




Bickmore — Actuarial

Actuarial Review of the Self-Insured Workers' Compensation Program

Outstanding Liabilities as of June 30, 2021

Presented to
Novato Fire Protection District

July 13, 2021 - DRAFT



SCOPE AND SIGNATURE

The Novato Fire Protection District (“the District”) has engaged Bickmore Actuarial to conduct an actuarial review of unpaid loss and loss adjustment expenses for claims that occurred on or before June 30, 2021 for its self-insured workers’ compensation program utilizing data valued as of June 30, 2021 for claims with dates of loss prior to July 1, 2014.

The specific objectives of the study are:

1. Estimate the District’s net liability for outstanding claims as of June 30, 2021. Liabilities net of reinsurance are presented on both an undiscounted basis as well as a discounted basis. The net liabilities are also presented at the expected level (i.e. without a risk margin) and with risk margins, which are quantified via confidence levels. The net liabilities include provisions for loss, allocated loss adjustment expense (ALAE), and unallocated loss adjustment expense (ULAE). ALAE and ULAE are defined in the Glossary section of this report.
2. Provide a statement of compliance with Governmental Accounting Standards Board Statement #10.

We appreciate the opportunity to be of service to the District in preparing this report. Please feel free to call Becky Richard at (916) 244-1183 or Derek Burkhalter at (916) 244-1167 with any questions you may have concerning this report.

Becky Richard and Derek Burkhalter meet the Casualty Actuarial Society continuing education requirements and the American Academy of Actuaries’ qualification standards to sign Statements of Actuarial Opinion.

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EXECUTIVE SUMMARY

Net Claim Liabilities

The following table presents our conclusions regarding the District's net claim liabilities for claims with dates of loss prior to July 1, 2014.

Loss & LAE Claim Liabilities
As of June 30, 2021, Net of Reinsurance

Dollars (\$000s)	Expected ¹	← Confidence Level →				
		70%	75%	80%	85%	90%
Loss & ALAE	\$1,014	\$1,184	\$1,267	\$1,365	\$1,486	\$1,650
Claims Admin. (ULAE)	<u>75</u>	<u>88</u>	<u>94</u>	<u>101</u>	<u>110</u>	<u>122</u>
Total Loss & LAE	\$1,089	\$1,272	\$1,361	\$1,466	\$1,596	\$1,772
NPV Adjustment ²	<u>(138)</u>	<u>(161)</u>	<u>(172)</u>	<u>(186)</u>	<u>(202)</u>	<u>(225)</u>
Discounted Loss & LAE	\$951	\$1,111	\$1,189	\$1,280	\$1,394	\$1,547
Short Term ³	\$134	\$156	\$167	\$180	\$196	\$218
Long Term ³	817	955	1,022	1,100	1,198	1,329

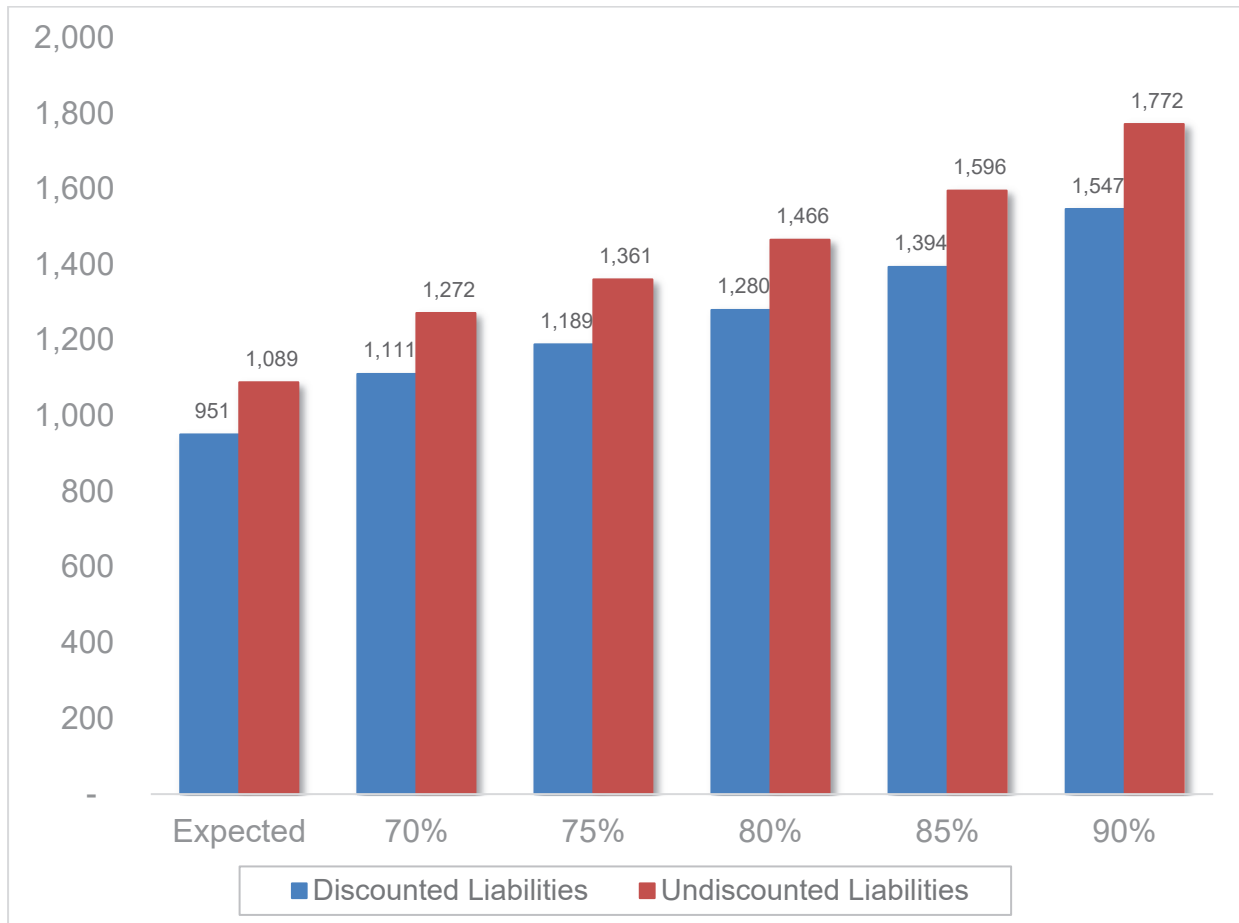
¹ Expected values represent the "best actuarial" or "central" estimate.

² Net present value is based on an annual discount rate of 2.0%.

³ Short term liabilities are projected to be paid within 12 months of the accounting date. Long term liabilities are projected to be paid after 12 months.

The following graph displays the program's net claim liabilities as of June 30, 2021 as shown on the prior page.

Loss & LAE Claim Liabilities
As of June 30, 2021, Net of Reinsurance
(\$000s)



We generally recommend that entities maintain funding at the 75% - 85% confidence level. However, we understand that each entity is unique, and that proper funding levels can vary based on issues such as the organization's risk tolerance, financial circumstances, and priorities.

Statement of Compliance with GASB #10

The outstanding liabilities presented in this section that include claims administration costs comply with the requirements promulgated by GASB #10.

BACKGROUND

Novato Fire Protection District began its self-insured workers' compensation program on July 1, 1987. It is our understanding that, effective July 1, 2014, the District joined the Fire Agencies Self Insurance System and the self-insured workers' compensation program is now in run-off. Claims administration services for the District's workers' compensation program are provided by Athens.

The following table shows a history of the District's self-insured retentions (SIRs) by year.

Policy Year Start Date	Policy Year End Date	Per Occurrence Retention	Aggregate Retention
7/1/1987	6/30/1994	275,000	(none)
7/1/1994	6/30/1995	275,000	(none)
7/1/1995	6/30/1996	275,000	(none)
7/1/1996	6/30/1997	275,000	(none)
7/1/1997	6/30/1998	275,000	(none)
7/1/1998	6/30/1999	275,000	(none)
7/1/1999	6/30/2000	275,000	(none)
7/1/2000	6/30/2001	275,000	(none)
7/1/2001	6/30/2002	300,000	(none)
7/1/2002	6/30/2003	1,000,000	(none)
7/1/2003	6/30/2004	1,000,000	(none)
7/1/2004	6/30/2005	1,000,000	(none)
7/1/2005	6/30/2006	1,000,000	(none)
7/1/2006	6/30/2007	1,000,000	(none)
7/1/2007	6/30/2008	1,000,000	(none)
7/1/2008	6/30/2009	1,000,000	(none)
7/1/2009	6/30/2010	1,000,000	(none)
7/1/2010	6/30/2011	1,000,000	(none)
7/1/2011	6/30/2012	1,000,000	(none)
7/1/2012	6/30/2013	1,000,000	(none)
7/1/2013	6/30/2014	1,250,000	(none)

Additional background on the program is given in Appendix K.

OBSERVATIONS AND ANALYSIS

In this section, we present a comparison to the prior analysis. The prior report for the District was dated July 21, 2020 and relied on data evaluated as of June 30, 2020. The current analysis relies on data evaluated as of June 30, 2021.

Comparison of Actual versus Expected Activity

The following tables describe how paid and reported losses have emerged between the two points in time referenced above. We also compare how our projected ultimate loss & ALAE amounts have changed between these two points in time.

Actual Versus Expected Incurred Loss & ALAE¹
Prior vs. Current Reports
(\$000s)

Fiscal Year	Expected Emergence	Actual Emergence	Actual Minus Expected Emergence
Prior	\$0	(\$36)	(\$36)
1994-95	0	0	0
1995-96	1	7	6
1996-97	2	(5)	(7)
1997-98	2	0	(2)
1998-99	2	(18)	(20)
1999-00	3	1	(2)
2000-01	1	0	(1)
2001-02	1	0	(1)
2002-03	1	2	1
2003-04	0	0	0
2004-05	3	5	2
2005-06	1	0	(1)
2006-07	0	0	0
2007-08	0	0	0
2008-09	9	20	11
2009-10	13	10	(3)
2010-11	13	(17)	(30)
2011-12	16	10	(6)
2012-13	11	7	(4)
2013-14	30	0	(30)
Total	\$109	(\$14)	(\$123)

¹ Loss & ALAE limited to the District's self-insured retention.

Actual Versus Expected Paid Loss & ALAE¹
Prior vs. Current Reports
(\$000s)

Fiscal Year	Expected Payments	Actual Payments	Actual Minus Expected Payments
Prior	\$0	(\$36)	(\$36)
1994-95	0	0	0
1995-96	1	0	(1)
1996-97	4	0	(4)
1997-98	4	2	(2)
1998-99	6	0	(6)
1999-00	6	4	(2)
2000-01	5	0	(5)
2001-02	4	3	(1)
2002-03	5	1	(4)
2003-04	0	0	0
2004-05	4	3	(1)
2005-06	1	3	2
2006-07	0	0	0
2007-08	0	0	0
2008-09	17	2	(15)
2009-10	10	8	(2)
2010-11	14	19	5
2011-12	16	12	(4)
2012-13	15	7	(8)
2013-14	29	0	(29)
Total	\$141	\$27	(\$114)

¹ Loss & ALAE limited to the District's self-insured retention.

Change in Projected Ultimate Loss & ALAE¹
Prior vs. Current Reports
(\$000s)

Fiscal Year	Prior Ultimate	Current Ultimate	Change in Ultimate
Prior	\$1,808	\$1,773	(\$36)
1994-95	354	354	0
1995-96	122	128	6
1996-97	572	559	(13)
1997-98	461	454	(7)
1998-99	1,017	988	(29)
1999-00	453	440	(13)
2000-01	599	586	(13)
2001-02	1,080	1,086	6
2002-03	180	183	3
2003-04	2,004	2,004	0
2004-05	211	215	4
2005-06	261	264	3
2006-07	493	493	0
2007-08	92	92	0
2008-09	656	666	10
2009-10	698	692	(6)
2010-11	632	617	(15)
2011-12	700	697	(3)
2012-13	324	339	15
2013-14	594	563	(31)
Total	\$13,311	\$13,193	(\$118)

¹ Projected ultimate loss & ALAE limited to the District's self-insured retention, at expected (no risk margin), and not discounted to reflect net present value.

Comparison of Liabilities: Prior vs. Current Reports

The table below compares our prior report's estimated liability for outstanding claims by component as of June 30, 2020 to our current report's estimated liability for outstanding claims as of June 30, 2021.

Change in Claims Liabilities
At Expected (without Risk Margin), Net of Reinsurance

Dollars (\$000s)	Prior Report at 6/30/2020	Current Report at 6/30/2021	Dollar Change	Percent Change
Case Reserves ¹	\$506	\$465	(\$41)	-8.1%
IBNR ²	653	549	(104)	-15.9%
Claims Administration	90	75	(15)	-16.7%
Total (Undiscounted)	\$1,249	\$1,089	(\$160)	-12.8%
NPV Adjustment ³	(172)	(138)	34	-19.8%
Total (Discounted)	\$1,077	\$951	(\$126)	-11.7%

¹ Established by the claims administrator.

² IBNR: Incurred But Not Reported for development beyond the case reserves.

³ Net present value is based on an annual discount rate of 2.5% in the prior report and 2.0% in the current report.

The table below reconciles our prior report's estimated liability for outstanding claims as of June 30, 2020 to our current report's estimated liability for outstanding claims as of June 30, 2021.

Reconciliation of Claims Liabilities
At Expected (without Risk Margin), Net of Reinsurance

	Dollars (\$000s)
(A) Prior 6/30/2020 Discounted Loss & LAE Liabilities	\$1,077
(B) Change in Ultimate Loss & ALAE	(118)
(C) Paid Loss & ALAE in 2020-21	(27)
(D) Change in ULAE	(15)
(E) Change in Net Present Value	34
(F) Current 6/30/2021 Discounted Loss & LAE Liabilities	\$951

Loss and LAE Liabilities by Category

The following table shows the categories that compose our ultimate loss & LAE liability estimates.

Loss & ALAE Liabilities by Category and Year¹
As of June 30, 2021, Net of Reinsurance
(\$000s)

Fiscal Year	Case Reserves	Incurred but Not Reported (IBNR)	Total Liabilities
Prior	\$0	\$0	\$0
1994-95	0	0	0
1995-96	11	1	12
1996-97	7	1	8
1997-98	10	2	13
1998-99	0	3	3
1999-00	22	4	25
2000-01	27	6	32
2001-02	15	9	24
2002-03	15	4	20
2003-04	0	0	0
2004-05	42	11	53
2005-06	6	6	12
2006-07	0	0	0
2007-08	0	0	0
2008-09	149	46	195
2009-10	35	57	92
2010-11	33	81	114
2011-12	52	90	141
2012-13	42	82	123
2013-14	<u>0</u>	<u>147</u>	<u>147</u>
Total Loss & ALAE	\$465	\$549	\$1,014
ULAE	n/a	75	75
Total Loss & LAE	\$465	\$624	\$1,089

¹ Loss & ALAE liabilities are limited to the District's self-insured retention, at expected (no risk margin), and not discounted to reflect net present value.

Losses by Component

The following graphs illustrate our selected ultimate loss and ALAE amount for each accident year, and segregates each ultimate into its component parts of (1) amounts already paid, (2) amounts already reserved for individual claims, and (3) IBNR reserves to cover both unreported claims as well as any adverse development on known claims.

Ultimate Loss & ALAE by Component
As of June 30, 2021



METHODOLOGY

The methodology that we have used to estimate ultimate Loss & LAE liabilities is in accordance with standard actuarial principles. The 6-step process described below outlines the methods used to calculate the liabilities.

1. Estimate Ultimate Loss & ALAE: The ultimate value of losses associated with a given policy year is usually not known until many years after the policy year has expired. One estimate of future payments for a given policy year is the case reserve. However, to accurately project future payments for a given policy year, we also calculate indicated IBNR reserves that consider the following three factors:
 - The amount that case reserves are redundant or deficient.
 - Losses that occurred during the policy period but have not yet been reported. This is called "Pure IBNR".
 - Future payments on claims which are closed but will reopen in the future.

Separate ultimate loss & ALAE projections are developed for costs limited to \$100,000 and limited to the retention. Loss development factors are primarily based on the District's own historical experience supplemented with industry data. The following methods are used to estimate ultimate loss & ALAE:

- Reported Loss Development: Includes paid losses and case reserves.
- Paid Loss Development: Based on payments only.
- Reported Exposure Method: This calculates IBNR based on expected ultimate loss times an IBNR factor. For the first layer of losses, the expected ultimate loss is based on exposure times initial loss rates. These loss rates are based on historical losses in that layer developed to ultimate using loss development factors. The loss rates in the higher layer incorporate increased limits factors based on the District's historical losses and industry data. Where appropriate, historical data is adjusted for both claims and exposure trend, to reflect issues such as inflation, benefit level changes, and legal changes.
- Paid Exposure Method: This calculates unpaid costs based on expected ultimate loss times an unpaid factor. The loss rates are identical to those utilized in the reported exposure method.
- Frequency x Severity: This calculates ultimate costs based on expected ultimate severity and expected ultimate frequency derived from historical experience.

2. Select Ultimate Loss & ALAE: Based on the indicated ultimate loss and ALAE from the various methods described previously, the ultimate losses by year are selected.
3. Calculate Expected Undiscounted Unpaid Loss & ALAE: Unpaid loss & ALAE equals ultimate Loss & ALAE (calculated in step #2, above) minus payments to date.
4. Discounting/Net Present Value: Since payments associated with claims liabilities will be spread out over several years, they are discounted to reflect anticipated investment income on the assets set aside to pay these costs. The expected Loss & ALAE payout pattern is based on the paid loss development factors previously described.
5. Claims Administration: Liabilities associated with claims administration expenses are calculated based on an average cost per claim method.

For the average cost per claim method, we first develop an average cost per claim by assuming a 7.5% ULAE to loss ratio. We then apply this cost per claim to open and IBNR claims to arrive at the ULAE liability.

6. Confidence Levels: The “expected” estimate of unpaid Loss & ALAE is our best estimate given current information. However, there is uncertainty inherent in the claims settlement process. This uncertainty is quantified via confidence levels. For example, we believe that future payments have a 75% chance of being less than the liabilities at the 75% confidence level and have only a 25% chance of exceeding the 75% confidence level estimates. The confidence levels are based on the Heckman Meyers approach.

CONSIDERATIONS AND KEY ASSUMPTIONS

Several considerations should be taken into account when evaluating property/casualty claim liabilities and funding projections for upcoming years. The following is a list of issues that we have considered in this report, along with some key assumptions that we have made.

Data

Data Quality: Our analysis is based on loss experience, exposure data, and other general and specific information provided to us by or on behalf of the District. While we have not independently audited or verified this information, we have reviewed it for reasonability and internal consistency. We have assumed that the data is accurate and complete. Any material inaccuracy or omission could invalidate the conclusions in this report and should be brought to our attention immediately.

Exposure: The exposure base utilized in this study is payroll, which was provided to us by the District. A list of exposure by year can be found in Appendix M.

Claims: The claims data utilized in this study was provided to us by the District.

Other Program Information: Key program information, including historical retentions, were provided to us by the District. We relied on this information without audit.

Key Dates

Accounting Date: This study presents liabilities as of an accounting date of June 30, 2021.

Valuation Date: The data underlying this study are valued as of June 30, 2021.

Review Date: We have also made use of information presented to us through the review date of July 13, 2021. We have not reflected any actual claims activity subsequent to the valuation date.

Accounting Standard

The accounting standards applicable to this analysis follow the guidance promulgated by the Governmental Accounting Standards Board (GASB).

Other Actuarial Considerations

Discounting to Reflect Net Present Value: Reserves in this report are presented on both undiscounted and discounted bases. We have assumed that assets held for investment will generate an average annual rate of return of 2.0% over the time during which the loss liabilities are paid out. It should be noted that actual future investment returns may vary

significantly from this assumption, depending upon prevailing investment market conditions.

Uncertainty & Risk Margin: There is uncertainty regarding the ultimate cost of the reserves and funding amounts that are estimated in this report. Our estimates are presented both at the expected level (also known as the actuarial central estimate) and at higher confidence levels. The projections at higher confidence levels reflect uncertainty by including a risk margin for the potential of costs coming in higher than at the expected level.

Trending: We have adjusted historical payroll and claims costs to reflect inflation as well as other changes in the claims environment. The payroll, claim frequency, and claim cost trend factors by year are in Appendices M and E, respectively. Benefit level changes are based on estimates from the California Workers' Compensation Rating Bureau (WCIRB).

External Influences: This analysis contemplates a continuation of current social, economic, judicial, and legislative trends. Historical changes have been reflected through the use of trend factors.

Homogeneity: The accuracy of loss estimates may be improved by subdividing loss experience into groups exhibiting similar characteristics. In evaluating the District's loss experience, we considered all of the experience together.

Credibility: Credibility is a measure of the predictive value attached to a body of data. The degree to which consideration is given to homogeneity is related to the consideration of credibility. While making more homogeneous groupings may increase the credibility of the data, partitioning into cells too small to be reliable statistically may also decrease it. As discussed above, further subdivision of data (by individual department, for instance) would reduce the statistical credibility too greatly. This aggregation of data assumes that there has been a relatively stable distribution of exposures among various risk characteristics during the years included in this analysis.

Loss Development: The rate at which costs develop to their ultimate level was included in the calculation of loss development factors. The loss development factors are described in the Methodology section of this report.

Claim Emergence Patterns: The delay between the occurrence of claims and the recording of claims was considered in the estimation of loss development factors.

Claim Settlement Patterns: The rate at which claims are closed and the impact upon incurred losses are considered in the calculation of loss development factors.

Reopened Claim Potential: The effect of reopened claims is included in the calculation of loss development factors.

Claim Frequency and Average Claim Size: The average and potential claim frequency and average claim size have been measured and considered in the liability estimates.

Large Losses & Catastrophes: The impact of large losses and catastrophes have the potential to distort the results of actuarial analyses. We have mitigated this risk by separating loss development and loss rates into the lower layer (limited to \$100,000 per occurrence) and the excess layer. In addition, our net liability and funding estimates limit loss & ALAE to the appropriate SIR. Lastly, we have utilized industry size of loss curves and increased limits factors where we feel that the District's experience is not fully credible.

Loss Limitations: Our projections of claim costs are limited to the District's SIR. We have assumed that all relevant reinsurance purchased by the District for costs above the SIR is collectible. The retentions used in the study are displayed by year in the Background section of this report.

Recoveries: The data underlying this report are net of salvage, subrogation and other recoveries.

Portfolio Transfers, Commutations, and Structured Settlements: No historical loss portfolio transfers or commutations have been reflected in this analysis. To the extent there are structured settlements, they have been reflected in the claims data utilized in this analysis.

Operational Changes: This analysis has not made special adjustment for any specific operational changes at the District.

Reasonableness: We have established the reasonability of our results by utilizing standard actuarial techniques and reasonable assumptions.

Claims Administration Costs (Unallocated Loss Adjustment Expense or ULAE): ULAE costs have been included in our estimate of outstanding liabilities.

CONDITIONS AND LIMITATIONS

It is important to recognize that the projections in this report are estimates at one point in time and are subject to future changes. Since the emergence and settlement of claims are subject to uncertainty, actual developments likely will vary, perhaps significantly, from the amounts carried in this report. No warranty is expressed or implied that such variance will not occur. The accuracy of the conclusions in this report depends on many factors, including the following:

Loss Activity since the Evaluation Date: The losses in this study were valued as of June 30, 2021. It is possible that there has been significant loss activity that has occurred since that date which would change the findings of this report.

Data Accuracy: This report relies on unaudited loss and exposure information provided by the District. The accuracy of our projections relies on the accuracy of this data.

Loss Development: The appropriateness of the District's historical and industry loss development patterns in projecting future loss development.

Trend Changes: The appropriateness of the trend indices used to adjust historical losses.

Discounting/Net Present Value: Our estimates that are discounted to reflect net present value assume a certain investment return on assets. This adjustment to reflect net present value is inaccurate to the extent that actual investment returns deviate from the assumed returns.

Insurance: 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 District's excess coverage.

Future Law Changes: We cannot predict, nor have we attempted to predict, the impact of future law changes and court rulings on claims costs.

New Classes of Claims: Our projections make no provision for the extraordinary future emergence of new classes of loss or types of loss not sufficiently represented in the District's historical data, or which are not yet quantifiable.

DISTRIBUTION AND USE

This report was prepared for the sole use of the Novato Fire Protection District and its auditors. This report is neither intended nor necessarily suitable for any other use. It may be forwarded to regulatory authorities as required by law. Any other distribution of this report requires the express written consent of Bickmore Actuarial. If such consent is granted, the report should be forwarded in its entirety, including all exhibits and appendices. It should also be understood that Bickmore Actuarial would be available to answer any questions regarding this report and its conclusions.

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, utilization review, bill review, etc.)

Benefit Level Factor – Factor used to adjust historical losses to the current level of workers' compensation benefits.

Case Reserve – The amount left to be paid on an open 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 net present value.

Expected Losses – The best estimate of the full, ultimate value of losses.

Exposure Base – An objective and easily measurable quantity that is correlated with loss. Commonly used exposure bases include payroll, population, revenue, number of employees (FTE), average daily attendance (ADA), number of vehicles and total insured value (TIV).

Incurred but not Reported (IBNR) Losses – This is the ultimate value of losses less any amount that has been paid to date or set up as a case reserve by the claims adjuster. It includes amounts for claims incurred but not yet received by the administrator as well as loss development on already reported claims.

Loss Adjustment Expense – The sum of Allocated Loss Adjustment Expense (ALAE) and Unallocated Loss Adjustment Expense (ULAE).

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 the Methodology section.

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 administration expenses, taxes, etc.)

EXHIBITS AND APPENDICES

Novato Fire Protection District - Workers' Compensation

Funding Guidelines for Outstanding Liabilities at
June 30, 2021

(A) Estimated Ultimate Losses Incurred through 6/30/21: (From Appendix G)	\$13,193,000
(B) Estimated Paid Losses through 6/30/21: (From Appendix G)	12,179,000
(C) Estimated Liability for Claims Outstanding at 6/30/21: (From Appendix G)	<u>\$1,014,000</u>
(D) Estimated Liability for Outstanding Claims Administration Fees at 6/30/21: (From Appendix F)	75,000
(E) Total Outstanding Liability for Claims at 6/30/21: ((C) + (D))	<u>\$1,089,000</u>
(F) Reserve Discount Factor (Based on a Discount Rate of 2.0%): (Appendix I, Page 1, (G))	0.874
(G) Discounted Outstanding Liability for Claims at 6/30/21: ((E) x (F))	<u>\$951,000</u>

	<u>Marginally Acceptable</u>	<u>75%</u>	<u>Recommended</u>	<u>85%</u>	<u>Conservative</u>
Confidence Level of Adequacy:	70%	75%	80%	85%	90%
(H) Confidence Level Factor: (From Appendix J)	1.168	1.250	1.346	1.466	1.627
(I) Margin for Adverse Experience: ((G) x [(H) - 1])	160,000	238,000	329,000	443,000	596,000
(J) Total Required Assets at 6/30/21: ((G) + (I))	<u>\$1,111,000</u>	<u>\$1,189,000</u>	<u>\$1,280,000</u>	<u>\$1,394,000</u>	<u>\$1,547,000</u>

Novato Fire Protection District - Workers' Compensation

IBNR as of 6/30/22 at Expected Claims Level

Accident Year	Estimated Ultimate (A)	Reported as of 6/30/21 (B)	Estimated IBNR as of 6/30/21 (C)	Estimated Percent of IBNR Reported Between 7/1/21 and 6/30/22 (D)	Estimated IBNR Reported (E)	Estimated IBNR as of 6/30/22 (F)
Prior	\$1,772,557	\$1,772,557	\$0	100.0%	\$0	\$0
1994-1995	353,817	353,817	0	100.0%	0	0
1995-1996	128,000	126,843	1,157	50.0%	1,000	157
1996-1997	559,000	557,776	1,224	33.3%	0	1,224
1997-1998	454,000	451,864	2,136	39.9%	1,000	1,136
1998-1999	988,000	985,316	2,684	16.6%	0	2,684
1999-2000	440,000	436,297	3,703	24.9%	1,000	2,703
2000-2001	586,000	580,243	5,757	19.8%	1,000	4,757
2001-2002	1,086,000	1,077,213	8,787	22.8%	2,000	6,787
2002-2003	183,000	178,814	4,186	31.2%	1,000	3,186
2003-2004	2,004,301	2,004,301	0	23.6%	0	0
2004-2005	215,000	203,640	11,360	21.3%	2,000	9,360
2005-2006	264,000	257,533	6,467	19.4%	1,000	5,467
2006-2007	493,327	493,327	0	19.2%	0	0
2007-2008	92,328	92,328	0	17.2%	0	0
2008-2009	666,000	620,125	45,875	16.6%	8,000	37,875
2009-2010	692,000	635,495	56,505	15.7%	9,000	47,505
2010-2011	617,000	536,416	80,584	15.4%	12,000	68,584
2011-2012	697,000	607,330	89,670	15.4%	14,000	75,670
2012-2013	339,000	257,495	81,505	14.9%	12,000	69,505
2013-2014	563,000	415,567	147,433	17.4%	26,000	121,433
Totals	\$13,193,330	\$12,644,297	\$549,033		\$91,000	\$458,033

Notes:

- (A) From Exhibit 3, Page 1.
- (B) Provided by the District. These losses exclude amounts incurred above the District's SIR for each year.
- (C) (A) - (B).
- (D) Percentage of incurred but not reported (IBNR) expected to be reported between 7/1/21 and 6/30/22. 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 6/30/22. This amount is dependent on both the strength of the case reserves and the average frequency and severity of the losses incurred.

Novato Fire Protection District - Workers' Compensation

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)	Case Reserve Method (E)	Selected Estimate of Ultimate Losses (F)
Prior	\$1,772,557	\$1,797,373			\$1,772,557	\$1,772,557
1994-1995	354,171	360,540			353,817	353,817
1995-1996	127,097	118,528			127,908	128,000
1996-1997	559,449	565,498			558,691	559,000
1997-1998	454,123	456,054			453,774	454,000
1998-1999	991,228	1,024,729			985,316	988,000
1999-2000	439,787	434,667			440,820	440,000
2000-2001	586,045	585,278			586,212	586,000
2001-2002	1,091,217	1,135,771			1,080,871	1,086,000
2002-2003	182,211	178,865			183,052	183,000
2003-2004	2,054,409	2,222,770			2,004,301	2,004,301
2004-2005	210,156	182,196			219,884	215,000
2005-2006	267,834	287,821	\$274,504	\$307,413	259,997	264,000
2006-2007	517,993	572,259	515,759	557,820	493,327	493,327
2007-2008	97,960	108,947	101,559	117,106	92,328	92,328
2008-2009	666,014	567,721	676,376	610,152	721,105	666,000
2009-2010	692,054	741,501	692,100	731,563	661,917	692,000
2010-2011	593,813	639,271	600,607	643,923	564,145	617,000
2011-2012	685,676	730,853	688,621	726,921	654,342	697,000
2012-2013	297,407	294,661	354,822	410,364	299,404	339,000
2013-2014	496,187	606,728	542,482	662,347	415,567	563,000
Totals						\$13,193,330

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 Exhibit 3, Page 3, Column (E).
- (F) Selected averages of (A), (B), (C), (D), and (E).

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.

Novato Fire Protection District - Workers' Compensation

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	\$1,519,306	\$1,531,460			\$1,519,329	\$1,519,306
1994-1995	280,016	283,096			280,023	280,016
1995-1996	126,970	117,485			127,008	127,000
1996-1997	507,986	508,324			507,994	508,000
1997-1998	372,671	368,762			372,996	373,000
1998-1999	694,416	708,940			691,641	691,649
1999-2000	321,829	307,351			321,997	322,000
2000-2001	362,274	344,594			361,998	362,000
2001-2002	598,083	615,901			593,928	593,926
2002-2003	180,423	170,044			180,000	180,000
2003-2004	440,418	454,345			435,209	435,196
2004-2005	206,695	169,715			207,000	207,000
2005-2006	262,169	265,138	\$262,267	\$264,920	263,007	263,000
2006-2007	276,451	285,928	276,451	285,116	270,756	270,765
2007-2008	94,544	97,868	94,452	97,591	92,322	92,328
2008-2009	460,999	443,985	460,761	444,699	457,010	457,000
2009-2010	450,739	450,395	448,606	446,080	380,536	451,000
2010-2011	374,555	352,415	374,090	352,841	298,205	369,000
2011-2012	404,405	410,022	403,670	407,809	305,387	406,000
2012-2013	215,418	206,556	222,332	220,899	365,470	213,000
2013-2014	388,170	406,655	388,404	405,172	474,870	369,686
Totals						\$8,490,872

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).

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.

Novato Fire Protection District - Workers' Compensation

Reported Loss Development

Accident Year (A)	Limited Reported Losses as of 6/30/21 (B)	Reported Loss Development Factor (C)	Ultimate Limited Losses (D)	Program Reported Losses of 6/30/21 (E)	Reported Loss Development Factor (F)	Ultimate Program Losses (G)
Prior	\$1,519,306	1.000	\$1,519,306	\$1,772,557	1.000	\$1,772,557
1994-1995	280,016	1.000	280,016	353,817	1.001	354,171
1995-1996	126,843	1.001	126,970	126,843	1.002	127,097
1996-1997	506,972	1.002	507,986	557,776	1.003	559,449
1997-1998	371,556	1.003	372,671	451,864	1.005	454,123
1998-1999	691,649	1.004	694,416	985,316	1.006	991,228
1999-2000	320,228	1.005	321,829	436,297	1.008	439,787
2000-2001	360,113	1.006	362,274	580,243	1.010	586,045
2001-2002	593,926	1.007	598,083	1,077,213	1.013	1,091,217
2002-2003	178,814	1.009	180,423	178,814	1.019	182,211
2003-2004	435,196	1.012	440,418	2,004,301	1.025	2,054,409
2004-2005	203,640	1.015	206,695	203,640	1.032	210,156
2005-2006	257,533	1.018	262,169	257,533	1.040	267,834
2006-2007	270,765	1.021	276,451	493,327	1.050	517,993
2007-2008	92,328	1.024	94,544	92,328	1.061	97,960
2008-2009	448,879	1.027	460,999	620,125	1.074	666,014
2009-2010	437,186	1.031	450,739	635,495	1.089	692,054
2010-2011	361,889	1.035	374,555	536,416	1.107	593,813
2011-2012	389,225	1.039	404,405	607,330	1.129	685,676
2012-2013	206,339	1.044	215,418	257,495	1.155	297,407
2013-2014	369,686	1.050	388,170	415,567	1.194	496,187
Totals	\$8,422,089		\$8,538,537	\$12,644,297		\$13,137,388

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the District. 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 District's SIR. Amounts are provided by the District.
- (F) Derived from factors on Appendix A, Page 3.
- (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.

Novato Fire Protection District - Workers' Compensation
Reported Loss Development

Accident Year	Limited Losses Reported as of:									
	96 Months	108 Months	120 Months	132 Months	144 Months	156 Months	168 Months	180 Months	192 Months	204 Months
1993-1994										
1994-1995										
1995-1996										
1996-1997										
1997-1998										
1998-1999										
1999-2000										
2000-2001			336,295	326,958	326,958	326,958	332,558	332,558	340,226	340,226
2001-2002		602,305	602,316	602,390	603,332	603,332	603,332	614,352	614,352	593,926
2002-2003	155,191	155,323	177,069	177,091	177,091	177,091	177,091	177,091	177,091	177,091
2003-2004	435,196	435,196	435,196	435,196	435,196	435,196	435,196	435,196	435,196	435,196
2004-2005	194,071	198,520	198,520	198,520	198,932	198,932	198,932	198,932	198,932	203,640
2005-2006	263,457	263,457	263,457	257,533	257,533	257,533	257,533	257,533	257,533	
2006-2007	269,969	270,420	270,420	270,420	270,420	270,420	270,765	270,765		
2007-2008	92,328	92,328	92,328	92,328	92,328	92,328	92,328			
2008-2009	439,700	439,700	428,838	428,838	428,838	448,879				
2009-2010	429,898	429,898	429,898	429,898	437,186					
2010-2011	337,589	337,589	350,681	361,889						
2011-2012	375,532	389,225	389,225							
2012-2013	206,339	206,339								
2013-2014	369,686									

Reported Loss Development Factors:

	96-108 Months	108-120 Months	120-132 Months	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months
1993-1994										
1994-1995										
1995-1996										
1996-1997										
1997-1998										
1998-1999										
1999-2000										
2000-2001			0.972	1.000	1.000	1.017	1.000	1.023	1.000	0.990
2001-2002		1.000	1.000	1.002	1.000	1.000	1.018	1.000	0.967	1.000
2002-2003	1.001	1.140	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003-2004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004-2005	1.023	1.000	1.000	1.002	1.000	1.000	1.000	1.000	1.024	
2005-2006	1.000	1.000	0.978	1.000	1.000	1.000	1.000	1.000		
2006-2007	1.002	1.000	1.000	1.000	1.000	1.001	1.000			
2007-2008	1.000	1.000	1.000	1.000	1.000	1.000				
2008-2009	1.000	0.975	1.000	1.000	1.047					
2009-2010	1.000	1.000	1.000	1.017						
2010-2011	1.000	1.039	1.032							
2011-2012	1.036	1.000								
2012-2013	1.000									

	96-108 Months	108-120 Months	120-132 Months	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months
Average	1.006	1.014	0.998	1.002	1.005	1.002	1.003	1.004	0.998	0.998
\$-Wtd. Averages										
Total	1.006	1.007	0.999	1.003	1.007	1.003	1.005	1.004	0.991	0.998
3-yr	1.015	1.011	1.009	1.008	1.025	1.001	1.000	1.000	1.006	1.000
4-yr	1.010	1.001	1.009	1.006	1.019	1.000	1.000	1.000	0.989	0.998
Comparative										
Factors	1.006	1.005	1.004	1.004	1.004	1.003	1.003	1.002	1.003	1.003
Prior	1.005	1.004	1.003	1.003	1.003	1.003	1.003	1.003	1.002	1.002
Selected	1.006	1.005	1.004	1.004	1.004	1.003	1.003	1.003	1.003	1.003
Cumulated	1.050	1.044	1.039	1.035	1.031	1.027	1.024	1.021	1.018	1.015

Novato Fire Protection District - Workers' Compensation

Paid Loss Development

Accident Year (A)	Limited Paid Losses as of 6/30/21 (B)	Paid Loss Development Factor (C)	Ultimate Limited Losses (D)	Program Paid Losses of 6/30/21 (E)	Paid Loss Development Factor (F)	Ultimate Program Losses (G)
Prior	\$1,519,306	1.008	\$1,531,460	\$1,772,557	1.014	\$1,797,373
1994-1995	280,016	1.011	283,096	353,817	1.019	360,540
1995-1996	115,863	1.014	117,485	115,863	1.023	118,528
1996-1997	499,827	1.017	508,324	550,631	1.027	565,498
1997-1998	361,177	1.021	368,762	441,485	1.033	456,054
1998-1999	691,649	1.025	708,940	985,316	1.040	1,024,729
1999-2000	298,689	1.029	307,351	414,759	1.048	434,667
2000-2001	333,586	1.033	344,594	553,716	1.057	585,278
2001-2002	593,926	1.037	615,901	1,062,461	1.069	1,135,771
2002-2003	163,347	1.041	170,044	163,347	1.095	178,865
2003-2004	435,196	1.044	454,345	2,004,301	1.109	2,222,770
2004-2005	162,096	1.047	169,715	162,096	1.124	182,196
2005-2006	252,032	1.052	265,138	252,032	1.142	287,821
2006-2007	270,765	1.056	285,928	493,327	1.160	572,259
2007-2008	92,328	1.060	97,868	92,328	1.180	108,947
2008-2009	417,279	1.064	443,985	470,747	1.206	567,721
2009-2010	421,718	1.068	450,395	600,406	1.235	741,501
2010-2011	328,439	1.073	352,415	502,967	1.271	639,271
2011-2012	379,299	1.081	410,022	555,782	1.315	730,853
2012-2013	189,675	1.089	206,556	215,711	1.366	294,661
2013-2014	369,686	1.100	406,655	415,567	1.460	606,728
Totals	\$8,175,899		\$8,498,979	\$12,179,216		\$13,612,031

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the District. 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 District's SIR. Amounts are provided by the District.
- (F) Derived from factors on Appendix B, Page 3.
- (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.

Novato Fire Protection District - Workers' Compensation
Paid Loss Development

Accident Year	Limited Losses Paid as of:									
	96 Months	108 Months	120 Months	132 Months	144 Months	156 Months	168 Months	180 Months	192 Months	204 Months
1993-1994										
1994-1995										
1995-1996										
1996-1997										
1997-1998										
1998-1999										
1999-2000										
2000-2001			326,958	326,958	326,958	326,958	327,518	327,540	329,590	329,620
2001-2002		593,110	593,121	593,195	593,217	593,217	593,239	593,261	593,926	593,926
2002-2003	150,202	150,369	156,650	157,007	157,007	157,029	157,851	162,306	162,324	162,395
2003-2004	435,196	435,196	435,196	435,196	435,196	435,196	435,196	435,196	435,196	435,196
2004-2005	149,769	150,458	151,422	151,616	152,733	153,478	154,856	156,476	159,312	162,096
2005-2006	244,930	245,226	245,304	246,398	247,621	247,639	247,740	249,390	252,032	
2006-2007	269,969	270,420	270,420	270,420	270,420	270,420	270,765	270,765		
2007-2008	92,328	92,328	92,328	92,328	92,328	92,328	92,328			
2008-2009	408,858	409,566	410,956	414,112	415,512	417,279				
2009-2010	415,898	415,898	415,898	415,918	421,718					
2010-2011	297,638	304,014	309,482	328,439						
2011-2012	375,532	377,415	379,299							
2012-2013	189,313	189,675								
2013-2014	369,686									

Paid Loss Development Factors:

	96-108 Months	108-120 Months	120-132 Months	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months
1993-1994										
1994-1995										
1995-1996										
1996-1997										
1997-1998										
1998-1999										
1999-2000										
2000-2001			1.000	1.000	1.000	1.002	1.000	1.006	1.000	0.994
2001-2002		1.000	1.000	1.000	1.000	1.000	1.000	1.001	1.000	1.000
2002-2003	1.001	1.042	1.002	1.000	1.000	1.005	1.028	1.000	1.000	1.001
2003-2004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004-2005	1.005	1.006	1.001	1.007	1.005	1.009	1.010	1.018	1.017	
2005-2006	1.001	1.000	1.004	1.005	1.000	1.000	1.007	1.011		
2006-2007	1.002	1.000	1.000	1.000	1.000	1.001	1.000			
2007-2008	1.000	1.000	1.000	1.000	1.000	1.000				
2008-2009	1.002	1.003	1.008	1.003	1.004					
2009-2010	1.000	1.000	1.000	1.014						
2010-2011	1.021	1.018	1.061							
2011-2012	1.005	1.005								
2012-2013	1.002									

	96-108 Months	108-120 Months	120-132 Months	132-144 Months	144-156 Months	156-168 Months	168-180 Months	180-192 Months	192-204 Months	204-216 Months
Average \$-Wtd. Averages	1.004	1.007	1.007	1.003	1.001	1.002	1.006	1.006	1.003	0.999
Total	1.004	1.005	1.007	1.003	1.001	1.001	1.004	1.004	1.002	0.999
3-yr	1.010	1.007	1.019	1.008	1.002	1.001	1.005	1.007	1.004	1.000
4-yr	1.007	1.006	1.018	1.006	1.002	1.002	1.003	1.005	1.002	0.999
Comparative Factors	1.015	1.012	1.010	1.009	1.008	1.007	1.006	1.005	1.005	1.004
Prior	1.010	1.005	1.004	1.004	1.003	1.003	1.003	1.003	1.002	1.002
Selected	1.010	1.007	1.007	1.005	1.004	1.004	1.004	1.004	1.005	1.003
Cumulated	1.100	1.089	1.081	1.073	1.068	1.064	1.060	1.056	1.052	1.047

Novato Fire Protection District - Workers' Compensation

Exposure and Development Method
Based on Reported Losses

Accident Year	Trended Payroll (\$00) (A)	Reported Losses as of 6/30/21 (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)
2005-2006	\$129,567	\$257,533	1.040	0.038	\$3.447	\$16,971	\$274,504
2006-2007	141,619	493,327	1.050	0.048	3.300	22,432	515,759
2007-2008	166,958	92,328	1.061	0.057	0.970	9,231	101,559
2008-2009	174,493	620,125	1.074	0.069	4.672	56,251	676,376
2009-2010	154,051	635,495	1.089	0.082	4.481	56,605	692,100
2010-2011	131,590	536,416	1.107	0.097	5.029	64,191	600,607
2011-2012	132,174	607,330	1.129	0.114	5.395	81,291	688,621
2012-2013	130,048	257,495	1.155	0.134	5.585	97,327	354,822
2013-2014	129,857	415,567	1.194	0.162	6.033	126,915	542,482
Totals	1,290,357	\$3,915,616				\$531,214	\$4,446,830

Notes:

- (A) From Appendix M, Column (C).
- (B) Provided by the District. These losses exclude amounts incurred above the District'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.

Novato Fire Protection District - Workers' Compensation

Exposure and Development Method
Based on Paid Losses

Accident Year	Trended Payroll (\$00) (A)	Paid Losses as of 6/30/21 (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)
2005-2006	\$129,567	\$252,032	1.142	0.124	\$3.447	\$55,381	\$307,413
2006-2007	141,619	493,327	1.160	0.138	3.300	64,493	557,820
2007-2008	166,958	92,328	1.180	0.153	0.970	24,778	117,106
2008-2009	174,493	470,747	1.206	0.171	4.672	139,405	610,152
2009-2010	154,051	600,406	1.235	0.190	4.481	131,157	731,563
2010-2011	131,590	502,967	1.271	0.213	5.029	140,956	643,923
2011-2012	132,174	555,782	1.315	0.240	5.395	171,139	726,921
2012-2013	130,048	215,711	1.366	0.268	5.585	194,653	410,364
2013-2014	129,857	415,567	1.460	0.315	6.033	246,780	662,347
Totals	1,290,357	\$3,598,867				\$1,168,742	\$4,767,609

Notes:

- (A) From Appendix M, Column (C).
- (B) Provided by the District. These losses exclude amounts paid above the District'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.

Novato Fire Protection District - Workers' Compensation

Exposure and Development Method

Accident Year	Trended Payroll (\$00) (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)
2005-2006	\$129,567	\$263,000	2.528	\$664,864	\$5.131	\$2.030	1.698	\$3.447
2006-2007	141,619	270,765	2.296	621,676	4.390	1.912	1.726	3.300
2007-2008	166,958	92,328	2.052	189,457	1.135	0.553	1.754	0.970
2008-2009	174,493	457,000	1.840	840,880	4.819	2.619	1.784	4.672
2009-2010	154,051	451,000	1.619	730,169	4.740	2.471	1.814	4.481
2010-2011	131,590	369,000	1.467	541,323	4.114	2.727	1.844	5.029
2011-2012	132,174	406,000	1.391	564,746	4.273	2.876	1.876	5.395
2012-2013	130,048	213,000	1.366	290,958	2.237	2.928	1.907	5.585
2013-2014	129,857	369,686	1.332	492,422	3.792	3.003	2.009	6.033
Total/Avg	1,290,357	\$2,891,779		\$4,936,495	\$3.826			
08/09-13/14	852,213	2,265,686		3,460,498	4.061			
10/11-13/14	523,669	1,357,686		1,889,449	3.608			
				Selected Limited Rate:	\$4.000			
				Prior:	\$4.000			

Notes:

- (A) From Appendix M, Column (C).
- (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 2008-2009 and prior (B) / (A).
- (G) Based on a Weibull 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.

Novato Fire Protection District - Workers' Compensation

Frequency and Severity Method

Accident Year	Ultimate Program Severity (A)	Adjusted Ultimate Claims (B)	Ultimate Program Losses (C)
Prior	\$8,910	213	\$1,897,830
1994-1995	11,624	31	360,344
1995-1996	5,150	32	164,800
1996-1997	19,531	34	664,054
1997-1998	18,907	26	491,582
1998-1999	29,620	31	918,220
1999-2000	13,900	31	430,900
2000-2001	18,781	26	488,306
2001-2002	34,293	24	823,032
2002-2003	9,715	30	291,450
2003-2004	23,085	31	715,635
2004-2005	17,298	20	345,960
2005-2006	16,543	27	446,661
2006-2007	20,320	23	467,360
2007-2008	8,996	18	161,928
2008-2009	35,444	23	815,212
2009-2010	26,543	26	690,118
2010-2011	28,945	19	549,955
2011-2012	30,150	19	572,850
2012-2013	30,309	23	697,107
2013-2014	31,799	30	953,970
Total		737	\$12,947,274

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.

Novato Fire Protection District - Workers' Compensation

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	\$1,519,306	213	\$7,133	1.938	\$13,824	\$7,133	1.249	\$8,910
1994-1995	280,016	31	9,033	1.909	17,244	9,033	1.287	11,624
1995-1996	127,000	32	3,969	1.728	6,858	3,969	1.298	5,150
1996-1997	508,000	34	14,941	1.529	22,845	14,941	1.307	19,531
1997-1998	373,000	26	14,346	1.317	18,894	14,346	1.318	18,907
1998-1999	691,649	31	22,311	1.146	25,568	22,311	1.328	29,620
1999-2000	322,000	31	10,387	1.003	10,418	10,387	1.338	13,900
2000-2001	362,000	26	13,923	0.932	12,976	13,923	1.349	18,781
2001-2002	593,926	24	24,747	0.919	22,742	24,747	1.386	34,293
2002-2003	180,000	30	6,000	0.951	5,706	6,000	1.619	9,715
2003-2004	435,196	31	14,039	1.159	16,271	14,039	1.644	23,085
2004-2005	207,000	20	10,350	1.479	15,308	10,350	1.671	17,298
2005-2006	263,000	27	9,741	1.585	15,439	9,741	1.698	16,543
2006-2007	270,765	23	11,772	1.482	17,446	11,772	1.726	20,320
2007-2008	92,328	18	5,129	1.364	6,996	5,129	1.754	8,996
2008-2009	457,000	23	19,870	1.259	25,016	19,870	1.784	35,444
2009-2010	451,000	26	17,346	1.141	19,792	14,636	1.814	26,543
2010-2011	369,000	19	19,421	1.064	20,664	15,695	1.844	28,945
2011-2012	406,000	19	21,368	1.039	22,201	16,073	1.876	30,150
2012-2013	213,000	23	9,261	1.051	9,733	15,890	1.907	30,309
2013-2014	369,686	30	12,323	1.055	13,001	15,829	2.009	31,799

Average Limited Severity: \$16,140
Average 09/10-13/14 Limited Severity: 17,078
Average 10/11-13/14 Limited Severity: 16,400

Selected Limited Severity: \$16,700
Prior: \$18,500

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 (D).
- (E) (C) x (D).
- (F) Selected Limited Severity / (D).
- (G) Based on a Weibull 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.

Novato Fire Protection District - Workers' Compensation

Frequency and Severity Method
Projection of Ultimate Claims

Accident Year	Reported Claim Development (A)	Closed Claim Development (B)	Selected Ultimate Claims (C)	Trended Payroll (\$000,000) (D)	Claim Frequency (E)	Trend Factor (F)	Trended Claim Frequency (G)
Prior	213	213	213			2.290	
1994-1995	31	31	31			2.223	
1995-1996	32	31	32			2.158	
1996-1997	34	33	34			2.095	
1997-1998	26	25	26			2.034	
1998-1999	31	31	31			1.975	
1999-2000	31	29	31			1.917	
2000-2001	26	25	26			1.861	
2001-2002	24	23	24			1.807	
2002-2003	30	29	30			1.754	
2003-2004	31	32	31			1.703	
2004-2005	20	19	20			1.653	
2005-2006	27	27	27	13.0	2.084	1.605	3.345
2006-2007	23	24	23	14.2	1.624	1.558	2.530
2007-2008	18	18	18	16.7	1.078	1.513	1.631
2008-2009	23	22	23	17.4	1.318	1.469	1.936
2009-2010	26	25	26	15.4	1.688	1.426	2.407
2010-2011	19	19	19	13.2	1.444	1.384	1.998
2011-2012	19	18	19	13.2	1.437	1.344	1.931
2012-2013	23	22	23	13.0	1.769	1.305	2.309
2013-2014	30	31	30	13.0	2.310	1.267	2.927
Total	737	727	737	129.0			2.303
06/07-09/10	90	89	90	63.7			2.102

Notes:

- (A) From Appendix D, Page 4, (C).
- (B) From Appendix D, Page 5, (C).
- (C) Selected from (A) and (B).
- (D) From Appendix M, Column (C) / 10,000.
- (E) (C) / (D).
- (F) From Appendix E, Page 1, Column (H).
- (G) (E) x (F).

This exhibit summarizes the estimated numbers of claims and shows the estimated frequencies per \$1,000,000 of trended payroll.

Novato Fire Protection District - Workers' Compensation

Frequency and Severity Method
Reported Claim Count Development

Accident Year	Claims Reported as of 6/30/2021 (A)	Reported Claim Development Factor (B)	Ultimate Claims (C)	Trended Claim Frequency (D)
Prior	213	1.000	213	
1994-1995	31	1.000	31	
1995-1996	32	1.000	32	
1996-1997	34	1.000	34	
1997-1998	26	1.000	26	
1998-1999	31	1.000	31	
1999-2000	31	1.000	31	
2000-2001	26	1.000	26	
2001-2002	24	1.000	24	
2002-2003	30	1.000	30	
2003-2004	31	1.000	31	
2004-2005	20	1.000	20	
2005-2006	27	1.000	27	3.345
2006-2007	23	1.000	23	2.530
2007-2008	18	1.000	18	1.631
2008-2009	23	1.000	23	1.936
2009-2010	26	1.000	26	2.407
2010-2011	19	1.000	19	1.998
2011-2012	19	1.000	19	1.932
2012-2013	23	1.000	23	2.308
2013-2014	30	1.000	30	2.927
Total	737		737	2.303

Notes:

- (A) Provided by the District.
- (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 District. 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.

Novato Fire Protection District - Workers' Compensation

Frequency and Severity Method
Closed Claim Count Development

Accident Year	Claims Closed as of 6/30/2021 (A)	Closed Claim Development Factor (B)	Ultimate Claims (C)	Trended Claim Frequency (D)
Prior	213	1.000	213	
1994-1995	31	1.001	31	
1995-1996	31	1.003	31	
1996-1997	33	1.005	33	
1997-1998	25	1.007	25	
1998-1999	31	1.009	31	
1999-2000	29	1.011	29	
2000-2001	25	1.013	25	
2001-2002	23	1.015	23	
2002-2003	29	1.017	29	
2003-2004	31	1.019	32	
2004-2005	19	1.021	19	
2005-2006	26	1.023	27	3.345
2006-2007	23	1.025	24	2.640
2007-2008	18	1.027	18	1.631
2008-2009	21	1.030	22	1.852
2009-2010	24	1.033	25	2.314
2010-2011	18	1.037	19	1.998
2011-2012	17	1.041	18	1.830
2012-2013	21	1.045	22	2.208
2013-2014	30	1.049	31	3.025
Total	718		727	2.282

Notes:

- (A) Provided by the District.
- (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 District. 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.

Novato Fire Protection District - Workers' Compensation
Reported Claim Count Development

Accident Year	Claims Reported as of:												
	96 Months	108 Months	120 Months	132 Months	144 Months	156 Months	168 Months	180 Months	192 Months	204 Months	216 Months	228 Months	240 Months
1993-1994													
1994-1995													
1995-1996													
1996-1997													
1997-1998													
1998-1999													31
1999-2000												31	31
2000-2001							26	26	26	26	25	26	26
2001-2002						24	24	24	24	24	24	24	24
2002-2003					30	30	30	30	30	30	30	30	
2003-2004				31	31	31	31	31	31	31	31		
2004-2005			20	20	20	20	20	20	20	20			
2005-2006		27	27	27	27	27	27	27	27				
2006-2007	23	23	23	23	23	23	23	23					
2007-2008	18	18	18	18	18	18	18						
2008-2009	23	23	23	23	23	23							
2009-2010	26	26	26	26	26								
2010-2011	19	19	19	19									
2011-2012	19	19	19										
2012-2013	23	23											
2013-2014	30												

Reported Claim Count Development Factors:

	96-108 Months	108-120 Months	120-132 Months	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
1993-1994													
1994-1995													
1995-1996													
1996-1997													
1997-1998													
1998-1999													1.000
1999-2000												1.000	1.000
2000-2001							1.000	1.000	1.000	0.962	1.040	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	1.000		
2003-2004				1.000	1.000	1.000	1.000	1.000	1.000	1.000			
2004-2005			1.000	1.000	1.000	1.000	1.000	1.000	1.000				
2005-2006		1.000	1.000	1.000	1.000	1.000	1.000	1.000					
2006-2007	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
2007-2008	1.000	1.000	1.000	1.000	1.000	1.000							
2008-2009	1.000	1.000	1.000	1.000	1.000								
2009-2010	1.000	1.000	1.000	1.000									
2010-2011	1.000	1.000	1.000										
2011-2012	1.000	1.000											
2012-2013	1.000												

	96-108 Months	108-120 Months	120-132 Months	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
Average Claim-Weighted Averages	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.991	1.013	1.000	1.000
3-yr	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.013	1.000	1.000
4-yr	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.991			
Comparative Factors	1.001	1.000	1.001	1.000	1.000	1.001	1.000	1.001	1.000	1.000	1.001	1.000	1.001
Prior	1.000	1.000	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	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	1.000	1.000

Novato Fire Protection District - Workers' Compensation
Closed Claim Development

Accident Year	Claims Closed as of:												
	96 Months	108 Months	120 Months	132 Months	144 Months	156 Months	168 Months	180 Months	192 Months	204 Months	216 Months	228 Months	240 Months
1993-1994													
1994-1995													
1995-1996													
1996-1997													
1997-1998													
1998-1999													30
1999-2000												29	29
2000-2001							25	25	25	25	24	25	25
2001-2002						22	22	22	22	23	23	23	23
2002-2003					29	29	29	29	29	29	29	29	
2003-2004				30	30	30	30	30	31	31	31		
2004-2005			19	19	19	19	19	19	19	19			
2005-2006		26	26	26	26	26	26	26	26				
2006-2007	22	23	23	23	23	23	23	23					
2007-2008	18	18	18	18	18	18	18						
2008-2009	20	20	21	21	21	21							
2009-2010	24	24	24	24	24								
2010-2011	17	17	16	18									
2011-2012	18	17	17										
2012-2013	21	21											
2013-2014	30												

Closed Claim Count Development Factors:

	96-108 Months	108-120 Months	120-132 Months	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
1993-1994													
1994-1995													
1995-1996													
1996-1997													
1997-1998													
1998-1999													1.000
1999-2000												1.000	1.000
2000-2001							1.000	1.000	1.000	0.960	1.042	1.000	1.000
2001-2002						1.000	1.000	1.000	1.045	1.000	1.000	1.000	
2002-2003					1.000	1.000	1.000	1.000	1.000	1.000	1.000		
2003-2004				1.000	1.000	1.000	1.000	1.033	1.000	1.000			
2004-2005			1.000	1.000	1.000	1.000	1.000	1.000	1.000				
2005-2006		1.000	1.000	1.000	1.000	1.000	1.000	1.000					
2006-2007	1.045	1.000	1.000	1.000	1.000	1.000	1.000						
2007-2008	1.000	1.000	1.000	1.000	1.000	1.000							
2008-2009	1.000	1.050	1.000	1.000	1.000								
2009-2010	1.000	1.000	1.000	1.000									
2010-2011	1.000	0.941	1.125										
2011-2012	0.944	1.000											
2012-2013	1.000												

	96-108 Months	108-120 Months	120-132 Months	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
Average Claim-Weighted Averages	0.998	0.999	1.018	1.000	1.000	1.000	1.000	1.006	1.009	0.990	1.014	1.000	1.000
3-yr	0.982	0.983	1.033	1.000	1.000	1.000	1.000	1.013	1.000	1.000	1.013	1.000	1.000
4-yr	0.988	1.000	1.025	1.000	1.000	1.000	1.000	1.010	1.010	0.991			
Comparative Factors	1.009	1.006	1.005	1.003	1.003	1.002	1.002	1.002	1.002	1.002	1.001	1.001	1.001
Prior	1.008	1.005	1.004	1.003	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001
Selected	1.004	1.004	1.004	1.004	1.003	1.003	1.002	1.002	1.002	1.002	1.002	1.002	1.002
Cumulated	1.049	1.045	1.041	1.037	1.033	1.030	1.027	1.025	1.023	1.021	1.019	1.017	1.015

Novato Fire Protection District - Workers' Compensation

Loss Trend Factors

Accident Year	Benefit Level Factor (A)	Factor to 2021-2022 Loss Rate Level (B)	Factor to 2021-2022 Frequency Level (C)	Factor to 2021-2022 Severity Level (D)
Prior	1.279	4.383	2.290	1.938
1994-1995	1.279	4.194	2.223	1.909
1995-1996	1.175	3.687	2.158	1.728
1996-1997	1.055	3.170	2.095	1.529
1997-1998	0.922	2.650	2.034	1.317
1998-1999	0.815	2.241	1.975	1.146
1999-2000	0.724	1.905	1.917	1.003
2000-2001	0.682	1.719	1.861	0.932
2001-2002	0.683	1.646	1.807	0.919
2002-2003	0.717	1.654	1.754	0.951
2003-2004	0.887	1.960	1.703	1.159
2004-2005	1.150	2.429	1.653	1.479
2005-2006	1.250	2.528	1.605	1.585
2006-2007	1.187	2.296	1.558	1.482
2007-2008	1.108	2.052	1.513	1.364
2008-2009	1.038	1.840	1.469	1.259
2009-2010	0.955	1.619	1.426	1.141
2010-2011	0.904	1.467	1.384	1.064
2011-2012	0.896	1.391	1.344	1.039
2012-2013	0.919	1.366	1.305	1.051
2013-2014	0.937	1.332	1.267	1.055

Notes:

- (A) Based on WCIRB.
- (B) (A) adjusted for a 4.5% annual loss rate trend.
- (C) 3.0% annual frequency trend.
- (D) (A) adjusted for a 1.5% annual severity trend.

ulation of the ways in which we expect claims costs to have changed over the changes in statutory workers' compensation benefit levels and changes in actual changes in payroll. Changes in the ways in which claims are filed as a result of workers' compensation benefits are not generally reflected in the statutory benefit level and may be part of the reason for changes in actual claims costs in excess of payroll.

Novato Fire Protection District - Workers' Compensation

Residual Trend Factors

Accident Year	Initial Estimate of Ultimate Limited Losses (A)	Ultimate Reported Claims (B)	BLF (C)	Adjusted Limited Severity (D)	Trended Payroll (\$00) (E)	Ultimate Frequency (F)
Prior	\$1,519,306	213	1.279	9,123		
1994-1995	280,016	31	1.279	11,552		
1995-1996	127,000	32	1.175	4,663		
1996-1997	508,000	34	1.055	15,770		
1997-1998	373,000	26	0.922	13,227		
1998-1999	691,649	31	0.815	18,180		
1999-2000	322,000	31	0.724	7,518		
2000-2001	362,000	26	0.682	9,499		
2001-2002	593,926	24	0.683	16,897		
2002-2003	180,000	30	0.717	4,301		
2003-2004	435,196	31	0.887	12,459		
2004-2005	207,000	20	1.150	11,897		
2005-2006	263,000	27	1.250	12,178	129,567	2.084
2006-2007	270,765	23	1.187	13,968	141,619	1.624
2007-2008	92,328	18	1.108	5,684	166,958	1.078
2008-2009	457,000	23	1.038	20,631	174,493	1.318
2009-2010	451,000	26	0.955	16,563	154,051	1.688
2010-2011	369,000	19	0.904	17,555	131,590	1.444
2011-2012	406,000	19	0.896	19,136	132,174	1.437
2012-2013	213,000	23	0.919	8,512	130,048	1.769
2013-2014	369,686	30	0.937	11,542	129,857	2.310

	<u>Severity Trend Factors</u>	<u>Frequency Trend Factors</u>
Latest 9	1.009	1.022
Latest 5	0.865	1.087
5-Yr Mvg. Wtd. Avg. Latest 5	1.008	1.032
Prior	1.025	1.020
Default	1.025	0.980
Selected Residual Trend	1.015	1.030

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) x (C) / (B).
- (E) From Appendix M, Column (C).
- (F) (B) / (E) x 10,000.

Novato Fire Protection District - Workers' Compensation

Outstanding Liability for
Unallocated Loss Adjustment Expenses
as of 6/30/21

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)
2021-2022	19.0	\$575	1.000	\$575	\$10,925
2022-2023	14.8	575	1.050	604	8,939
2023-2024	12.4	575	1.103	634	7,862
2024-2025	10.9	575	1.158	666	7,259
2025-2026	8.9	575	1.216	699	6,221
2026-2027	7.7	575	1.277	734	5,652
2027-2028	6.5	575	1.341	771	5,012
2028-2029	5.4	575	1.408	810	4,374
2029-2030	4.7	575	1.478	850	3,995
2030-2031	3.9	575	1.552	892	3,479
2031-2032	3.3	575	1.630	937	3,092
2032-2033	2.8	575	1.712	984	2,755
2033-2034	2.2	575	1.798	1,034	2,275
2034-2035	1.5	575	1.888	1,086	1,629
2035-2036	0.8	575	1.982	1,140	912
2036-2037	0.5	575	2.081	1,197	599
2037-2038	0.1	575	2.185	1,256	126
2038-2039	0.0	575	2.294	1,319	0

(G) Total ULAE Outstanding as of 6/30/21: \$75,106

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 District.
- (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.

Novato Fire Protection District - Workers' Compensation

Outstanding Liability for
Unallocated Loss Adjustment Expenses
as of 6/30/22

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)
2022-2023	14.8	\$575	1.050	\$604	\$8,939
2023-2024	12.4	575	1.103	634	7,862
2024-2025	10.9	575	1.158	666	7,259
2025-2026	8.9	575	1.216	699	6,221
2026-2027	7.7	575	1.277	734	5,652
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2029-2030	4.7	575	1.478	850	3,995
2030-2031	3.9	575	1.552	892	3,479
2031-2032	3.3	575	1.630	937	3,092
2032-2033	2.8	575	1.712	984	2,755
2033-2034	2.2	575	1.798	1,034	2,275
2034-2035	1.5	575	1.888	1,086	1,629
2035-2036	0.8	575	1.982	1,140	912
2036-2037	0.5	575	2.081	1,197	599
2037-2038	0.1	575	2.185	1,256	126
2038-2039	0.0	575	2.294	1,319	0
2039-2040	0.0	575	2.409	1,385	0

(G) Total ULAE Outstanding as of 6/30/22: \$64,181

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 District.
- (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.

Novato Fire Protection District - Workers' Compensation
Payment and Reserve Forecast

	Accident Year	Calendar Period									
		7/1/2021 to 6/30/2021	7/1/2022 to 6/30/2022	7/1/2023 to 6/30/2023	7/1/2024 to 6/30/2024	7/1/2025 to 6/30/2025	7/1/2026 to 6/30/2026	7/1/2027 to 6/30/2027	7/1/2028 to 6/30/2028	7/1/2029 to 6/30/2029	7/1/2030 to 6/30/2031
2004-2005											
Ultimate Loss	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000
Paid in Calendar Period	-	5,767	5,889	5,899	4,508	4,055	3,598	2,778	2,163	2,181	2,181
Paid to Date	162,096	167,863	173,378	185,146	189,654	193,709	197,307	200,085	202,248	204,429	204,429
Undiscounted Outstanding Liability	52,904	47,137	41,622	29,854	25,346	21,291	17,693	14,915	12,752	10,571	10,571
2005-2006											
Ultimate Loss	\$264,000	\$264,000	\$264,000	\$264,000	\$264,000	\$264,000	\$264,000	\$264,000	\$264,000	\$264,000	\$264,000
Paid in Calendar Period	-	1,352	1,157	1,178	1,184	904	814	722	557	434	434
Paid to Date	252,032	253,384	254,541	256,826	258,010	258,914	259,728	260,450	261,007	261,441	261,441
Undiscounted Outstanding Liability	11,968	10,616	9,459	7,174	5,990	5,086	4,272	3,550	2,993	2,559	2,559
2006-2007											
Ultimate Loss	\$493,327	\$493,327	\$493,327	\$493,327	\$493,327	\$493,327	\$493,327	\$493,327	\$493,327	\$493,327	\$493,327
Paid in Calendar Period	-	493,327	493,327	493,327	493,327	493,327	493,327	493,327	493,327	493,327	493,327
Paid to Date	493,327	493,327	493,327	493,327	493,327	493,327	493,327	493,327	493,327	493,327	493,327
Undiscounted Outstanding Liability	-	-	-	-	-	-	-	-	-	-	-
2007-2008											
Ultimate Loss	\$92,328	\$92,328	\$92,328	\$92,328	\$92,328	\$92,328	\$92,328	\$92,328	\$92,328	\$92,328	\$92,328
Paid in Calendar Period	-	92,328	92,328	92,328	92,328	92,328	92,328	92,328	92,328	92,328	92,328
Paid to Date	92,328	92,328	92,328	92,328	92,328	92,328	92,328	92,328	92,328	92,328	92,328
Undiscounted Outstanding Liability	-	-	-	-	-	-	-	-	-	-	-
2008-2009											
Ultimate Loss	\$666,000	\$666,000	\$666,000	\$666,000	\$666,000	\$666,000	\$666,000	\$666,000	\$666,000	\$666,000	\$666,000
Paid in Calendar Period	-	20,892	16,739	16,048	13,731	13,132	13,974	14,047	10,734	9,656	9,656
Paid to Date	470,747	491,639	508,378	540,031	553,762	566,894	580,868	594,915	605,649	615,305	615,305
Undiscounted Outstanding Liability	195,253	174,361	157,622	125,969	112,238	99,106	85,132	71,085	60,351	50,695	50,695
2009-2010											
Ultimate Loss	\$692,000	\$692,000	\$692,000	\$692,000	\$692,000	\$692,000	\$692,000	\$692,000	\$692,000	\$692,000	\$692,000
Paid in Calendar Period	-	9,343	8,801	6,574	6,760	5,784	5,532	5,887	5,917	4,522	4,522
Paid to Date	600,406	609,749	618,550	632,175	638,935	644,719	650,251	656,138	662,055	666,577	666,577
Undiscounted Outstanding Liability	91,594	82,251	73,450	59,825	53,065	47,281	41,749	35,862	29,945	25,423	25,423
2010-2011											
Ultimate Loss	\$617,000	\$617,000	\$617,000	\$617,000	\$617,000	\$617,000	\$617,000	\$617,000	\$617,000	\$617,000	\$617,000
Paid in Calendar Period	-	12,316	10,375	7,831	7,300	7,507	6,423	6,143	6,537	6,571	6,571
Paid to Date	502,967	515,283	525,658	535,432	550,563	558,070	564,493	570,636	577,173	583,744	583,744
Undiscounted Outstanding Liability	114,033	101,717	91,342	81,568	73,737	66,437	58,930	46,364	39,827	33,256	33,256

Novato Fire Protection District - Workers' Compensation
Payment and Reserve Forecast

	Accident Year	Calendar Period											
		7/1/2021 to 6/30/2021	7/1/2022 to 6/30/2022	7/1/2023 to 6/30/2023	7/1/2024 to 6/30/2024	7/1/2025 to 6/30/2025	7/1/2026 to 6/30/2026	7/1/2027 to 6/30/2027	7/1/2028 to 6/30/2028	7/1/2029 to 6/30/2029	7/1/2030 to 6/30/2030	7/1/2031 to 6/30/2031	
2011-2012													
Ultimate Loss	\$697,000	\$697,000	\$697,000	\$697,000	\$697,000	\$697,000	\$697,000	\$697,000	\$697,000	\$697,000	\$697,000	\$697,000	
Paid in Calendar Period	-	15,534	13,574	11,435	10,772	8,631	8,046	8,275	7,080	6,771	6,771	7,205	
Paid to Date	555,782	571,316	584,890	596,325	607,097	615,728	623,774	632,049	639,129	645,900	653,105	653,105	
Outstanding Liability	141,218	125,684	112,110	100,675	89,903	81,272	73,226	64,951	57,871	51,100	43,895	43,895	
2012-2013													
Ultimate Loss	\$339,000	\$339,000	\$339,000	\$339,000	\$339,000	\$339,000	\$339,000	\$339,000	\$339,000	\$339,000	\$339,000	\$339,000	
Paid in Calendar Period	-	13,069	12,124	10,594	8,925	8,408	6,736	6,280	6,458	5,526	5,285	5,285	
Paid to Date	215,711	228,780	240,904	251,498	260,423	268,831	275,567	281,847	288,305	293,831	299,116	299,116	
Outstanding Liability	123,289	110,220	98,096	87,502	78,577	70,169	63,433	57,153	50,695	45,169	39,884	39,884	
2013-2014													
Ultimate Loss	\$563,000	\$563,000	\$563,000	\$563,000	\$563,000	\$563,000	\$563,000	\$563,000	\$563,000	\$563,000	\$563,000	\$563,000	
Paid in Calendar Period	-	22,115	13,284	12,324	10,769	9,072	8,546	6,847	6,383	6,565	5,617	5,617	
Paid to Date	415,567	437,682	450,966	463,290	474,059	483,131	491,677	498,524	504,907	511,472	517,089	517,089	
Outstanding Liability	147,433	125,318	112,034	99,710	88,941	79,869	71,323	64,476	58,093	51,528	45,911	45,911	
Ultimate Loss	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	\$13,193,330	
Ultimate Loss at 80%	13,544,000	13,544,000	13,544,000	13,544,000	13,544,000	13,544,000	13,544,000	13,544,000	13,544,000	13,544,000	13,544,000	13,544,000	
Paid at Expected in Calendar Period	-	124,175	100,647	88,760	80,303	69,963	63,474	59,055	55,626	49,843	45,740	45,740	
Paid at 80% in Calendar Period	-	166,926	135,471	119,471	108,088	94,170	85,436	79,488	74,873	67,089	61,566	61,566	
Total Paid to Date at Expected	12,179,216	12,303,391	12,404,038	12,492,798	12,573,101	12,643,064	12,706,538	12,765,593	12,821,219	12,871,062	12,916,802	12,916,802	
Total Paid to Date at 80%	12,346,142	12,481,613	12,601,084	12,709,172	12,803,342	12,888,778	12,968,266	13,043,139	13,110,227	13,171,793	13,171,793	13,171,793	
Undiscounted Outstanding Liability at Expected	1,014,114	889,939	789,292	700,532	620,229	550,266	486,792	427,737	372,111	322,268	276,528	276,528	
Undiscounted Outstanding Liability at 80%	1,364,997	1,197,858	1,062,387	942,916	834,828	740,658	655,222	575,734	500,861	433,773	372,207	372,207	
Total Undiscounted Outstanding ULAE at Expected	75,106	64,181	55,242	47,380	40,121	33,974	28,769	24,361	20,629	17,468	14,792	14,792	
Total Undiscounted Outstanding ULAE at 80%	101,093	86,388	74,356	63,773	54,003	45,729	38,723	32,790	27,767	23,513	19,910	19,910	
Total Undiscounted Outstanding Liability at Expected	1,089,220	954,120	844,534	747,912	660,350	584,240	515,561	452,098	392,740	339,736	291,320	291,320	
Total Undiscounted Outstanding Liability at 80%	1,466,090	1,284,246	1,136,743	1,006,690	888,831	786,387	693,945	608,524	528,628	457,285	392,117	392,117	

Notes appear on the next page.

Novato Fire Protection District - Workers' Compensation
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 2008-2009, \$666,000 is expected to be paid between 7/1/21 and 6/30/22, \$491,639 will have been paid by 6/30/22, and the reserve for remaining payments on these claims should be \$174,361.
- Ultimate Losses for each accident year are from Exhibit 3, Page 1.
- Paid in Calendar Period is a proportion of the Undiscounted Outstanding Liability from the previous calendar period. These proportions are derived from the paid loss development pattern selected in Appendix B. For example, $\$20,892 = \$195,253 \times 10.7\%$.
- Paid to Date is Paid in Calendar Period plus Paid to Date from previous calendar period. For example, $\$491,639 = \$20,892 + \$470,747$.
- Outstanding Liability is Ultimate Loss minus Paid to Date. For example, $\$174,361 = \$195,253 - \$20,892$.

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.

Novato Fire Protection District - Workers' Compensation

Short- and Long-Term Liabilities

<u>Liabilities as of 6/30/21:</u>		<u>Expected</u>	<u>Discounted</u>
<u>Current (Short Term)</u>	Loss and ALAE:	\$124,175	\$122,952
	ULAE:	10,925	10,817
	Short-Term Loss and LAE:	<u>\$135,100</u>	<u>\$133,769</u>
<u>Non-Current (Long Term)</u>	Loss and ALAE:	\$889,939	\$763,102
	ULAE:	64,181	54,805
	Long-Term Loss and LAE:	<u>\$954,120</u>	<u>\$817,907</u>
<u>Total Liability</u>	Loss and ALAE:	\$1,014,114	\$886,054
	ULAE:	75,106	65,622
	Total Loss and LAE:	<u>\$1,089,220</u>	<u>\$951,676</u>

<u>Liabilities as of 6/30/22:</u>			
<u>Current (Short Term)</u>	Loss and ALAE:	\$100,647	\$99,655
	ULAE:	8,939	8,851
	Short-Term Loss and LAE:	<u>\$109,586</u>	<u>\$108,506</u>
<u>Non-Current (Long Term)</u>	Loss and ALAE:	\$789,292	\$680,888
	ULAE:	55,242	47,441
	Long-Term Loss and LAE:	<u>\$844,534</u>	<u>\$728,329</u>
<u>Total Liability</u>	Loss and ALAE:	\$889,939	\$780,543
	ULAE:	64,181	56,292
	Total Loss and LAE:	<u>\$954,120</u>	<u>\$836,835</u>

		<u>Discounted with a Margin for Contingencies</u>				
		70%	75%	80%	85%	90%
		<u>Confidence</u>	<u>Confidence</u>	<u>Confidence</u>	<u>Confidence</u>	<u>Confidence</u>
<u>Liabilities as of 6/30/21:</u>						
<u>Current (Short Term)</u>	Loss and ALAE:	\$143,608	\$153,690	\$165,493	\$180,248	\$200,043
	ULAE:	12,634	13,521	14,560	15,858	17,599
	Short-Term Loss and LAE:	<u>\$156,242</u>	<u>\$167,211</u>	<u>\$180,053</u>	<u>\$196,106</u>	<u>\$217,642</u>
<u>Non-Current (Long Term)</u>	Loss and ALAE:	\$891,303	\$953,878	\$1,027,136	\$1,118,707	\$1,241,567
	ULAE:	64,013	68,506	73,767	80,344	89,168
	Long-Term Loss and LAE:	<u>\$955,316</u>	<u>\$1,022,384</u>	<u>\$1,100,903</u>	<u>\$1,199,051</u>	<u>\$1,330,735</u>
<u>Total Liability</u>	Loss and ALAE:	\$1,034,911	\$1,107,568	\$1,192,629	\$1,298,955	\$1,441,610
	ULAE:	76,647	82,027	88,327	96,202	106,767
	Total Loss and LAE:	<u>\$1,111,558</u>	<u>\$1,189,595</u>	<u>\$1,280,956</u>	<u>\$1,395,157</u>	<u>\$1,548,377</u>
<u>Liabilities as of 6/30/22:</u>						
<u>Current (Short Term)</u>	Loss and ALAE:	\$116,397	\$124,569	\$134,136	\$146,094	\$162,139
	ULAE:	10,338	11,064	11,913	12,976	14,401
	Short-Term Loss and LAE:	<u>\$126,735</u>	<u>\$135,633</u>	<u>\$146,049</u>	<u>\$159,070</u>	<u>\$176,540</u>
<u>Non-Current (Long Term)</u>	Loss and ALAE:	\$795,277	\$851,110	\$916,475	\$998,182	\$1,107,804
	ULAE:	55,411	59,301	63,856	69,548	77,187
	Long-Term Loss and LAE:	<u>\$850,688</u>	<u>\$910,411</u>	<u>\$980,331</u>	<u>\$1,067,730</u>	<u>\$1,184,991</u>
<u>Total Liability</u>	Loss and ALAE:	\$911,674	\$975,679	\$1,050,611	\$1,144,276	\$1,269,943
	ULAE:	65,749	70,365	75,769	82,524	91,588
	Total Loss and LAE:	<u>\$977,423</u>	<u>\$1,046,044</u>	<u>\$1,126,380</u>	<u>\$1,226,800</u>	<u>\$1,361,531</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.

Novato Fire Protection District - Workers' Compensation

Discount Factors to be Applied to Overall Reserves

Accident Year	Full Value of Reserve at 6/30/21 (A)	Discount Factor (B)	Discounted Reserve at 6/30/21 (C)	Full Value of Reserve at 6/30/22 (D)	Discount Factor (E)	Discounted Reserve at 6/30/22 (F)
Prior	\$0	0.990	\$0	\$0	0.995	\$0
1994-1995	0	0.974	0	0	0.990	0
1995-1996	12,137	0.960	11,651	10,062	0.974	9,800
1996-1997	8,369	0.948	7,936	7,155	0.960	6,868
1997-1998	12,515	0.939	11,756	10,300	0.948	9,767
1998-1999	2,684	0.931	2,500	2,230	0.939	2,095
1999-2000	25,241	0.926	23,367	21,202	0.931	19,746
2000-2001	32,284	0.920	29,697	27,409	0.926	25,374
2001-2002	23,539	0.916	21,558	19,655	0.920	18,080
2002-2003	19,653	0.910	17,888	14,622	0.916	13,391
2003-2004	0	0.904	0	0	0.910	0
2004-2005	52,904	0.896	47,387	47,137	0.904	42,590
2005-2006	11,968	0.889	10,642	10,616	0.896	9,509
2006-2007	0	0.883	0	0	0.889	0
2007-2008	0	0.876	0	0	0.883	0
2008-2009	195,253	0.871	170,077	174,361	0.876	152,702
2009-2010	91,594	0.867	79,391	82,251	0.871	71,645
2010-2011	114,033	0.863	98,440	101,717	0.867	88,165
2011-2012	141,218	0.861	121,525	125,684	0.863	108,498
2012-2013	123,289	0.858	105,723	110,220	0.861	94,850
2013-2014	147,433	0.858	126,516	125,318	0.858	107,463
Totals	\$1,014,114		\$886,054	\$889,939		\$780,543

(G) Discount Factor at 6/30/21 for Overall Reserve: 0.874
 (H) Discount Factor at 6/30/22 for Overall Reserve: 0.877

Notes:

- (A) From Appendix G, Outstanding Liability at 6/30/21.
- (B) Based on Appendix I, Page 2, Column (E).
- (C) (A) x (B).
- (D) From Appendix G, Outstanding Liability at 6/30/22.
- (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 0.874, the discounted liability for outstanding claims is 87.4% of the full value.

Novato Fire Protection District - Workers' Compensation

Calculation of Discount Factors

Payment Year (A)	Payment Pattern (B)	Return on Investment (C)	Discounted Reserves (D)	Undiscounted Reserves (E)	Discount Factor (F)
29+	2.3%	2.0%	0.023	0.023	0.990
28	0.5%	2.0%	0.027	0.028	0.974
27	0.5%	2.0%	0.032	0.033	0.960
26	0.6%	2.0%	0.036	0.038	0.948
25	0.7%	2.0%	0.043	0.046	0.939
24	0.8%	2.0%	0.050	0.054	0.931
23	1.1%	2.0%	0.060	0.065	0.926
22	1.1%	2.0%	0.070	0.076	0.920
21	1.4%	2.0%	0.083	0.090	0.916
20	1.4%	2.0%	0.095	0.104	0.910
19	1.3%	2.0%	0.106	0.117	0.904
18	1.2%	2.0%	0.116	0.130	0.896
17	1.4%	2.0%	0.128	0.144	0.889
16	1.4%	2.0%	0.140	0.158	0.883
15	1.5%	2.0%	0.151	0.173	0.876
14	1.8%	2.0%	0.166	0.191	0.871
13	2.0%	2.0%	0.183	0.211	0.867
12	2.2%	2.0%	0.201	0.233	0.863
11	2.6%	2.0%	0.223	0.259	0.861
10	2.7%	2.0%	0.245	0.286	0.858
9	3.8%	2.0%	0.278	0.323	0.858
8	10.8%	2.0%	0.379	0.431	0.879
7	5.4%	2.0%	0.425	0.485	0.876
6	6.0%	2.0%	0.476	0.545	0.873
5	5.4%	2.0%	0.520	0.599	0.868
4	6.2%	2.0%	0.571	0.661	0.864
3	8.8%	2.0%	0.647	0.749	0.864
2	13.6%	2.0%	0.769	0.885	0.869
1	11.5%	2.0%	0.868	1.000	0.868

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,
 $76.9\% = [64.7\% / 1.020] + [13.6\% / (1.010)]$.
- (E) Summation of future (B) values. This is the percent of ultimate loss unpaid at the beginning of the year.
- (F) (D) / (E).

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 0.88, on a discounted basis, \$0.88 must be budgeted for every \$1 that will actually be paid on claims that will be incurred in the next fiscal year.

Novato Fire Protection District - Workers' Compensation

Confidence Level Table

Probability	Projected Losses	Outstanding Losses
95%	3.348	1.896
90%	2.344	1.627
85%	1.833	1.466
80%	1.499	1.346
75%	1.256	1.250
70%	1.068	1.168
65%	0.915	1.097
60%	0.787	1.032
55%	0.677	0.973
50%	0.582	0.917
45%	0.498	0.865
40%	0.423	0.813
35%	0.355	0.762
30%	0.293	0.711
25%	0.235	0.658

To read table: For the above retention, there is a 90% chance that final loss settlements will be less than 2.344 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.

Novato Fire Protection District - Workers' Compensation

Program History

Policy Year Start Date	Policy Year End Date	Policy Year	Self-Insured Retention	
			Per Occurrence	Aggregate
7/1/1987	6/30/1994	Prior	\$275,000	(none)
7/1/1994	6/30/1995	1994-1995	275,000	(none)
7/1/1995	6/30/1996	1995-1996	275,000	(none)
7/1/1996	6/30/1997	1996-1997	275,000	(none)
7/1/1997	6/30/1998	1997-1998	275,000	(none)
7/1/1998	6/30/1999	1998-1999	275,000	(none)
7/1/1999	6/30/2000	1999-2000	275,000	(none)
7/1/2000	6/30/2001	2000-2001	275,000	(none)
7/1/2001	6/30/2002	2001-2002	300,000	(none)
7/1/2002	6/30/2003	2002-2003	1,000,000	(none)
7/1/2003	6/30/2004	2003-2004	1,000,000	(none)
7/1/2004	6/30/2005	2004-2005	1,000,000	(none)
7/1/2005	6/30/2006	2005-2006	1,000,000	(none)
7/1/2006	6/30/2007	2006-2007	1,000,000	(none)
7/1/2007	6/29/2008	2007-2008	1,000,000	(none)
7/1/2008	6/30/2009	2008-2009	1,000,000	(none)
7/1/2009	6/30/2010	2009-2010	1,000,000	(none)
7/1/2010	6/30/2011	2010-2011	1,000,000	(none)
7/1/2011	6/29/2012	2011-2012	1,000,000	(none)
7/1/2012	6/30/2013	2012-2013	1,000,000	(none)
7/1/2013	6/30/2014	2013-2014	1,250,000	(none)

Third Party Claims Administrator	Begin Date	End Date
Athens	7/1/1987	Current

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

Novato Fire Protection District - Workers' Compensation

Incurred Losses as of 6/30/21

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	\$1,828,737	\$0	\$56,180	\$1,772,557	\$0	\$253,250	\$1,519,306	\$253,250	\$1,772,557	\$1,772,557
1994-1995	353,817	0	0	353,817	0	73,801	280,016	73,801	353,817	353,817
1995-1996	126,843	0	0	126,843	0	0	126,843	0	126,843	126,843
1996-1997	557,776	0	0	557,776	0	50,804	506,972	50,804	557,776	557,776
1997-1998	451,864	0	0	451,864	0	80,309	371,556	80,309	451,864	451,864
1998-1999	985,316	0	0	985,316	0	293,668	691,649	293,668	985,316	985,316
1999-2000	436,297	0	0	436,297	0	116,070	320,228	116,070	436,297	436,297
2000-2001	585,910	0	0	585,910	5,667	225,797	360,113	220,129	580,243	580,243
2001-2002	1,124,402	0	694	1,123,707	46,495	529,782	593,926	483,287	1,077,213	1,077,213
2002-2003	178,814	0	0	178,814	0	0	178,814	0	178,814	178,814
2003-2004	2,004,301	0	0	2,004,301	0	1,569,106	435,196	1,569,106	2,004,301	2,004,301
2004-2005	203,640	0	0	203,640	0	0	203,640	0	203,640	203,640
2005-2006	257,533	0	0	257,533	0	0	257,533	0	257,533	257,533
2006-2007	493,327	0	0	493,327	0	222,562	270,765	222,562	493,327	493,327
2007-2008	92,328	0	0	92,328	0	0	92,328	0	92,328	92,328
2008-2009	620,125	0	0	620,125	0	171,245	448,879	171,245	620,125	620,125
2009-2010	635,495	0	0	635,495	0	198,310	437,186	198,310	635,495	635,495
2010-2011	536,416	0	0	536,416	0	174,528	361,889	174,528	536,416	536,416
2011-2012	607,330	0	0	607,330	0	218,106	389,225	218,106	607,330	607,330
2012-2013	257,495	0	0	257,495	0	51,156	206,339	51,156	257,495	257,495
2013-2014	415,567	0	0	415,567	0	45,881	369,686	45,881	415,567	415,567
Total	\$12,753,334	\$0	\$56,875	\$12,696,460	\$52,162	\$4,274,372	\$8,422,088	\$4,222,210	\$12,644,298	\$12,644,298

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the District.
- (C)
- (D) Recoveries.
- (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.

Novato Fire Protection District - Workers' Compensation

Paid Losses as of 6/30/21

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	\$1,828,737	\$0	\$56,180	\$1,772,557	\$0	\$253,250	\$1,519,306	\$253,250	\$1,772,557	\$1,772,557
1994-1995	353,817	0	0	353,817	0	73,801	280,016	73,801	353,817	353,817
1995-1996	115,863	0	0	115,863	0	0	115,863	0	115,863	115,863
1996-1997	550,631	0	0	550,631	0	50,804	499,827	50,804	550,631	550,631
1997-1998	441,485	0	0	441,485	0	80,309	361,177	80,309	441,485	441,485
1998-1999	985,316	0	0	985,316	0	293,668	691,649	293,668	985,316	985,316
1999-2000	414,759	0	0	414,759	0	116,070	298,689	116,070	414,759	414,759
2000-2001	559,383	0	0	559,383	5,667	225,797	333,586	220,129	553,716	553,716
2001-2002	1,063,156	0	694	1,062,461	0	468,536	593,926	468,536	1,062,461	1,062,461
2002-2003	163,347	0	0	163,347	0	0	163,347	0	163,347	163,347
2003-2004	2,004,301	0	0	2,004,301	0	1,569,106	435,196	1,569,106	2,004,301	2,004,301
2004-2005	162,096	0	0	162,096	0	0	162,096	0	162,096	162,096
2005-2006	252,032	0	0	252,032	0	0	252,032	0	252,032	252,032
2006-2007	493,327	0	0	493,327	0	222,562	270,765	222,562	493,327	493,327
2007-2008	92,328	0	0	92,328	0	0	92,328	0	92,328	92,328
2008-2009	470,747	0	0	470,747	0	53,469	417,279	53,469	470,747	470,747
2009-2010	600,406	0	0	600,406	0	178,688	421,718	178,688	600,406	600,406
2010-2011	502,967	0	0	502,967	0	174,528	328,439	174,528	502,967	502,967
2011-2012	555,782	0	0	555,782	0	176,483	379,299	176,483	555,782	555,782
2012-2013	215,711	0	0	215,711	0	26,037	189,675	26,037	215,711	215,711
2013-2014	415,567	0	0	415,567	0	45,881	369,686	45,881	415,567	415,567
Total	\$12,241,758	\$0	\$56,875	\$12,184,884	\$5,667	\$4,008,985	\$8,175,899	\$4,003,318	\$12,179,217	\$12,179,217

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the District.
- (C)
- (D) Recoveries.
- (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.

Novato Fire Protection District - Workers' Compensation

Case Reserves as of 6/30/21

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
1994-1995	0	0	0	0	0	0	0	0	0	0
1995-1996	10,980	0	0	10,980	0	0	10,980	0	10,980	10,980
1996-1997	7,145	0	0	7,145	0	0	7,145	0	7,145	7,145
1997-1998	10,379	0	0	10,379	0	0	10,379	0	10,379	10,379
1998-1999	0	0	0	0	0	0	0	0	0	0
1999-2000	21,539	0	0	21,539	0	0	21,539	0	21,539	21,539
2000-2001	26,527	0	0	26,527	0	0	26,527	0	26,527	26,527
2001-2002	61,246	0	0	61,246	46,495	61,246	0	14,751	14,751	14,751
2002-2003	15,468	0	0	15,468	0	0	15,468	0	15,468	15,468
2003-2004	0	0	0	0	0	0	0	0	0	0
2004-2005	41,544	0	0	41,544	0	0	41,544	0	41,544	41,544
2005-2006	5,500	0	0	5,500	0	0	5,500	0	5,500	5,500
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	149,377	0	0	149,377	0	117,776	31,601	117,776	149,377	149,377
2009-2010	35,089	0	0	35,089	0	19,621	15,468	19,621	35,089	35,089
2010-2011	33,449	0	0	33,449	0	0	33,449	0	33,449	33,449
2011-2012	51,548	0	0	51,548	0	41,623	9,925	41,623	51,548	51,548
2012-2013	41,784	0	0	41,784	0	25,119	16,665	25,119	41,784	41,784
2013-2014	0	0	0	0	0	0	0	0	0	0
Total	\$511,576	\$0	\$0	\$511,576	\$46,495	\$265,387	\$246,189	\$218,892	\$465,081	\$465,081

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Appendix L, Page 1, Column (B) - Appendix L, Page 2, Column (B).
- (C) Appendix L, Page 1, Column (C) - Appendix L, Page 2, Column (C).
- (D) Appendix L, Page 1, Column (D) - Appendix L, 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.

Novato Fire Protection District - Workers' Compensation

Claim Counts as of 6/30/21

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	231	0	18	213	231	0	18	213	0	0
1994-1995	33	0	2	31	33	0	2	31	0	0
1995-1996	35	0	3	32	34	0	3	31	1	1
1996-1997	39	0	5	34	38	0	5	33	1	1
1997-1998	28	0	2	26	27	0	2	25	1	1
1998-1999	34	0	3	31	34	0	3	31	0	0
1999-2000	31	0	0	31	29	0	0	29	2	2
2000-2001	28	0	2	26	27	0	2	25	1	1
2001-2002	25	0	1	24	24	0	1	23	1	1
2002-2003	30	0	0	30	29	0	0	29	1	1
2003-2004	35	0	4	31	35	0	4	31	0	0
2004-2005	25	0	5	20	24	0	5	19	1	1
2005-2006	29	0	2	27	28	0	2	26	1	1
2006-2007	25	0	2	23	25	0	2	23	0	0
2007-2008	20	0	2	18	20	0	2	18	0	0
2008-2009	24	0	1	23	22	0	1	21	2	2
2009-2010	27	0	1	26	25	0	1	24	2	2
2010-2011	25	0	6	19	24	0	6	18	1	1
2011-2012	24	0	5	19	22	0	5	17	2	2
2012-2013	24	0	1	23	22	0	1	21	2	2
2013-2014	34	0	4	30	34	0	4	30	0	0
Total	806	0	69	737	787	0	69	718	19	19

Notes:

- (A) Years are 7/1 to 6/30.
- (B) Provided by the District.
- (C)
- (D) Closed claims with no payment
- (E) (B) + (C) - (D).
- (F) Provided by the District.
- (G)
- (H) Closed claims with no payment
- (I) (F) + (G) - (H).
- (J) (B) - (F).
- (K) (E) - (I).

Novato Fire Protection District - Workers' Compensation

Exposure Measures

Accident Year	Total Payroll (\$00) (A)	Inflation Trend Factor (B)	Trended Payroll (\$00) (C)
2005-2006	87,368	1.483	129,567
2006-2007	97,871	1.447	141,619
2007-2008	118,242	1.412	166,958
2008-2009	126,628	1.378	174,493
2009-2010	114,621	1.344	154,051
2010-2011	100,374	1.311	131,590
2011-2012	103,342	1.279	132,174
2012-2013	104,205	1.248	130,048
2013-2014	106,615	1.218	129,857

Notes:

- (A) Provided by the District.
- (B) Based on WCIRB.
- (C) (A) x (B).