20.7%	5,669,092	6,960,989	20.7%	20.7%
Total	652,048,757	693,636,655	478,234,661	173,814,096	215,401,995				21,027,149	25,713,842	12.1%	11.9%

NOTES:

(2) Exhibit 1, Page 1, Column (4) + Exhibit 2, Page 1, Column (4)

(3) Exhibit 1, Page 1, Column (5) + Exhibit 2, Page 1, Column (5)

(4) Exhibit 1, Page 1, Column (2) + Exhibit 2, Page 1, Column (2)

(5) = (2) - (4)

(6) = (3) - (4)

(7) = (4) / Average of Columns (2), (3)

(8) = (7) - Prior Year's (7)

(9) = (8) / (1.00 - (7))

(10) = (5) * (9)

(11) = (6) * (9)

(12) = (10) / (5)(13) = (11) / (6)





All Other - Clusters 5-17 & 95 Indemnity

Allocation of Outstanding Reserve to MDOT Agencies

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(17)	(18)	(19)	(20)
		Aon	Aon	Outstanding	Outstanding		DOT	Allocation - Met	thod 1			DOT	Allocation - Me	thod 2			DOT All	ocation - Meth	od 3		DOT	DOT	All Other	All Other
Accident		Selected Ult	Selected Ult	Losses	Losses	Paid Counts	DOT Counts	DOT / Total	DOT OS Loss	DOT OS Loss	Total Paid	DOT Paid	DOT / Total	DOT OS Loss	DOT OS Loss	Total Payroll	DOT Payroll	DOT / Total	DOT OS Loss	DOT OS Loss	Outstanding	Outstanding	Outstanding	Outstanding
Year	Paid Loss	(Low)	(High)	(Low)	(High)	7/1/10-11	7/1/10-11	Paid Counts	(Low)	(High)	7/1/10-11	7/1/10-11	Paid	(Low)	(High)	(\$000)	(\$000)	Payroll	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs	41,887,797	48,924,937	54,023,336	7,037,140	12,135,539	18					682,924	0	0.0%	0	0				453,233	781,599	151,078	260,533	6,886,063	11,875,006
6/30/82-83	5,408,761	5,765,190	6,208,666	356,429	799,905	3					111,749								22,956	51,519	7,652	17,173	348,777	782,732
6/30/83-84	7,857,808	8,461,302	9,112,172	603,494	1,254,363	1					34,472								38,869	80,788	12,956	26,929	590,538	1,227,434
6/30/84-85	16,223,357	17,166,000	18,199,000	942,643	1,975,644	3	1	33.3%	314,214	658,548	167,455	55,076	32.9%	310,035	649,788				60,712	127,243	186,418	390,705	756,225	1,584,938
6/30/85-86	19,085,972	20,514,000	21,396,000	1,428,028	2,310,028	6	1	16.7%	238,005	385,005	256,923	56,395	21.9%	313,452	507,051				91,973	148,779	214,477	346,945	1,213,551	1,963,083
6/30/86-87	19,255,160	21,068,000	21,944,000	1,812,840	2,688,840	7	1	14.3%	258,977	384,120	285,068	56,396	19.8%	358,639	531,941				116,757	173,177	244,791	363,079	1,568,048	2,325,760
6/30/87-88	26,422,494	29,732,000	31,340,000	3,309,506	4,917,506	10	1	10.0%	330,951	491,751	377,897	42,593	11.3%	373,020	554,261				213,151	316,716	305,707	454,242	3,003,798	4,463,263
6/30/88-89	24,123,836	27,104,000	27,637,000	2,980,164	3,513,164	10	2	20.0%	596,033	702,633	398,985	66,163	16.6%	494,191	582,577				191,940	226,268	427,388	503,826	2,552,776	3,009,338
6/30/89-90	22,798,834	26,463,000	26,614,000	3,664,166	3,815,166	9	2	22.2%	814,259	847,815	312,669	49,188	15.7%	576,433	600,188				235,994	245,719	542,229	564,574	3,121,937	3,250,592
6/30/90-91	20,112,775	23,847,000	23,872,000	3,734,225	3,759,225	6	1	16.7%	622,371	626,538	239,904	21,005	8.8%	326,957	329,146				240,506	242,116	396,611	399,266	3,337,614	3,359,959
6/30/91-92	11,949,615	14,427,000	15,176,000	2,477,385	3,226,385	9					269,285								159,558	207,798	53,186	69,266	2,424,199	3,157,119
6/30/92-93	8,952,525	11,159,000	11,967,000	2,206,475	3,014,475	8	1	12.5%	275,809	376,809	287,405	32,299	11.2%	247,963	338,766				142,110	194,150	221,961	303,242	1,984,514	2,711,233
6/30/93-94	9,872,790	12,415,000	12,464,000	2,542,210	2,591,210	7	2	28.6%	726,346	740,346	177,510	37,548	21.2%	537,749	548,114				163,733	166,889	475,943	485,116	2,066,267	2,106,094
6/30/94-95	8,884,767	11,377,000	11,422,000	2,492,233	2,537,233	5	1	20.0%	498,447	507,447	167,156	21,527	12.9%	320,957	326,752				160,514	163,413	326,639	332,537	2,165,594	2,204,696
6/30/95-96	9,120,225	12,049,000	12,721,000	2,928,775	3,600,775	8					225,170								188,630	231,911	62,877	77,304	2,865,898	3,523,471
6/30/96-97	9,542,666	12,797,000	13,488,000	3,254,334	3,945,334	4					120,339								209,598	254,103	69,866	84,701	3,184,468	3,860,634
6/30/97-98	8,372,999	11,312,000	11,890,000	2,939,001	3,517,001	3					116,208					1,917,994	137,500	7.2%	210,695	252,131	210,695	252,131	2,728,306	3,264,869
6/30/98-99	8,609,988	11,987,000	12,597,000	3,377,012	3,987,012	6	1	16.7%	562,835	664,502	179,587	1,096	0.6%	20,602	24,323	2,081,524	136,688	6.6%	221,760	261,817	268,399	316,881	3,108,613	3,670,132
6/30/99-00	9,887,364	14,271,000	15,052,000	4,383,636	5,164,636	5					244,289					2,207,243	137,892	6.2%	273,858	322,649	273,858	322,649	4,109,779	4,841,988
6/30/00-01	8,966,510	13,514,000	14,234,000	4,547,490	5,267,490	6	1	16.7%	757,915	877,915	200,288	20,253	10.1%	459,833	532,638	2,201,008	145,149	6.6%	299,891	347,372	505,879	585,975	4,041,611	4,681,515
6/30/01-02	9,778,478	15,045,000	15,855,000	5,266,522	6,076,522	9					185,992					2,292,592	140,223	6.1%	322,120	371,662	322,120	371,662	4,944,402	5,704,859
6/30/02-03	9,470,362	15,056,000	15,874,000	5,585,638	6,403,638	12					127,902					2,260,534	140,250	6.2%	346,549	397,300	115,516	132,433	5,470,121	6,271,204
6/30/03-04	8,252,696	13,620,000	14,306,000	5,367,304	6,053,304	13					278,017	27,600	9.9%	532,837	600,940	2,255,942	137,408	6.1%	326,918	368,702	326,918	368,702	5,040,386	5,684,602
6/30/04-05	9,300,968	15,529,000	15,878,000	6,228,032	6,577,032	20					672,502					2,309,083	145,033	6.3%	391,181	413,102	130,394	137,701	6,097,638	6,439,331
6/30/05-06	8,353,255	15,244,000	15,530,000	6,890,745	7,176,745	36	4	11.1%	765,638	797,416	905,232	66,212	7.3%	504,012	524,930	2,480,693	156,390	6.3%	434,413	452,444	568,021	591,597	6,322,724	6,585,148
6/30/06-07	7,439,700	14,690,000	15,966,000	7,250,300	8,526,300	43	9	20.9%	1,517,505	1,784,574	1,174,982	261,128	22.2%	1,611,309	1,894,888	2,612,577	157,146	6.0%	436,103	512,854	1,188,306	1,397,439	6,061,994	7,128,861
6/30/07-08	8,589,520	18,050,000	20,677,000	9,460,481	12,087,481	70	7	10.0%	946,048	1,208,748	1,834,042	123,588	6.7%	637,502	814,525	2,783,717	168,663	6.1%	573,201	732,368	718,917	918,547	8,741,563	11,168,934
6/30/08-09	7,312,937	19,807,000	20,777,000	12,494,063	13,464,063	104	10	9.6%	1,201,352	1,294,621	2,276,328	231,175	10.2%	1,268,850	1,367,360	2,750,907	180,456	6.6%	819,593	883,224	1,096,598	1,181,735	11,397,465	12,282,328
6/30/09-10	5,758,421	20,148,000	22,613,000	14,389,579	16,854,579	238	12	5.0%	725,525	849,811	3,125,305	192,336	6.2%	885,559	1,037,259	2,806,048	203,138	7.2%	1,041,701	1,220,149	884,262	1,035,740	13,505,317	15,818,839
6/30/10-11	3,058,305	20,774,000	26,302,000	17,715,695	23,243,695	557	33	5.9%	1,049,583	1,377,095	3,058,305	190,509	6.2%	1,103,550	1,447,901	2,942,638	197,766	6.7%	1,190,623	1,562,144	1,190,623	1,562,144	16,525,072	21,681,551
Total	374,650,885	522,316,429	555,135,173	147,665,545	180,484,288	1,236	90	7.3%	12,201,813	14,575,693	18,493,889	1,552,086	8.4%	10,883,450	13,213,346						11,500,284	13,854,774	136,165,261	166,629,514
																	Sel. FY97 & Prior	6.4%	1					

(14) = (13) / (12) (2), (7), (8), (12), (13), (17). (18) Provided by Commonwealth of Massachusetts (3) From Prior Analysis - Section 8, Exhibit 2, Page 1, Column 6 (15) = (14) * (5) (4) From Prior Analysis - Section 8, Exhibit 2, Page 1, Column 7 (16) = (14) * (6) (5) = (3) - (2) (19) = (18) / (17) (6) = (4) - (2) (20) = (19) * (5) (9) = (8) / (7)(21) = (19) * (6) (10) = (9) * (5) (11) = (9) * (6)

(22) Selected judgementally based on (10), (15), (20)

(23) Selected judgementally based on (11), (16). (21)

(24) = (5) - (22) (25) = (6) - (23)

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012 All Other - Clusters 5-17 & 95



Indemnity Allocation of Outstanding Reserve to MDOT Agencies

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
		Aon	Aon	Outstanding	Outstanding		DOT	Allocation - Me	thod 1			D	OT Allocation -	Method 2			DOT	Allocation - Meth	od 3		DOT	DOT	All Other	All Other
Accident		Selected Ult	Selected Ult	Losses	Losses	Paid Counts	DOT Counts	DOT / Total	DOT OS Loss	DOT OS Loss	Total Paid	DOT Paid	DOT / Total	DOT OS Loss	DOT OS Loss	Total Payroll	DOT Payroll	DOT / Total	DOT OS Loss	DOT OS Loss	Outstanding	Outstanding	Outstanding	Outstanding
Year	Paid Loss	(Low)	(High)	(Low)	(High)	7/1/11-12	7/1/11-12	Paid Counts	(Low)	(High)	7/1/11-12	7/1/11-12	Paid	(Low)	(High)	(\$000)	(\$000)	Payroll	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs	42,562,317	49,394,764	54,287,417	6,832,447	11,725,100	16					659,520								442,138	758,749	147,379	252,916	6,685,068	11,472,184
6/30/82-83	5,482,086	5,765,299	6,208,783	283,213	726,697	2					73,325								18,327	47,026	6,109	15,675	277,104	711,022
6/30/83-84	7,892,322	8,380,290	9,024,928	487,969	1,132,606	1					34,513								31,577	73,293	10,526	24,431	477,443	1,108,175
6/30/84-85	16,396,522	17,123,000	18,099,000	726,478	1,702,478	3	1	33.3%	242,159	567,493	173,166	56,954	32.9%	238,939	559,946				47,011	110,170	110,987	260,095	615,490	1,442,382
6/30/85-86	19,299,192	20,378,000	21,167,000	1,078,808	1,867,808	5	1	20.0%	215,762	373,562	213,219	58,318	27.4%	295,065	510,865				69,811	120,869	193,546	335,098	885,262	1,532,710
6/30/86-87	19,547,905	20,902,000	21,679,000	1,354,095	2,131,095	7	1	14.3%	193,442	304,442	292,745	58,414	20.0%	270,194	425,236				87,626	137,906	183,754	289,195	1,170,341	1,841,900
6/30/87-88	26,792,704	29,301,000	30,076,000	2,508,296	3,283,296	9	1	11.1%	278,700	364,811	370,210	44,046	11.9%	298,424	390,630				162,316	212,467	246,480	322,636	2,261,816	2,960,660
6/30/88-89	24,503,255	26,776,000	27,809,000	2,272,745	3,305,745	10	2	20.0%	454,549	661,149	379,420	41,007	10.8%	245,634	357,278				147,073	213,920	282,419	410,782	1,990,326	2,894,962
6/30/89-90	23,121,467	25,994,000	26,697,000	2,872,533	3,575,533	8	2	25.0%	718,133	893,883	322,633	50,857	15.8%	452,798	563,612				185,886	231,378	452,272	562,958	2,420,261	3,012,576
6/30/90-91	20,360,200	23,291,000	23,895,000	2,930,800	3,534,800	6	1	16.7%	488,467	589,133	247,425	21,063	8.5%	249,493	300,910				189,657	228,742	309,205	372,929	2,621,595	3,161,871
6/30/91-92	12,207,364	14,210,000	14,946,000	2,002,636	2,738,636	7					257,749								129,594	177,221	43,198	59,074	1,959,438	2,679,562
6/30/92-93	9,171,606	10,990,000	12,408,000	1,818,394	3,236,394	7	1	14.3%	259,771	462,342	244,081	30,655	12.6%	228,382	406,476				117,671	209,432	201,941	359,417	1,616,453	2,876,977
6/30/93-94	10,042,039	12,088,000	12,740,000	2,045,961	2,697,961	6	2	33.3%	681,987	899,320	169,249	38,194	22.6%	461,704	608,839				132,397	174,589	297,051	391,714	1,748,910	2,306,247
6/30/94-95	9,056,940	11,075,000	11,676,000	2,018,060	2,619,060	6	1	16.7%	336,343	436,510	182,173	22,260	12.2%	246,594	320,032				130,592	169,483	237,843	308,675	1,780,217	2,310,385
6/30/95-96	9,310,729	11,728,000	12,381,000	2,417,271	3,070,271	5					190,504								156,425	198,682	52,142	66,227	2,365,129	3,004,043
6/30/96-97	9,782,874	12,488,000	13,166,000	2,705,126	3,383,126	8	1	12.5%	338,141	422,891	200,208	4,430	2.2%	59,854	74,855				175,053	218,927	191,016	238,891	2,514,111	3,144,235
6/30/97-98	8,625,521	11,091,000	11,667,000	2,465,479	3,041,479	6					183,522					1,917,994	137,500	7.2%	176,749	218,042	176,749	218,042	2,288,730	2,823,437
6/30/98-99	8,640,902	11,472,000	12,064,000	2,831,098	3,423,098	5	1	20.0%	566,220	684,620	93,414	712	0.8%	21,565	26,075	2,081,524	136,688	6.6%	185,911	224,786	257,899	311,827	2,573,200	3,111,272
6/30/99-00	9,935,745	13,614,000	14,361,000	3,678,255	4,425,255	7	1	14.3%	525,465	632,179	148,381	597	0.4%	14,809	17,816	2,207,243	137,892	6.2%	229,790	276,458	229,790	276,458	3,448,464	4,148,797
6/30/00-01	9,193,961	13,032,000	13,729,000	3,838,039	4,535,039	8	1	12.5%	479,755	566,880	227,451	20,943	9.2%	353,391	417,568	2,201,008	145,149	6.6%	253,105	299,070	362,084	427,839	3,475,956	4,107,200
6/30/01-02	9,994,625	14,510,000	15,282,000	4,515,375	5,287,375	6	1	16.7%	752,562	881,229	166,147	48	0.0%	1,309	1,532	2,292,592	140,223	6.1%	276,177	323,395	276,177	323,395	4,239,198	4,963,980
6/30/02-03	9,572,220	14,346,000	15,108,000	4,773,780	5,535,780	9					105,859	6,000	5.7%	270,574	313,763	2,260,534	140,250	6.2%	296,179	343,456	188,918	219,073	4,584,862	5,316,707
6/30/03-04	8,555,058	13,228,000	13,900,000	4,672,942	5,344,942	9					259,962					2,255,942	137,408	6.1%	284,625	325,556	284,625	325,556	4,388,317	5,019,386
6/30/04-05	9,621,847	15,088,000	15,232,000	5,466,153	5,610,153	15	1	6.7%	364,410	374,010	445,879	-12,794	-2.9%	-156,843	-160,975	2,309,083	145,033	6.3%	343,328	352,373	183,632	188,469	5,282,521	5,421,683
6/30/05-06	9,212,575	15,288,000	15,806,000	6,075,425	6,593,425	24	1	4.2%	253,143	274,726	724,822	12,663	1.7%	106,142	115,192	2,480,693	156,390	6.3%	383,013	415,669	247,433	268,529	5,827,993	6,324,896
6/30/06-07	7,797,213	13,872,000	15,405,000	6,074,787	7,607,787	27	6	22.2%	1,349,953	1,690,619	573,511	85,415	14.9%	904,738	1,133,053	2,612,577	157,146	6.0%	365,396	457,606	635,067	795,329	5,439,720	6,812,458
6/30/07-08	10,279,740	18,965,000	20,127,000	8,685,260	9,847,260	54	4	7.4%	643,353	729,427	1,560,720	253,768	16.3%	1,412,194	1,601,131	2,783,717	168,663	6.1%	526,231	596,635	860,593	975,731	7,824,667	8,871,529
6/30/08-09	9,391,181	20,695,000	21,217,000	11,303,819	11,825,819	96	9	9.4%	1,059,733	1,108,671	1,936,845	132,863	6.9%	775,415	811,223	2,750,907	180,456	6.6%	741,515	775,757	858,888	898,550	10,444,931	10,927,268
6/30/09-10	8,360,727	22,299,000	23,909,000	13,938,273	15,548,273	114	6	5.3%	733,593	818,330	2,339,304	174,874	7.5%	1,041,949	1,162,304	2,806,048	203,138	7.2%	1,009,030	1,125,582	928,191	1,035,405	13,010,083	14,512,868
6/30/10-11	6,862,614	24,263,000	26,795,000	17,400,386	19,932,386	252	17	6.7%	1,173,836	1,344,645	3,504,118	222,792	6.4%	1,106,317	1,267,301	2,942,638	197,766	6.7%	1,169,431	1,339,600	1,149,861	1,317,182	16,250,524	18,615,204
6/30/11-12	3,091,255	24,995,000	28,674,000	21,903,745	25,582,745	561	47	8.4%	1,835,073	2,143,296	3,091,255	249,011	8.1%	1,764,424	2,060,780	3,006,849	207,447	6.9%	1,511,174	1,764,994	1,511,174	1,764,994	20,392,571	23,817,751
Total	394,664,707	546,642,353	579,536,128	151,977,647	184,871,422	1,299	109	8.4%	13,944,548	17,224,168	19,371,332	1,573,089	8.1%	10,663,063	13,285,442				,		11,116,946	13,617,093	140,860,701	171,254,328
																	Sel. FY97 & Prior	6.5%						

(2), (7), (8), (12), (13), (17), (18) Provided by Commonwealth of Massachusetts (3) From Section 8, Exhibit 1, Page 1, Column 6 (4) From Section 8, Exhibit 1, Page 1, Column 7 (14) = (13) / (12) (15) = (14) * (5) (16) = (14) * (6) (22) Selected judgementally based on (10), (15), (20) (23) Selected judgementally based on (11), (16), (21) (24) = (5) - (22) (19) = (18) / (17) (20) = (19) * (5) (21) = (19) * (6) (5) = (3) - (2) (25) = (6) - (23) (6) = (4) - (2) (9) = (8) / (7) (10) = (9) * (5) (11) = (9) * (6)



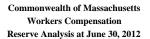
All Other - Clusters 5-17 & 95 Medical

Summary of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Ult Loss -	Ult Loss -	Aon	Aon	Outstanding	Outstanding	Ult Loss	Ult Loss
Accident	Payroll		Paid Loss	Paid BF	Selected Ult	Selected Ult	Losses	Losses	Cost	Cost
Year	(000's)	Paid Loss	Method	Method	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs		2,920,917			3,137,404	3,162,817	216,487	241,900		
6/30/82-83		504,586	511,602		504,586	521,834	0	17,248		
6/30/83-84		790,813	805,818		790,813	813,876	0	23,063		
6/30/84-85	732,729	1,123,581	1,150,625	1,150,963	1,151,000	1,151,000	27,419	27,419	0.157	0.157
6/30/85-86	787,208	1,872,692	1,927,354	1,927,391	1,907,730	1,927,000	35,038	54,308	0.242	0.245
6/30/86-87	902,483	1,628,722	1,684,645	1,685,643	1,685,000	1,686,000	56,278	57,278	0.187	0.187
6/30/87-88	1,366,586	3,123,843	3,247,256	3,252,128	3,247,000	3,252,000	123,157	128,157	0.238	0.238
6/30/88-89	1,486,478	3,535,629	3,693,687	3,697,831	3,694,000	3,698,000	158,371	162,371	0.249	0.249
6/30/89-90	1,494,463	3,792,543	3,981,897	3,988,688	3,982,000	3,989,000	189,457	196,457	0.266	0.267
6/30/90-91	1,405,560	3,425,312	3,614,312	3,613,098	3,576,870	3,614,000	151,558	188,688	0.254	0.257
6/30/91-92	1,364,510	2,703,064	2,869,325	2,867,518	2,868,000	2,869,000	164,936	165,936	0.210	0.210
6/30/92-93	1,347,359	2,428,953	2,598,981	2,596,519	2,597,000	2,599,000	168,047	170,047	0.193	0.193
6/30/93-94	1,424,410	2,860,084	3,085,037	3,080,390	3,080,000	3,085,000	219,916	224,916	0.216	0.217
6/30/94-95	1,497,829	2,411,441	2,621,215	2,617,301	2,617,000	2,621,000	205,559	209,559	0.175	0.175
6/30/95-96	1,582,635	2,054,604	2,268,413	2,265,924	2,266,000	2,268,000	211,396	213,396	0.143	0.143
6/30/96-97	1,979,748	2,457,338	2,740,027	2,737,700	2,738,000	2,740,000	280,662	282,662	0.138	0.138
6/30/97-98	1,917,994	1,958,225	2,222,398	2,224,464	2,222,000	2,224,000	263,775	265,775	0.116	0.116
6/30/98-99	2,081,524	2,459,300	2,835,983	2,834,998	2,835,000	2,836,000	375,700	376,700	0.136	0.136
6/30/99-00	2,207,243	2,756,324	3,238,996	3,235,981	3,236,000	3,239,000	479,676	482,676	0.147	0.147
6/30/00-01	2,201,008	2,693,375	3,218,207	3,218,276	3,218,000	3,218,000	524,625	524,625	0.146	0.146
6/30/01-02	2,292,592	2,491,961	3,031,960	3,040,603	3,032,000	3,041,000	540,039	549,039	0.132	0.133
6/30/02-03	2,260,534	2,844,031	3,564,073	3,566,830	3,564,000	3,567,000	719,969	722,969	0.158	0.158
6/30/03-04	2,255,942	2,905,967	3,757,018	3,761,119	3,757,000	3,761,000	851,033	855,033	0.167	0.167
6/30/04-05	2,309,083	4,101,306	5,466,949	5,159,480	4,600,000	5,467,000	498,694	1,365,694	0.199	0.237
6/30/05-06	2,480,693	3,240,647	4,475,854	4,551,329	4,100,000	4,551,000	859,353	1,310,353	0.165	0.183
6/30/06-07	2,612,577	4,612,091	6,621,621	6,190,767	5,600,000	6,622,000	987,909	2,009,909	0.214	0.253
6/30/07-08	2,783,717	3,665,019	5,490,469	5,581,535	5,000,000	5,582,000	1,334,981	1,916,981	0.180	0.201
6/30/08-09	2,750,907	3,757,225	5,931,790	5,940,623	5,300,000	6,238,000	1,542,775	2,480,775	0.193	0.227
6/30/09-10	2,806,048	3,532,579	6,066,272	6,241,527	5,600,000	6,554,000	2,067,421	3,021,421	0.200	0.234
6/30/10-11	2,942,638	3,339,318	7,290,794	7,173,105	6,500,000	7,655,000	3,160,682	4,315,682	0.221	0.260
6/30/11-12	3,006,849	1,578,463	9,092,889	7,790,665	7,000,000	9,548,000	5,421,537	7,969,537	0.233	0.318
Total	54,281,345	83,569,954	109,105,466	105,992,393	105,406,403	114,100,527	21,836,450	30,530,573		
Tot 6/30/84-12	54,281,345	79,353,638	107,788,046	105,992,393	100,973,600	109,602,000	21,619,962	30,248,362	0.186	0.202

NOTES:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 8, Exhibit 2, Page 2, Column 3
- (4) From Section 8, Exhibit 2, Page 2, Column 8
- (5) From Section 8, Exhibit 2, Page 3, Column 8
- (6), (7) Selected based on (3), (4), and (5)
- (8) = (6) (3)
- (9) = (7) (3)
- (10) = (6) / (2) / 10
- (11) = (7) / (2) / 10





All Other - Clusters 5-17 & 95 Medical

Paid Loss Development Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Paid	Paid	Average
Accident	Payroll		Paid	Adjustment	Excluding	Lump Sum	Including	Loss	Counts	Counts	Outstanding
Year	(000's)	Paid Loss	LDF	for Tail	Lump Sum	Payments	Lump Sum	Cost	7/1/10-11	7/1/11-12	Claim
All Prior Yrs		2,920,917							6	3	
6/30/82-83		504,586	1.014	1.000	511,602	N/A	511,602		1	1	7,016
6/30/83-84		790,813	1.019	1.000	805,818	N/A	805,818		0	0	
6/30/84-85	732,729	1,123,581	1.024	1.000	1,150,625	N/A	1,150,625	0.157	1	0	
6/30/85-86	787,208	1,872,692	1.029	1.000	1,927,354	N/A	1,927,354	0.245	2	2	27,331
6/30/86-87	902,483	1,628,722	1.034	1.000	1,684,645	N/A	1,684,645	0.187	2	2	27,961
6/30/87-88	1,366,586	3,123,843	1.040	1.000	3,247,256	N/A	3,247,256	0.238	5	5	24,683
6/30/88-89	1,486,478	3,535,629	1.045	1.000	3,693,687	N/A	3,693,687	0.248	11	8	19,757
6/30/89-90	1,494,463	3,792,543	1.050	1.000	3,981,897	N/A	3,981,897	0.266	7	6	31,559
6/30/90-91	1,405,560	3,425,312	1.055	1.000	3,614,312	N/A	3,614,312	0.257	7	7	27,000
6/30/91-92	1,364,510	2,703,064	1.062	1.000	2,869,325	N/A	2,869,325	0.210	6	4	41,565
6/30/92-93	1,347,359	2,428,953	1.070	1.000	2,598,981	N/A	2,598,981	0.193	10	6	28,338
6/30/93-94	1,424,410	2,860,084	1.079	1.000	3,085,037	N/A	3,085,037	0.217	7	7	32,136
6/30/94-95	1,497,829	2,411,441	1.087	1.000	2,621,215	N/A	2,621,215	0.175	11	11	19,070
6/30/95-96	1,582,635	2,054,604	1.104	1.000	2,268,413	N/A	2,268,413	0.143	4	6	35,635
6/30/96-97	1,979,748	2,457,338	1.115	1.000	2,740,027	N/A	2,740,027	0.138	7	9	31,410
6/30/97-98	1,917,994	1,958,225	1.135	1.000	2,222,398	N/A	2,222,398	0.116	7	8	33,022
6/30/98-99	2,081,524	2,459,300	1.153	1.000	2,835,983	N/A	2,835,983	0.136	11	10	37,668
6/30/99-00	2,207,243	2,756,324	1.175	1.000	3,238,996	N/A	3,238,996	0.147	13	13	37,129
6/30/00-01	2,201,008	2,693,375	1.195	1.000	3,218,207	N/A	3,218,207	0.146	15	17	30,873
6/30/01-02	2,292,592	2,491,961	1.217	1.000	3,031,960	N/A	3,031,960	0.132	25	29	18,621
6/30/02-03	2,260,534	2,844,031	1.253	1.000	3,564,073	N/A	3,564,073	0.158	27	28	25,716
6/30/03-04	2,255,942	2,905,967	1.293	1.000	3,757,018	N/A	3,757,018	0.167	35	29	29,347
6/30/04-05	2,309,083	4,101,306	1.333	1.000	5,466,949	N/A	5,466,949	0.237	41	31	44,053
6/30/05-06	2,480,693	3,240,647	1.381	1.000	4,475,854	N/A	4,475,854	0.180	54	36	34,311
6/30/06-07	2,612,577	4,612,091	1.436	1.000	6,621,621	N/A	6,621,621	0.253	78	52	38,645
6/30/07-08	2,783,717	3,665,019	1.498	1.000	5,490,469	N/A	5,490,469	0.197	115	69	26,456
6/30/08-09	2,750,907	3,757,225	1.579	1.000	5,931,790	N/A	5,931,790	0.216	220	117	18,586
6/30/09-10	2,806,048	3,532,579	1.717	1.000	6,066,272	N/A	6,066,272	0.216	713	180	14,076
6/30/10-11	2,942,638	3,339,318	2.183	1.000	7,290,794	N/A	7,290,794	0.248	1,055	700	5,645
6/30/11-12	3,006,849	1,578,463	5.761	1.000	9,092,889	N/A	9,092,889	0.302		990	7,590
Total	54,281,345	83,569,954			109,105,466		109,105,466		2,496	2,386	

NOTES:

⁽²⁾ Provided by Commonwealth of Massachusetts

^{(3), (4)} From Section 8, Exhibit 2, Page 7

⁽⁵⁾ Based on information from the MA WCRIB 9/1/12 filing. Consideration for development beyond 252 months made in selection of LDF's.

 $^{(6) = (3) \}times (4) \times (5)$

⁽⁷⁾ Lump Sum Payments are considered in the Indemnity analysis (Section 1)

^{(8) = (6) + (7)}

^{(9) = (8) / (2) / 10}

^{(10), (11)} Provided by Commonwealth of Massachusetts

 $^{(12) =} Maximum of [{(6) - (3)} / (11)] and 0$

Section 8 Exhibit 2 Page 3

All Other - Clusters 5-17 & 95 Medical

Paid Bornhuetter-Ferguson Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		A Priori			Ultimate Loss	Est Ult	Ultimate Loss	Ultimate	Ultimate Loss
Accident	Payroll	Loss		Paid	Excluding	Lump Sum	Including	Loss	Cost Excluding
Year	(000's)	Rate	Paid Loss	LDF	Lump Sum	Payments	Lump Sum	Cost	Lump Sum
All Prior Yrs									
6/30/82-83									
6/30/83-84									
6/30/84-85	732,729	0.159	1,123,581	1.024	1,150,963	N/A	1,150,963	0.157	0.157
6/30/85-86	787,208	0.245	1,872,692	1.029	1,927,391	N/A	1,927,391	0.245	0.245
6/30/86-87	902,483	0.190	1,628,722	1.034	1,685,643	N/A	1,685,643	0.187	0.187
6/30/87-88	1,366,586	0.247	3,123,843	1.040	3,252,128	N/A	3,252,128	0.238	0.238
6/30/88-89	1,486,478	0.255	3,535,629	1.045	3,697,831	N/A	3,697,831	0.249	0.249
6/30/89-90	1,494,463	0.276	3,792,543	1.050	3,988,688	N/A	3,988,688	0.267	0.267
6/30/90-91	1,405,560	0.255	3,425,312	1.055	3,613,098	N/A	3,613,098	0.257	0.257
6/30/91-92	1,364,510	0.208	2,703,064	1.062	2,867,518	N/A	2,867,518	0.210	0.210
6/30/92-93	1,347,359	0.190	2,428,953	1.070	2,596,519	N/A	2,596,519	0.193	0.193
6/30/93-94	1,424,410	0.212	2,860,084	1.079	3,080,390	N/A	3,080,390	0.216	0.216
6/30/94-95	1,497,829	0.172	2,411,441	1.087	2,617,301	N/A	2,617,301	0.175	0.175
6/30/95-96	1,582,635	0.142	2,054,604	1.104	2,265,924	N/A	2,265,924	0.143	0.143
6/30/96-97	1,979,748	0.137	2,457,338	1.115	2,737,700	N/A	2,737,700	0.138	0.138
6/30/97-98	1,917,994	0.117	1,958,225	1.135	2,224,464	N/A	2,224,464	0.116	0.116
6/30/98-99	2,081,524	0.136	2,459,300	1.153	2,834,998	N/A	2,834,998	0.136	0.136
6/30/99-00	2,207,243	0.146	2,756,324	1.175	3,235,981	N/A	3,235,981	0.147	0.147
6/30/00-01	2,201,008	0.146	2,693,375	1.195	3,218,276	N/A	3,218,276	0.146	0.146
6/30/01-02	2,292,592	0.134	2,491,961	1.217	3,040,603	N/A	3,040,603	0.133	0.133
6/30/02-03	2,260,534	0.158	2,844,031	1.253	3,566,830	N/A	3,566,830	0.158	0.158
6/30/03-04	2,255,942	0.167	2,905,967	1.293	3,761,119	N/A	3,761,119	0.167	0.167
6/30/04-05	2,309,083	0.183	4,101,306	1.333	5,159,480	N/A	5,159,480	0.223	0.223
6/30/05-06	2,480,693	0.191	3,240,647	1.381	4,551,329	N/A	4,551,329	0.183	0.183
6/30/06-07	2,612,577	0.199	4,612,091	1.436	6,190,767	N/A	6,190,767	0.237	0.237
6/30/07-08	2,783,717	0.207	3,665,019	1.498	5,581,535	N/A	5,581,535	0.201	0.201
6/30/08-09	2,750,907	0.217	3,757,225	1.579	5,940,623	N/A	5,940,623	0.216	0.216
6/30/09-10	2,806,048	0.231	3,532,579	1.717	6,241,527	N/A	6,241,527	0.222	0.222
6/30/10-11	2,942,638	0.240	3,339,318	2.183	7,173,105	N/A	7,173,105	0.244	0.244
6/30/11-12	3,006,849	0.250	1,578,463	5.761	7,790,665	N/A	7,790,665	0.259	0.259
Total	54,281,345		79,353,638		105,992,393		105,992,393		

NOTES:

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 8, Exhibit 2, Page 4, Column 11
- (4) From Section 8, Exhibit 2, Page 2, Column 3
- (5) From Section 8, Exhibit 2, Page 2, Column 4
- $(6) = (4) + [\{1 \{1/(5)\}\} \times (3) \times (2) \times 10]$
- (7) Lump Sum Payments are considered in the Indemnity analysis (Section 1)
- (8) = (6) + (7)
- (9) = (8) / (2) / 10
- (10) = (6) / (2) / 10

Section 8 Exhibit 2 Page 4

All Other - Clusters 5-17 & 95 Medical

Calculation of Initial Expected Loss Rate

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Unadjusted	Benefit	Adjusted		Trended	Detrended	Prior	Current
Accident	Payroll	Expected	Loss	Level	Loss	Trend	Adjusted	Selected	Selected	Selected
Year	(000's)	Ult Loss	Cost	Factor	Cost	Factor	Loss Cost	Loss Cost	Loss Cost	Loss Cost
All Prior Yrs										
6/30/82-83										
6/30/83-84										
6/30/84-85									0.159	0.159
6/30/85-86									0.245	0.245
6/30/86-87									0.190	0.190
6/30/87-88									0.247	0.247
6/30/88-89									0.255	0.255
6/30/89-90									0.276	0.276
6/30/90-91	1,405,560	3,614,312	0.257	1.194	0.307	2.370	0.728	0.092	0.265	0.255
6/30/91-92	1,364,510	2,869,325	0.210	1.189	0.250	2.279	0.570	0.096	0.217	0.208
6/30/92-93	1,347,359	2,598,981	0.193	1.189	0.229	2.191	0.503	0.100	0.198	0.190
6/30/93-94	1,424,410	3,085,037	0.217	1.178	0.255	2.107	0.538	0.105	0.221	0.212
6/30/94-95	1,497,829	2,621,215	0.175	1.170	0.205	2.026	0.415	0.110	0.173	0.172
6/30/95-96	1,582,635	2,268,413	0.143	1.155	0.166	1.948	0.323	0.116	0.147	0.142
6/30/96-97	1,979,748	2,740,027	0.138	1.137	0.157	1.873	0.295	0.122	0.139	0.137
6/30/97-98	1,917,994	2,222,398	0.116	1.135	0.132	1.801	0.237	0.127	0.119	0.117
6/30/98-99	2,081,524	2,835,983	0.136	1.135	0.155	1.732	0.268	0.132	0.138	0.136
6/30/99-00	2,207,243	3,238,996	0.147	1.135	0.167	1.665	0.277	0.138	0.148	0.146
6/30/00-01	2,201,008	3,218,207	0.146	1.109	0.162	1.601	0.260	0.146	0.149	0.146
6/30/01-02	2,292,592	3,031,960	0.132	1.101	0.146	1.539	0.224	0.153	0.132	0.134
6/30/02-03	2,260,534	3,564,073	0.158	1.073	0.169	1.480	0.250	0.164	0.160	0.158
6/30/03-04	2,255,942	3,757,018	0.167	1.046	0.174	1.423	0.248	0.175	0.170	0.167
6/30/04-05	2,309,083	5,466,949	0.237	1.036	0.245	1.369	0.336	0.183	0.183	0.183
6/30/05-06	2,480,693	4,475,854	0.180	1.032	0.186	1.316	0.245	0.191	0.191	0.191
6/30/06-07	2,612,577	6,621,621	0.253	1.032	0.262	1.265	0.331	0.199	0.199	0.199
6/30/07-08	2,783,717	5,490,469	0.197	1.032	0.204	1.217	0.248	0.207	0.207	0.207
6/30/08-09	2,750,907	5,931,790	0.216	1.027	0.221	1.170	0.259	0.217	0.217	0.217
6/30/09-10	2,806,048	6,066,272	0.216	1.000	0.216	1.125	0.243	0.231	0.231	0.231
6/30/10-11	2,942,638	7,290,794	0.248	1.000	0.248	1.082	0.268	0.240	0.240	0.240
6/30/11-12	3,006,849	9,092,889	0.302	1.000	0.302	1.040	0.315	0.250		0.250
Total	47,511,399	92,102,583								
			Trend L	ast 4 (ex 11-12):	5.8%	Avg 3 (x11-12):	0.257			
			Trend L	ast 8 (ex 11-12):	2.5%	Avg 5 (x11-12):	0.270			
			Trend La	st 12 (ex 11-12):	4.2%	Avg 10 (x11-12):	0.265			
			Prior	Selected Trend:	4.0%	Prior Sel Avg:	0.250			

4.0%

Sel. Loss Cost:

0.260

Selected Trend:

NOTES

- (2) Provided by Commonwealth of Massachusetts
- (3) From Section 8, Exhibit 2, Page 2, Column 6
- (4) = (3) / (2) / 10
- (5) Based on information from the MA WCIRB $\,$
- $(6) = (4) \times (5)$
- (7) Based on Selected Trend from (6) $\,$
- $(8) = (6) \times (7)$
- (9) = Sel. Loss Cost / [(5) * (7)]
- $\left(10\right)$ From Aon analysis as of June 30, 2011
- (11) Selected based on (9) and (4)

(9) = (7) + (8)

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012

Section 8 Exhibit 2 Page 5

All Other - Clusters 5-17 & 95 Medical

Calculation of 1982 & Prior Reserves (Page 1)

Method 1	<u> </u>					
(1)	Average Payment Trend		0.900			
(2)	Credibility		59%			
(3)	Average Pmt Trend Statewide		0.950			
(4)	Credibility Weighted Trend		0.920			
		(Low)	(High)			
(5)	Selected Range	0.911	0.930			
(6)	Incremental Paid for 2012	24,383	24,383			
(7)	Estimated Reserve	250,469	322,443			
(8)	Paid to Date (82 & Prior)	2,920,917	2,920,917			
(9)	Est Ult Paid for 1982 & Prior	3,171,386	3,243,360			
Method 2	<u> </u>					
-		(Current)	(Prior)			
(10)	Avg Incremental Paid (3 yrs)	26,072	26,401			
(11)	Projected Number of Years	7	7			
(12)	Estimated Reserve	182,505	184,809			
(13)	Paid to Date (82 & Prior)	2,920,917	2,897,465			
(14)	Est Ult Paid for 1982 & Prior	3,103,422	3,082,274			
(14a)	Paid Counts During Fiscal Year	3	6			
		(Low)	(High)			
(15)	Sel Ult Excluding Lump Sums	3,137,404	3,162,817			
(16)	Lump Sum Ultimates	N/A	N/A			
(17)	Ult Loss Including Lump Sums	3,137,404	3,162,817			
(18)	Implied Tail	1.074	1.083			
(19)	Ult Loss Inc Lump Sums @ 6/11	3,102,509	3,117,115			
NOTES:						
	on 8, Exhibit 2, Page 6		(10) Avg of 3 latest years from Section 8, Exhibit 2, Page 6, Column 3			
	2) = (Average of Section 8, Exhibit 2, Page 6, Column 3 / 175,000) ^ 0.5		(11) Selected judgmentally			
(3) Average St	<u>-</u>		$(12) = (10 \times (11))$			
	+ (4) x {1 - (2)}		(14) = (12) + (13)			
	dgmentally based on (4)		(15) = Average of (9) and (14)			
-	ided by Commonwealth of Massachusetts		(16) Lump Sums are considered in Indemnity analysis (Section 1)			
$(7) = (6) \times (5)$	•		(17) = (15) + (16)			
(8), (16) From	Section 8, Exhibit 2, Page 2, Column 3		(18) = (15) / (8)			
	-		(10) = (10) / (0)			

(19) From Prior Aon Analysis as of June 30, 2011



Section 8 Exhibit 2

Page 6

All Other - Clusters 5-17 & 95 Medical

Calculation of 1982 & Prior Reserves (Page 2)

(1)	(2)	(3)	(4)	(5)		
				Average		
		Incremental		Observed		Trend
Year	X	Paids	LN	Trend		Calculations
1992	1	206,798	12.239			
1993	2	153,285	11.940	0.741		
1994	3	146,363	11.894	0.955		
1995	4	120,472	11.699	0.823		
1996	5	130,279	11.777	1.081		
1997	6	37,349	10.528	0.287		
1998	7	24,406	10.103	0.653		
1999	8	85,275	11.354	3.494		
2000	9	30,381	10.322	0.356	n =	21
2001	10	26,076	10.169	0.858	S(x) =	42,042
2002	11	28,013	10.240	1.074	S(x-sq) =	84,168,854
2003	12	24,232	10.095	0.865	S(xy) =	450,124
2004	13	32,198	10.380	1.329	S(y) =	225
2005	14	42,136	10.649	1.309	D =	16,170
2006	15	33,882	10.431	0.804	slope =	-0.095
2007	16	22,266	10.011	0.657	Avg Trend =	0.905
2008	17	32,986	10.404	1.481		
2009	18	25,370	10.141	0.769		
2010	19	25,142	10.132	0.991		
2011	20	28,691	10.264	1.141		
2012	21	24,383	10.102	0.850		

Selected Trend: 0.900

NOTES:

(3) 2012 provided by Commonwealth of Massachusetts. Prior years from Aon analysis as of June 30, 2011

(4) LN [(3)]

(5) Eg. 2012: 0.85 = 24383 / 28691

Percent of Ult

45.8%

58.2%

63.3%

66.8%

72.4%

75.0%

77.3%

79.8%

82.2%

85.1%

86.7%

88.1%

89.7%

90.6%

92.0%

92.7%

93.5%

94.2%

94.8%

95.2%

96.2%

97.2%

97.6%

98.1%

98.6%

Commonwealth of Massachusetts Workers Compensation All Other - Clusters 5-17 & 95 MEDICAL. Paid Loss Development Paid Loss (Excluding Lump Sum)

Exhibit 2 Page ?

Acc Yr Ending June-83 June-84 121,026 324,243 146 374 195,518 505,877 312,256 664,679 929,832 401,393 716,886 980,992 457,468 758,667 1,077,726 472,628 784,865 1,103,232 65.800 95,928 172.082 223 519 270 937 291 319 316 614 336 461 453 214 453 179 457 283 457 468 457 468 458 118 476 174 480 561 485 930 491 063 495 741 498 237 501 473 504,586 391,630 488,686 438,262 592,053 586,886 747,423 636,458 911,116 683,784 957,391 693,120 968,422 724,043 1,009,751 734,862 1,031,712 788,687 1,110,832 788,743 1,116,052 790,813 1,123,312 790,813 1,123,581 172,377 253,637 610,938 745,334 749,852 762,583 783,107 790,813 790,813 222,608 324,021 409,170 702,853 785,283 1,051,061 1,088,791 1,096,356 1,122,649 1,123,581 June-85 91,462 1,066,218 1,631,069 1,451,102 1,672,723 1,470,676 1,716,974 1,498,691 June-86 197 516 482 005 708 037 875 864 1.053.127 1 211 316 1 370 683 1 467 692 1 572 492 1 608 200 1.655.833 1.699.156 1.724.323 1 731 547 1 743 355 1 755 277 1.764.089 1.780.012 1 796 528 1.802.048 1 808 935 1 832 489 1.867.039 1,872,692 488,687 928,992 1,116,174 1,326,215 1,394,678 1,416,827 1,433,554 1,461,072 1,482,961 1,507,156 1,527,729 1,539,237 1,554,224 1,564,621 1,590,009 1,608,659 761,278 1,545,443 1,628,722 June-88 390.619 1.150.212 1.830.796 2.204.311 2.429.489 2.580.235 2,679,602 2.758.965 2.816.870 2.872.713 2.895.135 2.917.336 2.938.306 2.953.260 2.965,159 2.980.478 3.005.909 3.019.968 3.040.247 3.060,774 3.075.967 3.084.408 3.098,971 3.111.109 3.123.843 2,380,914 2,616,790 2,727,013 2,917,488 348,632 1,379,611 1,965,598 2,882,836 2,988,159 3,078,524 3,143,724 3,188,707 3,222,672 3,251,157 3,271,467 3,290,603 3,312,237 3,338,112 3,358,373 3,385,594 3,459,727 3,477,288 3,487,596 3,504,078 3,526,921 3,498,784 3,525,521 3,594,665 June-90 597,392 1,787,214 2,367,627 3,052,042 3,170,650 3,294,118 3,385,084 3,460,338 3,559,539 3,616,129 3,673,092 3,699,660 3,720,191 3,743,464 3,756,545 3,772,853 3,783,930 3,792,543 708,625 1,924,338 2,444,979 2,785,515 2,902,296 588,418 1,588,370 1,986,839 2,229,495 2,290,208 3,018,419 2,325,875 3,064,528 2,375,312 3,074,954 2,430,547 3,092,506 2,462,691 3,113,710 2,497,761 3,131,050 2,542,769 3,142,716 2,553,772 3,165,865 2,574,534 3,200,123 2,586,268 3,230,691 2,593,937 3,265,408 3,303,782 2,607,986 2,617,238 3,334,465 2,623,319 3,363,420 2,642,357 3,385,556 2,693,544 3,405,270 3,425,312 2,703,064 June-92 June-93 415.674 1.315.738 1.611.871 1.719.235 1.836.642 1.871.759 1.907.504 1.930.526 1.977.226 2.009.894 2.048.320 2.106,226 2.144.269 2.190,485 2.240.879 2.296,700 2.349,467 2.390,884 2.414.691 2.428.953 598,740 1,383,736 625,005 1,262,191 1,941,862 2,012,247 1,627,990 1,716,166 2,200,199 1,770,565 2,346,328 1,919,317 2,406,956 2,509,745 2,549,583 2,105,461 2,601,202 2,177,442 2,677,455 2,207,352 2,727,826 2,235,130 2,785,899 2,265,454 2,804,943 2,822,448 June-94 June-95 1.500.916 1.843.652 2.018.626 2.068.939 2.289.441 2.313.135 2.411.441 June-96 June-97 442,026 1,106,672 490,343 1,177,901 1,298,637 1,506,086 1,588,152 1,851,037 1,939,610 1,626,688 1,672,734 2,100,197 1,723,992 2,157,406 1,784,200 2,207,438 1,838,291 2,247,927 1,904,595 2,302,138 1,938,999 2,315,796 1,990,646 2,350,446 2,023,635 2,367,170 1 973 969 2,041,150 2,054,604 2,338,520 June-98 326,869 974.658 1,226,365 1,350,342 1,476,983 1,551,929 1,456,433 1,645,438 1,757,364 1,866,452 1.637.433 1.716.707 1.747.491 1.769.878 1.797.150 1,821,161 1,842,103 1,916,231 2,353,171 2,390,481 2,459,300 1 958 225 484,930 1,204,187 1,932,933 2,065,834 2,135,187 2,187,567 2,264,558 June-99 687,002 1,407,750 1.709.714 1.905.283 2.094.421 June-00 2.260.264 2,375,651 2.506.812 2.566,510 2.618.716 2.644.619 2.679.121 2.756.324 555,924 456,844 1,355,841 1,259,496 1,668,220 1,683,493 1,965,335 2,137,275 1,908,166 2,029,871 2,265,629 2,333,456 2,389,586 2,101,432 2,140,880 2,212,890 2,477,500 2,581,034 2,640,810 2,279,178 2,337,107 2,491,961 2,693,375 June-02 314,443 1,423,035 598,148 1,733,246 744,557 2,314,627 June-03 June-04 2,006,147 2,291,763 2,403,958 2,216,316 2,434,141 2,548,142 2,513,521 2,669,710 2.608.269 2.678.105 2,752,202 2,844,031 2,729,591 2,840,027 3 030 458 3 409 706 3 640 720 3 806 314 3 993 880 4 101 306 June-05 2,611,952 2,837,745 3,016,501 3,153,780 3,990,645 4,226,540 4,465,130 4,612,091 3,153,780 3,240,647 June-06 June-07 1.118.370 3.111.007 1,399,818 2,842,788 3,291,021 3,540,051 3,665,019 1,326,874 2,783,994 3,440,192 3,757,225 June-09 1,396,833 3,068,894 3,532,579 June-10 3,339,318 1,578,463 June-12 Age-to-Age Factors Acc Yr Ending June-83 24-36 1.458 108-120 1.075 120-132 1.072 132-144 1.014 216-228 144-156 156-168 168-180 180-192 192-204 204-216 228-240 276-288 1.009 288-300 300-312 312-324 324-336 336-348 348-360 1.143 1.212 1.129 1.000 1.000 1.000 1.001 1.032 1.008 1.011 1.011 1.005 1.006 1.006 1.278 1.263 1.237 1.042 1.160 1.023 1.012 1.020 1.014 1.002 1.006 1.009 1.006 1.005 1.007 1.003 1.007 1.005 1.007 June-84 1 471 1.208 1 1 1 1 9 1 154 1.160 1.041 1.044 1.021 1.014 1.012 1.008 1.011 1.001 1.018 1.019 1.016 1.018 1.036 1.024 1.015 1.035 1.035 1.029 1.014 1.034 1.010 1.015 1.014 1.006 1.012 1.005 1.027 1.000 1.003 1.000 1.000 1.000 1.000 1.194 1.187 1.063 1.071 1.052 1.029 1.030 1.015 1.007 1.008 1.009 1.012 1.010 1.007 1.005 1.004 1.016 1.004 1.001 2.434 1.456 1.212 1.051 1.013 1.029 1.022 1.019 1.004 1.007 1.014 1.011 1.010 1.007 1.006 1.013 1.000 1.000 1.469 1.150 1.016 1.010 1.004 1.007 1.005 June-86 2.440 1.007 1.003 June-87 2 446 1 558 1.220 1.201 1.063 1.016 1.008 1.011 1.006 1.007 1.004 1.004 1.004 1.012 1.012 2.945 3.957 1.592 1.204 1.102 1.062 1.030 1.021 1.007 1.004 1.005 1.009 1.005 1.003 1.004 June-88 June-89 1.037 1.006 1.008 1.022 1.005 1.002 1.014 1.022 1.007 1.014 1.017 1.043 1.025 1.030 1.325 1.271 1.251 1.009 1.008 1.004 1.004 1.028 2.992 1.152 1.070 1.046 1.039 1.039 1.028 1.010 1.006 1.016 1.007 1.012 1.006 1.006 1.003 1.004 1.003 1.042 1.027 1.068 1.003 1.023 1.012 1.024 1.026 1.013 1.024 1.026 1.007 1.008 1.018 2.716 2.699 1.040 1.011 June-91 1.139 1.015 1.011 1.010 1.009 1.009 1.007 1.006 1.006 June-92 1.016 1.021 1.019 1.003 1.005 1.004 1.023 1.002 1.007 1.019 1.004 1.019 1.022 1.018 June-93 3.165 2.311 1.225 1.025 1.010 1.006 1.028 1.020 1.034 1.018 1.093 1.007 1.006 June-94 1.139 1.036 1.041 1.029 1.019 1.021 1.007 1.006 2.019 1.189 1.054 1.032 1.041 1.041 1.052 1.014 1.014 June-95 June-96 1.160 1.008 1.009 1.007 1.023 1.018 1.034 1.024 1.037 1.018 1.013 1.025 1.020 1.042 June-97 2.402 1 407 1.117 1.048 1.059 1.022 1.027 1.006 1.010 1.005 1.007 1.038 1.258 1.094 1.051 1.055 1.011 1.040 1.022 June-98 2.982 1.101 June-99 2.483 1.209 1.215 1.230 1 130 1.068 1.099 1.087 1.062 1.036 1.069 1.055 1.024 1.039 1.016 1.029 2.049 1.062 June-00 1.114 1.051 1.013 1.029 1.030 June-01 1.178 1.020 2.757 4.526 1.337 1.133 1.035 1.019 1.030 1.025 1.064 1.034 1.027 June-03 June-04 June-05 2.898 1.098 1.047 1.048 1.279 1.309 1.022 1.040 1.023 1.027 June-06 2 272 1 183 1.086 1.063 1.046 1.028 June-07 2.782 1.283 1.059 1.056 1.033 June-08 1.236 June-09 June-10 2.098 1.092 June-11 2.098 12-24 24-36 36-48 48.60 60-72 72.84 84-96 96.108 108-120 120-132 132-144 144-156 156-168 168-180 180-102 192-204 204-216 216-228 228-240 240-252 252-264 264-276 276-288 288-300 300-312 312-324 324-336 To Ult Averages Simple Avg All Yrs Latest 5 1 313 1 148 1.090 1.071 1.054 1.047 1.038 1.026 1.020 1.008 1.008 1.003 1.002 1.003 1.006 1.202 1.028 1.029 1.016 1.004 1.088 1.018 1.008 1.005 1.008 1.002 Latest 3 2.131 1.181 1.076 1.052 1.041 1.033 1.031 1.027 1.034 1.033 1.024 1.019 1.025 1.015 1.019 1.008 1.022 1.008 1.011 1.005 1.005 1.005 1.008 1.010 1.011 1.001 Volume Wtd 1.271 1.015 1.015 1.013 1.008 1.010 1.002 1.001 1.003 1.006 All Yrs 2.506 1.124 1.055 1.035 1.028 1.025 1.020 1.014 1.012 1.009 1.010 1.009 1.007 1.005 1.005 1.005 1.203 Latest 5 2 216 1.086 1.054 1.042 1.033 1.030 1.028 1.029 1.030 1.018 1.017 1.019 1.016 1.018 1.010 1.015 1.008 1.008 1.004 1.004 1.005 1.005 1.008 1.010 2.130 1.180 1.075 1.031 1.027 1.034 1.032 1.023 1.024 1.005 1.004 1.004 Latest 3 1.035 1.020 1.015 1.020 1.008 1.021 1.006 1.008 1.012 1.002 1.001 Dev Factor Selection Industry 1 1.968 1.143 1.014 Industry 2 1.266 1.074 1.040 1.013 1.011 1.010 1.015 1.008 1.013 1.022 1.030 1.253 1.013 1.009 1.008 1.008 1.008 1.005 1.004 1.002 1.004 1.281 1.062 1.046 1.034 1.030 1.025 1.018 1.041 1.014 1.017 1.011 1.013 1.008 1.006 1.005 1.005 1.005 1.005 1.024 1.023 Prior 1.016 1.009 1.011 1.008 1.005 Selected 2,638 1.088 1.054 1.043 1.039 1.036 1.031 1.032 1.018 1.017 1.019 1.018 1.010 1.016 1.008 1.006 1.005 1.005 1.005 1.005 1.005 1.005 1.014 FacToUlt 5.761 2.183 1.717 1.579 1.498 1.436 1.333 1.293 1.217 1.175 1.153 1.135 1.115 1.104 1.087 1.079 1.070 1.062 1.055 1.050 1.045 1.040 1.034 1.029 1.024 1.019 1.014 17.4%

Section 8 Exhibit 2 Page 8

All Other - Clusters 5-17 & 95 Medical

Comparison of Ultimate Losses

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ultima	ite Loss	Ultima	ate Loss	Change in U	ltimate Loss	Change in U	ltimate Loss
Accident	As of	f 6/11	As o	f 6/12	(Dollar)	(Percent)	(Dollar)	(Percent)
Year	Low	High	Low	High	Low	Low	High	High
All Prior Yrs	3,102,509	3,117,115	3,137,404	3,162,817	34,895	1.1%	45,702	1.5%
6/30/82-83	501,473	522,068	504,586	521,834	3,113	0.6%	(234)	0.0%
6/30/83-84	790,813	833,596	790,813	813,876	0	0.0%	(19,720)	-2.4%
6/30/84-85	1,199,000	1,201,000	1,151,000	1,151,000	(48,000)	-4.0%	(50,000)	-4.2%
6/30/85-86	1,980,000	2,006,000	1,907,730	1,927,000	(72,270)	-3.7%	(79,000)	-3.9%
6/30/86-87	1,735,000	1,737,000	1,685,000	1,686,000	(50,000)	-2.9%	(51,000)	-2.9%
6/30/87-88	3,376,000	3,376,000	3,247,000	3,252,000	(129,000)	-3.8%	(124,000)	-3.7%
6/30/88-89	3,841,000	3,846,000	3,694,000	3,698,000	(147,000)	-3.8%	(148,000)	-3.8%
6/30/89-90	4,145,000	4,147,000	3,982,000	3,989,000	(163,000)	-3.9%	(158,000)	-3.8%
6/30/90-91	3,714,480	3,754,000	3,576,870	3,614,000	(137,610)	-3.7%	(140,000)	-3.7%
6/30/91-92	2,990,000	2,993,000	2,868,000	2,869,000	(122,000)	-4.1%	(124,000)	-4.1%
6/30/92-93	2,701,000	2,706,000	2,597,000	2,599,000	(104,000)	-3.9%	(107,000)	-4.0%
6/30/93-94	3,210,000	3,218,000	3,080,000	3,085,000	(130,000)	-4.0%	(133,000)	-4.1%
6/30/94-95	2,636,000	2,642,000	2,617,000	2,621,000	(19,000)	-0.7%	(21,000)	-0.8%
6/30/95-96	2,357,000	2,361,000	2,266,000	2,268,000	(91,000)	-3.9%	(93,000)	-3.9%
6/30/96-97	2,766,000	2,769,000	2,738,000	2,740,000	(28,000)	-1.0%	(29,000)	-1.0%
6/30/97-98	2,278,000	2,280,000	2,222,000	2,224,000	(56,000)	-2.5%	(56,000)	-2.5%
6/30/98-99	2,888,000	2,890,000	2,835,000	2,836,000	(53,000)	-1.8%	(54,000)	-1.9%
6/30/99-00	3,280,000	3,284,000	3,236,000	3,239,000	(44,000)	-1.3%	(45,000)	-1.4%
6/30/00-01	3,294,000	3,295,000	3,218,000	3,218,000	(76,000)	-2.3%	(77,000)	-2.3%
6/30/01-02	2,979,000	2,991,000	3,032,000	3,041,000	53,000	1.8%	50,000	1.7%
6/30/02-03	3,596,000	3,598,000	3,564,000	3,567,000	(32,000)	-0.9%	(31,000)	-0.9%
6/30/03-04	3,823,000	3,826,000	3,757,000	3,761,000	(66,000)	-1.7%	(65,000)	-1.7%
6/30/04-05	4,700,000	5,557,000	4,600,000	5,467,000	(100,000)	-2.1%	(90,000)	-1.6%
6/30/05-06	4,200,000	4,623,000	4,100,000	4,551,000	(100,000)	-2.4%	(72,000)	-1.6%
6/30/06-07	5,600,000	6,763,000	5,600,000	6,622,000	0	0.0%	(141,000)	-2.1%
6/30/07-08	5,100,000	5,722,000	5,000,000	5,582,000	(100,000)	-2.0%	(140,000)	-2.4%
6/30/08-09	5,400,000	6,330,000	5,300,000	6,238,000	(100,000)	-1.9%	(92,000)	-1.5%
6/30/09-10	6,000,000	7,234,000	5,600,000	6,554,000	(400,000)	-6.7%	(680,000)	-9.4%
6/30/10-11	6,700,000	9,970,000	6,500,000	7,655,000	(200,000)	-3.0%	(2,315,000)	-23.2%
6/30/11-12								
Total	100,883,276	109,591,780	98,406,403	104,552,527	(2,476,872)	-2.5%	(5,039,252)	-4.6%

NOTES:

(2), (3) From Aon analysis as of June 30, 2011

(4), (5) From Section 8, Exhibit 2, Page 1, Columns 6, 7

(6) = (4) - (2)

(7) = (4) / (2) - 1

(8) = (5) - (3)

(9) = (5) / (3) - 1

Section 8 Exhibit 2

Page 9

All Other - Clusters 5-17 & 95 Medical

Calculation of Discount Factors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Cumulative	Incremental		Pres Value	Pres Value		
	Paid Loss	Paid Loss	Percent	of Increm.	of Increm.	Discount	Factor At:
Maturity	Development	Development	Unpaid	Pmts (4%)	Pmts (6%)	4%	6%
372	100.0%	1.4%	0.0%	0.4%	0.2%	1.000	1.000
360	98.6%	0.5%	1.4%	0.2%	0.1%	0.981	0.971
348	98.1%	0.5%	1.9%	0.2%	0.1%	0.953	0.931
336	97.6%	0.5%	2.4%	0.2%	0.1%	0.930	0.897
324	97.2%	0.5%	2.8%	0.2%	0.1%	0.909	0.868
312	96.7%	0.5%	3.3%	0.2%	0.1%	0.889	0.841
300	96.2%	0.5%	3.8%	0.2%	0.1%	0.871	0.816
288	95.7%	0.5%	4.3%	0.2%	0.1%	0.853	0.792
276	95.2%	0.5%	4.8%	0.2%	0.1%	0.837	0.770
264	94.8%	0.6%	5.2%	0.2%	0.2%	0.820	0.749
252	94.2%	0.7%	5.8%	0.3%	0.2%	0.808	0.732
240	93.5%	0.7%	6.5%	0.3%	0.2%	0.800	0.723
228	92.7%	0.7%	7.3%	0.3%	0.2%	0.791	0.712
216	92.0%	1.4%	8.0%	0.7%	0.5%	0.780	0.698
204	90.6%	0.9%	9.4%	0.5%	0.3%	0.785	0.706
192	89.7%	1.6%	10.3%	0.9%	0.6%	0.774	0.692
180	88.1%	1.4%	11.9%	0.8%	0.6%	0.776	0.695
168	86.7%	1.6%	13.3%	1.0%	0.7%	0.770	0.689
156	85.1%	1.4%	14.9%	0.9%	0.7%	0.767	0.685
144	83.7%	1.5%	16.3%	1.0%	0.8%	0.758	0.674
132	82.2%	2.4%	17.8%	1.6%	1.3%	0.750	0.664
120	79.8%	2.4%	20.2%	1.7%	1.4%	0.752	0.667
108	77.3%	2.3%	22.7%	1.7%	1.4%	0.751	0.667
96	75.0%	2.6%	25.0%	2.0%	1.7%	0.746	0.661
84	72.4%	2.8%	27.6%	2.1%	1.9%	0.743	0.656
72	69.7%	2.9%	30.3%	2.3%	2.1%	0.738	0.651
60	66.8%	3.4%	33.2%	2.9%	2.6%	0.733	0.645
48	63.3%	5.1%	36.7%	4.5%	4.2%	0.731	0.643
36	58.2%	12.4%	41.8%	11.3%	10.7%	0.737	0.651
24	45.8%	28.4%	54.2%	26.8%	26.1%	0.771	0.696
12	17.4%	17.4%	82.6%	17.0%	16.9%	0.824	0.765

Total 100.0%

NOTES:

(2) = 1 / Section 8, Exhibit 2, Page 2, Column 4

(3) Incremental % based on (2)

(4) = 1 - (2)

 $(5) = [(3) / 1.04] ^ {[(1) - 6] / 12}$

 $(6) = [(3) / 1.06] ^ {[(1) - 6] / 12}$

(7), (8) Discount factor based on (5), (6)



Section 8 Exhibit 2 Page 10

All Other - Clusters 5-17 & 95 Medical

Outstanding Loss Discounting - 4.0%

(1)	(2)	(3)	(4)	(5)	(6)
	Undisc		Discount		ounted
Accident	Outstandi		Factor at		ing Losses
Year	(Low)	(High)	4.0%	(Low)	(High)
All Prior Yrs	216,487	241,900		189,336	211,562
6/30/82-83	0	17,248	0.981	0	16,913
6/30/83-84	0	23,063	0.953	0	21,975
6/30/84-85	27,419	27,419	0.930	25,487	25,487
6/30/85-86	35,038	54,308	0.909	31,838	49,348
6/30/86-87	56,278	57,278	0.889	50,046	50,935
6/30/87-88	123,157	128,157	0.871	107,264	111,619
6/30/88-89	158,371	162,371	0.853	135,164	138,578
6/30/89-90	189,457	196,457	0.837	158,510	164,366
6/30/90-91	151,558	188,688	0.820	124,343	154,806
6/30/91-92	164,936	165,936	0.808	133,199	134,007
6/30/92-93	168,047	170,047	0.800	134,411	136,011
6/30/93-94	219,916	224,916	0.791	173,914	177,868
6/30/94-95	205,559	209,559	0.780	160,330	163,450
6/30/95-96	211,396	213,396	0.785	165,899	167,469
6/30/96-97	280,662	282,662	0.774	217,266	218,814
6/30/97-98	263,775	265,775	0.776	204,570	206,121
6/30/98-99	375,700	376,700	0.770	289,436	290,206
6/30/99-00	479,676	482,676	0.767	367,828	370,129
6/30/00-01	524,625	524,625	0.758	397,828	397,828
6/30/01-02	540,039	549,039	0.750	405,217	411,970
6/30/02-03	719,969	722,969	0.752	541,540	543,797
6/30/03-04	851,033	855,033	0.751	639,185	642,190
6/30/04-05	498,694	1,365,694	0.746	372,156	1,019,163
6/30/05-06	859,353	1,310,353	0.743	638,071	972,940
6/30/06-07	987,909	2,009,909	0.738	729,188	1,483,539
6/30/07-08	1,334,981	1,916,981	0.733	979,003	1,405,810
6/30/08-09	1,542,775	2,480,775	0.731	1,127,422	1,812,889
6/30/09-10	2,067,421	3,021,421	0.737	1,522,971	2,225,738
6/30/10-11	3,160,682	4,315,682	0.771	2,436,151	3,326,388
6/30/11-12	5,421,537	7,969,537	0.824	4,464,837	6,563,210
Total	21,836,450	30,530,573		16,922,411	23,615,124

_						
_	Discount Calculation for					
	All Prior Years					
_	(Low)	(High)				
·						
(8) Estimated Total Reserve:	216,487	241,900				
(9) Projected Number of Years:	7	7				
(10) Projected Paid Loss per Year:	30,927	34,557				
(11) Discounted Value at 4%:	189,336	211,562				

0.775

(7) Total Discount Factor:

NOTES:

(2), (3) From Section 8, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 8, Exhibit 2, Page 9, Column 7

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

0.773

Section 8 Exhibit 2 Page 11

All Other - Clusters 5-17 & 95 Medical

Outstanding Loss Discounting - 6.0%

(1)	(2)	(3)	(4)	(5)	(6)			
	Undisc		Discount	Discounted				
Accident	Outstandi		Factor at	Outstandi	ě.			
Year	(Low)	(High)	6.0%	(Low)	(High)			
All Prior Yrs	216,487	241,900		177,824	198,698			
6/30/82-83	0	17,248	0.971	0	16,753			
6/30/83-84	0	23,063	0.931	0	21,467			
6/30/84-85	27,419	27,419	0.897	24,607	24,607			
6/30/85-86	35,038	54,308	0.868	30,414	47,140			
6/30/86-87	56,278	57,278	0.841	47,334	48,175			
6/30/87-88	123,157	128,157	0.816	100,493	104,573			
6/30/88-89	158,371	162,371	0.792	125,481	128,650			
6/30/89-90	189,457	196,457	0.770	145,860	151,249			
6/30/90-91	151,558	188,688	0.749	113,442	141,234			
6/30/91-92	164,936	165,936	0.732	120,734	121,466			
6/30/92-93	168,047	170,047	0.723	121,439	122,885			
6/30/93-94	219,916	224,916	0.712	156,473	160,031			
6/30/94-95	205,559	209,559	0.698	143,460	146,251			
6/30/95-96	211,396	213,396	0.706	149,166	150,577			
6/30/96-97	280,662	282,662	0.692	194,243	195,627			
6/30/97-98	263,775	265,775	0.695	183,313	184,703			
6/30/98-99	375,700	376,700	0.689	258,777	259,466			
6/30/99-00	479,676	482,676	0.685	328,453	330,507			
6/30/00-01	524,625	524,625	0.674	353,615	353,615			
6/30/01-02	540,039	549,039	0.664	358,676	364,653			
6/30/02-03	719,969	722,969	0.667	480,504	482,506			
6/30/03-04	851,033	855,033	0.667	567,269	569,935			
6/30/04-05	498,694	1,365,694	0.661	329,509	902,375			
6/30/05-06	859,353	1,310,353	0.656	564,029	860,038			
6/30/06-07	987,909	2,009,909	0.651	643,232	1,308,661			
6/30/07-08	1,334,981	1,916,981	0.645	861,580	1,237,196			
6/30/08-09	1,542,775	2,480,775	0.643	991,368	1,594,115			
6/30/09-10	2,067,421	3,021,421	0.651	1,345,595	1,966,512			
6/30/10-11	3,160,682	4,315,682	0.696	2,199,714	3,003,550			
6/30/11-12	5,421,537	7,969,537	0.765	4,146,850	6,095,776			
Total	21,836,450	30,530,573		15,263,452	21,292,992			

(7) Total Discount Factor:	0.699	0.697

_									
_	Discount Calculation for								
	All Prior Years								
_	(Low)	(High)							
(8) Estimated Total Reserve:	216,487	241,900							
(9) Projected Number of Years:	7	7							
(10) Projected Paid Loss per Year:	30,927	34,557							
(11) Discounted Value at 6%:	177,824	198,698							

NOTES:

(2), (3) From Section 8, Exhibit 2, Page 1, Columns 8, 9

(4) From Section 8, Exhibit 2, Page 9, Column 8

 $(5) = (2) \times (4)$

 $(6) = (3) \times (4)$

 $(7) = Sum \ of \ (5) \ / \ Sum \ of \ (2) \ and \ Sum \ of \ (6) \ / \ Sum \ of \ (3)$

(10) = (8) / (9)

All Other - Clusters 5-17 & 95

Medical Allocation of Outstanding Reserve to MDOT Agencies

Section 8 Exhibit 2 Page MDOT - FY2011

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19) Ilocation - Met	(20)	(21)	(22)	(23)	(24)	(25)
		Aon	Aon	Outstanding	Outstanding	DOT Allocation - Method 1				DOT	Allocation - M	lethod 2				DOT	DOT	All Other	All Other					
Accident		Selected Ult	Selected Ult	Losses	Losses	Paid Counts	DOT Counts	DOT / Total	DOT OS Loss	DOT OS Loss	Total Paid	DOT Paid	DOT / Total	DOT OS Loss	DOT OS Loss	Total Payroll	DOT Payroll	DOT / Total	DOT OS Loss	DOT OS Loss	Outstanding	Outstanding	Outstanding	
Year	Paid Loss	(Low)	(High)	(Low)	(High)	7/1/10-11	7/1/10-11	Paid Counts	(Low)	(High)	7/1/10-11	7/1/10-11	Paid	(Low)	(High)	(\$000)	(\$000)	Payroll	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs	2,897,465	3,102,509	3,117,115	205,044	219,650	6					28,691	0	0.0%	0	0				13,206	14,147	13,206	14,147	191,838	205,503
6/30/82-83	501,473	501,473	522,068	0	20,595	1					3,236								0	1,326	0	1,326	0	19,269
6/30/83-84	790,813	790,813	833,596	0	42,783	0					0								0	2,755	0	918	0	41,865
6/30/84-85	1,123,581	1,199,000	1,201,000	75,419	77,419	1					269								4,857	4,986	1,619	1,662	73,799	75,756
6/30/85-86	1,867,039	1,980,000	2,006,000	112,961	138,961	2					34,550								7,275	8,950	2,425	2,983	110,536	135,978
6/30/86-87	1,608,659	1,735,000	1,737,000	126,341	128,341	2					18,650								8,137	8,266	2,712	2,755	123,629	125,586
6/30/87-88	3,111,109	3,376,000	3,376,000	264,891	264,891	5					12,138								17,061	17,061	5,687	5,687	259,204	259,204
6/30/88-89	3,526,921	3,841,000	3,846,000	314,079	319,079	11					22,843								20,229	20,551	6,743	6,850	307,336	312,229
6/30/89-90	3,783,930	4,145,000	4,147,000	361,070	363,070	7	1	14.3%	51,581	51,867	11,077	165	1.5%	5,368	5,398				23,255	23,384	26,735	26,883	334,335	336,187
6/30/90-91	3,405,270	3,714,480	3,754,000	309,210	348,730	7					19,714								19,915	22,460	6,638	7,487	302,572	341,244
6/30/91-92	2,693,544	2,990,000	2,993,000	296,456	299,456	6					51,188								19,093	19,287	6,364	6,429	290,091	293,027
6/30/92-93	2,414,691	2,701,000	2,706,000	286,309	291,309	10	2	20.0%	57,262	58,262	23,807	3,476	14.6%	41,799	42,529				18,440	18,762	39,167	39,851	247,142	251,458
6/30/93-94	2,841,619	3,210,000	3,218,000	368,381	376,381	7	3	42.9%	157,877	161,306	19,172	4,113	21.5%	79,030	80,746				23,726	24,241	86,878	88,764	281,503	287,616
6/30/94-95	2,313,135	2,636,000	2,642,000	322,865	328,865	11	2	18.2%	58,703	59,794	23,694	1,173	4.9%	15,977	16,274				20,794	21,181	31,825	32,416	291,040	296,449
6/30/95-96	2,041,150	2,357,000	2,361,000	315,850	319,850	4					17,515								20,343	20,600	6,781	6,867	309,069	312,983
6/30/96-97	2,367,170	2,766,000	2,769,000	398,830	401,830	7					16,724								25,687	25,880	8,562	8,627	390,268	393,203
6/30/97-98	1,916,231	2,278,000	2,280,000	361,769	363,769	7	1	14.3%	51,681	51,967	74,127	65	0.1%	316	318	1,917,994	137,500	7.2%	25,935	26,078	25,977	26,121	335,792	337,648
6/30/98-99	2,390,481	2,888,000	2,890,000	497,519	499,519	11	1	9.1%	45,229	45,411	37,310	1,869	5.0%	24,916	25,017	2,081,524	136,688	6.6%	32,671	32,802	34,272	34,410	463,247	465,109
6/30/99-00	2,679,121	3,280,000	3,284,000	600,879	604,879	13	2	15.4%	92,443	93,058	34,502	11,178	32.4%	194,670	195,966	2,207,243	137,892	6.2%	37,539	37,788	108,217	108,938	492,662	495,941
6/30/00-01	2,640,810	3,294,000	3,295,000	653,190	654,190	15	3	20.0%	130,638	130,838	59,776	3,195	5.3%	34,917	34,970	2,201,008	145,149	6.6%	43,076	43,142	69,544	69,650	583,647	584,540
6/30/01-02	2,337,107	2,979,000	2,991,000	641,893	653,893	25	4	16.0%	102,703	104,623	57,929	2,123	3.7%	23,528	23,968	2,292,592	140,223	6.1%	39,261	39,994	55,164	56,195	586,729	597,698
6/30/02-03	2,752,202	3,596,000	3,598,000	843,798	845,798	27	1	3.7%	31,252	31,326	74,097	10,175	13.7%	115,868	116,143	2,260,534	140,250	6.2%	52,352	52,476	66,491	66,648	777,308	779,150
6/30/03-04	2,840,027	3,823,000	3,826,000	982,973	985,973	35	3	8.6%	84,255	84,512	110,436	16,688	15.1%	148,534	148,987	2,255,942	137,408	6.1%	59,872	60,055	72,063	72,283	910,910	913,690
6/30/04-05	3,993,880	4,700,000	5,557,000	706,120	1,563,120	41	3	7.3%	51,667	114,375	187,566	3,619	1.9%	13,623	30,158	2,309,083	145,033	6.3%	44,351	98,179	36,547	80,904	669,573	1,482,216
6/30/05-06	3,153,780	4,200,000	4,623,000	1,046,220	1,469,220	54	3	5.6%	58,123	81,623	137,279	11,346	8.3%	86,468	121,428	2,480,693	156,390	6.3%	65,957	92,624	70,183	98,558	976,037	1,370,661
6/30/06-07	4,465,130	5,600,000	6,763,000	1,134,870	2,297,870	78	12	15.4%	174,595	353,518	238,590	57,223	24.0%	272,183	551,112	2,612,577	157,146	6.0%	68,262	138,216	121,429	245,867	1,013,441	2,052,003
6/30/07-08	3,540,051	5,100,000	5,722,000	1,559,949	2,181,949	115	6	5.2%	81,389	113,841	249,030	2,768	1.1%	17,336	24,249	2,783,717	168,663	6.1%	94,516	132,202	64,414	90,097	1,495,536	2,091,852
6/30/08-09	3,440,192	5,400,000	6,330,000	1,959,808	2,889,808	220	23	10.5%	204,889	302,116	656,199	86,339	13.2%	257,860	380,225	2,750,907	180,456	6.6%	128,561	189,567	197,103	290,636	1,762,704	2,599,172
6/30/09-10	3,068,894	6,000,000	7,234,000	2,931,106	4,165,106	713	49	6.9%	201,436	286,241	1,672,061	93,149	5.6%	163,290	232,035	2,806,048	203,138	7.2%	212,191	301,523	192,306	273,267	2,738,800	3,891,839
6/30/10-11	1,591,468	6,700,000	9,970,000	5,108,533	8,378,533	1,055	88	8.3%	426,115	698,873	1,591,468	140,379	8.8%	450,609	739,047	2,942,638	197,766	6.7%	343,330	563,098	406,685	667,006	4,701,848	7,711,527
Total	78,096,943	100,883,276	109,591,780	22,786,333	31,494,837	2,496	207	8.3%	2,061,839	2,823,551	5,483,635	449,040	8.2%	1,946,293	2,768,568				_		1,765,737	2,434,233	21,020,596	29,060,604
																	Sel. FY97 & Prio	г 6.4%						

(2), (7), (8), (12), (13), (17). (18) Provided by Commonwealth of Massachusetts (3) From Prior Analysis - Section 8, Exhibit 2, Page 1, Column 6 (4) From Prior Analysis - Section 8, Exhibit 2, Page 1, Column 7 (5) = (3) - (2) (6) = (4) - (2) (9) = (8) / (7) (10) = (9) * (5) (11) = (9) * (6)

(14) = (13) / (12) (15) = (14) * (5) (16) = (14) * (6) (19) = (18) / (17) (20) = (19) * (5) (21) = (19) * (6)

(22) Selected judgementally based on (10), (15), (20) (23) Selected judgementally based on (11), (16). (21)

(24) = (5) - (22)

(25) = (6) - (23)

Commonwealth of Massachusetts Workers Compensation Reserve Analysis at June 30, 2012 All Other - Clusters 5-17 & 95

Section 8 Exhibit 2 Page MDOT - FY2012

Medical Allocation of Outstanding Reserve to MDOT Agencies

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
		Aon	Aon	Outstanding	Outstanding	1		Allocation - Met					OT Allocation -					Allocation - Meth	od 3		DOT	DOT	All Other	All Other
Accident		Selected Ult	Selected Ult	Losses	Losses	Paid Counts	DOT Counts	DOT / Total	DOT OS Loss	DOT OS Loss	Total Paid	DOT Paid	DOT / Total	DOT OS Loss	DOT OS Loss	Total Payroll	DOT Payroll	DOT / Total	DOT OS Loss	DOT OS Loss	Outstanding	Outstanding	Outstanding	Outstanding
Year	Paid Loss	(Low)	(High)	(Low)	(High)	7/1/11-12	7/1/11-12	Paid Counts	(Low)	(High)	7/1/11-12	7/1/11-12	Paid	(Low)	(High)	(\$000)	(\$000)	Payroll	(Low)	(High)	(Low)	(High)	(Low)	(High)
All Prior Yrs	2,920,917	3,137,404	3,162,817	216,487	241,900	3					24,383								14,009	15,654	14,009	15,654	202,478	226,246
6/30/82-83	504,586	504,586	521,834	0	17,248	1					3,113								0	1,116	0	1,116	0	16,132
6/30/83-84	790,813	790,813	813,876	0	23,063	0					0								0	1,492	0	497	0	22,566
6/30/84-85	1,123,581	1,151,000	1,151,000	27,419	27,419	0					0								1,774	1,774	591	591	26,827	26,827
6/30/85-86	1,872,692	1,907,730	1,927,000	35,038	54,308	2					5,653								2,267	3,514	756	1,171	34,282	53,137
6/30/86-87	1,628,722	1,685,000	1,686,000	56,278	57,278	2					20,063								3,642	3,707	1,214	1,236	55,064	56,042
6/30/87-88	3,123,843	3,247,000	3,252,000	123,157	128,157	5					12,734								7,970	8,293	2,657	2,764	120,501	125,393
6/30/88-89	3,535,629	3,694,000	3,698,000	158,371	162,371	8	1	12.5%	19,796	20,296	8,708	450	5.2%	8,184	8,391				10,248	10,507	12,743	13,065	145,628	149,306
6/30/89-90	3,792,543	3,982,000	3,989,000	189,457	196,457	6	1	16.7%	31,576	32,743	8,613	110	1.3%	2,427	2,517				12,260	12,713	15,421	15,991	174,035	180,466
6/30/90-91	3,425,312	3,576,870	3,614,000	151,558	188,688	7					20,043								9,808	12,210	3,269	4,070	148,289	184,618
6/30/91-92	2,703,064	2,868,000	2,869,000	164,936	165,936	4					9,519								10,673	10,738	3,558	3,579	161,378	162,357
6/30/92-93	2,428,953	2,597,000	2,599,000	168,047	170,047	6	1	16.7%	28,008	28,341	14,262	554	3.9%	6,530	6,607				10,875	11,004	15,137	15,318	152,910	154,730
6/30/93-94	2,860,084	3,080,000	3,085,000	219,916	224,916	7	3	42.9%	94,250	96,393	18,465	3,142	17.0%	37,422	38,273				14,231	14,555	14,231	14,555	205,685	210,362
6/30/94-95	2,411,441	2,617,000	2,621,000	205,559	209,559	11	2	18.2%	37,374	38,102	98,306	1,217	1.2%	2,545	2,595				13,302	13,561	17,741	18,086	187,818	191,473
6/30/95-96	2,054,604	2,266,000	2,268,000	211,396	213,396	6					13,454								13,680	13,809	4,560	4,603	206,837	208,793
6/30/96-97	2,457,338	2,738,000	2,740,000	280,662	282,662	9	1	11.1%	31,185	31,407	90,168	1,800	2.0%	5,603	5,643				18,162	18,291	24,673	24,849	255,988	257,812
6/30/97-98	1,958,225	2,222,000	2,224,000	263,775	265,775	8	2	25.0%	65,944	66,444	41,994	457	1.1%	2,867	2,889	1,917,994	137,500	7.2%	18,910	19,053	18,910	19,053	244,865	246,722
6/30/98-99	2,459,300	2,835,000	2,836,000	375,700	376,700	10	1	10.0%	37,570	37,670	68,819	48,801	70.9%	266,418	267,127	2,081,524	136,688	6.6%	24,671	24,737	31,121	31,203	344,579	345,497
6/30/99-00	2,756,324	3,236,000	3,239,000	479,676	482,676	13	2	15.4%	73,796	74,258	77,203	65,874	85.3%	409,290	411,850	2,207,243	137,892	6.2%	29,967	30,154	29,967	30,154	449,710	452,522
6/30/00-01	2,693,375	3,218,000	3,218,000	524,625	524,625	17	3	17.6%	92,581	92,581	52,565	2,475	4.7%	24,701	24,701	2,201,008	145,149	6.6%	34,597	34,597	50,626	50,626	473,999	473,999
6/30/01-02	2,491,961	3,032,000	3,041,000	540,039	549,039	29	4	13.8%	74,488	75,730	154,854	1,875	1.2%	6,540	6,649	2,292,592	140,223	6.1%	33,031	33,581	38,020	38,653	502,019	510,386
6/30/02-03	2,844,031	3,564,000	3,567,000	719,969	722,969	28	2	7.1%	51,426	51,641	91,829	11,629	12.7%	91,176	91,556	2,260,534	140,250	6.2%	44,669	44,855	62,424	62,684	657,545	660,285
6/30/03-04	2,905,967	3,757,000	3,761,000	851,033	855,033	29	4	13.8%	117,384	117,936	65,940	17,898	27.1%	230,991	232,076	2,255,942	137,408	6.1%	51,836	52,079	84,610	85,008	766,424	770,026
6/30/04-05	4,101,306	4,600,000	5,467,000	498,694	1,365,694	31	2	6.5%	32,174	88,109	107,426	3,060	2.8%	14,206	38,905	2,309,083	145,033	6.3%	31,323	85,779	25,901	70,931	472,793	1,294,763
6/30/05-06	3,240,647	4,100,000	4,551,000	859,353	1,310,353	36	2	5.6%	47,742	72,797	86,866	10,680	12.3%	105,656	161,105	2,480,693	156,390	6.3%	54,176	82,609	69,191	105,504	790,162	1,204,850
6/30/06-07	4,612,091	5,600,000	6,622,000	987,909	2,009,909	52	8	15.4%	151,986	309,217	146,962	20,003	13.6%	134,463	273,565	2,612,577	157,146	6.0%	59,422	120,895	59,422	120,895	928,486	1,889,013
6/30/07-08	3,665,019	5,000,000	5,582,000	1,334,981	1,916,981	69	5	7.2%	96,738	138,912	124,969	4,127	3.3%	44,086	63,307	2,783,717	168,663	6.1%	80,885	116,148	73,903	106,122	1,261,077	1,810,859
6/30/08-09	3,757,225	5,300,000	6,238,000	1,542,775	2,480,775	117	12	10.3%	158,233	254,438	317,033	48,582	15.3%	236,416	380,156	2,750,907	180,456	6.6%	101,204	162,735	129,719	208,587	1,413,056	2,272,188
6/30/09-10	3,532,579	5,600,000	6,554,000	2,067,421	3,021,421	180	9	5.0%	103,371	151,071	463,685	16,906	3.6%	75,380	110,164	2,806,048	203,138	7.2%	149,666	218,729	109,473	159,988	1,957,948	2,861,433
6/30/10-11	3,339,318	6,500,000	7,655,000	3,160,682	4,315,682	700	55	7.9%	248,339	339,089	1,747,851	143,352	8.2%	259,227	353,955	2,942,638	197,766	6.7%	212,421	290,045	239,995	327,696	2,920,686	3,987,985
6/30/11-12	1,578,463	7,000,000	9,548,000	5,421,537	7,969,537	990	95	9.6%	520,248	764,754	1,578,463	219,356	13.9%	753,419	1,107,509	3,006,849	207,447	6.9%	374,040	549,831	422,776	621,472	4,998,760	7,348,065
Total	83,569,954	105,406,403	114,100,527	21,836,450	30,530,573	2,386	215	9.0%	2,114,210	2,881,927	5,473,942	622,349	11.4%	2,717,547	3,589,539						1,576,618	2,175,722	20,259,832	28,354,851
																	Sel. FY97 & Prior	6.5%						

(2), (7), (8), (12), (13), (17). (18) Provided by Commonwealth of Massachusetts (3) From Section 8, Exhibit 2, Page 1, Column 6 (14) = (13) / (12) (15) = (14) * (5) (4) From Section 8, Exhibit 2, Page 1, Column 7 (16) = (14) * (6) (5) = (3) - (2) (19) = (18) / (17) (6) = (4) - (2) (9) = (8) / (7) (20) = (19) * (5) (21) = (19) * (6) (10) = (9) * (5) (11) = (9) * (6)

(22) Selected judgementally based on (10), (15), (20) (23) Selected judgementally based on (11), (16). (21) (24) = (5) - (22)

(25) = (6) - (23)

266