

Monterey Bay Area Self Insurance Authority

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

**BAY ACTUARIAL CONSULTANTS
Moraga, California
March 2, 2022**

Bay Actuarial Consultants

March 2, 2022

Mr. Conor Boughey
Vice President
Alliant Insurance Services
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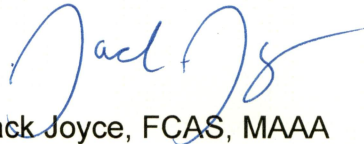
Dear Mr. Boughey:

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

Please call me at (925) 377-5269 if you have any questions.

Respectfully,

BAY ACTUARIAL CONSULTANTS



Jack Joyce, FCAS, MAAA
Principal

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

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Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Introduction

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Introduction

Background & Purpose

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

- 1) **Projected 2022-23 Losses & Rate of Loss.** It includes a projection of the losses expected to be incurred during 2022-23, expressed as a total dollar amount and also as a rate of loss per \$100 of payroll.
- 2) **Unpaid Losses.** It shows the estimated the liability for unpaid losses as of 12/31/21 and the projected 6/30/22 liability.
- 3) **Discounting.** The projected 2022-23 losses and the estimated liability are discounted to present value at 1.5% interest. Discounting takes the time value of money into account as an offset to future expenses.
- 4) **Quantification of Uncertainty.** It includes an analysis of these items in terms of “probability levels.”
- 5) **Short-Term versus Long-Term.** The liabilities are broken out into short-term and long-term components.

Conditions & Limitations

This report is for the Authority's internal use. The Authority may provide a copy to its financial auditors. Bay Actuarial does not authorize any other use. In particular, those interested in providing the Authority with coverage against property and liability claims to must perform their own actuarial analysis and may not rely upon our work.

Risk Management Services and Alliant Insurance Services provided the loss, payroll, and excess insurance information. We did not audit this data and are not responsible for its accuracy. In 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.

The term "losses" refers to all costs that can be associated with a specific claim. These include loss payments, attorney's fees, and other such expenses.

The actuarial projections in this report are uncertain estimates. Uncertainty is inherent and unavoidable because many of the events that will determine future claims costs have not yet taken place. These events include, but are not limited to, future legislation that may affect the tort liability system, changes in the rate of inflation, and the outcomes of current and future litigation and settlement negotiations. Our projections are based upon the Authority's historical experience. We 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.

Structure of the Report

The rest of this report comprises seven sections: the *Management Summary*, the *Technical Approach* section, the *Summary Exhibits*, the *Fiscal Year End Exhibits*, the *Loss Projection Exhibits*, the *Future Loss Exhibits*, and the *Discounting Exhibits*.

The *Management Summary* gives an overview of the results. The *Technical Approach* section explains and discusses the assumptions and details. The *Exhibits* document the calculations.

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Management Summary

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Management Summary

Projected 2022-23 Losses and Rates of Loss

Tables I and II shows the projected 2022-23 losses and loss rates at various probability levels, discounted and undiscounted. The rates in Table I are gross of the \$25,000 per loss deductible, while those in Table II are net. The rates are discounted at 1.5% interest. The amounts in Tables I and II do not include claims handling fees (“ULAE”), administrative costs, or the cost of excess insurance coverage. CARMA is assumed to cover the portion of any general or auto liability loss above \$1,000,000. The Employment Risk Management Authority (“ERMA”) is expected to cover the portion of any EPL loss above \$500,000 that is reported during 2022-23.

Tables I and II show “actuarial central estimates,” plus estimates at higher probability levels. A designated probability level estimate has the associated (estimated) probability of being adequate. For example, there is an estimated 80% probability that the actual 2022-23 losses, including the full amounts of the deductibles (Table I) will be less than **\$2,959,704**. The discounted 21-22 C.E values are based on last year’s 0.5% interest rate. There is a table on page 12 that allows one to discount the losses and loss rates at different interest rates.

Table I: Projected 2022-23 Losses and Rates of Loss				
\$1M SIR (\$500K EPL SIR), Gross of \$25K Deductible, 1.5% Interest Rate				
Probability Level	Undiscounted Losses	Discounted Losses	Undiscounted Loss Rate	Discounted Loss Rate
Central Estimate	\$2,176,253	\$2,087,027	\$3.13	\$3.00
70%	2,567,979	2,462,691	3.69	3.54
75%	2,742,079	2,629,654	3.94	3.78
80%	\$2,959,704	2,838,356	4.26	4.08
90%	3,525,530	3,380,983	5.07	4.86
2021-22 C.E.	\$1,875,387	\$1,847,256	\$2.78	\$2.74
% Change from 21-22	+16.0%	+13.0%	+12.6%	+9.5%

The change from last year in the projected total losses was +16.0%. The projected *rate of loss* increased less, by 12.6%.

Table II: Projected 2022-23 Losses and Loss Rates				
\$1M SIR (\$500K EPL SIR), NET of \$25K Deductible, 1.5% Interest Rate				
Probability Level	Undiscounted Losses	Discounted Losses	Undiscounted Loss Rate	Discounted Loss Rate
Central Estimate	\$1,769,760	\$1,690,120	\$2.55	\$2.44
70%	2,123,711	2,028,144	3.06	2.93
75%	2,282,990	2,180,255	3.29	3.15
80%	\$2,477,663	2,366,168	3.57	3.42
90%	3,043,986	2,907,007	4.39	4.20
2021-22 C.E.	\$1,513,106	\$1,488,896	\$2.24	\$2.21
% Change from 20-21	+16.9%	+13.5%	+13.8%	+10.4%

The credit for the \$25,000 deductible is about 19% of the gross of deductible rate.

Proposed Changes Now Adopted

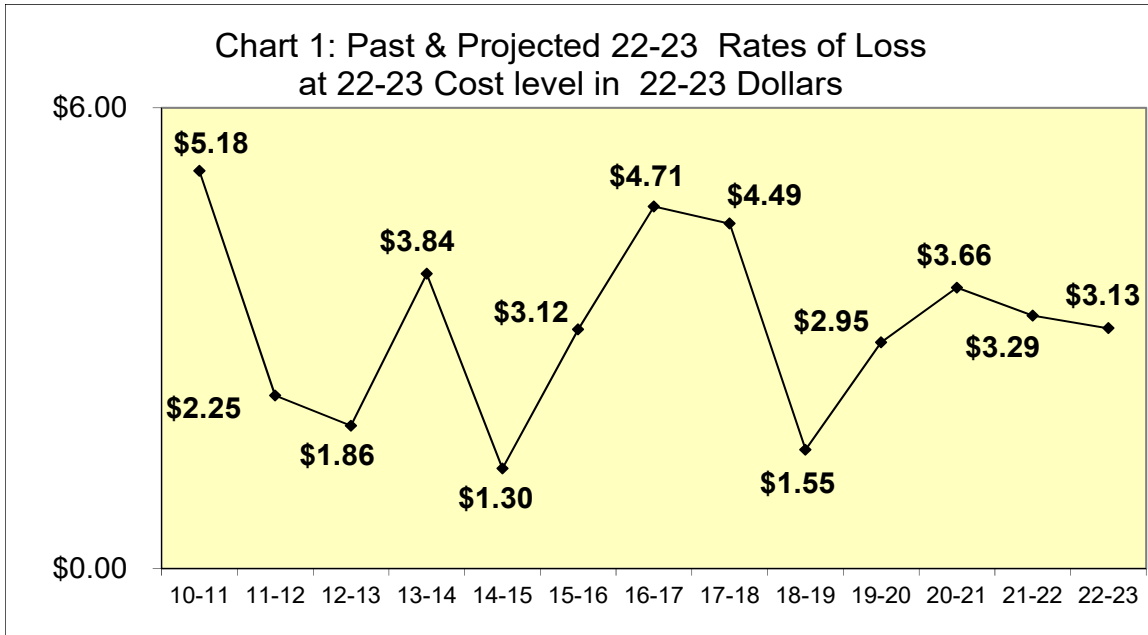
At last October's Executive and Finance Committee meeting we reviewed the actuarial assumptions and proposed two changes in the analysis for 2022. First, we proposed keeping 2010-11, which was MBASIA's worst year ever, in the loss data underlying the rate calculation for 2022-23. Second, we proposed inserting an exposure trend of +0.9% per year into the rate calculation. The 0.9% annual exposure growth rate is based on the estimated growth in population of the MBASIA cities. Both of these changes are included in the analysis in this report.

Back in October we estimated that implementing these two changes would have increased the 2021-22 rate by about 12.0%. Since the estimated annual loss trend is about 4.4% per year we can add another 4.4% to last year's 12.0% estimate (multiplicatively) to arrive at an expected overall increase of about 16.9% for 2022-23.

Table I indicates that the actual increase in the central estimate is **+16.0%**. This is extremely close to the **+16.9%** that was expected based on the changes proposed in October.

The Authority's Past Rates of Loss

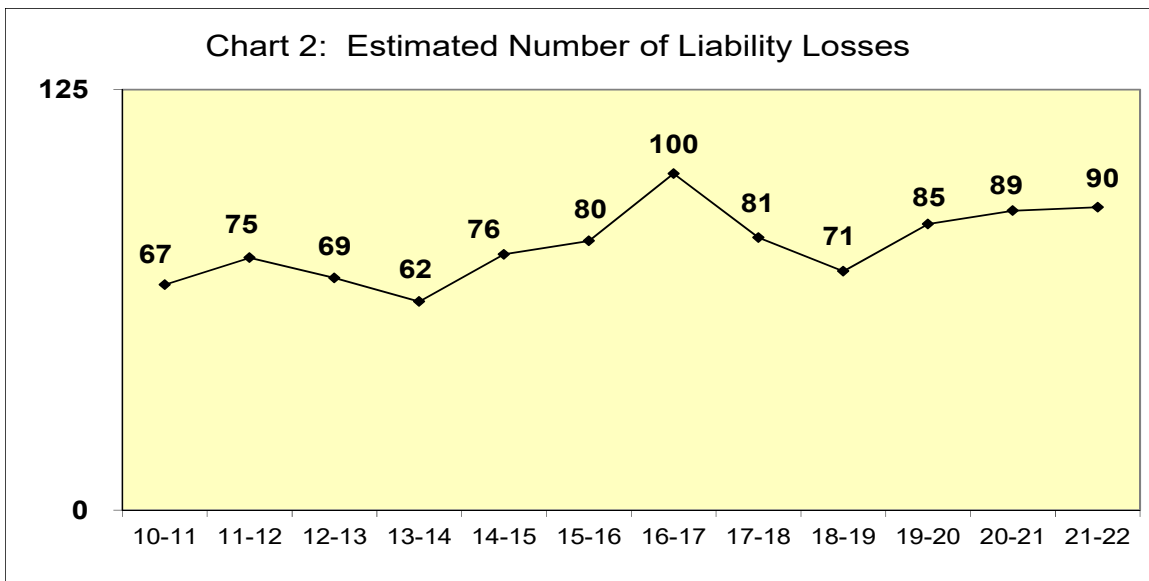
Chart 1 shows the Authority's estimated past rates of loss at the \$1M/\$500K (\$500K EPL) SIR in 22-23 dollars. The older rates are equal to the estimated total losses divided by the total insured payroll, all in 22-23 dollars. The **\$3.13** rate for 2022-23 is the projected undiscounted central estimate rate from Table I.



Six of the twelve older rates in chart are above the projected 22-23 rate of **\$3.13** and six are below. So the 22-23 central estimate is exactly in the center, where it is expected to be.

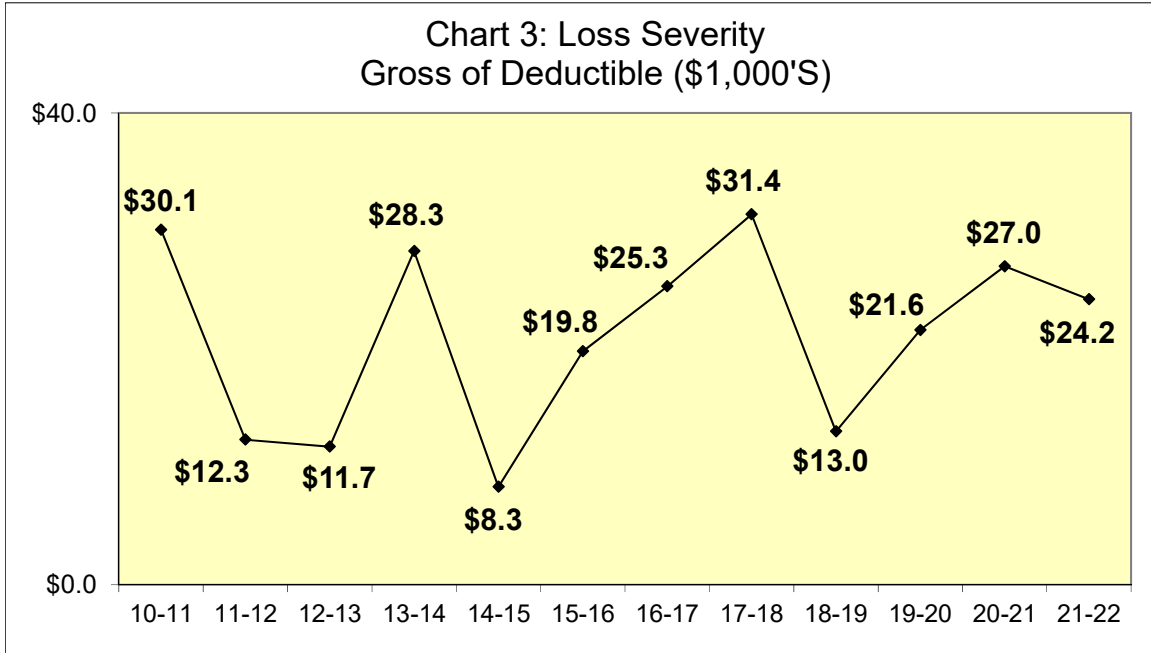
Loss Trend – Claim Frequency

Chart 2 shows about a 1.6% per year frequency trend for 10-11 through 20-21 but no trend at all for the last five years.



Loss Trend – Claim Severity

Chart 3 shows the severity trend. While it is hard to see any trend in these observations, a regression fitted through though these severity observations extended back to 1999-00 implies an exponential trend of 4.4% per year.



Liability at 12/31/21

We estimate that the Authority's liability for unpaid losses was **\$4,878,245** on 12/31/21. This is an undiscounted estimate and does not include the portion of the losses that the members will pay under their \$10,000 deductibles. Table III shows this central estimate plus the corresponding discounted amount. The Table also includes higher probability estimates for the liability.

Table III: Estimated Liability for Unpaid Losses as of 12/31/21 – Net of Deductibles		
Probability Level	Undiscounted Losses	Discounted at 1.5%
Central Estimate	\$4,878,245	\$4,809,949
60%	4,927,027	4,858,049
70%	5,268,504	5,194,745
75%	5,463,634	5,387,143
80%	5,707,546	5,627,641
90%	6,390,500	6,301,033

Reconciling the 12/31/20 & 12/31/21 Liability Estimates

In the 2021 report we estimated that the liability for unpaid losses, net of deductibles, was **\$5,164,088** on 12/31/20. The new estimate of the 12/31/21 liability is **\$4,878,245** as indicated in Table III. Table IV is reconciliation.

Table IV: Reconcile 12/31/20 & 12/31/21 Liabilities	
Estimated 12/31/20 Net Liability	\$5,164,088
Payments in Calendar 2021	-2,647,968
Change in Estimates for 12/31/20 and Prior	+322,125
Estimated Losses Calendar 2021	+2,040,000
Estimated 12/31/21 Net Liability	\$4,878,245

Projected 6/30/22 Liability

Table V shows the projection of the 6/30/22 liability.

Table V: Projected 6/30/22 Liability Net of Deductibles	
12/31/21 Liability Central Estimate	\$4,878,245
Projected Payments 1/1/22 to 6/30/22	-1,086,510
Projected New Losses 1/1/22 to 6/30/22	+945,000
Projected 6/30/22 Central Estimate	\$4,736,735

Table VI shows the projected probability levels for the projected 6/30/22 liability. These probability levels are based on the assumption that the claims payments over the next six months and the new losses that will occur will match the projections in Table V exactly.

Table VI: Projected Estimate of 6/30/22 Liability Net of Deductibles		
Probability Level	Undiscounted Losses	Discounted at 1.5%
Central Estimate	\$4,736,735	\$4,670,421
60%	4,831,470	4,763,830
70%	5,163,042	5,090,759
75%	5,352,511	5,277,576
80%	5,589,348	5,511,097
90%	6,252,491	6,164,956

Short-Term Liability

Short-term liabilities are those expected to be discharged over the next twelve months. The total projected 6/30/22 liability of **\$4,736,735** comprises **\$1,897,779** of short-term and **\$2,838,956** of long-term liabilities.

Capital Requirements

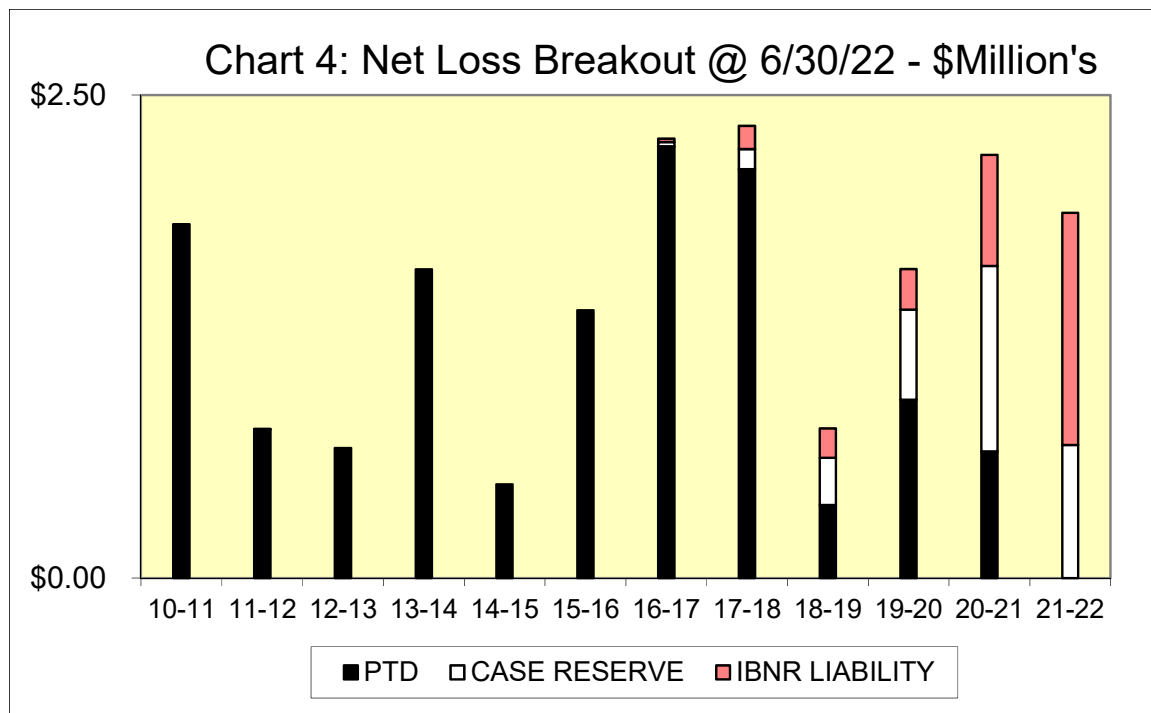
Subtracting the central estimate from the higher probability estimates produces estimates of the capital required to attain those higher probability levels. For example, in Table III the difference between the 75% level and the undiscounted central estimate is **\$585,389**, so that was the capital required to attain 75% at 12/31/21. A similar calculation based on Table VI shows that a total of **\$615,776** will be required to attain 75% at 6/30/22 if the projections of claims activity over the next six months shown in Table V are accurate.

ULAE Liability

We estimate the liability for unpaid unallocated loss adjustment expenses (“ULAE”) at **\$273,515** on both 12/31/21 and 6/30/22. This is on page 21.

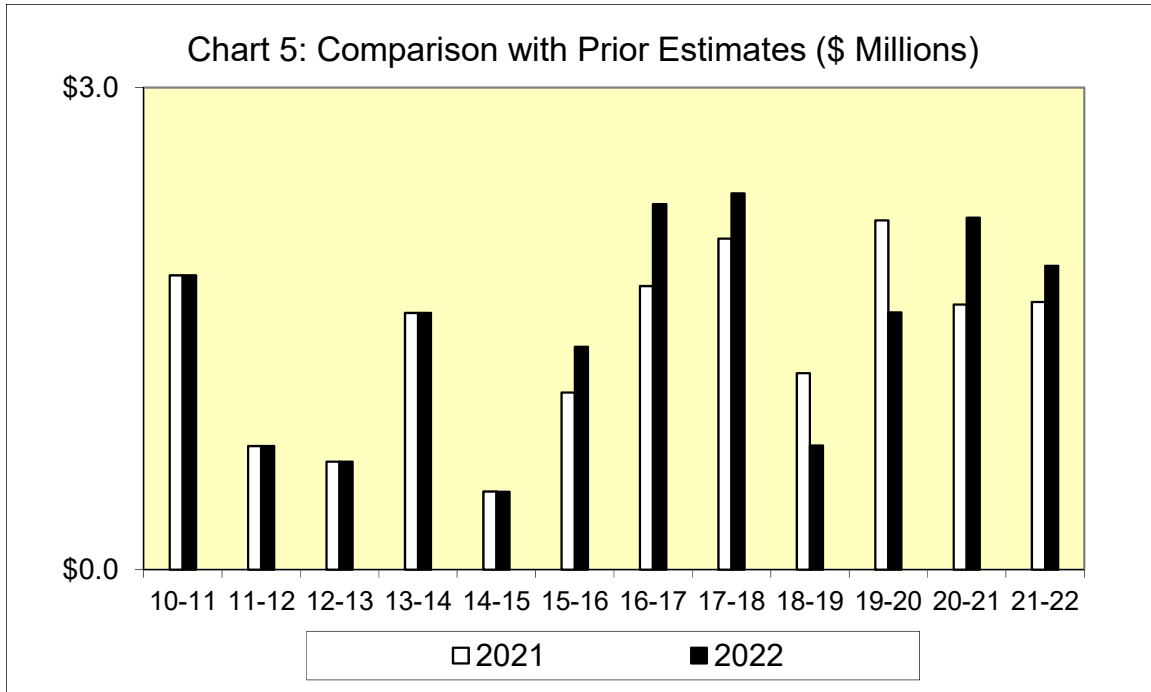
Projected Loss Breakout as of 6/30/22

In Tables V and VI show the Authority’s projected 6/30/22 liability of **\$4,736,735**, net of deductibles. This total comprises projected case reserves for known claims of **\$2,460,055** and an IBNR liability of **\$2,276,680**. This is **\$0.93** of IBNR liability for every \$1.00 of case reserves. Chart 4 breaks out the projected losses into their components: losses paid, case reserves, and IBNR liability. The projected 6/30/22 dollar amounts are shown on page 23.



Comparison with 2021 Estimates

Chart 5 compares last year’s estimates of the net of deductible losses with the new estimates. The overall increase in the estimates for all years through 2020-21 was **\$592,124**. However much of the increase is in the immature and uncertain 20-21 year. The increase is only **\$52,124** for 2019-20 and prior. The initial estimate for 21-22 is up **\$223,946** from last year’s initial projection.



Interest Rates

The discounted liabilities and rates in this report were discounted at **1.5%** interest. Here are the adjustments to make for different interest rate assumptions:

Interest Rate	0.0%	1.0%	1.13%	1.5%	2.0%
Net Contribution Rates	+4.7%	+1.5%	1.2%	0.0%	-1.6%
6/30/22 Liability	+1.4%	+0.4%	0.3%	0.0%	-0.5%

Given currently available market interest rates the Authority could fund the projected 6/30/22 liability by investing in US Treasuries and earn a yield to maturity of about **1.13%**. Funding the projected 2022-23 losses with US Treasuries could yield **1.50%**. Therefore **1.5%** currently appears to be a reasonable interest rate.

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Technical Approach

Monterey Bay Area Self Insurance Authority

An Actuarial Review of the Liability Self-Insurance Program

Technical Approach

This section describes the actuarial calculations.

Exhibits

Summary Exhibits

These exhibits summarize the analysis and conclusions. Summary Exhibits 1 and 2 show the estimated liability as of 12/31/21 and the projected 6/30/22 liability. The 6/30/22 projection is based on the assumption that losses will develop over the next six months as we currently project. Summary Exhibit 3 shows the projected rate of loss for the 2022-23 program year, which runs from 7/1/21 to 6/30/22. Summary Exhibit 4 shows the projected unpaid losses as of 6/30/22 by program year on both discounted and non-discounted bases. Summary Exhibit 5 shows the projected ULAE liability.

Fiscal Year End Exhibits

These exhibits show the calculation of the estimated unpaid losses as of 12/31/21 and the projected unpaid losses as of 6/30/22.

Loss Projection Exhibits

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

There are five different actuarial methods:

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

Loss Projection Exhibit 1 summarizes the results of these methods.

Limited Loss Exhibits - \$250,000 Limit

These exhibits show the estimated ultimate losses limited to \$250,000 per loss. This limited loss analysis is used in calculating the projected 2022-23 loss rate.

Future Loss Exhibits

These exhibits show the projection of the expected rate for 2022-23.

Discounting Exhibits

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

Deductibles Exhibits

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

Claims Data

We included development triangles for reported losses and losses paid plus a Program Information Exhibit.

Monterey Bay Area Self Insurance Authority

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

Summary Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Unpaid Losses as of 12/31/21
Losses Limited to SIR, NET of Deductible

	<u>12/31/21</u>
(1) Estimated Unpaid Losses:	\$4,878,245
(2) Discounted Value of Unpaid Losses: (Assuming 1.5% Interest Rate)	\$4,809,949

Probability Levels for 12/31/21 Liabilities			
Probability Level <u>(3)</u>	Probability Factor <u>(4)</u>	Undiscounted <u>(5)</u>	Discounted at 1.50% <u>(6)</u>
Central Estimate	1.00	\$4,878,245	\$4,809,949
60%	1.02	4,975,810	4,906,148
70%	1.09	5,317,287	5,242,845
75%	1.13	5,512,416	5,435,243
80%	1.18	5,756,329	5,675,740
90%	1.31	6,390,500	6,301,033

Notes:

- (1) Page 24, Column (6).
- (2) (1), discounted at 1.50% interest.
- (3) Estimated probability that funding will be adequate.
- (4) Estimated by BAC.
- (5) (1) x (4).
- (6) (2) x (4).

Monterey Bay Area Self Insurance Authority
Property & Liability Programs

Projected 6/30/22 Estimate of Liability

	<u>Net of Deductibles</u>
(1) Estimated Unpaid Losses: 12/31/21	\$4,878,245
(2) Projected payments over next six months:	\$1,086,509
(3) Projected new losses over next six months:	\$945,000
(4) Projected Unpaid Losses: 6/30/22	\$4,736,735

Probability Level <u>(5)</u>	Projected Estimated Probability Factor <u>(6)</u>	Undiscounted Net of Deductibles <u>(7)</u>	Discounted Net of Deductibles <u>(8)</u>
Central Estimate	1.00	\$4,736,735	\$4,670,421
60%	1.02	4,831,470	4,763,830
70%	1.09	5,163,042	5,090,759
75%	1.13	5,352,511	5,277,576
80%	1.18	5,589,348	5,511,097
90%	1.32	6,252,491	6,164,956

Items (7) & (8) depend upon the accuracy of the projections in items (2) & (3).
The assumption is that actual expenditures and actual new losses will match items (2) & (3) exactly.

Notes:

- (1) Page 17, Item (1).
- (2) Projected by BAC.
- (3) Projected by BAC.
- (4) (1) - (2) + (3).
- (5) Projected Probability on 6/30/22.
- (6) Projected by BAC.
- (7) (4) x (6).
- (8) (7), discounted at 1.50% interest.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Loss Funding Rate for 2022-23
Losses Limited to \$1,000,000, NET of \$25K Deductible

(1) Discounted Loss Rate: (as of 7/1/22, 1.5% interest rate)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>Loss Rates</u></td> </tr> <tr> <td style="text-align: center;">\$2.44</td> </tr> </table>	<u>Loss Rates</u>	\$2.44
<u>Loss Rates</u>			
\$2.44			

<u>Probability Levels</u>		
Probability Level <u>(2)</u>	Probability Factor <u>(3)</u>	Discounted * Rate <u>(4)</u>
50%	0.90	2.20
Central Estimate	1.00	\$2.44
60%	1.04	2.54
70%	1.20	2.93
75%	1.30	3.17
80%	1.42	3.46
90%	1.75	4.27

* Multiply by 1.047 to obtain undiscounted values.

Notes:

- (1) [Page 54, Column (7)] x [Page 60, Column (4)],
adjusted for \$25,000 deductible.
- (2) Estimated probability that funding will be adequate.
- (3) Estimated by BAC.
- (4) (1) x (3).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Unpaid Losses as of 6/30/22
Losses Limited to SIR, NET of \$10K Deductible

Program Year	Undiscounted Value: Claims Liabilities as of 6/30/22 (1)	Discounted (1.5% Interest) Claims Liabilities as of 6/30/22 (2)	Estimated Ultimate Losses (3)
2010-11	\$0	\$0	\$1,830,911
2011-12	316	316	769,011
2012-13	0	0	672,565
2013-14	0	0	1,597,495
2014-15	0	0	484,373
2015-16	0	0	1,386,294
2016-17	38,783	38,495	2,273,930
2017-18	224,993	222,739	2,341,156
2018-19	395,366	389,911	773,229
2019-20	676,824	663,102	1,600,000
2020-21	1,534,381	1,515,916	2,190,000
2021-22	1,866,074	1,838,933	1,890,000
Total	\$4,736,735	\$4,669,412	\$17,808,965

Notes:

- (1) Page 23, Column (6).
- (2) Page 58, Column (3).
- (3) Page 23, Column (1).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

ULAE Projections and Calculation of Unpaid ULAE

(1) Selected ULAE Ratio: **8.7%**

	Case Reserves with <u>Development</u>	"True" <u>IBNR</u>	<u>Total</u>
(2) ULAE Ratio:	4.3%	8.7%	
(3) Estimated Unpaid Losses as of 12/31/21:	\$3,921,022	\$1,208,914	\$5,129,936
(4) Estimated Unpaid ULAE as of 12/31/21:	\$168,604	\$104,911	\$273,515
(5) Discounted Unpaid ULAE as of 12/31/21: (1.5% interest rate)			\$269,686

We project that the 6/30/22 ULAE liability
will equal the 12/31/21 ULAE liability.

Notes:

- (1) Estimated by BAC.
- (2) "50-50 Rule."
- (3) Page 30, assuming 50% of IBNR is development on known claims.
- (4) (2) x [(3)].
- (5) (4) x [Page 58, Item].

Monterey Bay Area Self Insurance Authority

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

Fiscal Year End Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Unpaid Losses as of 6/30/22
Losses Limited to SIR, NET of \$10K Deductible

Program Year	Estimated Ultimate Losses (1)	Projected Losses Paid as of 6/30/22 (2)	Projected Case Reserves 6/30/22 (3)	Projected Losses Reported as of 6/30/22 (4)	Projected IBNR as of 6/30/22 (5)	Projected Unpaid Losses as of 6/30/22 (6)
2010-11	\$1,830,911	\$1,830,911	\$0	\$1,830,911	\$0	\$0
2011-12	769,011	768,695	1	768,696	315	316
2012-13	672,565	672,565	0	672,565	0	0
2013-14	1,597,495	1,597,495	0	1,597,495	0	0
2014-15	484,373	484,373	0	484,373	0	0
2015-16	1,386,294	1,386,294	0	1,386,294	0	0
2016-17	2,273,930	2,235,147	21,509	2,256,656	17,274	38,783
2017-18	2,341,156	2,116,163	105,019	2,221,182	119,974	224,993
2018-19	773,229	377,863	244,414	622,277	150,952	395,366
2019-20	1,600,000	923,176	465,027	1,388,202	211,798	676,824
2020-21	2,190,000	655,619	959,052	1,614,671	575,329	1,534,381
2021-22	1,890,000	23,926	665,034	688,960	1,201,040	1,866,074
Total	\$17,808,965	\$13,072,229	\$2,460,056	\$15,532,285	\$2,276,680	\$4,736,735

Notes:

(1) through (6) Page 25 entries minus Page 28 entries.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Estimated Unpaid Losses as of 12/31/21
Losses Limited to SIR, NET of \$10K Deductible

Program Year	Estimated Ultimate Losses (1)	Losses Paid as of 12/31/21 (2)	Case Reserves 12/31/21 (3)	Losses Reported as of 12/31/21 (4)	Estimated IBNR as of 12/31/21 (5)	Estimated Unpaid Losses as of 12/31/21 (6)
2010-11	\$1,830,911	\$1,830,911	\$0	\$1,830,911	\$0	\$0
2011-12	769,011	768,381	0	768,381	630	630
2012-13	672,565	672,565	0	672,565	0	0
2013-14	1,597,495	1,597,495	0	1,597,495	0	0
2014-15	484,373	484,373	0	484,373	0	0
2015-16	1,386,294	1,386,294	0	1,386,294	0	0
2016-17	2,273,930	2,195,751	43,513	2,239,264	34,667	78,180
2017-18	2,341,156	1,961,466	171,591	2,133,057	208,099	379,690
2018-19	773,229	238,672	365,143	603,815	169,414	534,557
2019-20	1,600,000	783,654	584,983	1,368,637	231,363	816,346
2020-21	2,190,000	66,157	1,238,403	1,304,560	885,440	2,123,843
2021-22	945,000	0	164,000	164,000	781,000	945,000
Total	\$16,863,965	\$11,985,720	\$2,567,633	\$14,553,352	\$2,310,612	\$4,878,245

Notes:

(1) through (6) Page 27 entries minus Page 30 entries.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Unpaid Losses as of 6/30/22
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Estimated Ultimate Losses (1)	Projected Losses Paid as of 6/30/22 (2)	Projected Case Reserves 6/30/22 (3)	Projected Losses Reported as of 6/30/22 (4)	Projected IBNR as of 6/30/22 (5)	Projected Unpaid Losses as of 6/30/22 (6)
2010-11	\$2,018,174	\$2,018,174	\$0	\$2,018,174	\$0	\$0
2011-12	926,000	925,081	605	925,685	315	919
2012-13	805,895	805,895	0	805,895	0	0
2013-14	1,754,364	1,754,364	0	1,754,364	0	0
2014-15	628,110	628,110	0	628,110	0	0
2015-16	1,584,642	1,584,642	0	1,584,642	0	0
2016-17	2,530,000	2,490,873	21,852	2,512,726	17,274	39,127
2017-18	2,540,000	2,315,007	105,019	2,420,026	119,974	224,993
2018-19	920,000	522,619	246,430	769,048	150,952	397,381
2019-20	1,840,000	1,154,793	472,009	1,626,802	213,198	685,207
2020-21	2,400,000	816,589	992,211	1,808,799	591,201	1,583,411
2021-22	2,180,000	115,760	746,117	861,878	1,318,122	2,064,240
Total	\$20,127,185	\$15,131,907	\$2,584,243	\$17,716,150	\$2,411,035	\$4,995,278

Notes:

- (1) Page 32, Column (6).
- (2) Page 26, Column (3).
- (3) (4) - (2).
- (4) Page 26, Column (6).
- (5) (1) - (4).
- (6) (3) + (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Paid and Reported Losses between 1/1/22 and 6/30/22
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Losses Paid as of 12/31/21 <u>(1)</u>	Projected Losses Paid 1/1/22 - 6/30/22 <u>(2)</u>	Projected Losses Paid as of 6/30/22 <u>(3)</u>	Losses Reported as of 12/31/21 <u>(4)</u>	Projected Losses Reported 1/1/22 - 6/30/22 <u>(5)</u>	Projected Losses Reported as of 6/30/22 <u>(6)</u>
2010-11	\$2,018,174	\$0	\$2,018,174	\$2,018,174	\$0	\$2,018,174
2011-12	924,160	920	925,081	925,370	315	925,685
2012-13	805,895	0	805,895	805,895	0	805,895
2013-14	1,754,364	0	1,754,364	1,754,364	0	1,754,364
2014-15	628,110	0	628,110	628,110	0	628,110
2015-16	1,584,642	0	1,584,642	1,584,642	0	1,584,642
2016-17	2,451,133	39,741	2,490,873	2,495,333	17,393	2,512,726
2017-18	2,160,310	154,697	2,315,007	2,331,901	88,125	2,420,026
2018-19	382,803	139,816	522,619	750,586	18,462	769,048
2019-20	1,011,135	143,658	1,154,793	1,605,828	20,974	1,626,802
2020-21	180,583	636,006	816,589	1,484,359	324,441	1,808,799
2021-22	5,940	109,820	115,760	234,795	627,083	861,878
Total	\$13,907,249	\$1,224,658	\$15,131,907	\$16,619,357	\$1,096,793	\$17,716,150

Notes:

- (1) Page 34, Column (1).
- (2) Projected by BAC.
- (3) (1) + (2).
- (4) Page 33, Column (1).
- (5) Projected by BAC.
- (6) (4) + (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Estimated Unpaid Losses as of 12/31/21
Losses Limited to SIR, Gross of \$10K Deductible

Program Year	Estimated Ultimate Losses (1)	Losses Paid as of 12/31/21 (2)	Case Reserves 12/31/21 (3)	Losses Reported as of 12/31/21 (4)	Estimated IBNR as of 12/31/21 (5)	Estimated Unpaid Losses as of 12/31/21 (6)
2010-11	\$2,018,174	\$2,018,174	\$0	\$2,018,174	\$0	\$0
2011-12	926,000	924,160	1,210	925,370	630	1,840
2012-13	805,895	805,895	0	805,895	0	0
2013-14	1,754,364	1,754,364	0	1,754,364	0	0
2014-15	628,110	628,110	0	628,110	0	0
2015-16	1,584,642	1,584,642	0	1,584,642	0	0
2016-17	2,530,000	2,451,133	44,200	2,495,333	34,667	78,867
2017-18	2,540,000	2,160,310	171,591	2,331,901	208,099	379,690
2018-19	920,000	382,803	367,783	750,586	169,414	537,197
2019-20	1,840,000	1,011,135	594,693	1,605,828	234,172	828,865
2020-21	2,400,000	180,583	1,303,776	1,484,359	915,641	2,219,417
2021-22	1,090,000	5,940	228,855	234,795	855,205	1,084,060
Total	\$19,037,185	\$13,907,249	\$2,712,108	\$16,619,357	\$2,417,828	\$5,129,936

Notes:

- (1) Page 32, Column (6).
2021-22 entry adjusted for incomplete year through 12/31/21.
- (2) Page 34, Column (1).
- (3) (4) - (2).
- (4) Page 33, Column (1).
- (5) (1) - (4).
- (6) (1) - (2).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Unpaid Deductibles as of 6/30/22
Losses Limited to \$10K Deductible

Program Year	Estimated Ultimate Deductibles (1)	Projected Ded Paid as of 6/30/22 (2)	Projected Case Reserves 6/30/22 (3)	Projected Ded Reported as of 6/30/22 (4)	Projected Deductible IBNR as of 6/30/22 (5)	Projected Deductible Losses as of 6/30/22 (6)
2010-11	\$187,263	\$187,263	\$0	\$187,263	\$0	\$0
2011-12	156,989	156,385	604	156,989	0	604
2012-13	133,330	133,330	0	133,330	0	0
2013-14	156,869	156,869	0	156,869	0	0
2014-15	143,737	143,737	0	143,737	0	0
2015-16	198,348	198,348	0	198,348	0	0
2016-17	256,070	255,726	344	256,070	0	344
2017-18	198,844	198,844	0	198,844	0	0
2018-19	146,771	144,756	2,015	146,771	0	2,015
2019-20	240,000	231,617	6,982	238,599	1,401	8,383
2020-21	210,000	160,969	33,159	194,128	15,872	49,031
2021-22	290,000	91,834	81,083	172,917	117,083	198,166
Total	\$2,318,220	\$2,059,678	\$124,187	\$2,183,865	\$134,355	\$258,542

Notes:

- (1) Page 62, Column (3).
- (2) Page 29, Column (3).
- (3) (4) - (2).
- (4) Page 29, Column (6).
- (5) (1) - (4).
- (6) (3) + (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Paid and Reported Deductibles between 1/1/22 and 6/30/22
Losses Limited to \$10K Deductible

Program Year	Ded Paid as of 12/31/21 (1)	Projected Losses Paid 1/1/22 - 6/30/22 (2)	Projected Losses Paid as of 6/30/22 (3)	Losses Reported as of 12/31/21 (4)	Projected Losses Reported 1/1/22 - 6/30/22 (5)	Projected Losses Reported as of 6/30/22 (6)
2010-11	\$187,263	\$0	\$187,263	\$187,263	\$0	\$187,263
2011-12	155,779	606	156,385	156,989	0	156,989
2012-13	133,330	0	133,330	133,330	0	133,330
2013-14	156,869	0	156,869	156,869	0	156,869
2014-15	143,737	0	143,737	143,737	0	143,737
2015-16	198,348	0	198,348	198,348	0	198,348
2016-17	255,382	344	255,726	256,070	0	256,070
2017-18	198,844	0	198,844	198,844	0	198,844
2018-19	144,131	625	144,756	146,771	0	146,771
2019-20	227,481	4,136	231,617	237,190	1,409	238,599
2020-21	114,425	46,544	160,969	179,799	14,329	194,128
2021-22	5,940	85,894	91,834	70,795	102,122	172,917
Total	\$1,921,529	\$138,149	\$2,059,678	\$2,066,005	\$117,861	\$2,183,865

Notes:

- (1) Page 30, Column (2).
- (2) Projected by BAC.
- (3) (1) + (2).
- (4) Page 30, Column (4).
- (5) Projected by BAC.
- (6) (4) + (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Estimated Unpaid Deductibles as of 12/31/21
Losses Limited to \$10K Deductible

Program Year	Estimated Ultimate Deductibles (1)	Ded Paid as of 12/31/21 (2)	Case Reserves 12/31/21 (3)	Ded Reported as of 12/31/21 (4)	Estimated Deductible IBNR as of 12/31/21 (5)	Estimated Deductible Losses as of 12/31/21 (6)
2010-11	\$187,263	\$187,263	\$0	\$187,263	\$0	\$0
2011-12	156,989	155,779	1,210	156,989	0	1,210
2012-13	133,330	133,330	0	133,330	0	0
2013-14	156,869	156,869	0	156,869	0	0
2014-15	143,737	143,737	0	143,737	0	0
2015-16	198,348	198,348	0	198,348	0	0
2016-17	256,070	255,382	688	256,070	0	688
2017-18	198,844	198,844	0	198,844	0	0
2018-19	146,771	144,131	2,640	146,771	0	2,640
2019-20	240,000	227,481	9,710	237,190	2,810	12,519
2020-21	210,000	114,425	65,373	179,799	30,201	95,575
2021-22	145,000	5,940	64,855	70,795	74,205	139,060
Total	\$2,173,220	\$1,921,529	\$144,476	\$2,066,005	\$107,216	\$251,691

Notes:

- (1) Page 62, Column (3).
2021-22 adjusted for partial year through 12/31/21.
- (2) Provided by Risk Management Services.
- (3) (4) - (2).
- (4) Page 63, Column (1).
- (5) (1) - (4).
- (6) (1) - (2).

Monterey Bay Area Self Insurance Authority

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

Loss Projection Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Reported Projection (1)	Paid Projection (2)	IBNR to Case Reserves Ratio (3)	B-F Method Using Reported (4)	Frequency Times Severity (5)	Selected Ultimate Losses (6)
2010-11	\$2,018,174	\$2,018,174	\$2,018,174	\$2,018,174	\$1,103,800	\$2,018,174
2011-12	925,370	924,160	925,370	925,370	1,291,310	926,000
2012-13	805,895	806,261	805,895	805,895	1,241,670	805,895
2013-14	1,754,364	1,759,832	1,754,364	1,754,364	1,166,190	1,754,364
2014-15	628,110	631,158	628,110	628,110	1,494,319	628,110
2015-16	1,584,642	1,592,471	1,584,642	1,584,642	1,644,379	1,584,642
2016-17	2,528,458	2,557,525	2,515,665	2,517,091	2,148,933	2,530,000
2017-18	2,494,080	2,394,282	2,673,196	2,446,679	1,819,896	2,540,000
2018-19	835,516	528,715	965,003	940,250	1,665,990	920,000
2019-20	1,855,377	2,438,309	1,783,046	1,869,989	2,078,236	1,840,000
2020-21	2,572,140	1,456,885	2,700,782	2,353,897	2,266,004	2,400,000
2021-22	2,310,730	1,644,841	2,332,710	2,172,967	2,385,000	2,180,000
Total	\$20,312,856	\$18,752,613	\$20,686,957	\$20,017,428	\$20,305,727	\$20,127,185

Notes:

- (1) Page 33, Column (3).
- (2) Page 34, Column (3).
- (3) Page 35, Column (6).
- (4) Page 36, Column (6).
- (5) Page 40, Column (4).
- (6) Selected on the basis of (1) - (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Cumulative Reported Losses as of 12/31/21 (1)	Reported Development Factor as of 12/31/21 (2)	Projected Ultimate Losses (3)
2010-11	\$2,018,174	1.000	\$2,018,174
2011-12	925,370	1.000	925,370
2012-13	805,895	1.000	805,895
2013-14	1,754,364	1.000	1,754,364
2014-15	628,110	1.000	628,110
2015-16	1,584,642	1.000	1,584,642
2016-17	2,495,333	1.013	2,528,458
2017-18	2,331,901	1.070	2,494,080
2018-19	750,586	1.113	835,516
2019-20	1,605,828	1.155	1,855,377
2020-21	1,484,359	1.733	2,572,140
2021-22	234,795	9.841	2,310,730
Total	\$16,619,357		\$20,312,856

Notes:

- (1) Provided by Risk Management Services.
- (2) Page 66.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Cumulative Paid Losses as of 12/31/21 <u>(1)</u>	Paid Development Factor as of 12/31/21 <u>(2)</u>	Projected Ultimate Losses <u>(3)</u>
2010-11	\$2,018,174	1.000	\$2,018,174
2011-12	924,160	1.000	924,160
2012-13	805,895	1.000	806,261
2013-14	1,754,364	1.003	1,759,832
2014-15	628,110	1.005	631,158
2015-16	1,584,642	1.005	1,592,471
2016-17	2,451,133	1.043	2,557,525
2017-18	2,160,310	1.108	2,394,282
2018-19	382,803	1.381	528,715
2019-20	1,011,135	2.411	2,438,309
2020-21	180,583	8.068	1,456,885
2021-22	5,940	276.909	1,644,841
Total	\$13,907,249		\$18,752,613

Notes:

- (1) Provided by Risk Management Services.
- (2) Page 67.
- (3) (1) x (2), rounded.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Reported Development Factor as of 12/31/21 (1)	Paid Development Factor as of 12/31/21 (2)	IBNR to Case Reserves Ratio (3)	Case Reserves 12/31/21 (4)	Estimated IBNR as of 12/31/21 (5)	Estimated Ultimate Losses (6)
2010-11	1.000	1.000	0.000	\$0	\$0	\$2,018,174
2011-12	1.000	1.000	0.000	1,210	0	925,370
2012-13	1.000	1.000	0.000	0	0	805,895
2013-14	1.000	1.003	0.000	0	0	1,754,364
2014-15	1.000	1.005	0.000	0	0	628,110
2015-16	1.000	1.005	0.000	0	0	1,584,642
2016-17	1.013	1.043	0.460	44,200	20,332	2,515,665
2017-18	1.070	1.108	1.989	171,591	341,295	2,673,196
2018-19	1.113	1.381	0.583	367,783	214,417	965,003
2019-20	1.155	2.411	0.298	594,693	177,218	1,783,046
2020-21	1.733	8.068	0.933	1,303,776	1,216,423	2,700,782
2021-22	9.841	276.909	9.167	228,855	2,097,915	2,332,710
Total				\$2,712,108	\$4,067,600	\$20,686,957

Notes:

- (1) Page 33, Column (2).
- (2) Page 34, Column (2).
- (3) $[(1) - 1.000] \times (2) / [(2) - (1)]$.
- (4) Page 33, Column (1) - Page 34, Column (1).
- (5) (3) x (4), rounded.
- (6) (5) + Page 33, Column (1).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Reported Loss Development Factors (2)	Percentage of Losses Not Yet Reported (3)	Expected Unreported Losses (4)	Losses Reported as of 12/31/21 (5)	Estimated Ultimate Losses (6)
2010-11	\$1,216,476	1.000	0.0%	\$0	\$2,018,174	\$2,018,174
2011-12	1,282,678	1.000	0.0%	\$0	925,370	925,370
2012-13	1,351,964	1.000	0.0%	0	805,895	805,895
2013-14	1,426,412	1.000	0.0%	0	1,754,364	1,754,364
2014-15	1,504,117	1.000	0.0%	0	628,110	628,110
2015-16	1,587,197	1.000	0.0%	0	1,584,642	1,584,642
2016-17	1,673,713	1.013	1.3%	21,758	2,495,333	2,517,091
2017-18	1,765,823	1.070	6.5%	114,778	2,331,901	2,446,679
2018-19	1,859,455	1.113	10.2%	189,664	750,586	940,250
2019-20	1,956,750	1.155	13.5%	264,161	1,605,828	1,869,989
2020-21	2,055,645	1.733	42.3%	869,538	1,484,359	2,353,897
2021-22	2,158,321	9.841	89.8%	1,938,172	234,795	2,172,967

Notes:

- (1) Page 37, Column (4).
- (2) Page 33, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 33, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	<i>A Priori</i> 2021-22 Loss (1)	Factor to Remove Trend (2)	Payroll Trended to 2021-22 (\$100's) (3)	<i>A Priori</i> Ultimate Losses (4)
2010-11	\$3.26	0.622	\$599,006	\$1,216,476
2011-12	3.26	0.650	604,397	1,282,678
2012-13	3.26	0.679	609,837	1,351,964
2013-14	3.26	0.710	615,325	1,426,412
2014-15	3.26	0.742	620,863	1,504,117
2015-16	3.26	0.776	626,451	1,587,197
2016-17	3.26	0.811	632,089	1,673,713
2017-18	3.26	0.848	637,778	1,765,823
2018-19	3.26	0.885	643,518	1,859,455
2019-20	3.26	0.923	649,310	1,956,750
2020-21	3.26	0.961	655,153	2,055,645
2021-22	3.26	1.000	661,050	2,158,321

Notes:

- (1) Page 38, Average of Column (3).
- (2) $1.000 / [\text{Page 38, Column (2)}]$.
- (3) Page 68, Average of Column (3).
- (4) $(1) \times (2) \times (3)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	<i>A Priori</i> Ultimate Losses (1)	Estimated Pure Premium Trend (2)	Constant Dollar Ultimate Losses (3)	Payroll Trended to 2021-22 (\$100's) (4)	Rate at 2021-22 Cost Level (5)	Selected Weights (6)
2010-11	\$2,018,174	1.609	\$3,246,300	\$599,006	\$5.42	1.00
2011-12	925,370	1.539	1,424,269	604,397	2.36	1.00
2012-13	805,895	1.473	1,186,773	609,837	1.95	1.00
2013-14	1,754,364	1.409	2,471,656	615,325	4.02	1.00
2014-15	628,110	1.348	846,549	620,863	1.36	1.00
2015-16	1,584,642	1.289	2,042,985	626,451	3.26	1.00
2016-17	2,542,779	1.233	3,135,679	632,089	4.96	0.99
2017-18	2,445,069	1.179	2,883,868	637,778	4.52	0.93
2018-19	750,586	1.129	847,681	643,518	1.32	0.90
2019-20	2,044,205	1.084	2,215,615	649,310	3.41	0.87
2020-21	2,374,952	1.041	2,471,896	655,153	3.77	0.58
Weighted Average All years					\$3.29	
Weighted Average 10/11-19/20					\$3.26	
(7) Selected A Priori 2021-22 Loss Rate:					\$3.26	

Notes:

- (1) Page 39, Column (3).
- (2) Estimated by BAC.
- (3) (1) x (2).
- (4) Page 68, Column (3).
- (7) (3) / (4).
- (6) Inverse of LDF on Page 33.
- (7) Weighted Average 2010-11 to 2019-20.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Reported Loss Projection (1)	Paid Loss Projection (2)	<i>A Priori</i> Selection (3)
2010-11	\$2,018,174	\$2,018,174	\$2,018,174
2011-12	925,370	924,160	925,370
2012-13	805,895	806,261	805,895
2013-14	1,754,364	1,759,832	1,754,364
2014-15	628,110	631,158	628,110
2015-16	1,584,642	1,592,471	1,584,642
2016-17	2,528,458	2,557,525	2,542,779
2017-18	2,494,080	2,394,282	2,445,069
2018-19	835,516	528,715	750,586
2019-20	1,855,377	2,438,309	2,044,205
2020-21	2,572,140	1,456,885	2,374,952
2021-22	2,310,730	1,644,841	2,287,876
Total	\$20,312,856	\$18,752,613	\$20,162,022

Notes:

- (1) Page 33, Column (3).
- (2) Page 34, Column (3).
- (3) Selected on the basis of (1) and (2).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Selected Claim Severity (1)	Factor to Remove Trend (2)	Selected Ultimate Claims (3)	Estimated Ultimate Losses (4)
2010-11	\$26,500	0.622	67	\$1,103,800
2011-12	26,500	0.650	75	1,291,310
2012-13	26,500	0.679	69	1,241,670
2013-14	26,500	0.710	62	1,166,190
2014-15	26,500	0.742	76	1,494,319
2015-16	26,500	0.776	80	1,644,379
2016-17	26,500	0.811	100	2,148,933
2017-18	26,500	0.848	81	1,819,896
2018-19	26,500	0.885	71	1,665,990
2019-20	26,500	0.923	85	2,078,236
2020-21	26,500	0.961	89	2,266,004
2021-22	26,500	1.000	90	2,385,000

Notes:

- (1) Page 41, Item (5).
- (2) $1.000 / [\text{Page 41, Column (2)}]$.
- (3) Page 42, Column (3).
- (4) $(1) \times (2) \times (3)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	<i>A Priori</i> Ultimate Losses (1)	Estimated Severity Trend (2)	Selected Claim Count (3)	Trended Claim Severity (4)
2010-11	\$2,018,174	1.609	67	\$48,452
2011-12	925,370	1.539	75	18,990
2012-13	805,895	1.473	69	17,200
2013-14	1,754,364	1.409	62	39,865
2014-15	628,110	1.348	76	11,139
2015-16	1,584,642	1.289	80	25,537
2016-17	2,542,779	1.233	100	31,357
2017-18	2,445,069	1.179	81	35,603
2018-19	750,586	1.129	71	11,939
2019-20	2,044,205	1.084	85	26,066
2020-21	2,374,952	1.041	89	27,774
2021-22	2,287,876	1.000	90	25,421
Average				\$26,612
16/17-20/21				\$26,548
			(5) Selected Severity:	\$26,500

Notes:

- (1) Page 39, Column (3).
- (2) Estimated by BAC.
- (3) Page 42, Column (3).
- (4) (1) x (2) / (3).
- (5) Selected on the basis of (4).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Selected Claim Counts

Program Year	Reported Claim Count Projection (1)	Bornhuetter- Ferguson Method (2)	Selected Claim Count (3)
2010-11	67		67
2011-12	75		75
2012-13	69		69
2013-14	62		62
2014-15	76		76
2015-16	80		80
2016-17	100		100
2017-18	81		81
2018-19	71		71
2019-20	85		85
2020-21	89		89
2021-22	100	90	90

Notes:

- (1) Page 43, Column (3).
- (2) Page 44, Column (6).
- (3) Selected on the basis of (1) and (2).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projection of Ultimate Claim Counts
Projection of Reported Claims

Program Year	Total Claims Reported 12/31/21 <u>(1)</u>	Development Factors as of 12/31/21 <u>(2)</u>	Projected Ultimate Claims <u>(3)</u>
2010-11	67	1.000	67
2011-12	75	1.000	75
2012-13	69	1.000	69
2013-14	62	1.000	62
2014-15	76	1.000	76
2015-16	80	1.000	80
2016-17	100	1.000	100
2017-18	81	1.000	81
2018-19	71	1.000	71
2019-20	84	1.011	85
2020-21	85	1.044	89
2021-22	29	3.458	100

Notes:

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

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projection of Ultimate Claim Counts
Bornhuetter-Ferguson Method

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 12/31/21 (5)	Projected Ultimate Claims (6)
2021-22	86	3.458	71.1%	61	29	90

Notes:

- (1) Page 45, Item (6).
- (2) Page 43, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 43, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Calculation of Expected # of Indemnity Claims
A Priori Claim Count

Program Year	Projected Ultimate Indemnity Claims (1)	Payroll Trended to 2021-22 (\$Millions) (2)	Indicated Indemnity Claim Frequency (3)
2010-11	67	\$59.9	1.12
2011-12	75	60.4	1.24
2012-13	69	61.0	1.13
2013-14	62	61.5	1.01
2014-15	76	62.1	1.22
2015-16	80	62.6	1.28
2016-17	100	63.2	1.58
2017-18	81	63.8	1.27
2018-19	71	64.4	1.10
2019-20	85	64.9	1.31
2020-21	89	65.5	1.36
2021-22	100	66.1	1.51
Average			1.26
10/11-20/21			1.24
		(4) Selected Claim Frequency:	1.30
		(5) 2021-22 Trended Payroll (\$Millions):	\$66.1
		(6) 2021-22 A Priori Indemnity Claims:	86

Notes:

- (1) Page 43, Column (3).
- (2) Page 68, Column (3) / 10,000.
- (3) (1) / (2).
- (4) Selected on the basis of (3).
- (5) (2).
- (6) (4) x (5).

Monterey Bay Area Self Insurance Authority

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

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

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Reported Projection (1)	Paid Projection (2)	IBNR to Case Reserves Ratio (3)	B-F Method Using Reported (4)	B-F Method Using Paid (5)	Selected Ultimate Losses (6)
2010-11	\$1,217,437	\$1,217,437	\$1,217,437	\$1,217,437	\$1,217,437	\$1,217,437
2011-12	623,610	622,400	623,610	623,610	622,400	624,000
2012-13	734,087	734,115	734,087	734,087	734,087	734,087
2013-14	1,004,364	1,004,577	1,004,364	1,004,364	1,004,364	1,004,364
2014-15	483,248	483,914	483,248	483,248	484,389	483,248
2015-16	1,273,122	1,275,677	1,273,122	1,273,122	1,275,495	1,273,122
2016-17	1,791,312	1,772,807	1,796,943	1,789,404	1,762,459	1,800,000
2017-18	1,414,010	1,457,686	1,355,976	1,408,453	1,445,570	1,355,976
2018-19	812,648	522,131	898,067	851,525	737,418	860,000
2019-20	1,558,476	1,800,905	1,532,074	1,538,043	1,563,920	1,550,000
2020-21	1,881,928	1,427,976	1,927,302	1,707,452	1,429,526	1,840,000
2021-22	2,137,223	918,755	2,205,008	1,552,255	1,477,350	1,560,000
Total	\$14,931,465	\$13,238,380	\$15,051,237	\$14,182,999	\$13,754,414	\$14,302,234

Notes:

- (1) Page 48, Column (3).
- (2) Page 49, Column (3).
- (3) Page 50, Column (6).
- (4) Page 51, Column (6).
- (5) Page 52, Column (6).
- (6) Selected on the basis of (1) - (5).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Cumulative Reported Losses as of 12/31/21 <u>(1)</u>	Reported Development Factor as of 12/31/21 <u>(2)</u>	Projected Ultimate Losses <u>(3)</u>
2010-11	\$1,217,437	1.000	\$1,217,437
2011-12	623,610	1.000	623,610
2012-13	734,087	1.000	734,087
2013-14	1,004,364	1.000	1,004,364
2014-15	483,248	1.000	483,248
2015-16	1,273,122	1.000	1,273,122
2016-17	1,783,241	1.005	1,791,312
2017-18	1,355,976	1.043	1,414,010
2018-19	750,586	1.083	812,648
2019-20	1,382,211	1.128	1,558,476
2020-21	1,155,859	1.628	1,881,928
2021-22	234,795	9.103	2,137,223

Notes:

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

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Cumulative Paid Losses as of 12/31/21 (1)	Paid Development Factor as of 12/31/21 (2)	Projected Ultimate Losses (3)
2010-11	\$1,217,437	1.000	\$1,217,437
2011-12	622,400	1.000	622,400
2012-13	734,087	1.000	734,115
2013-14	1,004,364	1.000	1,004,577
2014-15	483,248	1.001	483,914
2015-16	1,273,122	1.002	1,275,677
2016-17	1,739,041	1.019	1,772,807
2017-18	1,355,976	1.075	1,457,686
2018-19	382,803	1.364	522,131
2019-20	787,518	2.287	1,800,905
2020-21	180,583	7.908	1,427,976
2021-22	5,940	154.673	918,755

Notes:

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

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Reported LDF (1)	Paid LDF (2)	IBNR to Case Reserves Ratio (3)	Case Reserves as of 12/31/21 (4)	Estimated IBNR as of as of 12/31/21 (5)	Estimated Ultimate Losses (6)
2010-11	1.000	1.000	0.000	\$0	\$0	\$1,217,437
2011-12	1.000	1.000	0.000	1,210	0	623,610
2012-13	1.000	1.000	0.000	0	0	734,087
2013-14	1.000	1.000	0.000	0	0	1,004,364
2014-15	1.000	1.001	0.000	0	0	483,248
2015-16	1.000	1.002	0.000	0	0	1,273,122
2016-17	1.005	1.019	0.310	44,200	13,702	1,796,943
2017-18	1.043	1.075	1.428	0	0	1,355,976
2018-19	1.083	1.364	0.401	367,783	147,481	898,067
2019-20	1.128	2.287	0.252	594,693	149,863	1,532,074
2020-21	1.628	7.908	0.791	975,276	771,443	1,927,302
2021-22	9.103	154.673	8.609	228,855	1,970,213	2,205,008

Notes:

- (1) Page 48, Column (2).
- (2) Page 49, Column (2).
- (3) $[(1) - 1.000] \times (2) / [(2) - (1)]$.
- (4) Page 48, Column (1) - Page 49, Column (1).
- (5) (3) x (4), rounded.
- (6) (5) + Page 48, Column (1).

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Reported Loss Development Factors (2)	Percentage of Losses Not Yet Reported (3)	Expected Unreported Losses (4)	Losses Reported as of 12/31/21 (5)	Estimated Ultimate Losses (6)
2010-11	\$977,545	1.000	0.0%	\$0	\$1,217,437	\$1,217,437
2011-12	1,015,629	1.000	0.0%	0	623,610	623,610
2012-13	1,055,219	1.000	0.0%	0	734,087	734,087
2013-14	1,097,884	1.000	0.0%	0	1,004,364	1,004,364
2014-15	1,141,031	1.000	0.0%	0	483,248	483,248
2015-16	1,186,608	1.000	0.0%	0	1,273,122	1,273,122
2016-17	1,232,517	1.005	0.5%	6,163	1,783,241	1,789,404
2017-18	1,279,919	1.043	4.1%	52,477	1,355,976	1,408,453
2018-19	1,328,147	1.083	7.6%	100,939	750,586	851,525
2019-20	1,379,045	1.128	11.3%	155,832	1,382,211	1,538,043
2020-21	1,428,997	1.628	38.6%	551,593	1,155,859	1,707,452
2021-22	1,480,292	9.103	89.0%	1,317,460	234,795	1,552,255

Notes:

- (1) Page 32, Column (6), adjusted for \$250K limit.
- (2) Page 48, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 48, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Paid Loss Development Factors (2)	Percentage of Losses Not Yet Paid (3)	Expected Unpaid Losses (4)	Losses Paid as of 12/31/21 (5)	Estimated Ultimate Losses (6)
2010-11	\$977,545	1.000	0.0%	\$0	\$1,217,437	\$1,217,437
2011-12	1,015,629	1.000	0.0%	0	622,400	622,400
2012-13	1,055,219	1.000	0.0%	0	734,087	734,087
2013-14	1,097,884	1.000	0.0%	0	1,004,364	1,004,364
2014-15	1,141,031	1.001	0.1%	1,141	483,248	484,389
2015-16	1,186,608	1.002	0.2%	2,373	1,273,122	1,275,495
2016-17	1,232,517	1.019	1.9%	23,418	1,739,041	1,762,459
2017-18	1,279,919	1.075	7.0%	89,594	1,355,976	1,445,570
2018-19	1,328,147	1.364	26.7%	354,615	382,803	737,418
2019-20	1,379,045	2.287	56.3%	776,402	787,518	1,563,920
2020-21	1,428,997	7.908	87.4%	1,248,943	180,583	1,429,526
2021-22	1,480,292	154.673	99.4%	1,471,410	5,940	1,477,350

Notes:

- (1) Page 51, Column (1).
- (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

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

Future Loss Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected 1M/500K Loss Rate for 2022-23 *
Gross of \$25K Deductible

Based on 250K Limit Analysis

Program Year	250K Limit Loss Rate (1)	Factor for 1M/500K SIR (2)	Projected 1M/500K SIR Loss Rate (3)
2022-23	\$2.03	1.437	\$2.92

Based on 1M/500K Limit Analysis

Program Year	1M/500K SIR Loss Rate (4)	Factor for 1M/500K SIR (5)	Projected 1M/500K SIR Loss Rate (6)
2022-23	\$3.13	1.000	\$3.13

Program Year	Selected 2022-23 1M/500K SIR Loss Rate (7)	Projected 2022-23 Payroll (\$00's) (8)	Projected Ultimate Losses (9)
2022-23	\$3.13	\$695,289	\$2,176,253
25K Deductible:	\$0.58		\$406,493
Net of 25K Deductible:	\$2.55		\$1,769,760

* EPL Losses are limited to \$500K per occurrence

Notes:

- (1) Page 55, Item (7).
 - (2) Estimated by BAC.
 - (3) (1) x (2), rounded.
 - (4) Page 56, Item (7).
 - (5) Estimated by BAC.
 - (6) (4) x (5), rounded.
 - (7) Selected by BAC.
 - (8) Page 68, Column (2).
 - (9) (7) x (8), rounded.
- Deductible calculated as % of \$250K limit losses.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Future Loss Rate
Losses Limited to \$250,000, Gross of \$25K Deductible

Program Year	Estimated Ultimate Losses (1)	Trend to 2022-23 (2)	Losses Trended to 2022-23 (3)	Payroll Trended to 2022-23 (\$100's) (4)	Rate at 2022-23 Cost Level (5)	Selected Weights (6)
2010-11	\$1,217,437	1.369	\$1,666,506	\$624,412	\$2.67	1.00
2011-12	624,000	1.329	829,082	630,031	1.32	1.00
2012-13	734,087	1.289	946,249	635,702	1.49	1.00
2013-14	1,004,364	1.251	1,256,587	641,423	1.96	1.00
2014-15	483,248	1.214	586,852	647,196	0.91	1.00
2015-16	1,273,122	1.179	1,501,350	653,021	2.30	1.00
2016-17	1,800,000	1.146	2,062,635	658,898	3.13	1.00
2017-18	1,355,976	1.113	1,509,817	664,828	2.27	0.96
2018-19	860,000	1.083	931,379	670,811	1.39	0.92
2019-20	1,550,000	1.054	1,634,274	676,849	2.41	0.89
2020-21	1,840,000	1.027	1,889,241	682,940	2.77	0.61
Weighted Average 10-11 through 20-21:					\$2.03	
Weighted Average 10-11 through 19-20:					\$1.98	
(7) Projected 2022-23 \$250K Limit Rate:					\$2.03	
(8) Projected 2022-23 \$250K Limit Losses:					\$1,411,436	

Notes:

- (1) Page 47, Column (6).
- (2) Estimated by BAC.
- (3) (1) x (2).
- (4) Page 68, Column (4).
- (5) (4) / (3).
- (6) Inverse of LDF on Page 49.
- (7) Based on (5).
- (8) (7) x 2022-23 projected payroll.

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Projected Future Loss Rate
Losses Limited to \$1M/\$500K, Gross of \$25K Deductible

Program Year	Estimated Ultimate Losses (1)	Trend to 2022-23 (2)	Losses Trended to 2022-23 (3)	Payroll Trended to 2022-23 (\$100's) (4)	Rate at 2022-23 Cost Level (5)	Selected Weights (6)
2010-11	\$2,018,174	1.602	\$3,233,789	\$624,412	\$5.18	1.00
2011-12	926,000	1.533	1,419,634	630,031	2.25	1.00
2012-13	805,895	1.467	1,182,015	635,702	1.86	1.00
2013-14	1,754,364	1.403	2,461,571	641,423	3.84	1.00
2014-15	628,110	1.342	843,036	647,196	1.30	1.00
2015-16	1,584,642	1.284	2,034,373	653,021	3.12	1.00
2016-17	2,530,000	1.228	3,106,570	658,898	4.71	0.99
2017-18	2,540,000	1.176	2,986,359	664,828	4.49	0.93
2018-19	920,000	1.128	1,038,088	670,811	1.55	0.90
2019-20	1,840,000	1.084	1,993,745	676,849	2.95	0.87
2020-21	2,400,000	1.041	2,498,548	682,940	3.66	0.58
Weighted Average 10-11 through 20-21:					\$3.16	
Weighted Average 10-11 through 19-20:					\$3.13	
(7) Projected 2022-23 \$1M/\$500k Limit Rate:					\$3.13	

Notes:

- (1) Page 32, Column (6).
- (2) Estimated by BAC.
- (3) (1) x (2).
- (4) Page 68, Column (4).
- (5) (4) / (3).
- (6) Inverse of LDF on Page 33.
- (7) Based on (5).

Monterey Bay Area Self Insurance Authority

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

Discounting Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Discounted Value of Unpaid Losses as of 6/30/22
Assuming a 1.5% Interest Rate

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

Program Year	Projected Unpaid Losses (1)	Discount Factor (2)	Discounted Unpaid Losses (3)
2010-11	\$0	1.000	\$0
2011-12	316	1.000	316
2012-13	0	1.000	0
2013-14	0	1.000	0
2014-15	0	1.000	0
2015-16	0	1.000	0
2016-17	38,783	0.993	38,495
2017-18	224,993	0.990	222,739
2018-19	395,366	0.986	389,911
2019-20	676,824	0.980	663,102
2020-21	1,534,381	0.988	1,515,916
2021-22	1,866,074	0.985	1,838,933
Total	\$4,736,735		\$4,669,412

(4) Indicated Discount Factor: 0.986

Notes:

- (1) Page 23, 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
General and Auto Liability Program

Discounted Value of 2022-23 Losses as of 7/1/22
Assuming a 1.5% Interest Rate

Losses Limited to \$1M SIR, Gross of \$25K Deductible

Program Year	Projected Loss Payments (1)	Discounted Value Factor (2)	Discounted Value of Payments (3)
2022-23	\$115,561	0.993	\$114,704
2023-24	624,898	0.978	611,097
2024-25	625,367	0.963	602,518
2025-26	308,827	0.949	293,146
2026-27	308,827	0.935	288,814
2027-28	159,116	0.921	146,606
2028-29	33,656	0.908	30,551
2029-30	0	0.894	0
2030-31	0	0.881	0
2031-32	0	0.868	0
2032-33	0	0.855	0
Total	\$2,176,253		\$2,087,436

(4) Indicated Discount Factor: 0.959

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
General and Auto Liability Program

Discounted Value of 2022-23 Losses as of 7/1/22
Assuming a 1.5% Interest Rate

Losses Limited to \$1M SIR, NET of \$25K Deductible

Program Year	Projected Loss Payments (1)	Discount Factor (2)	Discounted Value of Payments (3)
2022-23	\$0	0.993	\$0
2023-24	484,557	0.978	473,855
2024-25	429,237	0.963	413,554
2025-26	336,485	0.949	319,399
2026-27	336,485	0.935	314,679
2027-28	150,857	0.921	138,996
2028-29	32,139	0.908	29,174
2029-30	0	0.894	0
2030-31	0	0.881	0
2031-32	0	0.868	0
2032-33	0	0.855	0
Total	\$1,769,760		\$1,689,657

(4) Indicated Discount Factor: 0.955

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

Actuarial Analysis of the General and Auto Liability Program

Deductibles

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Reported Projection (1)	B-F Method Using Reported (2)	Selected Ultimate Losses (3)
2010-11	\$187,263	\$187,263	\$187,263
2011-12	156,989	156,989	156,989
2012-13	133,330	133,330	133,330
2013-14	156,869	156,869	156,869
2014-15	143,737	143,737	143,737
2015-16	198,348	198,348	198,348
2016-17	256,070	256,070	256,070
2017-18	198,844	198,844	198,844
2018-19	146,771	146,771	146,771
2019-20	237,721	237,732	240,000
2020-21	193,054	201,869	210,000
2021-22	332,092	282,956	290,000
Total	\$2,341,088	\$2,300,778	\$2,318,220

Notes:

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

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	Cumulative Reported Losses as of 12/31/21 (1)	Reported Development Factor as of 12/31/21 (2)	Projected Ultimate Losses (3)
2010-11	\$187,263	1.000	\$187,263
2011-12	156,989	1.000	156,989
2012-13	133,330	1.000	133,330
2013-14	156,869	1.000	156,869
2014-15	143,737	1.000	143,737
2015-16	198,348	1.000	198,348
2016-17	256,070	1.000	256,070
2017-18	198,844	1.000	198,844
2018-19	146,771	1.000	146,771
2019-20	237,190	1.002	237,721
2020-21	179,799	1.074	193,054
2021-22	70,795	4.691	332,092
Total	\$2,066,005		\$2,341,088

Notes:

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

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

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

Program Year	<i>A Priori</i> Ultimate Losses (1)	Cumulative Reported Loss Development Factors (2)	Percentage of Losses Not Yet Reported (3)	Expected Unreported Losses (4)	Limited Losses Reported as of 12/31/21 (5)	Estimated Ultimate Deductible Losses (6)
2010-11	\$230,510	1.000	0.0%	\$0	\$187,263	\$187,263
2011-12	117,042	1.000	0.0%	0	156,989	156,989
2012-13	136,361	1.000	0.0%	0	133,330	133,330
2013-14	184,743	1.000	0.0%	0	156,869	156,869
2014-15	88,074	1.000	0.0%	0	143,737	143,737
2015-16	229,976	1.000	0.0%	0	198,348	198,348
2016-17	322,398	1.000	0.0%	0	256,070	256,070
2017-18	240,920	1.000	0.0%	0	198,844	198,844
2018-19	151,555	1.000	0.0%	0	146,771	146,771
2019-20	271,164	1.002	0.2%	542	237,190	237,732
2020-21	319,848	1.074	6.9%	22,070	179,799	201,869
2021-22	269,582	4.691	78.7%	212,161	70,795	282,956
Total	\$2,562,173			\$234,773	\$2,066,005	\$2,300,778

Notes:

- (1) Page 47, Column (6), adjusted for \$10K limit.
- (2) Page 63, Column (2).
- (3) $100\% - [1.000 / (2)]$.
- (4) $(1) \times (3)$.
- (5) Page 63, Column (1).
- (6) $(4) + (5)$.

Monterey Bay Area Self Insurance Authority

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

Claims Data Exhibits

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program - Includes EPL

Cumulative Reported Losses (\$000's) - Limited to \$1M per Loss - Includes ALAE - 12/31/21

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>
2006					618	557	557	557	557	557	557
2007				451	424	401	401	401	401	401	401
2008			662	617	500	500	500	500	500	500	500
2009		541	307	355	405	452	455	454	455	455	455
2010	151	569	1,025	1,082	721	729	729	729	729	729	729
2011	76	819	2,507	2,500	2,304	2,334	2,240	2,240	2,240	2,240	2,240
2012	19	278	593	856	896	996	903	902	902	921	925
2013	55	343	454	777	703	934	796	796	806	806	
2014	7	1,443	1,714	2,384	2,359	2,359	1,684	2,402	1,754		
2015	13	534	685	589	589	589	629	628			
2016	55	828	1,339	1,160	1,185	1,285	1,585				
2017	13	1,619	2,544	1,764	1,960	2,495					
2018	277	1,500	1,522	2,123	2,332						
2019	102	380	1,057	751							
2020	232	1,381	1,606								
2021	41	1,484									
2022	235										
	<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>
VOL AVG	10.735	1.500	1.038	0.981	1.076	0.941	1.080	0.929	1.003	1.001	
AVG	38.886	1.625	1.101	0.971	1.065	0.977	1.042	0.972	1.003	1.001	
REFERENCE	3.070	1.380	1.102	1.041	1.025	1.013	1.026	1.008	1.003	1.000	1.001
SELECT	5.679	1.500	1.038	1.041	1.056	1.013	1.000	1.000	1.000	1.000	1.000
CUMULATIVE	9.841	1.733	1.155	1.113	1.070	1.013	1.000	1.000	1.000	1.000	1.000

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program - Includes EPL

Cumulative Paid Losses (\$000's) - Limited to \$1M per Loss - Includes ALAE - 12/31/21

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>
2006					565	557	557	557	557	557	557
2007				386	406	401	401	401	401	401	401
2008			337	497	500	500	500	500	500	500	500
2009		151	255	274	306	372	455	454	455	455	455
2010	15	122	524	727	721	729	729	729	729	729	729
2011	5	194	646	1,932	2,200	2,221	2,240	2,240	2,240	2,240	2,240
2012	13	113	177	387	897	899	902	902	902	921	924
2013	3	124	373	702	703	716	796	796	806	806	
2014	4	478	935	2,311	2,324	2,329	1,684	2,402	2,402		
2015	10	56	510	589	589	589	628	628			
2016	13	142	575	1,072	1,134	1,233	1,585				
2017	7	309	966	1,608	1,719	2,451					
2018	21	243	679	984	2,160						
2019	15	75	283	383							
2020	7	701	1,011								
2021	9	181									
2022	6										
	<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>
VOL AVG	22.436	2.560	1.832	1.191	1.077	0.993	1.081	1.001	1.003	1.001	
AVG	34.323	3.346	1.746	1.246	1.062	1.038	1.043	1.002	1.003	1.000	
REFERENCE	7.980	2.615	2.004	1.303	1.181	1.159	1.043	1.001	1.020	1.010	1.000
SELECT	34.323	3.346	1.746	1.246	1.062	1.038	1.000	1.002	1.003	1.000	1.000
CUMULATIVE	276.909	8.068	2.411	1.381	1.108	1.043	1.005	1.005	1.003	1.000	1.000

Monterey Bay Area Self Insurance Authority
General and Auto Liability Program

Program Information
Program Years run July 1 to June 30

Program Year	Self-Insured Retention (SIR) * (1)	Payroll (\$00's) (2)	Payroll Trended to 2021-22 (\$00's) (3)	Payroll Trended to 2022-23 (\$00's) (4)	Deductible (5)
2010-11	\$1,000,000	\$456,468	\$599,006	\$624,412	\$10,000
2011-12	1,000,000	454,479	604,397	630,031	10,000
2012-13	1,000,000	422,491	609,837	635,702	10,000
2013-14	1,000,000	436,959	615,325	641,423	10,000
2014-15	1,000,000	455,957	620,863	647,196	10,000
2015-16	1,000,000	472,388	626,451	653,021	10,000
2016-17	1,000,000	518,291	632,089	658,898	10,000
2017-18	1,000,000	545,055	637,778	664,828	10,000
2018-19	1,000,000	590,304	643,518	670,811	10,000
2019-20	1,000,000	622,825	649,310	676,849	10,000
2020-21	1,000,000	628,497	655,153	682,940	10,000
2021-22	1,000,000	661,050	661,050	689,087	10,000
2022-23	?	695,289	666,999	695,289	25,000

Notes:

- (1) Provided by MBASIA.
* EPL SIR is \$500,000 claims made starting 2011-12.
- (2) Provided by MBASIA.
- (3) Trending parallels 0.90% per year growth in population.
- (4) Trending parallels 0.90% per year growth in population.
- (5) Provided by MBASIA.
Deductible assumed to apply to combined loss & ALAE.
(Unconfirmed).