

Monterey Bay Area Self Insurance Authority

**An Actuarial Review of the
Liability Self-Insurance Program**

**BAY ACTUARIAL CONSULTANTS
Moraga, California
October 8, 2010**

Bay Actuarial Consultants

October 8, 2010

Mr. Michael Simmons
Vice Chairman
Alliant Insurance Services
100 Pine Street, 11th Floor
San Francisco, CA 94111


Dear Mr. Simmons:

We are pleased to present Bay Actuarial's Actuarial Review of the Monterey Bay Area Self Insurance Authority's General and Auto Liability self-insurance program. We appreciate the opportunity to serve the Authority.

If you have any questions, please call me at (925) 377-5269.

Respectfully,

BAY ACTUARIAL CONSULTANTS


Jack Joyce, FCAS, MAAA
Principal

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

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Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Introduction

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Introduction

Background & Purpose

The Monterey Bay Area Self Insurance Authority (“MBASIA”) self-insures its general and auto liability claims. The Authority has asked Bay Actuarial Consultants to provide an actuarial report on its liability self-insurance program. The specific topics covered in this report include the following:

- 1) **Projected 2010-11 Loss Rate.** A projection of the losses expected to be incurred during 2010-11, expressed in terms of a rate of loss per \$100 of payroll.
- 2) **Unpaid Losses.** We estimated the Authority’s liability for unpaid losses as of June 30, 2010.
- 3) **Discounting.** We have also discounted the projected 2010-11 losses and the liabilities to present value, assuming a 2% interest rate. The discounted estimates take into account the time value of money as general and auto liability costs discharge over an extended timeframe.
- 4) **Variability of Estimates.** We have included an analysis of items (1) and (2) above, in terms of “probability levels.”
- 5) **Short-Term versus Long-Term.** We have broken out the liabilities into their short-term and long-term components.

Conditions & Limitations

This report has been prepared for the Authority's internal use. Copies of this report may be provided to the Authority's auditors. Any other use of this report is not authorized without the prior written permission of Bay Actuarial. In particular, those interested in providing insurance to the Authority must perform their own actuarial analysis and may not rely upon our work.

In this report, we relied upon loss data provided by Risk Management Services and payroll information provided by Alliant Insurance Services. We have not audited this data and are not responsible for its accuracy. With any actuarial analysis, the accuracy and relevance of the conclusions, and the reasonableness of the recommendations, depend upon the accuracy and relevance of the underlying data.

Unless otherwise noted, the term "losses" refers to all costs that can be tied to specific claims. These include loss payments, attorney's fees, and other expenses linked to specific claims.

The actuarial projections in this report are estimates so they are uncertain. This uncertainty is unavoidable because many of the events that will determine future claims costs have not yet taken place. These events include, but are not limited to, future legislation that may affect the tort liability system, changes in the rate of inflation, and the outcomes of current and future litigation and settlement negotiations. Our projections are based upon the Authority's historical experience. We have not anticipated any extraordinary changes in the various factors that might affect the future cost of claims. We used actuarial methods that should produce reasonable results given current information. There is no guarantee, express or implied, that losses will develop as projected in this report.

Organization of the Report

We have divided the remainder of this report into seven sections: the *Management Summary*, the *Technical Approach* section, the *Summary Exhibits*, the *Fiscal Year End Exhibits*, the *Loss Projection Exhibits*, the *Future Loss Exhibits*, and the *Discounting Exhibits*.

The *Management Summary* gives an overview of the results of our analysis. The *Technical Approach* section explains and discusses the assumptions and details underlying our calculations. The *Exhibits* document the actual calculations used in developing our results.

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Management Summary

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Management Summary

Projected 2010-11 Losses and Loss Rates

Tables I and II shows the projected 2010-11 losses and loss rates at various probability levels, discounted and undiscounted. The rates in Table I are gross of the \$10,000 per loss deductible, while those in Table II are net of that deductible. We discounted the rates at 2% interest. The items in Tables I and II do not include claims handling fees (“ULAE”), administrative costs, or the cost of excess insurance coverage. The losses have been calculated assuming that CARMA will cover any individual losses that exceed \$1,000,000.

Tables I and II show actuarial central estimates, plus estimates at various probability levels. The probability level rates correspond to the estimated probabilities that the indicated rate will be adequate. For example, we estimate that there is a 70% probability that the actual 2010-11 discounted loss rate, gross of deductibles (Table I) will be less than **\$2.79**.

Table V on page 11 shows factors to adjust these rates for interest rates other than 2%.

Table I: Projected 2010-11 Losses and Loss Rates (\$1M SIR, Gross of \$10K Deductible, 2% Interest Rate)				
<u>Probability Level</u>	<u>Undiscounted Losses</u>	<u>Discounted Losses</u>	<u>Undiscounted Loss Rate</u>	<u>Discounted Loss Rate</u>
Central Estimate	\$1,012,508	\$960,870	\$2.35	\$2.23
70%	1,265,635	1,201,088	2.94	2.79
80%	1,620,013	1,537,392	3.77	3.58
90%	1,923,765	1,825,653	4.47	4.25
2009 C.E.	\$1,174,118	\$1,100,214	\$2.59	\$2.42
% Change from 09	-13.8%	-12.7%	-9.3%	-7.9%

The projected losses have fallen more than the rates because the exposure (payroll) has been falling.

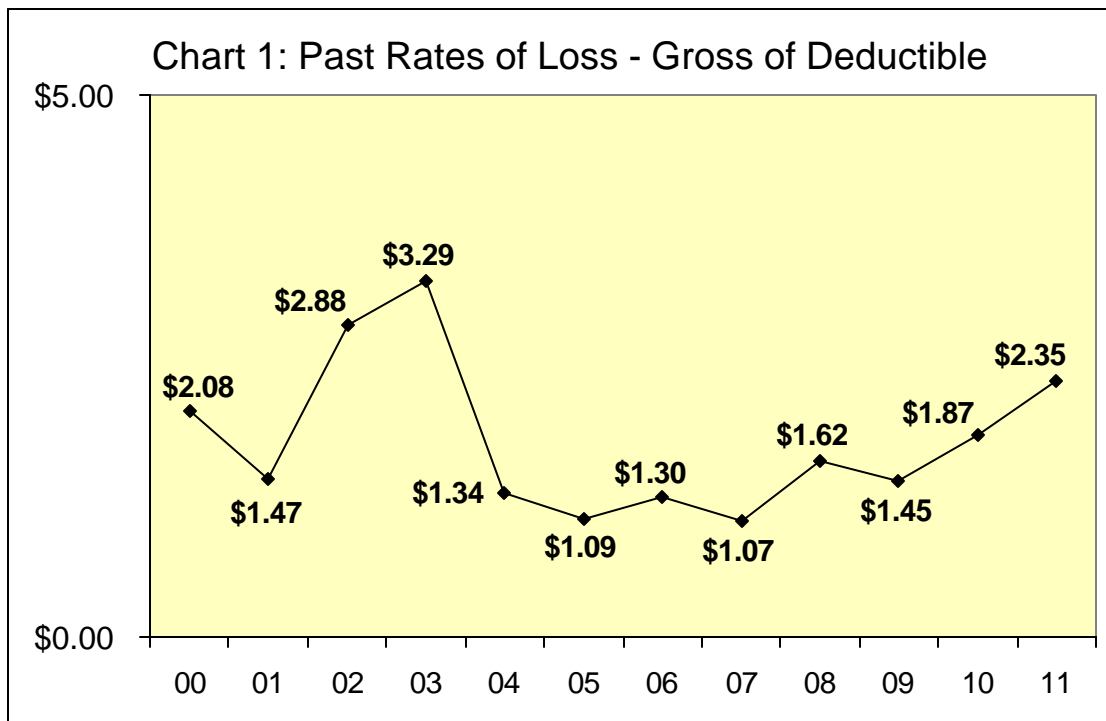
**Table II: Projected 2010-11 Losses and Loss Rates
(\$1M SIR, NET of \$10K Deductible, 2% Interest Rate)**

Probability Level	Undiscounted Losses	Discounted Losses	Undiscounted Loss Rate	Discounted Loss Rate
Central Estimate	\$892,988	\$841,195	\$2.08	\$1.96
70%	1,143,025	1,076,729	2.66	2.50
80%	1,428,781	1,345,911	3.32	3.13
90%	1,785,976	1,682,389	4.15	3.91

The \$10,000 deductible rates in Table II are about 12% lower than the Table I rates. The MBASIA has had unusually good experience with large claims. According to the September 2010 claims data, the largest loss reported since 1999-00 was only \$474,000, and the largest loss since 2003-04 was only \$301,000. Because of the relative lack of large losses, the actual percentage of loss that has fallen under the \$10,000 deductible since 1999-00 was 24% of the total instead of the 12% contemplated in the projected rates.

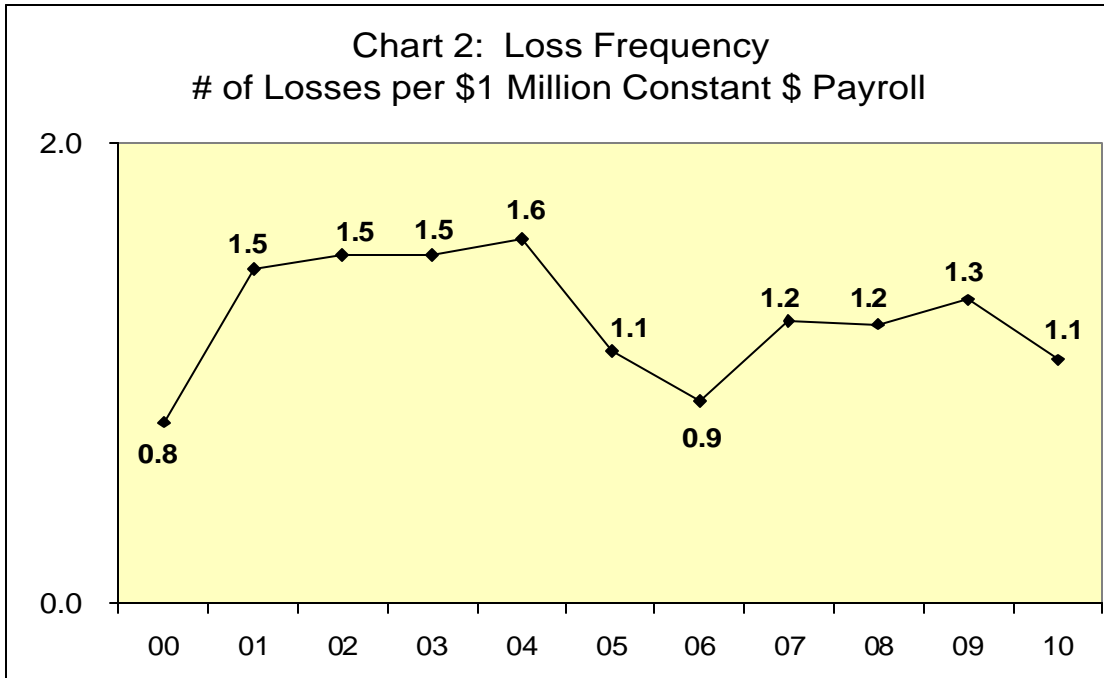
The Authority’s Past Rates of Loss

Chart 1 displays the Authority’s estimated past rates of loss. The rate is equal to the estimated total losses for the year divided by the total insured payroll measured in hundreds of dollars. These are Program Year’s running from July 1 to June 30. The indicated loss rates are undiscounted. The rate of **\$2.35** projected for 2010-11 in Chart 1 corresponds to the undiscounted rate in Table I.



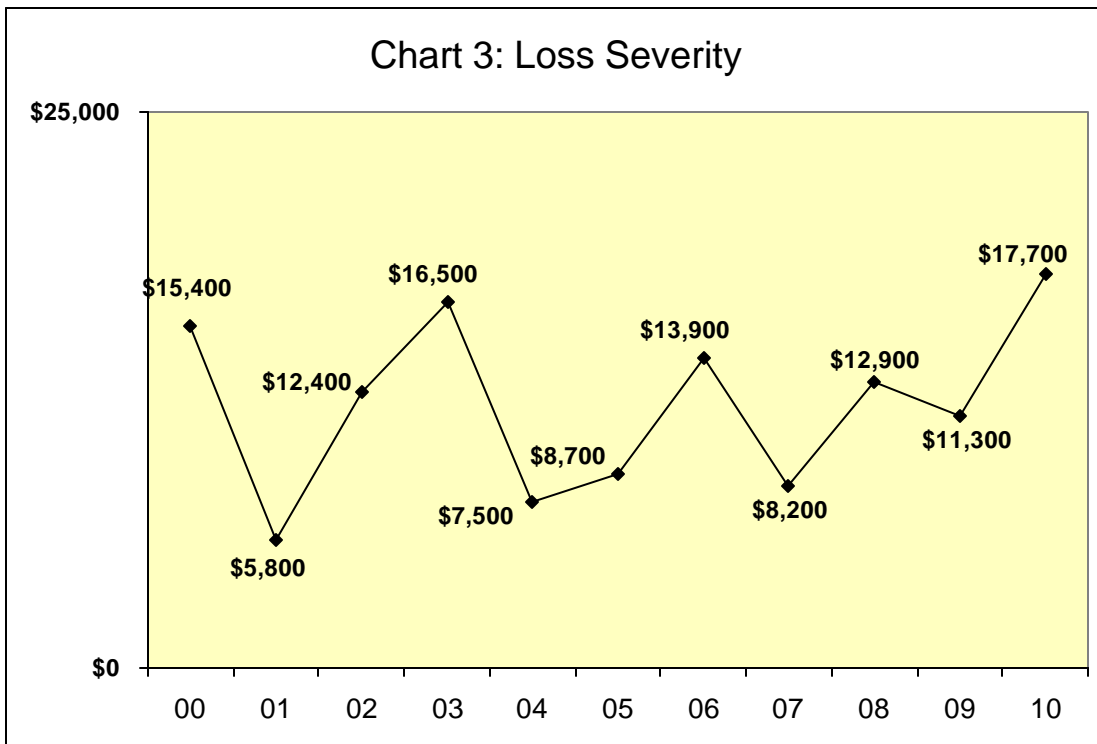
Loss Frequency

Loss “frequency” is the number of losses divided by 2009-10 payroll. Chart 2 displays recent loss frequency.



Average Loss Amount

The average loss amount is the estimated ultimate losses divided by the number of losses. Chart 3 displays the estimated average cost per loss for recent years.



Liability for Unpaid Losses – 6/30/10

We estimate that the Authority's liability for unpaid losses, undiscounted, was **\$1,414,000** on June 30, 2010, or **\$1,370,000** if discounted at 2% interest. Table III shows the actuarial central estimate plus various probability levels. The estimates in Table III are net of the \$10,000 deductible that the members pay on each loss.

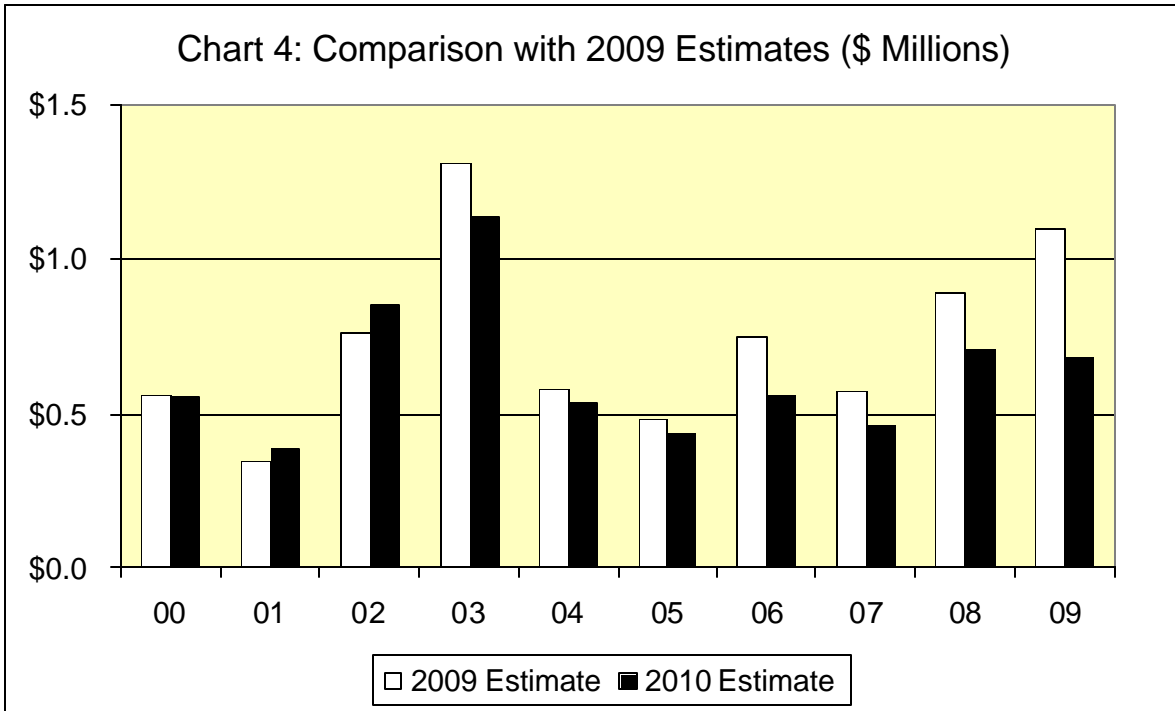
Table III: Estimated Liability for Unpaid Losses As of June 30, 2010 – Net of Deductibles		
Probability Level	Undiscounted Losses	Discounted Losses
50%	1,257,925	1,218,920
Central Estimate	\$1,413,839	\$1,369,573
60%	1,469,935	1,424,356
70%	1,710,213	1,657,183
80%	2,007,027	1,944,794
90%	2,501,717	2,424,144

Since last year's estimate of the liability was gross of deductibles we provide Table IV to facilitate a comparison with last year. The numbers have improved considerably.

Table IV: Estimated Liability for Unpaid Losses As of June 30, 2010 – Gross of Deductibles		
Probability Level	Undiscounted Losses	Discounted Losses
50%	1,411,326	1,368,000
Central Estimate	\$1,586,253	\$1,537,079
60%	1,649,190	1,598,562
70%	1,918,769	1,859,865
80%	2,251,780	2,182,652
90%	2,806,795	2,720,629
2009 C.E.	\$2,239,507	\$2,143,327

Starting with last year's estimated June 30, 2009 liability of \$2.240 million, we subtract \$1.023 million for the change in the estimated ultimate losses, subtract another \$0.480 million for the 2009-10 claims expenditures, and add the losses incurred for 2009-10, which were \$0.850 million. The result of this calculation is \$1.586 million, which matches the Table IV Central Estimate.

We investigated the unusual drop in the estimated ultimate losses. Chart 4 on the next page shows the changes in the estimates for 1999-00 through 2008-09.

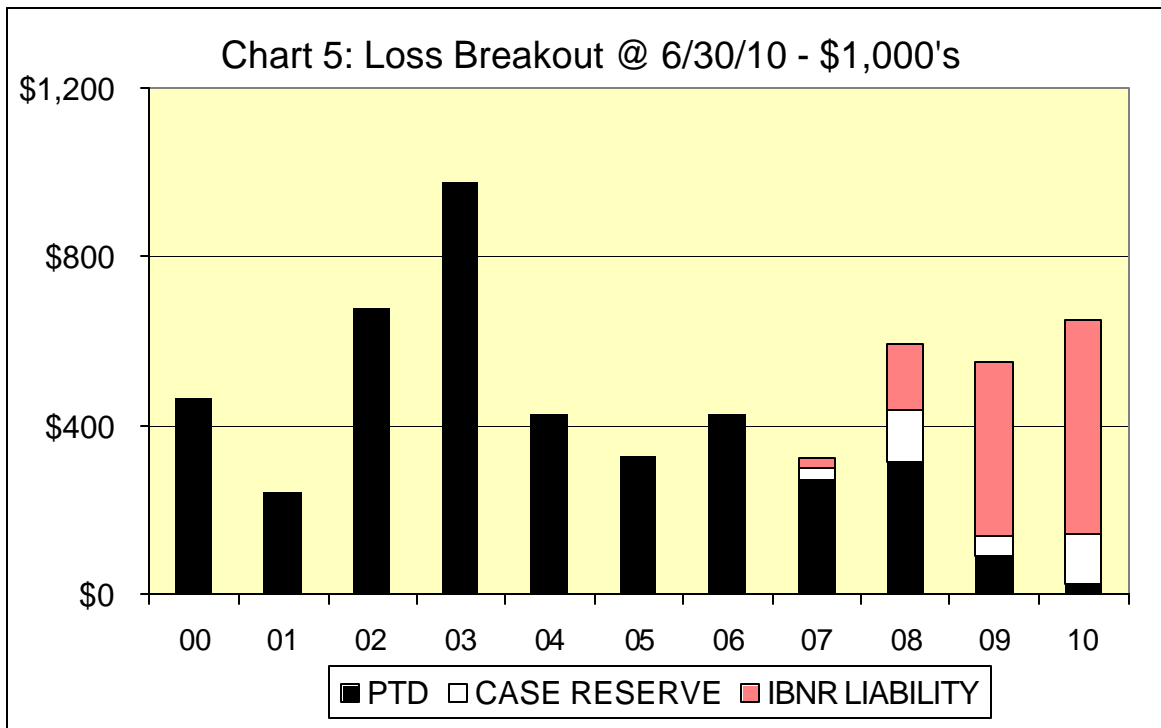


The large drop for 2008-09 was not that unusual since last year's estimate was based on June 30, 2009 claims data. At that time only \$78,000 had been paid for that year and the total reported losses were only \$354,000. The IBNR estimated for the 2008-09 program year was \$746,000, for an IBNR to case reserves ratio of 2.1, which is not unusually high. This year the IBNR to case reserves ratio for 2009-10 is 3.6. What is very unusual is that the total reported losses for 2008-09 actually fell during 2009-10. The total losses incurred for 2008-09 now stand at \$243,000, a drop of \$111,000 from where they stood last year.

There were some other unusual developments. The losses incurred for 2002-03 dropped by \$141,000 during 2009-10, and those for 2005-06 came down \$130,000.

Loss Breakout as of 6/30/10

In Table III we estimated that the Authority's 6/30/10 liability, net of deductibles, was **\$1,413,839**. This comprised **\$314,695** in case reserves for known claims and an IBNR liability of **\$1,099,144**. Chart 5 breaks out the estimated total program year losses into their components: losses paid, case reserves, and IBNR liability. The details are on page 21.



Short-Term Liability

Short-term liabilities are those expected to be discharged within twelve months. The total 6/30/10 liability of **\$1,413,839** comprises **\$403,000** of short-term and **\$1,010,839** of long-term liabilities.

Alternative Interest Rates

Table V shows the factors one would use to translate the Table I rates and the Table III liabilities to their equivalents at interest rates other than 2%.

Table V: Interest Rate Adjustment Factors				
Interest Rate	0%	1%	2%	3%
Rates	1.062	1.030	1.000	0.971
Liabilities	1.032	1.015	1.000	0.985

Analysis of Large Claim History

We mentioned above that the Authority's experience in the large claim category has been unusually good. The largest loss incurred since 1999-00 was a \$474,000 loss in 2002-03. If we take out the \$10,000 deductible and put this into 2010-11 dollars it becomes \$496,000. According to our database of California city claims, the probability that a typical loss, net of deductible, will cost less than \$496,000 in 2010-11 is 95.2%. The Authority incurred 42 losses that exceeded the deductible between 2002-03 and 2007-08.

The odds of incurring 42 claims that exceed the deductible, and that none of these will exceed \$496,000 only 12.5%. Therefore the Authority has been extremely "lucky" in the large claims category. This is a conservative calculation because we excluded the claims from 1999-00 through 2001-02 and 2008-09 and 2009-10 from the calculation. There were another 40 claims from those years that exceeded the deductible, and none of these have exceeded \$496,000 either. If we perform this calculation using all 82 claims, the odds of not seeing any of these claims exceed \$496,000 falls to just 2%.

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Technical Approach

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Technical Approach

This section describes the actuarial calculations.

Exhibits

Summary Exhibits

These exhibits summarize the analysis and conclusions. Summary Exhibit 1 shows the estimated liabilities for unpaid losses as of June 30, 2010. Summary Exhibit 2 shows our projected rate for the 2010-11 program year, which runs from July 1, 2010 to June 30, 2010. Summary Exhibit 3 shows the estimated unpaid losses as of June 30, 2010 by program year on both discounted and non-discounted bases.

Fiscal Year End Exhibits

These exhibits show the calculation of the estimated unpaid losses as of June 30, 2010.

Loss Projection Exhibits

These exhibits show the various actuarial projection methods and summarize the results for each program year.

We used five different actuarial methods:

- 1) Reported loss projection method;
- 2) Paid loss projection method;
- 3) IBNR to Case Reserves Ratio method;
- 4) Bornhuetter-Ferguson method using reported losses; and
- 5) Frequency times Severity method.

Loss Projection Exhibit 1 summarizes the results of these methods.

Limited Loss Exhibits - \$250,000 Limit

These exhibits show the estimated ultimate losses limited to \$250,000 per loss. We use this limited loss analysis to calculate the projected 2010-11 loss rate.

Limited Loss Exhibits - \$100,000 Limit

These exhibits are similar to the \$250,000 limit loss exhibits. We use the \$100,000 limit analysis, like the \$250,000 limit analysis, to calculate the projected 2010-11 loss rate.

Future Loss Exhibits

These exhibits show the projection of the expected rate for 2010-11.

Discounting Exhibits

These exhibits show the discounting of the remaining unpaid losses and the projected future loss rate. They also include the Program Information Exhibit.

Deductibles Exhibits

These exhibits show the estimation of the losses that fall under the \$10,000 deductible.

Claims Data

We included development triangles for reported losses, paid losses, and number of claims reported, plus a Program Information Exhibit.

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

Summary Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Unpaid Losses as of 06/30/10
Losses Limited to SIR, NET of \$10K Deductible

	<u>06/30/10</u>
(1) Estimated Unpaid Losses:	\$1,413,839
(2) Discounted Value of Unpaid Losses: (Assuming 2.0% Interest Rate)	\$1,369,573

Probability Levels for 06/30/10 Liabilities

Probability Level <u>(3)</u>	Probability Factor <u>(4)</u>	Discounted * Liability <u>(5)</u>
50%	0.89	1,218,920
Central Estimate	1.00	\$1,369,573
60%	1.04	1,424,356
70%	1.21	1,657,183
80%	1.42	1,944,794
90%	1.77	2,424,144

* Multiply by 1.032 to obtain undiscounted values.

Notes:

- (1) Page 19, Column (1).
- (2) Page 19, Column (2).
- (3) Estimated probability that funding will be adequate.
- (4) Estimated by BAC.
- (5) (2) x (4).

Monterey Bay Area Self Insurance Authority
 General and Auto Liability Program

Projected Loss Funding Rate for 2010-11
Losses Limited to \$1,000,000, NET of \$10K Deductible

(1) Discounted Loss Rate: Loss Rates
\$1.96
 (as of July 1, 2010, 2.0% interest rate)

<u>Probability Levels</u>		
Probability Level <u>(2)</u>	Probability Factor <u>(3)</u>	Discounted * Rate <u>(4)</u>
50%	0.79	1.55
Central Estimate	1.00	\$1.96
60%	1.01	1.98
70%	1.28	2.51
80%	1.59	3.12
90%	2.07	4.06

* Multiply by 1.062 to obtain undiscounted values.

Notes:

- (1) [Page 53, Column] x [Page 60, Column (4)],
adjusted for \$10,000 deductible.
- (2) Estimated probability that funding will be adequate.
- (3) Estimated by BAC.
- (4) (1) x (3).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Unpaid Losses as of June 30, 2010
Losses Limited to SIR, NET of \$10K Deductible

Program Year	Undiscounted Value: Claims Liabilities as of 6/30/10 (1)	Discounted Value: Claims Liabilities as of 6/30/10 (2)	Estimated Ultimate Losses (3)
1999-00	\$0	\$0	\$463,681
2000-01	0	0	242,383
2001-02	0	0	679,467
2002-03	0	0	978,960
2003-04	0	0	426,270
2004-05	0	0	327,828
2005-06	0	0	427,893
2006-07	50,179	49,301	322,784
2007-08	277,429	271,816	591,804
2008-09	458,928	446,813	551,237
2009-10	627,302	601,643	651,609
Total	\$1,413,839	\$1,369,573	\$5,663,915

Notes:

- (1) Page 21, Column (6).
- (2) Page 58, Column (3).
- (3) Page 21, Column (1).

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

Fiscal Year End Exhibit

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Estimated Unpaid Losses as of June 30, 2010
Losses Limited to SIR, NET of \$10K Deductible

Program Year	Estimated Ultimate Losses <u>(1)</u>	Losses Paid as of 6/30/10 <u>(2)</u>	Case Reserves 6/30/10 <u>(3)</u>	Losses Reported as of 6/30/10 <u>(4)</u>	Estimated IBNR Losses as of 6/30/10 <u>(5)</u>	Estimated Unpaid Losses as of 6/30/10 <u>(6)</u>
1999-00	\$463,681	\$463,682	\$0	\$463,682	\$0	\$0
2000-01	242,383	242,383	0	242,383	0	0
2001-02	679,467	679,467	0	679,467	0	0
2002-03	978,960	978,960	0	978,960	0	0
2003-04	426,270	426,270	0	426,270	0	0
2004-05	327,828	327,828	0	327,828	0	0
2005-06	427,893	427,893	0	427,893	0	0
2006-07	322,784	272,604	26,020	298,624	24,160	50,179
2007-08	591,804	314,375	122,578	436,953	154,851	277,429
2008-09	551,237	92,309	46,347	138,655	412,581	458,928
2009-10	651,609	24,307	119,750	144,057	507,552	627,302
Total	\$5,663,915	\$4,250,077	\$314,695	\$4,564,771	\$1,099,144	\$1,413,839

Notes:

(1) through (6) Page 22 entries minus Page 65 entries.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Estimated Unpaid Losses as of June 30, 2010
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Estimated Ultimate Losses (1)	Losses Paid as of 6/30/10 (2)	Case Reserves 6/30/10 (3)	Losses Reported as of 6/30/10 (4)	Estimated IBNR Losses as of 6/30/10 (5)	Estimated Unpaid Losses as of 6/30/10 (6)
1999-00	\$556,143	\$556,143	\$0	\$556,143	\$0	\$0
2000-01	385,844	385,844	0	385,844	0	0
2001-02	857,076	857,076	0	857,076	0	0
2002-03	1,139,378	1,139,378	0	1,139,378	0	0
2003-04	537,556	537,556	0	537,556	0	0
2004-05	436,370	436,370	0	436,370	0	0
2005-06	556,750	556,750	0	556,750	0	0
2006-07	460,000	409,821	26,020	435,840	24,160	50,179
2007-08	710,000	422,571	122,578	545,149	164,851	287,429
2008-09	680,000	196,795	46,347	243,141	436,859	483,205
2009-10	850,000	84,561	166,426	250,988	599,012	765,439
Total	\$7,169,117	\$5,582,864	\$361,371	\$5,944,235	\$1,224,882	\$1,586,253

Notes:

- (1) Page 25, Column (6).
- (2) Provided by Risk Management Services.
- (3) (4) - (2).
- (4) Provided by Risk Management Services.
- (5) (1) - (4).
- (6) (3) + (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Estimated Unpaid Deductibles as of June 30, 2010
Losses Limited to \$10K Deductible

Program Year	Estimated Ultimate Deductibles (1)	Ded Paid as of 6/30/10 (2)	Case Reserves 6/30/10 (3)	Ded Reported as of 6/30/10 (4)	Estimated Deductible IBNR as of 6/30/10 (5)	Estimated Deductible Losses as of 6/30/10 (6)
1999-00	\$92,462	\$92,462	\$0	\$92,462	\$0	\$0
2000-01	143,461	143,461	0	143,461	0	0
2001-02	177,609	177,609	0	177,609	0	0
2002-03	160,418	160,418	0	160,418	0	0
2003-04	111,286	111,286	0	111,286	0	0
2004-05	108,542	108,542	0	108,542	0	0
2005-06	128,857	128,857	0	128,857	0	0
2006-07	137,216	137,216	0	137,216	0	0
2007-08	118,196	108,196	0	108,196	10,000	10,000
2008-09	128,763	104,486	0	104,486	24,278	24,278
2009-10	198,391	60,254	46,676	106,930	91,460	138,137
Total	\$1,505,202	\$1,332,788	\$46,676	\$1,379,464	\$125,738	\$172,414

Notes:

- (1) Page 62, Column (3).
- (2) Provided by Risk Management Services.
- (3) (4) - (2).
- (4) Provided by Risk Management Services.
- (5) (1) - (4).
- (6) (3) + (5).

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

Loss Projection Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Selected Ultimate Losses
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Reported Projection (1)	Paid Projection (2)	IBNR to Case Reserves Ratio (3)	B-F Method Using Reported (4)	Frequency Times Severity (5)	Selected Ultimate Losses (6)
1999-00	\$556,143	\$557,518	\$556,143	\$556,143	\$332,787	\$556,143
2000-01	386,141	392,084	385,844	386,370	628,565	385,844
2001-02	860,561	887,492	857,076	859,246	677,118	857,076
2002-03	1,148,205	1,185,674	1,139,378	1,143,848	697,430	1,139,378
2003-04	543,707	568,033	537,556	544,971	878,788	537,556
2004-05	443,485	464,389	436,370	447,507	629,843	436,370
2005-06	568,602	611,148	556,750	571,827	519,902	556,750
2006-07	453,735	495,036	443,568	464,728	750,856	460,000
2007-08	686,160	750,127	668,381	694,364	760,433	710,000
2008-09	398,639	736,569	317,737	510,936	855,374	680,000
2009-10	899,618	1,069,746	869,652	845,168	705,600	850,000
Total	\$6,944,996	\$7,717,816	\$6,768,455	\$7,025,108	\$7,436,696	\$7,169,117

Notes:

- (1) Page 26, Column (3).
- (2) Page 27, Column (3).
- (3) Page 28, Column (6).
- (4) Page 29, Column (6).
- (5) Page 33, Column (4).
- (6) Selected on the basis of (1) - (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Reported Loss Development
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Cumulative Reported Losses as of 9/30/10 (1)	Reported Development Factor as of 9/30/10 (2)	Projected Ultimate Losses (3)
1999-00	\$556,143	1.000	\$556,143
2000-01	385,844	1.001	386,141
2001-02	857,076	1.004	860,561
2002-03	1,139,378	1.008	1,148,205
2003-04	537,556	1.011	543,707
2004-05	436,370	1.016	443,485
2005-06	556,750	1.021	568,602
2006-07	435,840	1.041	453,735
2007-08	616,408	1.113	686,160
2008-09	283,255	1.407	398,639
2009-10	343,235	2.621	899,618
Total	\$6,147,855		\$6,944,996

Notes:

- (1) Provided by Risk Management Services.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
 General and Auto Liability Program

Paid Loss Projection
 Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Cumulative Paid Losses as of 9/30/10 <u>(1)</u>	Paid Development Factor as of 9/30/10 <u>(2)</u>	Projected Ultimate Losses <u>(3)</u>
1999-00	\$556,143	1.002	\$557,518
2000-01	385,844	1.016	392,084
2001-02	857,076	1.035	887,492
2002-03	1,139,378	1.041	1,185,674
2003-04	537,556	1.057	568,033
2004-05	436,370	1.064	464,389
2005-06	556,750	1.098	611,148
2006-07	409,821	1.208	495,036
2007-08	493,830	1.519	750,127
2008-09	236,908	3.109	736,569
2009-10	90,756	11.787	1,069,746
Total	\$5,700,432		\$7,717,816

Notes:

- (1) Provided by Risk Management Services.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

IBNR to Case Reserves Ratio Method
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Reported Development Factor as of 9/30/10 (1)	Paid Development Factor as of 9/30/10 (2)	IBNR to Case Reserves Ratio (3)	Case Reserves 9/30/10 (4)	Estimated IBNR as of 9/30/10 (5)	Estimated Ultimate Losses (6)
1999-00	1.000	1.002	0.000	\$0	\$0	\$556,143
2000-01	1.001	1.016	0.051	0	0	385,844
2001-02	1.004	1.035	0.134	0	0	857,076
2002-03	1.008	1.041	0.245	0	0	1,139,378
2003-04	1.011	1.057	0.267	0	0	537,556
2004-05	1.016	1.064	0.362	0	0	436,370
2005-06	1.021	1.098	0.306	0	0	556,750
2006-07	1.041	1.208	0.297	26,020	7,728	443,568
2007-08	1.113	1.519	0.424	122,578	51,973	668,381
2008-09	1.407	3.109	0.744	46,347	34,482	317,737
2009-10	2.621	11.787	2.085	252,478	526,417	869,652
Total				\$447,423	\$620,600	\$6,768,455

Notes:

- (1) Page 26, Column (2).
- (2) Page 27, Column (2).
- (3) $[(1) - 1.000] \times (2) / [(2) - (1)]$.
- (4) Page 26, Column (1) - Page 27, Column (1).
- (5) (3) x (4), rounded.
- (6) (5) + Page 26, Column (1).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Bornhuetter-Ferguson Using Reported Losses
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Reported Loss Development Factors (2)	Percentage of Losses Not Yet Reported (3)	Expected Unreported Losses (4)	Losses Reported as of 9/30/10 (5)	Estimated Ultimate Losses (6)
1999-00	\$510,867	1.000	0.0%	\$0	\$556,143	\$556,143
2000-01	526,298	1.001	0.1%	526	385,844	386,370
2001-02	542,542	1.004	0.4%	2,170	857,076	859,246
2002-03	558,786	1.008	0.8%	4,470	1,139,378	1,143,848
2003-04	674,117	1.011	1.1%	7,415	537,556	544,971
2004-05	696,046	1.016	1.6%	11,137	436,370	447,507
2005-06	717,975	1.021	2.1%	15,077	556,750	571,827
2006-07	740,716	1.041	3.9%	28,888	435,840	464,728
2007-08	764,270	1.113	10.2%	77,956	616,408	694,364
2008-09	787,823	1.407	28.9%	227,681	283,255	510,936
2009-10	812,189	2.621	61.8%	501,933	343,235	845,168
	\$7,331,629			\$877,253	\$6,147,855	\$7,025,108

Notes:

- (1) Page 30, Column (3).
- (2) Page 26, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 26, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

A Priori Losses for Bornhuetter-Ferguson
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	<i>A Priori</i> 2009-10 Loss <u>(1)</u>	Factor to Remove Trend <u>(2)</u>	<i>A Priori</i> Ultimate Losses <u>(3)</u>
1999-00	\$812,189	0.629	\$510,867
2000-01	812,189	0.648	526,298
2001-02	812,189	0.668	542,542
2002-03	812,189	0.688	558,786
2003-04	812,189	0.830	674,117
2004-05	812,189	0.857	696,046
2005-06	812,189	0.884	717,975
2006-07	812,189	0.912	740,716
2007-08	812,189	0.941	764,270
2008-09	812,189	0.970	787,823
2009-10	812,189	1.000	812,189
Total			\$7,331,629

Notes:

- (1) Page 31, Average of Column (3).
- (2) $1.000 / [\text{Page 31, Column (2)}]$.
- (3) $(1) \times (2)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

A Priori Loss Rate for Bornhuetter-Ferguson Method
At \$1M SIR, Gross of \$10K Deductible

Program Year	<i>A Priori</i> Ultimate Losses (1)	Estimated Pure Premium Trend (2)	Constant Dollar Ultimate Losses (3)
1999-00	\$556,143	1.590	\$884,383
2000-01	385,844	1.544	595,556
2001-02	857,076	1.498	1,283,872
2002-03	1,139,378	1.454	1,657,043
2003-04	537,556	1.204	647,425
2004-05	436,370	1.167	509,225
2005-06	556,750	1.131	629,675
2006-07	472,853	1.096	518,412
2007-08	713,212	1.063	758,295
2008-09	503,940	1.031	519,626
2009-10	930,567	1.000	930,567
Average			\$812,189
99/00-08/09			\$800,351
	(4) 2009-10 Payroll (\$00's):		\$455,000
	(5) <i>A Priori</i> 2009-10 Loss Rate:		\$1.79

Notes:

- (1) Page 32, Column (3).
- (2) Estimated by BAC.
- (3) (1) x (2).
- (4) Page 70, Column (2).
- (5) [Average (3)] / (4).

Monterey Bay Area Self Insurance Authority
 General and Auto Liability Program

A Priori Ultimate losses
 Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Reported Loss Projection <u>(1)</u>	Paid Loss Projection <u>(2)</u>	<i>A Priori</i> Selection <u>(3)</u>
1999-00	\$556,143	\$557,518	\$556,143
2000-01	386,141	392,084	385,844
2001-02	860,561	887,492	857,076
2002-03	1,148,205	1,185,674	1,139,378
2003-04	543,707	568,033	537,556
2004-05	443,485	464,389	436,370
2005-06	568,602	611,148	556,750
2006-07	453,735	495,036	472,853
2007-08	686,160	750,127	713,212
2008-09	398,639	736,569	503,940
2009-10	899,618	1,069,746	930,567
Total	\$6,944,996	\$7,717,816	\$7,089,689

Notes:

- (1) Page 26, Column (3).
- (2) Page 27, Column (3).
- (3) Selected on the basis of (1) and (2).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Frequency Times Severity Method
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Selected Claim Severity <u>(1)</u>	Factor to Remove Trend <u>(2)</u>	Selected Ultimate Claims <u>(3)</u>	Estimated Ultimate Losses <u>(4)</u>
1999-00	\$14,700	0.629	36	\$332,787
2000-01	14,700	0.648	66	628,565
2001-02	14,700	0.668	69	677,118
2002-03	14,700	0.688	69	697,430
2003-04	14,700	0.830	72	878,788
2004-05	14,700	0.857	50	629,843
2005-06	14,700	0.884	40	519,902
2006-07	14,700	0.912	56	750,856
2007-08	14,700	0.941	55	760,433
2008-09	14,700	0.970	60	855,374
2009-10	14,700	1.000	48	705,600
Total				\$7,436,696

Notes:

- (1) Page 34, Item (5).
- (2) 1.000 / [Page 31, Column (2)].
- (3) Page 35, Column (3).
- (4) (1) x (2) x (3).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Calculation of Expected Claim Severity
Frequency Times Severity Method
At \$1M SIR, Gross of \$10K Deductible

Program Year	<i>A Priori</i> Ultimate Losses (1)	Estimated Severity Trend (2)	Selected Claim Count (3)	Trended Claim Severity (4)
1999-00	\$556,143	1.590	36	\$24,566
2000-01	385,844	1.544	66	\$9,024
2001-02	857,076	1.498	69	18,607
2002-03	1,139,378	1.454	69	24,015
2003-04	537,556	1.204	72	8,992
2004-05	436,370	1.167	50	10,185
2005-06	556,750	1.131	40	15,742
2006-07	472,853	1.096	56	9,257
2007-08	713,212	1.063	55	13,787
2008-09	503,940	1.031	60	8,660
2009-10	930,567	1.000	48	19,387
Total	\$7,089,689		621	\$14,747
99/00-08/09	\$6,159,122		573	\$14,284
			(5) Selected Severity:	\$14,700

Notes:

- (1) Page 32, Column (3).
- (2) 1.000 / [Page 31, Column (2)].
- (3) Page 35, Column (3).
- (4) (1) x (2) / (3).
- (5) Selected on the basis of (4).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Selected Claim Counts

Program Year	Reported Claim Count Projection <u>(1)</u>	Bornhuetter- Ferguson Method <u>(2)</u>	Selected Claim Count <u>(3)</u>
1999-00	36		36
2000-01	66		66
2001-02	69		69
2002-03	69		69
2003-04	72		72
2004-05	50		50
2005-06	40		40
2006-07	56		56
2007-08	55		55
2008-09	60		60
2009-10	46	48	48
Total	619		621

Notes:

- (1) Page 36, Column (3).
- (2) Page 37, Column (6).
- (3) Selected on the basis of (1) and (2).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projection of Ultimate Claim Counts
Projection of Reported Claims

Program Year	Total Claims Reported 9/30/10 (1)	Development Factors as of 9/30/10 (2)	Projected Ultimate Claims (3)
1999-00	36	1.000	36
2000-01	66	1.000	66
2001-02	69	1.000	69
2002-03	69	1.000	69
2003-04	72	1.000	72
2004-05	50	1.000	50
2005-06	40	1.000	40
2006-07	56	1.000	56
2007-08	55	1.007	55
2008-09	59	1.023	60
2009-10	39	1.192	46
Average			56
99/00-08/09 Average			57

Notes:

- (1) Provided by Risk Management Services.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projection of Ultimate Claim Counts
Bornhuetter-Ferguson Method

<u>Program Year</u>	<u>A Priori Claim Count (1)</u>	<u>Claim Development Factor (2)</u>	<u>Estimated Percentage of Claims Unreported (3)</u>	<u>Estimated Unreported Claims (4)</u>	<u>Reported Claims as of 9/30/10 (5)</u>	<u>Projected Ultimate Claims (6)</u>
2009-10	57	1.192	16.1%	9	39	48

Notes:

- (1) Page 36, Column (3), average 1999-00 to 2008-09.
- (2) Page 36, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 36, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

**Limited Loss Analysis
Losses Limited to \$250,000 per Loss**

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Selected Ultimate Losses
Losses Limited to \$250,000, Gross of \$10K Deductible

Program Year	Reported Projection (1)	Paid Projection (2)	IBNR to Case Reserves Ratio (3)	B-F Method Using Reported (4)	B-F Method Using Paid (5)	Selected Ultimate Losses (6)
1999-00	\$544,011	\$544,283	\$544,011	\$544,011	\$544,011	\$544,011
2000-01	386,132	387,380	385,844	386,220	387,346	385,844
2001-02	859,647	866,130	857,076	858,231	860,926	857,076
2002-03	918,422	929,546	915,447	916,630	921,363	915,447
2003-04	488,268	499,274	486,322	488,215	498,625	486,322
2004-05	438,193	450,477	436,370	438,314	451,433	436,370
2005-06	561,731	583,901	556,750	561,236	580,178	556,750
2006-07	446,550	467,569	442,111	448,119	473,263	460,000
2007-08	657,238	720,080	646,562	648,971	658,744	670,000
2008-09	362,087	633,265	307,958	400,637	573,979	460,000
2009-10	707,757	679,229	713,368	627,526	568,806	660,000
Total	\$6,370,036	\$6,761,134	\$6,291,819	\$6,318,110	\$6,518,674	\$6,431,820

Notes:

- (1) Page 40, Column (3).
- (2) Page 41, Column (3).
- (3) Page 42, Column (6).
- (4) Page 43, Column (6).
- (5) Page 44, Column (6).
- (6) Selected on the basis of (1) - (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Reported Loss Development
Losses Limited to \$250,000, Gross of \$10K Deductible

Program Year	Cumulative Reported Losses as of 9/30/10 <u>(1)</u>	Reported Development Factor as of 9/30/10 <u>(2)</u>	Projected Ultimate Losses <u>(3)</u>
1999-00	\$544,011	1.000	\$544,011
2000-01	385,844	1.001	386,132
2001-02	857,076	1.003	859,647
2002-03	915,447	1.003	918,422
2003-04	486,322	1.004	488,268
2004-05	436,370	1.004	438,193
2005-06	556,750	1.009	561,731
2006-07	435,840	1.025	446,550
2007-08	616,408	1.066	657,238
2008-09	283,255	1.278	362,087
2009-10	343,235	2.062	707,757
Total	\$5,860,558		\$6,370,036

Notes:

- (1) Provided by Risk Management Services.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Paid Loss Development
Losses Limited to \$250,000, Gross of \$10K Deductible

Program Year	Cumulative Paid Losses as of 9/30/10 (1)	Paid Development Factor as of 9/30/10 (2)	Projected Ultimate Losses (3)
1999-00	\$544,011	1.000	\$544,283
2000-01	385,844	1.004	387,380
2001-02	857,076	1.011	866,130
2002-03	915,447	1.015	929,546
2003-04	486,322	1.027	499,274
2004-05	436,370	1.032	450,477
2005-06	556,750	1.049	583,901
2006-07	409,821	1.141	467,569
2007-08	493,830	1.458	720,080
2008-09	236,908	2.673	633,265
2009-10	90,756	7.484	679,229
Total	\$5,413,135		\$6,761,134

Notes:

- (1) Provided by Risk Management Services.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

IBNR to Case Reserves Ratio Method
Losses Limited to \$250,000, Gross of \$10K Deductible

Program Year	Reported Development Factor as of 9/30/10 (1)	Paid Development Factor as of 9/30/10 (2)	IBNR to Case Reserves Ratio (3)	Case Reserves 9/30/10 (4)	Estimated IBNR as of 9/30/10 (5)	Estimated Ultimate Losses (6)
1999-00	1.000	1.000	0.000	\$0	\$0	\$544,011
2000-01	1.001	1.004	0.232	0	0	385,844
2001-02	1.003	1.011	0.401	0	0	857,076
2002-03	1.003	1.015	0.272	0	0	915,447
2003-04	1.004	1.027	0.181	0	0	486,322
2004-05	1.004	1.032	0.153	0	0	436,370
2005-06	1.009	1.049	0.236	0	0	556,750
2006-07	1.025	1.141	0.241	26,020	6,271	442,111
2007-08	1.066	1.458	0.246	122,578	30,154	646,562
2008-09	1.278	2.673	0.533	46,347	24,703	307,958
2009-10	2.062	7.484	1.466	252,478	370,133	713,368
Total				\$447,423	\$431,261	\$6,291,819

Notes:

- (1) Page 40, Column (2).
- (2) Page 41, Column (2).
- (3) $[(1) - 1.000] \times (2) / [(2) - (1)]$.
- (4) Page 40, Column (1) - Page 41, Column (1).
- (5) (3) x (4), rounded.
- (6) (5) + Page 40, Column (1).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Bornhuetter-Ferguson Using Reported Losses
Losses Limited to \$250,000, Gross of \$10K Deductible

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Reported Loss Development Factors (2)	Percentage of Losses Not Yet Reported (3)	Expected Unreported Losses (4)	Losses Reported as of 9/30/10 (5)	Estimated Ultimate Losses (6)
1999-00	\$366,631	1.000	0.0%	\$0	\$544,011	\$544,011
2000-01	375,544	1.001	0.1%	376	385,844	386,220
2001-02	384,972	1.003	0.3%	1,155	857,076	858,231
2002-03	394,401	1.003	0.3%	1,183	915,447	916,630
2003-04	473,183	1.004	0.4%	1,893	486,322	488,215
2004-05	485,902	1.004	0.4%	1,944	436,370	438,314
2005-06	498,469	1.009	0.9%	4,486	556,750	561,236
2006-07	511,625	1.025	2.4%	12,279	435,840	448,119
2007-08	525,204	1.066	6.2%	32,563	616,408	648,971
2008-09	538,452	1.278	21.8%	117,382	283,255	400,637
2009-10	552,021	2.062	51.5%	284,291	343,235	627,526
Total	\$5,106,404			\$457,552	\$5,860,558	\$6,318,110

Notes:

- (1) Page 25, Column (6), adjusted for \$250K limit.
- (2) Page 40, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 40, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Bornhuetter-Ferguson Using Paid Losses
Losses Limited to \$250,000, Gross of \$10K Deductible

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Paid Loss Development Factors (2)	Percentage of Losses Not Yet Paid (3)	Expected Unpaid Losses (4)	Losses Paid as of 9/30/10 (5)	Estimated Ultimate Losses (6)
1999-00	\$366,631	1.000	0.0%	\$0	\$544,011	\$544,011
2000-01	375,544	1.004	0.4%	1,502	385,844	387,346
2001-02	384,972	1.011	1.0%	3,850	857,076	860,926
2002-03	394,401	1.015	1.5%	5,916	915,447	921,363
2003-04	473,183	1.027	2.6%	12,303	486,322	498,625
2004-05	485,902	1.032	3.1%	15,063	436,370	451,433
2005-06	498,469	1.049	4.7%	23,428	556,750	580,178
2006-07	511,625	1.141	12.4%	63,442	409,821	473,263
2007-08	525,204	1.458	31.4%	164,914	493,830	658,744
2008-09	538,452	2.673	62.6%	337,071	236,908	573,979
2009-10	552,021	7.484	86.6%	478,050	90,756	568,806
Total	\$5,106,404			\$1,105,539	\$5,413,135	\$6,518,674

Notes:

- (1) Page 43, Column (1).
- (2) Page 41, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 41, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

**Limited Loss Analysis
Losses Limited to \$100,000 per Loss**

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Selected Ultimate Losses
Losses Limited to \$100,000, Gross of \$10K Deductible

Program Year	Reported Projection (1)	Paid Projection (2)	IBNR to Case Reserves Ratio (3)	B-F Method Using Reported (4)	B-F Method Using Paid (5)	Selected Ultimate Losses (6)
1999-00	\$394,011	\$394,011	\$394,011	\$394,011	\$394,011	\$394,011
2000-01	385,844	386,306	385,844	385,844	386,111	385,844
2001-02	785,178	789,098	785,064	785,064	786,429	785,064
2002-03	594,708	599,110	594,177	594,456	596,407	594,177
2003-04	336,912	341,735	336,322	336,989	341,656	336,322
2004-05	407,680	414,922	406,891	407,574	413,375	406,891
2005-06	509,784	524,223	507,072	508,817	518,587	507,072
2006-07	378,688	386,709	377,372	378,401	383,643	380,000
2007-08	470,058	584,038	451,849	465,209	528,511	500,000
2008-09	337,535	540,653	301,840	343,234	446,276	390,000
2009-10	628,636	515,214	653,278	515,953	404,235	520,000
Total	\$5,229,034	\$5,476,019	\$5,193,719	\$5,115,551	\$5,199,241	\$5,199,381

Notes:

- (1) Page 47, Column (3).
- (2) Page 48, Column (3).
- (3) Page 49, Column (6).
- (4) Page 50, Column (6).
- (5) Page 51, Column (6).
- (6) Selected on the basis of (1) - (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Reported Loss Development
Losses Limited to \$100,000, Gross of \$10K Deductible

Program Year	Cumulative Reported Losses as of 9/30/10 <u>(1)</u>	Reported Development Factor as of 9/30/10 <u>(2)</u>	Projected Ultimate Losses <u>(3)</u>
1999-00	\$394,011	1.000	\$394,011
2000-01	385,844	1.000	385,844
2001-02	785,064	1.000	785,178
2002-03	594,177	1.001	594,708
2003-04	336,322	1.002	336,912
2004-05	406,891	1.002	407,680
2005-06	507,072	1.005	509,784
2006-07	373,048	1.015	378,688
2007-08	449,157	1.047	470,058
2008-09	283,255	1.192	337,535
2009-10	343,235	1.832	628,636
Total	\$4,858,075		\$5,229,034

Notes:

- (1) Provided by Risk Management Services.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Paid Loss Development
Losses Limited to \$100,000, Gross of \$10K Deductible

Program Year	Cumulative Paid Losses as of 9/30/10 <u>(1)</u>	Paid Development Factor as of 9/30/10 <u>(2)</u>	Projected Ultimate Limited Losses <u>(3)</u>
1999-00	\$394,011	1.000	\$394,011
2000-01	385,844	1.001	386,306
2001-02	785,064	1.005	789,098
2002-03	594,177	1.008	599,110
2003-04	336,322	1.016	341,735
2004-05	406,891	1.020	414,922
2005-06	507,072	1.034	524,223
2006-07	349,029	1.108	386,709
2007-08	436,578	1.338	584,038
2008-09	236,908	2.282	540,653
2009-10	90,756	5.677	515,214
Total	\$4,522,652		\$5,476,019

Notes:

- (1) Provided by Risk Management Services.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

IBNR to Case Reserves Ratio Method
Losses Limited to \$100,000, Gross of \$10K Deductible

Program Year	Limited Reported LDF as of 09/30/10 (1)	Limited Paid LDF as of 09/30/10 (2)	IBNR to Case Reserves Ratio (3)	Limited Case Reserves as of 09/30/10 (4)	Estimated IBNR as of 09/30/10 (5)	Estimated Ultimate Limited Losses (6)
1999-00	1.000	1.000	0.000	\$0	\$0	\$394,011
2000-01	1.000	1.001	0.000	0	0	385,844
2001-02	1.000	1.005	0.029	0	0	785,064
2002-03	1.001	1.008	0.122	0	0	594,177
2003-04	1.002	1.016	0.124	0	0	336,322
2004-05	1.002	1.020	0.111	0	0	406,891
2005-06	1.005	1.034	0.194	0	0	507,072
2006-07	1.015	1.108	0.180	24,020	4,324	377,372
2007-08	1.047	1.338	0.214	12,578	2,692	451,849
2008-09	1.192	2.282	0.401	46,347	18,585	301,840
2009-10	1.832	5.677	1.228	252,478	310,043	653,278
Total				\$335,423	\$335,644	\$5,193,719

Notes:

- (1) Page 47, Column (2).
- (2) Page 48, Column (2).
- (3) $[(1) - 1.000] \times (2) / [(2) - (1)]$.
- (4) Page 47, Column (1) - Page 48, Column (1).
- (5) (3) x (4), rounded.
- (6) (5) + Page 47, Column (1).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Bornhuetter-Ferguson Using Reported Losses
Losses Limited to \$100,000, Gross of \$10K Deductible

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Reported Loss Development Factors (2)	Percentage of Losses Not Yet Reported (3)	Expected Unreported Losses (4)	Limited Losses Reported as of 9/30/10 (5)	Estimated Ultimate Losses (6)
1999-00	\$262,047	1.000	0.0%	\$0	\$394,011	\$394,011
2000-01	267,413	1.000	0.0%	0	385,844	385,844
2001-02	273,082	1.000	0.0%	0	785,064	785,064
2002-03	278,761	1.001	0.1%	279	594,177	594,456
2003-04	333,380	1.002	0.2%	667	336,322	336,989
2004-05	341,258	1.002	0.2%	683	406,891	407,574
2005-06	348,927	1.005	0.5%	1,745	507,072	508,817
2006-07	356,846	1.015	1.5%	5,353	373,048	378,401
2007-08	364,815	1.047	4.4%	16,052	449,157	465,209
2008-09	372,542	1.192	16.1%	59,979	283,255	343,234
2009-10	380,436	1.832	45.4%	172,718	343,235	515,953
Total	\$3,579,506			\$257,476	\$4,858,075	\$5,115,551

Notes:

- (1) Page 25, Column (6), adjusted for \$100K limit.
- (2) Page 47, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) (1) x (3).
- (5) Page 47, Column (1).
- (6) (4) + (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Bornhuetter-Ferguson Using Paid Losses
Losses Limited to \$100,000, Gross of \$10K Deductible

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative paid Loss Development Factors (2)	Percentage of Losses Not Yet paid (3)	Expected Unpaid Losses (4)	Losses Paid as of 9/30/10 (5)	Estimated Ultimate Losses (6)
1999-00	\$262,047	1.000	0.0%	\$0	\$394,011	\$394,011
2000-01	267,413	1.001	0.1%	267	385,844	386,111
2001-02	273,082	1.005	0.5%	1,365	785,064	786,429
2002-03	278,761	1.008	0.8%	2,230	594,177	596,407
2003-04	333,380	1.016	1.6%	5,334	336,322	341,656
2004-05	341,258	1.020	1.9%	6,484	406,891	413,375
2005-06	348,927	1.034	3.3%	11,515	507,072	518,587
2006-07	356,846	1.108	9.7%	34,614	349,029	383,643
2007-08	364,815	1.338	25.2%	91,933	436,578	528,511
2008-09	372,542	2.282	56.2%	209,368	236,908	446,276
2009-10	380,436	5.677	82.4%	313,479	90,756	404,235
Total	\$3,579,506			\$676,589	\$4,522,652	\$5,199,241

Notes:

- (1) Page 50, Column (1).
- (2) Page 48, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 48, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

Future Loss Exhibits

Monterey Bay Area Self Insurance Authority
 General and Auto Liability Program

Projected \$1M Loss Rate for 2010-11

All Gross of \$10K Deductible

Based on \$100K Limit Analysis

Program Year	100K Limit Loss Rate (1)	Factor for \$1M SIR (2)	Projected \$1M SIR Loss Rate (3)
2010-11	\$1.26	2.155	\$2.71

Based on \$250K Limit Analysis

Program Year	250K Limit Loss Rate (4)	Factor for \$1M SIR (5)	Projected \$1M SIR Loss Rate (6)
2010-11	\$1.59	1.479	\$2.35

Based on \$1M Limit Analysis

Program Year	1M Limit Loss Rate (7)	Factor for \$1M SIR (8)	Projected \$1M SIR Loss Rate (9)
2010-11	\$1.83	1.000	\$1.83

Program Year	Selected 2010-11 \$1M SIR Loss Rate (10)	Projected 2010-11 Payroll (\$00's) (11)	Projected Ultimate Losses (12)
2010-11	\$2.35	\$430,000	\$1,012,508

Notes:

- (1) Page 54, Item (4).
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.
- (4) Page 55, Item (4).
- (5) Estimated by BAC.
- (6) (4) x (5), rounded.
- (7) Page 56, Item (4).
- (8) Estimated by BAC.
- (9) (7) x (8), rounded.
- (10) Based on (3), (6), & (9).
- (11) Page 70, Column (2).
- (12) (10) x (11), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Future Loss Rate
Losses Limited to \$100,000, Gross of \$10K Deductible

Program Year	Estimated Ultimate Losses <u>(1)</u>	Pure Premium Trend <u>(2)</u>	Losses Trended to 2010-11 <u>(3)</u>
1999-00	\$394,011	1.275	\$502,277
2000-01	385,844	1.246	480,577
2001-02	785,064	1.217	955,646
2002-03	594,177	1.190	706,996
2003-04	336,322	1.163	391,137
2004-05	406,891	1.137	462,607
2005-06	507,072	1.112	563,789
2006-07	380,000	1.088	413,329
2007-08	500,000	1.065	532,327
2008-09	390,000	1.042	406,482
2009-10	520,000	1.021	530,779
		Average:	\$540,541
	(4) Projected 2010-11 Payroll (\$00):		\$430,000
	(5) Projected 2010-11 \$100K Limit Rate:		\$1.26

Notes:

- (1) Page 46, Column (6).
- (2) Estimated by BAC.
- (3) (1) x (2).
- (4) Page 70, Column (2).
- (5) Average (3) / (4).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Future Loss Rate
Losses Limited to \$250,000, Gross of \$10K Deductible

Program Year	Estimated Ultimate Losses (1)	Trend Factor (2)	Losses Trended to 2010-11 (3)
1999-00	\$544,011	1.327	\$722,149
2000-01	385,844	1.292	498,561
2001-02	857,076	1.258	1,078,224
2002-03	915,447	1.225	1,121,663
2003-04	486,322	1.194	580,552
2004-05	436,370	1.163	507,641
2005-06	556,750	1.134	631,301
2006-07	460,000	1.105	508,432
2007-08	670,000	1.077	721,875
2008-09	460,000	1.051	483,277
2009-10	660,000	1.025	676,415

Average: \$684,554

(4) Projected 2010-11 Payroll (\$00's): \$430,000

(5) Projected 2010-11 \$250K Limit Rate: \$1.59

Notes:

- (1) Page 39, Column (6).
- (2) Estimated by BAC.
- (3) (1) x (2).
- (4) Page 70, Column (2).
- (5) Average (3) / (4).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Future Loss Rate
Losses Limited to \$1,000,000, Gross of \$10K Deductible

Program Year	Estimated Ultimate Losses (1)	Trend Factor (2)	Losses Trended to 2010-11 (3)
1999-00	\$556,143	1.409	\$783,642
2000-01	385,844	1.364	526,184
2001-02	857,076	1.320	1,131,608
2002-03	1,139,378	1.279	1,457,406
2003-04	537,556	1.239	666,232
2004-05	436,370	1.201	524,153
2005-06	556,750	1.164	648,271
2006-07	460,000	1.129	519,427
2007-08	710,000	1.095	777,531
2008-09	680,000	1.062	722,198
2009-10	850,000	1.030	875,746

Average: \$784,763

(4) Projected 2010-11 Payroll (\$00's): \$430,000

(5) Projected 2010-11 \$1M Limit Rate: \$1.83

Notes:

- (1) Page 25, Column (6).
- (2) Estimated by BAC.
- (3) (1) x (2).
- (4) Page 70, Column (2).
- (5) (3) / (4).

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

Discounting Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Discounted Value of Unpaid Losses as of June 30, 2010
Assuming a 2.0% Interest Rate

Losses Limited to SIR, NET of \$10K Deductible

Program Year	Estimated Unpaid Losses (1)	Discount Factor (2)	Discounted Unpaid Losses (3)
1999-00	\$0	1.000	\$0
2000-01	0	1.000	0
2001-02	0	1.000	0
2002-03	0	1.000	0
2003-04	0	0.990	0
2004-05	0	0.981	0
2005-06	0	0.983	0
2006-07	50,179	0.983	49,301
2007-08	277,429	0.980	271,816
2008-09	458,928	0.974	446,813
2009-10	627,302	0.959	601,643
Total	\$1,413,839		\$1,369,573

(4) Indicated Discount Factor: 0.969

Notes:

- (1) Page 22, Column (6).
- (2) (3) / (1).
- (3) Based upon a 2.0% interest rate.
- (4) [Sum of Column (3)] / [Sum of Column (1)].

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Discounted Value of 2010-11 Losses as of July 1, 2010
Assuming a 2.0% Interest rate

Losses Limited to \$1M SIR, Gross of \$10K Deductible

Program Year	Projected Loss Payments (1)	Discounted Value Factor (2)	Discounted Value of Payments (3)
2010-11	\$101,927	0.990	\$100,923
2011-12	186,849	0.971	181,381
2012-13	313,838	0.952	298,679
2013-14	299,444	0.933	279,392
2014-15	69,949	0.915	63,986
2015-16	30,375	0.897	27,241
2016-17	5,063	0.879	4,451
2017-18	5,063	0.862	4,364
2018-19	0	0.845	0
2019-20	0	0.829	0
2020-21	0	0.812	0
Total	\$1,012,508		\$960,417

(4) Indicated Discount Factor: 0.949

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 2.0% interest rate.
Assumes mid-year payments.
- (3) (1) x (2).
- (4) [Sum of Column (3)] / [Sum of Column (1)].

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Discounted Value of 2010-11 Losses as of July 1, 2010
Assuming a 2.0% Interest rate

Losses Limited to \$1M SIR, NET of \$10K Deductible

Program Year	Projected Loss Payments (1)	Discounted Value Factor (2)	Discounted Value of Payments (3)
2010-11	\$33,810	0.990	\$33,477
2011-12	110,492	0.971	107,258
2012-13	330,066	0.952	314,124
2013-14	257,135	0.933	239,917
2014-15	115,008	0.915	105,203
2015-16	34,590	0.897	31,020
2016-17	6,256	0.879	5,500
2017-18	5,631	0.862	4,853
2018-19	0	0.845	0
2019-20	0	0.829	0
2020-21	0	0.812	0
Total	\$892,988		\$841,352

(4) Indicated Discount Factor: 0.942

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 2.0% interest rate.
Assumes mid-year payments.
- (3) (1) x (2).
- (4) [Sum of Column (3)] / [Sum of Column (1)].

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

Deductibles

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Selected Ultimate Deductible Losses
Losses Limited to \$10,000 Deductible

Program Year	Reported Projection (1)	B-F Method Using Reported (2)	Selected Ultimate Losses (3)
1999-00	\$92,462	\$92,462	\$92,462
2000-01	143,461	143,461	143,461
2001-02	177,617	177,609	177,609
2002-03	160,439	160,418	160,418
2003-04	111,289	111,286	111,286
2004-05	108,551	108,542	108,542
2005-06	128,893	128,857	128,857
2006-07	137,358	137,316	137,216
2007-08	118,895	118,979	118,196
2008-09	136,859	134,714	128,763
2009-10	210,065	186,716	198,391
Total	\$1,525,889	\$1,500,362	\$1,505,202

Notes:

- (1) Page 63, Column (3).
- (2) Page 64, Column (6).
- (3) Selected on the basis of (1) - (2).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Reported Loss Development
Deductible Losses Limited to \$10,000

Program Year	Cumulative Reported Losses as of 9/30/10 (1)	Reported Development Factor as of 9/30/10 (2)	Projected Ultimate Losses (3)
1999-00	\$92,462	1.000	\$92,462
2000-01	143,461	1.000	143,461
2001-02	177,609	1.000	177,617
2002-03	160,418	1.000	160,439
2003-04	111,286	1.000	111,289
2004-05	108,542	1.000	108,551
2005-06	128,857	1.000	128,893
2006-07	137,216	1.001	137,358
2007-08	118,196	1.006	118,895
2008-09	128,763	1.063	136,859
2009-10	146,177	1.437	210,065
Total	\$1,452,989		\$1,525,889

Notes:

- (1) Provided by Risk Management Services.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Bornhuetter-Ferguson Using Reported Losses
Deductible Losses Limited to \$10,000

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Reported Loss Development Factors (2)	Percentage of Losses Not Yet Reported (3)	Expected Unreported Losses (4)	Limited Losses Reported as of 9/30/10 (5)	Estimated Ultimate Deductible Losses (6)
1999-00	\$110,974	1.000	0.0%	\$0	\$92,462	\$92,462
2000-01	107,583	1.000	0.0%	0	143,461	143,461
2001-02	216,738	1.000	0.0%	0	177,609	177,609
2002-03	162,446	1.000	0.0%	0	160,418	160,418
2003-04	91,048	1.000	0.0%	0	111,286	111,286
2004-05	109,094	1.000	0.0%	0	108,542	108,542
2005-06	134,680	1.000	0.0%	0	128,857	128,857
2006-07	100,007	1.001	0.1%	100	137,216	137,316
2007-08	130,439	1.006	0.6%	783	118,196	118,979
2008-09	100,857	1.063	5.9%	5,951	128,763	134,714
2009-10	133,353	1.437	30.4%	40,539	146,177	186,716
Total	\$1,397,219			\$47,373	\$1,452,989	\$1,500,362

Notes:

- (1) Page 46, Column (6), adjusted for \$10K limit.
- (2) Page 63, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 63, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Estimated Unpaid Deductibles as of June 30, 2010
Losses Limited to \$10K Deductible

Program Year	Estimated Ultimate Deductibles (1)	Ded Paid as of 6/30/10 (2)	Case Reserves 6/30/10 (3)	Ded Reported as of 6/30/10 (4)	Estimated Deductible IBNR as of 6/30/10 (5)	Estimated Deductible Losses as of 6/30/10 (6)
1999-00	\$92,462	\$92,462	\$0	\$92,462	\$0	\$0
2000-01	143,461	143,461	0	143,461	0	0
2001-02	177,609	177,609	0	177,609	0	0
2002-03	160,418	160,418	0	160,418	0	0
2003-04	111,286	111,286	0	111,286	0	0
2004-05	108,542	108,542	0	108,542	0	0
2005-06	128,857	128,857	0	128,857	0	0
2006-07	137,216	137,216	0	137,216	0	0
2007-08	118,196	108,196	0	108,196	10,000	10,000
2008-09	128,763	104,486	0	104,486	24,278	24,278
2009-10	198,391	60,254	46,676	106,930	91,460	138,137
Total	\$1,505,202	\$1,332,788	\$46,676	\$1,379,464	\$125,738	\$172,414

Notes:

- (1) Page 62, Column (3).
- (2) Provided by Risk Management Services.
- (3) (4) - (2).
- (4) Provided by Risk Management Services.
- (5) (1) - (4).
- (6) (3) + (5).

Monterey Bay Area Self Insurance Authority

**Actuarial Analysis of the
General and Auto Liability Program**

Claims Data Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Cumulative Reported Losses (\$000's) - Limited to \$1M per Loss - Includes ALAE

Program	Months of Development										
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>	<u>108</u>	<u>120</u>	<u>132</u>
Year											
2000									557	557	556
2001								343	343	386	
2002							762	762	857		
2003						1,231	1,281	1,139			
2004					542	542	538				
2005				450	433	436					
2006			705	687	557						
2007		214	463	436							
2008	240	500	545								
2009	354	243									
2010	251										
	<u>12 - 24</u>	<u>24 - 36</u>	<u>36 - 48</u>	<u>48 - 60</u>	<u>60 - 72</u>	<u>72 - 84</u>	<u>84 - 96</u>	<u>96 - 108</u>	<u>108 - 120</u>	<u>120 - 132</u>	<u>132 - Ult.</u>
2 YR VOL	1.250	1.413	0.961	0.870	1.004	1.026	0.931	1.086	1.047	0.999	
2 YR AVG	1.385	1.628	0.958	0.886	1.004	1.016	0.945	1.062	1.062	0.999	
REFERENCE	2.552	1.353	1.106	1.025	1.008	1.004	1.004	1.003	1.003	1.002	1.000
SELECT	2.552	1.353	1.106	1.025	1.008	1.004	1.004	1.003	1.003	1.002	1.000
CUMULATIVE	4.015	1.573	1.162	1.050	1.025	1.017	1.013	1.008	1.005	1.002	1.000

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Cumulative Paid Losses (\$000's) - Limited to \$1M per Loss - Includes ALAE

Program	Months of Development										
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>	<u>108</u>	<u>120</u>	<u>132</u>
Year											
2000									557	557	556
2001								343	343	386	
2002							762	762	857		
2003						1,211	1,221	1,139			
2004					537	538	538				
2005				405	408	436					
2006			481	562	557						
2007		121	356	410							
2008	82	276	423								
2009	79	197									
2010	85										
	<u>12 - 24</u>	<u>24 - 36</u>	<u>36 - 48</u>	<u>48 - 60</u>	<u>60 - 72</u>	<u>72 - 84</u>	<u>84 - 96</u>	<u>96 - 108</u>	<u>108 - 120</u>	<u>120 - 132</u>	<u>132 - Ult.</u>
2 YR VOL	2.940	1.959	1.161	0.998	1.031	1.005	0.959	1.086	1.047	0.999	
2 YR AVG	2.931	2.234	1.159	0.999	1.036	1.004	0.967	1.062	1.062	0.999	
REFERENCE	4.309	2.252	1.388	1.119	1.048	1.010	1.012	1.010	1.013	1.017	1.005
SELECT	4.309	2.252	1.388	1.119	1.048	1.010	1.012	1.010	1.013	1.017	1.005
CUMULATIVE	16.879	3.917	1.739	1.253	1.119	1.068	1.058	1.046	1.036	1.022	1.005

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Cumulative # of Reported Losses

Months of Development

Program	<u>Months of Development</u>										
<u>Year</u>	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>	<u>108</u>	<u>120</u>	<u>132</u>
2000									37	37	36
2001								67	67	66	
2002							69	69	69		
2003						54	54	69			
2004					72	72	72				
2005				53	52	50					
2006			40	40	40						
2007		54	55	56							
2008	42	53	54								
2009	45	54									
2010	31										
	<u>12 - 24</u>	<u>24 - 36</u>	<u>36 - 48</u>	<u>48 - 60</u>	<u>60 - 72</u>	<u>72 - 84</u>	<u>84 - 96</u>	<u>96 - 108</u>	<u>108 - 120</u>	<u>120 - 132</u>	<u>132 - Ult.</u>
2 YR VOL	1.230	1.019	1.011	0.989	0.984	1.000	1.122	1.000	0.990	0.973	
2 YR AVG	1.231	1.019	1.009	0.991	0.981	1.000	1.139	1.000	0.993	0.973	
SELECT	1.231	1.019	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CUMULATIVE	1.265	1.028	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Program Information
Program Years run July 1 to June 30

Program Year	Self-Insured Retention (SIR) (1)	Payroll (\$00's) (2)	Deductible (3)
1999-00	\$500,000	\$267,420	\$10,000
2000-01	500,000	263,274	10,000
2001-02	500,000	297,462	10,000
2002-03	500,000	346,678	10,000
2003-04	1,000,000	401,995	10,000
2004-05	1,000,000	401,860	10,000
2005-06	1,000,000	429,640	10,000
2006-07	1,000,000	428,182	10,000
2007-08	1,000,000	437,000	10,000
2008-09	1,000,000	470,000	10,000
2009-10	1,000,000	455,000	10,000
2010-11	1,000,000	430,000	10,000

Notes:

- (1) Provided by MBASIA.
- (2) Provided by MBASIA.
- (3) Provided by MBASIA.
Deductible assumed to apply to combined loss & ALAE.