



Bickmore

Actuarial

Actuarial Review of the Self-Insured Liability Program

*Outstanding Liabilities as of June 30, 2019 and June 30, 2020
Forecast for Program Years 2019-20 and 2020-21*

Presented to

Humboldt County

October 25, 2019





Friday, October 25, 2019

Ms. Kristin Kovacs
Interim Risk Manager
County of Humboldt
825 5th Street
Eureka, CA 95501

Re: Actuarial Review of the Self-Insured Liability Program

Dear Ms. Kovacs:

As you requested, we have completed our review of Humboldt County's self-insured liability program. Assuming an SIR of \$100,000 per occurrence, we estimate the ultimate cost of claims and expenses for claims incurred during the 2019-20 and 2020-21 program years to be \$488,000 and \$527,000, respectively. These amounts include allocated loss adjustment expenses (ALAE), unallocated loss adjustment expenses (ULAE), and a discount for anticipated investment income. ALAE is the direct cost associated with the defense of individual claims (e.g. legal fees, investigation fees, court charges). ULAE is the cost to administer all claims to final settlement, which may be years into the future (e.g. claims adjusters' salaries, taxes). The discount for investment income is calculated based on the likely payout pattern of the County's claims, assuming a 2.5% return on investments per year. For budgeting purposes, the expected costs of 2019-20 and 2020-21 claims translate to rates of \$0.35 and \$0.38 per \$100 of payroll, respectively.

In addition, we estimate the program's liability for outstanding claims to be \$1,873,000 and \$1,479,000 as of June 30, 2019 and June 30, 2020, respectively, again including ALAE and ULAE, and discounted for anticipated investment income. Given estimated program assets of \$3,437,000 as of June 30, 2019, the program was funded above the 90% confidence level.

The \$1,873,000 estimate is the minimum liability to be booked by the County at June 30, 2019 for its liability program, in accordance with Governmental Accounting Standards Board (GASB) Statement #10. GASB #10 requires the County to accrue a liability on its financial statements for the ultimate cost of claims and expenses associated with all reported and unreported claims, including ALAE and ULAE. GASB #10 does not prohibit the discounting of losses to recognize investment income.

Our conclusions regarding the County's liability for unpaid loss and loss adjustment expenses (LAE) at June 30, 2019 are summarized in the table below.

Humboldt County
Self-Insured Liability Program
Estimated Liability for Unpaid Loss and LAE
at June 30, 2019

	Expected	Marginally Acceptable 70% CL	Recommended Range			Conservative 90% CL
			Low 75% CL	Target 80% CL	High 85% CL	
Loss and ALAE	\$1,957,000					
ULAE	30,000					
Investment Income Offset	(114,000)					
Discounted Loss and LAE	\$1,873,000	\$2,094,000	\$2,190,000	\$2,304,000	\$2,444,000	\$2,630,000
Assets	3,437,000					
Surplus	\$1,564,000	\$1,343,000	\$1,247,000	\$1,133,000	\$993,000	\$807,000

Our conclusions regarding the County's liability for unpaid loss and loss adjustment expenses (LAE) at June 30, 2020 are summarized in the table below.

Humboldt County
Self-Insured Liability Program
Estimated Liability for Unpaid Loss and LAE
at June 30, 2020

	Expected	Marginally Acceptable 70% CL	Recommended Range			Conservative 90% CL
			Low 75% CL	Target 80% CL	High 85% CL	
Loss and ALAE	\$1,532,000					
ULAE	31,000					
Investment Income Offset	(84,000)					
Discounted Loss and LAE	\$1,479,000	\$1,654,000	\$1,729,000	\$1,819,000	\$1,930,000	\$2,077,000
Assets	4,776,000					
Surplus	\$3,297,000	\$3,122,000	\$3,047,000	\$2,957,000	\$2,846,000	\$2,699,000

GASB #10 does not address an actual asset requirement for the program, but only speaks to the liability to be recorded on the County's financial statements.

Because actuarial estimates of claims costs are subject to some uncertainty, we recommend that an amount in addition to the discounted expected loss costs be set aside

as a risk margin for contingencies. Generally, the amount should be sufficient to fund assets to the 75% to 85% confidence level for primary programs. We consider funding assets to the 70% confidence level to be marginally acceptable and funding assets to the 90% confidence level to be conservative.

Furthermore, the CSAC Excess Insurance Authority standard states that based upon the actuarial recommendations, the member should maintain assets and make funding contributions equal to or exceeding the present value of expected losses and a reasonable margin for contingencies.

The table below shows our funding recommendations for Humboldt County for the 2019-20 fiscal year.

Humboldt County
Self-Insured Liability Program
Funding Guidelines for 2019-20
Self-Insured Retention (SIR) of \$100,000

	Expected	Marginally Acceptable 70% CL	Recommended Range			Conservative 90% CL
			Low 75% CL	Target 80% CL	High 85% CL	
Loss and ALAE	\$482,000					
ULAE	30,000					
Investment Income Offset	<u>(24,000)</u>					
Discounted Loss and LAE	\$488,000	\$580,000	\$624,000	\$675,000	\$740,000	\$827,000
Non-Claims Related Expenses	<u>1,845,000</u>	<u>1,845,000</u>	<u>1,845,000</u>	<u>1,845,000</u>	<u>1,845,000</u>	<u>1,845,000</u>
Indicated Funding	\$2,333,000	\$2,425,000	\$2,469,000	\$2,520,000	\$2,585,000	\$2,672,000
Rate per \$100 of 2019-20 Payroll	\$1.68	\$1.75	\$1.78	\$1.82	\$1.87	\$1.93

The funding recommendations shown in the table above do not include any recognition of the existing funding margin (surplus or deficit) at June 30, 2019.

The Non-Claims Related Expenses above include the following expenses:

- Excess Insurance: \$1,489,000
- Other Expenses: \$356,000

The table below shows our funding recommendations for Humboldt County for the 2020-21 fiscal year. Given the program’s projected funding surplus as of June 30, 2020, we recommend that the County implement a five-year funding plan to bring program assets back to the desired confidence level by June 30, 2025. Under this plan, the County should fund the full value of each prospective year’s claims costs; but in addition, may need to return an amortized portion of the projected surplus as of June 30, 2020. For example, to achieve funding at the 75% confidence level as of June 30, 2025, the County’s fiscal year 2020-21 contribution should total \$1,879,000, including \$674,000 for claims and loss adjustment expenses, \$1,845,000 for non-claims related expenses, less \$640,000 from the June 30, 2020 surplus.

Humboldt County
Self-Insured Liability Program
Funding Guidelines for 2020-21
Amortized Over Five Years
Self-Insured Retention (SIR) of \$100,000

	Expected	Marginally Acceptable 70% CL	Recommended Range			Conservative 90% CL
			Low 75% CL	Target 80% CL	High 85% CL	
Loss and ALAE	\$520,000					
ULAE	33,000					
Investment Income Offset	(26,000)					
Discounted Loss and LAE	\$527,000	\$626,000	\$674,000	\$729,000	\$799,000	\$893,000
Non-Claims Related Expenses	1,845,000	1,845,000	1,845,000	1,845,000	1,845,000	1,845,000
(Surplus) at 6/30/20 Amortized Over Five Years	(692,000)	(655,000)	(640,000)	(621,000)	(598,000)	(567,000)
Indicated Funding	\$1,680,000	\$1,816,000	\$1,879,000	\$1,953,000	\$2,046,000	\$2,171,000
Rate per \$100 of 2020-21 Payroll	\$1.21	\$1.31	\$1.36	\$1.41	\$1.48	\$1.57

The Non-Claims Related Expenses above include the following expenses:

- Excess Insurance: \$1,489,000
- Other Expenses: \$356,000

The report that follows outlines the scope of our study, its background, and our conclusions, recommendations, and assumptions. Judgments regarding the appropriateness of our conclusions and recommendations should be made only after studying the report in its entirety, including the graphs, attachments, exhibits and appendices. Our report has been developed for the County's internal use. It is not intended for general circulation.

We appreciate the opportunity to be of service to Humboldt County in preparing this report. Please feel free to call Mike Harrington at (916) 244-1162, Becky Richard at (916) 244-1183 or York Lee at (916) 244-1159 with any questions you may have concerning this report.

Sincerely,

Bickmore Actuarial



Mike Harrington, FCAS, MAAA
President and Principal, Bickmore Actuarial
Fellow, Casualty Actuarial Society
Member, American Academy of Actuaries



Becky Richard, ACAS, MAAA
Senior Actuarial Manager, Bickmore Actuarial
Associate, Casualty Actuarial Society
Member, American Academy of Actuaries



York Lee
Senior Actuarial Analyst, Bickmore Actuarial

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I. BACKGROUND

Humboldt County began its self-insured liability program on July 1, 1978. Its self-insured retention for 2010-11 and prior was \$150,000. From July 1, 2011 to June 30, 2014, the SIR was increased to \$500,000. As of July 1, 2014, the SIR was decreased to \$100,000. Excess coverage is provided by the CSAC Excess Insurance Authority. Claims administration services are provided by the County. Additional background on the program is given in Appendix K.

As of June 30, 2019, the County had assets of \$3,437,000 for the program. As of June 30, 2020, the County is expected to have assets of \$4,776,000 for the program. Additional background on program funding is given in Appendix L.

The purpose of this review is to provide a guide to the County to determine reasonable funding levels for its self-insurance program according to the funding policy the County has adopted and to comply with Governmental Accounting Standards Board Statements #10 and #30. The specific objectives of the study are to estimate the County's liability for outstanding claims as of June 30, 2019 and June 30, 2020, project ultimate loss costs for 2019-20 and 2020-21, and provide funding guidelines to meet these liabilities and future costs.

II. CONCLUSIONS AND RECOMMENDATIONS

A. LIABILITY FOR OUTSTANDING CLAIMS

Graphs 1a and 1b on the following pages summarize our assessment of the County's funding position as of June 30, 2019 and June 30, 2020. The dark-colored bars indicate our estimates of the program's liability for outstanding claims before recognition of the investment income that can be earned on the assets held before the claim payments come due. The horizontal line across each graph indicates the County's available assets at June 30th of each year.

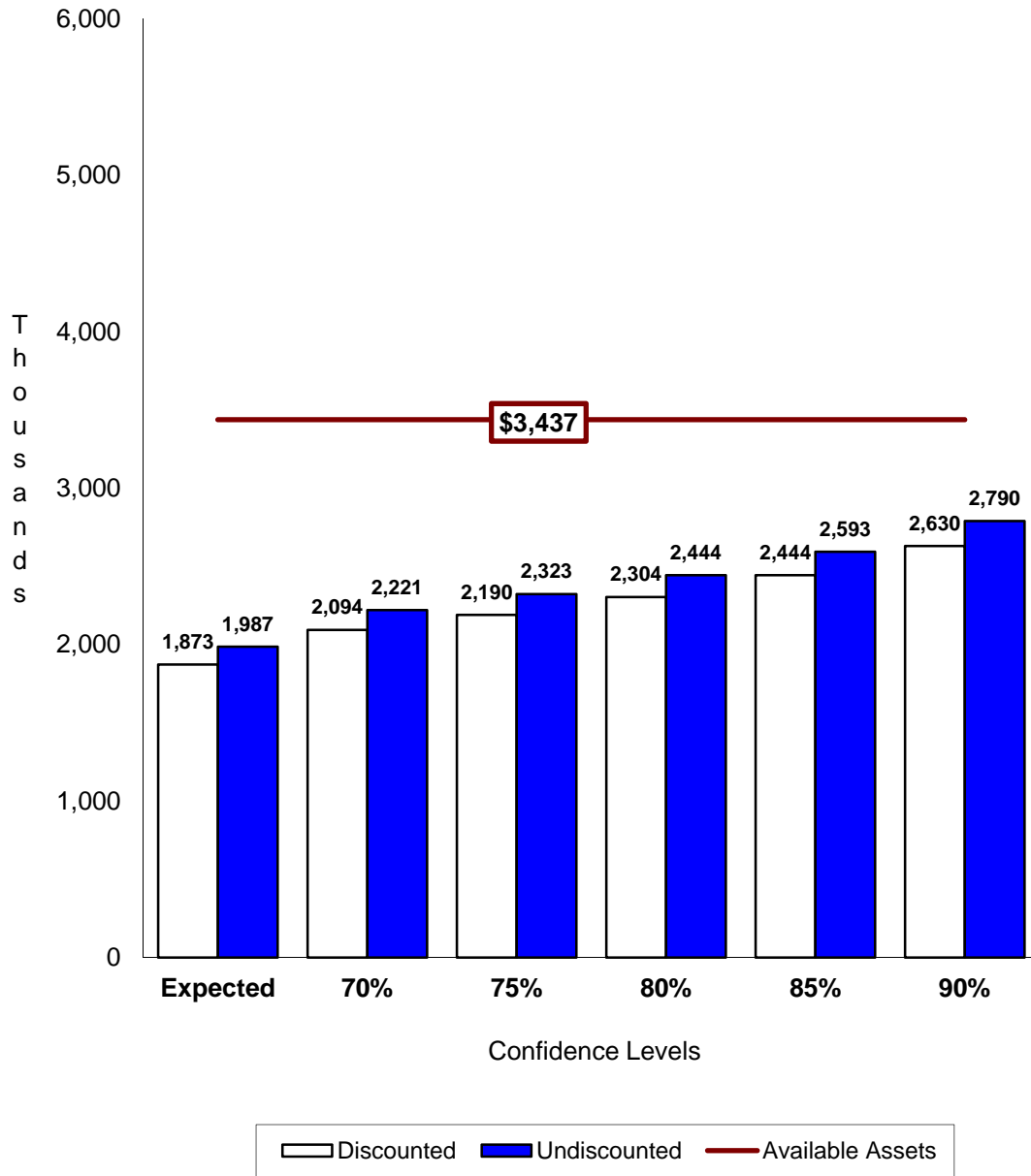
Our best estimate of the full value of the County's liability for outstanding claims within its self-insured retention (SIR) is \$1,987,000 as of June 30, 2019, and \$1,563,000 as of June 30, 2020. These amounts include losses, allocated loss adjustment expenses (ALAE), and unallocated loss adjustment expenses (ULAE). ALAE is the direct cost associated with the defense of individual claims (e.g. legal fees, investigation fees, court charges). ULAE is the cost to administer claims to final settlement, which may be years in the future (e.g. claims adjusters' salaries, taxes).

There is some measure of uncertainty associated with our best estimate because of the random nature of much of the process that determines ultimate claims costs. For this reason, we generally recommend that a program such as this include some funding margin for the possibility that actual loss costs will be greater than the best estimate. We generally measure the amount of this margin by thinking in terms of the probability distribution of actual possible results around our best estimate. As the margin grows, the probability that the corresponding funding amount will be sufficient to meet actual claim liabilities increases. We typically refer to this probability as the "confidence level" of funding. Graphs 1a and 1b show the liabilities for outstanding claims at several confidence levels that are typically of interest to risk managers in formulating funding policies for self-insurance programs.

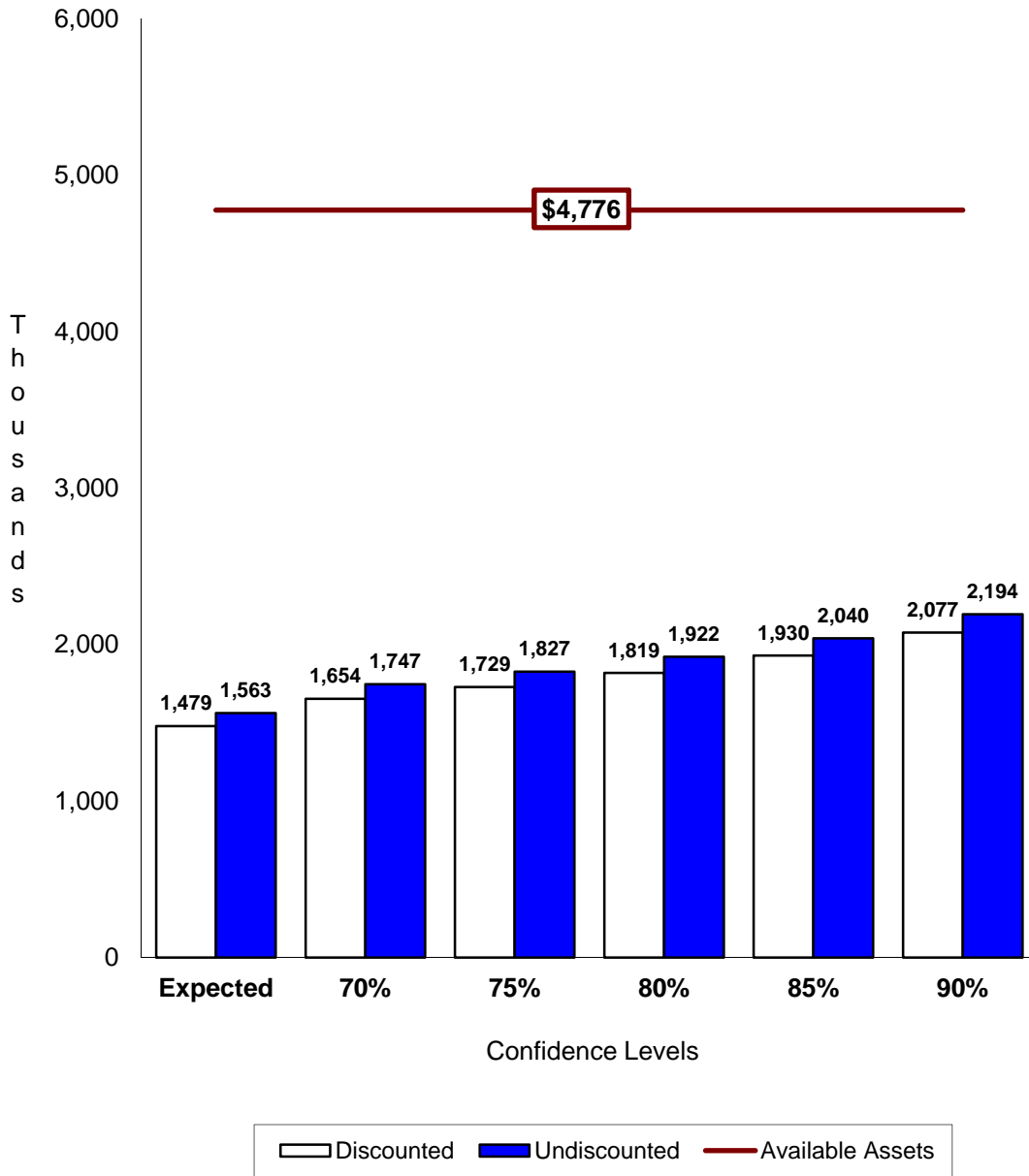
The County can earn investment income on the assets it holds until claims payments come due. Assuming a long-term average annual return on investments of 2.5%, we estimate the impact of investment income earnings to be about 5.7% if the program is funded within the range indicated in the graphs, resulting in a discounted liability for outstanding claims of \$1,873,000 as of June 30, 2019, and \$1,479,000 as of June 30, 2020.

Investment income earnings will be less than this when the program does not maintain sufficient funding, and more when there is excess funding. Thus, thinking in terms of liabilities discounted for investment income can actually mask funding deficiencies and redundancies that might otherwise be obvious. However, the discounted liabilities do represent legitimate funding targets. The light-colored bars on Graphs 1a and 1b show our estimates of the County's discounted liability for outstanding claims.

Humboldt County
Liability
Available Assets vs Outstanding Liability (\$000's)
at June 30, 2019



Humboldt County
Liability
Available Assets vs Outstanding Liability (\$000's)
at June 30, 2020



The table below displays a breakdown of the program's outstanding loss and LAE liabilities into case reserves and incurred but not reported (IBNR) reserves at June 30, 2019, before recognition of investment income.

Humboldt County
Self-Insured Liability Program
Estimated Liability for Unpaid Loss and LAE at June 30, 2019

Year	Case Reserves	IBNR Reserves	Total Outstanding
Prior	\$0	\$0	\$0
1999-00	0	0	0
2000-01	0	0	0
2001-02	0	0	0
2002-03	0	0	0
2003-04	0	0	0
2004-05	0	0	0
2005-06	0	0	0
2006-07	0	0	0
2007-08	0	0	0
2008-09	0	0	0
2009-10	0	608	608
2010-11	0	0	0
2011-12	71,524	1,638	73,162
2012-13	0	0	0
2013-14	195,902	14,715	210,617
2014-15	260,957	2,211	263,168
2015-16	57,089	8,995	66,084
2016-17	238,562	50,298	288,860
2017-18	556,848	74,577	631,425
2018-19	143,876	278,883	422,759
Loss and ALAE	\$1,524,758	\$431,925	\$1,956,683
ULAE		30,366	30,366
Total	\$1,524,758	\$462,291	\$1,987,049

The table below displays a breakdown of the program's outstanding loss and LAE liabilities into case reserves and incurred but not reported (IBNR) reserves at June 30, 2020, before recognition of investment income.

Humboldt County
Self-Insured Liability Program
Estimated Liability for Unpaid Loss and LAE at June 30, 2020

Year	Case Reserves	IBNR Reserves	Total Outstanding
Prior	\$0	\$0	\$0
1999-00	0	0	0
2000-01	0	0	0
2001-02	0	0	0
2002-03	0	0	0
2003-04	0	0	0
2004-05	0	0	0
2005-06	0	0	0
2006-07	0	0	0
2007-08	0	0	0
2008-09	0	0	0
2009-10	407	0	407
2010-11	0	0	0
2011-12	26,192	0	26,192
2012-13	0	0	0
2013-14	133,660	4,715	138,375
2014-15	155,321	211	155,532
2015-16	32,699	1,995	34,694
2016-17	128,087	25,298	153,385
2017-18	319,652	34,577	354,229
2018-19	216,024	60,883	276,907
2019-20	120,866	271,000	391,866
Loss and ALAE	\$1,132,908	\$398,679	\$1,531,587
ULAE		30,813	30,813
Total	\$1,132,908	\$429,492	\$1,562,400

B. PROGRAM FUNDING: GOALS AND OBJECTIVES

As self-insurance programs have proliferated among public entities, it has become apparent that there is a large measure of inconsistency in the way in which these programs recognize and account for their claims costs. This is the result of the fact that there have been several different sources of guidance available, none of which has been completely relevant to public entity self-insurance programs.

According to the Governmental Accounting Standards Board (GASB), the most relevant source of guidance on the subject is Financial Accounting Standards Board Statement #60. A liability for unpaid claim costs, including all loss adjustment expenses, should be accrued at the time the self-insured events occur. This liability should include an allowance for incurred but not reported claims. It may be discounted for investment income at an appropriate rate of return, provided the discounting is disclosed. The regulations detailing the way in which this must be done are outlined in GASB's statements #10 and #30. These regulations are required to be applied by the County.

GASB #10 and #30 do not address asset requirements. They do, however, allow a range of amounts to be recognized for accounting purposes; specifically, GASB #10 and #30 allow recognition of a risk margin for unexpectedly adverse loss experience. Thus, for accounting purposes, it is possible to formulate a funding policy from a range of alternatives. The uncertainty in any estimate of the program's liability for outstanding claims should be taken into consideration in determining funding policy, but it may be offset by recognizing anticipated investment income earnings. This usually means developing a funding program based on discounted claims costs with some risk margin for unexpected adverse loss experience.

The amount of the risk margin should be a question of long-term funding policy. We recommend that the risk margin be determined by thinking in terms of the probability that a given level of assets will prove to be adequate. For example, a reasonable goal might be to maintain assets at the 85% confidence level.

A key factor to consider in determining funding policy is the degree to which stability is required in the level of contributions to the program from year to year. If you elect to maintain assets at a low confidence level, the chances are much greater that future events will prove that additional contributions should have been made for old claims. The additional contributions for old claims may be required at the same time that costs are increasing dramatically on new claims. The burden of funding for increases on past years as well as on current years, may well be prohibitive.

We generally recommend maintaining program assets at the 80% confidence level, after recognition of investment income, with a recommended range of the 75% to 85% confidence levels. We tend to think of the 70% confidence level as marginally acceptable and of the 90% confidence level as conservative. We recommend the 75% to 85% confidence level range because the probabilities are reasonably high that resulting assets will be sufficient to meet claim liabilities, yet the required risk margins are not so large that they will cause most self-insured entities to experience undue financial hardship. In addition, within this range, anticipated investment income generally offsets the required risk margin for the most part, which means that assets are likely sufficient on an undiscounted basis.

We also strongly believe, however, that the confidence level to which any future year is funded should be evaluated in light of the relative certainty of the assumptions underlying the actuarial analysis, the County's other budgetary constraints, and the relative level of risk it is believed appropriate to assume. This means formulating both short and long-term funding goals, which may be the same in some years, but different in others.

In general, we recommend funding each year's claims costs in that year. When surpluses or deficits have developed on outstanding liabilities and funding adjustments are necessary, they should be clearly identified as such so that the habit of funding each year's claims costs that year is maintained. We also recommend that you reduce a surplus more slowly than you would accumulate funding to reduce a deficit.

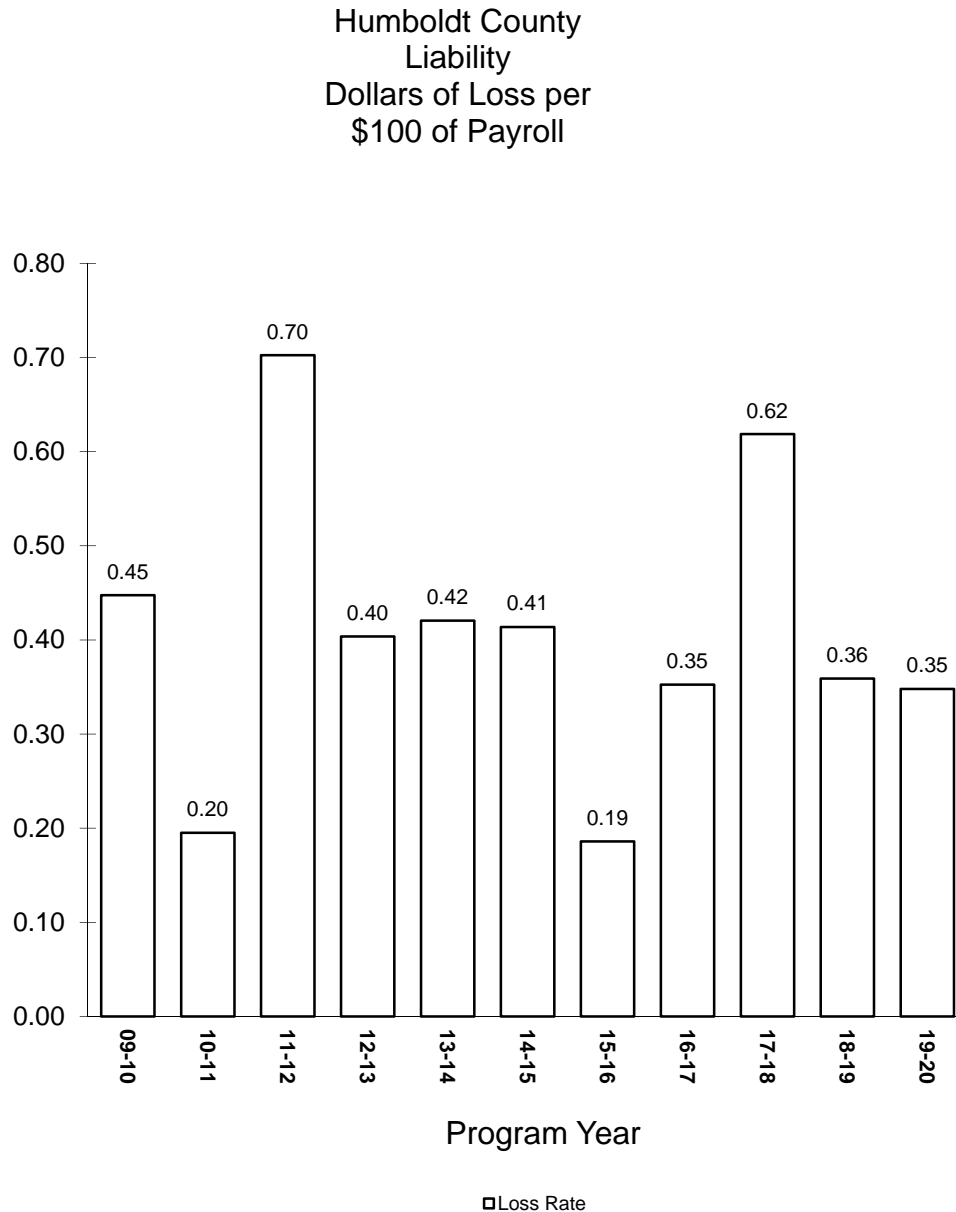
It is estimated that program assets were \$3,437,000 as of June 30, 2019, resulting in the program being funded above the 90% confidence level. Given estimated assets of \$4,776,000 as of June 30, 2020, the program is expected to be funded above the 90% confidence level.

C. HISTORICAL TRENDS IN THE SELF-INSURANCE PROGRAM

Loss Rate

The program's dollars of loss per \$100 of payroll (based on losses limited to \$100,000 per occurrence), or loss rate, has fluctuated over the most recent ten years. The projected 2019-20 loss rate of \$0.35 is based on an average of the most recent five years. See Graph 2 below.

Graph 2

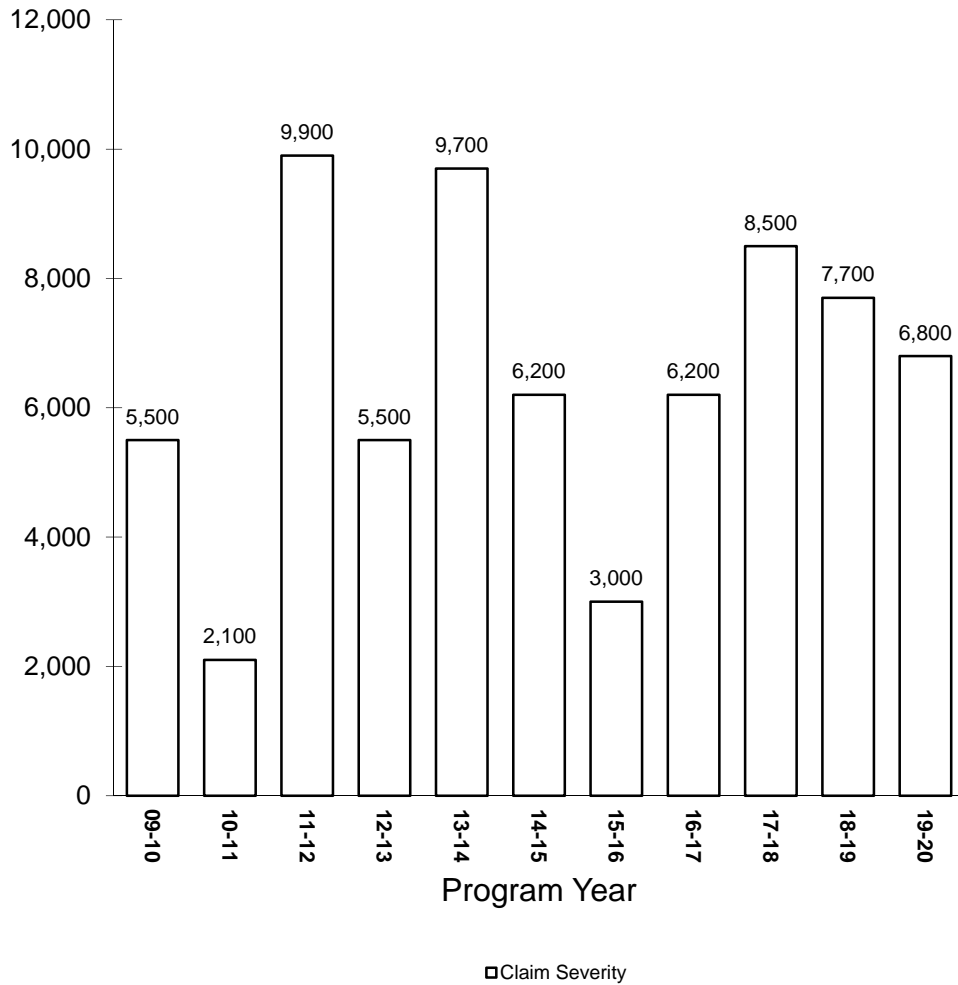


Severity

The program's average dollars of loss per claim (based on losses limited to \$100,000 per occurrence), or severity, has also fluctuated over the most recent ten years. The projected 2019-20 severity of \$6,800 is based on a long term average. See Graph 3 below.

Graph 3

Humboldt County
Liability
Dollars of Loss per Claim

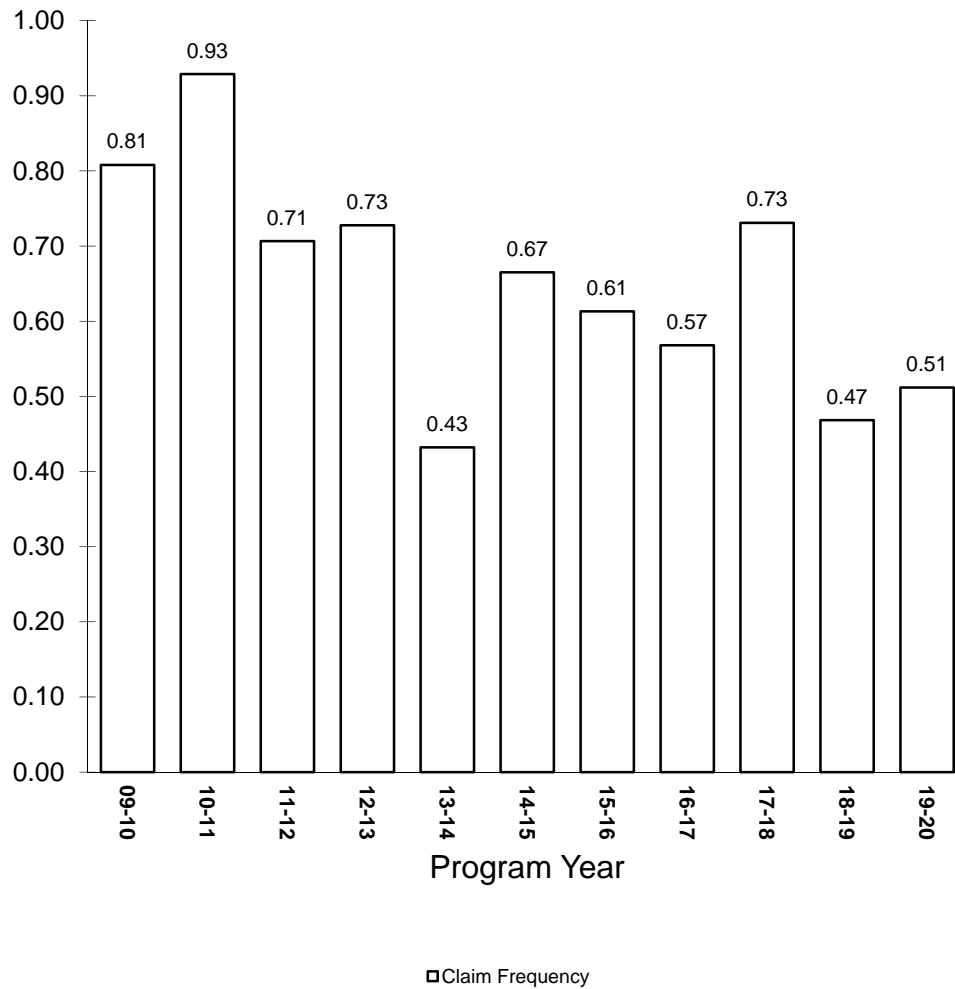


Frequency

The program's number of claims per \$1 million of payroll, or frequency, has been generally decreasing over the most recent ten years. The projected 2019-20 frequency of 0.51 is based on an average of the most recent five years. See Graph 4 below.

Graph 4

Humboldt County
Liability
Number of Claims per
\$1 Million of Payroll



D. COMPARISON WITH PREVIOUS RESULTS

The prior report for Humboldt County was dated October 30, 2018. In the table below we display actual versus expected development of incurred losses and ALAE by accident year between the June 30, 2018 evaluation date of the prior report and the June 30, 2019 evaluation date of the current report.

Actual Versus Expected Incurred Loss and ALAE Development

Accident Year	Expected Incurred Development	Actual Incurred Development	Actual Minus Expected
Prior	\$0	(\$60,000)	(\$60,000)
1999-00	0	0	0
2000-01	0	0	0
2001-02	0	0	0
2002-03	0	0	0
2003-04	0	0	0
2004-05	0	0	0
2005-06	0	(14,000)	(14,000)
2006-07	0	0	0
2007-08	0	0	0
2008-09	0	0	0
2009-10	0	(275,000)	(275,000)
2010-11	0	0	0
2011-12	4,000	(259,000)	(263,000)
2012-13	7,000	(23,000)	(30,000)
2013-14	20,000	0	(20,000)
2014-15	3,000	(74,000)	(77,000)
2015-16	14,000	(151,000)	(165,000)
2016-17	43,000	5,000	(38,000)
2017-18	187,000	96,000	(91,000)
2018-19	230,000	158,000	(72,000)
Total	\$508,000	(\$597,000)	(\$1,105,000)

As shown, actual incurred development was less than anticipated since the prior report. This is mainly due to favorable development in most accident years.

Based on the assumptions from the prior report, it was expected that incurred losses through accident year 2018-19 would increase by \$508,000 between the two evaluation dates. However, actual development decreased by approximately \$597,000; or about \$1,105,000 less than expected.

In the table below we display actual versus expected development of paid losses and ALAE by accident year between the June 30, 2018 evaluation date of the prior report and the June 30, 2019 evaluation date of the current report.

Actual Versus Expected Paid Loss and ALAE Development

Accident Year	Expected Paid Development	Actual Paid Development	Actual Minus Expected
Prior	\$60,000	\$0	(\$60,000)
1999-00	0	0	0
2000-01	0	0	0
2001-02	0	0	0
2002-03	0	0	0
2003-04	0	0	0
2004-05	0	0	0
2005-06	4,000	0	(4,000)
2006-07	0	0	0
2007-08	0	0	0
2008-09	0	0	0
2009-10	0	(275,000)	(275,000)
2010-11	0	0	0
2011-12	103,000	(170,000)	(273,000)
2012-13	12,000	0	(12,000)
2013-14	85,000	0	(85,000)
2014-15	152,000	6,000	(146,000)
2015-16	121,000	15,000	(106,000)
2016-17	148,000	30,000	(118,000)
2017-18	241,000	25,000	(216,000)
2018-19	65,000	14,000	(51,000)
Total	\$991,000	(\$355,000)	(\$1,346,000)

As shown, actual paid development was less than anticipated since the prior report. This is mainly due to favorable development in most accident years.

Based on the assumptions from the prior report, it was expected that paid losses through accident year 2018-19 would increase by \$991,000 between the two evaluation dates. However, actual development decreased by approximately \$355,000; or about \$1,346,000 less than expected. The negative paid development is due to six claims being coded as “not covered” or “deleted” in the loss run.

In the table below we display the change in our estimates of the program's ultimate losses and ALAE by accident year since our prior report.

Change in Ultimate Loss and ALAE

Accident Year	Prior Report	Current Report	Change In Ultimate
Prior	\$7,063,000	\$7,003,000	(\$60,000)
1999-00	173,000	173,000	0
2000-01	360,000	360,000	0
2001-02	265,000	265,000	0
2002-03	538,000	538,000	0
2003-04	270,000	270,000	0
2004-05	181,000	181,000	0
2005-06	846,000	831,000	(15,000)
2006-07	509,000	509,000	0
2007-08	262,000	262,000	0
2008-09	465,000	465,000	0
2009-10	687,000	413,000	(274,000)
2010-11	170,000	170,000	0
2011-12	1,139,000	877,000	(262,000)
2012-13	837,000	803,000	(34,000)
2013-14	1,150,000	1,130,000	(20,000)
2014-15	514,000	423,000	(91,000)
2015-16	365,000	194,000	(171,000)
2016-17	425,000	391,000	(34,000)
2017-18	782,000	711,000	(71,000)
2018-19	559,000	437,000	(122,000)
Total	\$17,560,000	\$16,406,000	(\$1,154,000)

As shown, overall we have decreased our estimated ultimate losses by \$1,154,000 since our prior report. The changes in our estimates of ultimate losses take into account both the incurred and paid development listed on the previous two pages.

At the time of the prior report, we estimated the liability for outstanding claims as of June 30, 2018 to be \$2,149,000 at the discounted, expected level. Our current estimate as of June 30, 2019 is \$1,873,000, a decrease in our assessment of the County's outstanding liabilities, as shown below:

Outstanding Claim Liabilities for Loss and LAE

	Prior Report at June 30, 2018	Current Report at June 30, 2019	Change
(A) Case Reserves:	\$1,767,000	\$1,525,000	(\$242,000)
(B) IBNR Reserves:	429,000	432,000	3,000
(C) Claims Administration Reserves:	39,000	30,000	(9,000)
(D) Total Reserves:	\$2,235,000	\$1,987,000	(\$248,000)
(E) Offset for Investment Income:	(86,000)	(114,000)	(28,000)
(F) Total Outstanding Claim Liabilities:	\$2,149,000	\$1,873,000	(\$276,000)

As shown, our estimate of outstanding claims liabilities at the discounted, expected level has decreased between June 30, 2018 and June 30, 2019, as reflected in our prior and current reports, respectively.

Case reserves have decreased, while our estimate of IBNR reserves increased slightly. Reserves for future claims administration expenses have decreased, resulting in a \$248,000 decrease in total claim reserves. The offset for investment income is expected to be higher. The net change due to the above factors is an overall decrease of \$276,000 in our estimate of outstanding claim liabilities for loss and LAE.

At the time of the prior report, available assets were estimated to be \$2,690,000 as of June 30, 2018, which corresponded to the then-estimated discounted liability for outstanding claims between the 80% and 85% confidence levels. Available assets are currently estimated to be \$3,437,000 as of June 30, 2019, which corresponds to the currently estimated liability for outstanding claims above the 90% confidence level. It can be summarized as follows:

Funding Margin

	Prior Report at June 30, 2018	Current Report at June 30, 2019	Change
(A) Outstanding Liability at the Discounted Expected Level:	\$2,149,000	\$1,873,000	(\$276,000)
(B) Estimated Assets At June 30:	2,690,000	3,437,000	747,000
(C) Surplus:	\$541,000	\$1,564,000	\$1,023,000

As you can see, our estimate of the program's funding margin at the discounted, expected level has increased by \$1,023,000 between June 30, 2018 (as previously estimated) and June 30, 2019 (as currently estimated). This is driven by an increase in the estimated fund assets between the two points, coupled with a decrease in the estimated outstanding liability.

At the time of the prior report, our funding estimate for the 2019-20 year was \$580,000 at the discounted, expected level. That amount included allocated loss adjustment expenses (ALAE), unallocated loss adjustment expenses (ULAE), and a discount for anticipated investment income. Our current estimate for the 2020-21 year is \$527,000 at the discounted, expected level, a decrease in the program's expected loss costs, as shown in the table below:

Comparison of Funding for Loss and LAE

	Prior Report 2019-20 SIR = \$100,000	Current Report 2020-21 SIR = \$100,000	Change
(A) Ultimate Loss and ALAE:	\$576,000	\$520,000	(\$56,000)
(B) Ultimate Claims Administration (ULAE):	35,000	33,000	(2,000)
(C) Total Claim Costs:	\$611,000	\$553,000	(\$58,000)
(D) Offset for Investment Income:	(31,000)	(26,000)	5,000
(E) Total Recommended Funding:	\$580,000	\$527,000	(\$53,000)
(F) Funding per \$100 of Payroll:	\$0.45	\$0.38	(\$0.07)

As you can see, our funding recommendations at the discounted, expected level have decreased between 2019-20 and 2020-21, as shown in our prior and current reports, respectively.

Our estimates of ultimate loss and ALAE have decreased by \$56,000. In addition, claims administration costs are expected to be lower, resulting in an overall decrease in total claim costs of \$58,000. Investment income is expected to be lower. The net change due to the above factors is an overall decrease of \$53,000 in our annual funding estimate for loss and LAE.

E. DATA PROVIDED FOR THE ANALYSIS

Overall, the data utilized in preparing this report appears to be accurate.

Comments and issues regarding the data are as follows:

- We have assumed that the program's self-insured retention will remain at \$100,000 per occurrence for 2019-20 and 2020-21 (See Appendix K).
- We estimated the June 30, 2020 asset balance by beginning with the June 30, 2019 asset balance, and adjusting for anticipated revenue and expense for 2019-20 (See Appendix L).
- We received loss data evaluated as of June 30, 2019 (See Appendix M). We also utilized the data from the County's most recent actuarial study for our assessment of loss development.
- Per discussions with the County and CSAC, we have zeroed out the case reserves on claims that have been coded as "closed".
- We also received updated exposure information through 2020-21, including population, revenue, total payroll, sheriff payroll, police vehicles and FTE (See Appendix N).

The data provided for the analysis appears to be reasonable for use in this actuarial valuation of liabilities and projection of loss costs.

F. COUNTY BENCHMARKING

The County's loss experience can be put into perspective by comparing it with the loss experience of other counties participating in the CSAC-EIA liability program. The following table shows a comparison of average loss rate (loss per \$100 of payroll), claim severity (loss per claim), and claim frequency (claims per \$1 million of payroll).

Humboldt County in Comparison with Other EIA Members

At the 2017-18 Level	Humboldt County	Other CSAC-EIA Members		
		Range		Average
Loss Rate (Dollars of Loss per \$100 of Payroll)	\$0.680	\$0.166	\$1.047	\$0.501
Claim Severity (Dollars of Loss per Claim)	\$9,300	\$2,220	\$36,110	\$10,867
Claim Frequency (Number of Claims per \$1 Million of Payroll)	0.731	0.144	1.604	0.614

The County's loss rate is higher than average. This reflects a lower than average cost per claim, with a higher than average number of claims per \$1 million of payroll.

The loss rates and severities in the table are limited to \$100,000 per occurrence and reflect anticipated reform savings. It should be noted that the statistics shown are projections for fiscal year 2017-18 based upon the results of all County actuarial reports completed last year, generally using loss data valued as of June 30, 2018. As such, they do not reflect the more recent loss data utilized in developing the estimates shown elsewhere in this report, and thus their use should be limited to benchmarking relative to other member counties.

Note also that the County's statistics in the above table are based on payroll rates to facilitate comparisons to the statistics for other CSAC-EIA members. The exhibits supporting our conclusions in this report are based on composite exposure, which is a weighted average of the County's population, budget, payroll, sheriff's payroll, number of patrol cars and FTE.

III. ASSUMPTIONS AND LIMITATIONS

Any quantitative analysis is developed within a very specific framework of assumptions about conditions in the outside world, and actuarial analysis is no exception. We believe that it is important to review the assumptions we have made in developing the estimates presented in this report. By doing so, we hope you will gain additional perspective on the nature of the uncertainties involved in maintaining a self-insurance program. Our assumptions, and some observations about them, are as follows:

- Our analysis is based on loss experience, exposure data, and other general and specific information provided to us by the County. While we have not independently audited or verified this information, we have reviewed it for reasonableness and internal consistency.
- We have also made use of loss statistics that have been developed from the information gathered and compiled from other California counties participating in the CSAC Excess Insurance Authority's liability program.
- We have assumed that the future development of incurred and paid losses can be reasonably predicted on the basis of development of such losses in the recent past. We have also assumed that the historical development patterns for the participants of the CSAC Excess Insurance Authority's liability program in the aggregate form a reasonable basis of comparison to the patterns from Humboldt County's data.
- We have made use of cost relationships for claims of various sizes derived from the most recent actuarial review of the CSAC Excess Insurance Authority's liability program.
- We have assumed that there is a continuing relationship between past and future loss costs.
- It is not possible to predict future claim costs precisely. Most of the costs of liability claims arise from a small number of incidents involving serious injury. A relatively small number of such claims could generate enough loss dollars to significantly reduce, or even deplete, the self-insurance fund.
- We cannot predict and have not attempted to predict the impact of future law changes and court rulings on claims costs. This is one major reason why we believe our funding recommendations are reasonable now, but should not be extrapolated into the future.
- We have assumed that the loss rate trend associated with claim costs increases at 2.5% per year. We have assumed that claim severity increases at 2.5% per year, and that claim frequency remains unchanged from year to year.

- We have assumed that payroll and other inflation-sensitive exposure measures increase 2.5% annually due to inflation.
- We have assumed that assets held for investment will generate an average annual return of 2.5% over the duration of payment of the loss liabilities. It should be noted that actual future investment returns may vary significantly from this assumption, depending upon the prevailing investment market conditions.
- The claims costs we have estimated include indemnity and medical payments, and all loss adjustment expenses. We have included estimates for excess insurance contributions to the CSAC-EIA and other expenses associated with the program based upon information provided by the County.
- Our funding recommendations do not include provisions for catastrophic events not in the County's history, such as earthquakes, flooding, mass civil disorder, or mass occupational disease.
- Our estimates assume that all excess insurance is valid and collectible. Further, our funding recommendations do not include a provision for losses greater than the County's excess coverage.
- The County's assets available for the program are estimated to be \$3,437,000 as of June 30, 2019, and \$4,776,000 as of June 30, 2020 for use in this report. This is shown in further detail in Appendix L.

IV. GLOSSARY OF ACTUARIAL TERMS

Accident Year - Year during which the accidents that generate a group of claims occurs, regardless of when the claims are reported, payments are made, or reserves are established.

Allocated Loss Adjustment Expenses (ALAE) - Expense incurred in settling claims that can be directly attributed to specific individual claims (e.g., legal fees, investigative fees, court charges, etc.)

Case Reserve - The amount left to be paid on a claim, as estimated by the claims administrator.

Claim Count Development Factor - A factor that is applied to the number of claims reported in a particular accident period in order to estimate the number of claims that will ultimately be reported.

Claim Frequency - Number of claims per \$1 million of payroll.

Confidence Level - An estimated probability that a given level of funding will be adequate to pay actual claims costs. For example, the 85% confidence level refers to an estimate for which there is an 85% chance that the amount will be sufficient to pay loss costs.

Discount Factor - A factor to adjust estimated loss costs to reflect anticipated investment income from assets held prior to actual claim payout.

Expected Losses - The best estimate of the full, ultimate value of loss costs.

Incurred but not Reported (IBNR) Losses - Losses for which the accident has occurred but the claim has not yet been reported. This is the ultimate value of losses, less any amount that has been set up as reported losses by the claims adjuster. It includes both amounts for claims incurred but not yet received by the administrator and loss development on already reported claims.

Loss Development Factor - A factor applied to losses for a particular accident period to reflect the fact that reported and paid losses do not reflect final values until all claims are settled (see Section IV).

Loss Rate - Ultimate losses per \$100 of payroll.

Non-Claims Related Expenses – Program expenses not directly associated with claims settlement and administration, such as excess insurance, safety program expenses, and general overhead. These exclude expenses associated with loss settlements (Indemnity/Medical, BI/PD), legal expenses associated with individual claims (ALAE), and claims administration (ULAE).

Outstanding Losses - Losses that have been incurred but not paid. This is the ultimate value of losses less any amount that has been paid.

Paid Losses - Losses actually paid on all reported claims.

Program Losses - Losses, including ALAE, limited to the SIR for each occurrence.

Reported Losses - The total expected value of losses as estimated by the claims administrator. This is the sum of paid losses and case reserves.

Self-Insured Retention (SIR) - The level at which an excess insurance policy is triggered to begin payments on a claim. Financially, this is similar to an insurance deductible.

Severity - Average claim cost.

Ultimate Losses - The value of claim costs at the time when all claims have been settled. This amount must be estimated until all claims are actually settled.

Unallocated Loss Adjustment Expenses (ULAE) – Claim settlement expenses that cannot be directly attributed to individual claims (e.g., claims adjusters' salaries, taxes, etc.)

County of Humboldt - Liability
Funding Guidelines for Outstanding Liabilities at
June 30, 2019

(A) Estimated Ultimate Losses Incurred through 6/30/19: (From Appendix G)	\$16,407,000
(B) Estimated Paid Losses through 6/30/19: (From Appendix G)	14,450,000
(C) Estimated Liability for Claims Outstanding at 6/30/19: (From Appendix G)	<u>\$1,957,000</u>
(D) Estimated Liability for Outstanding Claims Administration Fees at 6/30/19: (From Appendix F)	30,000
(E) Total Outstanding Liability for Claims at 6/30/19: ((C) + (D))	<u>\$1,987,000</u>
(F) Reserve Discount Factor (Based on a Discount Rate of 2.5%.): (Appendix I, Page 1, (G))	0.943
(G) Discounted Outstanding Liability for Claims at 6/30/19: ((E) x (F))	<u>\$1,873,000</u>

	Marginally Acceptable 70%	75%	Recommended 80%	85%	Conservative 90%
(H) Confidence Level Factor: (From Appendix J)	1.118	1.169	1.230	1.305	1.404
(I) Margin for Adverse Experience: ((G) x [(H) - 1])	221,000	317,000	431,000	571,000	757,000
(J) Total Required Assets at 6/30/19: ((G) + (I))	<u>\$2,094,000</u>	<u>\$2,190,000</u>	<u>\$2,304,000</u>	<u>\$2,444,000</u>	<u>\$2,630,000</u>
(K) Estimated Total Assets at 6/30/19: (From Appendix L, Page 1)	3,437,000	3,437,000	3,437,000	3,437,000	3,437,000
(L) Indicated Funding Redundancy/ (Deficiency): ((K) - (J))	<u>\$1,343,000</u>	<u>\$1,247,000</u>	<u>\$1,133,000</u>	<u>\$993,000</u>	<u>\$807,000</u>

County of Humboldt - Liability
Funding Guidelines for Outstanding Liabilities at
June 30, 2020

(A) Estimated Ultimate Losses Incurred through 6/30/20: (From Appendix G)	\$16,889,000
(B) Estimated Paid Losses through 6/30/20: (From Appendix G)	15,357,000
(C) Estimated Liability for Claims Outstanding at 6/30/20: (From Appendix G)	<u>\$1,532,000</u>
(D) Estimated Liability for Outstanding Claims Administration Fees at 6/30/20: (From Appendix F)	31,000
(E) Total Outstanding Liability for Claims at 6/30/20: ((C) + (D))	<u>\$1,563,000</u>
(F) Reserve Discount Factor (Based on a Discount Rate of 2.5%.): (Appendix I, Page 1, (H))	0.946
(G) Discounted Outstanding Liability for Claims at 6/30/20: ((E) x (F))	<u>\$1,479,000</u>

	Marginally Acceptable	75%	Recommended	85%	Conservative
Confidence Level of Adequacy:	70%				90%
(H) Confidence Level Factor: (From Appendix J)	1.118	1.169	1.230	1.305	1.404
(I) Margin for Adverse Experience: ((G) x [(H) - 1])	175,000	250,000	340,000	451,000	598,000
(J) Total Required Assets at 6/30/20: ((G) + (I))	<u>\$1,654,000</u>	<u>\$1,729,000</u>	<u>\$1,819,000</u>	<u>\$1,930,000</u>	<u>\$2,077,000</u>
(K) Estimated Total Assets at 6/30/20: (From Appendix L, Page 1)	4,776,000	4,776,000	4,776,000	4,776,000	4,776,000
(L) Indicated Funding Redundancy/ (Deficiency): ((K) - (J))	<u>\$3,122,000</u>	<u>\$3,047,000</u>	<u>\$2,957,000</u>	<u>\$2,846,000</u>	<u>\$2,699,000</u>

County of Humboldt - Liability

Funding Options for Program Year 2019-2020 (SIR = \$100,000)

	Dollar Amount	Payroll Rate			
(A) Estimated Ultimate Losses Incurred in Accident Year 2019-2020: (From Appendix G)	\$482,000	\$0.348			
(B) Estimated Claims Administration Fees Incurred in Accident Year 2019-2020: (From Exhibit 5, Page 1, (L))	30,000	0.022			
(C) Total Claims Costs Incurred in Accident Year 2019-2020: ((A) + (B))	\$512,000	\$0.370			
(D) Loss Discount Factor (Based on a Discount Rate of 2.5%.): (Appendix I, Page 2, (G))	0.953				
(E) Discounted Total Claims Costs Incurred in Accident Year 2019-2020: ((C) x (D))	\$488,000	\$0.352			
	Marginally Acceptable		Recommended		Conservative
	70%	75%	80%	85%	90%
(F) Confidence Level Factor: (From Appendix J)	1.188	1.278	1.384	1.517	1.694
(G) Margin for Adverse Experience: ((E) x [(F) - 1])	92,000	136,000	187,000	252,000	339,000
(H) Recommended Funding in 2019-2020 for Claims Costs and Other Expenses: ((E) + (G))	\$580,000	\$624,000	\$675,000	\$740,000	\$827,000
(I) Budgeted Non Claims Related Expenses: (Provided by the County)	1,845,000	1,845,000	1,845,000	1,845,000	1,845,000
(J) Recommended Funding in 2019-2020 for Claims Costs, Other Expenses, and Non Claims Related Expenses: ((H) + (I))	\$2,425,000	\$2,469,000	\$2,520,000	\$2,585,000	\$2,672,000
(K) Rate per \$100 of Payroll: ((J) / \$1,385,628)	\$1.750	\$1.782	\$1.819	\$1.866	\$1.928

Payroll rates are per hundred dollars of 2019-2020 payroll of \$138,562,800.

County of Humboldt - Liability

Funding Options for Program Year 2020-2021 (SIR = \$100,000)
Five-Year Funding Plan

	Dollar Amount	Payroll Rate			
(A) Estimated Ultimate Losses Incurred in Accident Year 2020-2021: (From Appendix G)	\$520,000	\$0.375			
(B) Estimated Claims Administration Fees Incurred in Accident Year 2020-2021: (From Exhibit 5, Page 1, (L))	33,000	0.024			
(C) Total Claims Costs Incurred in Accident Year 2020-2021: ((A) + (B))	\$553,000	\$0.399			
(D) Loss Discount Factor (Based on a Discount Rate of 2.5%.): (Appendix I, Page 2, (G))	0.953				
(E) Discounted Total Claims Costs Incurred in Accident Year 2020-2021: ((C) x (D))	\$527,000	\$0.380			
	Marginally Acceptable		Recommended		Conservative
	70%	75%	80%	85%	90%
(F) Confidence Level Factor: (From Appendix J)	1.188	1.278	1.384	1.517	1.694
(G) Margin for Adverse Experience: ((E) x [(F) - 1])	99,000	147,000	202,000	272,000	366,000
(H) Recommended Funding in 2020-2021 for Claims Costs and Other Expenses: ((E) + (G))	\$626,000	\$674,000	\$729,000	\$799,000	\$893,000
(I) Budgeted Non Claims Related Expenses: (Provided by the County)	1,845,000	1,845,000	1,845,000	1,845,000	1,845,000
(J) Annual Funding for the June 30, 2020 Redundancy/(Deficiency): (Exhibit 1, Page 2, (L) / 4.763)	655,000	640,000	621,000	598,000	567,000
(K) Recommended Funding Including Recognition of the June 30, 2020 Redundancy/(Deficiency): ((H) + (I) - (J))	\$1,816,000	\$1,879,000	\$1,953,000	\$2,046,000	\$2,171,000
(L) Rate per \$100 of Payroll: ((K) / \$1,385,628)	\$1.311	\$1.356	\$1.409	\$1.477	\$1.567

Payroll rates are per hundred dollars of 2020-2021 payroll of \$138,562,800.

County of Humboldt - Liability

IBNR as of 6/30/20 at Expected Claims Level

Accident Year	Estimated Ultimate (A)	Reported as of 6/30/19 (B)	Estimated IBNR as of 6/30/19 (C)	Estimated Percent of IBNR Reported Between 7/1/19 and 6/30/20 (D)	Estimated IBNR Reported (E)	Estimated IBNR as of 6/30/20 (F)
Prior	\$7,003,405	\$7,003,405	\$0	100.0%	\$0	\$0
1999-2000	173,032	173,032	0	100.0%	0	0
2000-2001	360,267	360,267	0	100.0%	0	0
2001-2002	264,993	264,993	0	100.0%	0	0
2002-2003	537,623	537,623	0	100.0%	0	0
2003-2004	269,878	269,878	0	100.0%	0	0
2004-2005	181,103	181,103	0	100.0%	0	0
2005-2006	831,274	831,274	0	100.0%	0	0
2006-2007	508,651	508,651	0	100.0%	0	0
2007-2008	262,473	262,473	0	100.0%	0	0
2008-2009	464,764	464,764	0	100.0%	0	0
2009-2010	413,000	412,392	608	100.0%	608	0
2010-2011	170,076	170,076	0	100.0%	0	0
2011-2012	877,000	875,362	1,638	100.0%	1,638	0
2012-2013	803,287	803,287	0	49.9%	0	0
2013-2014	1,130,000	1,115,285	14,715	69.0%	10,000	4,715
2014-2015	423,000	420,789	2,211	76.0%	2,000	211
2015-2016	194,000	185,005	8,995	82.9%	7,000	1,995
2016-2017	391,000	340,702	50,298	49.3%	25,000	25,298
2017-2018	711,000	636,423	74,577	53.5%	40,000	34,577
2018-2019	437,000	158,117	278,883	78.0%	218,000	60,883
2019-2020	482,000			43.8%	211,000	271,000
Totals	\$16,888,826	\$15,974,901	\$431,925		\$515,246	\$398,679

Notes:

- (A) From Exhibit 4, Page 1.
- (B) Provided by the County. These losses exclude amounts incurred above the County's SIR for each year.
- (C) (A) - (B).
- (D) Percentage of incurred but not reported (IBNR) expected to be reported between 7/1/19 and 6/30/20. The percentage is based on the development pattern selected in Appendix A.
- (E) ((A) - (B)) x (D).
- (F) (A) - (B) - (E).

This exhibit shows the calculation of the amount of incurred but not reported losses we expect as of 6/30/20. This amount is dependent on both the strength of the case reserves and the average frequency and severity of the losses incurred.

County of Humboldt - Liability
Estimated Ultimate Program Losses

Accident Year	Reported Loss Development Method (A)	Paid Loss Development Method (B)	Exposure Method Based on Reported Losses (C)	Exposure Method Based on Paid Losses (D)	Frequency-Severity Method (E)	Selected Estimate of Ultimate Losses (F)
Prior	\$7,003,405	\$7,003,405			\$6,906,522	\$7,003,405
1999-2000	173,032	173,032	173,032	173,032	199,980	173,032
2000-2001	360,267	360,627	360,267	360,681	413,950	360,267
2001-2002	264,993	265,258	264,993	265,250	255,983	264,993
2002-2003	537,623	538,161	537,623	538,196	572,800	537,623
2003-2004	269,878	270,418	269,878	270,427	274,564	269,878
2004-2005	181,103	181,646	181,103	181,748	214,812	181,103
2005-2006	831,274	834,599	831,274	834,250	744,281	831,274
2006-2007	508,651	511,194	508,651	511,174	505,208	508,651
2007-2008	262,473	264,048	262,473	264,007	256,025	262,473
2008-2009	464,764	468,482	464,764	468,779	502,213	464,764
2009-2010	412,392	417,341	412,392	417,638	437,970	413,000
2010-2011	170,076	173,307	170,076	174,019	207,927	170,076
2011-2012	877,113	848,049	877,850	868,534	1,243,480	877,000
2012-2013	806,500	869,960	806,187	859,106	724,032	803,287
2013-2014	1,129,784	1,040,742	1,125,546	1,011,729	788,216	1,130,000
2014-2015	422,893	174,377	422,938	195,498	480,556	423,000
2015-2016	190,555	152,092	197,648	197,235	463,744	194,000
2016-2017	361,485	145,754	366,448	237,193	467,964	391,000
2017-2018	726,159	170,370	696,420	337,464	639,408	711,000
2018-2019	360,823	76,232	439,950	421,946	444,885	437,000
Totals						\$16,406,826
			Projected Losses for the Year 2019-2020 (G)			\$482,000
			Projected Losses for the Year 2020-2021 (H)			\$520,000

Notes:

- (A) From Appendix A, Page 1, Column (G).
- (B) From Appendix B, Page 1, Column (G).
- (C) From Appendix C, Page 1, Column (G).
- (D) From Appendix C, Page 2, Column (G).
- (E) From Appendix D, Page 1, Column (C).
- (F) Selected averages of (A), (B), (C), (D), and (E).
- (G) From Exhibit 5, Page 1, Line (K).
- (H) From Exhibit 5, Page 1, Line (K).

This exhibit summarizes the results of the actuarial methods we have applied to estimate ultimate losses for each year. It is important to apply a number of estimation methods because each one relies on specific assumptions about the claims process that tend to hold generally true, but that may be violated in specific situations. Thus, the more estimation methods that can be applied, the better.

County of Humboldt - Liability

Estimated Ultimate Limited Losses Capped at \$100,000 per Claim

Accident Year	Reported Loss Development Method (A)	Paid Loss Development Method (B)	Exposure Method Based on Reported Losses (C)	Exposure Method Based on Paid Losses (D)	Frequency-Severity Method (E)	Selected Ultimate Limited Losses (F)
Prior	\$6,253,203	\$6,253,203			\$6,252,804	\$6,253,203
1999-2000	173,032	173,032	173,032	173,032	173,052	173,032
2000-2001	356,416	356,416	356,416	356,416	356,405	356,416
2001-2002	218,991	218,991	218,991	218,991	218,946	218,991
2002-2003	487,623	487,623	487,623	487,623	487,600	487,623
2003-2004	232,550	232,550	232,550	232,550	232,566	232,550
2004-2005	181,103	181,103	181,103	181,103	181,116	181,103
2005-2006	623,427	623,427	623,427	623,427	623,419	623,427
2006-2007	421,188	421,188	421,188	421,188	421,168	421,188
2007-2008	212,473	212,473	212,473	212,473	212,443	212,473
2008-2009	414,764	415,179	414,764	415,179	414,739	414,764
2009-2010	359,089	360,166	359,089	360,168	359,970	360,000
2010-2011	170,076	171,096	170,076	171,094	170,100	170,076
2011-2012	695,398	650,957	695,398	651,535	696,010	696,000
2012-2013	399,339	406,926	399,339	406,930	399,312	399,339
2013-2014	427,404	365,623	427,404	368,176	427,988	428,000
2014-2015	422,893	174,377	422,938	195,498	480,556	423,000
2015-2016	190,555	152,092	197,648	197,235	463,744	194,000
2016-2017	361,485	145,754	366,448	237,193	467,964	391,000
2017-2018	726,159	170,370	696,420	337,464	639,408	711,000
2018-2019	360,823	76,232	439,950	421,946	444,885	437,000
Totals						\$13,784,185
			Projected Losses for the Year 2019-2020 (G)			\$482,000
			Projected Losses for the Year 2020-2021 (H)			\$520,000

Notes:

- (A) From Appendix A, Page 1, Column (D).
- (B) From Appendix B, Page 1, Column (D).
- (C) Based on results in Appendix C, Page 1.
- (D) Based on results in Appendix C, Page 2.
- (E) Based on results in Appendix D, Page 1.
- (F) Selected averages of (A), (B), (C), (D), and (E).
- (G) From Exhibit 5, Page 1, Line (K) / Line (G).
- (H) From Exhibit 5, Page 1, Line (K) / Line (G).

This exhibit summarizes the results of the actuarial methods we have applied to estimate limited losses for each year. These results are used to select a limited loss rate for future years.

County of Humboldt - Liability

Selection of Projected Limited Loss Rate
and Projection of Program Losses and ULAE

Accident Year	Ultimate Limited Losses (A)	Trend Factor (B)	Trended Limited Losses (C)	Composite Exposures (D)	Trended Limited Loss Rate (E)
Prior	0	1.679	0	0	0.000
1999-2000	173,032	1.638	283,426	986,442	0.287
2000-2001	356,416	1.598	569,553	964,798	0.590
2001-2002	218,991	1.559	341,407	984,045	0.347
2002-2003	487,623	1.521	741,675	1,060,634	0.699
2003-2004	232,550	1.484	345,104	1,028,734	0.335
2004-2005	181,103	1.448	262,237	1,014,535	0.258
2005-2006	623,427	1.412	880,279	997,361	0.883
2006-2007	421,188	1.378	580,397	1,099,523	0.528
2007-2008	212,473	1.344	285,564	1,111,922	0.257
2008-2009	414,764	1.312	544,170	1,088,738	0.500
2009-2010	360,000	1.280	460,800	1,090,283	0.423
2010-2011	170,076	1.249	212,425	1,115,701	0.190
2011-2012	696,000	1.218	847,728	1,136,211	0.746
2012-2013	399,339	1.188	474,415	1,073,950	0.442
2013-2014	428,000	1.160	496,480	1,087,171	0.457
2014-2015	423,000	1.132	478,836	1,079,677	0.443
2015-2016	194,000	1.104	214,176	1,068,555	0.200
2016-2017	391,000	1.077	421,107	1,080,581	0.390
2017-2018	711,000	1.051	747,261	1,130,479	0.661
2018-2019	437,000	1.025	447,925	1,142,328	0.392
Totals	\$7,530,982		\$9,634,965	21,341,668	\$0.451
13/14-17/18	2,147,000		2,357,860	5,446,463	0.433
14/15-18/19	2,156,000		2,309,305	5,501,620	0.420
			(F) Selected Limited Rate:		\$0.425
			Prior:		\$0.500

Program Year:	2019-2020	2020-2021
(G) Factor to SIR:	1.000	1.000
(H) Trend Factor:	1.000	1.025
(I) Program Rate:	\$0.425	\$0.436
(J) Composite Exposures:	1,134,428	1,193,187
(K) Projected Program Losses:	482,000	520,000
(L) Projected ULAE:	30,000	33,000
(M) Projected Loss and ULAE:	\$512,000	\$553,000

Notes appear on the next page.

County of Humboldt - Liability

Selection of Projected Limited Loss Rate
and Projection of Program Losses and ULAE

Notes:

- (A) From Exhibit 4, Page 2, Column (F).
For purposes of projecting future losses, losses are capped at \$100,000 per occurrence.
- (B) From Appendix E, Page 1, Column (B).
- (C) $(A) \times (B)$.
- (D) From Appendix N, Page 2, Column (G).
- (E) $(C) / (D)$.
- (F) Selected based on (E).
- (G) Based on a Burr distribution, a mathematical model of claim sizes.
- (H) From Appendix E.
 - (I) $(F) \times (G) \times (H)$.
- (J) From Appendix N, Page 2, Column (G).
- (K) $(I) \times (J)$.
- (L) Based on an estimated claim closing pattern and the County's historical claims administration expenses.
- (M) $(K) + (L)$.

This exhibit shows the calculation of future loss costs based on the past loss rates. The projections will be accurate only to the extent that what has happened in the past is representative of what will happen in the future.

County of Humboldt - Liability

Reported Loss Development

Accident Year (A)	Limited Reported Losses as of 6/30/19 (B)	Reported Loss Development Factor (C)	Ultimate Limited Losses (D)	Program Reported Losses of 6/30/19 (E)	Reported Loss Development Factor (F)	Ultimate Program Losses (G)
Prior	\$6,253,203	1.000	\$6,253,203	\$7,003,405	1.000	\$7,003,405
1999-2000	173,032	1.000	173,032	173,032	1.000	173,032
2000-2001	356,416	1.000	356,416	360,267	1.000	360,267
2001-2002	218,991	1.000	218,991	264,993	1.000	264,993
2002-2003	487,623	1.000	487,623	537,623	1.000	537,623
2003-2004	232,550	1.000	232,550	269,878	1.000	269,878
2004-2005	181,103	1.000	181,103	181,103	1.000	181,103
2005-2006	623,427	1.000	623,427	831,274	1.000	831,274
2006-2007	421,188	1.000	421,188	508,651	1.000	508,651
2007-2008	212,473	1.000	212,473	262,473	1.000	262,473
2008-2009	414,764	1.000	414,764	464,764	1.000	464,764
2009-2010	359,089	1.000	359,089	412,392	1.000	412,392
2010-2011	170,076	1.000	170,076	170,076	1.000	170,076
2011-2012	695,398	1.000	695,398	875,362	1.002	877,113
2012-2013	399,339	1.000	399,339	803,287	1.004	806,500
2013-2014	427,404	1.000	427,404	1,115,285	1.013	1,129,784
2014-2015	420,789	1.005	422,893	420,789	1.005	422,893
2015-2016	185,005	1.030	190,555	185,005	1.030	190,555
2016-2017	340,702	1.061	361,485	340,702	1.061	361,485
2017-2018	636,423	1.141	726,159	636,423	1.141	726,159
2018-2019	158,117	2.282	360,823	158,117	2.282	360,823
Totals	\$13,367,112		\$13,687,991	\$15,974,901		\$16,315,243

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the County. These losses exclude amounts over \$100,000 per occurrence.
- (C) From Appendix A, Page 2.
- (D) (B) x (C). These estimated losses exclude amounts over \$100,000 per occurrence.
- (E) Losses capped at the County's SIR. Amounts are provided by the County.
- (F) Derived from factors on Appendix A, Page 4.
- (G) (E) x (F).

This method tends to understate ultimate losses for the most recent several years because the large losses for those years generally have not yet emerged at the time of our review.

This exhibit shows the calculation of estimated ultimate losses for each year based on paid losses and case reserves as reported by the claims administrator. These losses tend to "develop" or change from period to period as more information becomes available about the cases. This development tends to follow quantifiable patterns over time.

County of Humboldt - Liability
Reported Loss Development

Limited Losses Reported as of:

Accident Year	12 Months	24 Months	36 Months	48 Months	60 Months	72 Months	84 Months	96 Months	108 Months	120 Months
1998-1999					149,112	122,854	122,854	122,854	122,854	122,854
1999-2000				180,229	169,123	169,699	169,699	169,699	169,699	169,699
2000-2001			515,459	356,416	356,416	356,416	356,416	356,416	356,416	356,416
2001-2002		605,334	415,266	337,281	218,991	218,991	218,991	218,991	218,991	218,991
2002-2003	569,291	326,728	389,739	507,904	480,562	500,118	453,421	453,421	493,865	487,623
2003-2004	606,001	585,424	232,550	232,550	232,550	232,550	232,550	232,550	232,550	232,550
2004-2005	495,853	401,364	238,807	224,954	224,954	224,954	224,954	181,103	181,103	181,103
2005-2006	436,020	806,615	732,169	755,169	755,169	772,669	727,669	727,669	727,669	727,669
2006-2007	679,095	656,908	526,058	445,198	504,663	440,305	421,188	421,188	421,188	421,188
2007-2008	33,937	122,005	152,005	213,464	229,167	248,473	248,473	248,473	248,473	212,473
2008-2009	217,847	310,857	388,978	415,066	461,566	461,566	451,566	451,566	414,764	414,764
2009-2010	24,115	344,184	333,713	354,168	392,168	359,089	359,089	359,089	359,089	359,089
2010-2011	173,075	194,176	192,882	192,882	192,882	192,882	170,076	170,076	170,076	
2011-2012	230,334	579,229	769,799	775,421	887,901	716,597	716,597	695,398		
2012-2013	326,434	449,821	357,440	357,440	422,586	422,586	399,339			
2013-2014	162,568	439,407	454,407	427,404	427,404	427,404				
2014-2015	110,912	376,429	548,899	494,919	420,789					
2015-2016	151,218	312,636	335,826	185,005						
2016-2017	417,929	335,959	340,702							
2017-2018	540,096	636,423								
2018-2019	158,117									

Reported Loss Development Factors:

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months
1998-1999					0.824	1.000	1.000	1.000	1.000	1.000
1999-2000				0.938	1.003	1.000	1.000	1.000	1.000	1.000
2000-2001			0.691	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001-2002		0.686	0.812	0.649	1.000	1.000	1.000	1.000	1.000	1.000
2002-2003	0.574	1.193	1.303	0.946	1.041	0.907	1.000	1.089	0.987	1.000
2003-2004	0.966	0.397	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004-2005	0.809	0.595	0.942	1.000	1.000	1.000	0.805	1.000	1.000	1.000
2005-2006	1.850	0.908	1.031	1.000	1.023	0.942	1.000	1.000	1.000	1.000
2006-2007	0.967	0.801	0.846	1.134	0.872	0.957	1.000	1.000	1.000	1.000
2007-2008	3.595	1.246	1.404	1.074	1.084	1.000	1.000	1.000	0.855	1.000
2008-2009	1.427	1.251	1.067	1.112	1.000	0.978	1.000	0.919	1.000	1.000
2009-2010	14.273	0.970	1.061	1.107	0.916	1.000	1.000	1.000	1.000	
2010-2011	1.122	0.993	1.000	1.000	1.000	0.882	1.000	1.000		
2011-2012	2.515	1.329	1.007	1.145	0.807	1.000	0.970			
2012-2013	1.378	0.795	1.000	1.182	1.000	0.945				
2013-2014	2.703	1.034	0.941	1.000	1.000					
2014-2015	3.394	1.458	0.902	0.850						
2015-2016	2.067	1.074	0.551							
2016-2017	0.804	1.014								
2017-2018	1.178									

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months
Average Dollar-Weighted Averages	2.476	0.984	0.972	1.009	0.973	0.974	0.984	1.001	0.987	1.000
3-yr	1.158	1.196	0.827	0.993	0.901	0.965	0.983	0.962	0.965	1.000
4-yr	1.362	1.147	0.863	1.050	0.911	0.973	0.988	0.970	0.975	1.000
CSAC Factors	1.575	1.050	0.965	0.965	0.990	1.000	1.000	1.000	1.000	1.000
Prior	2.100	1.075	1.035	1.030	1.007	1.001	1.000	1.000	1.000	1.000
Selected	2.000	1.075	1.030	1.025	1.005	1.000	1.000	1.000	1.000	1.000
Cumulated	2.282	1.141	1.061	1.030	1.005	1.000	1.000	1.000	1.000	1.000

County of Humboldt - Liability
Reported Loss Development

Limited Losses Reported as of:

Accident Year	132 Months	144 Months	156 Months	168 Months	180 Months	192 Months	204 Months	216 Months	228 Months	240 Months	252 Months
1998-1999	122,854	122,854	122,854	122,854	122,854	122,854	122,854	122,854	122,854	122,854	122,854
1999-2000	169,699	173,032	173,032	173,032	173,032	173,032	173,032	173,032	173,032	173,032	173,032
2000-2001	356,416	356,416	356,416	356,416	356,416	356,416	356,416	356,416	356,416		
2001-2002	218,991	218,991	218,991	218,991	218,991	218,991	218,991	218,991			
2002-2003	487,623	487,623	487,623	487,623	487,623	487,623	487,623				
2003-2004	232,550	232,550	232,550	232,550	232,550	232,550					
2004-2005	181,103	181,103	181,103	181,103	181,103						
2005-2006	727,669	623,427	623,427	623,427							
2006-2007	421,188	421,188	421,188								
2007-2008	212,473	212,473									
2008-2009	414,764										
2009-2010											
2010-2011											
2011-2012											
2012-2013											
2013-2014											
2014-2015											
2015-2016											
2016-2017											
2017-2018											
2018-2019											

Reported Loss Development Factors:

	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months	216-228 Months	228-240 Months	240-252 Months	252-Ult. Months
1998-1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
1999-2000	1.020	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
2000-2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
2001-2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
2002-2003	1.000	1.000	1.000	1.000	1.000	1.000					
2003-2004	1.000	1.000	1.000	1.000	1.000						
2004-2005	1.000	1.000	1.000	1.000							
2005-2006	0.857	1.000	1.000								
2006-2007	1.000	1.000									
2007-2008	1.000										
2008-2009											
2009-2010											
2010-2011											
2011-2012											
2012-2013											
2013-2014											
2014-2015											
2015-2016											
2016-2017											
2017-2018											

	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months	216-228 Months	228-240 Months	240-252 Months	252-Ult. Months
Average Dollar-Weighted Averages	0.988	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
3-yr	0.923	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
4-yr	0.932	1.000	1.000	1.000	1.000	1.000	1.000				
CSAC Factors	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulated	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

County of Humboldt - Liability
Reported between \$100,000 and \$500,000 Loss Development

Accident Year	<u>Losses Reported as of:</u>									
	12 Months	24 Months	36 Months	48 Months	60 Months	72 Months	84 Months	96 Months	108 Months	120 Months
1998-1999										
1999-2000										
2000-2001			3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850
2001-2002		330,000	400,000	330,000	301,000	351,000	48,002	48,002	48,002	48,002
2002-2003			246,000	224,295	163,795	163,795	163,795	163,795	163,795	163,795
2003-2004	90,100	186,000	48,500	37,328	37,328	37,328	37,328	37,328	37,328	37,328
2004-2005	60,000	60,000								
2005-2006	325,000	419,339	555,248	555,248	555,248	557,748	797,748	1,047,748	1,097,748	1,035,915
2006-2007	200,000	245,000	240,663	195,663	255,663	233,126	233,126	233,126	233,126	233,126
2007-2008				300,000	300,000	174,304	174,304	174,304	174,304	174,304
2008-2009				283,595	286,095	286,095	286,095	286,095	283,595	283,595
2009-2010					2,000	445,000	445,000	403,303	403,303	403,303
2010-2011										
2011-2012		15,000	45,000	45,000	45,000	42,419	42,419	179,964		
2012-2013	400,000	450,000	450,000	450,000	403,948	403,948	403,948			
2013-2014	400,000	435,000	645,000	497,881	687,881	687,881				
2014-2015			50,000	50,000	50,000					
2015-2016										
2016-2017	475,000	400,000	400,000							
2017-2018	245,000	545,000								
2018-2019										

Reported Loss Development Factors:

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months
1998-1999										
1999-2000										
2000-2001			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001-2002		1.212	0.825	0.912	1.166	0.137	1.000	1.000	1.000	0.958
2002-2003			0.912	0.730	1.000	1.000	1.000	1.000	1.000	1.000
2003-2004	2.064	0.261	0.770	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004-2005	1.000									
2005-2006	1.290	1.324	1.000	1.000	1.005	1.430	1.313	1.048	0.944	1.000
2006-2007	1.225	0.982	0.813	1.307	0.912	1.000	1.000	1.000	1.000	1.000
2007-2008				1.000	0.581	1.000	1.000	1.000	1.000	1.000
2008-2009				1.009	1.000	1.000	1.000	0.991	1.000	1.000
2009-2010					222.500	1.000	0.906	1.000	1.000	
2010-2011										
2011-2012		3.000	1.000	1.000	0.943	1.000	4.243			
2012-2013	1.125	1.000	1.000	0.898	1.000	1.000				
2013-2014	1.088	1.483	0.772	1.382	1.000					
2014-2015			1.000	1.000						
2015-2016										
2016-2017	0.842	1.000								
2017-2018	2.224									

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months
Average Dollar-Weighted Averages	1.357	1.283	0.909	1.020	19.426	0.961	1.346	1.004	0.994	0.995
3-yr				1.144	0.998				1.000	1.000
4-yr				1.138					1.000	1.000
CSAC Factors	3.450	1.400	1.225	1.060	1.030	1.020	1.005	1.003	1.001	1.000
Prior	3.450	1.300	1.225	1.060	1.030	1.020	1.005	1.003	1.001	1.000
Selected	3.450	1.400	1.225	1.060	1.030	1.020	1.005	1.003	1.001	1.000
Cumulated	6.652	1.928	1.377	1.124	1.060	1.029	1.009	1.004	1.001	1.000

County of Humboldt - Liability
Reported between \$100,000 and \$500,000 Loss Development

Accident Year	<u>Losses Reported as of:</u>								
	132 Months	144 Months	156 Months	168 Months	180 Months	192 Months	204 Months	216 Months	228 Months
1998-1999									
1999-2000									
2000-2001	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850
2001-2002	46,002	46,002	46,002	46,002	46,002	46,002	46,002	46,002	
2002-2003	163,795	163,795	163,795	163,795	163,795	163,795	163,795		
2003-2004	37,328	37,328	37,328	37,328	37,328	37,328			
2004-2005									
2005-2006	1,035,915	1,018,415	1,018,415	654,144					
2006-2007	233,126	233,126	233,126						
2007-2008	174,304	174,304							
2008-2009	283,595								
2009-2010									
2010-2011									
2011-2012									
2012-2013									
2013-2014									
2014-2015									
2015-2016									
2016-2017									
2017-2018									
2018-2019									

Reported Loss Development Factors:

	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months	216-228 Months	228-Ult. Months
1998-1999									
1999-2000									
2000-2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2001-2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
2002-2003	1.000	1.000	1.000	1.000	1.000	1.000			
2003-2004	1.000	1.000	1.000	1.000	1.000				
2004-2005									
2005-2006	0.983	1.000	0.642						
2006-2007	1.000	1.000							
2007-2008	1.000								
2008-2009									
2009-2010									
2010-2011									
2011-2012									
2012-2013									
2013-2014									
2014-2015									
2015-2016									
2016-2017									
2017-2018									

	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months	216-228 Months	228-Ult. Months		
Average Dollar-Weighted Averages	0.998	1.000	0.928	1.000	1.000	1.000	1.000	1.000			
3-yr	0.988				1.000	1.000					
4-yr					1.000						
CSAC Factors	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
Cumulated	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		

County of Humboldt - Liability

Paid Loss Development

Accident Year (A)	Limited Paid Losses as of 6/30/19 (B)	Paid Loss Development Factor (C)	Ultimate Limited Losses (D)	Program Paid Losses of 6/30/19 (E)	Paid Loss Development Factor (F)	Ultimate Program Losses (G)
Prior	\$6,253,203	1.000	\$6,253,203	\$7,003,405	1.000	\$7,003,405
1999-2000	173,032	1.000	173,032	173,032	1.000	173,032
2000-2001	356,416	1.000	356,416	360,267	1.001	360,627
2001-2002	218,991	1.000	218,991	264,993	1.001	265,258
2002-2003	487,623	1.000	487,623	537,623	1.001	538,161
2003-2004	232,550	1.000	232,550	269,878	1.002	270,418
2004-2005	181,103	1.000	181,103	181,103	1.003	181,646
2005-2006	623,427	1.000	623,427	831,274	1.004	834,599
2006-2007	421,188	1.000	421,188	508,651	1.005	511,194
2007-2008	212,473	1.000	212,473	262,473	1.006	264,048
2008-2009	414,764	1.001	415,179	464,764	1.008	468,482
2009-2010	359,089	1.003	360,166	412,392	1.012	417,341
2010-2011	170,076	1.006	171,096	170,076	1.019	173,307
2011-2012	643,874	1.011	650,957	803,838	1.055	848,049
2012-2013	399,339	1.019	406,926	803,287	1.083	869,960
2013-2014	351,899	1.039	365,623	919,383	1.132	1,040,742
2014-2015	159,832	1.091	174,377	159,832	1.091	174,377
2015-2016	127,916	1.189	152,092	127,916	1.189	152,092
2016-2017	102,140	1.427	145,754	102,140	1.427	145,754
2017-2018	79,575	2.141	170,370	79,575	2.141	170,370
2018-2019	14,241	5.353	76,232	14,241	5.353	76,232
Totals	\$11,982,751		\$12,248,778	\$14,450,143		\$14,939,094

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the County. These losses exclude amounts over \$100,000 per occurrence.
- (C) From Appendix B, Page 2.
- (D) (B) x (C). These estimated losses exclude amounts over \$100,000 per occurrence.
- (E) Losses capped at the County's SIR. Amounts are provided by the County.
- (F) Derived from factors on Appendix B, Page 4.
- (G) (E) x (F).

This method tends to understate ultimate losses for the most recent several years because the large losses for those years generally have not yet emerged at the time of our review.

This exhibit shows the calculation of estimated ultimate losses for each year based on paid losses as reported by the claims administrator. These losses tend to "develop" or change from period to period as more information becomes available about the cases. This development tends to follow quantifiable patterns over time.

County of Humboldt - Liability
Paid Loss Development

Limited Losses Paid as of:

Accident Year	12	24	36	48	60	72	84	96	108	120
	Months	Months	Months	Months	Months	Months	Months	Months	Months	Months
1998-1999					108,364	108,364	122,854	122,854	122,854	122,854
1999-2000				113,594	113,594	169,699	169,699	169,699	169,699	169,699
2000-2001			317,877	338,667	356,416	356,416	356,416	356,416	356,416	356,416
2001-2002		96,040	147,305	179,787	199,363	218,991	218,991	218,991	218,991	218,991
2002-2003	33,699	95,896	261,555	350,589	432,717	433,711	453,421	453,421	477,954	487,623
2003-2004	44,816	113,994	232,550	232,550	232,550	232,550	232,550	232,550	232,550	232,550
2004-2005	38,349	113,175	170,096	178,579	181,103	181,103	181,103	181,103	181,103	181,103
2005-2006	131,390	311,911	455,492	502,867	507,364	544,867	578,915	608,959	623,427	623,427
2006-2007	140,720	181,063	223,596	236,468	360,178	411,599	421,188	421,188	421,188	421,188
2007-2008	15,606	46,948	51,070	184,767	209,263	212,473	212,473	212,473	212,473	212,473
2008-2009	119,315	208,781	302,581	399,208	410,751	414,764	414,764	414,764	414,764	414,764
2009-2010	3,515	198,005	253,803	280,023	311,186	359,089	359,089	359,089	359,089	359,089
2010-2011	85,205	153,657	169,679	170,076	170,076	170,076	170,076	170,076	170,076	170,076
2011-2012	50,741	302,495	401,580	502,344	554,397	604,943	624,332	643,874		
2012-2013	42,782	286,688	322,315	333,863	399,339	399,339	399,339			
2013-2014	21,106	50,270	238,101	342,908	351,899	351,899				
2014-2015	33,666	125,053	150,785	154,192	159,832					
2015-2016	34,100	75,631	112,627	127,916						
2016-2017	33,566	71,851	102,140							
2017-2018	54,998	79,575								
2018-2019	14,241									

Paid Loss Development Factors:

	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132
	Months	Months	Months	Months	Months	Months	Months	Months	Months	Months
1998-1999					1.000	1.134	1.000	1.000	1.000	1.000
1999-2000				1.000	1.494	1.000	1.000	1.000	1.000	1.000
2000-2001			1.065	1.052	1.000	1.000	1.000	1.000	1.000	1.000
2001-2002		1.534	1.221	1.109	1.098	1.000	1.000	1.000	1.000	1.000
2002-2003	2.846	2.727	1.340	1.234	1.002	1.045	1.000	1.054	1.020	1.000
2003-2004	2.544	2.040	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004-2005	2.951	1.503	1.050	1.014	1.000	1.000	1.000	1.000	1.000	1.000
2005-2006	2.374	1.460	1.104	1.009	1.074	1.062	1.052	1.024	1.000	1.000
2006-2007	1.287	1.235	1.058	1.523	1.143	1.023	1.000	1.000	1.000	1.000
2007-2008	3.008	1.088	3.618	1.133	1.015	1.000	1.000	1.000	1.000	1.000
2008-2009	1.750	1.449	1.319	1.029	1.010	1.000	1.000	1.000	1.000	1.000
2009-2010	56.331	1.282	1.103	1.111	1.154	1.000	1.000	1.000	1.000	
2010-2011	1.803	1.104	1.002	1.000	1.000	1.000	1.000	1.000		
2011-2012	5.962	1.328	1.251	1.104	1.091	1.032	1.031			
2012-2013	6.701	1.124	1.036	1.196	1.000	1.000				
2013-2014	2.382	4.736	1.440	1.026	1.000					
2014-2015	3.715	1.206	1.023	1.037						
2015-2016	2.218	1.489	1.136							
2016-2017	2.141	1.422								
2017-2018	1.447									

	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132
	Months	Months	Months	Months	Months	Months	Months	Months	Months	Months
Average Dollar-Weighted Averages	6.216	1.670	1.298	1.099	1.068	1.020	1.006	1.006	1.002	1.000
3-yr	1.851	1.341	1.246	1.096	1.039	1.017	1.017	1.000	1.000	1.000
4-yr	2.252	1.870	1.164	1.099	1.034	1.013	1.012	1.000	1.000	1.000
CSAC Factors Prior	3.100	1.800	1.250	1.070	1.045	1.020	1.010	1.009	1.008	1.007
	3.500	1.600	1.250	1.100	1.065	1.020	1.008	1.005	1.003	1.002
Selected	2.500	1.500	1.200	1.090	1.050	1.020	1.008	1.005	1.003	1.002
Cumulated	5.353	2.141	1.427	1.189	1.091	1.039	1.019	1.011	1.006	1.003

County of Humboldt - Liability
Paid Loss Development

Limited Losses Paid as of:

Accident Year	132 Months	144 Months	156 Months	168 Months	180 Months	192 Months	204 Months	216 Months	228 Months	240 Months	252 Months
1998-1999	122,854	122,854	122,854	122,854	122,854	122,854	122,854	122,854	122,854	122,854	122,854
1999-2000	169,699	173,032	173,032	173,032	173,032	173,032	173,032	173,032	173,032	173,032	173,032
2000-2001	356,416	356,416	356,416	356,416	356,416	356,416	356,416	356,416	356,416		
2001-2002	218,991	218,991	218,991	218,991	218,991	218,991	218,991	218,991			
2002-2003	487,623	487,623	487,623	487,623	487,623	487,623	487,623				
2003-2004	232,550	232,550	232,550	232,550	232,550	232,550					
2004-2005	181,103	181,103	181,103	181,103	181,103						
2005-2006	623,427	623,427	623,427	623,427							
2006-2007	421,188	421,188	421,188								
2007-2008	212,473	212,473									
2008-2009	414,764										
2009-2010											
2010-2011											
2011-2012											
2012-2013											
2013-2014											
2014-2015											
2015-2016											
2016-2017											
2017-2018											
2018-2019											

Paid Loss Development Factors:

	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months	216-228 Months	228-240 Months	240-252 Months	252-Ult. Months
1998-1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
1999-2000	1.020	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
2000-2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
2001-2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
2002-2003	1.000	1.000	1.000	1.000	1.000	1.000					
2003-2004	1.000	1.000	1.000	1.000	1.000						
2004-2005	1.000	1.000	1.000	1.000							
2005-2006	1.000	1.000	1.000								
2006-2007	1.000	1.000									
2007-2008	1.000										
2008-2009											
2009-2010											
2010-2011											
2011-2012											
2012-2013											
2013-2014											
2014-2015											
2015-2016											
2016-2017											
2017-2018											

	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months	216-228 Months	228-240 Months	240-252 Months	252-Ult. Months
Average Dollar-Weighted Averages	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
3-yr	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
4-yr	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
CSAC Factors	1.006	1.005	1.004	1.003	1.002	1.001	1.001	1.001	1.001	1.001	1.001
Prior	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulated	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

County of Humboldt - Liability
Paid between \$100,000 and \$500,000 Loss Development

Accident Year	<u>Losses Paid as of:</u>									
	12 Months	24 Months	36 Months	48 Months	60 Months	72 Months	84 Months	96 Months	108 Months	120 Months
1998-1999										
1999-2000										
2000-2001			3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850
2001-2002						25,710	46,002	46,002	46,002	46,002
2002-2003			163,635	163,795	163,795	163,795	163,795	163,795	163,795	163,795
2003-2004			37,055	37,328	37,328	37,328	37,328	37,328	37,328	37,328
2004-2005										
2005-2006	303,756	329,339	380,248	380,248	380,248	380,248	380,248	615,764	642,059	649,231
2006-2007	195,328	195,328	195,663	195,663	195,663	233,126	233,126	233,126	233,126	233,126
2007-2008				58,219	147,106	174,304	174,304	174,304	174,304	174,304
2008-2009				283,595	283,595	283,595	283,595	283,595	283,595	283,595
2009-2010						45,688	167,415	226,194	223,375	223,375
2010-2011										
2011-2012		8,297	12,419	12,419	12,419	12,419	12,419	159,964		
2012-2013		400,000	403,948	403,948	403,948	403,948	403,948			
2013-2014			85,508	326,353	567,286	567,484				
2014-2015										
2015-2016										
2016-2017										
2017-2018										
2018-2019										

Paid Loss Development Factors:

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months
1998-1999										
1999-2000										
2000-2001			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001-2002						1.789	1.000	1.000	1.000	1.000
2002-2003			1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003-2004			1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004-2005										
2005-2006	1.084	1.155	1.000	1.000	1.000	1.000	1.619	1.043	1.011	1.007
2006-2007	1.000	1.002	1.000	1.000	1.191	1.000	1.000	1.000	1.000	1.000
2007-2008				2.527	1.185	1.000	1.000	1.000	1.000	1.000
2008-2009				1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009-2010						3.664	1.351	0.988	1.000	
2010-2011										
2011-2012		1.497	1.000	1.000	1.000	1.000	12.881			
2012-2013		1.010	1.000	1.000	1.000	1.000				
2013-2014			3.817	1.738	1.000					
2014-2015										
2015-2016										
2016-2017										
2017-2018										

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months
Average Dollar-Weighted Averages	1.042	1.166	1.353	1.227	1.038	1.314	2.285	1.003	1.001	1.001
3-yr					1.000				1.000	1.000
4-yr									1.000	1.003
CSAC Factors	8.100	2.500	1.500	1.250	1.100	1.080	1.050	1.035	1.025	1.010
Prior	8.100	1.750	1.500	1.250	1.100	1.080	1.050	1.035	1.025	1.010
Selected	8.100	2.500	1.500	1.250	1.100	1.080	1.050	1.035	1.025	1.010
Cumulated	52.958	6.538	2.615	1.743	1.394	1.267	1.173	1.117	1.079	1.053

County of Humboldt - Liability
Paid between \$100,000 and \$500,000 Loss Development

Accident Year	<u>Losses Paid as of:</u>								
	132 Months	144 Months	156 Months	168 Months	180 Months	192 Months	204 Months	216 Months	228 Months
1998-1999									
1999-2000									
2000-2001	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850
2001-2002	46,002	46,002	46,002	46,002	46,002	46,002	46,002	46,002	
2002-2003	163,795	163,795	163,795	163,795	163,795	163,795	163,795		
2003-2004	37,328	37,328	37,328	37,328	37,328	37,328			
2004-2005									
2005-2006	653,735	654,144	654,144	654,144					
2006-2007	233,126	233,126	233,126						
2007-2008	174,304	174,304							
2008-2009	283,595								
2009-2010									
2010-2011									
2011-2012									
2012-2013									
2013-2014									
2014-2015									
2015-2016									
2016-2017									
2017-2018									
2018-2019									

Paid Loss Development Factors:

	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months	216-228 Months	228-Ult. Months
1998-1999									
1999-2000									
2000-2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2001-2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
2002-2003	1.000	1.000	1.000	1.000	1.000	1.000			
2003-2004	1.000	1.000	1.000	1.000	1.000				
2004-2005									
2005-2006	1.001	1.000	1.000						
2006-2007	1.000	1.000							
2007-2008	1.000								
2008-2009									
2009-2010									
2010-2011									
2011-2012									
2012-2013									
2013-2014									
2014-2015									
2015-2016									
2016-2017									
2017-2018									

	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months	216-228 Months	228-Ult. Months		
Average Dollar-Weighted Averages	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
3-yr	1.000				1.000	1.000					
4-yr					1.000						
CSAC Factors	1.008	1.007	1.006	1.005	1.004	1.003	1.003	1.002	1.003		
Prior	1.008	1.007	1.006	1.005	1.004	1.003	1.003	1.002	1.001	1.001	1.001
Selected	1.008	1.007	1.006	1.005	1.004	1.003	1.003	1.002	1.003	1.001	1.001
Cumulated	1.043	1.035	1.028	1.022	1.017	1.013	1.010	1.007	1.005	1.002	1.001

County of Humboldt - Liability
Exposure and Development Method
Based on Reported Losses

Accident Year	Composite Exposures (A)	Reported Losses as of 6/30/19 (B)	Loss Development Factor (C)	Percentage of Losses Yet to Be Reported (D)	Program Rate (E)	Incurred but not Reported (IBNR) (F)	Ultimate Program Losses (G)
Prior	0		1.000	0.000	0.296	0	
1999-2000	986,442	173,032	1.000	0.000	0.202	0	173,032
2000-2001	964,798	360,267	1.000	0.000	0.429	0	360,267
2001-2002	984,045	264,993	1.000	0.000	0.261	0	264,993
2002-2003	1,060,634	537,623	1.000	0.000	0.540	0	537,623
2003-2004	1,028,734	269,878	1.000	0.000	0.267	0	269,878
2004-2005	1,014,535	181,103	1.000	0.000	0.212	0	181,103
2005-2006	997,361	831,274	1.000	0.000	0.746	0	831,274
2006-2007	1,099,523	508,651	1.000	0.000	0.459	0	508,651
2007-2008	1,111,922	262,473	1.000	0.000	0.230	0	262,473
2008-2009	1,088,738	464,764	1.000	0.000	0.461	0	464,764
2009-2010	1,090,283	412,392	1.000	0.000	0.401	0	412,392
2010-2011	1,115,701	170,076	1.000	0.000	0.186	0	170,076
2011-2012	1,136,211	875,362	1.002	0.002	1.095	2,488	877,850
2012-2013	1,073,950	803,287	1.004	0.004	0.675	2,900	806,187
2013-2014	1,087,171	1,115,285	1.013	0.013	0.726	10,261	1,125,546
2014-2015	1,079,677	420,789	1.005	0.005	0.398	2,149	422,938
2015-2016	1,068,555	185,005	1.030	0.029	0.408	12,643	197,648
2016-2017	1,080,581	340,702	1.061	0.057	0.418	25,746	366,448
2017-2018	1,130,479	636,423	1.141	0.124	0.428	59,997	696,420
2018-2019	1,142,328	158,117	2.282	0.562	0.439	281,833	439,950
Totals	21,341,668	\$8,971,496				\$398,017	\$9,369,513

Notes:

- (A) From Appendix N, Page 2, Column (G).
- (B) Provided by the County. These losses exclude amounts incurred above the County's SIR for each year.
- (C) From Appendix A, Page 1, Column (F).
- (D) $1 - 1 / (C)$.
- (E) From Appendix C, Page 3, Column (H).
- (F) $(A) \times (D) \times (E)$.
- (G) $(B) + (F)$.

This exhibit shows the calculation of ultimate losses based on the assumption that there is an underlying relationship between losses and exposure that changes in regular ways over time. The method relies on the premise that the losses that are currently unreported will cost what this relationship would suggest.

County of Humboldt - Liability
Exposure and Development Method
Based on Paid Losses

Accident Year	Composite Exposures (A)	Paid Losses as of 6/30/19 (B)	Loss Development Factor (C)	Percentage of Losses Yet to Be Paid (D)	Program Rate (E)	Incurred but not Paid (F)	Ultimate Program Losses (G)
Prior	0		1.000	0.000	0.296	0	
1999-2000	986,442	173,032	1.000	0.000	0.202	0	173,032
2000-2001	964,798	360,267	1.001	0.001	0.429	414	360,681
2001-2002	984,045	264,993	1.001	0.001	0.261	257	265,250
2002-2003	1,060,634	537,623	1.001	0.001	0.540	573	538,196
2003-2004	1,028,734	269,878	1.002	0.002	0.267	549	270,427
2004-2005	1,014,535	181,103	1.003	0.003	0.212	645	181,748
2005-2006	997,361	831,274	1.004	0.004	0.746	2,976	834,250
2006-2007	1,099,523	508,651	1.005	0.005	0.459	2,523	511,174
2007-2008	1,111,922	262,473	1.006	0.006	0.230	1,534	264,007
2008-2009	1,088,738	464,764	1.008	0.008	0.461	4,015	468,779
2009-2010	1,090,283	412,392	1.012	0.012	0.401	5,246	417,638
2010-2011	1,115,701	170,076	1.019	0.019	0.186	3,943	174,019
2011-2012	1,136,211	803,838	1.055	0.052	1.095	64,696	868,534
2012-2013	1,073,950	803,287	1.083	0.077	0.675	55,819	859,106
2013-2014	1,087,171	919,383	1.132	0.117	0.726	92,346	1,011,729
2014-2015	1,079,677	159,832	1.091	0.083	0.398	35,666	195,498
2015-2016	1,068,555	127,916	1.189	0.159	0.408	69,319	197,235
2016-2017	1,080,581	102,140	1.427	0.299	0.418	135,053	237,193
2017-2018	1,130,479	79,575	2.141	0.533	0.428	257,889	337,464
2018-2019	1,142,328	14,241	5.353	0.813	0.439	407,705	421,946
Totals	21,341,668	\$7,446,738				\$1,141,168	\$8,587,906

Notes:

- (A) From Appendix N, Page 2, Column (G).
- (B) Provided by the County. These losses exclude amounts paid above the County's SIR for each year.
- (C) From Appendix B, Page 1, Column (F).
- (D) $1 - 1 / (C)$.
- (E) From Appendix C, Page 3, Column (H).
- (F) $(A) \times (D) \times (E)$.
- (G) $(B) + (F)$.

This exhibit shows the calculation of ultimate losses based on the assumption that there is an underlying relationship between losses and exposure that changes in regular ways over time. The method relies on the premise that the losses that are currently unpaid will cost what this relationship would suggest.

County of Humboldt - Liability
Exposure and Development Method

Accident Year	Composite Exposures (A)	Ultimate Limited Losses (B)	Trend Factor (C)	Trended Limited Losses (D)	Trended Limited Loss Rate (E)	Limited Loss Rate (F)	Factor to SIR (G)	Program Loss Rate (H)
Prior	0		1.679			0.268	1.105	0.296
1999-2000	986,442	173,032	1.638	283,426	0.287	0.175	1.156	0.202
2000-2001	964,798	356,416	1.598	569,553	0.590	0.369	1.162	0.429
2001-2002	984,045	218,991	1.559	341,407	0.347	0.223	1.169	0.261
2002-2003	1,060,634	487,623	1.521	741,675	0.699	0.460	1.175	0.540
2003-2004	1,028,734	232,550	1.484	345,104	0.335	0.226	1.181	0.267
2004-2005	1,014,535	181,103	1.448	262,237	0.258	0.179	1.186	0.212
2005-2006	997,361	623,427	1.412	880,279	0.883	0.625	1.194	0.746
2006-2007	1,099,523	421,188	1.378	580,397	0.528	0.383	1.200	0.459
2007-2008	1,111,922	212,473	1.344	285,564	0.257	0.191	1.205	0.230
2008-2009	1,088,738	414,764	1.312	544,170	0.500	0.381	1.211	0.461
2009-2010	1,090,283	360,000	1.280	460,800	0.423	0.330	1.217	0.401
2010-2011	1,115,701	170,076	1.249	212,425	0.190	0.152	1.222	0.186
2011-2012	1,136,211	696,000	1.218	847,728	0.746	0.613	1.787	1.095
2012-2013	1,073,950	399,339	1.188	474,415	0.442	0.372	1.813	0.675
2013-2014	1,087,171	428,000	1.160	496,480	0.457	0.394	1.842	0.726
2014-2015	1,079,677	423,000	1.132	478,836	0.443	0.398	1.000	0.398
2015-2016	1,068,555	191,000	1.104	210,864	0.197	0.408	1.000	0.408
2016-2017	1,080,581	361,000	1.077	388,797	0.360	0.418	1.000	0.418
2017-2018	1,130,479	726,000	1.051	763,026	0.675	0.428	1.000	0.428
2018-2019	1,142,328	361,000	1.025	370,025	0.324	0.439	1.000	0.439
Total/Avg	21,341,668	\$7,436,982		\$9,537,208	\$0.447			
13/14-17/18	5,446,463	2,129,000		2,338,003	0.429			
14/15-18/19	5,501,620	2,062,000		2,211,548	0.402			
				Selected Limited Rate:	\$0.450			
				Prior:	\$0.500			

Notes:

- (A) From Appendix N, Page 2, Column (G).
- (B) Selected average of results from Appendices A and B.
- (C) From Appendix E, Page 1, Column (B).
- (D) (B) x (C).
- (E) (D) / (A).
- (F) Selected Limited Rate / (C). For 2013-2014 and prior (B) / (A).
- (G) Based on a Burr distribution, a mathematical model of claim sizes.
- (H) (F) x (G).

This exhibit shows the calculation of the underlying historical relationship between losses and exposure that is needed to apply the estimation methods shown on pages 1 and 2 of this Appendix.

County of Humboldt - Liability
Frequency and Severity Method

Accident Year	Ultimate Program Severity (A)	Adjusted Ultimate Claims (B)	Ultimate Program Losses (C)
Prior	\$3,983	1,734	\$6,906,522
1999-2000	2,020	99	199,980
2000-2001	4,870	85	413,950
2001-2002	2,813	91	255,983
2002-2003	5,728	100	572,800
2003-2004	3,308	83	274,564
2004-2005	2,652	81	214,812
2005-2006	7,673	97	744,281
2006-2007	5,741	88	505,208
2007-2008	3,325	77	256,025
2008-2009	8,233	61	502,213
2009-2010	6,738	65	437,970
2010-2011	2,567	81	207,927
2011-2012	17,764	70	1,243,480
2012-2013	10,056	72	724,032
2013-2014	17,914	44	788,216
2014-2015	7,067	68	480,556
2015-2016	7,246	64	463,744
2016-2017	7,428	63	467,964
2017-2018	7,612	84	639,408
2018-2019	7,805	57	444,885
Total		3,264	\$16,744,520

Notes:

- (A) From Appendix D, Page 2, Column (H).
- (B) From Appendix D, Page 2, Column (B).
- (C) (A) x (B).

This exhibit shows the calculation of the estimated ultimate losses for each year based on the observed average frequency and severity of claims.

County of Humboldt - Liability
Frequency and Severity Method

Accident Year	Ultimate Limited Losses (A)	Adjusted Ultimate Claims (B)	Ultimate Limited Severity (C)	Trend Factor (D)	Trended Limited Severity (E)	Limited Severity (F)	Factor to SIR (G)	Program Severity (H)
Prior	\$6,253,203	1,734	\$3,606	1.679	\$6,054	\$3,606	1.105	\$3,983
1999-2000	173,032	99	1,748	1.638	2,863	1,748	1.156	2,020
2000-2001	356,416	85	4,193	1.598	6,700	4,193	1.162	4,870
2001-2002	218,991	91	2,406	1.559	3,751	2,406	1.169	2,813
2002-2003	487,623	100	4,876	1.521	7,416	4,876	1.175	5,728
2003-2004	232,550	83	2,802	1.484	4,158	2,802	1.181	3,308
2004-2005	181,103	81	2,236	1.448	3,238	2,236	1.186	2,652
2005-2006	623,427	97	6,427	1.412	9,075	6,427	1.194	7,673
2006-2007	421,188	88	4,786	1.378	6,595	4,786	1.200	5,741
2007-2008	212,473	77	2,759	1.344	3,708	2,759	1.205	3,325
2008-2009	414,764	61	6,799	1.312	8,920	6,799	1.211	8,233
2009-2010	360,000	65	5,538	1.280	7,089	5,538	1.217	6,738
2010-2011	170,076	81	2,100	1.249	2,623	2,100	1.222	2,567
2011-2012	696,000	70	9,943	1.218	12,111	9,943	1.787	17,764
2012-2013	399,339	72	5,546	1.188	6,589	5,546	1.813	10,056
2013-2014	428,000	44	9,727	1.160	11,283	9,727	1.842	17,914
2014-2015	423,000	68	6,221	1.132	7,042	7,067	1.000	7,067
2015-2016	191,000	64	2,984	1.104	3,294	7,246	1.000	7,246
2016-2017	361,000	63	5,730	1.077	6,171	7,428	1.000	7,428
2017-2018	711,000	84	8,464	1.051	8,896	7,612	1.000	7,612
2018-2019	431,000	57	7,561	1.025	7,750	7,805	1.000	7,805
Average Limited Severity:					\$6,444			
Average 13/14-17/18 Limited Severity:					7,337			
Average 14/15-18/19 Limited Severity:					6,631			
Selected Limited Severity:					\$8,000			
Prior:					\$8,000			

Notes:

- (A) Selected average of results from Appendices A, B, and C.
- (B) Appendix D, Page 3, Column (C).
- (C) (A) / (B).
- (D) From Appendix E, Page 1, Column (J).
- (E) (C) x (D).
- (F) Selected Limited Severity / (D).
- (G) Based on a Burr distribution, a mathematical model of claim sizes.
- (H) (F) x (G).

This exhibit shows the calculation of the historical average cost per claim, or severity. The observed average severity is used in the method shown on page 1 of this Appendix.

County of Humboldt - Liability

Frequency and Severity Method
Projection of Ultimate Claims

Accident Year	Reported Claim Development (A)	Closed Claim Development (B)	Selected Ultimate Claims (C)	Composite Exposures (10,000s) (D)	Claim Frequency (E)	Trend Factor (F)	Trended Claim Frequency (G)
Prior	1,734	1,734	1,734	0.0		1.000	
1999-2000	99	99	99	98.6	1.004	1.000	1.004
2000-2001	85	85	85	96.5	0.881	1.000	0.881
2001-2002	91	91	91	98.4	0.925	1.000	0.925
2002-2003	100	100	100	106.1	0.943	1.000	0.943
2003-2004	83	83	83	102.9	0.807	1.000	0.807
2004-2005	81	81	81	101.5	0.798	1.000	0.798
2005-2006	97	97	97	99.7	0.973	1.000	0.973
2006-2007	88	88	88	110.0	0.800	1.000	0.800
2007-2008	77	77	77	111.2	0.692	1.000	0.692
2008-2009	61	61	61	108.9	0.560	1.000	0.560
2009-2010	65	64	65	109.0	0.596	1.000	0.596
2010-2011	81	81	81	111.6	0.726	1.000	0.726
2011-2012	70	68	70	113.6	0.616	1.000	0.616
2012-2013	72	72	72	107.4	0.670	1.000	0.670
2013-2014	44	41	44	108.7	0.405	1.000	0.405
2014-2015	68	65	68	108.0	0.630	1.000	0.630
2015-2016	64	63	64	106.9	0.599	1.000	0.599
2016-2017	63	64	63	108.1	0.583	1.000	0.583
2017-2018	84	68	84	113.0	0.743	1.000	0.743
2018-2019	57	80	57	114.2	0.499	1.000	0.499
Total	3,264	3,262	3,264	2,134.2			0.717
13/14-17/18	323	301	323	544.6			0.593
					(H) Selected Frequency:		0.625
					Prior:		0.650
Program Year:				2019-2020	2020-2021		
(I) Trend Factor:				1.000	1.000		
(J) Selected Frequency:				0.625	0.625		
(K) Est. Composite Exposures (10,000s):				113.4	119.3		
(L) Ultimate Claims:				71	75		

Notes:

- (A) From Appendix D, Page 4, (C).
- (B) From Appendix D, Page 5, (C).
- (C) Selected from (A) and (B).
- (D) From Appendix N, Page 2, Column (G) / 10,000.
- (E) (C) / (D).
- (F) From Appendix E, Page 1, Column (H).
- (G) (E) x (F).
- (H) The selected frequency of 0.625 is based on (G).
- (I) From Appendix E, Page 1, Column (H).
- (J) (H) x (I).
- (K) From Appendix N, Page 2, Column (G) / 10,000.
- (L) (J) x (K).

This exhibit summarizes the estimated numbers of claims and shows the estimated frequencies per 10,000 units of composite exposures.

County of Humboldt - Liability
Frequency and Severity Method
Reported Claim Count Development

Accident Year	Claims Reported as of 6/30/2019 (A)	Reported Claim Development Factor (B)	Ultimate Claims (C)	Trended Claim Frequency (D)
Prior	1,734	1.000	1,734	
1999-2000	99	1.000	99	1.004
2000-2001	85	1.000	85	0.881
2001-2002	91	1.000	91	0.925
2002-2003	100	1.000	100	0.943
2003-2004	83	1.000	83	0.807
2004-2005	81	1.000	81	0.798
2005-2006	97	1.000	97	0.973
2006-2007	88	1.000	88	0.800
2007-2008	77	1.000	77	0.692
2008-2009	61	1.000	61	0.560
2009-2010	65	1.000	65	0.596
2010-2011	81	1.000	81	0.726
2011-2012	70	1.000	70	0.616
2012-2013	72	1.000	72	0.670
2013-2014	44	1.000	44	0.405
2014-2015	68	1.001	68	0.630
2015-2016	64	1.002	64	0.599
2016-2017	63	1.007	63	0.583
2017-2018	82	1.027	84	0.743
2018-2019	41	1.386	57	0.499
Total	3,246		3,264	0.717

Notes:

- (A) Provided by the County.
- (B) From Appendix D, Page 6.
- (C) (A) x (B).
- (D) (C) / [Appendix D, Page 3, (D)] x [Appendix D, Page 3, (F)].

This exhibit shows the calculation of estimated ultimate claims for each year based on reported claims as provided by the County. These numbers of claims tend to "develop" or change from period to period as more claims are filed. This development tends to follow quantifiable patterns over time.

County of Humboldt - Liability

Frequency and Severity Method
Closed Claim Count Development

Accident Year	Claims Closed as of 6/30/2019 (A)	Closed Claim Development Factor (B)	Ultimate Claims (C)	Trended Claim Frequency (D)
Prior	1,734	1.000	1,734	
1999-2000	99	1.000	99	1.004
2000-2001	85	1.000	85	0.881
2001-2002	91	1.000	91	0.925
2002-2003	100	1.000	100	0.943
2003-2004	83	1.000	83	0.807
2004-2005	81	1.000	81	0.798
2005-2006	97	1.000	97	0.973
2006-2007	88	1.000	88	0.800
2007-2008	77	1.000	77	0.692
2008-2009	61	1.000	61	0.560
2009-2010	64	1.000	64	0.587
2010-2011	81	1.001	81	0.726
2011-2012	68	1.002	68	0.598
2012-2013	72	1.004	72	0.670
2013-2014	41	1.009	41	0.377
2014-2015	64	1.019	65	0.602
2015-2016	61	1.039	63	0.590
2016-2017	59	1.081	64	0.592
2017-2018	55	1.243	68	0.602
2018-2019	23	3.480	80	0.700
Total	3,184		3,262	0.716

Notes:

- (A) Provided by the County.
- (B) From Appendix D, Page 7.
- (C) (A) x (B).
- (D) (C) / [Appendix D, Page 3, (D)] x [Appendix D, Page 3, (F)].

This exhibit shows the calculation of estimated ultimate claims for each year based on closed claims as provided by the County. These numbers of closed claims tend to "develop" or change from period to period as more claims are closed. This development tends to follow quantifiable patterns over time.

County of Humboldt - Liability
Reported Claim Count Development

Accident Year	Claims Reported as of:												
	12 Months	24 Months	36 Months	48 Months	60 Months	72 Months	84 Months	96 Months	108 Months	120 Months	132 Months	144 Months	156 Months
1998-1999					115	115	115	115	115	115	115	115	115
1999-2000				96	96	98	98	98	98	98	98	98	99
2000-2001			84	85	85	85	85	85	85	85	85	85	85
2001-2002		88	89	91	91	91	91	91	91	91	91	91	91
2002-2003	74	97	98	99	99	99	99	100	100	100	100	100	100
2003-2004	64	82	83	83	83	83	83	83	83	83	83	83	83
2004-2005	50	76	78	81	81	81	81	81	81	81	81	81	81
2005-2006	64	97	97	97	97	97	97	97	97	97	97	97	97
2006-2007	55	83	87	87	88	88	88	88	88	88	88	88	88
2007-2008	56	72	74	76	76	77	77	77	77	77	77	77	
2008-2009	45	56	60	61	61	61	61	61	61	61	61		
2009-2010	18	61	64	65	65	65	65	65	65	65			
2010-2011	69	80	81	81	81	81	81	81	81				
2011-2012	54	68	68	70	70	70	70	70					
2012-2013	53	72	72	72	72	72	72						
2013-2014	35	44	44	44	44	44							
2014-2015	45	67	68	68	68								
2015-2016	49	62	64	64									
2016-2017	48	63	63										
2017-2018	60	82											
2018-2019	41												

Reported Claim Count Development Factors:

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months	132-144 Months	144-156 Months	156-168 Months
1998-1999					1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999-2000				1.000	1.021	1.000	1.000	1.000	1.000	1.000	1.010	1.000	1.000
2000-2001			1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001-2002		1.011	1.022	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002-2003	1.311	1.010	1.010	1.000	1.000	1.000	1.010	1.000	1.000	1.000	1.000	1.000	1.000
2003-2004	1.281	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004-2005	1.520	1.026	1.038	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005-2006	1.516	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006-2007	1.509	1.048	1.000	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2007-2008	1.286	1.028	1.027	1.000	1.013	1.000	1.000	1.000	1.000	1.000	1.000		
2008-2009	1.244	1.071	1.017	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
2009-2010	3.389	1.049	1.016	1.000	1.000	1.000	1.000	1.000	1.000				
2010-2011	1.159	1.013	1.000	1.000	1.000	1.000	1.000	1.000					
2011-2012	1.259	1.000	1.029	1.000	1.000	1.000	1.000						
2012-2013	1.358	1.000	1.000	1.000	1.000	1.000							
2013-2014	1.257	1.000	1.000	1.000	1.000								
2014-2015	1.489	1.015	1.000	1.000									
2015-2016	1.265	1.032	1.000										
2016-2017	1.313	1.000											
2017-2018	1.367												

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months	132-144 Months	144-156 Months	156-168 Months
Average Claim-Weighted Averages	1.470	1.020	1.011	1.001	1.002	1.000	1.001	1.000	1.000	1.000	1.001	1.000	1.000
3-yr	1.318	1.016	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
4-yr	1.356	1.013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CSAC Factors	1.270	1.030	1.005	1.005	1.005	1.004	1.003	1.002	1.001	1.001	1.000	1.000	1.000
Prior	1.350	1.030	1.010	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.350	1.020	1.005	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulated	1.386	1.027	1.007	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

County of Humboldt - Liability
Closed Claim Development

Accident Year	Claims Closed as of:												
	12 Months	24 Months	36 Months	48 Months	60 Months	72 Months	84 Months	96 Months	108 Months	120 Months	132 Months	144 Months	156 Months
1998-1999					115	115	115	115	115	115	115	115	115
1999-2000				95	96	97	98	98	98	98	98	99	99
2000-2001			79	85	85	85	85	85	85	85	85	85	85
2001-2002		78	85	88	90	90	90	90	90	90	91	91	91
2002-2003	30	88	90	95	98	98	99	99	99	100	100	100	100
2003-2004	29	60	82	83	83	83	83	83	83	83	83	83	83
2004-2005	23	64	72	76	77	77	77	81	81	81	81	81	81
2005-2006	36	79	88	89	89	89	93	93	93	94	94	95	95
2006-2007	21	48	79	80	82	87	88	88	88	88	88	88	88
2007-2008	23	63	63	64	72	74	74	74	75	77	77	77	
2008-2009	16	26	32	59	60	60	60	60	61	61	61		
2009-2010	4	51	60	61	61	63	63	64	64	64			
2010-2011	36	73	80	80	80	80	81	81	81				
2011-2012	16	54	57	59	58	66	66	68					
2012-2013	17	64	67	67	71	71	72						
2013-2014	18	37	37	41	41	41							
2014-2015	20	54	60	62	64								
2015-2016	17	37	54	61									
2016-2017	16	56	59										
2017-2018	27	55											
2018-2019	23												

Closed Claim Count Development Factors:

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months	132-144 Months	144-156 Months	156-168 Months
1998-1999					1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999-2000				1.011	1.010	1.010	1.000	1.000	1.000	1.000	1.010	1.000	1.000
2000-2001			1.076	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001-2002		1.090	1.035	1.023	1.000	1.000	1.000	1.000	1.000	1.011	1.000	1.000	1.000
2002-2003	2.933	1.023	1.056	1.032	1.000	1.010	1.000	1.000	1.010	1.000	1.000	1.000	1.000
2003-2004	2.069	1.367	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004-2005	2.783	1.125	1.056	1.013	1.000	1.000	1.052	1.000	1.000	1.000	1.000	1.000	1.000
2005-2006	2.194	1.114	1.011	1.000	1.000	1.045	1.000	1.000	1.011	1.000	1.011	1.000	1.021
2006-2007	2.286	1.646	1.013	1.025	1.061	1.011	1.000	1.000	1.000	1.000	1.000	1.000	
2007-2008	2.739	1.000	1.016	1.125	1.028	1.000	1.000	1.014	1.027	1.000	1.000		
2008-2009	1.625	1.231	1.844	1.017	1.000	1.000	1.000	1.017	1.000	1.000			
2009-2010	12.750	1.176	1.017	1.000	1.033	1.000	1.016	1.000	1.000				
2010-2011	2.028	1.096	1.000	1.000	1.000	1.013	1.000	1.000					
2011-2012	3.375	1.056	1.035	0.983	1.138	1.000	1.030						
2012-2013	3.765	1.047	1.000	1.060	1.000	1.014							
2013-2014	2.056	1.000	1.108	1.000	1.000								
2014-2015	2.700	1.111	1.033	1.032									
2015-2016	2.176	1.459	1.130										
2016-2017	3.500	1.054											
2017-2018	2.037												

	12-24 Months	24-36 Months	36-48 Months	48-60 Months	60-72 Months	72-84 Months	84-96 Months	96-108 Months	108-120 Months	120-132 Months	132-144 Months	144-156 Months	156-168 Months
Average Claim-Weighted Averages	3.189	1.162	1.090	1.020	1.017	1.007	1.007	1.002	1.004	1.001	1.002	1.000	1.003
3-yr	2.467	1.177	1.086	1.035	1.047	1.009	1.014	1.005	1.010	1.000	1.004	1.000	1.008
4-yr	2.525	1.141	1.060	1.022	1.032	1.007	1.011	1.007	1.007	1.000	1.003	1.000	1.006
CSAC Factors	2.150	1.191	1.064	1.040	1.024	1.015	1.010	1.009	1.006	1.005	1.004	1.003	1.002
Prior	3.000	1.150	1.035	1.015	1.010	1.005	1.002	1.001	1.001	1.000	1.000	1.000	1.000
Selected	2.800	1.150	1.040	1.020	1.010	1.005	1.002	1.001	1.001	1.000	1.000	1.000	1.000
Cumulated	3.480	1.243	1.081	1.039	1.019	1.009	1.004	1.002	1.001	1.000	1.000	1.000	1.000

County of Humboldt - Liability

Loss Trend Factors

Accident Year	Benefit Level Factor (A)	Factor to 2019-2020 Loss Rate Level (B)	Factor to 2020-2021 Loss Rate Level (C)	Factor to 2021-2022 Loss Rate Level (D)	Factor to 2022-2023 Loss Rate Level (E)	Factor to 2019-2020 Frequency Level (F)	Factor to 2020-2021 Frequency Level (G)	Factor to 2021-2022 Frequency Level (H)	Factor to 2022-2023 Frequency Level (I)	Factor to 2019-2020 Severity Level (J)
Prior	1.000	1.679	1.720	1.764	1.808	1.000	1.000	1.000	1.000	1.679
1999-2000	1.000	1.638	1.678	1.721	1.764	1.000	1.000	1.000	1.000	1.638
2000-2001	1.000	1.598	1.637	1.679	1.721	1.000	1.000	1.000	1.000	1.598
2001-2002	1.000	1.559	1.598	1.638	1.679	1.000	1.000	1.000	1.000	1.559
2002-2003	1.000	1.521	1.559	1.598	1.638	1.000	1.000	1.000	1.000	1.521
2003-2004	1.000	1.484	1.520	1.559	1.598	1.000	1.000	1.000	1.000	1.484
2004-2005	1.000	1.448	1.483	1.521	1.559	1.000	1.000	1.000	1.000	1.448
2005-2006	1.000	1.412	1.447	1.484	1.521	1.000	1.000	1.000	1.000	1.412
2006-2007	1.000	1.378	1.412	1.448	1.484	1.000	1.000	1.000	1.000	1.378
2007-2008	1.000	1.344	1.378	1.413	1.448	1.000	1.000	1.000	1.000	1.344
2008-2009	1.000	1.312	1.344	1.379	1.413	1.000	1.000	1.000	1.000	1.312
2009-2010	1.000	1.280	1.312	1.345	1.379	1.000	1.000	1.000	1.000	1.280
2010-2011	1.000	1.249	1.280	1.312	1.345	1.000	1.000	1.000	1.000	1.249
2011-2012	1.000	1.218	1.248	1.280	1.312	1.000	1.000	1.000	1.000	1.218
2012-2013	1.000	1.188	1.218	1.249	1.280	1.000	1.000	1.000	1.000	1.188
2013-2014	1.000	1.160	1.188	1.219	1.249	1.000	1.000	1.000	1.000	1.160
2014-2015	1.000	1.132	1.160	1.189	1.219	1.000	1.000	1.000	1.000	1.132
2015-2016	1.000	1.104	1.131	1.160	1.189	1.000	1.000	1.000	1.000	1.104
2016-2017	1.000	1.077	1.104	1.132	1.160	1.000	1.000	1.000	1.000	1.077
2017-2018	1.000	1.051	1.077	1.104	1.132	1.000	1.000	1.000	1.000	1.051
2018-2019	1.000	1.025	1.050	1.077	1.104	1.000	1.000	1.000	1.000	1.025
2019-2020	1.000	1.000	1.025	1.051	1.077	1.000	1.000	1.000	1.000	1.000
2020-2021	1.000	--	1.000	1.025	1.051	--	1.000	1.000	1.000	--
2021-2022	1.000	--	--	1.000	1.025	--	--	1.000	1.000	--
2022-2023	1.000	--	--	--	1.000	--	--	--	1.000	--

Notes:

- (A) No benefit level adjustment applied.
- (B) - (E) (A) adjusted for a 2.5% annual loss rate trend.
- (F) - (I) (A) adjusted for a 0.0% annual frequency trend.
- (J) (A) adjusted for a 2.5% annual severity trend.

This exhibit shows the calculation of the ways in which we expect claims costs to have changed over the past twenty years due to changes in inflation.

County of Humboldt - Liability

Residual Trend Factors

Accident Year	Initial Estimate of Ultimate Limited Losses (A)	Ultimate Reported Claims (B)	BLF (C)	Adjusted Limited Severity (D)	Composite Exposures (E)	Ultimate Frequency (F)
Prior	\$6,253,203	1,734	1.000	3,606		
1999-2000	173,032	99	1.000	1,748	986,442	1.004
2000-2001	356,416	85	1.000	4,193	964,798	0.881
2001-2002	218,991	91	1.000	2,406	984,045	0.925
2002-2003	487,623	100	1.000	4,876	1,060,634	0.943
2003-2004	232,550	83	1.000	2,802	1,028,734	0.807
2004-2005	181,103	81	1.000	2,236	1,014,535	0.798
2005-2006	623,427	97	1.000	6,427	997,361	0.973
2006-2007	421,188	88	1.000	4,786	1,099,523	0.800
2007-2008	212,473	77	1.000	2,759	1,111,922	0.692
2008-2009	414,764	61	1.000	6,799	1,088,738	0.560
2009-2010	360,000	65	1.000	5,538	1,090,283	0.596
2010-2011	170,076	81	1.000	2,100	1,115,701	0.726
2011-2012	696,000	70	1.000	9,943	1,136,211	0.616
2012-2013	399,339	72	1.000	5,546	1,073,950	0.670
2013-2014	428,000	44	1.000	9,727	1,087,171	0.405
2014-2015	423,000	68	1.000	6,221	1,079,677	0.630
2015-2016	191,000	64	1.000	2,984	1,068,555	0.599
2016-2017	361,000	63	1.000	5,730	1,080,581	0.583
2017-2018	726,000	84	1.000	8,643	1,130,479	0.743
2018-2019	361,000	57	1.000	6,333	1,142,328	0.499

	<u>Severity Trend Factors</u>	<u>Frequency Trend Factors</u>
Latest 10 x 2018-2019	1.020	1.006
Latest 5 x 2018-2019	0.969	1.121
Prior	1.025	0.985
Default	1.030	0.975
Selected Residual Trend	1.025	1.000

Notes:

- (A) Selected average of results from Appendix A and Appendix B.
- (B) Appendix D, Page 3, Column (C).
- (C) Appendix E, Page 1, (A).
- (D) $(A) \times (C) / (B)$.
- (E) From Appendix N, Page 2, Column (G).
- (F) $(B) / (E) \times 10,000$.

County of Humboldt - Liability

Outstanding Liability for
Unallocated Loss Adjustment Expenses
as of 6/30/19

Fiscal Year (A)	Number of Claims Active During Fiscal Year (B)	Average ULAE Charge per Active Claim (C)	Inflation Trend Factor (D)	Trended ULAE Charge per Active Claim (E)	ULAE Paid During Year (F)
2019-2020	77.0	\$228	1.000	\$228	\$17,556
2020-2021	27.5	228	1.050	239	6,573
2021-2022	12.7	228	1.103	251	3,188
2022-2023	6.1	228	1.158	264	1,610
2023-2024	2.8	228	1.216	277	776
2024-2025	1.2	228	1.277	291	349
2025-2026	0.6	228	1.341	306	184
2026-2027	0.3	228	1.408	321	96
2027-2028	0.1	228	1.478	337	34
2028-2029	0.0	228	1.552	354	0
2029-2030	0.0	228	1.630	372	0
2030-2031	0.0	228	1.712	390	0
2031-2032	0.0	228	1.798	410	0
2032-2033	0.0	228	1.888	430	0
2033-2034	0.0	228	1.982	452	0
2034-2035	0.0	228	2.081	474	0
2035-2036	0.0	228	2.185	498	0
2036-2037	0.0	228	2.294	523	0

(G) Total ULAE Outstanding as of 6/30/19: \$30,366

Notes:

- (A) We assume fiscal years will be 7/1 to 6/30.
- (B) Based on an estimated claim closing pattern.
- (C) Based on claims administration payment information provided by the County.
- (D) We assume ULAE costs will increase at 5.0% per year.
- (E) (C) x (D).
- (F) (B) x (E).
- (G) Total of Column (F).

This exhibit shows the calculation of the outstanding ULAE based on the expected pattern of claims closings and assumptions about future claims administration costs per open claim.

County of Humboldt - Liability

Outstanding Liability for
Unallocated Loss Adjustment Expenses
as of 6/30/20

Fiscal Year (A)	Number of Claims Active During Fiscal Year (B)	Average ULAE Charge per Active Claim (C)	Inflation Trend Factor (D)	Trended ULAE Charge per Active Claim (E)	ULAE Paid During Year (F)
2020-2021	76.2	\$228	1.050	\$239	\$18,212
2021-2022	25.7	228	1.103	251	6,451
2022-2023	11.8	228	1.158	264	3,115
2023-2024	5.6	228	1.216	277	1,551
2024-2025	2.6	228	1.277	291	757
2025-2026	1.3	228	1.341	306	398
2026-2027	0.6	228	1.408	321	193
2027-2028	0.3	228	1.478	337	101
2028-2029	0.1	228	1.552	354	35
2029-2030	0.0	228	1.630	372	0
2030-2031	0.0	228	1.712	390	0
2031-2032	0.0	228	1.798	410	0
2032-2033	0.0	228	1.888	430	0
2033-2034	0.0	228	1.982	452	0
2034-2035	0.0	228	2.081	474	0
2035-2036	0.0	228	2.185	498	0
2036-2037	0.0	228	2.294	523	0
2037-2038	0.0	228	2.409	549	0

(G) Total ULAE Outstanding as of 6/30/20: \$30,813

Notes:

- (A) We assume fiscal years will be 7/1 to 6/30.
- (B) Based on an estimated claim closing pattern.
- (C) Based on claims administration payment information provided by the County.
- (D) We assume ULAE costs will increase at 5.0% per year.
- (E) (C) x (D).
- (F) (B) x (E).
- (G) Total of Column (F).

This exhibit shows the calculation of the outstanding ULAE based on the expected pattern of claims closings and assumptions about future claims administration costs per open claim.

County of Humboldt - Liability
Payment and Reserve Forecast

<u>Accident Year</u>	<u>As of 6/30/2019</u>	<u>Calendar Period</u>	
		<u>7/1/2019 to 6/30/2020</u>	<u>7/1/2020 to 6/30/2021</u>
Prior			
Ultimate Loss	\$8,339,320	\$8,339,320	\$8,339,320
Paid in Calendar Period	-		
Paid to Date	8,339,320	8,339,320	8,339,320
Outstanding Liability			
2003-2004			
Ultimate Loss	\$269,878	\$269,878	\$269,878
Paid in Calendar Period	-		
Paid to Date	269,878	269,878	269,878
Outstanding Liability			
2004-2005			
Ultimate Loss	\$181,103	\$181,103	\$181,103
Paid in Calendar Period	-		
Paid to Date	181,103	181,103	181,103
Outstanding Liability			
2005-2006			
Ultimate Loss	\$831,274	\$831,274	\$831,274
Paid in Calendar Period	-		
Paid to Date	831,274	831,274	831,274
Outstanding Liability			
2006-2007			
Ultimate Loss	\$508,651	\$508,651	\$508,651
Paid in Calendar Period	-		
Paid to Date	508,651	508,651	508,651
Outstanding Liability			
2007-2008			
Ultimate Loss	\$262,473	\$262,473	\$262,473
Paid in Calendar Period	-		
Paid to Date	262,473	262,473	262,473
Outstanding Liability			
2008-2009			
Ultimate Loss	\$464,764	\$464,764	\$464,764
Paid in Calendar Period	-		
Paid to Date	464,764	464,764	464,764
Outstanding Liability			
2009-2010			
Ultimate Loss	\$413,000	\$413,000	\$413,000
Paid in Calendar Period	-	201	101
Paid to Date	412,392	412,593	412,694
Outstanding Liability	608	407	306

County of Humboldt - Liability
Payment and Reserve Forecast

<u>Accident Year</u>	<u>As of</u> <u>6/30/2019</u>	<u>Calendar Period</u>	
		<u>7/1/2019</u> <u>to</u> <u>6/30/2020</u>	<u>7/1/2020</u> <u>to</u> <u>6/30/2021</u>
2010-2011			
Ultimate Loss	\$170,076	\$170,076	\$170,076
Paid in Calendar Period	-		
Paid to Date	170,076	170,076	170,076
Outstanding Liability			
2011-2012			
Ultimate Loss	\$877,000	\$877,000	\$877,000
Paid in Calendar Period	-	46,970	9,534
Paid to Date	803,838	850,808	860,342
Outstanding Liability	73,162	26,192	16,658
2012-2013			
Ultimate Loss	\$803,287	\$803,287	\$803,287
Paid in Calendar Period	-		
Paid to Date	803,287	803,287	803,287
Outstanding Liability			
2013-2014			
Ultimate Loss	\$1,130,000	\$1,130,000	\$1,130,000
Paid in Calendar Period	-	72,242	44,280
Paid to Date	919,383	991,625	1,035,905
Outstanding Liability	210,617	138,375	94,095
2014-2015			
Ultimate Loss	\$423,000	\$423,000	\$423,000
Paid in Calendar Period	-	107,636	53,347
Paid to Date	159,832	267,468	320,815
Outstanding Liability	263,168	155,532	102,185
2015-2016			
Ultimate Loss	\$194,000	\$194,000	\$194,000
Paid in Calendar Period	-	31,390	14,190
Paid to Date	127,916	159,306	173,496
Outstanding Liability	66,084	34,694	20,504
2016-2017			
Ultimate Loss	\$391,000	\$391,000	\$391,000
Paid in Calendar Period	-	135,475	72,858
Paid to Date	102,140	237,615	310,473
Outstanding Liability	288,860	153,385	80,527
2017-2018			
Ultimate Loss	\$711,000	\$711,000	\$711,000
Paid in Calendar Period	-	277,196	166,133
Paid to Date	79,575	356,771	522,904
Outstanding Liability	631,425	354,229	188,096

County of Humboldt - Liability
Payment and Reserve Forecast

<u>Accident Year</u>	<u>As of</u> <u>6/30/2019</u>	<u>Calendar Period</u>	
		<u>7/1/2019</u> <u>to</u> <u>6/30/2020</u>	<u>7/1/2020</u> <u>to</u> <u>6/30/2021</u>
2018-2019			
Ultimate Loss	\$437,000	\$437,000	\$437,000
Paid in Calendar Period	-	145,852	121,562
Paid to Date	14,241	160,093	281,655
Outstanding Liability	422,759	276,907	155,345
2019-2020			
Ultimate Loss	-	\$482,000	\$482,000
Paid in Calendar Period	-	90,134	135,194
Paid to Date	-	90,134	225,328
Outstanding Liability	-	391,866	256,672
2020-2021			
Ultimate Loss	-	-	\$520,000
Paid in Calendar Period	-	-	97,240
Paid to Date	-	-	97,240
Outstanding Liability	-	-	422,760
Totals			
Ultimate Loss	\$16,406,826	\$16,888,826	\$17,408,826
Paid in Calendar Period	-	907,096	714,439
Paid to Date	14,450,143	15,357,239	16,071,678
Outstanding Liability	1,956,683	1,531,587	1,337,148
Total Outstanding ULAE	30,366	30,813	32,484
Outstanding Liability plus ULAE	1,987,049	1,562,400	1,369,632

Notes appear on the next page.

County of Humboldt - Liability

Payment and Reserve Forecast

Notes to previous page:

- Accident Year is associated with date of loss. Calendar Period is associated with date of transaction. For example, for the losses which occurred during 2017-2018, \$277,196 is expected to be paid between 7/1/19 and 6/30/20, \$356,771 will have been paid by 6/30/20, and the reserve for remaining payments on these claims should be \$354,229.
- Ultimate Losses for each accident year are from Exhibit 4, Page 1.
- Paid in Calendar Period is a proportion of the Outstanding Liability from the previous calendar period. These proportions are derived from the paid loss development pattern selected in Appendix B. For example, \$166,133 = \$354,229 x 46.9%.
- Paid to Date is Paid in Calendar Period plus Paid to Date from previous calendar period. For example, \$522,904 = \$166,133 + \$356,771.
- Outstanding Liability is Ultimate Loss minus Paid to Date. For example, \$354,229 = \$711,000 - \$356,771.

This exhibit shows the calculation of the liability for outstanding claims as of the date of evaluation, the end of the current fiscal year, and the end of the coming fiscal year. It also shows the expected claims payout during the remainder of the current fiscal year and the coming fiscal year. Refer to the Totals at the end of the exhibit for the balance sheet information. The top parts of the exhibit show information for each program year.

County of Humboldt - Liability

Short- and Long-Term Liabilities

<u>Liabilities as of 6/30/19:</u>		<u>Expected</u>	<u>Discounted</u>
<u>Current (Short Term)</u>	Loss and ALAE:	\$816,962	\$806,938
	ULAE:	17,556	17,341
	Short-Term Loss and LAE:	<u>\$834,518</u>	<u>\$824,279</u>
<u>Non-Current (Long Term)</u>	Loss and ALAE:	\$1,139,721	\$1,037,955
	ULAE:	12,810	11,290
	Long-Term Loss and LAE:	<u>\$1,152,531</u>	<u>\$1,049,245</u>
<u>Total Liability</u>	Loss and ALAE:	\$1,956,683	\$1,844,893
	ULAE:	30,366	28,631
	Total Loss and LAE:	<u>\$1,987,049</u>	<u>\$1,873,524</u>

<u>Liabilities as of 6/30/20:</u>			
<u>Current (Short Term)</u>	Loss and ALAE:	\$617,199	\$609,626
	ULAE:	18,212	17,989
	Short-Term Loss and LAE:	<u>\$635,411</u>	<u>\$627,615</u>
<u>Non-Current (Long Term)</u>	Loss and ALAE:	\$914,388	\$839,298
	ULAE:	12,601	11,161
	Long-Term Loss and LAE:	<u>\$926,989</u>	<u>\$850,459</u>
<u>Total Liability</u>	Loss and ALAE:	\$1,531,587	\$1,448,924
	ULAE:	30,813	29,150
	Total Loss and LAE:	<u>\$1,562,400</u>	<u>\$1,478,074</u>

		<u>Discounted with a Margin for Contingencies</u>				
		<u>70%</u>	<u>75%</u>	<u>80%</u>	<u>85%</u>	<u>90%</u>
		<u>Confidence</u>	<u>Confidence</u>	<u>Confidence</u>	<u>Confidence</u>	<u>Confidence</u>
<u>Liabilities as of 6/30/19:</u>						
<u>Current (Short Term)</u>	Loss and ALAE:	\$902,157	\$943,311	\$992,534	\$1,053,054	\$1,132,941
	ULAE:	19,387	20,272	21,329	22,630	24,347
	Short-Term Loss and LAE:	<u>\$921,544</u>	<u>\$963,583</u>	<u>\$1,013,863</u>	<u>\$1,075,684</u>	<u>\$1,157,288</u>
<u>Non-Current (Long Term)</u>	Loss and ALAE:	\$1,160,433	\$1,213,369	\$1,276,684	\$1,354,531	\$1,457,289
	ULAE:	12,623	13,198	13,888	14,734	15,851
	Long-Term Loss and LAE:	<u>\$1,173,056</u>	<u>\$1,226,567</u>	<u>\$1,290,572</u>	<u>\$1,369,265</u>	<u>\$1,473,140</u>
<u>Total Liability</u>	Loss and ALAE:	\$2,062,590	\$2,156,680	\$2,269,218	\$2,407,585	\$2,590,230
	ULAE:	32,010	33,470	35,217	37,364	40,198
	Total Loss and LAE:	<u>\$2,094,600</u>	<u>\$2,190,150</u>	<u>\$2,304,435</u>	<u>\$2,444,949</u>	<u>\$2,630,428</u>
<u>Liabilities as of 6/30/20:</u>						
<u>Current (Short Term)</u>	Loss and ALAE:	\$681,562	\$712,653	\$749,840	\$795,562	\$855,915
	ULAE:	20,112	21,029	22,126	23,476	25,257
	Short-Term Loss and LAE:	<u>\$701,674</u>	<u>\$733,682</u>	<u>\$771,966</u>	<u>\$819,038</u>	<u>\$881,172</u>
<u>Non-Current (Long Term)</u>	Loss and ALAE:	\$938,335	\$981,139	\$1,032,337	\$1,095,284	\$1,178,374
	ULAE:	12,478	13,048	13,728	14,565	15,670
	Long-Term Loss and LAE:	<u>\$950,813</u>	<u>\$994,187</u>	<u>\$1,046,065</u>	<u>\$1,109,849</u>	<u>\$1,194,044</u>
<u>Total Liability</u>	Loss and ALAE:	\$1,619,897	\$1,693,792	\$1,782,177	\$1,890,846	\$2,034,289
	ULAE:	32,590	34,077	35,854	38,041	40,927
	Total Loss and LAE:	<u>\$1,652,487</u>	<u>\$1,727,869</u>	<u>\$1,818,031</u>	<u>\$1,928,887</u>	<u>\$2,075,216</u>

Note: Current (short term) liabilities are the portion of the total estimated liability shown on Appendix G that is expected to be paid out within the coming year. Totals may vary from Exhibit 1, due to rounding.

County of Humboldt - Liability

Discount Factors to be Applied to Overall Reserves

Accident Year	Full Value of Reserve at 6/30/19 (A)	Discount Factor (B)	Discounted Reserve at 6/30/19 (C)	Full Value of Reserve at 6/30/20 (D)	Discount Factor (E)	Discounted Reserve at 6/30/20 (F)
Prior	\$0	1.000	\$0	\$0	1.000	\$0
1999-2000	0	1.000	0	0	1.000	0
2000-2001	0	0.988	0	0	1.000	0
2001-2002	0	0.964	0	0	0.988	0
2002-2003	0	0.940	0	0	0.964	0
2003-2004	0	0.952	0	0	0.940	0
2004-2005	0	0.949	0	0	0.952	0
2005-2006	0	0.941	0	0	0.949	0
2006-2007	0	0.932	0	0	0.941	0
2007-2008	0	0.922	0	0	0.932	0
2008-2009	0	0.922	0	0	0.922	0
2009-2010	608	0.928	564	407	0.922	375
2010-2011	0	0.936	0	0	0.928	0
2011-2012	73,162	0.961	70,304	26,192	0.936	24,506
2012-2013	0	0.954	0	0	0.961	0
2013-2014	210,617	0.950	200,083	138,375	0.954	131,948
2014-2015	263,168	0.903	237,527	155,532	0.950	147,753
2015-2016	66,084	0.931	61,557	34,694	0.903	31,314
2016-2017	288,860	0.946	273,200	153,385	0.931	142,877
2017-2018	631,425	0.951	600,628	354,229	0.946	335,025
2018-2019	422,759	0.949	401,030	276,907	0.951	263,401
2019-2020				391,866	0.949	371,725
Totals	\$1,956,683		\$1,844,893	\$1,531,587		\$1,448,924

(G) Discount Factor at 6/30/19 for Overall Reserve: 0.943
(H) Discount Factor at 6/30/20 for Overall Reserve: 0.946

Notes:

- (A) From Appendix G, Outstanding Liability at 6/30/19.
- (B) Based on Appendix I, Page 2, Column (E).
- (C) (A) x (B).
- (D) From Appendix G, Outstanding Liability at 6/30/20.
- (E) Based on Appendix I, Page 2, Column (E).
- (F) (D) x (E).
- (G) Total of (C) / Total of (A).
- (H) Total of (F) / Total of (D).

This exhibit shows the expected impact of anticipated investment income on the liability for outstanding claims at the date of evaluation and the end of the current fiscal year. For example, if the discount factor in item (G) is 0.943, the discounted liability for outstanding claims is 94.3% of the full value.

County of Humboldt - Liability

Calculation of Discount Factors

Payment Year (A)	Payment Pattern (B)	Return on Investment (C)	Discounted Reserves (D)	Undiscounted Reserves (E)	Discount Factor (F)
22	0.0%	2.5%	0.000	0.000	1.000
21	0.0%	2.5%	0.000	0.000	1.000
20	0.0%	2.5%	0.000	0.000	1.000
19	0.0%	2.5%	0.000	0.000	1.000
18	0.0%	2.5%	0.000	0.000	1.000
17	0.0%	2.5%	0.000	0.000	1.000
16	0.0%	2.5%	0.000	0.000	1.000
15	0.0%	2.5%	0.000	0.000	1.000
14	0.0%	2.5%	0.000	0.000	1.000
13	0.0%	2.5%	0.000	0.000	1.000
12	0.1%	2.5%	0.001	0.001	0.988
11	0.2%	2.5%	0.003	0.003	0.980
10	0.3%	2.5%	0.006	0.006	0.972
9	0.5%	2.5%	0.011	0.011	0.966
8	0.8%	2.5%	0.018	0.019	0.961
7	1.9%	2.5%	0.036	0.038	0.963
6	4.6%	2.5%	0.081	0.083	0.966
5	7.6%	2.5%	0.153	0.159	0.964
4	14.0%	2.5%	0.288	0.299	0.963
3	23.4%	2.5%	0.512	0.533	0.960
2	28.0%	2.5%	0.776	0.813	0.954
1	18.7%	2.5%	0.942	1.000	0.942
(G) Discount Factor for Future Funding:				2019-2020	0.953
				2020-2021	0.953

Notes:

- (A) This is the year of payment relative to the accident year. For example, year 7 refers to payments made in the seventh year after the inception of the accident year. We assume that payments are made at midyear.
- (B) Percent of ultimate loss paid this year. This payment pattern is based on the paid loss development pattern selected in Appendix B, Page 2.
- (C) Assumed Investment Income Rates.
- (D) Discounted Reserves at the beginning of this year is next year's Discounted Reserves discounted one year plus this year's payments discounted six months. For example, in year 2, $77.6\% = [51.2\% / 1.025] + [28.0\% / (1.012)]$.
- (E) Summation of future (B) values. This is the percent of ultimate loss unpaid at the beginning of the year.
- (F) (D) / (E).
- (G) (F) at year 1, with interest accumulated for six months. We assume that the required funding is deposited at the middle of the first year.

This exhibit shows the calculation of the effect of anticipated investment income on future claims costs. Thus, if the discount factor in item (F) is 0.95, on a discounted basis, \$0.95 must be budgeted for every \$1 that will actually be paid on claims that will be incurred in the next fiscal year.

County of Humboldt - Liability

Confidence Level Table

Probability	Projected Losses	Outstanding Losses
95%	1.990	1.569
90%	1.694	1.404
85%	1.517	1.305
80%	1.384	1.230
75%	1.278	1.169
70%	1.188	1.118
65%	1.109	1.072
60%	1.037	1.030
55%	0.971	0.992
50%	0.909	0.956
45%	0.851	0.921
40%	0.793	0.886
35%	0.737	0.852
30%	0.680	0.818
25%	0.622	0.781

To read table: For the above retention, there is a 90% chance that final loss settlements will be less than 1.694 times the average expected amount of losses.

This exhibit shows the loads that must be applied to bring estimated losses at the expected level to the various indicated confidence levels.

County of Humboldt - Liability

Program History

Policy Year Start Date	Policy Year End Date	Policy Year	Self-Insured Retention	
			Per Occurrence	Aggregate
1/1/1977	6/30/1999	Prior	\$150,000	(none)
7/1/1999	6/30/2000	1999-2000	150,000	(none)
7/1/2000	6/30/2001	2000-2001	150,000	(none)
7/1/2001	6/30/2002	2001-2002	150,000	(none)
7/1/2002	6/30/2003	2002-2003	150,000	(none)
7/1/2003	6/30/2004	2003-2004	150,000	(none)
7/1/2004	6/30/2005	2004-2005	150,000	(none)
7/1/2005	6/30/2006	2005-2006	150,000	(none)
7/1/2006	6/30/2007	2006-2007	150,000	(none)
7/1/2007	6/30/2008	2007-2008	150,000	(none)
7/1/2008	6/30/2009	2008-2009	150,000	(none)
7/1/2009	6/30/2010	2009-2010	150,000	(none)
7/1/2010	6/30/2011	2010-2011	150,000	(none)
7/1/2011	6/30/2012	2011-2012	500,000	(none)
7/1/2012	6/30/2013	2012-2013	500,000	(none)
7/1/2013	6/30/2014	2013-2014	500,000	(none)
7/1/2014	6/30/2015	2014-2015	100,000	(none)
7/1/2015	6/30/2016	2015-2016	100,000	(none)
7/1/2016	6/30/2017	2016-2017	100,000	(none)
7/1/2017	6/30/2018	2017-2018	100,000	(none)
7/1/2018	6/30/2019	2018-2019	100,000	(none)
7/1/2019	6/30/2020	2019-2020	100,000	(none)
7/1/2020	6/30/2021	2020-2021	100,000	(none)
	Third Party Claims Administrator		Begin Date	End Date
	County		9/1/1997	Current
	Rooney & Anderson		7/1/1980	8/31/1997

This exhibit summarizes some of the key facts about the history of the program.

County of Humboldt - Liability

Estimated Total Assets as of 6/30/20

(A) <u>Total Assets as of 6/30/19:</u>	\$3,437,000
(B) <u>Total Income to Fund during 2019-2020</u>	
Contributions:	\$4,076,000
Interest:	45,000
Other:	0
Total Income:	<u>\$4,121,000</u>
(C) <u>Total Payments from Fund during 2019-2020</u>	
Loss and ALAE:	\$907,000
Additional Allocated Loss Adjustment Expense:	0
In-House Unallocated Loss Adjustment Expense:	30,000
Fees to Outside Administrator (TPA):	0
Excess Insurance:	1,489,000
Other:	356,000
Total Payments:	<u>\$2,782,000</u>
(D) <u>Estimated Total Assets as of 6/30/20:</u>	\$4,776,000

Notes:

- (A) Provided by the County.
- (B) Provided by the County.
- (C) Provided by the County. Loss and ALAE paid is estimated in Appendix G.
- (D) (A) + (B) - (C).

County of Humboldt - Liability

Estimated Total Assets as of 6/30/21

(A) <u>Estimated Total Assets as of 6/30/20:</u>	\$4,776,000
(B) <u>Total Income to Fund during 2020-2021</u>	
Contributions:	\$4,076,000
Interest:	45,000
Other:	0
Total Income:	<u>\$4,121,000</u>
(C) <u>Total Payments from Fund during 2020-2021</u>	
Loss and ALAE:	\$714,000
Additional Allocated Loss Adjustment Expense:	0
In-House Unallocated Loss Adjustment Expense:	30,000
Fees to Outside Administrator (TPA):	0
Excess Insurance:	1,489,000
Other:	356,000
Total Payments:	<u>\$2,589,000</u>
(D) <u>Estimated Total Assets as of 6/30/21:</u>	\$6,308,000

Notes:

- (A) Appendix L, Page 1, Line (D).
- (B) Provided by the County.
- (C) Provided by the County. Loss and ALAE paid is estimated in Appendix G.
- (D) (A) + (B) - (C).

County of Humboldt - Liability

Incurred Losses as of 6/30/19

Accident Year (A)	Unlimited Incurred (B)	Additions to Losses (C)	Subtractions from Losses (D)	Adjusted Incurred (E)	Incurred Over SIR (F)	Incurred Over \$100,000 (G)	Incurred Capped at \$100,000 (H)	Incurred \$100,000 to SIR Layer (I)	Incurred Capped at SIR (J)	Incurred Capped at SIR & Aggregate (K)
Prior	\$9,588,823	\$0	\$0	\$9,588,823	\$2,585,418	\$3,335,620	\$6,253,203	\$750,202	\$7,003,405	\$7,003,405
1999-2000	173,032	0	0	173,032	0	0	173,032	0	173,032	173,032
2000-2001	360,267	0	0	360,267	0	3,850	356,416	3,850	360,267	360,267
2001-2002	264,993	0	0	264,993	0	46,002	218,991	46,002	264,993	264,993
2002-2003	651,419	0	0	651,419	113,795	163,795	487,623	50,000	537,623	537,623
2003-2004	269,878	0	0	269,878	0	37,328	232,550	37,328	269,878	269,878
2004-2005	181,103	0	0	181,103	0	0	181,103	0	181,103	181,103
2005-2006	1,277,570	0	0	1,277,570	446,296	654,144	623,427	207,848	831,274	831,274
2006-2007	654,314	0	0	654,314	145,663	233,126	421,188	87,463	508,651	508,651
2007-2008	386,777	0	0	386,777	124,304	174,304	212,473	50,000	262,473	262,473
2008-2009	698,359	0	0	698,359	233,595	283,595	414,764	50,000	464,764	464,764
2009-2010	937,392	0	0	937,392	525,000	578,303	359,089	53,303	412,392	412,392
2010-2011	170,076	0	0	170,076	0	0	170,076	0	170,076	170,076
2011-2012	875,362	0	0	875,362	0	179,964	695,398	179,964	875,362	875,362
2012-2013	1,917,779	0	0	1,917,779	1,114,492	1,518,440	399,339	403,948	803,287	803,287
2013-2014	4,665,285	0	0	4,665,285	3,550,000	4,237,881	427,404	687,881	1,115,285	1,115,285
2014-2015	470,789	0	0	470,789	50,000	50,000	420,789	0	420,789	420,789
2015-2016	185,005	0	0	185,005	0	0	185,005	0	185,005	185,005
2016-2017	740,702	0	0	740,702	400,000	400,000	340,702	0	340,702	340,702
2017-2018	1,181,423	0	0	1,181,423	545,000	545,000	636,423	0	636,423	636,423
2018-2019	158,117	0	0	158,117	0	0	158,117	0	158,117	158,117
2019-2020	0	0	0	0	0	0	0	0	0	0
Total	\$25,808,465	\$0	\$0	\$25,808,465	\$9,833,565	\$12,441,352	\$13,367,113	\$2,607,787	\$15,974,901	\$15,974,901

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the County.
- (C)
- (D)
- (E) (B) + (C) - (D).
- (F) Sum of incurred losses in excess of SIR.
- (G) Sum of incurred losses in excess of \$100,000.
- (H) (E) - (G).
- (I) (G) - (F).
- (J) (E) - (F).
- (K) Minimum of (J) and the aggregate stop loss. See Appendix K.

County of Humboldt - Liability

Paid Losses as of 6/30/19

Accident Year (A)	Unlimited Paid (B)	Additions to Losses (C)	Subtractions from Losses (D)	Adjusted Paid (E)	Paid Over SIR (F)	Paid Over \$100,000 (G)	Paid Capped at \$100,000 (H)	Paid \$100,000 to SIR Layer (I)	Paid Capped at SIR (J)	Paid Capped at SIR & Aggregate (K)
Prior	\$9,588,823	\$0	\$0	\$9,588,823	\$2,585,418	\$3,335,620	\$6,253,203	\$750,202	\$7,003,405	\$7,003,405
1999-2000	173,032	0	0	173,032	0	0	173,032	0	173,032	173,032
2000-2001	360,267	0	0	360,267	0	3,850	356,416	3,850	360,267	360,267
2001-2002	264,993	0	0	264,993	0	46,002	218,991	46,002	264,993	264,993
2002-2003	651,419	0	0	651,419	113,795	163,795	487,623	50,000	537,623	537,623
2003-2004	269,878	0	0	269,878	0	37,328	232,550	37,328	269,878	269,878
2004-2005	181,103	0	0	181,103	0	0	181,103	0	181,103	181,103
2005-2006	1,277,570	0	0	1,277,570	446,296	654,144	623,427	207,848	831,274	831,274
2006-2007	654,314	0	0	654,314	145,663	233,126	421,188	87,463	508,651	508,651
2007-2008	386,777	0	0	386,777	124,304	174,304	212,473	50,000	262,473	262,473
2008-2009	698,359	0	0	698,359	233,595	283,595	414,764	50,000	464,764	464,764
2009-2010	582,464	0	0	582,464	170,072	223,375	359,089	53,303	412,392	412,392
2010-2011	170,076	0	0	170,076	0	0	170,076	0	170,076	170,076
2011-2012	803,838	0	0	803,838	0	159,964	643,874	159,964	803,838	803,838
2012-2013	1,917,779	0	0	1,917,779	1,114,492	1,518,440	399,339	403,948	803,287	803,287
2013-2014	919,383	0	0	919,383	0	567,484	351,899	567,484	919,383	919,383
2014-2015	159,832	0	0	159,832	0	0	159,832	0	159,832	159,832
2015-2016	127,916	0	0	127,916	0	0	127,916	0	127,916	127,916
2016-2017	102,140	0	0	102,140	0	0	102,140	0	102,140	102,140
2017-2018	79,575	0	0	79,575	0	0	79,575	0	79,575	79,575
2018-2019	14,241	0	0	14,241	0	0	14,241	0	14,241	14,241
2019-2020	0	0	0	0	0	0	0	0	0	0
Total	\$19,383,778	\$0	\$0	\$19,383,778	\$4,933,637	\$7,401,026	\$11,982,752	\$2,467,390	\$14,450,142	\$14,450,142

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the County.
- (C)
- (D)
- (E) (B) + (C) - (D).
- (F) Sum of paid losses in excess of SIR.
- (G) Sum of paid losses in excess of \$100,000.
- (H) (E) - (G).
- (I) (G) - (F).
- (J) (E) - (F).
- (K) Minimum of (J) and the aggregate stop loss. See Appendix K.

County of Humboldt - Liability

Case Reserves as of 6/30/19

Accident Year (A)	Unlimited Reserves (B)	Additions to Losses (C)	Subtractions from Losses (D)	Adjusted Reserves (E)	Reserves Over SIR (F)	Reserves Over \$100,000 (G)	Reserves Capped at \$100,000 (H)	Reserves \$100,000 to SIR Layer (I)	Reserves Capped at SIR (J)	Reserves Capped at SIR & Aggregate (K)
Prior	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1999-2000	0	0	0	0	0	0	0	0	0	0
2000-2001	0	0	0	0	0	0	0	0	0	0
2001-2002	0	0	0	0	0	0	0	0	0	0
2002-2003	0	0	0	0	0	0	0	0	0	0
2003-2004	0	0	0	0	0	0	0	0	0	0
2004-2005	0	0	0	0	0	0	0	0	0	0
2005-2006	0	0	0	0	0	0	0	0	0	0
2006-2007	0	0	0	0	0	0	0	0	0	0
2007-2008	0	0	0	0	0	0	0	0	0	0
2008-2009	0	0	0	0	0	0	0	0	0	0
2009-2010	354,928	0	0	354,928	354,928	354,928	0	0	0	0
2010-2011	0	0	0	0	0	0	0	0	0	0
2011-2012	71,524	0	0	71,524	0	20,000	51,524	20,000	71,524	71,524
2012-2013	0	0	0	0	0	0	0	0	0	0
2013-2014	3,745,902	0	0	3,745,902	3,550,000	3,670,397	75,505	120,397	195,902	195,902
2014-2015	310,957	0	0	310,957	50,000	50,000	260,957	0	260,957	260,957
2015-2016	57,089	0	0	57,089	0	0	57,089	0	57,089	57,089
2016-2017	638,562	0	0	638,562	400,000	400,000	238,562	0	238,562	238,562
2017-2018	1,101,848	0	0	1,101,848	545,000	545,000	556,848	0	556,848	556,848
2018-2019	143,876	0	0	143,876	0	0	143,876	0	143,876	143,876
2019-2020	0	0	0	0	0	0	0	0	0	0
Total	\$6,424,687	\$0	\$0	\$6,424,687	\$4,899,928	\$5,040,325	\$1,384,362	\$140,397	\$1,524,759	\$1,524,759

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Appendix M, Page 1, Column (B) - Appendix M, Page 2, Column (B).
- (C) Appendix M, Page 1, Column (C) - Appendix M, Page 2, Column (C).
- (D) Appendix M, Page 1, Column (D) - Appendix M, Page 2, Column (D).
- (E) (B) + (C) - (D).
- (F) Sum of case reserves in excess of SIR.
- (G) Sum of case reserves in excess of \$100,000.
- (H) (E) - (G).
- (I) (G) - (F).
- (J) (E) - (F).
- (K) Minimum of (J) and the aggregate stop loss. See Appendix K.

County of Humboldt - Liability

Claim Counts as of 6/30/19

Accident Year (A)	Reported Claims (B)	Additions to Reported Claims (C)	Subtractions from Reported Claims (D)	Adjusted Reported Claims (E)	Closed Claims (F)	Additions to Closed Claims (G)	Subtractions from Closed Claims (H)	Adjusted Closed Claims (I)	Open Claims (J)	Adjusted Open Claims (K)
Prior	1,734	0	0	1,734	1,734	0	0	1,734	0	0
1999-2000	99	0	0	99	99	0	0	99	0	0
2000-2001	85	0	0	85	85	0	0	85	0	0
2001-2002	91	0	0	91	91	0	0	91	0	0
2002-2003	100	0	0	100	100	0	0	100	0	0
2003-2004	83	0	0	83	83	0	0	83	0	0
2004-2005	81	0	0	81	81	0	0	81	0	0
2005-2006	97	0	0	97	97	0	0	97	0	0
2006-2007	88	0	0	88	88	0	0	88	0	0
2007-2008	77	0	0	77	77	0	0	77	0	0
2008-2009	61	0	0	61	61	0	0	61	0	0
2009-2010	65	0	0	65	64	0	0	64	1	1
2010-2011	81	0	0	81	81	0	0	81	0	0
2011-2012	70	0	0	70	68	0	0	68	2	2
2012-2013	72	0	0	72	72	0	0	72	0	0
2013-2014	44	0	0	44	41	0	0	41	3	3
2014-2015	68	0	0	68	64	0	0	64	4	4
2015-2016	64	0	0	64	61	0	0	61	3	3
2016-2017	63	0	0	63	59	0	0	59	4	4
2017-2018	82	0	0	82	55	0	0	55	27	27
2018-2019	41	0	0	41	23	0	0	23	18	18
2019-2020	0	0	0	0	0	0	0	0	0	0
Total	3,246	0	0	3,246	3,184	0	0	3,184	62	62

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the County.
- (C)
- (D)
- (E) (B) + (C) - (D).
- (F) Provided by the County.
- (G)
- (H)
- (I) (F) + (G) - (H).
- (J) (B) - (F).
- (K) (E) - (I).

County of Humboldt - Liability

Exposure Measures

Accident Year	Population (A)	Gross Revenue (\$00) (B)	Total Payroll (\$00) (C)	Sheriff's Payroll (\$00) (D)	Number of Police Vehicles (E)	Number of Employees (FTE) (F)	Inflation Trend Factor (G)
Prior							
1999-2000	127,700	1,600,000	583,757	79,710	82	1,900	1.638
2000-2001	127,600	1,827,621	531,217	75,165	82	1,912	1.598
2001-2002	128,000	1,963,341	536,701	79,659	83	1,990	1.559
2002-2003	128,150	2,086,477	626,020	105,365	81	1,980	1.521
2003-2004	128,300	2,126,701	541,338	106,274	83	1,960	1.484
2004-2005	128,500	2,077,464	550,787	105,792	83	1,964	1.448
2005-2006	128,500	2,199,429	586,128	102,300	75	1,968	1.413
2006-2007	128,330	2,391,316	813,477	111,077	85	1,996	1.379
2007-2008	132,821	2,511,658	806,878	110,176	95	1,972	1.345
2008-2009	128,000	2,632,000	771,214	105,306	95	2,073	1.312
2009-2010	128,000	2,647,792	804,413	109,839	95	2,043	1.280
2010-2011	128,000	2,932,739	871,995	121,634	95	1,854	1.249
2011-2012	129,623	3,031,173	990,752	131,285	88	1,797	1.219
2012-2013	129,623	2,656,712	989,441	123,177	85	1,740	1.189
2013-2014	129,623	2,811,219	1,018,032	124,370	90	1,750	1.160
2014-2015	134,827	3,031,472	1,022,333	127,281	82	1,735	1.132
2015-2016	134,827	3,055,417	1,043,869	129,277	79	1,741	1.104
2016-2017	134,623	3,190,863	1,109,003	136,459	75	1,771	1.077
2017-2018	134,623	3,525,423	1,149,277	158,883	76	1,809	1.051
2018-2019	134,623	3,744,037	1,217,160	167,475	73	1,770	1.025
2019-2020	134,623	4,124,176	1,385,628	142,791	68	1,805	1.000
2020-2021	134,623	4,508,851	1,385,628	146,742	63	2,331	1.000

Notes: All exposure data provided by the County.

County of Humboldt - Liability

Adjusted Exposure Measures

Accident Year	Population (A)	Trended Gross Revenue (\$00) (B)	Trended Payroll (\$00) (C)	Trended Sheriff's Payroll (\$00) (D)	Number of Police Vehicles (E)	Number of Employees (FTE) (F)	Composite Exposures (G)
Prior							
1999-2000	1,051,354	828,173	956,194	954,691	1,075,301	1,073,606	986,442
2000-2001	1,050,531	922,890	848,885	878,274	1,075,301	1,080,387	964,798
2001-2002	1,053,824	967,228	836,717	908,063	1,088,414	1,124,461	984,045
2002-2003	1,055,059	1,002,836	952,176	1,171,821	1,062,188	1,118,811	1,060,634
2003-2004	1,056,294	997,304	803,346	1,153,183	1,088,414	1,107,510	1,028,734
2004-2005	1,057,941	950,581	797,540	1,120,103	1,088,414	1,109,770	1,014,535
2005-2006	1,057,941	982,063	828,199	1,056,950	983,507	1,112,030	997,361
2006-2007	1,056,541	1,042,050	1,121,785	1,120,016	1,114,641	1,127,852	1,099,523
2007-2008	1,093,515	1,067,505	1,085,251	1,083,543	1,245,776	1,114,290	1,111,922
2008-2009	1,053,824	1,091,206	1,011,833	1,010,233	1,245,776	1,171,361	1,088,738
2009-2010	1,053,824	1,070,979	1,029,649	1,028,023	1,245,776	1,154,409	1,090,283
2010-2011	1,053,824	1,157,505	1,089,122	1,110,846	1,245,776	1,047,614	1,115,701
2011-2012	1,067,186	1,167,620	1,207,727	1,170,183	1,153,982	1,015,406	1,136,211
2012-2013	1,067,186	998,191	1,176,445	1,070,894	1,114,641	983,197	1,073,950
2013-2014	1,067,186	1,030,480	1,180,917	1,054,895	1,180,208	988,848	1,087,171
2014-2015	1,110,031	1,084,394	1,157,281	1,053,528	1,075,301	980,372	1,079,677
2015-2016	1,110,031	1,065,925	1,152,431	1,043,583	1,035,961	983,762	1,068,555
2016-2017	1,108,351	1,085,953	1,194,396	1,074,615	983,507	1,000,714	1,080,581
2017-2018	1,108,351	1,170,850	1,207,890	1,221,002	996,620	1,022,186	1,130,479
2018-2019	1,108,351	1,212,694	1,247,589	1,255,193	957,280	1,000,149	1,142,328
2019-2020	1,108,351	1,303,240	1,385,628	1,044,088	891,713	1,019,926	1,134,428
2020-2021	1,108,351	1,424,797	1,385,628	1,072,978	826,146	1,317,146	1,193,187
Weight	15.0%	15.0%	20.0%	20.0%	15.0%	15.0%	

Notes: Monetary exposures have been adjusted for inflation before calculating the adjusted exposure measures. All exposures from page 1 have been adjusted to a common level.
Composite Exposure = (15.0% x Population) + (15.0% x Revenue (\$00)) + (20.0% x Payroll (\$00)) + (20.0% x Sheriff's Payroll (\$00)) + (15.0% x Police Vehicles) + (15.0% x (FTE)).