

# **Monterey Bay Area Self Insurance Authority**

**An Actuarial Review of the  
Workers' Compensation Program**

**BAY ACTUARIAL CONSULTANTS  
Moraga, California  
April 1, 2015**

# Bay Actuarial Consultants

April 1, 2015

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 workers' compensation 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 Workers' Compensation Program

### Table of Contents

	<u>Page</u>
Introduction	2
<i>Background &amp; Purpose</i>	3
<i>Conditions &amp; Limitations</i>	4
<i>Organization of the Report</i>	4
Management Summary	5
<i>Projected 2015-16 Loss Rates</i>	6
<i>The Authority's Past Rates of Loss</i>	7
<i>Claim Frequency</i>	8
<i>Average Claim Amount</i>	8
<i>Limited Liability for Unpaid Losses – 6/30/15</i>	9
<i>Loss Breakout as of 6/30/15</i>	9
<i>Short-Term Liability</i>	10
<i>Comparison with Last Year's Estimates</i>	10
<i>Reconciliation with 12/31/13 Liability Estimate</i>	10
<i>Interest Rates</i>	11
<i>2014-15 Claims Data</i>	11
Technical Approach	12
Summary Exhibits	15
Fiscal Year End Exhibits	20
Limited Ultimate Loss Exhibits	30
Gross Loss Exhibits	37
Future Loss Exhibits	52
Discounting Exhibits	55
Claims Data	61

# **Monterey Bay Area Self Insurance Authority**

## **An Actuarial Review of the Workers' Compensation Program**

### **Introduction**

# Monterey Bay Area Self Insurance Authority

## An Actuarial Review of the Workers' Compensation Program

### Introduction

#### Background & Purpose

The Monterey Bay Area Self Insurance Authority ("MBASIA") self-insures its workers' compensation claims. Members of the Authority pay the temporary disability ("TD") and Section 4850 of workers' compensation claims directly. Therefore the Authority has no liability for unpaid 4850/TD benefits. Because of this fact we supply two sets of 2015-16 funding rates. The first set includes a provision for 4850/TD benefits and might be useful in evaluating excess insurance options that cover those benefits. The second set of rates excludes 4850/TD and might be useful for projecting the Authority's internal funding requirements. The specific topics covered in this report include the following:

- 1) **Projected 2015-16 Loss Rate.** Projections of the losses expected to be incurred during 2015-16, expressed in terms of rates of loss per \$100 of payroll. There are two sets of rates. The first set includes 4850/TD benefits and the second set doesn't.
- 2) **Unpaid Losses.** We projected the Authority's liability for unpaid losses as of June 30, 2015.
- 3) **Discounting.** We discounted the projected 2015-16 losses and the 6/30/15 liabilities at 1.5% interest. The discounted estimates take into account the time value of money as workers' compensation costs are disbursed over an extended timeframe.
- 4) **Variability of Estimates.** We 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.

We relied upon loss and payroll data that JT<sup>2</sup> Claims Administrators and MBASIA provided. We have not audited this data and are not responsible for its accuracy. The accuracy and relevance of the conclusions and the reasonableness of the recommendations depend upon the accuracy of the underlying data. We use the term "losses" to refer 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. Uncertainty is unavoidable because many of the events that will determine actual claims costs will take place in the future. These events include, but are not limited to, future legislation or ballot initiatives that may change statutory benefit levels or the workers' compensation laws, changes in the rate of inflation, and the outcomes of future administrative proceedings and litigation. Our projections are based upon the Authority's historical experience. We did not anticipate 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 nine sections: the *Management Summary*, the *Technical Approach* section, the *Summary Exhibits*, the *Fiscal Year End Exhibits*, the *Limited Ultimate Loss Exhibits*, the *Gross Loss Exhibits*, the *Future Loss Exhibits*, the *Discounting Exhibits*, and the *Claims Data Exhibits*.

# **Monterey Bay Area Self Insurance Authority**

## **An Actuarial Review of the Workers' Compensation Program**

### **Management Summary**

# Monterey Bay Area Self Insurance Authority

## An Actuarial Review of the Workers' Compensation Program

### Management Summary

#### Projected 2015-16 Loss Rates

Table I shows the MBASIA's projected rates of loss for 2015-16 at various self-insured retentions ("SIR's) ranging between \$150,000 and \$1,000,000, plus unlimited. These rates are discounted at 1.5% interest and include 4850/TD benefits. Table II is similar except that it excludes 4850/TD benefits. The Table I and II rates do not cover claims handling fees, program administration, or excess insurance.

Tables I and II show actuarial central estimates and estimates at various probability levels. The higher probability level rates have higher probabilities of being adequate. For example, we estimate that there is a 70% probability that the actual 2015-16 \$250,000 SIR loss rate with and without 4850/TD will be less than **\$7.71** and **\$6.96**, respectively.

<b>Table I: Projected 2015-16 Discounted Loss Rates (1.5% interest rate – INCLUDES 4850/TD)</b>						
Probability Level	Projected Loss per \$100 of Payroll					
	\$150,000 SIR	\$250,000 SIR	\$500,000 SIR	\$750,000 SIR	\$1,000,000 SIR	Unlimited Retention
50%	5.16	6.49	7.91	8.41	8.66	8.94
<b>Central Estimate</b>	<b>\$5.37</b>	<b>\$6.76</b>	<b>\$8.24</b>	<b>\$8.85</b>	<b>\$9.12</b>	<b>\$9.51</b>
60%	5.58	7.10	8.65	9.29	9.58	9.89
70%	6.12	<b>\$7.71</b>	9.48	10.27	10.58	11.03
80%	6.71	8.59	10.55	11.42	11.86	12.46
90%	7.68	9.80	12.20	13.28	13.86	14.74
<b>14-15 Central Estimate</b>	<b>\$5.44</b>	<b>\$6.40</b>	<b>\$7.53</b>	<b>\$8.05</b>	<b>\$8.29</b>	<b>\$8.74</b>
<b>Change in C.E.</b>	<b>-1.3%</b>	<b>+4.6%</b>	<b>+9.4%</b>	<b>+9.9%</b>	<b>+10.0%</b>	<b>+8.8%</b>

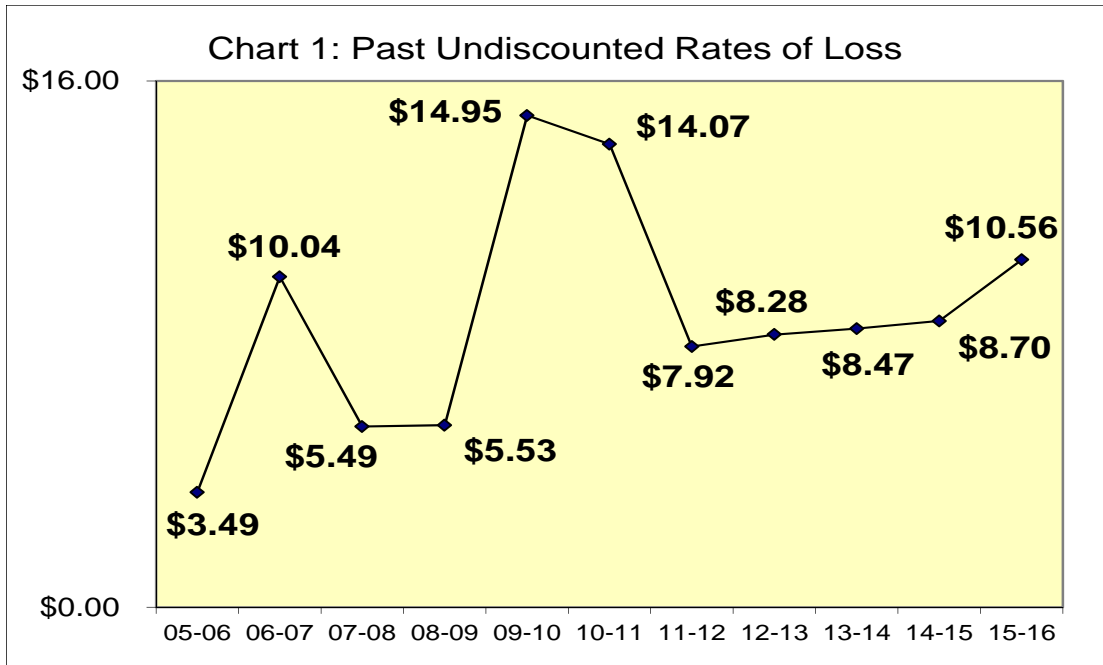
The next to last row in Table I shows last year's projected 2014-15 central value rates. The bottom row shows the percentage changes between last year's and this year's central value rates. Last year's rates were discounted at 2.0% interest. Reducing the interest rate to 1.5% raised the increases in the central estimates by about 3% from what they otherwise would have been.

<b>Table II: Projected 2015-16 Discounted Loss Rates (1.5% interest rate – EXCLUDES 4850/TD)</b>						
Probability <u>Level</u>	<u>Projected Loss per \$100 of Payroll</u>					
	\$150,000 <u>SIR</u>	\$250,000 <u>SIR</u>	\$500,000 <u>SIR</u>	\$750,000 <u>SIR</u>	\$1,000,000 <u>SIR</u>	Unlimited <u>Retention</u>
50%	4.52	5.86	7.30	7.79	8.05	8.34
<b>Central Estimate</b>	<b>\$4.71</b>	<b>\$6.10</b>	<b>\$7.60</b>	<b>\$8.20</b>	<b>\$8.47</b>	<b>\$8.87</b>
60%	4.90	6.41	7.98	8.61	8.89	9.22
70%	5.37	<b>\$6.96</b>	8.74	9.51	9.83	10.29
80%	5.89	7.75	9.73	10.58	11.01	11.62
90%	6.74	8.84	11.25	12.30	12.87	13.75
<b>14-15 Central Estimate</b>	<b>\$4.56</b>	<b>\$5.53</b>	<b>\$6.66</b>	<b>\$7.19</b>	<b>\$7.43</b>	<b>\$7.88</b>
<b>Change in C.E.</b>	<b>+3.3%</b>	<b>+10.3%</b>	<b>+14.1%</b>	<b>+14.0%</b>	<b>+14.0%</b>	<b>+12.6%</b>

Last year we estimated that 4850/TD constituted 9.8% of the total unlimited losses. This year the data indicates 6.8%. This percentage has been falling rapidly and this is causing the rates ex 4850/TD to increase much faster than the rates that include those costs.

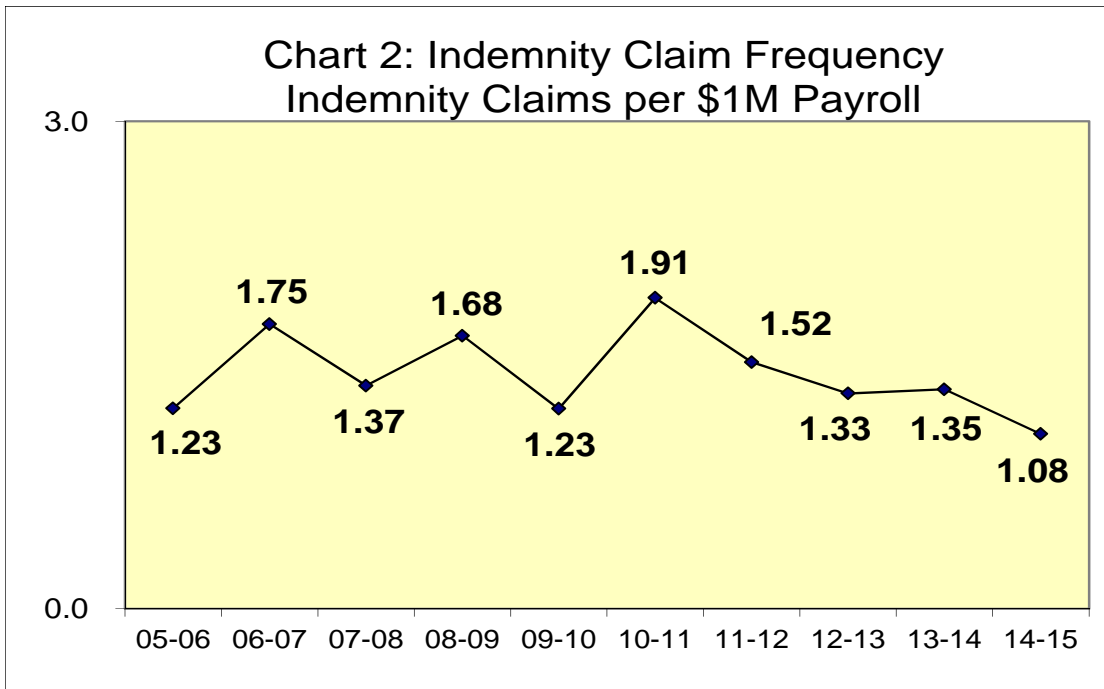
### The Authority's Past Rates of Loss

Chart 1 displays the Authority's estimated past unlimited, undiscounted loss rates (no reduction for losses ceded to excess insurers). The loss rate is ultimate total loss per \$100 of payroll. **\$10.56** is the undiscounted central estimate unlimited rate for 2015-16. The rates in Chart 1 include 4850/TD.



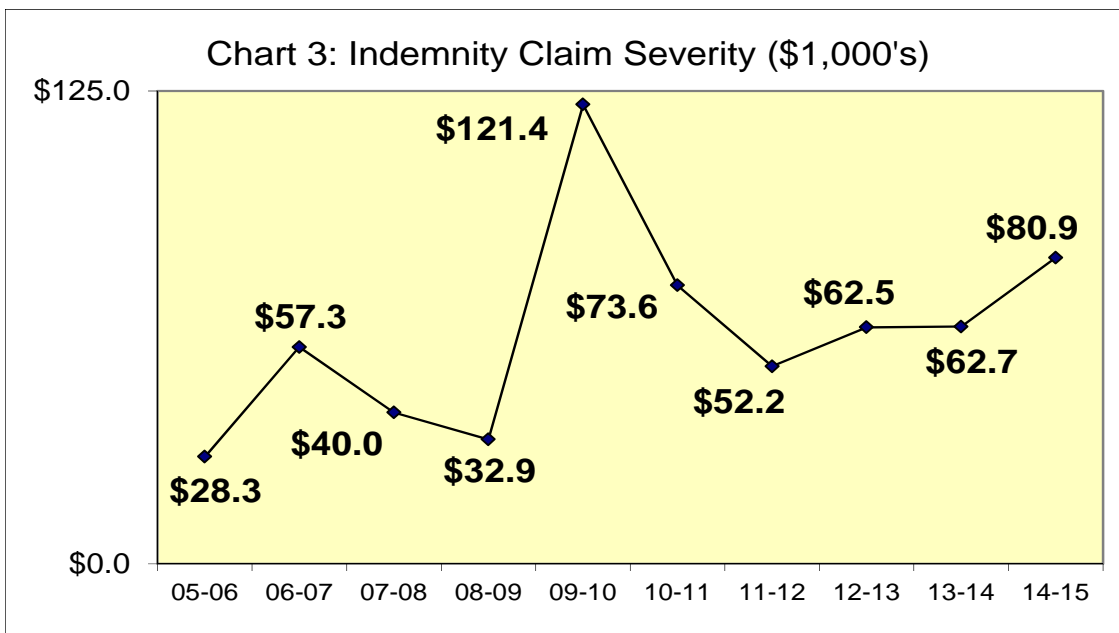
### Claim Frequency

Indemnity claim frequency is the number of “indemnity” claims divided by payroll. Chart 2 displays indemnity claim frequency.



### Average Claim Amount (“Severity”)

Chart 3 shows the average indemnity claim amount, calculated by dividing the estimated annual losses by the number of indemnity claims. The values in this chart are based on unlimited loss data, so they include the portions of claims are ceded to excess insurers. The Chart 3 severities include 4850/TD.



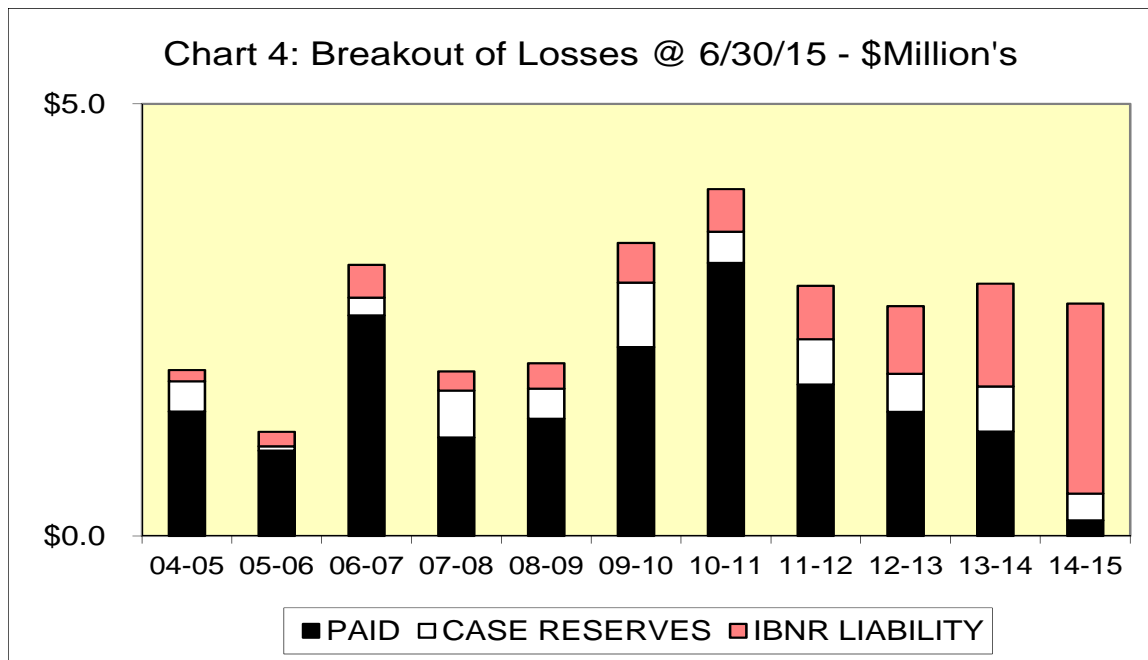
### Limited Liability for Unpaid Losses @ 6/30/14

We project that the limited liability for unpaid losses will be **\$12,915,000** on June 30, 2015 on an undiscounted basis, or **\$10,546,000** if discounted at 1.5% interest. Table III shows these liabilities at various probability levels.

Table III: Projected Liability for Unpaid Losses As of June 30, 2015 - \$1,000's		
Probability	Undiscounted	Discounted at 1.5% Interest
<u>Level</u>	<u>Losses</u>	<u>Losses</u>
50%	12,656	11,315
<b>Central Estimate</b>	<b>\$12,915</b>	<b>\$11,546</b>
60%	13,302	11,892
70%	13,819	12,354
80%	14,723	13,162
90%	16,014	14,317

### Loss Breakout as of 6/30/15

We project that the Authority's liability of **\$12,915,000** will comprise **\$5,315,000** in case reserves for known claims and an IBNR liability of **\$7,600,000**. Chart 4 breaks out the estimated total program year losses for 2004-05 through 2014-15 into their components: losses paid, case reserves, and IBNR liability. There is **\$1.43** of IBNR liability for every **\$1.00** of case reserves.

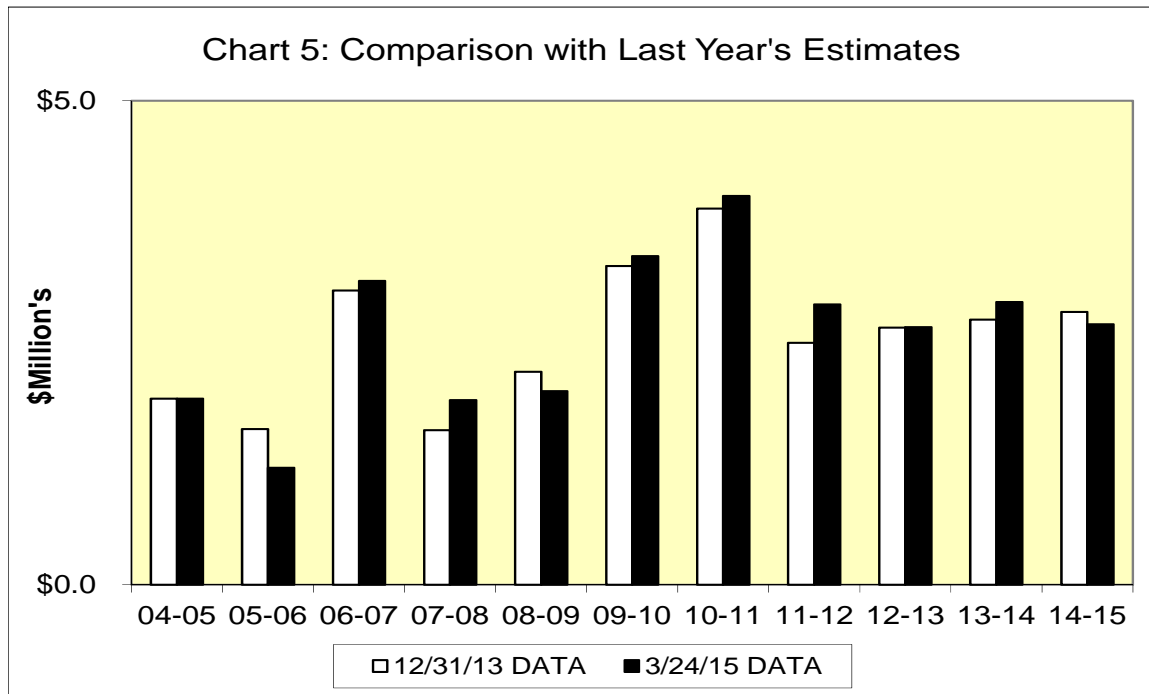


## Short-Term Liability

Short-term liabilities are those expected to be expended within twelve months. The limited 6/30/15 liability comprises **\$1,808,000** in short-term and **\$11,107,000** in long-term liabilities.

## Comparison with Last Year's Estimates

Chart 5 compares this year's estimates of the limited ultimate losses with last year's estimates. Chart 5 shows limited losses excluding 4850/TD benefits. The total change for all years through 2013-14 was an increase of \$454,000.



## Reconciling the 12/31/13 & 3/24/15 Liability Estimates

Last year we estimated that the liability for unpaid losses (including 4850/TD) was \$11,910,000 on December 31, 2013. Claims expenditures, net of 4850/TD, were \$3,250,000 between 1/1/14 and 3/24/15. The change in the estimated losses incurred through 12/31/13 was an increase of \$506,000. The estimated total losses incurred between 1/1/14 and 3/24/15 were \$3,719,000. Therefore starting with the December 31, 2013 liability, if we subtract the claims expenditures and add the change in the estimates and the total loss incurred since 1/1/14 the indicated liability is \$12,885,000. This matches our direct calculation on page 29.

## Interest Rates

We discounted the rates and liabilities using a 1.5% interest rate. Here are the adjustments to make for different interest rate assumptions:

<b>Interest Rate</b>	<b>0.0%</b>	<b>1.0%</b>	<b>1.20%</b>	<b>1.39%</b>	<b>1.5%</b>	<b>2.0%</b>
<b>UNL Rate</b>	<b>+11.0%</b>	<b>+3.3%</b>	<b>+2.0%</b>	<b>+0.8%</b>	<b>+0.0%</b>	<b>-3.0%</b>
<b>1M Rate</b>	<b>+11.0%</b>	<b>+3.4%</b>	<b>+2.0%</b>	<b>+0.8%</b>	<b>+0.0%</b>	<b>-3.0%</b>
<b>750K Rate</b>	<b>+10.7%</b>	<b>+3.3%</b>	<b>+1.9%</b>	<b>+0.8%</b>	<b>+0.0%</b>	<b>-2.9%</b>
<b>500K Rate</b>	<b>+10.5%</b>	<b>+3.2%</b>	<b>+1.9%</b>	<b>+0.8%</b>	<b>+0.0%</b>	<b>-2.9%</b>
<b>250K Rate</b>	<b>+9.1%</b>	<b>+2.8%</b>	<b>+1.6%</b>	<b>+0.5%</b>	<b>+0.0%</b>	<b>-2.6%</b>
<b>Liabilities</b>	<b>+11.9%</b>	<b>+3.7%</b>	<b>+2.1%</b>	<b>+0.8%</b>	<b>+0.0%</b>	<b>-3.4%</b>

We included columns labeled 1.20% and 1.39%. Those are the “risk-free buy-and-hold” interest rates appropriate for discounting the 2015-16 losses and the 6/30/15 liabilities, respectively. We calculated those rates by assembling hypothetical portfolios of US Treasury bills, notes, and bonds selected to mature just in time to provide exactly the funds that would be needed to pay the claims. The portfolio matching the expenditures on the 2015-16 claims yielded an overall interest rate of 1.20%. The portfolio matching the expenditures on the 6/30/14 liabilities yielded an overall interest rate of 1.39%. These are benchmarks that rise and fall with interest rates in general.

## 2014-15 Claims Data

This report was based on claims data evaluated as of 3/24/15, although we also used data evaluated as of 12/31/14 for some calculations. What stood out was the extraordinarily good loss experience for the 2014-15 program year in both the 12/31/14 and 3/24/15 data.

The lower left number in the loss development triangle on page 62 shows that only \$79,000 of 2014-15 losses had been reported through 12/31/14. The numbers in the column directly above that “79” figure show the comparable numbers from past years, which averaged \$606,000.

The paid loss triangle on page 63 and the reported number of claims triangle on page 64 are similar. We asked the claims administrator to confirm these numbers and they have done so. 2014-15 is off to an extraordinarily good start through March 24, 2015.

# **Monterey Bay Area Self Insurance Authority**

## **An Actuarial Review of the Workers' Compensation Program**

### **Technical Approach**

# Monterey Bay Area Self Insurance Authority

## An Actuarial Review of the Workers' Compensation Program

### Technical Approach

This section describes the actuarial calculations.

#### Exhibits

##### ***Summary Exhibits***

These exhibits summarize the analysis and conclusions. Summary Exhibit 1 shows the projected limited liabilities for unpaid losses as of June 30, 2015. Summary Exhibit 2 shows our projected rate for the 2015-16 program year, which runs from July 1, 2015 to June 30, 2015. These rates include 4850/TD benefits. Summary Exhibit 3 shows the estimated limited unpaid losses as of June 30, 2015 by program year on both discounted and non-discounted bases. The limited unpaid losses exclude 4850/TD. Summary Exhibit 4 shows the ULAE liability at 3/24/15 and 6/30/15.

##### ***Fiscal Year End Exhibits***

These exhibits show the estimated unpaid limited losses as of June 30, 2015. Fiscal Year End Exhibit 4 shows limited unpaid losses including 4850/TD benefits. Fiscal Year End Exhibit 3 shows the percentages of the total losses that derive from 4850/TD. Fiscal Year End Exhibit 2 shows the calculation that removes 4850/TD IBNR from the total IBNR liability. Fiscal Year End Exhibit 1 shows the limited unpaid losses excluding 4850/TD.

##### ***Limited Ultimate Loss Exhibits***

These exhibits show the estimation of the limited ultimate losses for each program year, including 4850/TD benefits. We start with the gross (unlimited) loss estimates and adjust them to a limited basis to reflect the expected effect of excess insurance.

### ***Gross Loss Exhibits***

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

We use 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.

Gross Loss Exhibit 1 summarizes these results.

### ***Future Loss Exhibits***

These exhibits show the projection of the projected gross (unlimited) rate for 2015-16, with and without 4850/TD benefits.

### ***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.

### ***Claims Data Exhibits***

These exhibits show the reported loss, paid loss, and claim count triangles as of December 31, 2014, and the associated loss and claim development factors.

**Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program**

**Actuarial Analysis of the  
Workers' Compensation Program**

**Summary Exhibits**

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projected Unpaid Losses as of June 30, 2015  
**Limited Self-Insured Losses Excluding 4850/TD**

(1) Projected Unpaid Losses:		\$12,914,793
(2) Discounted Value of Unpaid Losses: (Assuming 1.5% Interest Rate)		\$11,545,618

**Probability Levels**

Probability Level <u>(3)</u>	Probability Factor <u>(4)</u>	Discounted * Liability <u>(5)</u>
40%	0.94	10,852,881
50%	0.98	11,314,706
<b>Central Estimate</b>	<b>1.00</b>	<b>\$11,545,618</b>
60%	1.03	11,891,987
70%	1.07	12,353,811
80%	1.14	13,162,005
90%	1.24	14,316,566

\* Multiply by 1.119 to obtain undiscounted values.

Notes:

- (1) Page 18, Column (1).
- (2) Page 18, Column (2).
- (3) Estimated probability that funding will be adequate.
- (4) Estimated by BAC.
- (5) (2) x (4).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projected Loss Funding Rate for 2015-16

\$250,000 SIR Loss rate  
**Limited Losses Including 4850/TD**

(1) Discounted Loss Rate: Loss Rates  
(as of July 1, 2015, 1.5% interest rate) \$6.76

<b><u>Probability Levels</u></b>		
Probability Level <u>(2)</u>	Probability Factor <u>(3)</u>	Discounted * Rate <u>(4)</u>
0.20	0.71	\$4.80
0.30	0.80	5.41
0.40	0.88	5.95
0.50	0.96	6.49
<b>Central Estimate</b>	<b>1.00</b>	<b>\$6.76</b>
0.60	1.05	7.10
0.70	1.14	7.71
0.80	1.27	8.59
0.90	1.45	9.80
* Multiply by 1.091 to obtain undiscounted values.		

Notes:

- (1) [Page 53, Column (5)] x [Page 60, Item (4)], adjusted for \$250K SIR.
- (2) Estimated probability that funding will be adequate.
- (3) Estimated by BAC.
- (4) (1) x (3).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

June 30, 2015 Summary

**Limited Self-Insured Losses Excluding 4850/TD**

Program Year	Undiscounted Claims Liabilities as of 6/30/15 <u>(1)</u>	Discounted (1.5% Interest) Claims Liabilities as of 6/30/15 <u>(2)</u>	Estimated Ultimate Losses <u>(3)</u>
1985-86	\$10,119	\$9,505	\$400,000
1986-87	902	839	756,000
1987-88	1,064	983	132,000
1988-89	558	513	704,000
1989-90	1,381	1,271	740,000
1990-91	44,063	40,335	1,290,000
1991-92	79,904	72,336	1,350,000
1992-93	84,102	75,339	1,492,639
1993-94	326	292	1,108,561
1994-95	130,194	116,404	819,693
1995-96	49,951	44,428	889,518
1996-97	124,902	110,725	1,438,181
1997-98	104,575	92,688	1,082,837
1998-99	163,535	145,236	1,521,420
1999-00	102,754	91,237	1,442,757
2000-01	163,208	145,174	2,563,152
2001-02	282,052	252,688	2,161,203
2002-03	137,333	122,627	2,042,846
2003-04	97,320	86,338	1,773,776
2004-05	480,436	425,504	1,920,688
2005-06	218,200	192,786	1,205,790
2006-07	585,156	515,115	3,137,898
2007-08	766,134	673,551	1,905,596
2008-09	641,338	563,421	1,998,098
2009-10	1,204,889	1,052,554	3,392,072
2010-11	854,895	751,599	4,014,077
2011-12	1,142,590	1,014,945	2,895,494
2012-13	1,224,118	1,100,992	2,659,540
2013-14	1,709,127	1,556,699	2,919,196
2014-15	2,509,665	2,289,494	2,689,368
Total	\$12,914,793	\$11,545,618	\$52,446,402

## Notes:

- (1) Page 56, Column (1).
- (2) Page 56, Column (3).
- (3) Page 21, Column (1).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

ULAE Projections and Calculation of Unpaid ULAE

(1) Selected ULAE Ratio: **10.0%**

	Case Reserves with <u>Development</u>	"True" <u>IBNR</u>	<u>Total</u>
(2) ULAE Ratio:	5.0%	10.0%	
(3) Estimated Unpaid Losses as of 3/24/15:	\$19,687,998	\$1,169,002	\$20,857,000
(4) Estimated Unpaid ULAE as of 3/24/15:	\$984,400	\$116,900	\$1,101,300
(5) Discounted Unpaid ULAE as of 3/24/15: ( 1.5% interest rate)			\$984,562

We project that the ULAE liability will not change between 03/24/15 & 06/30/15.

Notes:

- (1) Estimated by BAC.
- (2) "50-50 Rule."
- (3) From gross ultimates on Page 38 and gross claims data, assuming 90% of IBNR is development on known claims.
- (4) (2) x (3).
- (5) (4) x [Page 56, Item (4)].

**Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program**

**Actuarial Analysis of the  
Workers' Compensation Program**

**Fiscal Year End Exhibits**

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projected Unpaid Losses as of June 30, 2015  
**Limited Self-Insured Losses Excluding 4850/TD**

Program Year	Estimated Ultimate Losses (1)	Limited Paid Losses less 4850/TD Paid 6/30/15 (2)	Limited Case Reserves less 4850/TD Case 6/30/15 (3)	Lim Reported less 4850/TD Reported 6/30/15 (4)	Limited IBNR less 4850/TD IBNR 6/30/15 (5)	Projected Unpaid Losses excluding 4850/TD 6/30/15 (6)
1985-86	\$400,000	\$389,881	\$3,977	\$393,858	\$6,142	\$10,119
1986-87	756,000	755,098	76	755,175	825	902
1987-88	132,000	130,936	1	130,938	1,062	1,064
1988-89	704,000	703,442	12	703,454	546	558
1989-90	740,000	738,619	25	738,644	1,356	1,381
1990-91	1,290,000	1,245,937	17,093	1,263,030	26,970	44,063
1991-92	1,350,000	1,270,096	68,203	1,338,299	11,701	79,904
1992-93	1,492,639	1,408,537	52,267	1,460,805	31,834	84,102
1993-94	1,108,561	1,108,235	3	1,108,238	324	326
1994-95	819,693	689,499	111,656	801,155	18,538	130,194
1995-96	889,518	839,568	22,761	862,329	27,189	49,951
1996-97	1,438,181	1,313,280	88,537	1,401,816	36,365	124,902
1997-98	1,082,837	978,262	57,484	1,035,745	47,091	104,575
1998-99	1,521,420	1,357,886	135,423	1,493,308	28,112	163,535
1999-00	1,442,757	1,340,002	47,432	1,387,434	55,323	102,754
2000-01	2,563,152	2,399,944	96,265	2,496,209	66,943	163,208
2001-02	2,161,203	1,879,151	149,949	2,029,100	132,104	282,052
2002-03	2,042,846	1,905,513	63,346	1,968,859	73,987	137,333
2003-04	1,773,776	1,676,456	6,051	1,682,506	91,270	97,320
2004-05	1,920,688	1,440,252	349,872	1,790,125	130,564	480,436
2005-06	1,205,790	987,590	49,844	1,037,434	168,357	218,200
2006-07	3,137,898	2,552,742	205,061	2,757,803	380,096	585,156
2007-08	1,905,596	1,139,462	543,430	1,682,892	222,705	766,134
2008-09	1,998,098	1,356,760	348,209	1,704,969	293,129	641,338
2009-10	3,392,072	2,187,184	743,865	2,931,049	461,023	1,204,889
2010-11	4,014,077	3,159,182	359,498	3,518,680	495,397	854,895
2011-12	2,895,494	1,752,904	525,362	2,278,266	617,228	1,142,590
2012-13	2,659,540	1,435,422	439,703	1,875,124	784,416	1,224,118
2013-14	2,919,196	1,210,069	519,050	1,729,119	1,190,076	1,709,127
2014-15	2,689,368	179,703	310,686	490,389	2,198,979	2,509,665
<b>Total</b>	<b>\$52,446,402</b>	<b>\$39,531,609</b>	<b>\$5,315,140</b>	<b>\$44,846,749</b>	<b>\$7,599,653</b>	<b>\$12,914,793</b>

## Notes:

(1) - (6) Page 27 entries - Page 24 entries.

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Calculation of 4850/TD IBNR

Program Year	Total Case Reserves 3/24/15 (1)	4850/TD Case Reserves 3/24/15 (2)	4850/TD Case Reserves Percentage (3)	Total IBNR as of 3/24/15 (4)	4850/TD IBNR as of 3/24/15 (5)	IBNR Net of 4850/TD as of 3/24/15 (6)
1985-86	\$3,459	\$0	0.0%	\$6,913	\$0	\$6,913
1986-87	0	0	0.0%	940	0	940
1987-88	0	0	0.0%	1,078	0	1,078
1988-89	0	0	0.0%	575	0	575
1989-90	0	0	0.0%	1,421	0	1,421
1990-91	18,651	0	0.0%	27,804	0	27,804
1991-92	69,344	0	0.0%	12,021	0	12,021
1992-93	52,358	0	0.0%	32,362	0	32,362
1993-94	0	0	0.0%	330	0	330
1994-95	117,003	0	0.0%	18,942	0	18,942
1995-96	23,278	0	0.0%	27,694	0	27,694
1996-97	90,688	0	0.0%	36,868	0	36,868
1997-98	59,286	0	0.0%	47,911	0	47,911
1998-99	139,773	0	0.0%	28,944	0	28,944
1999-00	49,260	0	0.0%	57,167	0	57,167
2000-01	99,716	0	0.0%	68,189	0	68,189
2001-02	153,540	0	0.0%	138,920	0	138,920
2002-03	64,432	0	0.0%	79,929	0	79,929
2003-04	3,804	0	0.0%	95,200	0	95,200
2004-05	355,784	0	0.0%	133,469	0	133,469
2005-06	45,524	0	0.0%	179,276	0	179,276
2006-07	209,121	0	0.0%	389,873	0	389,873
2007-08	553,555	0	0.0%	229,271	0	229,271
2008-09	355,559	15,000	4.2%	311,382	0	311,382
2009-10	751,785	0	0.0%	485,669	0	485,669
2010-11	351,868	1,462	0.4%	516,282	0	516,282
2011-12	565,878	22,599	4.0%	645,728	0	645,728
2012-13	456,784	0	0.0%	830,741	0	830,741
2013-14	524,595	40,951	7.8%	1,334,509	15,626	1,318,883
2014-15	152,486	3,248	2.1%	1,878,453	12,004	1,866,449
Total	\$5,267,530	\$83,260		\$7,617,864	\$27,630	\$7,590,234

## Notes:

- (1) Page 29, Column (3).
- (2) Provided by JT2.
- (3) (2) / (1).
- (4) Page 29, Column (5).
- (5) (2) x 'IBNR to case reserves' ratio.  
Ratio is [(4) / (1)], reduced 70% in 2014-15, 85% in 2013-14, & 95% in 2012-13.  
4850/TD IBNR is \$0 for all other years.
- (6) (4) - (5).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

4850/TD as % of Total Losses

Program Year	4850/TD (1)	Estimated Ultimate Gross Loss (2)	4850/TD Percentage (3)
2006-07	\$562,102	\$4,300,000	13.1%
2007-08	394,404	2,400,000	16.4%
2008-09	501,902	2,600,000	19.3%
2009-10	607,928	6,800,000	8.9%
2010-11	485,923	6,400,000	7.6%
2011-12	204,506	3,600,000	5.7%
2012-13	140,460	3,500,000	4.0%
2013-14	280,804	3,700,000	7.6%
Total	\$3,178,028	\$33,300,000	9.5%
09/10 - 13/14	\$1,719,621	\$24,000,000	6.8%

**Selected Percentages**

Gross Loss:	6.8%
\$1M Limit:	7.1%
\$750K Limit:	7.3%
\$500K Limit:	7.8%
\$250K Limit:	9.7%
\$150K Limit:	12.2%

- (1) Page 26, Column (4).  
(2) Page 38, Column (6).  
(3) (1) / (2).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projected Unpaid Losses as of June 30, 2015

4850/TD Only

Program Year	Estimated Ultimate 4850/TD (1)	Projected 4850/TD Paid as of 6/30/15 (2)	Projected 4850/TD Case Reserves as of 6/30/15 (3)	Projected 4850/TD Reported as of 6/30/15 (4)	Projected 4850/TD IBNR as of 6/30/15 (5)	Projected Unpaid Losses excluding 4850/TD 6/30/15 (6)
1985-86	\$0	\$0	\$0	\$0	\$0	\$0
1986-87	0	0	0	0	0	0
1987-88	0	0	0	0	0	0
1988-89	0	0	0	0	0	0
1989-90	0	0	0	0	0	0
1990-91	0	0	0	0	0	0
1991-92	0	0	0	0	0	0
1992-93	27,361	27,361	0	27,361	0	0
1993-94	51,439	51,439	0	51,439	0	0
1994-95	150,307	150,307	0	150,307	0	0
1995-96	220,482	220,482	0	220,482	0	0
1996-97	181,819	181,819	0	181,819	0	0
1997-98	197,163	197,163	0	197,163	0	0
1998-99	118,580	118,580	0	118,580	0	0
1999-00	137,243	137,243	0	137,243	0	0
2000-01	316,848	316,848	0	316,848	0	0
2001-02	448,797	448,797	0	448,797	0	0
2002-03	487,154	487,154	0	487,154	0	0
2003-04	326,224	326,224	0	326,224	0	0
2004-05	469,312	469,312	0	469,312	0	0
2005-06	294,210	294,210	0	294,210	0	0
2006-07	562,102	562,102	0	562,102	0	0
2007-08	394,404	394,404	0	394,404	0	0
2008-09	501,902	494,411	7,491	501,902	0	7,491
2009-10	607,928	607,928	0	607,928	0	0
2010-11	485,923	484,705	1,218	485,923	0	1,218
2011-12	204,506	191,906	12,600	204,506	0	12,600
2012-13	140,460	140,460	0	140,460	0	0
2013-14	280,804	245,036	35,768	280,804	0	35,768
2014-15	210,632	103,224	30,511	133,735	76,897	107,408
<b>Total</b>	<b>\$6,815,598</b>	<b>\$6,651,113</b>	<b>\$87,588</b>	<b>\$6,738,701</b>	<b>\$76,897</b>	<b>\$164,485</b>

## Notes:

- (1) Page 26, Column (4).
- (2) Page 25, Column (3).
- (3) (4) - (2).
- (4) Page 25, Column (6).
- (5) (1) - (4).
- (6) (1) - (2).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projected Paid and Reported Losses between 3/25/15 and 6/30/15

4850/TD Only

Program Year	Losses Paid as of 3/24/15 (1)	Projected Losses Paid 3/25/15 - 6/30/15 (2)	Projected Losses Paid as of 6/30/15 (3)	Losses Reported as of 3/24/15 (4)	Projected Losses Reported 3/25/15 - 6/30/15 (5)	Projected Losses Reported as of 6/30/15 (6)
1985-86	\$0	\$0	\$0	\$0	\$0	\$0
1986-87	0	0	0	0	0	0
1987-88	0	0	0	0	0	0
1988-89	0	0	0	0	0	0
1989-90	0	0	0	0	0	0
1990-91	0	0	0	0	0	0
1991-92	0	0	0	0	0	0
1992-93	27,361	0	27,361	27,361	0	27,361
1993-94	51,439	0	51,439	51,439	0	51,439
1994-95	150,307	0	150,307	150,307	0	150,307
1995-96	220,482	0	220,482	220,482	0	220,482
1996-97	181,819	0	181,819	181,819	0	181,819
1997-98	197,163	0	197,163	197,163	0	197,163
1998-99	118,580	0	118,580	118,580	0	118,580
1999-00	137,243	0	137,243	137,243	0	137,243
2000-01	316,848	0	316,848	316,848	0	316,848
2001-02	448,797	0	448,797	448,797	0	448,797
2002-03	487,154	0	487,154	487,154	0	487,154
2003-04	326,224	0	326,224	326,224	0	326,224
2004-05	469,312	0	469,312	469,312	0	469,312
2005-06	294,210	0	294,210	294,210	0	294,210
2006-07	562,102	0	562,102	562,102	0	562,102
2007-08	394,404	0	394,404	394,404	0	394,404
2008-09	486,902	7,509	494,411	501,902	0	501,902
2009-10	607,928	0	607,928	607,928	0	607,928
2010-11	484,461	244	484,705	485,923	0	485,923
2011-12	181,907	9,999	191,906	204,506	0	204,506
2012-13	140,460	0	140,460	140,460	0	140,460
2013-14	239,853	5,183	245,036	280,804	0	280,804
2014-15	8,123	95,102	103,224	11,371	122,364	133,735
Total	\$6,533,077	\$118,036	\$6,651,113	\$6,616,337	\$122,364	\$6,738,701

## Notes:

- (1) Page 26, Column (1).
- (2) Projected by BAC.
- (3) (1) + (2).
- (4) Provided by JT2.
- (5) Projected by BAC.
- (6) (4) + (5).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Paid Loss Development  
4850/TD

Program Year	Cumulative Paid Losses as of 3/24/15 (1)	Paid Development Factor as of 3/24/15 (2)	Projected Ultimate Losses (3)	Selected Ultimate Losses (4)
1985-86	\$0	1.000	\$0	\$0
1986-87	0	1.000	0	0
1987-88	0	1.000	0	0
1988-89	0	1.000	0	0
1989-90	0	1.000	0	0
1990-91	0	1.000	0	0
1991-92	0	1.000	0	0
1992-93	27,361	1.000	27,361	27,361
1993-94	51,439	1.000	51,439	51,439
1994-95	150,307	1.000	150,307	150,307
1995-96	220,482	1.000	220,482	220,482
1996-97	181,819	1.000	181,819	181,819
1997-98	197,163	1.000	197,163	197,163
1998-99	118,580	1.000	118,580	118,580
1999-00	137,243	1.000	137,243	137,243
2000-01	316,848	1.000	316,848	316,848
2001-02	448,797	1.000	448,797	448,797
2002-03	487,154	1.000	487,154	487,154
2003-04	326,224	1.000	326,224	326,224
2004-05	469,312	1.000	469,312	469,312
2005-06	294,210	1.000	294,210	294,210
2006-07	562,102	1.000	562,102	562,102
2007-08	394,404	1.000	394,404	394,404
2008-09	486,902	1.025	498,953	501,902
2009-10	607,928	1.025	622,975	607,928
2010-11	484,461	1.030	498,962	485,923
2011-12	181,907	1.019	185,429	204,506
2012-13	140,460	1.008	141,623	140,460
2013-14	239,853	1.101	264,189	280,804
2014-15	8,123	3.499	28,422	210,632
Total	\$6,533,077		\$6,623,996	\$6,815,598

## Notes:

- (1) Provided by JT2.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.
- (4) Selected based upon (3) & case incurred values.

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projected Unpaid Losses as of June 30, 2015  
**Limited Self-Insured Losses Including 4850/TD**

Program Year	Estimated Ultimate Losses (1)	Projected Paid Losses as of 6/30/15 (2)	Projected Case Reserves 6/30/15 (3)	Projected Reported Losses as of 6/30/15 (4)	Projected IBNR as of 6/30/15 (5)	Projected Unpaid Losses as of 6/30/15 (6)
1985-86	\$400,000	\$389,881	\$3,977	\$393,858	\$6,142	\$10,119
1986-87	756,000	755,098	76	755,175	825	902
1987-88	132,000	130,936	1	130,938	1,062	1,064
1988-89	704,000	703,442	12	703,454	546	558
1989-90	740,000	738,619	25	738,644	1,356	1,381
1990-91	1,290,000	1,245,937	17,093	1,263,030	26,970	44,063
1991-92	1,350,000	1,270,096	68,203	1,338,299	11,701	79,904
1992-93	1,520,000	1,435,898	52,267	1,488,166	31,834	84,102
1993-94	1,160,000	1,159,674	3	1,159,676	324	326
1994-95	970,000	839,806	111,656	951,462	18,538	130,194
1995-96	1,110,000	1,060,049	22,761	1,082,811	27,189	49,951
1996-97	1,620,000	1,495,098	88,537	1,583,635	36,365	124,902
1997-98	1,280,000	1,175,425	57,484	1,232,909	47,091	104,575
1998-99	1,640,000	1,476,465	135,423	1,611,888	28,112	163,535
1999-00	1,580,000	1,477,246	47,432	1,524,677	55,323	102,754
2000-01	2,880,000	2,716,792	96,265	2,813,057	66,943	163,208
2001-02	2,610,000	2,327,948	149,949	2,477,896	132,104	282,052
2002-03	2,530,000	2,392,667	63,346	2,456,013	73,987	137,333
2003-04	2,100,000	2,002,680	6,051	2,008,730	91,270	97,320
2004-05	2,390,000	1,909,564	349,872	2,259,436	130,564	480,436
2005-06	1,500,000	1,281,800	49,844	1,331,643	168,357	218,200
2006-07	3,700,000	3,114,844	205,061	3,319,904	380,096	585,156
2007-08	2,300,000	1,533,866	543,430	2,077,295	222,705	766,134
2008-09	2,500,000	1,851,171	355,700	2,206,871	293,129	648,829
2009-10	4,000,000	2,795,111	743,865	3,538,977	461,023	1,204,889
2010-11	4,500,000	3,643,886	360,717	4,004,603	495,397	856,114
2011-12	3,100,000	1,944,810	537,962	2,482,772	617,228	1,155,190
2012-13	2,800,000	1,575,882	439,703	2,015,584	784,416	1,224,118
2013-14	3,200,000	1,455,105	554,819	2,009,924	1,190,076	1,744,895
2014-15	2,900,000	282,927	341,197	624,124	2,275,876	2,617,073
<b>Total</b>	<b>\$59,262,000</b>	<b>\$46,182,722</b>	<b>\$5,402,728</b>	<b>\$51,585,450</b>	<b>\$7,676,550</b>	<b>\$13,079,278</b>

## Notes:

- (1) Page 31, Column (6).
- (2) Page 28, Column (3).
- (3) (4) - (2).
- (4) Page 28, Column (6).
- (5) (1) - (4).
- (6) (3) + (5).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projected Paid and Reported Losses between 3/25/15 and 6/30/15  
Limited Self-Insured Losses Including 4850/TD

Program Year	Losses Paid as of 3/24/15 (1)	Projected Losses Paid 3/25/15 - 6/30/15 (2)	Projected Losses Paid as of 6/30/15 (3)	Losses Reported as of 3/24/15 (4)	Projected Losses Reported 3/25/15 - 6/30/15 (5)	Projected Losses Reported as of 6/30/15 (6)
1985-86	\$389,628	\$253	\$389,881	\$393,087	\$771	\$393,858
1986-87	755,060	38	755,098	755,060	114	755,175
1987-88	130,922	15	130,936	130,922	16	130,938
1988-89	703,425	17	703,442	703,425	29	703,454
1989-90	738,579	40	738,619	738,579	64	738,644
1990-91	1,243,544	2,392	1,245,937	1,262,196	834	1,263,030
1991-92	1,268,635	1,461	1,270,096	1,337,979	320	1,338,299
1992-93	1,435,280	618	1,435,898	1,487,638	528	1,488,166
1993-94	1,159,670	4	1,159,674	1,159,670	6	1,159,676
1994-95	834,054	5,751	839,806	951,058	404	951,462
1995-96	1,059,029	1,021	1,060,049	1,082,306	504	1,082,811
1996-97	1,492,444	2,655	1,495,098	1,583,132	503	1,583,635
1997-98	1,172,802	2,623	1,175,425	1,232,089	820	1,232,909
1998-99	1,471,283	5,183	1,476,465	1,611,056	832	1,611,888
1999-00	1,473,573	3,672	1,477,246	1,522,833	1,845	1,524,677
2000-01	2,712,094	4,697	2,716,792	2,811,811	1,247	2,813,057
2001-02	2,317,539	10,408	2,327,948	2,471,080	6,817	2,477,896
2002-03	2,385,639	7,028	2,392,667	2,450,071	5,942	2,456,013
2003-04	2,000,996	1,683	2,002,680	2,004,800	3,930	2,008,730
2004-05	1,900,747	8,817	1,909,564	2,256,531	2,905	2,259,436
2005-06	1,275,199	6,600	1,281,800	1,320,724	10,920	1,331,643
2006-07	3,101,006	13,838	3,114,844	3,310,127	9,777	3,319,904
2007-08	1,517,175	16,691	1,533,866	2,070,729	6,566	2,077,295
2008-09	1,833,059	18,112	1,851,171	2,188,618	18,253	2,206,871
2009-10	2,762,546	32,565	2,795,111	3,514,331	24,645	3,538,977
2010-11	3,631,849	12,037	3,643,886	3,983,718	20,886	4,004,603
2011-12	1,888,394	56,416	1,944,810	2,454,272	28,500	2,482,772
2012-13	1,512,476	63,406	1,575,882	1,969,259	46,325	2,015,584
2013-14	1,340,896	114,209	1,455,105	1,865,491	144,433	2,009,924
2014-15	88,478	194,449	282,927	240,963	383,160	624,124
Total	\$45,596,023	\$586,699	\$46,182,722	\$50,863,553	\$721,897	\$51,585,450

## Notes:

- (1) Page 33, Column (1).
- (2) Projected by BAC.
- (3) (1) + (2).
- (4) Page 32, Column (1).
- (5) Projected by BAC.
- (6) (4) + (5).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Estimated Unpaid Losses as of March 24, 2015  
**Limited Self-Insured Losses Including 4850/TD**

Program Year	Estimated Ultimate Losses (1)	Paid Losses as of 3/24/15 (2)	Case Reserves 3/24/15 (3)	Reported Losses as of 3/24/15 (4)	Estimated IBNR as of 3/24/15 (5)	Estimated Unpaid Losses as of 3/24/15 (6)
1985-86	\$400,000	\$389,628	\$3,459	\$393,087	\$6,913	\$10,372
1986-87	756,000	755,060	0	755,060	940	940
1987-88	132,000	130,922	0	130,922	1,078	1,078
1988-89	704,000	703,425	0	703,425	575	575
1989-90	740,000	738,579	0	738,579	1,421	1,421
1990-91	1,290,000	1,243,544	18,651	1,262,196	27,804	46,456
1991-92	1,350,000	1,268,635	69,344	1,337,979	12,021	81,365
1992-93	1,520,000	1,435,280	52,358	1,487,638	32,362	84,720
1993-94	1,160,000	1,159,670	0	1,159,670	330	330
1994-95	970,000	834,054	117,003	951,058	18,942	135,946
1995-96	1,110,000	1,059,029	23,278	1,082,306	27,694	50,971
1996-97	1,620,000	1,492,444	90,688	1,583,132	36,868	127,556
1997-98	1,280,000	1,172,802	59,286	1,232,089	47,911	107,198
1998-99	1,640,000	1,471,283	139,773	1,611,056	28,944	168,717
1999-00	1,580,000	1,473,573	49,260	1,522,833	57,167	106,427
2000-01	2,880,000	2,712,094	99,716	2,811,811	68,189	167,906
2001-02	2,610,000	2,317,539	153,540	2,471,080	138,920	292,461
2002-03	2,530,000	2,385,639	64,432	2,450,071	79,929	144,361
2003-04	2,100,000	2,000,996	3,804	2,004,800	95,200	99,004
2004-05	2,390,000	1,900,747	355,784	2,256,531	133,469	489,253
2005-06	1,500,000	1,275,199	45,524	1,320,724	179,276	224,801
2006-07	3,700,000	3,101,006	209,121	3,310,127	389,873	598,994
2007-08	2,300,000	1,517,175	553,555	2,070,729	229,271	782,825
2008-09	2,500,000	1,833,059	355,559	2,188,618	311,382	666,941
2009-10	4,000,000	2,762,546	751,785	3,514,331	485,669	1,237,454
2010-11	4,500,000	3,631,849	351,868	3,983,718	516,282	868,151
2011-12	3,100,000	1,888,394	565,878	2,454,272	645,728	1,211,606
2012-13	2,800,000	1,512,476	456,784	1,969,259	830,741	1,287,524
2013-14	3,200,000	1,340,896	524,595	1,865,491	1,334,509	1,859,104
2014-15	2,119,417	88,478	152,486	240,963	1,878,453	2,030,939
<b>Total</b>	<b>\$58,481,417</b>	<b>\$45,596,023</b>	<b>\$5,267,530</b>	<b>\$50,863,553</b>	<b>\$7,617,864</b>	<b>\$12,885,394</b>

## Notes:

- (1) Page 31, Column (6).  
2014-15 value adjusted for 8.77 month exposure through 3/24/15.
- (2) Page 33, Column (1).
- (3) (4) - (2).
- (4) Page 32, Column (1).
- (5) (1) - (4).
- (6) (3) + (5).

**Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program**

**Actuarial Analysis of the  
Workers' Compensation Program**

**Limited Loss Exhibits  
Including 4850/TD**

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Selected Ultimate Losses  
Limited Self-Insured Losses Including 4850/TD

Program Year	Limited Reported Projection (1)	Limited Paid Projection (2)	Lim IBNR to Case Reserves Ratio (3)	B-F Limited Method Using Reported (4)	B-F Limited Method Using Paid (5)	Selected Ultimate Losses (6)
1985-86	\$394,436	\$400,610	\$393,582	\$394,516	\$402,491	\$400,000
1986-87	759,813	780,242	755,060	761,071	787,118	756,000
1987-88	131,794	135,530	130,922	131,787	135,124	132,000
1988-89	709,184	731,347	703,425	708,681	728,393	704,000
1989-90	745,868	771,438	738,579	745,574	768,659	740,000
1990-91	1,279,557	1,312,663	1,268,668	1,281,415	1,316,302	1,290,000
1991-92	1,354,518	1,344,497	1,357,118	1,353,163	1,339,493	1,350,000
1992-93	1,508,469	1,533,449	1,502,036	1,512,087	1,547,046	1,520,000
1993-94	1,174,543	1,234,446	1,159,670	1,173,362	1,223,916	1,160,000
1994-95	965,745	898,619	982,532	964,840	900,205	970,000
1995-96	1,100,257	1,148,156	1,088,498	1,101,393	1,152,079	1,110,000
1996-97	1,610,819	1,629,543	1,606,439	1,610,187	1,626,127	1,620,000
1997-98	1,255,131	1,292,402	1,246,733	1,266,326	1,349,695	1,280,000
1998-99	1,644,872	1,642,858	1,645,300	1,642,430	1,626,657	1,640,000
1999-00	1,559,263	1,674,021	1,534,754	1,567,168	1,704,884	1,580,000
2000-01	2,884,114	3,130,265	2,834,845	2,917,500	3,278,590	2,880,000
2001-02	2,549,244	2,738,856	2,509,312	2,546,543	2,692,419	2,610,000
2002-03	2,558,377	2,935,785	2,468,885	2,549,815	2,829,738	2,530,000
2003-04	2,156,730	2,575,850	2,006,554	2,145,500	2,449,226	2,100,000
2004-05	2,386,356	2,419,204	2,377,497	2,380,923	2,393,709	2,390,000
2005-06	1,420,510	1,678,651	1,339,526	1,559,602	2,094,211	1,500,000
2006-07	3,588,071	4,206,276	3,397,540	3,562,076	3,961,558	3,700,000
2007-08	2,267,248	2,122,612	2,312,632	2,346,896	2,421,859	2,300,000
2008-09	2,460,829	2,683,512	2,379,198	2,582,122	2,956,850	2,500,000
2009-10	4,067,996	4,255,869	3,990,963	3,998,558	4,012,278	4,000,000
2010-11	4,572,877	5,763,498	4,171,968	4,386,142	4,786,087	4,500,000
2011-12	3,033,904	3,402,074	2,880,378	3,063,564	3,307,948	3,100,000
2012-13	2,591,190	3,292,991	2,333,772	2,697,016	3,152,962	2,800,000
2013-14	3,049,805	4,329,192	2,540,120	3,108,799	3,551,933	3,200,000
2014-15	916,712	942,010	906,411	2,696,492	3,107,079	2,900,000
<b>Total</b>	<b>\$56,698,232</b>	<b>\$63,006,466</b>	<b>\$54,562,915</b>	<b>\$58,755,546</b>	<b>\$63,604,638</b>	<b>\$59,262,000</b>

- (1) Page 32, Column (3).
- (2) Page 33, Column (3).
- (3) Page 34, Column (6).
- (4) Page 35, Column (6).
- (5) Page 36, Column (6).
- (6) Selected on the basis of (1) - (5).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Reported Loss Development  
**Limited Self-Insured Losses Including 4850/TD**

Program Year	Cumulative Reported Losses as of 3/24/15 (1)	Reported Development Factor as of 3/24/15 (2)	Projected Ultimate Losses (3)
1985-86	\$393,087	1.003	\$394,436
1986-87	755,060	1.006	759,813
1987-88	130,922	1.007	131,794
1988-89	703,425	1.008	709,184
1989-90	738,579	1.010	745,868
1990-91	1,262,196	1.014	1,279,557
1991-92	1,337,979	1.012	1,354,518
1992-93	1,487,638	1.014	1,508,469
1993-94	1,159,670	1.013	1,174,543
1994-95	951,058	1.015	965,745
1995-96	1,082,306	1.017	1,100,257
1996-97	1,583,132	1.017	1,610,819
1997-98	1,232,089	1.019	1,255,131
1998-99	1,611,056	1.021	1,644,872
1999-00	1,522,833	1.024	1,559,263
2000-01	2,811,811	1.026	2,884,114
2001-02	2,471,080	1.032	2,549,244
2002-03	2,450,071	1.044	2,558,377
2003-04	2,004,800	1.076	2,156,730
2004-05	2,256,531	1.058	2,386,356
2005-06	1,320,724	1.076	1,420,510
2006-07	3,310,127	1.084	3,588,071
2007-08	2,070,729	1.095	2,267,248
2008-09	2,188,618	1.124	2,460,829
2009-10	3,514,331	1.158	4,067,996
2010-11	3,983,718	1.148	4,572,877
2011-12	2,454,272	1.236	3,033,904
2012-13	1,969,259	1.316	2,591,190
2013-14	1,865,491	1.635	3,049,805
2014-15	240,963	3.804	916,712
Total	\$50,863,553		\$56,698,232

Notes:

- (1) Provided by JT2.
- (2) Page 39, Column (2), tempered for SIR.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Paid Loss Development  
**Limited Self-Insured Losses Including 4850/TD**

Program Year	Cumulative Paid Losses as of 3/24/15 (1)	Paid Development Factor as of 3/24/15 (2)	Projected Ultimate Losses (3)
1985-86	\$389,628	1.028	\$400,610
1986-87	755,060	1.033	780,242
1987-88	130,922	1.035	135,530
1988-89	703,425	1.040	731,347
1989-90	738,579	1.044	771,438
1990-91	1,243,544	1.056	1,312,663
1991-92	1,268,635	1.060	1,344,497
1992-93	1,435,280	1.068	1,533,449
1993-94	1,159,670	1.064	1,234,446
1994-95	834,054	1.077	898,619
1995-96	1,059,029	1.084	1,148,156
1996-97	1,492,444	1.092	1,629,543
1997-98	1,172,802	1.102	1,292,402
1998-99	1,471,283	1.117	1,642,858
1999-00	1,473,573	1.136	1,674,021
2000-01	2,712,094	1.154	3,130,265
2001-02	2,317,539	1.182	2,738,856
2002-03	2,385,639	1.231	2,935,785
2003-04	2,000,996	1.287	2,575,850
2004-05	1,900,747	1.273	2,419,204
2005-06	1,275,199	1.316	1,678,651
2006-07	3,101,006	1.356	4,206,276
2007-08	1,517,175	1.399	2,122,612
2008-09	1,833,059	1.464	2,683,512
2009-10	2,762,546	1.541	4,255,869
2010-11	3,631,849	1.587	5,763,498
2011-12	1,888,394	1.802	3,402,074
2012-13	1,512,476	2.177	3,292,991
2013-14	1,340,896	3.229	4,329,192
2014-15	88,478	10.647	942,010
Total	\$45,596,023		\$63,006,466

Notes:

- (1) Provided by JT2.
- (2) Page 40, Column (2), tempered for SIR.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

IBNR to Case Reserves Ratio Method  
Limited Self-Insured Losses Including 4850/TD

Program Year	Limited Reported LDF (1)	Limited Paid LDF (2)	Limited IBNR to Case Reserves Ratio (3)	Limited Case Reserves (4)	Estimated IBNR as of Reserves (5)	Estimated Ultimate Losses (6)
1985-86	1.003	1.028	0.143	\$3,459	\$495	\$393,582
1986-87	1.006	1.033	0.240	0	0	755,060
1987-88	1.007	1.035	0.242	0	0	130,922
1988-89	1.008	1.040	0.270	0	0	703,425
1989-90	1.010	1.044	0.298	0	0	738,579
1990-91	1.014	1.056	0.347	18,651	6,472	1,268,668
1991-92	1.012	1.060	0.276	69,344	19,139	1,357,118
1992-93	1.014	1.068	0.275	52,358	14,398	1,502,036
1993-94	1.013	1.064	0.264	0	0	1,159,670
1994-95	1.015	1.077	0.269	117,003	31,474	982,532
1995-96	1.017	1.084	0.266	23,278	6,192	1,088,498
1996-97	1.017	1.092	0.257	90,688	23,307	1,606,439
1997-98	1.019	1.102	0.247	59,286	14,644	1,246,733
1998-99	1.021	1.117	0.245	139,773	34,244	1,645,300
1999-00	1.024	1.136	0.242	49,260	11,921	1,534,754
2000-01	1.026	1.154	0.231	99,716	23,034	2,834,845
2001-02	1.032	1.182	0.249	153,540	38,232	2,509,312
2002-03	1.044	1.231	0.292	64,432	18,814	2,468,885
2003-04	1.076	1.287	0.461	3,804	1,754	2,006,554
2004-05	1.058	1.273	0.340	355,784	120,966	2,377,497
2005-06	1.076	1.316	0.413	45,524	18,802	1,339,526
2006-07	1.084	1.356	0.418	209,121	87,413	3,397,540
2007-08	1.095	1.399	0.437	553,555	241,903	2,312,632
2008-09	1.124	1.464	0.536	355,559	190,580	2,379,198
2009-10	1.158	1.541	0.634	751,785	476,632	3,990,963
2010-11	1.148	1.587	0.535	351,868	188,250	4,171,968
2011-12	1.236	1.802	0.753	565,878	426,106	2,880,378
2012-13	1.316	2.177	0.798	456,784	364,513	2,333,772
2013-14	1.635	3.229	1.286	524,595	674,629	2,540,120
2014-15	3.804	10.647	4.364	152,486	665,448	906,411
Total				\$5,267,530	\$3,699,362	\$54,562,915

Notes:

- (1) Page 32, Column (2).
- (2) Page 33, Column (2).
- (3)  $[(1) - 1.000] \times (2) / [(2) - (1)]$ .
- (4)  $[\text{Page 32, Column (1)}] - [\text{Page 33, Column (1)}]$ .
- (5) (3) x (4), rounded.
- (6) (5) + Page 32, Column (1).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Bornhuetter-Ferguson Using Reported Losses  
Limited Self-Insured Losses Including 4850/TD

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 3/24/15 (5)	Estimated Ultimate Losses (6)
1985-86	\$476,412	1.003	0.3%	\$1,429	\$393,087	\$394,516
1986-87	1,001,801	1.006	0.6%	6,011	755,060	761,071
1987-88	123,581	1.007	0.7%	865	130,922	131,787
1988-89	657,049	1.008	0.8%	5,256	703,425	708,681
1989-90	699,537	1.010	1.0%	6,995	738,579	745,574
1990-91	1,372,795	1.014	1.4%	19,219	1,262,196	1,281,415
1991-92	1,265,316	1.012	1.2%	15,184	1,337,979	1,353,163
1992-93	1,746,338	1.014	1.4%	24,449	1,487,638	1,512,087
1993-94	1,053,219	1.013	1.3%	13,692	1,159,670	1,173,362
1994-95	918,767	1.015	1.5%	13,782	951,058	964,840
1995-96	1,192,950	1.017	1.6%	19,087	1,082,306	1,101,393
1996-97	1,591,465	1.017	1.7%	27,055	1,583,132	1,610,187
1997-98	1,902,077	1.019	1.8%	34,237	1,232,089	1,266,326
1998-99	1,493,984	1.021	2.1%	31,374	1,611,056	1,642,430
1999-00	1,927,590	1.024	2.3%	44,335	1,522,833	1,567,168
2000-01	4,227,579	1.026	2.5%	105,689	2,811,811	2,917,500
2001-02	2,434,284	1.032	3.1%	75,463	2,471,080	2,546,543
2002-03	2,374,859	1.044	4.2%	99,744	2,450,071	2,549,815
2003-04	2,010,000	1.076	7.0%	140,700	2,004,800	2,145,500
2004-05	2,303,560	1.058	5.4%	124,392	2,256,531	2,380,923
2005-06	3,412,550	1.076	7.0%	238,878	1,320,724	1,559,602
2006-07	3,272,059	1.084	7.7%	251,949	3,310,127	3,562,076
2007-08	3,174,329	1.095	8.7%	276,167	2,070,729	2,346,896
2008-09	3,545,082	1.124	11.1%	393,504	2,188,618	2,582,122
2009-10	3,560,489	1.158	13.6%	484,227	3,514,331	3,998,558
2010-11	3,119,562	1.148	12.9%	402,424	3,983,718	4,386,142
2011-12	3,190,008	1.236	19.1%	609,292	2,454,272	3,063,564
2012-13	3,032,321	1.316	24.0%	727,757	1,969,259	2,697,016
2013-14	3,204,402	1.635	38.8%	1,243,308	1,865,491	3,108,799
2014-15	3,331,790	3.804	73.7%	2,455,529	240,963	2,696,492
Total	\$63,615,756			\$7,891,993	\$50,863,553	\$58,755,546

Notes:

- (1) Page 43, Column (4), or Page 38, Column (6), adjusted for SIR.
- (2) Page 32, Column (2).
- (3)  $100\% - [1.000 / (2)]$ .
- (4)  $(1) \times (3)$ .
- (5) Page 32, Column (1).
- (6)  $(4) + (5)$ .

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Bornhuetter-Ferguson Using Paid Losses  
Limited Self-Insured Losses Including 4850/TD

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 3/24/15 (5)	Estimated Ultimate Losses (6)
1985-86	\$476,412	1.028	2.7%	\$12,863	\$389,628	\$402,491
1986-87	1,001,801	1.033	3.2%	32,058	755,060	787,118
1987-88	123,581	1.035	3.4%	4,202	130,922	135,124
1988-89	657,049	1.040	3.8%	24,968	703,425	728,393
1989-90	699,537	1.044	4.3%	30,080	738,579	768,659
1990-91	1,372,795	1.056	5.3%	72,758	1,243,544	1,316,302
1991-92	1,265,316	1.060	5.6%	70,858	1,268,635	1,339,493
1992-93	1,746,338	1.068	6.4%	111,766	1,435,280	1,547,046
1993-94	1,053,219	1.064	6.1%	64,246	1,159,670	1,223,916
1994-95	918,767	1.077	7.2%	66,151	834,054	900,205
1995-96	1,192,950	1.084	7.8%	93,050	1,059,029	1,152,079
1996-97	1,591,465	1.092	8.4%	133,683	1,492,444	1,626,127
1997-98	1,902,077	1.102	9.3%	176,893	1,172,802	1,349,695
1998-99	1,493,984	1.117	10.4%	155,374	1,471,283	1,626,657
1999-00	1,927,590	1.136	12.0%	231,311	1,473,573	1,704,884
2000-01	4,227,579	1.154	13.4%	566,496	2,712,094	3,278,590
2001-02	2,434,284	1.182	15.4%	374,880	2,317,539	2,692,419
2002-03	2,374,859	1.231	18.7%	444,099	2,385,639	2,829,738
2003-04	2,010,000	1.287	22.3%	448,230	2,000,996	2,449,226
2004-05	2,303,560	1.273	21.4%	492,962	1,900,747	2,393,709
2005-06	3,412,550	1.316	24.0%	819,012	1,275,199	2,094,211
2006-07	3,272,059	1.356	26.3%	860,552	3,101,006	3,961,558
2007-08	3,174,329	1.399	28.5%	904,684	1,517,175	2,421,859
2008-09	3,545,082	1.464	31.7%	1,123,791	1,833,059	2,956,850
2009-10	3,560,489	1.541	35.1%	1,249,732	2,762,546	4,012,278
2010-11	3,119,562	1.587	37.0%	1,154,238	3,631,849	4,786,087
2011-12	3,190,008	1.802	44.5%	1,419,554	1,888,394	3,307,948
2012-13	3,032,321	2.177	54.1%	1,640,486	1,512,476	3,152,962
2013-14	3,204,402	3.229	69.0%	2,211,037	1,340,896	3,551,933
2014-15	3,331,790	10.647	90.6%	3,018,601	88,478	3,107,079
Total	\$63,615,756			\$18,008,615	\$45,596,023	\$63,604,638

Notes:

- (1) Page 35, Column (1).
- (2) Page 33, Column (2).
- (3)  $100\% - [1.000 / (2)]$ .
- (4)  $(1) \times (3)$ .
- (5) Page 33, Column (2).
- (6)  $(4) + (5)$ .

**Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program**

**Actuarial Analysis of the  
Workers' Compensation Program**

**Gross Loss Exhibits**

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

**Selected Ultimate Losses  
Unlimited Losses Including 4850/TD**

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)
1985-86	\$543,760	\$519,342	\$555,574			\$550,000
1986-87	1,099,845	1,080,209	1,110,861			1,100,000
1987-88	133,264	136,874	130,922			132,000
1988-89	718,895	739,496	703,425			704,000
1989-90	770,946	794,203	751,039			752,000
1990-91	1,455,883	1,423,069	1,482,777			1,450,000
1991-92	1,382,403	1,366,637	1,394,286			1,380,000
1992-93	1,934,966	1,864,792	1,987,028			1,930,000
1993-94	1,206,451	1,279,533	1,159,670			1,160,000
1994-95	992,562	931,848	1,028,514			1,010,000
1995-96	1,297,938	1,194,027	1,358,436			1,330,000
1996-97	1,792,417	1,842,349	1,764,955			1,800,000
1997-98	2,029,912	1,484,049	2,313,535			2,170,000
1998-99	1,716,242	1,741,853	1,703,307			1,720,000
1999-00	2,298,100	2,545,634	2,185,467			2,240,000
2000-01	4,980,290	4,886,915	5,017,147			4,960,000
2001-02	2,810,524	2,906,464	2,774,502			2,790,000
2002-03	2,624,864	3,030,428	2,479,452			2,550,000
2003-04	2,156,730	2,575,850	2,006,554			2,010,000
2004-05	2,451,818	2,496,585	2,434,779			2,460,000
2005-06	1,464,447	1,729,920	1,347,857	\$1,676,948	\$2,604,788	1,500,000
2006-07	4,227,314	4,655,391	4,048,965	4,150,134	3,603,122	4,300,000
2007-08	2,330,233	2,173,467	2,394,005	2,447,877	2,817,670	2,400,000
2008-09	2,532,801	2,737,158	2,437,154	2,709,011	3,961,232	2,600,000
2009-10	6,996,832	6,742,976	7,126,872	6,496,729	2,998,165	6,800,000
2010-11	6,415,374	6,965,736	6,149,556	5,967,309	4,973,372	6,400,000
2011-12	3,448,103	3,702,047	3,298,029	3,652,548	4,211,580	3,600,000
2012-13	3,392,388	3,956,586	3,127,084	3,613,889	3,649,625	3,500,000
2013-14	3,177,595	4,651,635	2,590,481	3,712,719	4,105,599	3,700,000
2014-15	975,831	963,371	981,434	3,835,358	3,492,100	3,800,000
<b>Total</b>	<b>\$69,358,728</b>	<b>\$73,118,444</b>	<b>\$67,843,665</b>			<b>\$72,798,000</b>
05/06-14/15	\$34,960,918	\$38,278,287	\$33,501,438	\$38,262,523	\$36,417,253	\$38,600,000

(1) Page 39, Column (3).

(2) Page 40, Column (3).

(3) Page 41, Column (6).

(4) Page 42, Column (6).

(5) Page 46, Column (4).

(6) Selected on the basis of (1) - (5).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Reported Loss Development  
Unlimited Losses Including 4850/TD

Program Year	Cumulative Reported Losses as of 3/24/15 (1)	Reported Development Factor as of 3/24/15 (2)	Projected Ultimate Losses (3)
1985-86	\$536,861	1.013	\$543,760
1986-87	1,083,619	1.015	1,099,845
1987-88	130,922	1.018	133,264
1988-89	703,425	1.022	718,895
1989-90	751,039	1.027	770,946
1990-91	1,413,067	1.030	1,455,883
1991-92	1,337,979	1.033	1,382,403
1992-93	1,864,826	1.038	1,934,966
1993-94	1,159,670	1.040	1,206,451
1994-95	951,058	1.044	992,562
1995-96	1,239,830	1.047	1,297,938
1996-97	1,708,003	1.049	1,792,417
1997-98	1,928,018	1.053	2,029,912
1998-99	1,620,142	1.059	1,716,242
1999-00	2,158,423	1.065	2,298,100
2000-01	4,668,841	1.067	4,980,290
2001-02	2,627,765	1.070	2,810,524
2002-03	2,450,071	1.071	2,624,864
2003-04	2,004,800	1.076	2,156,730
2004-05	2,256,531	1.087	2,451,818
2005-06	1,320,724	1.109	1,464,447
2006-07	3,788,594	1.116	4,227,314
2007-08	2,070,729	1.125	2,330,233
2008-09	2,188,618	1.157	2,532,801
2009-10	5,876,064	1.191	6,996,832
2010-11	5,201,111	1.233	6,415,374
2011-12	2,562,665	1.346	3,448,103
2012-13	2,375,298	1.428	3,392,388
2013-14	1,865,491	1.703	3,177,595
2014-15	240,963	4.050	975,831
Total	\$60,085,145		\$69,358,728

## Notes:

- (1) Provided by JT2.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Paid Loss Projection  
Unlimited Losses Including 4850/TD

Program Year	Cumulative Paid Losses as of 3/24/15 (1)	Paid Development Factor as of 3/24/15 (2)	Projected Ultimate Losses (3)
1985-86	\$499,658	1.039	\$519,342
1986-87	1,037,050	1.042	1,080,209
1987-88	130,922	1.045	136,874
1988-89	703,425	1.051	739,496
1989-90	751,039	1.057	794,203
1990-91	1,333,398	1.067	1,423,069
1991-92	1,268,635	1.077	1,366,637
1992-93	1,713,399	1.088	1,864,792
1993-94	1,159,670	1.103	1,279,533
1994-95	834,054	1.117	931,848
1995-96	1,059,029	1.127	1,194,027
1996-97	1,617,315	1.139	1,842,349
1997-98	1,285,490	1.154	1,484,049
1998-99	1,480,369	1.177	1,741,853
1999-00	2,109,163	1.207	2,545,634
2000-01	3,955,099	1.236	4,886,915
2001-02	2,317,539	1.254	2,906,464
2002-03	2,385,639	1.270	3,030,428
2003-04	2,000,996	1.287	2,575,850
2004-05	1,900,747	1.313	2,496,585
2005-06	1,275,199	1.357	1,729,920
2006-07	3,339,678	1.394	4,655,391
2007-08	1,517,175	1.433	2,173,467
2008-09	1,833,059	1.493	2,737,158
2009-10	4,312,554	1.564	6,742,976
2010-11	4,058,407	1.716	6,965,736
2011-12	1,917,608	1.931	3,702,047
2012-13	1,692,477	2.338	3,956,586
2013-14	1,340,896	3.469	4,651,635
2014-15	88,478	10.888	963,371
Total	\$50,918,167		\$73,118,444

## Notes:

- (1) Provided by JT2.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

IBNR to Case Reserves Ratio Method  
Unlimited Losses Including 4850/TD

Program Year	Reported Development Factor as of 3/24/15 (1)	Paid Development Factor as of 3/24/15 (2)	IBNR to Case Reserves Ratio (3)	Case Reserves 3/24/15 (4)	Estimated IBNR Losses as of 3/24/15 (5)	Estimated Ultimate Losses (6)
1985-86	1.013	1.039	0.503	\$37,203	\$18,713	\$555,574
1986-87	1.015	1.042	0.585	46,568	27,242	1,110,861
1987-88	1.018	1.045	0.678	0	0	130,922
1988-89	1.022	1.051	0.789	0	0	703,425
1989-90	1.027	1.057	0.905	0	0	751,039
1990-91	1.030	1.067	0.875	79,669	69,710	1,482,777
1991-92	1.033	1.077	0.812	69,344	56,307	1,394,286
1992-93	1.038	1.088	0.807	151,428	122,202	1,987,028
1993-94	1.040	1.103	0.706	0	0	1,159,670
1994-95	1.044	1.117	0.662	117,003	77,456	1,028,514
1995-96	1.047	1.127	0.656	180,801	118,606	1,358,436
1996-97	1.049	1.139	0.628	90,688	56,952	1,764,955
1997-98	1.053	1.154	0.600	642,528	385,517	2,313,535
1998-99	1.059	1.177	0.595	139,773	83,165	1,703,307
1999-00	1.065	1.207	0.549	49,260	27,044	2,185,467
2000-01	1.067	1.236	0.488	713,743	348,306	5,017,147
2001-02	1.070	1.254	0.473	310,225	146,737	2,774,502
2002-03	1.071	1.270	0.456	64,432	29,381	2,479,452
2003-04	1.076	1.287	0.461	3,804	1,754	2,006,554
2004-05	1.087	1.313	0.501	355,784	178,248	2,434,779
2005-06	1.109	1.357	0.596	45,524	27,133	1,347,857
2006-07	1.116	1.394	0.580	448,916	260,371	4,048,965
2007-08	1.125	1.433	0.584	553,555	323,276	2,394,005
2008-09	1.157	1.493	0.699	355,559	248,536	2,437,154
2009-10	1.191	1.564	0.800	1,563,510	1,250,808	7,126,872
2010-11	1.233	1.716	0.830	1,142,705	948,445	6,149,556
2011-12	1.346	1.931	1.140	645,057	735,364	3,298,029
2012-13	1.428	2.338	1.101	682,821	751,786	3,127,084
2013-14	1.703	3.469	1.382	524,595	724,990	2,590,481
2014-15	4.050	10.888	4.856	152,486	740,471	981,434
Total				\$9,166,978	\$7,758,520	\$67,843,665

## Notes:

- (1) Page 39, Column (2).
- (2) Page 40, Column (2).
- (3)  $[(1) - 1.000] \times (2) / [(2) - (1)]$ .
- (4) Page 39, Column (1) - Page 40, Column (1).
- (5) (3) x (4), rounded.
- (6) (5) + Page 39, Column (1).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Bornhuetter-Ferguson Using Reported Losses  
**Unlimited Losses Including 4850/TD**

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 3/24/15 (5)	Estimated Ultimate Losses (6)
2005-06	\$3,634,939	1.109	9.8%	\$356,224	\$1,320,724	\$1,676,948
2006-07	3,476,347	1.116	10.4%	361,540	3,788,594	4,150,134
2007-08	3,397,733	1.125	11.1%	377,148	2,070,729	2,447,877
2008-09	3,826,416	1.157	13.6%	520,393	2,188,618	2,709,011
2009-10	3,879,154	1.191	16.0%	620,665	5,876,064	6,496,729
2010-11	4,053,956	1.233	18.9%	766,198	5,201,111	5,967,309
2011-12	4,240,788	1.346	25.7%	1,089,883	2,562,665	3,652,548
2012-13	4,128,637	1.428	30.0%	1,238,591	2,375,298	3,613,889
2013-14	4,472,707	1.703	41.3%	1,847,228	1,865,491	3,712,719
2014-15	4,773,433	4.050	75.3%	3,594,395	240,963	3,835,358
	\$39,884,110			\$10,772,265	\$27,490,258	\$38,262,523

## Notes:

- (1) Page 43, Column (4).
- (2) Page 39, Column (2).
- (3)  $100\% - [1.000 / (2)]$ .
- (4)  $(1) \times (3)$ .
- (5) Page 39, Column (1).
- (6)  $(4) + (5)$ .

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

*A Priori* Losses for Bornhuetter-Ferguson  
**Unlimited Losses Including 4850/TD**

Program Year	<i>A Priori</i> Loss Rate (1)	Factor to Remove Trend (2)	Trended Payroll (\$00's) (3)	<i>A Priori</i> Ultimate Losses (4)
2005-06	\$10.71	0.661	\$513,460	\$3,634,939
2006-07	10.71	0.647	501,683	3,476,347
2007-08	10.71	0.632	501,976	3,397,733
2008-09	10.71	0.675	529,296	3,826,416
2009-10	10.71	0.721	502,357	3,879,154
2010-11	10.71	0.769	492,224	4,053,956
2011-12	10.71	0.821	482,296	4,240,788
2012-13	10.71	0.877	439,559	4,128,637
2013-14	10.71	0.937	445,699	4,472,707
2014-15	10.71	1.000	445,699	4,773,433
Total			\$4,854,249	\$39,884,110

## Notes:

- (1) Page 44, Item (5).
- (2) Estimated by BAC.
- (3) Page 65, Column (3).
- (4) (1) x (2) x (3).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

*A Priori* Loss Rate for Bornhuetter-Ferguson Method  
**Unlimited Losses Including 4850/TD**

Program Year	<i>A Priori</i> Ultimate Losses (1)	Estimated Pure Premium Trend (2)	Trended Payroll (\$00's) (3)	Constant Dollar Loss Rate (4)
2000-01	\$4,937,027	1.543	\$378,946	\$20.10
2001-02	2,854,683	1.476	407,767	10.33
2002-03	2,810,418	1.412	452,603	8.77
2003-04	2,347,534	1.445	499,830	6.78
2004-05	2,472,085	1.478	489,865	7.46
2005-06	1,583,844	1.512	513,460	4.66
2006-07	4,417,630	1.547	501,683	13.62
2007-08	2,261,265	1.582	501,976	7.13
2008-09	2,622,028	1.482	529,296	7.34
2009-10	6,887,085	1.388	502,357	19.03
2010-11	6,645,506	1.300	492,224	17.55
2011-12	3,552,400	1.217	482,296	8.97
2012-13	3,606,354	1.140	439,559	9.35
2013-14	3,663,020	1.068	445,699	8.78
2014-15	972,453	1.000	445,699	2.18
Total	\$51,633,332		\$7,083,261	\$10.14
00/01-13/14	\$35,239,132		\$4,408,550	\$10.71
		(5) Selected A Priori 2014-15 Loss Rate:		\$10.71

## Notes:

- (1) Page 45, Column (3).
- (2) Estimated by BAC.
- (3) Page 65, Column (3).
- (4)  $(1) \times (2) / (3)$ .
- (5) Selected on the basis of (4).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

*A Priori* Ultimate losses  
**Unlimited Losses Including 4850/TD**

Program Year	Reported Loss Projection (1)	Paid Loss Projection (2)	<i>A Priori</i> Selection (3)
1985-86	\$543,760	\$519,342	\$536,861
1986-87	1,099,845	1,080,209	1,090,154
1987-88	133,264	136,874	135,045
1988-89	718,895	739,496	729,050
1989-90	770,946	794,203	782,401
1990-91	1,455,883	1,423,069	1,439,765
1991-92	1,382,403	1,366,637	1,374,684
1992-93	1,934,966	1,864,792	1,900,717
1993-94	1,206,451	1,279,533	1,241,918
1994-95	992,562	931,848	963,239
1995-96	1,297,938	1,194,027	1,247,909
1996-97	1,792,417	1,842,349	1,816,359
1997-98	2,029,912	1,484,049	1,928,018
1998-99	1,716,242	1,741,853	1,728,376
1999-00	2,298,100	2,545,634	2,414,118
2000-01	4,980,290	4,886,915	4,937,027
2001-02	2,810,524	2,906,464	2,854,683
2002-03	2,624,864	3,030,428	2,810,418
2003-04	2,156,730	2,575,850	2,347,534
2004-05	2,451,818	2,496,585	2,472,085
2005-06	1,464,447	1,729,920	1,583,844
2006-07	4,227,314	4,655,391	4,417,630
2007-08	2,330,233	2,173,467	2,261,265
2008-09	2,532,801	2,737,158	2,622,028
2009-10	6,996,832	6,742,976	6,887,085
2010-11	6,415,374	6,965,736	6,645,506
2011-12	3,448,103	3,702,047	3,552,400
2012-13	3,392,388	3,956,586	3,606,354
2013-14	3,177,595	4,651,635	3,663,020
2014-15	975,831	963,371	972,453
Total	\$69,358,728	\$73,118,444	\$70,961,946

## Notes:

- (1) Page 39, Column (3).
- (2) Page 40, Column (3).
- (3) Selected on the basis of (1) and (2).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Frequency Times Severity Method

Program Year	Selected Claim Severity (1)	Factor to Remove Trend (2)	Selected Ultimate Claims (3)	Estimated Ultimate Losses (4)
2005-06	\$74,300	0.661	53	\$2,604,788
2006-07	74,300	0.647	75	3,603,122
2007-08	74,300	0.632	60	2,817,670
2008-09	74,300	0.675	79	3,961,232
2009-10	74,300	0.721	56	2,998,165
2010-11	74,300	0.769	87	4,973,372
2011-12	74,300	0.821	69	4,211,580
2012-13	74,300	0.877	56	3,649,625
2013-14	74,300	0.937	59	4,105,599
2014-15	74,300	1.000	47	3,492,100
Total				\$36,417,253

## Notes:

- (1) Page 47, Item (5).
- (2) Estimated by BAC.
- (3) Page 48, Column (3).
- (4) (1) x (2) x (3).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Calculation of Expected Claim Severity  
Frequency Times Severity Method  
**Unlimited Losses Including 4850/TD**

Program Year	<i>A Priori</i> Ultimate Losses (1)	Estimated Severity Trend (2)	Selected Claim Count (3)	Trended Claim Severity (4)
2003-04	\$2,347,534	1.445	73	\$46,454
2004-05	2,472,085	1.478	68	53,724
2005-06	1,583,844	1.512	53	45,178
2006-07	4,417,630	1.547	75	91,096
2007-08	2,261,265	1.582	60	59,628
2008-09	2,622,028	1.482	79	49,181
2009-10	6,887,085	1.388	56	170,675
2010-11	6,645,506	1.300	87	99,281
2011-12	3,552,400	1.217	69	62,671
2012-13	3,606,354	1.140	56	73,419
2013-14	3,663,020	1.068	59	66,291
2014-15	972,453	1.000	47	20,690
Total	\$41,031,204		782	\$69,857
03/04-13/14	\$40,058,751		735	\$74,300
			(5) Selected Severity:	\$74,300

## Notes:

- (1) Page 45, Column (3).
- (2) Estimated by BAC.
- (3) Page 48, Column (3).
- (4) (1) x (2) / (3).
- (5) Selected on the basis of (4).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Selected Claim Counts

Program Year	Reported Claim Count Projection (1)	Bornhuetter- Ferguson Method (2)	Selected Claim Count (3)
1985-86	10		10
1986-87	12		12
1987-88	8		8
1988-89	22		22
1989-90	40		40
1990-91	49		49
1991-92	46		46
1992-93	37		37
1993-94	50		50
1994-95	45		45
1995-96	45		45
1996-97	54		54
1997-98	61		61
1998-99	54		54
1999-00	51		51
2000-01	63		63
2001-02	71		71
2002-03	74		74
2003-04	73		73
2004-05	68		68
2005-06	53		53
2006-07	75		75
2007-08	60		60
2008-09	79		79
2009-10	56		56
2010-11	87		87
2011-12	69		69
2012-13	56		56
2013-14	59		59
2014-15	28	47	47
Total	1,555		1,574

## Notes:

- (1) Page 49, Column (3).
- (2) Page 50, Column (6).
- (3) Selected on the basis of (1) and (2).

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projection of Ultimate # of Indemnity Claims

Program Year	Total Indemnity Claims Reported 3/24/15 <u>(1)</u>	Development Factors as of 3/24/15 <u>(2)</u>	Projected Ultimate Indemnity Claims <u>(3)</u>
1985-86	10	1.000	10
1986-87	12	1.000	12
1987-88	8	1.000	8
1988-89	22	1.000	22
1989-90	40	1.000	40
1990-91	49	1.000	49
1991-92	46	1.000	46
1992-93	37	1.000	37
1993-94	50	1.000	50
1994-95	45	1.000	45
1995-96	45	1.000	45
1996-97	54	1.000	54
1997-98	61	1.000	61
1998-99	54	1.000	54
1999-00	51	1.000	51
2000-01	63	1.000	63
2001-02	71	1.000	71
2002-03	74	1.000	74
2003-04	73	1.000	73
2004-05	68	1.000	68
2005-06	53	1.000	53
2006-07	75	1.000	75
2007-08	60	1.000	60
2008-09	79	1.000	79
2009-10	56	1.005	56
2010-11	87	1.004	87
2011-12	69	1.004	69
2012-13	56	1.004	56
2013-14	57	1.033	59
2014-15	12	2.323	28
Total	1,537		1,555

## Notes:

- (1) Provided by JT2.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projection of Ultimate # of Indemnity Claims  
Bornhuetter-Ferguson Method

Program Year	A Priori Claim Count (1)	Claim Development Factor (2)	Estimated Percentage of Claims Unreported (3)	Estimated Unreported Claims (4)	Reported Claims as of 3/24/15 (5)	Projected Ultimate Claims (6)
2014-15	62	2.323	56.9%	35	12	47

## Notes:

- (1) Page 51, Item (6).
- (2) Page 49, Column (2).
- (3)  $100\% - [ 1.000 / (2) ]$ .
- (4)  $(1) \times (3)$ .
- (5) Page 49, Column (1).
- (6)  $(4) + (5)$ .

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Calculation of Expected Claim Counts  
A Priori Claim Count

Program Year	Projected Ultimate Claim Counts (1)	Trended Payroll (\$Millions) (2)	Indicated Claim Frequency (3)
2007-08	60	\$50.2	1.20
2008-09	79	52.9	1.49
2008-09	79	52.9	1.49
2009-10	56	50.2	1.11
2010-11	87	49.2	1.77
2011-12	69	48.2	1.43
2012-13	56	44.0	1.27
2013-14	59	44.6	1.32
2014-15	28	44.6	0.63
Total	573	\$436.8	1.30
07/08-13/14	545	\$392.3	1.39
	(4) Selected Claim Frequency:		1.39
	(5) 2014-15 Trended Payroll (\$Millions):		\$44.6
	(6) 2014-15 A Priori Claim Count:		62

## Notes:

- (1) Page 49, Column (3).
- (2) Page 65, Column (3) / 10,000.
- (3) (1) / (2).
- (4) Selected on the basis of (3).
- (5) Page 65, Column (3) / 10,000.
- (6) (4) x (5).

**Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program**

**Actuarial Analysis of the  
Workers' Compensation Program**

**Future Loss Exhibits**

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Projected Ultimate Unlimited Loss Rate for 2015-16  
**Unlimited Losses Including 4850/TD**

Program Year	2014-15 Level Loss Rate (1)	Expected Increase for 2015-16 (2)	Trended Payroll (\$00's) (3)	Projected Ultimate Losses (4)	Projected 2015-16 Unlimited Loss Rate (5)
2015-16	\$9.70	1.068	\$445,699	<b>4,616,123</b>	\$10.56
				(6) 4850 percentage:	6.8%
				(7) Gross Rate ex 4850 :	\$9.85
				(8) 1M Limit Rate ex 4850 :	\$9.40
				(9) 750K Limit Rate ex 4850 :	\$9.09
				(10) 500K Limit Rate ex 4850 :	\$8.40
				(11) 250K Limit Rate ex 4850 :	\$6.66
				(12) 150K Limit Rate ex 4850 :	\$5.14

Notes:

- (1) Page 54, Item (11).
- (2) 6.8% Expected Increase Estimated by BAC.
- (3) Page 65, Column (2).
- (4) (1) x (2) x (3), rounded.
- (5) (4) / [Page 65, Column (2)], rounded.
- (6) Page 23, Column (3).
- (7) [ 1.00 - (6)] x Unlimited Loss Rate.
- (8) - (12) Unlimited Loss Rate adjusted for Stated Limit & Percentages on Page 23.

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

**Unlimited Losses Including 4850/TD**

Projected Future Loss Rate

Program Year	Estimated Ultimate Losses (1)	Pure Premium Trend (2)	Trended Payroll (\$00's) (3)	Trended Loss Rate (4)
2002-03	\$2,550,000	1.412	\$452,603	\$7.96
2003-04	2,010,000	1.445	499,830	5.81
2004-05	2,460,000	1.478	489,865	7.42
2005-06	1,500,000	1.512	513,460	4.42
2006-07	4,300,000	1.547	501,683	13.26
2007-08	2,400,000	1.582	501,976	7.56
2008-09	2,600,000	1.482	529,296	7.28
2009-10	6,800,000	1.388	502,357	18.79
2010-11	6,400,000	1.300	492,224	16.90
2011-12	3,600,000	1.217	482,296	9.09
2012-13	3,500,000	1.140	439,559	9.08
2013-14	3,700,000	1.068	445,699	8.86
<b>Total</b>	<b>\$37,260,000</b>		<b>\$4,898,416</b>	<b>\$9.70</b>

(5) Selected Loss Rate: \$9.70

Program Year	Largest Claim (6)	Severity Trend (7)	LDL (8)	Trended Developed Max Claim (9)
2003-04	\$306,241	1.445	1.076	\$475,908
2004-05	455,667	1.478	1.087	731,657
2005-06	273,605	1.512	1.109	458,646
2006-07	822,712	1.547	1.116	1,419,729
2007-08	491,528	1.582	1.125	875,133
2008-09	430,181	1.482	1.157	737,679
2009-10	2,811,520	1.388	1.191	4,645,982
2010-11	711,140	1.300	1.233	1,140,088
2011-12	358,393	1.217	1.346	587,003
2012-13	650,000	1.140	1.428	1,058,350

(10) Factor for Unlimited Retention: 1.000

(11) Unlimited 2014-15 Rate: **\$9.70**

Notes:

- (1) Page 38, Column (6).
- (2) Page 44, Column (2).
- (3) Page 65, Column (3).
- (4) (1) x (2) / (3).
- (5) Based on Column (4).
- (6) Provided by JT2.
- (7) Page 47, Column (2). Indexed to 2014-15.
- (8) Page 39, Column (2).
- (9) (6) x (7) x (8).
- (10) Estimated by BAC.
- (11) (5) x (10).

**Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program**

**Actuarial Analysis of the  
Workers' Compensation Program**

**Discounting Exhibits**

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Discounted Value of Unpaid Losses as of June 30, 2015  
Assuming a 1.5% Interest Rate

**Limited Self-Insured Losses Excluding 4850/TD**

Program Year	Projected Unpaid Losses (1)	Discount Factor (2)	Discounted Unpaid Losses (3)
1985-86	\$10,119	0.939	\$9,505
1986-87	902	0.931	839
1987-88	1,064	0.924	983
1988-89	558	0.919	513
1989-90	1,381	0.920	1,271
1990-91	44,063	0.915	40,335
1991-92	79,904	0.905	72,336
1992-93	84,102	0.896	75,339
1993-94	326	0.897	292
1994-95	130,194	0.894	116,404
1995-96	49,951	0.889	44,428
1996-97	124,902	0.887	110,725
1997-98	104,575	0.886	92,688
1998-99	163,535	0.888	145,236
1999-00	102,754	0.888	91,237
2000-01	163,208	0.890	145,174
2001-02	282,052	0.896	252,688
2002-03	137,333	0.893	122,627
2003-04	97,320	0.887	86,338
2004-05	480,436	0.886	425,504
2005-06	218,200	0.884	192,786
2006-07	585,156	0.880	515,115
2007-08	766,134	0.879	673,551
2008-09	641,338	0.879	563,421
2009-10	1,204,889	0.874	1,052,554
2010-11	854,895	0.879	751,599
2011-12	1,142,590	0.888	1,014,945
2012-13	1,224,118	0.899	1,100,992
2013-14	1,709,127	0.911	1,556,699
2014-15	2,509,665	0.912	2,289,494
<b>Total</b>	<b>\$12,914,793</b>		<b>\$11,545,618</b>

(4) Indicated Discount Factor: 0.894

Notes:

- (1) Page 21, Column (6).
- (2) (3) / (1).
- (3) Based upon a 1.5% interest rate.
- (4) [ Sum of Column (3) ] / [ Sum of Column (1) ].

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Discounted Value of 2015-16 Losses as of July 1, 2015  
Assuming a 1.5% Interest rate

Unlimited Losses Including 4850/TD

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2015-16	\$508,917	0.993	\$505,143
2016-17	832,903	0.978	814,508
2017-18	466,455	0.963	449,412
2018-19	598,305	0.949	567,926
2019-20	369,748	0.935	345,787
2020-21	245,861	0.921	226,530
2021-22	159,104	0.908	144,428
2022-23	179,460	0.894	160,499
2023-24	84,114	0.881	74,115
2024-25	52,195	0.868	45,311
2025-26	8,990	0.855	7,689
2026-27	103,141	0.843	86,910
2027-28	32,011	0.830	26,575
2028-29	51,157	0.818	41,842
2029-30	56,328	0.806	45,390
2030-31	98,081	0.794	77,868
2031-32	98,635	0.782	77,151
2032-33	68,616	0.771	52,877
2033-34	49,469	0.759	37,558
2034-35	39,732	0.748	29,720
2035-36	36,800	0.737	27,120
2036-37	56,455	0.726	40,990
2037-38	58,016	0.715	41,501
2038-39	39,577	0.705	27,892
2039-40	40,320	0.694	27,996
40-41 to 52-53	281,735	0.631	177,829
Total	\$4,616,123		\$4,160,567

(4) Indicated Discount Factor: 0.901

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 1.5% interest rate.
- (3) (1) x (2).
- (4) [ Sum of Column (3) ] / [ Sum of Column (1) ].

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Discounted Value of 2015-16 Losses as of July 1, 2015  
Assuming a 1.5% Interest rate

\$1 Million SIR  
Limited Self-Insured Losses Including 4850/TD

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2015-16	\$487,597	0.993	\$483,980
2016-17	798,009	0.978	780,385
2017-18	446,913	0.963	430,584
2018-19	573,239	0.949	544,133
2019-20	354,257	0.935	331,300
2020-21	235,560	0.921	217,040
2021-22	152,439	0.908	138,378
2022-23	171,942	0.894	153,775
2023-24	80,590	0.881	71,010
2024-25	50,008	0.868	43,412
2025-26	8,613	0.855	7,366
2026-27	98,820	0.843	83,269
2027-28	31,744	0.830	26,353
2028-29	50,005	0.818	40,900
2029-30	54,857	0.806	44,205
2030-31	94,603	0.794	75,107
2031-32	94,925	0.782	74,249
2032-33	65,393	0.771	50,394
2033-34	47,137	0.759	35,788
2034-35	37,854	0.748	28,315
2035-36	35,056	0.737	25,835
2036-37	53,771	0.726	39,042
2037-38	55,452	0.715	39,667
2038-39	37,662	0.705	26,543
2039-40	38,364	0.694	26,638
40-41 to 52-53	267,922	0.631	169,059
Total	\$4,422,732		\$3,986,727

(4) Indicated Discount Factor: 0.901

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 1.5% interest rate.
- (3) (1) x (2).
- (4) [ Sum of Column (3) ] / [ Sum of Column (1) ].

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Discounted Value of 2015-16 Losses as of July 1, 2015  
Assuming a 1.5% Interest rate

\$500,000 SIR

Limited Self-Insured Losses Including 4850/TD

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2015-16	\$439,049	0.993	\$435,793
2016-17	718,556	0.978	702,686
2017-18	402,417	0.963	387,713
2018-19	518,859	0.949	492,514
2019-20	337,433	0.935	315,566
2020-21	228,246	0.921	210,301
2021-22	151,550	0.908	137,571
2022-23	165,667	0.894	148,163
2023-24	83,788	0.881	73,828
2024-25	56,173	0.868	48,764
2025-26	20,485	0.855	17,520
2026-27	94,376	0.843	79,524
2027-28	25,208	0.830	20,927
2028-29	40,118	0.818	32,813
2029-30	44,002	0.806	35,458
2030-31	76,160	0.794	60,465
2031-32	76,085	0.782	59,513
2032-33	52,592	0.771	40,529
2033-34	37,771	0.759	28,677
2034-35	30,249	0.748	22,627
2035-36	27,947	0.737	20,596
2036-37	42,745	0.726	31,036
2037-38	11,352	0.715	8,121
2038-39	33,086	0.705	23,318
2039-40	33,686	0.694	23,390
40-41 to 52-53	234,786	0.631	148,092
Total	\$3,982,386		\$3,605,505

(4) Indicated Discount Factor: 0.905

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 1.5% interest rate.
- (3) (1) x (2).
- (4) [ Sum of Column (3) ] / [ Sum of Column (1) ].

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Discounted Value of 2015-16 Losses as of July 1, 2015  
Assuming a 1.5% Interest rate

\$250,000 SIR  
Limited Self-Insured Losses Including 4850/TD

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2015-16	\$363,105	0.993	\$360,412
2016-17	642,969	0.978	628,769
2017-18	355,458	0.963	342,471
2018-19	437,594	0.949	415,375
2019-20	289,095	0.935	270,360
2020-21	195,249	0.921	179,898
2021-22	131,258	0.908	119,151
2022-23	135,625	0.894	121,295
2023-24	73,425	0.881	64,696
2024-25	52,065	0.868	45,198
2025-26	26,989	0.855	23,083
2026-27	72,387	0.843	60,996
2027-28	14,244	0.830	11,825
2028-29	23,499	0.818	19,220
2029-30	25,861	0.806	20,840
2030-31	45,478	0.794	36,106
2031-32	45,122	0.782	35,294
2032-33	31,632	0.771	24,377
2033-34	22,552	0.759	17,122
2034-35	17,962	0.748	13,436
2035-36	16,518	0.737	12,173
2036-37	7,361	0.726	5,345
2037-38	9,666	0.715	6,914
2038-39	10,082	0.705	7,105
2039-40	22,443	0.694	15,584
40-41 to 52-53	154,351	0.630	97,189
Total	\$3,221,989		\$2,954,234

(4) Indicated Discount Factor: 0.917

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 1.5% interest rate.
- (3) (1) x (2).
- (4) [ Sum of Column (3) ] / [ Sum of Column (1) ].

**Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program**

**Actuarial Analysis of the  
Workers' Compensation Program**

**Claims Data Exhibits**

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Cumulative Reported Losses (\$000's) as of December 31, 2014 - Unlimited

Program Year	<u>Months of Development</u>										
	<u>6</u>	<u>18</u>	<u>30</u>	<u>42</u>	<u>54</u>	<u>66</u>	<u>78</u>	<u>90</u>	<u>102</u>	<u>114</u>	<u>126</u>
1994										1,070	1,053
1995									746	747	767
1996								841	838	849	855
1997							1,502	1,656	1,665	1,676	1,682
1998						1,124	1,054	1,035	1,027	1,028	1,086
1999					1,161	1,279	1,290	1,286	1,356	1,441	1,451
2000				1,082	1,243	1,263	1,230	1,277	1,471	1,557	1,970
2001			1,697	2,579	2,857	2,668	3,101	3,477	3,769	4,114	4,088
2002		1,239	1,886	2,196	2,336	2,291	2,328	2,367	2,375	2,354	2,361
2003	644	2,163	2,625	2,510	2,494	2,445	2,452	2,452	2,440	2,440	2,415
2004	676	1,643	1,676	1,757	1,803	1,906	1,862	1,788	1,781	1,852	1,998
2005	882	1,861	1,899	2,025	2,284	1,955	2,133	2,183	2,166	2,146	2,257
2006	507	1,453	1,896	2,268	1,889	1,664	1,672	1,683	1,644	1,320	
2007	696	3,220	4,322	3,231	3,180	3,579	3,866	3,789	3,785		
2008	317	1,879	1,778	1,423	1,428	1,526	1,620	2,071			
2009	488	1,618	2,060	1,916	1,940	2,331	2,207				
2010	657	2,758	3,500	3,588	5,609	5,938					
2011	1,155	4,758	4,564	4,256	5,135						
2012	586	1,659	2,086	2,501							
2013	266	1,347	2,301								
2014	400	1,704									
2015	79										
	<u>6 - 18</u>	<u>18 - 30</u>	<u>30 - 42</u>	<u>42 - 54</u>	<u>54 - 66</u>	<u>66 - 78</u>	<u>78 - 90</u>	<u>90 - 102</u>	<u>102 - 114</u>	<u>114 - 126</u>	<u>126 - Ult.</u>
ALL YR VOL	3.583	1.195	1.009	1.117	1.022	1.033	1.039	1.020	1.011	1.033	
REFERENCE	2.872	1.314	1.163	1.116	1.062	1.029	1.011	1.009	1.007	1.004	1.089
SELECTED	4.094	1.251	1.046	1.109	1.039	1.027	1.034	1.011	1.001	1.024	1.089
CUMULATIVE	7.393	1.806	1.443	1.380	1.244	1.198	1.166	1.128	1.116	1.115	1.089
@ 3/24/15	4.050	1.703	1.428	1.346	1.233	1.191	1.157	1.125	1.116	1.109	1.087

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Cumulative Paid Losses (\$000's) as of December 31, 2014 - Unlimited

Program Year	Months of Development										
	<u>6</u>	<u>18</u>	<u>30</u>	<u>42</u>	<u>54</u>	<u>66</u>	<u>78</u>	<u>90</u>	<u>102</u>	<u>114</u>	<u>126</u>
1994										1,022	1,027
1995									738	743	747
1996								838	838	839	843
1997							1,345	1,420	1,467	1,505	1,522
1998						882	932	968	989	999	1,011
1999					988	1,102	1,188	1,232	1,338	1,361	1,382
2000				688	774	846	931	1,029	1,136	1,254	1,684
2001			863	1,708	2,057	2,279	2,518	2,758	2,905	3,162	3,385
2002		654	1,162	1,499	1,859	2,047	2,128	2,155	2,183	2,213	2,248
2003	238	991	1,485	1,906	2,111	2,271	2,276	2,279	2,282	2,379	2,381
2004	116	726	1,078	1,264	1,557	1,653	1,667	1,693	1,742	1,764	1,998
2005	229	1,059	1,332	1,459	1,532	1,585	1,714	1,819	1,842	1,866	1,894
2006	123	646	1,005	1,124	1,211	1,254	1,262	1,269	1,272	1,275	
2007	224	1,357	2,048	2,507	2,751	3,107	3,160	3,248	3,329		
2008	65	797	1,117	1,190	1,236	1,294	1,369	1,511			
2009	156	891	1,433	1,593	1,719	1,820	1,831				
2010	174	1,675	2,265	2,775	3,033	4,299					
2011	376	2,001	3,230	3,761	3,999						
2012	192	728	1,366	1,855							
2013	136	805	1,579								
2014	161	1,145									
2015	23										
	<u>6 - 18</u>	<u>18 - 30</u>	<u>30 - 42</u>	<u>42 - 54</u>	<u>54 - 66</u>	<u>66 - 78</u>	<u>78 - 90</u>	<u>90 - 102</u>	<u>102 - 114</u>	<u>114 - 126</u>	<u>126 - Ult.</u>
ALL YR VOL	5.850	1.549	1.231	1.110	1.131	1.041	1.044	1.030	1.033	1.053	
REFERENCE	3.815	1.674	1.339	1.226	1.118	1.069	1.055	1.040	1.020	1.009	1.318
SELECTED	6.343	1.610	1.243	1.128	1.115	1.047	1.047	1.029	1.024	1.038	1.318
CUMULATIVE	25.242	3.979	2.472	1.988	1.762	1.581	1.509	1.442	1.402	1.368	1.318
@ 3/24/15	10.888	3.469	2.338	1.931	1.716	1.564	1.493	1.433	1.394	1.357	1.313

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Cumulative # of Indemnity Losses Reported as of December 31, 2014 - Unlimited

Program	<u>Months of Development</u>											
	<u>6</u>	<u>18</u>	<u>30</u>	<u>42</u>	<u>54</u>	<u>66</u>	<u>78</u>	<u>90</u>	<u>102</u>	<u>114</u>	<u>126</u>	<u>138</u>
2004				70	70	71	72	72	73	73	73	73
2005			67	67	68	68	68	68	68	68	68	68
2006		52	53	54	54	53	53	53	53	53		
2007	32	69	74	74	74	74	75	75	75			
2008	22	56	58	59	59	60	60	60				
2009	30	78	79	78	78	79	79					
2010	25	53	55	56	56	56						
2011	44	86	87	86	87							
2012	25	66	68	69								
2013	19	53	56									
2014	26	57										
2015	9											
	<u>6 - 18</u>	<u>18 - 30</u>	<u>30 - 42</u>	<u>42 - 54</u>	<u>54 - 66</u>	<u>66 - 78</u>	<u>78 - 90</u>	<u>90 - 102</u>	<u>102 - 114</u>	<u>114 - 126</u>	<u>126 - 138</u>	<u>138 - Ult.</u>
ALL YR VOL	2.323	1.033	1.004	1.004	1.004	1.005	1.000	1.004	1.000	1.000	1.000	
SELECTED	2.323	1.033	1.004	1.004	1.004	1.005	1.000	1.000	1.000	1.000	1.000	1.000
CUMULATIVE	2.440	1.050	1.017	1.013	1.009	1.005	1.000	1.000	1.000	1.000	1.000	1.000

Monterey Bay Area Self Insurance Authority  
Workers' Compensation Program

Program Information

Program Year	Self-Insured Retention (SIR) (1)	Payroll (\$00's) (2)	Payroll Trended to 2014-15 (\$00's) (3)
1985-86	\$150,000	\$0	\$0
1986-87	200,000	0	0
1987-88	250,000	0	0
1988-89	250,000	0	0
1989-90	250,000	0	0
1990-91	300,000	0	0
1991-92	250,000	0	0
1992-93	250,000	0	0
1993-94	275,000	0	0
1994-95	300,000	0	0
1995-96	300,000	0	0
1996-97	300,000	0	0
1997-98	300,000	204,799	341,244
1998-99	300,000	212,991	337,994
1999-00	300,000	267,420	404,160
2000-01	300,000	263,274	378,946
2001-02	350,000	297,462	407,767
2002-03	500,000	346,678	452,603
2003-04	NO XS	401,995	499,830
2004-05	500,000	401,860	489,865
2005-06	500,000	429,640	513,460
2006-07	500,000	428,182	501,683
2007-08	500,000	437,000	501,976
2008-09	500,000	470,000	529,296
2009-10	500,000	455,000	502,357
2010-11	250,000	454,739	492,224
2011-12	250,000	454,479	482,296
2012-13	250,000	422,491	439,559
2013-14	250,000	436,959	445,699
2014-15	250,000	436,959	445,699
2015-16	?	436,959	445,699

Notes:

- (1) Provided by MBASIA.
- (2) Provided by MBASIA. 2015-16 estimated by BAC.
- (3) Estimated by BAC.