

Compton Community College District

An Actuarial Review of the Workers' Compensation Program

BAY ACTUARIAL CONSULTANTS
Moraga, California
June 22, 2015

Bay Actuarial Consultants

June 22, 2015

Rachelle Sasser
Dean of Human Resources
Compton Community College District
Office of Human Resources/Risk Management
1111 E. Artesia Blvd.
Compton, CA 90221

Dear Ms. Sasser:

This report documents our actuarial review of the **Compton Community College District's** workers' compensation program. We appreciate the opportunity to be of service.

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

Sincerely,

BAY ACTUARIAL CONSULTANTS



Jack Joyce, FCAS, MAAA
Principal

Compton Community College District

An Actuarial Review of the Workers' Compensation Program

Table of Contents

	<u>Page</u>
Introduction	2
<i>Background & Purpose</i>	3
<i>Conditions & Limitations</i>	3
<i>Organization of the Report</i>	4
Management Summary	5
<i>Projected Unpaid Self-Insured Losses @ 6/30/15</i>	6
<i>Projected 2015-16 Rates of Loss</i>	6
<i>Compton's Past Rates of Loss</i>	7
<i>Indemnity Claim Frequency</i>	8
<i>Average Indemnity Claim Amount ("Severity")</i>	8
<i>Comparison with Prior Estimates</i>	9
<i>Different Interest Rates</i>	9
<i>Lifetime Medical Claims</i>	10
Technical Approach	11
Summary Exhibits	14
Fiscal Year End Exhibit	18
Limited Loss Exhibits	22
Gross Loss Exhibits	29
Future Loss Exhibits	44
Discounting Exhibits	47

Compton Community College District

An Actuarial Review of the Workers' Compensation Program

Introduction

Compton Community College District

An Actuarial Review of the Workers' Compensation Program

Introduction

Background & Purpose

The Compton Community College District self-insures its workers' compensation claims.

Compton has asked Bay Actuarial Consultants to provide an actuarial report on its workers' compensation program. The specific topics covered in this report include the following:

- 1) **Unpaid Losses.** We have projected the unpaid self-insured losses as of June 30, 2015.
- 2) **2015-16 Rates of Loss.** An projection of the losses expected to be incurred during 2015-16, expressed in terms of rates per \$100 of payroll
- 3) **Discounting.** Estimates of the liabilities and of the projected 2015-16 losses on a discounted basis. Discounting takes into account the fact that workers' compensation losses are incurred whenever an accident happens but are often paid out over thirty or forty years.
- 4) **Variability of Estimated Losses.** An analysis of items (1) and (2) above, in terms of "probability levels."

Conditions & Limitations

This report has been prepared for Compton's internal use. Copies of this report may be provided to Compton'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 Compton must perform their own actuarial analysis and may not rely upon our work.

In this report, we relied upon loss and payroll data provided by Keenan & Associates. We have not audited this data and are not responsible for its accuracy. Keenan does not provide claims data on a “net of excess insurance” basis. Therefore we examine the gross claims data claim by claim and wherever a loss exceeds the stated SIR we assume that the excess insurer will pay the portion of the loss that exceeds the stated SIR. The actual net loss amounts may differ from our calculations. 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. We have not calculated the cost of management fees or so-called Unallocated Loss Adjustment Expenses (ULAE). Compton’s claims administrator determines these.

The actuarial projections in this report are estimates. 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 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 Compton’s historical experience. We did not anticipate any extraordinary changes in the various factors that might affect the future cost of claims. We used methods that we believe 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 eight sections: the *Management Summary*, the *Technical Approach* section, the *Summary Exhibits*, the *Fiscal Year End Exhibits*, the *Limited Loss Exhibits*, the *Gross Loss 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.

Compton Community College District

An Actuarial Review of the Workers' Compensation Program

Management Summary

Compton Community College District

An Actuarial Review of the Workers' Compensation Program

Management Summary

Projected Unpaid Self-Insured Losses @ 6/30/15

On June 20, 2014 the District ended its self-insurance program and joined the Protected Insurance Program for Schools and Community Colleges ("PIPS"). It still has a liability for unpaid losses for claims incurred through that date. We project that the remaining unpaid losses from the self-insurance program will total \$1,707,000 on June 30, 2015. That projected liability is \$1,509,000 if discounted at 1.5% interest. This projection is based on our analysis of the claims data evaluated as of April 30, 2015. Table I shows various probability levels for this liability.

**Table I: Projected Liability for Unpaid Losses as of June 30, 2015
(Dollars in Thousands)**

Probability Level	Undiscounted	Discounted at 1.5% Interest
Central Estimate	\$1,707	\$1,509
70%	1,929	1,706
80%	2,151	1,902
90%	2,509	2,219

Two years ago we analyzed the March 31, 2013 claims data and estimated that the liability for unpaid losses was \$2,914,000 on that date.

Projected 2015-16 Rates of Loss

While the District is not self-insuring in 2015-16, we estimated benchmark funding rates as management information. Table II shows Compton's projected rates of loss for 2015-16 at self-insured retentions ("SIR's") of \$500,000, \$750,000, \$1,000,000, and unlimited. These rates are discounted at 1.5% interest. Table III on page 9 contains factors that change the Table I and II entries to their equivalents when discounted at interest rates. The Table II rates do not reflect the full cost of self-insurance because they do not include claims handling fees, administrative costs, or the cost of excess insurance coverage. Table II shows actuarial central estimates, plus estimates at various probability levels. The probability level rates correspond to the estimated probabilities that

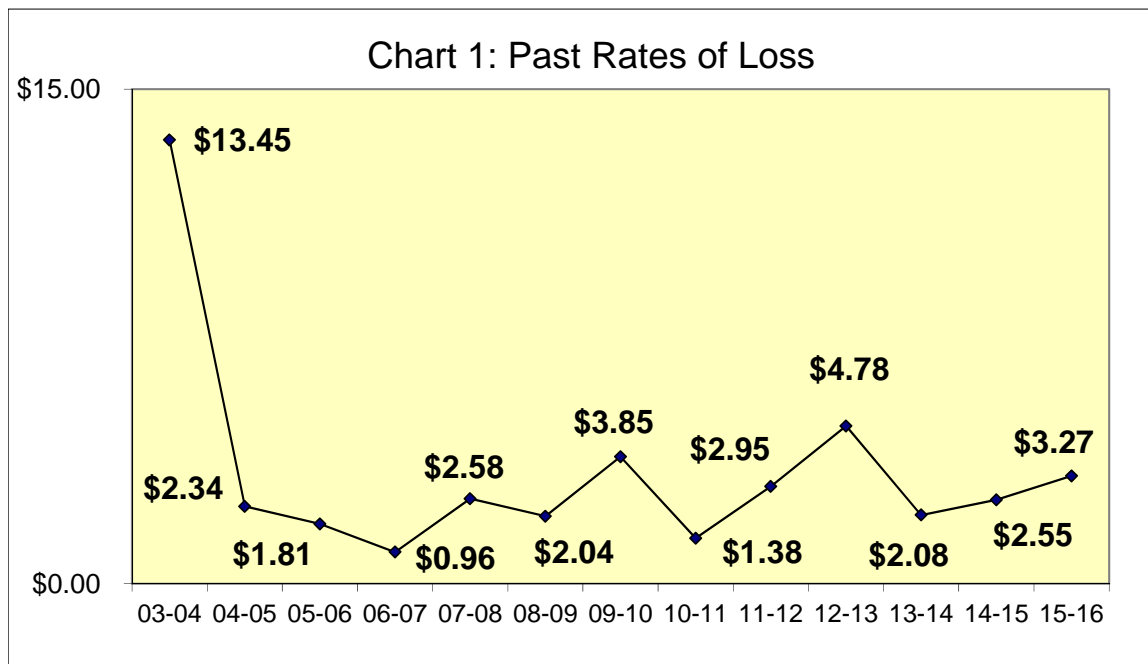
the indicated rate will be adequate. For example, we estimate that there is a 70% probability that the actual 2015-16 Unlimited SIR loss rate will be less than **\$3.42**.

Table II: Projected 2015-16 Discounted Loss Rates (1.5% Interest Rate)				
Probability Level	Projected Loss per \$100 of Payroll			
	\$500,000 SIR	\$750,000 SIR	\$1,000,000 SIR	Unlimited SIR
Central Estimate	\$2.56	\$2.72	\$2.79	\$2.95
70%	3.20	3.37	3.38	\$3.42
80%	3.90	4.24	4.38	4.42
90%	5.00	5.57	5.89	6.16

The benchmark 70% probability unlimited rate is actually 33¢ lower than the corresponding rate we projected for 2013-14 two years ago (using a 1.5% interest rate in both 2013 and 2015).

Compton's Past Loss Rates

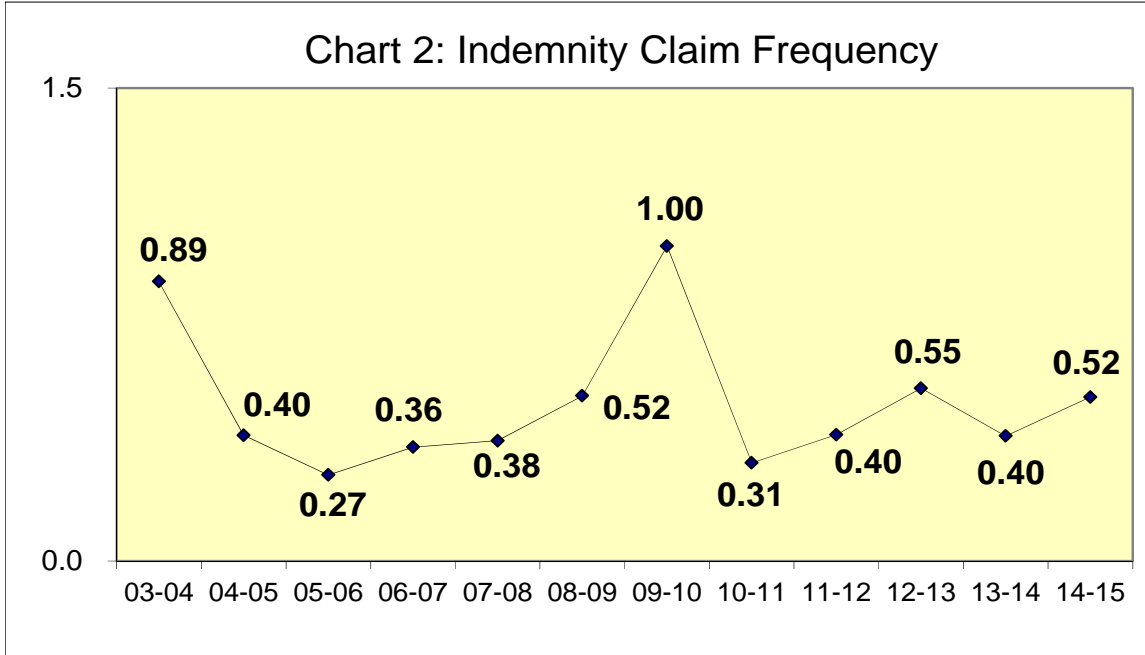
Chart 1 shows the program's estimated past rates of loss. The loss rate is equal to the estimated total losses for the year divided by payroll measured in \$100's. These are unlimited undiscounted loss rates.



The projected undiscounted loss rate for 2015-16 is **\$3.27** in Chart 1. That corresponds to the *discounted* rate of \$2.95 in Table II.

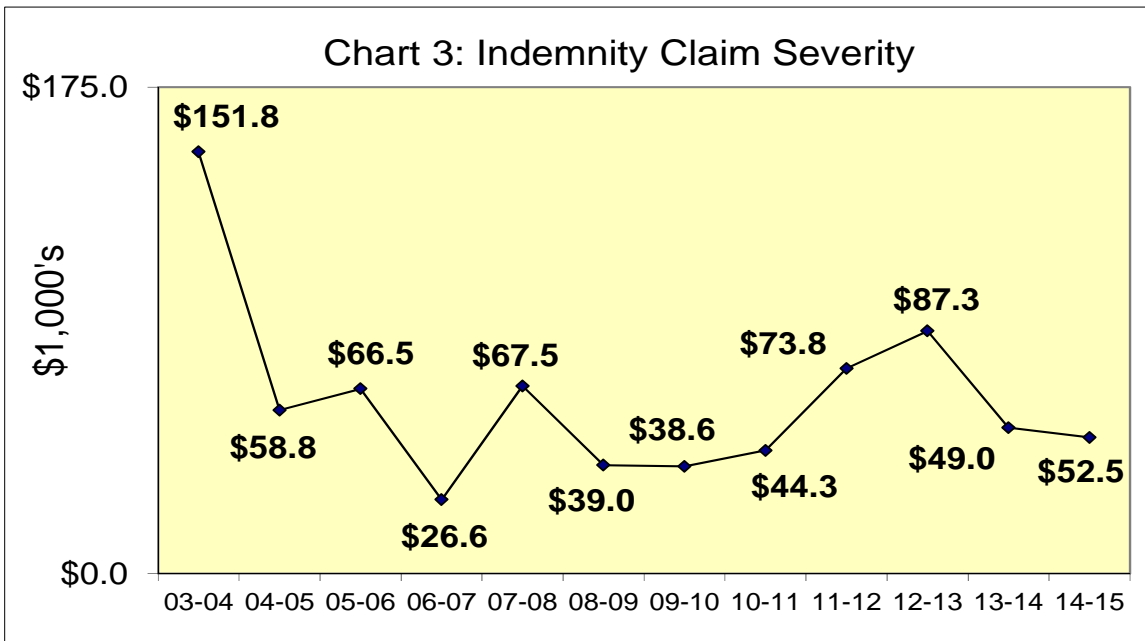
Indemnity Claim Frequency

Chart 2 shows indemnity claim “frequency” as the ultimate number of indemnity claims per \$1 million payroll. Chart 2 does not include the numerous but inexpensive “medical-only” claims.



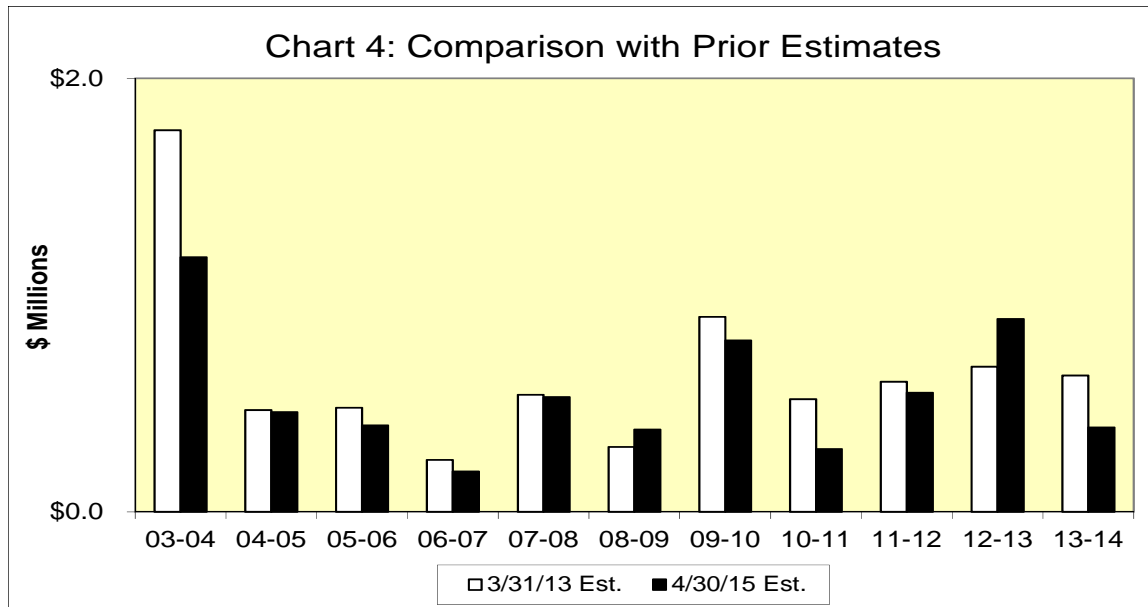
Average Indemnity Claim Amount (“Severity”)

Indemnity claim severity is the estimated average indemnity loss, stated at ultimate settlement value. Community College severity is generally in the \$35,000 to \$50,000 range, so severity has been relatively poor.



Comparison with Prior Estimates

Chart 4 compares the new estimates of the limited losses with those from the 2013 report. The overall change for all years through 2012-13 was a reduction of \$1,059,000. Most of the reduction was in the 2003-04 program year, where the estimate fell from \$1,760,000 to \$1,174,000. The large drop in 2003-04 may be due to data issues. According to the data the actual losses paid for 2003-04, after estimated excess insurance recoveries, actually fell from **\$1.519 million** at 3/31/13 to **\$1.163 million** on April 30, 2015.



Different Interest Rates

The rates and liabilities shown in Tables I and II were discounted at 1.5% interest. The factors in Table III allow one to change the Table I and II rates and liabilities to what their values would be if a different interest rate were used for discounting. These are multiplicative factors. For instance, to obtain the central estimate of the 6/30/15 liability discounted at 1.0% interest, multiply the Table I value of \$1,509,000 by the Table III factor of **1.040** in the bottom row. The product, \$1,569,000, is the projected liability discounted at 1.0% interest.

Table III: Interest Rate Adjustment Factors				
Interest Rate	1.0%	1.39%	1.5%	1.61%
UNL Rate	1.033	1.008	1.000	0.993
1M Rate	1.034	1.008	1.000	0.993
750K Rate	1.033	1.007	1.000	0.993
500K Rate	1.032	1.008	1.000	0.993
Liabilities	1.040	1.009	1.000	0.992

We included columns for interest rates of 1.39% and 1.61%. These were the “risk-free buy-and-hold” interest rates available for discounting the 2015-16 losses and the 6/30/15 liability, respectively. We matched the projected timing and amounts of the claims payments on the 6/30/15 liability and on the 2015-16 losses with income streams that hypothetical portfolios of US Treasury bills, notes, and bonds would produce. We selected the securities in these hypothetical portfolios so that they would mature just as the money would be needed to pay the claims. The “locked-in” yields on these hypothetical portfolios were 1.39% and 1.61% as of 6/3/15. To achieve these yields the portfolios would need to include some higher yielding long maturity (30 year) bonds. Since the District is unlikely to invest in bonds with a 30 year maturity, actually achieving these yields would prove unrealistic in practice. Nevertheless this exercise demonstrates that these yields are achievable in theory. They are good benchmarks for evaluating the reasonableness of the interest rates that we used in the discounting calculations. Discounting liabilities and future loss costs at these risk-free rates produces probably the best measures of their true economic values.

Lifetime Medical Claims

One of the benefits that injured workers receive is lifetime medical coverage for their injuries. When the claims examiners do not foresee any future expense on a claim, and there have been no expenditures on that claim over the past twelve months they “close” the claim. However, some of these claims do re-open and incur additional costs. There are currently 25 “future medical” claim files with potential future medical payments, \$0 in reserves, and total paid less than the SIR. To put this number in context, the total inventory of self-insured claims with active reserves was only 22 on April 30, 2015.

Our “normal” actuarial methods provide for potential lifetime medical claims, except in program years where there are no active claims. 9 of the 26 program years between 1988-89 and 2013-14 had active claims with open case reserves. The other 17 program years were “closed.” 3 of these “closed” years had a total of 12 potential lifetime medical claims. We included an extra \$25,200 in additional IBNR liability for these 12 potential claims. Although the current lifetime medical reserve is small, we expect that this issue will grow more important in the future. Many other self-insured K-12’s have very substantial lifetime medical liabilities.

Compton Community College District

An Actuarial Review of the Workers' Compensation Program

Technical Approach

Compton Community College District

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 liabilities for unpaid losses as of June 30, 2015. Summary Exhibit 2 shows our projected (hypothetical) loss funding rate for the 2015-16 program year. Summary Exhibit 3 shows the projected unpaid losses from the self-insurance program on both discounted and non-discounted bases.

Fiscal Year End Exhibits

These exhibits show the calculation of the projected unpaid losses as of June 30, 2015.

Limited Loss Exhibits

These exhibits show the estimation of the limited ultimate losses for each program year. We start with the gross (unlimited) loss estimates and adjust them to a limited basis to reflect the effect of excess insurance. We assume that the excess insurer will pay in full the portion of every loss that exceeds the stated SIR.

Gross Loss Exhibits

These exhibits show the various actuarial projection methods and summarize the results for each program year, on a gross (unlimited loss) basis.

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.

Gross Loss Exhibit 1 summarizes the results of these methods.

Future Loss Exhibits

These exhibits show the projection of the expected rate of loss for 2015-16.

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.

**Compton Community College District
Workers' Compensation Program**

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

Summary Exhibits

Compton Community College District
Workers' Compensation Program

Projected Unpaid Losses as of June 30, 2015
Self-Insured Losses Limited to Stated SIR

(1) Projected Unpaid Losses:	\$1,707,068
(2) Discounted Value of Unpaid Losses: (Assuming 1.50% Interest Rate)	\$1,509,330

Probability Levels

Probability Level <u>(3)</u>	Probability Factor <u>(4)</u>	Discounted * Liability <u>(5)</u>
30%	0.78	1,177,277
40%	0.86	1,298,024
50%	0.94	1,418,770
Central Estimate	1.00	\$1,509,330
60%	1.02	1,539,517
70%	1.13	1,705,543
80%	1.26	1,901,756
90%	1.47	2,218,715

* Multiply by 1.131 to obtain undiscounted values.

Notes:

- (1) Page 17, Column (1).
- (2) Page 17, Column (2).
- (3) Estimated probability that funding will be adequate.
- (4) Estimated by BAC.
- (5) (2) x (4).

Compton Community College District
Workers' Compensation Program

Projected Loss Funding Rate for 2015-16

Unlimited Loss Rate

(1) Discounted Loss Rate: (as of July 1, 2015, 1.50% interest rate)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Loss Rates</td> </tr> <tr> <td style="text-align: center;">\$2.95</td> </tr> </table>	Loss Rates	\$2.95
Loss Rates			
\$2.95			

<u>Probability Levels</u>		
Probability Level <u>(2)</u>	Probability Factor <u>(3)</u>	Discounted * Rate <u>(4)</u>
0.40	0.58	\$1.71
0.50	0.73	2.15
0.60	0.91	2.68
Central Estimate	1.00	\$2.95
0.70	1.16	3.42
0.80	1.50	4.43
0.90	2.09	6.17

* Multiply by 1.110 to obtain undiscounted values.

Notes:

- (1) [Page 45, Column (5)] x [Page 49, Item (4)].
- (2) Estimated probability that funding will be adequate.
- (3) Estimated by BAC.
- (4) (1) x (3).

Compton Community College District
Workers' Compensation Program

June 30, 2015 Summary
Self-Insured Losses Limited to Stated SIR

Program Year	Undiscounted Value: Claims Liabilities as of 6/30/15 (1)	Discounted (1.50% Interest) Claims Liabilities as of 6/30/15 (2)	Estimated Ultimate Losses (3)
1988-89	\$0	\$0	\$142,173
1989-90	0	0	50,370
1990-91	0	0	256,232
1991-92	0	0	114,907
1992-93	0	0	192,765
1993-94	0	0	628,710
1994-95	0	0	213,579
1995-96	0	0	81,410
1996-97	14,149	12,575	380,000
1997-98	0	0	124,493
1998-99	0	0	166,239
1999-00	0	0	0
2000-01	0	0	0
2001-02	0	0	0
2002-03	0	0	0
2003-04	10,484	9,094	1,174,000
2004-05	90,680	78,866	460,000
2005-06	8,565	7,366	399,000
2006-07	5,756	4,927	186,000
2007-08	187,107	160,093	530,000
2008-09	116,975	101,051	380,000
2009-10	138,194	119,832	790,000
2010-11	72,967	63,807	290,000
2011-12	189,165	167,369	550,000
2012-13	534,793	480,026	890,000
2013-14	338,232	304,324	390,000
Total	\$1,707,068	\$1,509,330	\$8,389,878

Notes:

- (1) Page 19, Column (6).
- (2) Page 48, Column (3).
- (3) Page 23, Column (6).

**Compton Community College District
Workers' Compensation Program**

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

Fiscal Year End Exhibits

Compton Community College District
Workers' Compensation Program

Projected Unpaid Losses as of June 30, 2015
Self-Insured Losses Limited to Stated SIR

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)
1988-89	\$142,173	\$142,173	\$0	\$142,173	\$0	\$0
1989-90	50,370	50,370	0	50,370	0	0
1990-91	256,232	256,232	0	256,232	0	0
1991-92	114,907	114,907	0	114,907	0	0
1992-93	192,765	192,765	0	192,765	0	0
1993-94	628,710	628,710	0	628,710	0	0
1994-95	213,579	213,579	0	213,579	0	0
1995-96	81,410	81,410	0	81,410	0	0
1996-97	380,000	365,851	9,591	375,442	4,558	14,149
1997-98	124,493	124,493	0	124,493	0	0
1998-99	166,239	166,239	0	166,239	0	0
1999-00	0	0	0	0	0	0
2000-01	0	0	0	0	0	0
2001-02	0	0	0	0	0	0
2002-03	0	0	0	0	0	0
2003-04	1,174,000	1,163,516	59	1,163,576	10,424	10,484
2004-05	460,000	369,320	60,660	429,980	30,020	90,680
2005-06	399,000	390,435	58	390,493	8,507	8,565
2006-07	186,000	180,244	-36	180,208	5,792	5,756
2007-08	530,000	342,893	137,862	480,755	49,245	187,107
2008-09	380,000	263,025	81,624	344,649	35,351	116,975
2009-10	790,000	651,806	72,822	724,628	65,372	138,194
2010-11	290,000	217,033	16,757	233,790	56,210	72,967
2011-12	550,000	360,835	74,546	435,381	114,619	189,165
2012-13	890,000	355,207	330,623	685,830	204,170	534,793
2013-14	390,000	51,768	104,336	156,104	233,896	338,232
Total	\$8,389,878	\$6,682,810	\$888,904	\$7,571,714	\$818,164	\$1,707,068

Notes:

- (1) Page 23, Column (6).
- (2) Page 20, Column (3).
- (3) (4) - (2).
- (4) Page 20, Column (6).
- (5) (1) - (4).
- (6) (1) - (2).

Compton Community College District
Workers' Compensation Program

Projected Paid and Reported Losses between 5/1/15 and 6/30/15
Self-Insured Losses Limited to Stated SIR

Program Year	Losses Paid as of 4/30/15 (1)	Projected Losses Paid 5/1/15 - 6/30/15 (2)	Projected Losses Paid as of 6/30/15 (3)	Losses Reported as of 4/30/15 (4)	Projected Losses Reported 5/1/15 - 6/30/15 (5)	Projected Losses Reported as of 6/30/15 (6)
1988-89	\$142,173	\$0	\$142,173	\$142,173	\$0	\$142,173
1989-90	50,370	0	50,370	50,370	0	50,370
1990-91	256,232	0	256,232	256,232	0	256,232
1991-92	114,907	0	114,907	114,907	0	114,907
1992-93	192,765	0	192,765	192,765	0	192,765
1993-94	628,710	0	628,710	628,710	0	628,710
1994-95	213,579	0	213,579	213,579	0	213,579
1995-96	81,410	0	81,410	81,410	0	81,410
1996-97	365,660	191	365,851	375,404	39	375,442
1997-98	124,493	0	124,493	124,493	0	124,493
1998-99	166,239	0	166,239	166,239	0	166,239
1999-00	0	0	0	0	0	0
2000-01	0	0	0	0	0	0
2001-02	0	0	0	0	0	0
2002-03	0	0	0	0	0	0
2003-04	1,163,428	88	1,163,516	1,163,428	147	1,163,576
2004-05	367,956	1,365	369,320	429,140	839	429,980
2005-06	390,387	47	390,435	390,387	106	390,493
2006-07	180,111	133	180,244	180,111	97	180,208
2007-08	340,253	2,640	342,893	479,690	1,066	480,755
2008-09	261,417	1,608	263,025	343,923	726	344,649
2009-10	648,880	2,926	651,806	722,507	2,121	724,628
2010-11	215,050	1,983	217,033	230,847	2,943	233,790
2011-12	354,417	6,418	360,835	428,377	7,004	435,381
2012-13	336,194	19,013	355,207	673,414	12,416	685,830
2013-14	42,130	9,638	51,768	143,951	12,153	156,104
Total	\$6,636,760	\$46,050	\$6,682,810	\$7,532,057	\$39,657	\$7,571,714

Notes:

- (1) Page 25, Column (1).
- (2) Projected by BAC.
- (3) (1) + (2).
- (4) Page 24, Column (1).
- (5) Projected by BAC.
- (6) (4) + (5).

Compton Community College District
Workers' Compensation Program

Estimated Unpaid Losses as of April 30, 2015
Self-Insured Losses Limited to Stated SIR

Program Year	Estimated Ultimate Losses (1)	Paid Losses as of 4/30/15 (2)	Case Reserves 4/30/15 (3)	Reported Losses as of 4/30/15 (4)	Estimated IBNR as of 4/30/15 (5)	Estimated Unpaid Losses as of 4/30/15 (6)
1988-89	\$142,173	\$142,173	\$0	\$142,173	\$0	\$0
1989-90	50,370	50,370	0	50,370	0	0
1990-91	256,232	256,232	0	256,232	0	0
1991-92	114,907	114,907	0	114,907	0	0
1992-93	192,765	192,765	0	192,765	0	0
1993-94	628,710	628,710	0	628,710	0	0
1994-95	213,579	213,579	0	213,579	0	0
1995-96	81,410	81,410	0	81,410	0	0
1996-97	380,000	365,660	9,743	375,404	4,596	14,340
1997-98	124,493	124,493	0	124,493	0	0
1998-99	166,239	166,239	0	166,239	0	0
1999-00	0	0	0	0	0	0
2000-01	0	0	0	0	0	0
2001-02	0	0	0	0	0	0
2002-03	0	0	0	0	0	0
2003-04	1,174,000	1,163,428	0	1,163,428	10,572	10,572
2004-05	460,000	367,956	61,185	429,140	30,860	92,044
2005-06	399,000	390,387	0	390,387	8,613	8,613
2006-07	186,000	180,111	0	180,111	5,889	5,889
2007-08	530,000	340,253	139,437	479,690	50,310	189,747
2008-09	380,000	261,417	82,506	343,923	36,077	118,583
2009-10	790,000	648,880	73,627	722,507	67,493	141,120
2010-11	290,000	215,050	15,797	230,847	59,153	74,950
2011-12	550,000	354,417	73,960	428,377	121,623	195,583
2012-13	890,000	336,194	337,220	673,414	216,586	553,806
2013-14	325,000	42,130	101,821	143,951	181,049	282,870
Total	\$8,324,878	\$6,636,760	\$895,297	\$7,532,057	\$792,821	\$1,688,118

Notes:

- (1) Page 23, Column (6). 2014-15 adjusted for incomplete year through 04/30/15.
- (2) Page 25, Column (1).
- (3) (4) - (2).
- (4) Page 24, Column (1).
- (5) (1) - (4).
- (6) (3) + (5).

**Compton Community College District
Workers' Compensation Program**

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

Limited Loss Exhibits

Compton Community College District
Workers' Compensation Program

Selected Ultimate Losses
Self-Insured Losses Limited to Stated SIR

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)
1988-89	\$142,677	\$146,239	\$142,173	\$142,664	\$145,611	\$142,173
1989-90	50,585	51,987	50,370	50,542	51,700	50,370
1990-91	257,478	265,851	256,232	257,312	264,008	256,232
1991-92	115,521	119,860	114,907	115,387	118,842	114,907
1992-93	193,928	202,277	192,765	193,733	200,346	192,765
1993-94	632,503	657,341	628,710	631,942	652,412	628,710
1994-95	214,973	224,598	213,579	214,924	224,561	213,579
1995-96	81,981	85,977	81,410	81,866	84,863	81,410
1996-97	378,177	388,055	376,827	377,598	383,836	380,000
1997-98	125,478	132,962	124,493	125,199	130,139	124,493
1998-99	167,715	179,183	166,239	167,279	174,555	166,239
1999-00	0	0	0	0	0	0
2000-01	0	0	0	0	0	0
2001-02	0	0	0	0	0	0
2002-03	0	0	0	0	0	0
2003-04	1,219,794	1,449,470	1,163,428	1,186,413	1,261,865	1,174,000
2004-05	454,204	469,596	450,065	456,122	473,922	460,000
2005-06	415,108	502,932	390,387	421,998	508,402	399,000
2006-07	195,623	242,821	180,111	218,361	305,030	186,000
2007-08	526,367	473,581	543,831	527,153	490,642	530,000
2008-09	376,269	376,785	376,100	382,827	399,843	380,000
2009-10	807,939	996,471	754,535	776,777	827,560	790,000
2010-11	271,453	366,104	239,835	313,347	442,201	290,000
2011-12	552,673	721,594	486,953	539,994	606,919	550,000
2012-13	1,012,545	915,039	1,052,787	843,671	657,903	890,000
2013-14	269,364	169,513	309,818	386,211	432,553	390,000
Total	\$8,462,355	\$9,138,236	\$8,295,555	\$8,411,320	\$8,837,712	\$8,389,878

- (1) Page 24, Column (3).
- (2) Page 25, Column (3).
- (3) Page 26, Column (6).
- (4) Page 27, Column (6).
- (5) Page 28, Column (6).
- (6) Selected on the basis of (1) - (5).

Compton Community College District
Workers' Compensation Program

Reported Loss Development
Self-Insured Losses Limited to Stated SIR

Program Year	Cumulative Reported Losses as of 4/30/15 (1)	Reported Development Factor as of 4/30/15 (2)	Projected Ultimate Losses (3)
1988-89	\$142,173	1.004	\$142,677
1989-90	50,370	1.004	50,585
1990-91	256,232	1.005	257,478
1991-92	114,907	1.005	115,521
1992-93	192,765	1.006	193,928
1993-94	628,710	1.006	632,503
1994-95	213,579	1.007	214,973
1995-96	81,410	1.007	81,981
1996-97	375,404	1.007	378,177
1997-98	124,493	1.008	125,478
1998-99	166,239	1.009	167,715
1999-00			
2000-01			
2001-02			
2002-03			
2003-04	1,163,428	1.048	1,219,794
2004-05	429,140	1.058	454,204
2005-06	390,387	1.063	415,108
2006-07	180,111	1.086	195,623
2007-08	479,690	1.097	526,367
2008-09	343,923	1.094	376,269
2009-10	722,507	1.118	807,939
2010-11	230,847	1.176	271,453
2011-12	428,377	1.290	552,673
2012-13	673,414	1.504	1,012,545
2013-14	143,951	1.871	269,364
Total	\$7,532,057		\$8,462,355

Notes:

- (1) Provided by Keenan & Associates.
- (2) Page 31, Column (2), tempered for SIR.
- (3) (1) x (2), rounded.

Compton Community College District
Workers' Compensation Program

Paid Loss Development
Self-Insured Losses Limited to Stated SIR

Program Year	Cumulative Paid Losses as of 4/30/15 (1)	Paid Development Factor as of 4/30/15 (2)	Projected Ultimate Losses (3)
1988-89	\$142,173	1.029	\$146,239
1989-90	50,370	1.032	51,987
1990-91	256,232	1.038	265,851
1991-92	114,907	1.043	119,860
1992-93	192,765	1.049	202,277
1993-94	628,710	1.046	657,341
1994-95	213,579	1.052	224,598
1995-96	81,410	1.056	85,977
1996-97	365,660	1.061	388,055
1997-98	124,493	1.068	132,962
1998-99	166,239	1.078	179,183
1999-00			
2000-01			
2001-02			
2002-03			
2003-04	1,163,428	1.246	1,449,470
2004-05	367,956	1.276	469,596
2005-06	390,387	1.288	502,932
2006-07	180,111	1.348	242,821
2007-08	340,253	1.392	473,581
2008-09	261,417	1.441	376,785
2009-10	648,880	1.536	996,471
2010-11	215,050	1.702	366,104
2011-12	354,417	2.036	721,594
2012-13	336,194	2.722	915,039
2013-14	42,130	4.024	169,513
Total	\$6,636,760		\$9,138,236

Notes:

- (1) Provided by Keenan & Associates.
- (2) Page 32, Column (2), tempered for SIR.
- (3) (1) x (2), rounded.

Compton Community College District
Workers' Compensation Program

IBNR to Case Reserves Ratio Method
Self-Insured Losses Limited to Stated SIR

Program Year	Limited Reported LDF (1)	Limited Paid LDF (2)	Lim IBNR to Case Reserves Ratio (3)	Limited Case Reserves (4)	Estimated IBNR as of Reserves (5)	Estimated Ultimate Limited Losses (6)
1988-89	1.004	1.029	0.145	\$0	\$0	\$142,173
1989-90	1.004	1.032	0.158	0	0	50,370
1990-91	1.005	1.038	0.154	0	0	256,232
1991-92	1.005	1.043	0.147	0	0	114,907
1992-93	1.006	1.049	0.146	0	0	192,765
1993-94	1.006	1.046	0.160	0	0	628,710
1994-95	1.007	1.052	0.152	0	0	213,579
1995-96	1.007	1.056	0.151	0	0	81,410
1996-97	1.007	1.061	0.146	9,743	1,423	376,827
1997-98	1.008	1.068	0.141	0	0	124,493
1998-99	1.009	1.078	0.139	0	0	166,239
1999-00	0.000	0.000	0.000	0	0	0
2000-01	0.000	0.000	0.000	0	0	0
2001-02	0.000	0.000	0.000	0	0	0
2002-03	0.000	0.000	0.000	0	0	0
2003-04	1.048	1.246	0.306	0	0	1,163,428
2004-05	1.058	1.276	0.342	61,185	20,925	450,065
2005-06	1.063	1.288	0.363	0	0	390,387
2006-07	1.086	1.348	0.443	0	0	180,111
2007-08	1.097	1.392	0.460	139,437	64,141	543,831
2008-09	1.094	1.441	0.390	82,506	32,177	376,100
2009-10	1.118	1.536	0.435	73,627	32,028	754,535
2010-11	1.176	1.702	0.569	15,797	8,988	239,835
2011-12	1.290	2.036	0.792	73,960	58,576	486,953
2012-13	1.504	2.722	1.125	337,220	379,373	1,052,787
2013-14	1.871	4.024	1.629	101,821	165,867	309,818
Total				\$895,297	\$763,498	\$8,295,555

Notes:

- (1) Page 24, Column (2).
- (2) Page 25, Column (2).
- (3) $[(1) - 1.000] \times (2) / [(2) - (1)]$.
- (4) $[\text{Page 24, Column (1)}] - [\text{Page 25, Column (1)}]$.
- (5) (3) x (4), rounded.
- (6) (5) + Page 24, Column (1).

Compton Community College District
Workers' Compensation Program

Bornhuetter-Ferguson Using Reported Losses
Self-Insured Losses Limited to Stated SIR

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 4/30/15 (5)	Estimated Ultimate Losses (6)
1988-89	\$122,776	1.004	0.4%	\$491	\$142,173	\$142,664
1989-90	42,903	1.004	0.4%	172	50,370	50,542
1990-91	216,009	1.005	0.5%	1,080	256,232	257,312
1991-92	95,964	1.005	0.5%	480	114,907	115,387
1992-93	161,304	1.006	0.6%	968	192,765	193,733
1993-94	538,672	1.006	0.6%	3,232	628,710	631,942
1994-95	224,128	1.007	0.6%	1,345	213,579	214,924
1995-96	65,156	1.007	0.7%	456	81,410	81,866
1996-97	313,383	1.007	0.7%	2,194	375,404	377,598
1997-98	88,224	1.008	0.8%	706	124,493	125,199
1998-99	115,504	1.009	0.9%	1,040	166,239	167,279
1999-00						
2000-01						
2001-02						
2002-03						
2003-04	499,682	1.048	4.6%	22,985	1,163,428	1,186,413
2004-05	490,582	1.058	5.5%	26,982	429,140	456,122
2005-06	526,851	1.063	6.0%	31,611	390,387	421,998
2006-07	484,181	1.086	7.9%	38,250	180,111	218,361
2007-08	533,296	1.097	8.9%	47,463	479,690	527,153
2008-09	452,373	1.094	8.6%	38,904	343,923	382,827
2009-10	511,977	1.118	10.6%	54,270	722,507	776,777
2010-11	550,001	1.176	15.0%	82,500	230,847	313,347
2011-12	496,074	1.290	22.5%	111,617	428,377	539,994
2012-13	508,229	1.504	33.5%	170,257	673,414	843,671
2013-14	519,871	1.871	46.6%	242,260	143,951	386,211
Total	\$7,557,142			\$879,263	\$7,532,057	\$8,411,320

Notes:

- (1) Page 30, Column (6), adjusted for SIR.
- (2) Page 24, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 24, Column (1).
- (6) $(4) + (5)$.

Compton Community College District
Workers' Compensation Program

Bornhuetter-Ferguson Using Paid Losses
Self-Insured Losses Limited to Stated SIR

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 4/30/15 (5)	Estimated Ultimate Losses (6)
1988-89	\$122,776	1.029	2.8%	\$3,438	\$142,173	\$145,611
1989-90	42,903	1.032	3.1%	1,330	50,370	51,700
1990-91	216,009	1.038	3.6%	7,776	256,232	264,008
1991-92	95,964	1.043	4.1%	3,935	114,907	118,842
1992-93	161,304	1.049	4.7%	7,581	192,765	200,346
1993-94	538,672	1.046	4.4%	23,702	628,710	652,412
1994-95	224,128	1.052	4.9%	10,982	213,579	224,561
1995-96	65,156	1.056	5.3%	3,453	81,410	84,863
1996-97	313,383	1.061	5.8%	18,176	365,660	383,836
1997-98	88,224	1.068	6.4%	5,646	124,493	130,139
1998-99	115,504	1.078	7.2%	8,316	166,239	174,555
1999-00						
2000-01						
2001-02						
2002-03						
2003-04	499,682	1.246	19.7%	98,437	1,163,428	1,261,865
2004-05	490,582	1.276	21.6%	105,966	367,956	473,922
2005-06	526,851	1.288	22.4%	118,015	390,387	508,402
2006-07	484,181	1.348	25.8%	124,919	180,111	305,030
2007-08	533,296	1.392	28.2%	150,389	340,253	490,642
2008-09	452,373	1.441	30.6%	138,426	261,417	399,843
2009-10	511,977	1.536	34.9%	178,680	648,880	827,560
2010-11	550,001	1.702	41.3%	227,151	215,050	442,201
2011-12	496,074	2.036	50.9%	252,502	354,417	606,919
2012-13	508,229	2.722	63.3%	321,709	336,194	657,903
2013-14	519,871	4.024	75.1%	390,423	42,130	432,553
Total	\$7,557,142			\$2,200,952	\$6,636,760	\$8,837,712

Notes:

- (1) Page 27, Column (1).
- (2) Page 25, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 25, Column (2).
- (6) $(4) + (5)$.

**Compton Community College District
Workers' Compensation Program**

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

Gross Loss Exhibits

Compton Community College District
Workers' Compensation Program

Selected Ultimate Losses

Gross Unlimited Losses

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)
1988-89	\$145,315	\$149,480	\$142,173			\$142,173
1989-90	51,710	53,276	50,370			50,370
1990-91	264,009	273,521	256,232			256,232
1991-92	118,735	123,810	114,907			114,907
1992-93	200,026	209,862	192,765			192,765
1993-94	670,183	710,945	644,150			648,000
1994-95	282,864	302,853	271,016			273,000
1995-96	85,231	91,808	81,410			81,410
1996-97	421,658	416,653	424,424			420,000
1997-98	131,090	143,778	124,493			124,493
1998-99	176,124	195,713	166,239			166,239
1999-00	0	0	0			0
2000-01	0	0	0			0
2001-02	0	0	0			0
2002-03	0	0	0			0
2003-04	2,735,425	3,056,448	2,620,104	\$2,580,288	\$1,033,146	2,580,000
2004-05	466,841	484,767	459,977	471,897	467,776	470,000
2005-06	425,992	517,233	390,387	438,053	354,173	399,000
2006-07	197,680	242,821	180,111	224,433	423,944	186,000
2007-08	531,517	473,581	553,591	533,559	509,469	540,000
2008-09	384,822	384,062	385,093	396,091	645,267	390,000
2009-10	825,937	1,011,266	762,045	792,707	1,444,768	810,000
2010-11	277,919	369,495	241,605	333,370	500,998	310,000
2011-12	566,342	722,591	496,124	562,912	603,542	590,000
2012-13	1,033,844	915,039	1,087,520	872,289	878,834	960,000
2013-14	272,004	169,513	314,706	421,047	676,864	420,000
2014-15	238,987	196,355	253,144	488,276	896,000	490,000
Total	\$10,504,255	\$11,214,870	\$10,212,585			\$10,614,589
03/04-14/15	\$7,957,310	\$8,543,171	\$7,744,406	\$8,114,921	\$8,434,781	\$8,145,000

(1) Page 31, Column (3).

(2) Page 32, Column (3).

(3) Page 33, Column (6).

(4) Page 34, Column (6).

(5) Page 38, Column (4).

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

Compton Community College District
Workers' Compensation Program

Reported Loss Development

Gross Unlimited Losses

Program Year	Cumulative Reported Losses as of 4/30/15 (1)	Reported Development Factor as of 4/30/15 (2)	Projected Ultimate Losses (3)
1988-89	\$142,173	1.022	\$145,315
1989-90	50,370	1.027	51,710
1990-91	256,232	1.030	264,009
1991-92	114,907	1.033	118,735
1992-93	192,765	1.038	200,026
1993-94	644,150	1.040	670,183
1994-95	271,016	1.044	282,864
1995-96	81,410	1.047	85,231
1996-97	401,778	1.049	421,658
1997-98	124,493	1.053	131,090
1998-99	166,239	1.059	176,124
1999-00	0	1.065	0
2000-01	0	1.067	0
2001-02	0	1.070	0
2002-03	0	1.071	0
2003-04	2,541,956	1.076	2,735,425
2004-05	429,140	1.088	466,841
2005-06	390,387	1.091	425,992
2006-07	180,111	1.098	197,680
2007-08	479,690	1.108	531,517
2008-09	343,923	1.119	384,822
2009-10	722,507	1.143	825,937
2010-11	230,847	1.204	277,919
2011-12	428,377	1.322	566,342
2012-13	673,414	1.535	1,033,844
2013-14	143,951	1.890	272,004
2014-15	62,787	3.806	238,987
Total	\$9,072,622		\$10,504,255

Notes:

- (1) Provided by Keenan & Associates.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Compton Community College District
Workers' Compensation Program

Paid Loss Projection

Gross Unlimited Losses

Program Year	Cumulative Paid Losses as of 4/30/15 (1)	Paid Development Factor as of 4/30/15 (2)	Projected Ultimate Losses (3)
1988-89	\$142,173	1.051	\$149,480
1989-90	50,370	1.058	53,276
1990-91	256,232	1.067	273,521
1991-92	114,907	1.077	123,810
1992-93	192,765	1.089	209,862
1993-94	644,150	1.104	710,945
1994-95	271,016	1.117	302,853
1995-96	81,410	1.128	91,808
1996-97	365,660	1.139	416,653
1997-98	124,493	1.155	143,778
1998-99	166,239	1.177	195,713
1999-00	0	1.208	0
2000-01	0	1.236	0
2001-02	0	1.255	0
2002-03	0	1.271	0
2003-04	2,372,805	1.288	3,056,448
2004-05	367,956	1.317	484,767
2005-06	390,387	1.325	517,233
2006-07	180,111	1.348	242,821
2007-08	340,253	1.392	473,581
2008-09	261,417	1.469	384,062
2009-10	648,880	1.558	1,011,266
2010-11	215,050	1.718	369,495
2011-12	354,417	2.039	722,591
2012-13	336,194	2.722	915,039
2013-14	42,130	4.024	169,513
2014-15	16,016	12.260	196,355
Total	\$7,935,030		\$11,214,870

Notes:

- (1) Provided by Keenan & Associates.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Compton Community College District
Workers' Compensation Program

IBNR to Case Reserves Ratio Method

Gross Unlimited Losses

Program Year	Reported Development Factor (1)	Paid Development Factor (2)	IBNR to Case Reserves Ratio (3)	Case Reserves (4)	Estimated IBNR (5)	Estimated Ultimate Losses (6)
1988-89	1.022	1.051	0.793	\$0	\$0	\$142,173
1989-90	1.027	1.058	0.905	0	0	50,370
1990-91	1.030	1.067	0.873	0	0	256,232
1991-92	1.033	1.077	0.813	0	0	114,907
1992-93	1.038	1.089	0.804	0	0	192,765
1993-94	1.040	1.104	0.705	0	0	644,150
1994-95	1.044	1.117	0.662	0	0	271,016
1995-96	1.047	1.128	0.655	0	0	81,410
1996-97	1.049	1.139	0.627	36,118	22,646	424,424
1997-98	1.053	1.155	0.601	0	0	124,493
1998-99	1.059	1.177	0.594	0	0	166,239
1999-00	1.065	1.208	0.547	0	0	0
2000-01	1.067	1.236	0.488	0	0	0
2001-02	1.070	1.255	0.472	0	0	0
2002-03	1.071	1.271	0.455	0	0	0
2003-04	1.076	1.288	0.462	169,151	78,148	2,620,104
2004-05	1.088	1.317	0.504	61,185	30,837	459,977
2005-06	1.091	1.325	0.517	0	0	390,387
2006-07	1.098	1.348	0.525	0	0	180,111
2007-08	1.108	1.392	0.530	139,437	73,901	553,591
2008-09	1.119	1.469	0.499	82,506	41,170	385,093
2009-10	1.143	1.558	0.537	73,627	39,538	762,045
2010-11	1.204	1.718	0.681	15,797	10,758	241,605
2011-12	1.322	2.039	0.916	73,960	67,747	496,124
2012-13	1.535	2.722	1.228	337,220	414,106	1,087,520
2013-14	1.890	4.024	1.677	101,821	170,755	314,706
2014-15	3.806	12.260	4.070	46,771	190,357	253,144
Total				\$1,137,592	\$1,139,963	\$10,212,585

Notes:

- (1) Page 31, Column (2).
- (2) Page 32, Column (2).
- (3) $[(1) - 1.000] \times (2) / [(2) - (1)]$.
- (4) Page 31, Column (1) - Page 32, Column (1).
- (5) (3) x (4), rounded.
- (6) (5) + Page 31, Column (1).

Compton Community College District
Workers' Compensation Program

Bornhuetter-Ferguson Using Reported Losses

Gross Unlimited Losses

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 4/30/15 (5)	Estimated Ultimate Losses (6)
2003-04	\$539,883	1.076	7.1%	\$38,332	\$2,541,956	\$2,580,288
2004-05	527,868	1.088	8.1%	42,757	429,140	471,897
2005-06	567,450	1.091	8.4%	47,666	390,387	438,053
2006-07	498,003	1.098	8.9%	44,322	180,111	224,433
2007-08	549,684	1.108	9.8%	53,869	479,690	533,559
2008-09	492,149	1.119	10.6%	52,168	343,923	396,091
2009-10	561,596	1.143	12.5%	70,200	722,507	792,707
2010-11	606,644	1.204	16.9%	102,523	230,847	333,370
2011-12	551,373	1.322	24.4%	134,535	428,377	562,912
2012-13	569,843	1.535	34.9%	198,875	673,414	872,289
2013-14	588,315	1.890	47.1%	277,096	143,951	421,047
2014-15	577,326	3.806	73.7%	425,489	62,787	488,276
Total	\$6,630,134			\$1,487,832	\$6,627,089	\$8,114,921

Notes:

- (1) Page 35, Column (4).
- (2) Page 31, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 31, Column (1).
- (6) $(4) + (5)$.

Compton Community College District
Workers' Compensation Program

A Priori Losses for Bornhuetter-Ferguson

Gross Unlimited Losses

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)
2003-04	\$3.00	0.678	\$265,429	\$539,883
2004-05	3.00	0.653	269,458	527,868
2005-06	3.00	0.659	287,026	567,450
2006-07	3.00	0.676	245,563	498,003
2007-08	3.00	0.711	257,705	549,684
2008-09	3.00	0.720	227,847	492,149
2009-10	3.00	0.768	243,748	561,596
2010-11	3.00	0.799	253,085	606,644
2011-12	3.00	0.842	218,279	551,373
2012-13	3.00	0.892	212,946	569,843
2013-14	3.00	0.944	207,738	588,315
2014-15	3.00	1.000	192,442	577,326
Total			\$2,881,266	\$6,630,134

Notes:

- (1) Page 36, Item (5).
- (2) Estimated by BAC.
- (3) Page 53, Column (3).
- (4) (1) x (2) x (3).

Compton Community College District
Workers' Compensation Program

A Priori Loss Rate for Bornhuetter-Ferguson Method

Gross Unlimited Losses

Program Year	<i>A Priori</i> Ultimate Losses (1)	Estimated Pure Premium Trend (2)	Trended Payroll (\$00's) (3)	Constant Dollar Loss Rate (4)
2003-04	\$2,881,543	1.474	\$265,429	\$16.01
2004-05	474,948	1.532	269,458	2.70
2005-06	467,200	1.518	287,026	2.47
2006-07	217,937	1.479	245,563	1.31
2007-08	505,838	1.407	257,705	2.76
2008-09	384,493	1.389	227,847	2.34
2009-10	904,356	1.302	243,748	4.83
2010-11	315,649	1.252	253,085	1.56
2011-12	627,805	1.188	218,279	3.42
2012-13	990,998	1.121	212,946	5.22
2013-14	239,253	1.059	207,738	1.22
2014-15	228,887	1.000	192,442	1.19
Total	\$8,238,907		\$2,881,266	\$3.75
04/05-13/14	\$5,128,477		\$2,423,395	\$2.78
			(5) Selected A Priori 2014-15 Loss Rate:	\$3.00

Notes:

- (1) Page 37, Column (3).
- (2) Estimated by BAC.
- (3) Page 53, Column (3).
- (4) $(1) \times (2) / (3)$.
- (5) Selected on the basis of (4).

Compton Community College District
Workers' Compensation Program

A Priori Ultimate losses

Gross Unlimited Losses

Program Year	Reported Loss Projection (1)	Paid Loss Projection (2)	<i>A Priori</i> Selection (3)
1988-89	\$145,315	\$149,480	\$147,368
1989-90	51,710	53,276	52,481
1990-91	264,009	273,521	268,681
1991-92	118,735	123,810	121,219
1992-93	200,026	209,862	204,826
1993-94	670,183	710,945	689,962
1994-95	282,864	302,853	292,518
1995-96	85,231	91,808	88,397
1996-97	421,658	416,653	419,258
1997-98	131,090	143,778	137,141
1998-99	176,124	195,713	185,403
1999-00	0	0	0
2000-01	0	0	0
2001-02	0	0	0
2002-03	0	0	0
2003-04	2,735,425	3,056,448	2,881,543
2004-05	466,841	484,767	474,948
2005-06	425,992	517,233	467,200
2006-07	197,680	242,821	217,937
2007-08	531,517	473,581	505,838
2008-09	384,822	384,062	384,493
2009-10	825,937	1,011,266	904,356
2010-11	277,919	369,495	315,649
2011-12	566,342	722,591	627,805
2012-13	1,033,844	915,039	990,998
2013-14	272,004	169,513	239,253
2014-15	238,987	196,355	228,887
Total	\$10,504,255	\$11,214,870	\$10,846,161

Notes:

- (1) Page 31, Column (3).
- (2) Page 32, Column (3).
- (3) Selected on the basis of (1) and (2).

Compton Community College District
Workers' Compensation Program

Frequency Times Severity Method

Gross Unlimited Losses

Program Year	Selected Claim Severity (1)	Factor to Remove Trend (2)	Selected Ultimate Claims (3)	Estimated Ultimate Losses (4)
2003-04	\$89,600	0.678	17	\$1,033,146
2004-05	89,600	0.653	8	467,776
2005-06	89,600	0.659	6	354,173
2006-07	89,600	0.676	7	423,944
2007-08	89,600	0.711	8	509,469
2008-09	89,600	0.720	10	645,267
2009-10	89,600	0.768	21	1,444,768
2010-11	89,600	0.799	7	500,998
2011-12	89,600	0.842	8	603,542
2012-13	89,600	0.892	11	878,834
2013-14	89,600	0.944	8	676,864
2014-15	89,600	1.000	10	896,000
Total				\$8,434,781

Notes:

- (1) Page 39, Item (5).
- (2) Estimated by BAC.
- (3) Page 40, Column (3).
- (4) (1) x (2) x (3).

Compton Community College District
Workers' Compensation Program

Calculation of Expected Claim Severity
Frequency Times Severity Method

Gross Unlimited Losses

Program Year	<i>A Priori</i> Ultimate Losses (1)	Estimated Severity Trend (2)	Selected Claim Count (3)	Trended Claim Severity (4)
2003-04	\$2,881,543	1.474	17	\$249,903
2004-05	474,948	1.532	8	90,974
2005-06	467,200	1.518	6	118,194
2006-07	217,937	1.479	7	46,061
2007-08	505,838	1.407	8	88,961
2008-09	384,493	1.389	10	53,390
2009-10	904,356	1.302	21	56,085
2010-11	315,649	1.252	7	56,452
2011-12	627,805	1.188	8	93,202
2012-13	990,998	1.121	11	101,035
2013-14	239,253	1.059	8	31,671
2014-15	228,887	1.000	10	22,889
Total	\$8,238,907		121	\$84,068
03/04-13/14	\$8,010,020		111	\$89,630
			(5) Selected Severity:	\$89,600

Notes:

- (1) Page 37, Column (3).
- (2) Estimated by BAC.
- (3) Page 40, Column (3).
- (4) (1) x (2) / (3).
- (5) Selected on the basis of (4).

Compton Community College District
Workers' Compensation Program

Selected # of Indemnity Claims

Program Year	Reported Claim Count Projection (1)	Bornhuetter- Ferguson Method (2)	Selected Indemnity Claim Count (3)
1988-89	7		7
1989-90	7		7
1990-91	16		16
1991-92	7		7
1992-93	13		13
1993-94	15		15
1994-95	5		5
1995-96	3		3
1996-97	12		12
1997-98	5		5
1998-99	6		6
1999-00	0		0
2000-01	0		0
2001-02	0		0
2002-03	0		0
2003-04	17		17
2004-05	8		8
2005-06	6		6
2006-07	7		7
2007-08	8		8
2008-09	10		10
2009-10	21		21
2010-11	7		7
2011-12	8		8
2012-13	11		11
2013-14	8		8
2014-15	12	10	10
Total	219		217

Notes:

- (1) Page 41, Column (3).
- (2) Page 42, Column (6).
- (3) Selected on the basis of (1) and (2).

Compton Community College District
Workers' Compensation Program

Projection of Ultimate # of Indemnity Claims
Reported Count Projection

Program Year	Total Indemnity Claims Reported 4/30/15 (1)	Development Factors as of 4/30/15 (2)	Projected Ultimate Indemnity Claims (3)
1988-89	7	1.000	7
1989-90	7	1.000	7
1990-91	16	1.000	16
1991-92	7	1.000	7
1992-93	13	1.000	13
1993-94	15	1.000	15
1994-95	5	1.000	5
1995-96	3	1.000	3
1996-97	12	1.000	12
1997-98	5	1.000	5
1998-99	6	1.000	6
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	17	1.000	17
2004-05	8	1.000	8
2005-06	6	1.000	6
2006-07	7	1.000	7
2007-08	8	1.000	8
2008-09	10	1.000	10
2009-10	21	1.000	21
2010-11	7	1.000	7
2011-12	8	1.002	8
2012-13	11	1.017	11
2013-14	7	1.093	8
2014-15	7	1.699	12
Total	213		219

Notes:

- (1) Provided by Keenan & Associates.
- (2) Estimated by BAC.
- (3) (1) x (2), rounded.

Compton Community College District
Workers' Compensation Program

Projection of Ultimate # of Indemnity Claims
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 4/30/15 (5)</u>	<u>Projected Ultimate Claims (6)</u>
2014-15	8	1.699	41.1%	3	7	10

Notes:

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

Compton Community College District
Workers' Compensation Program

Calculation of Expected Claim Counts
A Priori Claim Count

Program Year	Projected Ultimate Indemnity Claims (1)	Trended Payroll (\$Millions) (2)	Indicated Indemnity Claim Frequency (3)
2003-04	17	\$26.5	0.64
2004-05	8	26.9	0.30
2005-06	6	28.7	0.21
2006-07	7	24.6	0.29
2007-08	8	25.8	0.31
2008-09	10	22.8	0.44
2009-10	21	24.4	0.86
2010-11	7	25.3	0.28
2011-12	8	21.8	0.37
2012-13	11	21.3	0.52
2013-14	8	20.8	0.39
2014-15	12	19.2	0.62
Total	123	\$288.1	0.43
03/04-13/14	111	\$268.9	0.42
(4) Selected Claim Frequency:			0.42
(5) 2014-15 Trended Payroll (\$Millions):			\$19.2
(6) 2014-15 A Priori Claim Count:			8

Notes:

- (1) Page 41, Column (3).
- (2) Page 53, Column (3) / 10,000.
- (3) (1) / (2).
- (4) Selected on the basis of (3).
- (5) Page 53, Column (3) / 10,000.
- (6) (4) x (5).

**Compton Community College District
Workers' Compensation Program**

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

Future Loss Exhibits

Compton Community College District
Workers' Compensation Program

Projected Ultimate Unlimited Loss Rate for 2015-16

Gross Unlimited Losses

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	\$3.18	1.059	\$192,442	\$648,529	\$3.27

Notes:

- (1) Page 46, Item (11).
- (2) 5.9% Expected Increase Estimated by BAC.
- (3) Page 53, Column (3).
- (4) (1) x (2) x (3), rounded.
- (5) (4) / [Page 53, Column (2)], rounded.

Compton Community College District
Workers' Compensation Program

Projected Future Loss Rate

Gross Unlimited Losses

Program Year	Estimated Ultimate Losses (1)	Pure Premium Trend (2)	Trended Payroll (\$00's) (3)	Trended Loss Rate (4)
2003-04	\$2,580,000	1.474	\$265,429	\$14.33
2004-05	470,000	1.532	269,458	2.67
2005-06	399,000	1.518	287,026	2.11
2006-07	186,000	1.479	245,563	1.12
2007-08	540,000	1.407	257,705	2.95
2008-09	390,000	1.389	227,847	2.38
2009-10	810,000	1.302	243,748	4.33
2010-11	310,000	1.252	253,085	1.53
2011-12	590,000	1.188	218,279	3.21
2012-13	960,000	1.121	212,946	5.06
2013-14	420,000	1.059	207,738	2.14
2014-15	490,000	1.000	192,442	2.55
Total	\$8,145,000		\$2,881,266	\$3.70

(5) Selected Loss Rate: \$2.75

Program Year	Largest Claim (6)	Severity Trend (7)	LDF (8)	Trended Developed Max Claim (9)
2007-08	\$165,147	1.407	1.108	\$257,459
2008-09	140,359	1.389	1.119	218,076
2009-10	180,145	1.302	1.143	268,198
2010-11	110,188	1.252	1.204	166,072
2011-12	203,296	1.188	1.322	319,207
2012-13	274,270	1.121	1.535	472,220

(10) Factor for Unlimited Retention: 1.156

(11) Unlimited 2014-15 Rate: **\$3.18**

Notes:

- (1) Page 30, Column (6).
- (2) Page 36, Column (2).
- (3) Page 53, Column (3).
- (4) (1) x (2) / (3).
- (5) Based on Column (4).
- (6) Provided by Keenan & Associates.
- (7) Page 39, Column (2). Indexed to 2014-15.
- (8) Page 31, Column (2).
- (9) (6) x (7) x (8).
- (10) Estimated by BAC.
- (11) (5) x (10).

**Compton Community College District
Workers' Compensation Program**

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

Discounting Exhibits

Compton Community College District
Workers' Compensation Program

Discounted Value of Unpaid Losses as of June 30, 2015
Assuming a 1.50% Interest Rate

Program Year	Projected Unpaid Losses (1)	Discount Factor (2)	Discounted Unpaid Losses (3)
1988-89	\$0	0.617	\$0
1989-90	0	0.916	0
1990-91	0	0.915	0
1991-92	0	0.913	0
1992-93	0	0.910	0
1993-94	0	0.900	0
1994-95	0	0.899	0
1995-96	0	0.894	0
1996-97	14,149	0.889	12,575
1997-98	0	0.885	0
1998-99	0	0.885	0
1999-00	0	0.888	0
2000-01	0	0.888	0
2001-02	0	0.882	0
2002-03	0	0.876	0
2003-04	10,484	0.867	9,094
2004-05	90,680	0.870	78,866
2005-06	8,565	0.860	7,366
2006-07	5,756	0.856	4,927
2007-08	187,107	0.856	160,093
2008-09	116,975	0.864	101,051
2009-10	138,194	0.867	119,832
2010-11	72,967	0.874	63,807
2011-12	189,165	0.885	167,369
2012-13	534,793	0.898	480,026
2013-14	338,232	0.900	304,324
Total	\$1,707,068		\$1,509,330

(4) Indicated Discount Factor: 0.884

Notes:

- (1) Page 19, Column (6).
- (2) (3) / (1).
- (3) Based upon a 1.50% interest rate.
- (4) [Sum of Column (3)] / [Sum of Column (1)].

Compton Community College District
Workers' Compensation Program

Discounted Value of 2015-16 Losses as of July 1, 2015
Assuming a 1.50% Interest rate

Gross Unlimited Losses

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2015-16	\$71,499	0.993	\$70,969
2016-17	117,016	0.978	114,432
2017-18	65,533	0.963	63,139
2018-19	84,057	0.949	79,789
2019-20	51,947	0.935	48,580
2020-21	34,541	0.921	31,826
2021-22	22,353	0.908	20,291
2022-23	25,213	0.894	22,549
2023-24	11,817	0.881	10,413
2024-25	7,333	0.868	6,366
2025-26	1,263	0.855	1,080
2026-27	14,490	0.843	12,210
2027-28	4,497	0.830	3,734
2028-29	7,187	0.818	5,879
2029-30	7,914	0.806	6,377
2030-31	13,780	0.794	10,940
2031-32	13,857	0.782	10,839
2032-33	9,640	0.771	7,429
2033-34	6,950	0.759	5,277
2034-35	5,582	0.748	4,175
2035-36	5,170	0.737	3,810
2036-37	7,931	0.726	5,759
2037-38	8,151	0.715	5,831
2038-39	5,560	0.705	3,919
2039-40	5,665	0.694	3,933
40-41 & later	39,582	0.631	24,984
Total	\$648,529		\$584,530

(4) Indicated Discount Factor: 0.901

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 1.50% interest rate.
- (3) (1) x (2).
- (4) [Sum of Column (3)] / [Sum of Column (1)].

Compton Community College District
Workers' Compensation Program

Discounted Value of 2015-16 Losses as of July 1, 2015
Assuming a 1.50% Interest rate

\$1 Million SIR

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2015-16	\$67,729	0.993	\$67,227
2016-17	110,847	0.978	108,398
2017-18	62,078	0.963	59,810
2018-19	79,625	0.949	75,582
2019-20	49,208	0.935	46,019
2020-21	32,720	0.921	30,148
2021-22	21,174	0.908	19,221
2022-23	23,883	0.894	21,360
2023-24	11,194	0.881	9,864
2024-25	6,946	0.868	6,030
2025-26	1,196	0.855	1,023
2026-27	13,726	0.843	11,566
2027-28	4,409	0.830	3,661
2028-29	6,946	0.818	5,681
2029-30	7,620	0.806	6,140
2030-31	13,141	0.794	10,433
2031-32	13,185	0.782	10,313
2032-33	9,083	0.771	7,000
2033-34	6,547	0.759	4,971
2034-35	5,258	0.748	3,933
2035-36	4,869	0.737	3,589
2036-37	7,469	0.726	5,423
2037-38	7,703	0.715	5,510
2038-39	5,231	0.705	3,687
2039-40	5,329	0.694	3,700
40-41 & later	37,215	0.631	23,483
Total	\$614,335		\$553,772

(4) Indicated Discount Factor: 0.901

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 1.50% interest rate.
- (3) (1) x (2).
- (4) [Sum of Column (3)] / [Sum of Column (1)].

Compton Community College District
Workers' Compensation Program

Discounted Value of 2015-16 Losses as of July 1, 2015
Assuming a 1.50% Interest rate

\$750,000 SIR

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2015-16	\$65,876	0.993	\$65,387
2016-17	107,814	0.978	105,433
2017-18	60,379	0.963	58,173
2018-19	77,447	0.949	73,514
2019-20	48,710	0.935	45,554
2020-21	32,711	0.921	30,139
2021-22	21,386	0.908	19,413
2022-23	23,849	0.894	21,329
2023-24	11,523	0.881	10,153
2024-25	7,388	0.868	6,414
2025-26	1,879	0.855	1,607
2026-27	7,109	0.843	5,991
2027-28	6,274	0.830	5,209
2028-29	6,257	0.818	5,117
2029-30	6,951	0.806	5,601
2030-31	12,386	0.794	9,834
2031-32	15,459	0.782	12,092
2032-33	8,647	0.771	6,664
2033-34	6,228	0.759	4,729
2034-35	4,999	0.748	3,739
2035-36	4,627	0.737	3,410
2036-37	7,094	0.726	5,150
2037-38	6,164	0.715	4,410
2038-39	5,078	0.705	3,579
2039-40	5,173	0.694	3,592
40-41 & later	36,118	0.631	22,798
Total	\$597,526		\$539,031

(4) Indicated Discount Factor: 0.902

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 1.50% interest rate.
- (3) (1) x (2).
- (4) [Sum of Column (3)] / [Sum of Column (1)].

Compton Community College District
Workers' Compensation Program

Discounted Value of 2015-16 Losses as of July 1, 2015
Assuming a 1.50% Interest rate

\$500,000 SIR

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2015-16	\$61,927	0.993	\$61,468
2016-17	101,351	0.978	99,112
2017-18	56,760	0.963	54,686
2018-19	73,184	0.949	69,468
2019-20	47,594	0.935	44,510
2020-21	32,194	0.921	29,662
2021-22	21,376	0.908	19,404
2022-23	23,367	0.894	20,898
2023-24	11,818	0.881	10,413
2024-25	7,923	0.868	6,878
2025-26	2,889	0.855	2,471
2026-27	13,312	0.843	11,217
2027-28	3,556	0.830	2,952
2028-29	5,659	0.818	4,628
2029-30	6,206	0.806	5,001
2030-31	10,742	0.794	8,528
2031-32	10,732	0.782	8,394
2032-33	7,418	0.771	5,717
2033-34	5,328	0.759	4,045
2034-35	4,267	0.748	3,191
2035-36	3,942	0.737	2,905
2036-37	6,029	0.726	4,378
2037-38	1,601	0.715	1,145
2038-39	4,667	0.705	3,289
2039-40	4,751	0.694	3,299
40-41 & later	33,116	0.631	20,888
Total	\$561,707		\$508,547

(4) Indicated Discount Factor: 0.905

Notes:

- (1) Based upon the observed payment pattern.
- (2) Based upon a 1.50% interest rate.
- (3) (1) x (2).
- (4) [Sum of Column (3)] / [Sum of Column (1)].

Compton Community College District
Workers' Compensation Program

Program Information

Program Year	Self-Insured Retention (SIR) (1)	Payroll (\$00's) (2)	Payroll Trended to 2014-15 (\$00's) (3)
1988-89	\$150,000	\$89,156	\$192,272
1989-90	150,000	90,976	190,483
1990-91	150,000	99,988	203,254
1991-92	150,000	97,881	193,176
1992-93	150,000	98,857	189,421
1993-94	150,000	99,754	185,571
1994-95	150,000	98,370	177,668
1995-96	150,000	104,083	182,510
1996-97	150,000	106,498	181,306
1997-98	150,000	116,539	192,622
1998-99	150,000	154,030	247,172
1999-00	0	174,732	272,227
2000-01	0	195,787	296,145
2001-02	0	224,316	329,416
2002-03	0	233,313	332,649
2003-04	500,000	191,752	265,429
2004-05	500,000	200,502	269,458
2005-06	500,000	219,981	287,026
2006-07	1,000,000	193,850	245,563
2007-08	1,000,000	209,537	257,705
2008-09	500,000	190,818	227,847
2009-10	500,000	210,260	243,748
2010-11	500,000	224,863	253,085
2011-12	500,000	199,756	218,279
2012-13	500,000	200,722	212,946
2013-14	500,000	201,688	207,738
2014-15	0	192,442	192,442
2015-16	?	198,215	192,442

Notes:

- (1) Provided by Keenan & Associates.
- (2) Provided by Keenan & Associates. 2015-16 estimated by BAC.
- (3) 3.0% trend to 2014-15.