

6.8 - Select Actuarial Services Executive Summary as of 06.30.23

Executive Summary

State of Tennessee

Workers Compensation and Tort Liabilities

September 28, 2023

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Executive Summary

State of Tennessee

Report Date: September 28, 2023

Based on data as of June 30, 2023

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Section 1

Executive Summary

The purpose of this executive summary is to summarize the reserve and forecast reports for the State of Tennessee (the State). The reserve and forecast reports provide estimates associated with the State's Workers Compensation and Liability exposures.

These reports address liabilities associated with pure losses only. They do not address expenses associated with the cost of settling the losses. Estimated administrative expenses for 7/1/24-25 are allocated in the forecast reports.

More detail about results, data, assumptions, and methodology can be found in the four separate reserve and forecast reports for Workers Compensation and Liability.

Results of the Analyses

The table that follows shows the main results of the reserve analyses. Outstanding losses are estimated to total \$123,122,000 for all types of loss as of June 30, 2023. Of this amount, we expect \$18,399,000 to be paid out during the next fiscal year. Discounted outstanding losses total \$92,415,000 assuming a 4.0% interest rate.

Type of Loss	Outstanding Losses As of 6/30/23	Outstanding Losses Discounted at 4.0%	Expected Payments on Outstanding Losses 7/1/23 to 6/30/24
Workers Compensation	\$102,398,000	\$73,428,000	\$12,428,000
Automobile Liability	\$4,634,000	\$4,360,000	\$1,912,000
General Liability	\$14,168,000	\$12,925,000	\$3,683,000
Medical Malpractice	\$1,922,000	\$1,702,000	\$376,000
Total	\$123,122,000	\$92,415,000	\$18,399,000

Discounted required reserves are down \$16,622,000 from the prior analysis for all lines combined (see Reconciliation Table 1). Approximately half of the decrease to the discounted required reserve can be attributed to the change in the discount rate from 2.5% to 4.0%. The balance of the decrease is experience driven. Workers Compensation has seen another year of favorable development. Claim frequency hit an all-time low at the start of the pandemic in 2020/21 and has subsequently increased less than anticipated for 2021/22 and 2022/23. Additionally, several claims from mature periods experienced substantial reserve decreases since the prior evaluation and this also helped to reduce the outstanding liability.

For the Tort coverages, General Liability stands out. Reported losses for both Transportation and “all other agencies” developed considerably less than projected and a handful of large claims in older years experienced large decreases. For Automobile Liability and Medical Malpractice, loss development was slightly higher than expected.

More details on the experience for the individual types of loss can be found in the Reserve Reports.

Forecast losses for the 7/1/24-25 accident year are as shown in the table that follows for each type of loss. At the expected level, forecast losses total \$26,590,000 while this total decreases to \$24,298,000 at the 65th percentile discounted level.

Type of Loss	Undiscounted Expected 7/1/24-25 Forecast Losses	Discounted 65 th Percentile 7/1/24-25 Forecast Losses*
Workers Compensation	\$19,357,000	\$17,358,000
Automobile Liability	\$2,473,000	\$2,448,000
General Liability	\$4,334,000	\$4,071,000
Medical Malpractice	\$426,000	\$421,000
Total	\$26,590,000	\$24,298,000

* In this report, the discounted 65th percentile forecast losses is the sum of the individual 65th percentile forecast losses, not the 65th percentile of all lines combined.

The total discounted, risk-loaded forecast losses are down about \$2.0 million from the estimate in the prior analysis (see Reconciliation Table 2). Experience alone would suggest a \$4.2 million decrease to the undiscounted forecast losses. The change in the discount rate from 2.5% to 4.0% further reduces the discounted, risk-loaded forecast by about \$1.4 million. Finally, the combined effects of other factors, such as inflation and exposure increases, push the forecast up by about \$3.6 million compared to last year’s estimate. Additional details on the forecasts for the individual types of loss can be found in the Forecast Reports.

Several tables and graphs have been included in this Executive Summary.

Graph 1 displays the outstanding losses as of June 30, 2023, by type of loss.

Graph 2 shows the change in ultimate losses for the current report as compared to the prior report as of June 30, 2022. This change is shown in total and by type of loss.

Graph 3 displays the discounted 65th percentile forecast losses by type of loss.

Graph 4 shows the change in the discounted, risk-loaded forecast losses from 2023/24 estimated in the prior report to 2024/25 estimated in the current report. This change is shown in total and by type of loss.

Reconciliation Table 1 outlines the changes that occurred between the last actuarial report and the current actuarial report and shows how those changes contribute to the change in the outstanding

losses between the two reports. This is shown both in total and by type of loss. Medical Malpractice is shown separately due to the differences in the way the outstanding losses were calculated.

Reconciliation Table 2 outlines the changes that occurred between the last actuarial report and the current actuarial report and shows how those changes contribute to the change in the forecast losses for 7/1/24-25 between the two reports. This is shown both in total and by type of loss.

WC Tables 1 through 4, AL Tables 1 through 4, GL Tables 1 through 4, and Med Mal Tables 1 through 4 are analogous.

Table 1 displays the ultimate and outstanding losses as of June 30, 2023, both undiscounted and discounted at 4.0%. Estimated short-term (next fiscal year) and long-term payments are also shown.

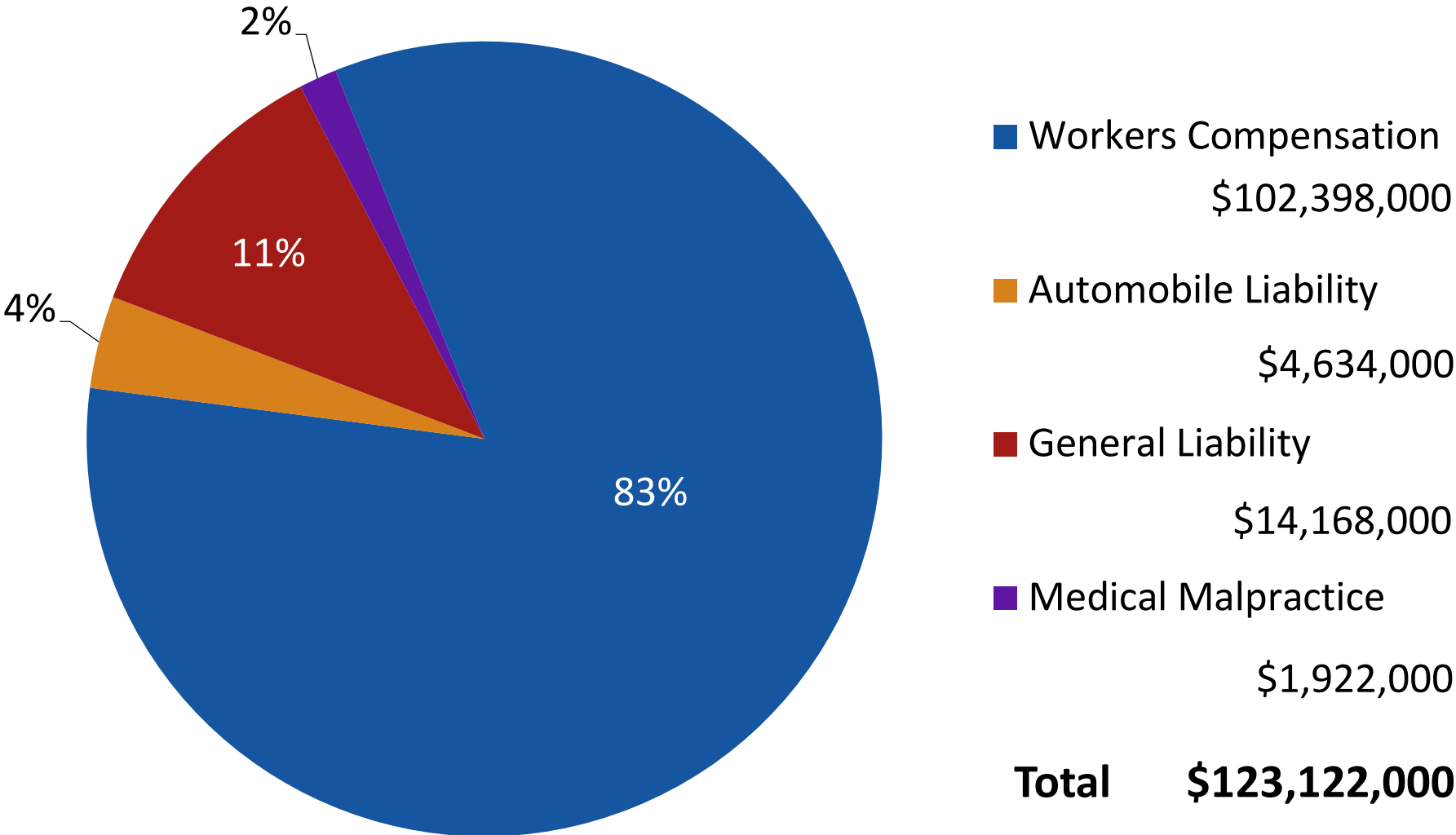
Table 2 provides a comparison of actual incurred and paid losses as of June 30, 2023, with expected incurred and paid losses. These expectations were based on the information and assumptions made in the previous report dated January 5, 2023. Also shown is a comparison of the current estimates of ultimate losses with those selected in the prior report.

Table 3 shows the ultimate and outstanding losses as of June 30, 2023, at various confidence levels, both undiscounted and discounted at 4.0%.

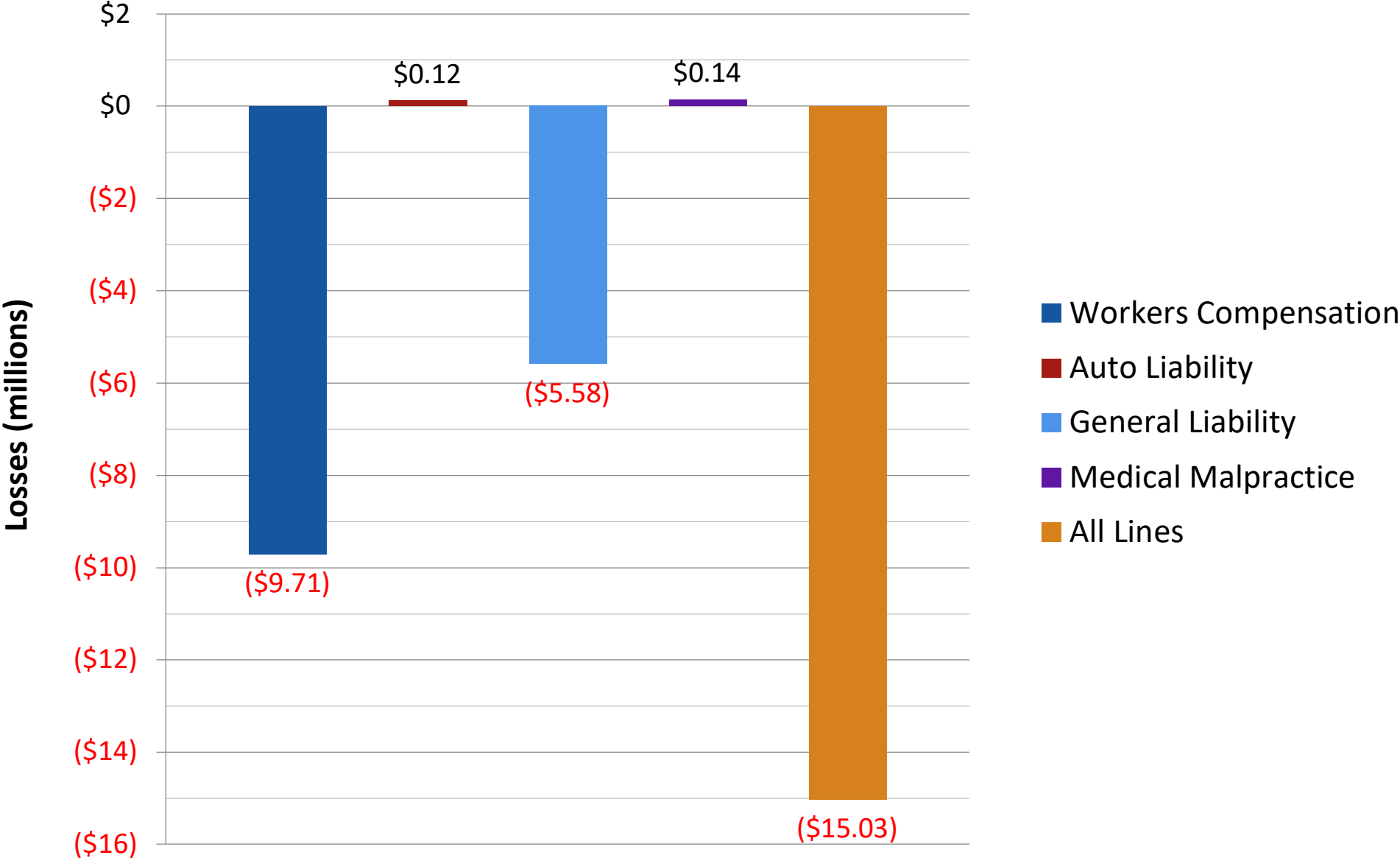
Table 4 shows the aggregate loss distribution for the 7/1/24-25 forecast losses. Both the undiscounted and discounted forecast losses are shown at various percentiles, including expected. Also shown, are the undiscounted and discounted costs per exposure (exposures vary by line) at various percentiles including expected.

Allocation Table 1 displays the allocation of the losses and estimated administrative expenses for 7/1/24-25 to the various agencies or agency groups. This is shown in total as well as broken into type of loss. A more detailed breakdown of this Allocation to the budget codes within each agency or agency group can be found in Appendix H of the Forecast reports.

Undiscounted Outstanding Losses As of June 30, 2023

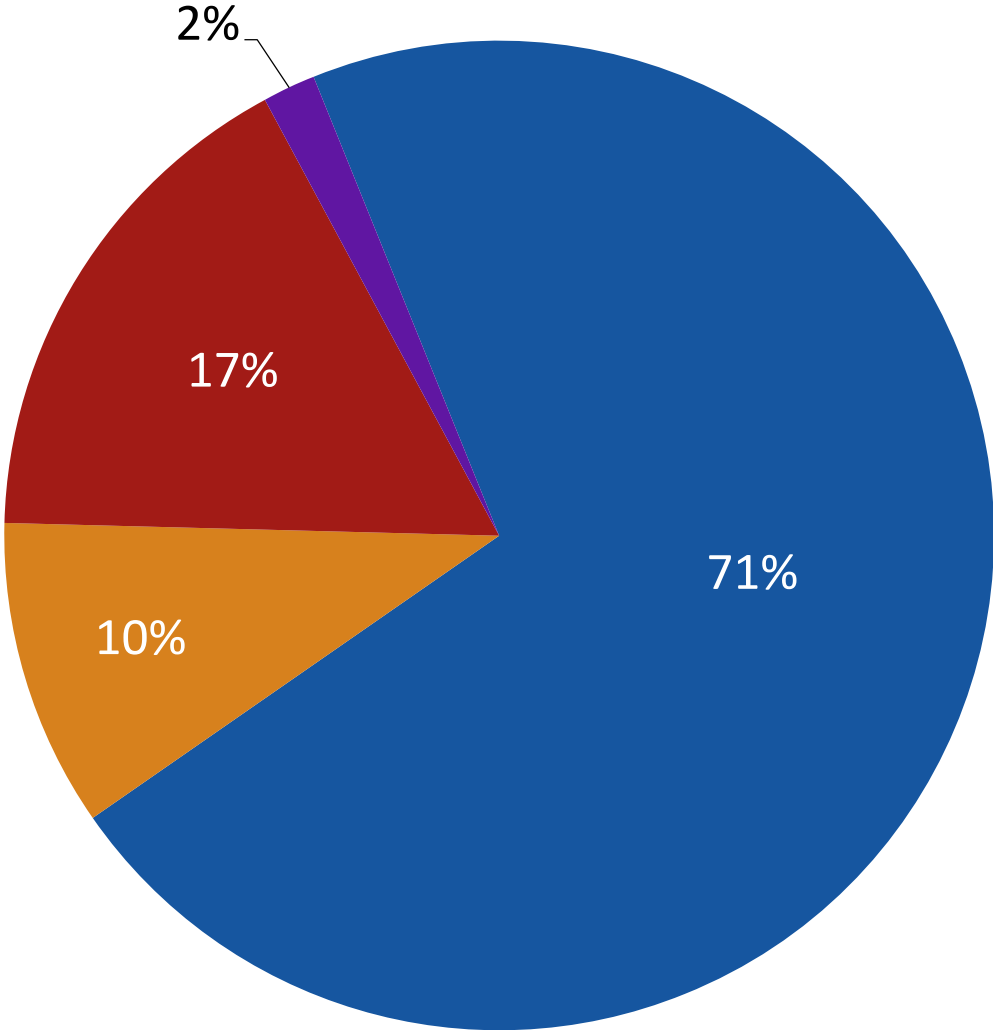


Change in Ultimate Losses By Line*



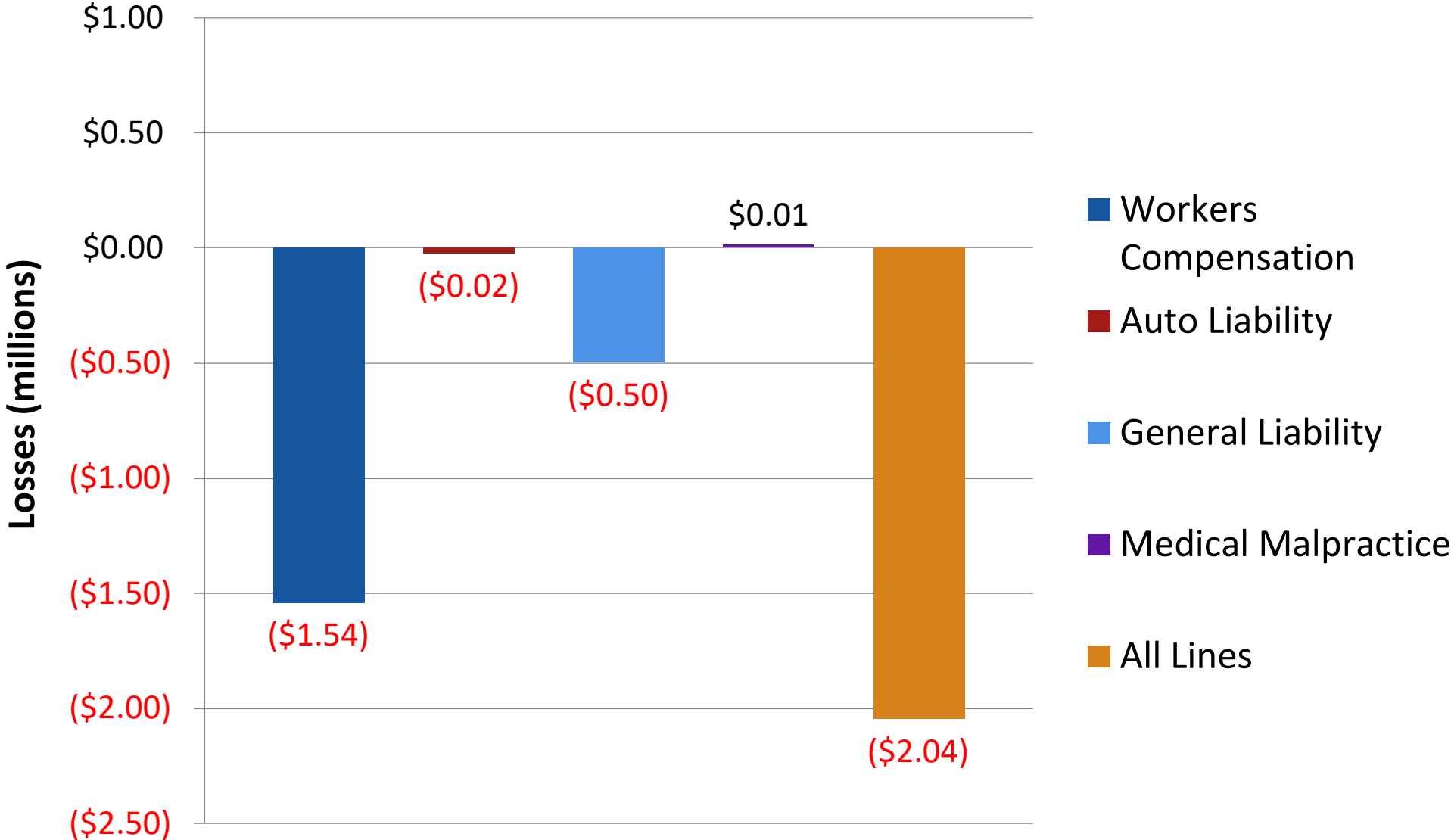
*Incurred Through 6/30/23

Discounted 65th Percentiles 7/1/24-25 Forecast Losses



Workers Compensation	\$17,358,000
Automobile Liability	\$2,448,000
General Liability	\$4,071,000
Medical Malpractice	\$421,000
Total	\$24,298,000

Change in Discounted, Risk-Loaded Forecast Losses Losses By Line*



*Changes from 2023/24 forecast to 2024/25 forecast

Reconciliation of Required Reserves to Previous Actuarial Report

	<i>Workers Compensation</i>	<i>Automobile Liability</i>	<i>General Liability</i>	<i>Medical Malpractice</i>	<i>Total</i>
(1) <i>Discounted Required Reserves as of June 30, 2022 (@2.5%)</i>	\$87,356,000	\$3,741,000	\$16,296,000	\$1,644,000	\$109,037,000
(2) <i>Undiscounted Required Reserves as of June 30, 2022</i>	\$108,913,000	\$3,887,000	\$17,299,000	\$1,776,000	\$131,875,000
(3) <i>Change in Ultimate Losses on Accident Years through 7/1/21-22 { Through 7/1/22-23 for Medical Malpractice }</i>	(\$7,738,000)	(\$242,000)	(\$4,914,000)	\$144,000	(\$12,750,000)
(4) <i>Losses Paid During 7/1/22-23 on Losses Incurred through 6/30/22 { Through 7/1/21-22 for Losses Incurred through 6/30/22 for Medical Malpractice }</i>	(\$12,266,097)	(\$1,162,862)	(\$1,647,949)	(\$372,500)	(\$15,449,408)
(5) <i>Undiscounted Required Reserves as of 6/30/23 on Loss Incurred through 6/30/22</i>	\$88,909,000	\$2,482,000	\$10,736,000	\$1,922,000	\$104,049,000
(6) <i>Ultimate Losses on 7/1/22-23 { From 6/30/22 forecast report for Medical Malpractice }</i>	\$17,383,000	\$2,681,000	\$3,624,000	\$375,000	\$24,063,000
(7) <i>Losses Paid During 7/1/22-23 on Losses Incurred during 7/1/22-23</i>	(\$3,894,481)	(\$528,931)	(\$191,501)		(\$4,614,912)
(8) <i>Undiscounted Required Reserves as of 6/30/23 on 7/1/22-23</i>	\$13,489,000	\$2,152,000	\$3,432,000		\$19,073,000
(9) <i>Undiscounted Required Reserves as of June 30, 2023</i>	\$102,398,000	\$4,634,000	\$14,168,000	\$1,922,000	\$123,122,000
(10) <i>Discounted Required Reserves as of June 30, 2023 (@4.0%)</i>	\$73,428,000	\$4,360,000	\$12,925,000	\$1,702,000	\$92,415,000

Reconciliation of Forecast to Previous Actuarial Report

	<i>Workers Compensation</i>	<i>Automobile Liability</i>	<i>General Liability</i>	<i>Medical Malpractice</i>	<i>Total</i>
(1) <i>Discounted 65%ile Forecast for 2023/24 (Prior report @2.5%)</i>	\$18,897,000	\$2,471,000	\$4,567,000	\$407,000	\$26,342,000
(2) <i>Undiscounted 65%ile Forecast for 2023/24 (Prior report)</i>	\$21,391,000	\$2,606,000	\$5,024,000	\$451,000	\$29,472,000
(3) <i>Undiscounted Expected Forecast for 2023/24 (Prior report)</i>	\$19,960,000	\$2,434,000	\$4,564,000	\$384,000	\$27,342,000
(4) <i>Projected Exposures for 2023/24 (Prior report)</i>	\$48,328,579	11,231	\$4,832,857,899	2,217	--
(5) <i>Projected Exposures for 2024/25</i>	\$54,279,115	11,361	\$5,429,728,396	2,344	--
(6) <i>Approximate Change due to Change in Exposure {Percentage Change}</i>	\$2,558,000 12.8%	\$28,000 1.2%	\$482,000 10.6%	\$22,000 5.7%	\$3,090,000 11.3%
(7) <i>Approximate Change due to Inflation {Percentage Change}</i>	\$100,000 0.5%	\$97,000 4.0%	\$137,000 3.0%	\$13,000 3.5%	\$347,000 1.3%
(8) <i>Approximate Change due to Experience {Percentage Change}</i>	(\$3,261,000) -16.3%	(\$86,000) -3.5%	(\$849,000) -18.6%	\$7,000 1.8%	(\$4,189,000) -15.3%
(9) <i>Undiscounted Expected Forecast for 2024/25</i>	\$19,357,000	\$2,473,000	\$4,334,000	\$426,000	\$26,590,000
(10) <i>Approximate Change due to Modeling Differences {Percentage Change}</i>	\$42,000 0.2%	\$13,000 0.5%	(\$61,000) -1.2%	\$3,000 0.7%	(\$3,000) 0.0%
(11) <i>Undiscounted 65%ile Forecast for 2024/25</i>	\$20,830,000	\$2,658,000	\$4,733,000	\$496,000	\$28,717,000
(12) <i>Approximate Change due to Change in Payout Pattern {Percentage Change}</i>	\$67,000 0.3%	\$0 0.0%	\$26,000 0.5%	(\$5,000) -1.0%	\$88,000 0.3%
(13) <i>Discounted 65%ile Forecast for 2024/25 @2.5% (disc to 10/1/24)</i>	\$18,403,000	\$2,523,000	\$4,302,000	\$447,000	\$25,675,000
(14) <i>Approximate Change due to Change in Interest Rate {Percentage Change}</i>	(\$1,045,000) -5.7%	(\$75,000) -3.0%	(\$231,000) -5.4%	(\$26,000) -5.8%	(\$1,377,000) -5.4%
(15) <i>Discounted 65%ile Forecast for 2024/25 @4.0% (disc to 10/1/24) {Overall Percentage Change}</i>	\$17,358,000 -8.1%	\$2,448,000 -0.9%	\$4,071,000 -10.9%	\$421,000 3.4%	\$24,298,000 -7.8%

**Calculation of Required Reserves
As of June 30, 2023
Workers Compensation**

(A) Accident Period	(B) Selected Ultimate Losses	(C) Paid Losses	(D) Total Required Reserves	(E) Discount Factor at 4.0%	(F) Total Discounted Reserves at 4.0%	(G) Projected Payments 7/1/2023 to 6/30/2024	(H) Projected Payments after 6/30/2024
7/1/1969 - 6/30/1993	\$57,168,000	\$55,506,603	\$1,661,000	1.000	\$1,661,000	\$43,000	\$1,618,000
7/1/93-94	\$15,855,127	\$15,493,347	\$362,000	0.997	\$361,000	\$10,000	\$351,000
7/1/94-95	\$15,540,448	\$15,328,900	\$212,000	0.976	\$207,000	\$6,000	\$206,000
7/1/95-96	\$15,654,749	\$15,448,718	\$206,000	0.942	\$194,000	\$5,000	\$202,000
7/1/96-97	\$13,132,000	\$12,093,411	\$1,039,000	0.909	\$944,000	\$29,000	\$1,009,000
7/1/97-98	\$15,865,727	\$15,513,038	\$353,000	0.878	\$310,000	\$11,000	\$342,000
7/1/98-99	\$18,596,226	\$17,987,130	\$609,000	0.846	\$515,000	\$18,000	\$590,000
7/1/99-00	\$23,345,000	\$22,197,200	\$1,148,000	0.821	\$943,000	\$36,000	\$1,113,000
7/1/00-01	\$21,581,788	\$20,573,265	\$1,009,000	0.795	\$802,000	\$33,000	\$976,000
7/1/01-02	\$21,810,000	\$20,509,730	\$1,300,000	0.772	\$1,004,000	\$44,000	\$1,257,000
7/1/02-03	\$22,249,330	\$21,144,925	\$1,104,000	0.753	\$831,000	\$41,000	\$1,064,000
7/1/03-04	\$24,507,000	\$22,881,795	\$1,625,000	0.731	\$1,188,000	\$60,000	\$1,565,000
7/1/04-05	\$29,255,000	\$25,568,532	\$3,686,000	0.715	\$2,635,000	\$145,000	\$3,542,000
7/1/05-06	\$22,749,140	\$21,257,744	\$1,491,000	0.700	\$1,044,000	\$62,000	\$1,430,000
7/1/06-07	\$36,664,000	\$31,218,235	\$5,446,000	0.685	\$3,733,000	\$235,000	\$5,210,000
7/1/07-08	\$27,181,471	\$23,889,703	\$3,292,000	0.673	\$2,217,000	\$151,000	\$3,140,000
7/1/08-09	\$23,676,000	\$21,457,103	\$2,219,000	0.664	\$1,474,000	\$108,000	\$2,111,000
7/1/09-10	\$31,890,000	\$27,862,322	\$4,028,000	0.656	\$2,641,000	\$207,000	\$3,821,000
7/1/10-11	\$30,895,000	\$27,302,395	\$3,593,000	0.650	\$2,334,000	\$197,000	\$3,394,000
7/1/11-12	\$32,643,000	\$28,324,470	\$4,319,000	0.646	\$2,788,000	\$254,000	\$4,066,000
7/1/12-13	\$30,669,000	\$25,336,534	\$5,332,000	0.644	\$3,432,000	\$337,000	\$4,995,000
7/1/13-14	\$27,840,000	\$23,304,943	\$4,535,000	0.645	\$2,926,000	\$312,000	\$4,225,000
7/1/14-15	\$15,992,000	\$12,897,912	\$3,094,000	0.644	\$1,994,000	\$227,000	\$2,867,000
7/1/15-16	\$15,516,000	\$12,772,931	\$2,743,000	0.650	\$1,783,000	\$225,000	\$2,518,000
7/1/16-17	\$16,434,000	\$12,676,034	\$3,758,000	0.660	\$2,480,000	\$347,000	\$3,412,000
7/1/17-18	\$13,326,000	\$9,937,744	\$3,388,000	0.669	\$2,265,000	\$350,000	\$3,037,000
7/1/18-19	\$19,538,000	\$13,663,994	\$5,874,000	0.683	\$4,010,000	\$695,000	\$5,179,000
7/1/19-20	\$16,259,000	\$10,612,616	\$5,646,000	0.702	\$3,964,000	\$789,000	\$4,856,000
7/1/20-21	\$16,548,000	\$9,336,163	\$7,212,000	0.728	\$5,248,000	\$1,234,000	\$5,978,000
7/1/21-22	\$15,696,000	\$7,070,865	\$8,625,000	0.760	\$6,559,000	\$1,891,000	\$6,733,000
7/1/22-23	\$17,383,000	\$3,894,481	\$13,489,000	0.811	\$10,941,000	\$4,326,000	\$9,163,000
Total	\$705,460,000	\$603,062,784	\$102,398,000		\$73,428,000	\$12,428,000	\$89,970,000

**Comparison of Results with Report Valued as of June 30, 2022
Workers Compensation**

(A) Accident Period	(B) Incurred Losses 6/30/2022	(C) Expected Incurred Losses 6/30/2023	(D) Actual Incurred Losses 6/30/2023	(E) Percent Difference	(F) Estimated Ultimate Losses 6/30/2022	(G) Estimated Ultimate Losses 6/30/2023	(H) Percent Difference
Prior	\$56,830,933	\$56,855,208	\$56,843,694	0%	\$57,139,000	\$57,168,000	0%
7/1/93-94	\$15,815,295	\$15,816,745	\$15,815,295	0%	\$15,833,127	\$15,855,127	0%
7/1/94-95	\$15,491,607	\$15,493,087	\$15,498,641	0%	\$15,509,448	\$15,540,448	0%
7/1/95-96	\$15,616,762	\$15,619,875	\$15,601,965	0%	\$15,650,495	\$15,654,749	0%
7/1/96-97	\$13,085,977	\$13,089,009	\$13,085,977	0%	\$13,118,793	\$13,132,000	0%
7/1/97-98	\$15,825,917	\$15,829,812	\$15,789,471	0%	\$15,868,727	\$15,865,727	0%
7/1/98-99	\$18,550,951	\$18,555,188	\$18,515,391	0%	\$18,596,226	\$18,596,226	0%
7/1/99-00	\$23,283,710	\$23,288,390	\$23,243,203	0%	\$23,332,454	\$23,345,000	0%
7/1/00-01	\$21,535,349	\$21,542,381	\$21,494,370	0%	\$21,606,135	\$21,581,788	0%
7/1/01-02	\$21,697,149	\$21,704,892	\$21,645,636	0%	\$21,769,965	\$21,810,000	0%
7/1/02-03	\$21,913,971	\$21,922,283	\$22,025,544	0%	\$21,992,330	\$22,249,330	1%
7/1/03-04	\$24,236,225	\$24,251,967	\$24,247,865	0%	\$24,375,065	\$24,507,000	1%
7/1/04-05	\$28,932,016	\$28,964,217	\$28,941,371	0%	\$29,186,185	\$29,255,000	0%
7/1/05-06	\$22,682,990	\$22,738,484	\$22,433,726	-1%	\$23,101,140	\$22,749,140	-2%
7/1/06-07	\$36,110,050	\$36,208,450	\$36,039,201	0%	\$36,842,837	\$36,664,000	0%
7/1/07-08	\$26,737,413	\$26,827,869	\$26,634,931	-1%	\$27,393,471	\$27,181,471	-1%
7/1/08-09	\$23,670,989	\$23,785,753	\$22,943,029	-4%	\$24,461,000	\$23,676,000	-3%
7/1/09-10	\$30,457,330	\$30,646,093	\$30,725,911	0%	\$31,694,000	\$31,890,000	1%
7/1/10-11	\$29,640,376	\$29,879,919	\$29,596,089	-1%	\$31,156,000	\$30,895,000	-1%
7/1/11-12	\$31,055,470	\$31,358,808	\$30,995,350	-1%	\$32,909,000	\$32,643,000	-1%
7/1/12-13	\$28,786,552	\$29,126,937	\$29,018,204	0%	\$30,781,000	\$30,669,000	0%
7/1/13-14	\$25,758,342	\$26,159,539	\$25,875,126	-1%	\$28,041,000	\$27,840,000	-1%
7/1/14-15	\$14,567,465	\$14,911,075	\$14,504,223	-3%	\$16,423,000	\$15,992,000	-3%
7/1/15-16	\$13,650,375	\$14,042,762	\$13,652,707	-3%	\$15,701,000	\$15,516,000	-1%
7/1/16-17	\$13,660,076	\$14,157,262	\$14,169,891	0%	\$16,178,000	\$16,434,000	2%
7/1/17-18	\$10,546,476	\$11,233,188	\$10,891,577	-3%	\$13,930,000	\$13,326,000	-4%
7/1/18-19	\$15,298,410	\$16,354,679	\$15,642,971	-4%	\$20,374,000	\$19,538,000	-4%
7/1/19-20	\$11,621,252	\$12,902,463	\$11,717,684	-9%	\$17,655,000	\$16,259,000	-8%
7/1/20-21	\$10,220,153	\$11,778,079	\$11,185,040	-5%	\$17,524,000	\$16,548,000	-6%
7/1/21-22	\$8,693,299	\$10,573,974	\$8,790,019	-17%	\$17,673,000	\$15,696,000	-11%
7/1/22-23	--	\$10,918,419	\$8,472,574	-22%	\$19,351,000	\$17,383,000	-10%
Total	\$645,972,881	\$666,536,805	\$656,036,675	-1.6%	\$715,166,000	\$705,460,000	-1.4%
		<i>Variance in Incurred</i>	(\$10,500,130)		<i>Change in Ultimates</i>	(\$9,706,000)	

**Comparison of Results with Report Valued as of June 30, 2022
Workers Compensation**

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Accident Period	Paid Losses 6/30/2022	Expected Paid Losses 6/30/2023	Actual Paid Losses 6/30/2023	Percent Difference	Estimated Ultimate Losses 6/30/2022	Estimated Ultimate Losses 6/30/2023	Percent Difference
Prior	\$55,327,394	\$55,375,269	\$55,506,603	0%	\$57,139,000	\$57,168,000	0%
7/1/93-94	\$15,450,349	\$15,460,810	\$15,493,347	0%	\$15,833,127	\$15,855,127	0%
7/1/94-95	\$15,292,163	\$15,298,272	\$15,328,900	0%	\$15,509,448	\$15,540,448	0%
7/1/95-96	\$15,301,245	\$15,311,452	\$15,448,718	1%	\$15,650,495	\$15,654,749	0%
7/1/96-97	\$12,038,436	\$12,070,663	\$12,093,411	0%	\$13,118,793	\$13,132,000	0%
7/1/97-98	\$15,487,360	\$15,499,379	\$15,513,038	0%	\$15,868,727	\$15,865,727	0%
7/1/98-99	\$17,944,782	\$17,965,827	\$17,987,130	0%	\$18,596,226	\$18,596,226	0%
7/1/99-00	\$22,059,598	\$22,102,443	\$22,197,200	0%	\$23,332,454	\$23,345,000	0%
7/1/00-01	\$20,501,091	\$20,539,467	\$20,573,265	0%	\$21,606,135	\$21,581,788	0%
7/1/01-02	\$20,443,601	\$20,491,658	\$20,509,730	0%	\$21,769,965	\$21,810,000	0%
7/1/02-03	\$21,015,728	\$21,053,077	\$21,144,925	0%	\$21,992,330	\$22,249,330	1%
7/1/03-04	\$22,754,323	\$22,819,226	\$22,881,795	0%	\$24,375,065	\$24,507,000	1%
7/1/04-05	\$25,161,172	\$25,330,838	\$25,568,532	1%	\$29,186,185	\$29,255,000	0%
7/1/05-06	\$21,151,354	\$21,237,684	\$21,257,744	0%	\$23,101,140	\$22,749,140	-2%
7/1/06-07	\$30,435,222	\$30,732,717	\$31,218,235	2%	\$36,842,837	\$36,664,000	0%
7/1/07-08	\$23,685,592	\$23,868,303	\$23,889,703	0%	\$27,393,471	\$27,181,471	-1%
7/1/08-09	\$21,402,538	\$21,562,727	\$21,457,103	0%	\$24,461,000	\$23,676,000	-3%
7/1/09-10	\$27,545,690	\$27,776,941	\$27,862,322	0%	\$31,694,000	\$31,890,000	1%
7/1/10-11	\$27,065,794	\$27,309,229	\$27,302,395	0%	\$31,156,000	\$30,895,000	-1%
7/1/11-12	\$28,095,933	\$28,404,840	\$28,324,470	0%	\$32,909,000	\$32,643,000	-1%
7/1/12-13	\$24,910,946	\$25,319,534	\$25,336,534	0%	\$30,781,000	\$30,669,000	0%
7/1/13-14	\$22,948,776	\$23,337,514	\$23,304,943	0%	\$28,041,000	\$27,840,000	-1%
7/1/14-15	\$12,745,074	\$13,051,640	\$12,897,912	-1%	\$16,423,000	\$15,992,000	-3%
7/1/15-16	\$12,571,399	\$12,861,838	\$12,772,931	-1%	\$15,701,000	\$15,516,000	-1%
7/1/16-17	\$12,131,844	\$12,557,502	\$12,676,034	1%	\$16,178,000	\$16,434,000	2%
7/1/17-18	\$9,592,033	\$10,114,300	\$9,937,744	-2%	\$13,930,000	\$13,326,000	-4%
7/1/18-19	\$12,728,214	\$13,804,770	\$13,663,994	-1%	\$20,374,000	\$19,538,000	-4%
7/1/19-20	\$9,841,805	\$11,178,269	\$10,612,616	-5%	\$17,655,000	\$16,259,000	-8%
7/1/20-21	\$7,659,447	\$9,834,068	\$9,336,163	-5%	\$17,524,000	\$16,548,000	-6%
7/1/21-22	\$3,613,304	\$8,038,793	\$7,070,865	-12%	\$17,673,000	\$15,696,000	-11%
7/1/22-23	--	\$4,311,470	\$3,894,481	-10%	\$19,351,000	\$17,383,000	-10%
Total	\$586,902,206	\$604,620,520	\$603,062,784	-0.3%	\$715,166,000	\$705,460,000	-1.4%
		<i>Variance in Paid</i>	(\$1,557,736)		<i>Change in Ultimates</i>	(\$9,706,000)	

**Percentile Estimates of Ultimate Losses and Required Reserves
Workers Compensation**

(A) Accident Year	(B) Expected Value	(C) 50th Percentile	(D) 65th Percentile	(E) 75th Percentile	(F) 90th Percentile
7/1/69 - 6/30/92	\$57,168,000	\$57,165,000	\$57,375,000	\$57,532,000	\$57,864,000
7/1/93-94	\$15,855,127	\$15,855,000	\$15,909,000	\$15,950,000	\$16,036,000
7/1/94-95	\$15,540,448	\$15,539,000	\$15,607,000	\$15,658,000	\$15,766,000
7/1/95-96	\$15,654,749	\$15,653,000	\$15,738,000	\$15,801,000	\$15,936,000
7/1/96-97	\$13,132,000	\$13,130,000	\$13,227,000	\$13,300,000	\$13,456,000
7/1/97-98	\$15,865,727	\$15,862,000	\$16,001,000	\$16,106,000	\$16,330,000
7/1/98-99	\$18,596,226	\$18,590,000	\$18,778,000	\$18,920,000	\$19,221,000
7/1/99-00	\$23,345,000	\$23,334,000	\$23,607,000	\$23,815,000	\$24,255,000
7/1/00-01	\$21,581,788	\$21,570,000	\$21,850,000	\$22,063,000	\$22,517,000
7/1/01-02	\$21,810,000	\$21,795,000	\$22,109,000	\$22,348,000	\$22,858,000
7/1/02-03	\$22,249,330	\$22,221,000	\$22,657,000	\$22,990,000	\$23,704,000
7/1/03-04	\$24,507,000	\$24,473,000	\$24,972,000	\$25,353,000	\$26,172,000
7/1/04-05	\$29,255,000	\$29,211,000	\$29,837,000	\$30,315,000	\$31,345,000
7/1/05-06	\$22,749,140	\$22,705,000	\$23,257,000	\$23,679,000	\$24,592,000
7/1/06-07	\$36,664,000	\$36,590,000	\$37,499,000	\$38,197,000	\$39,704,000
7/1/07-08	\$27,181,471	\$27,119,000	\$27,839,000	\$28,392,000	\$29,590,000
7/1/08-09	\$23,676,000	\$23,612,000	\$24,291,000	\$24,813,000	\$25,947,000
7/1/09-10	\$31,890,000	\$31,790,000	\$32,775,000	\$33,533,000	\$35,184,000
7/1/10-11	\$30,895,000	\$30,787,000	\$31,796,000	\$32,575,000	\$34,273,000
7/1/11-12	\$32,643,000	\$32,515,000	\$33,646,000	\$34,520,000	\$36,430,000
7/1/12-13	\$30,669,000	\$30,535,000	\$31,657,000	\$32,526,000	\$34,429,000
7/1/13-14	\$27,840,000	\$27,704,000	\$28,780,000	\$29,615,000	\$31,448,000
7/1/14-15	\$15,992,000	\$15,903,000	\$16,563,000	\$17,077,000	\$18,207,000
7/1/15-16	\$15,516,000	\$15,422,000	\$16,091,000	\$16,612,000	\$17,762,000
7/1/16-17	\$16,434,000	\$16,319,000	\$17,081,000	\$17,676,000	\$18,994,000
7/1/17-18	\$13,326,000	\$13,227,000	\$13,864,000	\$14,363,000	\$15,469,000
7/1/18-19	\$19,538,000	\$19,336,000	\$20,440,000	\$21,310,000	\$23,259,000
7/1/19-20	\$16,259,000	\$16,038,000	\$17,093,000	\$17,930,000	\$19,822,000
7/1/20-21	\$16,548,000	\$16,271,000	\$17,465,000	\$18,419,000	\$20,594,000
7/1/21-22	\$15,696,000	\$15,364,000	\$16,638,000	\$17,663,000	\$20,026,000
7/1/22-23	\$17,383,000	\$16,867,000	\$18,540,000	\$19,904,000	\$23,102,000
(1) All Years*	\$705,460,000	\$705,147,000	\$709,561,000	\$712,987,000	\$720,003,000
(2) Total Paid Losses		\$603,062,784			

Percentile Estimates of Required Reserves as of June 30, 2023					
	Expected	50th %-ile	65th %-ile	75th %-ile	90th %-ile
(3) All Years*	\$102,398,000	\$102,084,000	\$106,498,000	\$109,924,000	\$116,940,000

Percentile Estimates of Discounted Required Reserves as of June 30, 2023					
	Expected	50th %-ile	65th %-ile	75th %-ile	90th %-ile
(4) All Years*	\$73,428,000	\$73,203,000	\$76,368,000	\$78,825,000	\$83,856,000

* Totals are not summed, but are based on the combined distribution of all years experience

**Aggregate Loss Distribution
For the 7/1/24-25 Fiscal Year
Workers Compensation**

(A) Probability That Losses Will Be Less Than Or Equal to Each Column	(B) Undiscounted Estimated Ultimate Losses For 7/1/23-24	(C) Undiscounted Cost Per \$100 Payroll For 7/1/23-24	(D) Discounted Estimated Ultimate Losses For 7/1/23-24	(E) Discounted Cost Per \$100 Payroll For 7/1/23-24	(F) Probability That Losses Will Be Greater Than Each Column
50%	\$18,583,000	\$0.34	\$15,482,000	\$0.29	50%
55%	\$19,290,000	\$0.36	\$16,072,000	\$0.30	45%
60%	\$20,023,000	\$0.37	\$16,685,000	\$0.31	40%
65%	\$20,830,000	\$0.38	\$17,358,000	\$0.32	35%
70%	\$21,704,000	\$0.40	\$18,087,000	\$0.33	30%
75%	\$22,689,000	\$0.42	\$18,909,000	\$0.35	25%
80%	\$23,818,000	\$0.44	\$19,852,000	\$0.37	20%
85%	\$25,195,000	\$0.46	\$21,002,000	\$0.39	15%
90%	\$27,020,000	\$0.50	\$22,525,000	\$0.41	10%
95%	\$29,969,000	\$0.55	\$24,987,000	\$0.46	5%
		<u>Expected</u>			
55%	\$19,357,000	\$0.36	\$16,129,000	\$0.30	45%

- Aggregate distribution is the sum of individual agency distributions
Not the distribution of all agencies

Required Reserves
As of June 30, 2023
Losses Limited to \$300,000 per person, \$1,000,000 per occurrence

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
<i>Accident Period</i>	<i>Selected Ultimate Losses</i>	<i>Limited Paid Losses</i>	<i>Total Required Reserves</i>	<i>Discount Factor at 4.0%</i>	<i>Total Discounted Reserves at 4.0%</i>	<i>Projected Payments 7/1/2023 to 6/30/2024</i>	<i>Projected Payments after 6/30/2024</i>
7/1/11-12	\$1,312,798	\$1,287,699	\$25,000	0.957	\$24,000	\$25,000	\$0
7/1/12-13	\$2,065,173	\$2,065,173	\$0	0.957	\$0	\$0	\$0
7/1/13-14	\$2,340,590	\$2,340,590	\$0	0.958	\$0	\$0	\$0
7/1/14-15	\$2,118,166	\$2,118,166	\$0	0.958	\$0	\$0	\$0
7/1/15-16	\$1,723,631	\$1,723,631	\$0	0.958	\$0	\$0	\$0
7/1/16-17	\$1,676,611	\$1,676,611	\$0	0.959	\$0	\$0	\$0
7/1/17-18	\$1,644,000	\$1,599,780	\$44,000	0.959	\$42,000	\$28,000	\$16,000
7/1/18-19	\$2,260,000	\$2,214,878	\$45,000	0.959	\$43,000	\$28,000	\$17,000
7/1/19-20	\$1,266,000	\$1,174,881	\$92,000	0.957	\$88,000	\$56,000	\$36,000
7/1/20-21	\$2,277,000	\$940,048	\$1,337,000	0.954	\$1,275,000	\$744,000	\$593,000
7/1/21-22	\$1,760,000	\$821,444	\$939,000	0.946	\$888,000	\$419,000	\$520,000
7/1/22-23	\$2,681,000	\$528,931	\$2,152,000	0.930	\$2,000,000	\$612,000	\$1,540,000
Total	\$23,125,000	\$18,491,831	\$4,634,000		\$4,360,000	\$1,912,000	\$2,722,000

Comparison of Results with Report Valued as of June 30, 2022

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Accident Period	Limited Incurred Losses 6/30/2022	Expected Incurred Losses 6/30/2023	Actual Incurred Losses 6/30/2023	Percent Difference	Estimated Ultimate Losses 6/30/2022	Estimated Ultimate Losses 6/30/2023	Percent Difference
7/1/11-12	\$1,288,099	\$1,288,099	\$1,312,798	2%	\$1,288,099	\$1,312,798	2%
7/1/12-13	\$2,065,173	\$2,065,173	\$2,065,173	0%	\$2,065,173	\$2,065,173	0%
7/1/13-14	\$2,340,590	\$2,340,590	\$2,340,590	0%	\$2,340,590	\$2,340,590	0%
7/1/14-15	\$2,118,166	\$2,118,166	\$2,118,166	0%	\$2,118,166	\$2,118,166	0%
7/1/15-16	\$1,723,631	\$1,735,000	\$1,723,631	-1%	\$1,735,000	\$1,723,631	-1%
7/1/16-17	\$1,632,611	\$1,640,455	\$1,676,611	2%	\$1,652,000	\$1,676,611	1%
7/1/17-18	\$1,690,680	\$1,704,781	\$1,625,780	-5%	\$1,722,000	\$1,644,000	-5%
7/1/18-19	\$2,211,932	\$2,270,136	\$2,215,228	-2%	\$2,327,000	\$2,260,000	-3%
7/1/19-20	\$1,192,339	\$1,294,937	\$1,213,381	-6%	\$1,372,000	\$1,266,000	-8%
7/1/20-21	\$1,698,958	\$2,011,012	\$2,080,649	3%	\$2,192,000	\$2,277,000	4%
7/1/21-22	\$432,223	\$1,330,422	\$1,175,144	-12%	\$1,875,000	\$1,760,000	-6%
7/1/22-23		\$800,523	\$1,137,270	42%	\$2,323,000	\$2,681,000	15%
Total	\$18,394,400	\$20,599,294	\$20,684,420	0.4%	\$23,010,000	\$23,125,000	0.5%
		<i>Variance in Incurred</i>	\$85,126		<i>Change in Ultimates</i>	\$115,000	

Percentile Estimates of Ultimate Losses
Losses Limited to \$300,000 per person, \$1,000,000 per occurrence

(A)	(B)	(C)	(D)	(E)	(F)
Accident Year	Expected Value	50th Percentile	60th Percentile	75th Percentile	90th Percentile
7/1/11-12	\$1,312,798	\$1,313,000	\$1,314,000	\$1,317,000	\$1,321,000
7/1/12-13	\$2,065,173	\$2,065,000	\$2,068,000	\$2,072,000	\$2,078,000
7/1/13-14	\$2,340,590	\$2,341,000	\$2,344,000	\$2,348,000	\$2,356,000
7/1/14-15	\$2,118,166	\$2,118,000	\$2,129,000	\$2,149,000	\$2,178,000
7/1/15-16	\$1,723,631	\$1,723,000	\$1,734,000	\$1,752,000	\$1,779,000
7/1/16-17	\$1,676,611	\$1,676,000	\$1,688,000	\$1,707,000	\$1,735,000
7/1/17-18	\$1,644,000	\$1,643,000	\$1,658,000	\$1,683,000	\$1,721,000
7/1/18-19	\$2,260,000	\$2,246,000	\$2,310,000	\$2,420,000	\$2,588,000
7/1/19-20	\$1,266,000	\$1,253,000	\$1,299,000	\$1,380,000	\$1,506,000
7/1/20-21	\$2,277,000	\$2,225,000	\$2,350,000	\$2,573,000	\$2,933,000
7/1/21-22	\$1,760,000	\$1,679,000	\$1,815,000	\$2,065,000	\$2,486,000
7/1/22-23	\$2,681,000	\$2,433,000	\$2,720,000	\$3,275,000	\$4,279,000

(1) All Years \$23,125,000 \$22,932,000 \$23,302,000 \$23,914,000 \$25,027,000

(2) Total Paid Losses \$18,491,831

Percentile Estimates of Required Reserves as of June 30, 2023

	Expected	50th %-ile	60th %-ile	75th %-ile	90th %-ile
(3) All Years	\$4,634,000	\$4,440,000	\$4,810,000	\$5,422,000	\$6,535,000

Percentile Estimates of Discounted Required Reserves as of June 30, 2023

	Expected	50th %-ile	60th %-ile	75th %-ile	90th %-ile
(4) All Years	\$4,360,000	\$4,177,000	\$4,526,000	\$5,101,000	\$6,149,000

* Percentile estimates are based on a lognormal distribution as shown in Appendix A4

Line (1): Totals are not summed, but are based on the combined distribution of all years experience

Line (2): Exhibit 4

Line (3) = Line (1) - Line (2)

Line (4): Line (3), discounted at 4.0%

**Aggregate Loss Distribution
For the 7/1/24-25 Fiscal Year**

(A) Probability That Losses Will Be Less Than Or Equal to Each Column	(B) Undiscounted Estimated Ultimate Losses For 7/1/24-25	(C) Undiscounted Cost Per Power Unit For 7/1/24-25	(D) Discounted Estimated Ultimate Losses For 7/1/24-25	(E) Discounted Cost Per Power Unit For 7/1/24-25	(F) Probability That Losses Will Be Greater Than Each Column
50%	\$2,424,000	\$213	\$2,233,000	\$197	50%
55%	\$2,501,000	\$220	\$2,304,000	\$203	45%
60%	\$2,575,000	\$227	\$2,372,000	\$209	40%
65%	\$2,658,000	\$234	\$2,448,000	\$215	35%
70%	\$2,750,000	\$242	\$2,533,000	\$223	30%
75%	\$2,846,000	\$251	\$2,621,000	\$231	25%
80%	\$2,945,000	\$259	\$2,713,000	\$239	20%
85%	\$3,078,000	\$271	\$2,835,000	\$250	15%
90%	\$3,248,000	\$286	\$2,992,000	\$263	10%
95%	\$3,527,000	\$310	\$3,249,000	\$286	5%
<u>Expected</u>					
53%	\$2,473,000	\$218	\$2,278,000	\$201	47%

Column (B): Based on Distributions in Appendix E
 Column (C) = (B) / Power Unit Counts
 Column (D) = (B), Discounted at 4.0%
 Column (E) = (D) / Power Unit Counts

Required Reserves
As of June 30, 2023
Losses Limited to \$300,000 per person, \$1,000,000 per occurrence

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
<i>Accident Period</i>	<i>Selected Ultimate Losses</i>	<i>Limited Paid Losses</i>	<i>Total Required Reserves</i>	<i>Discount Factor at 4.0%</i>	<i>Total Discounted Reserves at 4.0%</i>	<i>Projected Payments 7/1/2023 to 6/30/2024</i>	<i>Projected Payments after 6/30/2024</i>
<i>Prior</i>	\$27,600	\$0	\$28,000	1.000	\$28,000	\$28,000	\$0
<i>7/1/11-12</i>	\$1,411,274	\$1,411,274	\$0	1.000	\$0	\$0	\$0
<i>7/1/12-13</i>	\$1,361,180	\$1,358,680	\$3,000	1.000	\$3,000	\$1,000	\$2,000
<i>7/1/13-14</i>	\$492,089	\$492,089	\$0	0.981	\$0	\$0	\$0
<i>7/1/14-15</i>	\$774,000	\$771,929	\$2,000	0.955	\$2,000	\$1,000	\$1,000
<i>7/1/15-16</i>	\$1,499,000	\$1,172,650	\$326,000	0.939	\$306,000	\$109,000	\$217,000
<i>7/1/16-17</i>	\$763,000	\$710,122	\$53,000	0.930	\$49,000	\$19,000	\$34,000
<i>7/1/17-18</i>	\$2,548,000	\$2,253,115	\$295,000	0.927	\$273,000	\$110,000	\$185,000
<i>7/1/18-19</i>	\$1,611,000	\$1,130,888	\$480,000	0.925	\$444,000	\$184,000	\$296,000
<i>7/1/19-20</i>	\$1,034,000	\$367,680	\$666,000	0.923	\$615,000	\$248,000	\$418,000
<i>7/1/20-21</i>	\$1,112,000	\$302,424	\$809,000	0.918	\$743,000	\$261,000	\$548,000
<i>7/1/21-22</i>	\$2,121,000	\$153,869	\$1,967,000	0.905	\$1,780,000	\$445,000	\$1,522,000
<i>7/1/22-23</i>	\$1,832,000	\$92,213	\$1,740,000	0.881	\$1,532,000	\$166,000	\$1,574,000
Total	\$16,586,000	\$10,216,933	\$6,369,000		\$5,775,000	\$1,572,000	\$4,797,000

Comparison of Results with Report Valued as of June 30, 2022

(A) Accident Period	(B) Limited Incurred Losses 6/30/2022	(C) Expected Incurred Losses 6/30/2023	(D) Actual Incurred Losses 6/30/2023	(E) Percent Difference	(F) Estimated Ultimate Losses 6/30/2022	(G) Estimated Ultimate Losses 6/30/2023	(H) Percent Difference
7/1/11-12	\$1,411,578	\$1,411,578	\$1,411,274	0%	\$1,411,578	\$1,411,274	0%
7/1/12-13	\$1,358,680	\$1,358,680	\$1,361,180	0%	\$1,358,680	\$1,361,180	0%
7/1/13-14	\$492,089	\$492,089	\$492,089	0%	\$492,089	\$492,089	0%
7/1/14-15	\$771,929	\$771,929	\$772,029	0%	\$771,929	\$774,000	0%
7/1/15-16	\$1,473,750	\$1,480,315	\$1,493,650	1%	\$1,486,000	\$1,499,000	1%
7/1/16-17	\$1,030,122	\$1,038,871	\$752,422	-28%	\$1,046,000	\$763,000	-27%
7/1/17-18	\$2,479,155	\$2,515,069	\$2,520,315	0%	\$2,543,000	\$2,548,000	0%
7/1/18-19	\$1,385,655	\$1,483,116	\$1,530,888	3%	\$1,558,000	\$1,611,000	3%
7/1/19-20	\$1,456,419	\$1,705,064	\$809,523	-53%	\$1,912,000	\$1,034,000	-46%
7/1/20-21	\$1,014,918	\$1,355,380	\$671,549	-50%	\$1,730,000	\$1,112,000	-36%
7/1/21-22	\$1,550,635	\$2,063,106	\$756,517	-63%	\$2,847,000	\$2,121,000	-26%
7/1/22-23		\$371,344	\$315,069	-15%	\$1,991,000	\$1,832,000	-8%
Total	\$14,424,930	\$16,046,541	\$12,886,505	-19.7%	\$19,147,000	\$16,559,000	-13.5%
		<i>Variance in Incurred</i>	(\$3,160,036)		<i>Change in Ultimates</i>	(\$2,588,000)	

Percentile Estimates of Ultimate Losses
Losses Limited to \$300,000 per person, \$1,000,000 per occurrence

(A)	(B)	(C)	(D)	(E)	(F)
Accident Year	Expected Value	50th Percentile	60th Percentile	75th Percentile	90th Percentile
Prior	\$27,600	\$28,000	\$28,000	\$28,000	\$28,000
7/1/11-12	\$1,411,274	\$1,411,000	\$1,411,000	\$1,412,000	\$1,412,000
7/1/12-13	\$1,361,180	\$1,361,000	\$1,364,000	\$1,368,000	\$1,374,000
7/1/13-14	\$492,089	\$492,000	\$493,000	\$495,000	\$498,000
7/1/14-15	\$774,000	\$773,000	\$781,000	\$793,000	\$810,000
7/1/15-16	\$1,499,000	\$1,489,000	\$1,533,000	\$1,609,000	\$1,724,000
7/1/16-17	\$763,000	\$755,000	\$783,000	\$833,000	\$910,000
7/1/17-18	\$2,548,000	\$2,506,000	\$2,625,000	\$2,835,000	\$3,169,000
7/1/18-19	\$1,611,000	\$1,558,000	\$1,664,000	\$1,855,000	\$2,172,000
7/1/19-20	\$1,034,000	\$991,000	\$1,067,000	\$1,206,000	\$1,439,000
7/1/20-21	\$1,112,000	\$1,030,000	\$1,137,000	\$1,341,000	\$1,702,000
7/1/21-22	\$2,121,000	\$1,860,000	\$2,118,000	\$2,628,000	\$3,587,000
7/1/22-23	\$1,832,000	\$1,275,000	\$1,582,000	\$2,264,000	\$3,796,000
(1) All Years	\$16,586,000	\$16,156,000	\$16,683,000	\$17,606,000	\$19,336,000
(2) Total Paid Losses		\$10,216,933			

Percentile Estimates of Required Reserves as of June 30, 2023					
	Expected	50th %-ile	60th %-ile	75th %-ile	90th %-ile
(3) All Years	\$6,369,000	\$5,939,000	\$6,466,000	\$7,389,000	\$9,119,000

Percentile Estimates of Discounted Required Reserves as of June 30, 2023					
	Expected	50th %-ile	60th %-ile	75th %-ile	90th %-ile
(4) All Years	\$5,775,000	\$5,385,000	\$5,863,000	\$6,700,000	\$8,269,000

* Percentile estimates are based on a lognormal distribution as shown in Appendix A4

Line (1): Totals are not summed, but are based on the combined distribution of all years experience

Line (2): Exhibit 4

Line (3) = Line (1) - Line (2)

Line (4): Line (3), discounted at 4.0%

**Aggregate Loss Distribution
 For the 7/1/24-25 Fiscal Year**

(A) Probability That Losses Will Be Less Than Or Equal to Each Column	(B) Undiscounted Estimated Ultimate Losses For 7/1/24-25	(C) Undiscounted Cost Per \$10,000 Payroll For 7/1/24-25	(D) Discounted Estimated Ultimate Losses For 7/1/24-25	(E) Discounted Cost Per \$10,000 Payroll For 7/1/24-25	(F) Probability That Losses Will Be Greater Than Each Column
50%	\$1,990,000	\$3.83	\$1,717,000	\$3.31	50%
55%	\$2,087,000	\$4.02	\$1,801,000	\$3.47	45%
60%	\$2,193,000	\$4.22	\$1,893,000	\$3.64	40%
65%	\$2,299,000	\$4.43	\$1,984,000	\$3.82	35%
70%	\$2,415,000	\$4.65	\$2,084,000	\$4.01	30%
75%	\$2,548,000	\$4.91	\$2,199,000	\$4.23	25%
80%	\$2,708,000	\$5.21	\$2,337,000	\$4.50	20%
85%	\$2,901,000	\$5.58	\$2,503,000	\$4.82	15%
90%	\$3,186,000	\$6.13	\$2,749,000	\$5.29	10%
95%	\$3,640,000	\$7.01	\$3,141,000	\$6.05	5%
<u>Expected</u>					
56%	\$2,107,000	\$4.06	1,818,000	\$3.50	44%

Column (B): Based on Distributions in Appendix E
 Column (C) = (B) / Payroll
 Column (D) = (B), Discounted at 4.0%
 Column (E) = (D) / Payroll

Required Reserves
As of June 30, 2023
Losses Limited to \$300,000 per person, \$1,000,000 per occurrence

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
<i>Accident Period</i>	<i>Selected Ultimate Losses</i>	<i>Limited Paid Losses</i>	<i>Total Required Reserves</i>	<i>Discount Factor at 4.0%</i>	<i>Total Discounted Reserves at 4.0%</i>	<i>Projected Payments 7/1/2023 to 6/30/2024</i>	<i>Projected Payments after 6/30/2024</i>
7/1/11-12	\$356,894	\$356,894	\$0	1.000	\$0	\$0	\$0
7/1/12-13	\$1,111,007	\$1,111,007	\$0	1.000	\$0	\$0	\$0
7/1/13-14	\$512,970	\$510,470	\$3,000	1.000	\$3,000	\$3,000	\$0
7/1/14-15	\$1,118,000	\$1,112,561	\$5,000	0.981	\$5,000	\$5,000	\$0
7/1/15-16	\$1,453,000	\$1,317,736	\$135,000	0.964	\$130,000	\$74,000	\$61,000
7/1/16-17	\$1,362,000	\$1,136,939	\$225,000	0.956	\$215,000	\$123,000	\$102,000
7/1/17-18	\$2,106,000	\$1,383,089	\$723,000	0.952	\$688,000	\$384,000	\$339,000
7/1/18-19	\$1,561,000	\$1,149,605	\$411,000	0.947	\$389,000	\$201,000	\$210,000
7/1/19-20	\$1,366,000	\$262,971	\$1,103,000	0.939	\$1,036,000	\$446,000	\$657,000
7/1/20-21	\$2,383,000	\$395,174	\$1,988,000	0.924	\$1,838,000	\$551,000	\$1,437,000
7/1/21-22	\$1,830,000	\$317,139	\$1,513,000	0.903	\$1,366,000	\$231,000	\$1,282,000
7/1/22-23	\$1,792,000	\$99,288	\$1,693,000	0.874	\$1,480,000	\$93,000	\$1,600,000
Total	\$16,952,000	\$9,152,872	\$7,799,000		\$7,150,000	\$2,111,000	\$5,688,000

Comparison of Results with Report Valued as of June 30, 2022

(A) Accident Period	(B) Limited Incurred Losses 6/30/2022	(C) Expected Incurred Losses 6/30/2023	(D) Actual Incurred Losses 6/30/2023	(E) Percent Difference	(F) Estimated Ultimate Losses 6/30/2022	(G) Estimated Ultimate Losses 6/30/2023	(H) Percent Difference
7/1/11-12	\$455,644	\$455,644	\$356,894	-22%	\$455,644	\$356,894	-22%
7/1/12-13	\$1,111,007	\$1,111,007	\$1,111,007	0%	\$1,111,007	\$1,111,007	0%
7/1/13-14	\$510,470	\$510,470	\$512,970	0%	\$510,470	\$512,970	0%
7/1/14-15	\$1,339,061	\$1,350,000	\$1,117,561	-17%	\$1,350,000	\$1,118,000	-17%
7/1/15-16	\$1,437,736	\$1,449,786	\$1,437,836	-1%	\$1,466,000	\$1,453,000	-1%
7/1/16-17	\$1,390,939	\$1,414,716	\$1,340,939	-5%	\$1,444,000	\$1,362,000	-6%
7/1/17-18	\$2,009,429	\$2,044,839	\$2,056,429	1%	\$2,085,000	\$2,106,000	1%
7/1/18-19	\$1,647,130	\$1,837,980	\$1,369,605	-25%	\$2,041,000	\$1,561,000	-24%
7/1/19-20	\$1,134,734	\$1,588,858	\$1,091,071	-31%	\$2,068,000	\$1,366,000	-34%
7/1/20-21	\$1,548,946	\$2,066,560	\$1,833,131	-11%	\$2,688,000	\$2,383,000	-11%
7/1/21-22	\$590,141	\$1,508,272	\$821,894	-46%	\$2,449,000	\$1,830,000	-25%
7/1/22-23		\$323,670	\$185,228	-43%	\$2,297,000	\$1,792,000	-22%
Total	\$13,175,236	\$15,661,802	\$13,234,564	-15.5%	\$19,965,000	\$16,952,000	-15.1%
		<i>Variance in Incurred</i>	(\$2,427,238)		<i>Change in Ultimates</i>	(\$3,013,000)	

Percentile Estimates of Ultimate Losses
Losses Limited to \$300,000 per person, \$1,000,000 per occurrence

(A)	(B)	(C)	(D)	(E)	(F)
Accident Year	Expected Value	50th Percentile	60th Percentile	75th Percentile	90th Percentile
7/1/11-12	\$356,894	\$357,000	\$360,000	\$367,000	\$376,000
7/1/12-13	\$1,111,007	\$1,108,000	\$1,129,000	\$1,165,000	\$1,220,000
7/1/13-14	\$512,970	\$512,000	\$521,000	\$538,000	\$563,000
7/1/14-15	\$1,118,000	\$1,110,000	\$1,144,000	\$1,205,000	\$1,297,000
7/1/15-16	\$1,453,000	\$1,438,000	\$1,492,000	\$1,586,000	\$1,732,000
7/1/16-17	\$1,362,000	\$1,344,000	\$1,401,000	\$1,500,000	\$1,655,000
7/1/17-18	\$2,106,000	\$2,067,000	\$2,171,000	\$2,356,000	\$2,652,000
7/1/18-19	\$1,561,000	\$1,523,000	\$1,611,000	\$1,770,000	\$2,026,000
7/1/19-20	\$1,366,000	\$1,258,000	\$1,394,000	\$1,654,000	\$2,115,000
7/1/20-21	\$2,383,000	\$2,014,000	\$2,333,000	\$2,978,000	\$4,236,000
7/1/21-22	\$1,830,000	\$1,381,000	\$1,670,000	\$2,291,000	\$3,612,000
7/1/22-23	\$1,792,000	\$1,136,000	\$1,447,000	\$2,163,000	\$3,861,000
(1) All Years	\$16,952,000	\$16,336,000	\$16,997,000	\$18,319,000	\$20,812,000
(2) Total Paid Losses		\$9,152,872			

Percentile Estimates of Required Reserves as of June 30, 2023					
	Expected	50th %-ile	60th %-ile	75th %-ile	90th %-ile
(3) All Years	\$7,799,000	\$7,183,000	\$7,844,000	\$9,166,000	\$11,659,000

Percentile Estimates of Discounted Required Reserves as of June 30, 2023					
	Expected	50th %-ile	60th %-ile	75th %-ile	90th %-ile
(4) All Years	\$7,150,000	\$6,585,000	\$7,191,000	\$8,403,000	\$10,689,000

* Percentile estimates are based on a lognormal distribution as shown in Appendix A4

Line (1): Totals are not summed, but are based on the combined distribution of all years experience

Line (2): Exhibit 4

Line (3) = Line (1) - Line (2)

Line (4): Line (3), discounted at 4.0%

**Aggregate Loss Distribution
 For the 7/1/24-25 Fiscal Year**

(A) Probability That Losses Will Be Less Than Or Equal to Each Column	(B) Undiscounted Estimated Ultimate Losses For 7/1/24-25	(C) Undiscounted Cost Per \$1,000 Payroll For 7/1/24-25	(D) Discounted Estimated Ultimate Losses For 7/1/24-25	(E) Discounted Cost Per \$1,000 Payroll For 7/1/24-25	(F) Probability That Losses Will Be Greater Than Each Column
50%	\$2,134,000	\$9.08	\$1,829,000	\$7.78	50%
55%	\$2,231,000	\$9.49	\$1,912,000	\$8.13	45%
60%	\$2,332,000	\$9.92	\$1,999,000	\$8.50	40%
65%	\$2,434,000	\$10.35	\$2,087,000	\$8.88	35%
70%	\$2,548,000	\$10.84	\$2,184,000	\$9.29	30%
75%	\$2,690,000	\$11.44	\$2,306,000	\$9.81	25%
80%	\$2,840,000	\$12.08	\$2,435,000	\$10.36	20%
85%	\$3,027,000	\$12.88	\$2,595,000	\$11.04	15%
90%	\$3,271,000	\$13.92	\$2,804,000	\$11.93	10%
95%	\$3,701,000	\$15.74	\$3,173,000	\$13.50	5%
<u>Expected</u>					
55%	\$2,227,000	\$9.47	1,909,000	\$8.12	45%

Column (B): Based on Distributions in Appendix E
 Column (C) = (B) / Payroll
 Column (D) = (B), Discounted at 4.0%
 Column (E) = (D) / Payroll

Required Reserves
As of June 30, 2023
For Claims Incurred through June 30, 2023
Losses Limited to \$300,000 per person, \$1,000,000 per occurrence

(A) Report Year	(B) Selected Ultimate Losses	(C) Limited Paid Losses	(D) Required Reserves on Known Claims	(E) Discount Factor at 4.0%	(F) Total Discounted Reserves at 4.0%	(G) Projected Payments 7/1/2023 to 6/30/2024	(H) Projected Payments after 6/30/2024
7/1/11-12	\$423,000	\$423,000	\$0	1.000	\$0	\$0	\$0
7/1/12-13	\$1,178,500	\$1,178,500	\$0	1.000	\$0	\$0	\$0
7/1/13-14	\$565,000	\$565,000	\$0	1.000	\$0	\$0	\$0
7/1/14-15	\$9,500	\$9,500	\$0	0.981	\$0	\$0	\$0
7/1/15-16	\$495,000	\$495,000	\$0	0.964	\$0	\$0	\$0
7/1/16-17	\$237,000	\$225,000	\$12,000	0.956	\$11,000	\$6,000	\$6,000
7/1/17-18	\$661,000	\$372,500	\$288,000	0.944	\$272,000	\$116,000	\$172,000
7/1/18-19	\$711,000	\$675,000	\$36,000	0.920	\$33,000	\$6,000	\$30,000
7/1/19-20	\$135,000	\$55,000	\$80,000	0.917	\$73,000	\$27,000	\$53,000
7/1/20-21	\$338,000	\$175,000	\$163,000	0.901	\$147,000	\$32,000	\$131,000
7/1/21-22	\$544,000	\$0	\$544,000	0.904	\$492,000	\$177,000	\$367,000
7/1/22-23	\$272,000	\$0	\$272,000	0.872	\$237,000	\$8,000	\$264,000
IBNR Reported in 2023/24	\$393,000					\$4,000	\$389,000
IBNR Rptd in All Other Yrs	\$134,000						\$134,000
Total	\$6,096,000	\$4,173,500	\$1,395,000		\$1,265,000	\$376,000	\$1,546,000

	<i>Undiscounted</i>	<i>Disc. 4.00%</i>
Reserves Required for Claims Reported as of June 30, 2023	\$1,395,000	\$1,265,000
Reserves for Unreported Claims as of June 30, 2023 { Exhibit 6 }	\$527,000	\$437,000
Total Required Reserves as of June 30, 2023	\$1,922,000	\$1,702,000

Comparison of Results with Report Valued as of June 30, 2022

(A) Report Year	(B) Limited Incurred Losses 6/30/2022	(C) Expected Incurred Losses 6/30/2023	(D) Actual Incurred Losses 6/30/2023	(E) Percent Difference	(F) Estimated Ultimate Losses 6/30/2022	(G) Estimated Ultimate Losses 6/30/2023	(H) Percent Difference
7/1/11-12	\$423,000	\$423,000	\$423,000	0%	\$423,000	\$423,000	0%
7/1/12-13	\$1,178,500	\$1,178,500	\$1,178,500	0%	\$1,178,500	\$1,178,500	0%
7/1/13-14	\$565,000	\$565,000	\$565,000	0%	\$565,000	\$565,000	0%
7/1/14-15	\$7,000	\$7,000	\$9,500	36%	\$7,000	\$9,500	36%
7/1/15-16	\$495,000	\$495,000	\$495,000	0%	\$495,000	\$495,000	0%
7/1/16-17	\$260,000	\$256,000	\$245,000	-4%	\$240,000	\$237,000	-1%
7/1/17-18	\$505,000	\$499,000	\$712,600	43%	\$469,000	\$661,000	41%
7/1/18-19	\$910,000	\$903,857	\$755,000	-16%	\$867,000	\$711,000	-18%
7/1/19-20	\$119,100	\$121,463	\$139,250	15%	\$138,000	\$135,000	-2%
7/1/20-21	\$282,700	\$366,019	\$315,350	-14%	\$389,000	\$338,000	-13%
7/1/21-22	\$122,100	\$216,578	\$463,725	114%	\$323,000	\$544,000	68%
7/1/22-23		\$215,140	\$81,501	-62%	\$396,000	\$272,000	-31%
Total	\$4,867,400	\$5,246,556	\$5,383,426	2.6%	\$5,491,000	\$5,569,000	1.4%
	<i>Variance in Incurred</i>		\$136,870		<i>Change in Ultimates</i>		\$78,000

Percentile Estimates of Ultimate Losses
Losses Limited to \$300,000 per person, \$1,000,000 per occurrence

(A)	(B)	(C)	(D)	(E)	(F)
Report Year	Expected Value	50th Percentile	60th Percentile	75th Percentile	90th Percentile
7/1/11-12	\$423,000	\$422,000	\$428,000	\$438,000	\$452,000
7/1/12-13	\$1,178,500	\$1,176,000	\$1,195,000	\$1,227,000	\$1,274,000
7/1/13-14	\$565,000	\$564,000	\$574,000	\$591,000	\$616,000
7/1/14-15	\$9,500	\$9,000	\$10,000	\$10,000	\$11,000
7/1/15-16	\$495,000	\$491,000	\$507,000	\$536,000	\$580,000
7/1/16-17	\$237,000	\$234,000	\$243,000	\$260,000	\$285,000
7/1/17-18	\$661,000	\$651,000	\$680,000	\$732,000	\$812,000
7/1/18-19	\$711,000	\$682,000	\$734,000	\$828,000	\$985,000
7/1/19-20	\$135,000	\$128,000	\$139,000	\$159,000	\$194,000
7/1/20-21	\$338,000	\$271,000	\$320,000	\$424,000	\$636,000
7/1/21-22	\$544,000	\$411,000	\$497,000	\$681,000	\$1,073,000
7/1/22-23	\$272,000	\$191,000	\$236,000	\$337,000	\$561,000
Total Runoff	\$5,569,000	\$5,457,000	\$5,608,000	\$5,882,000	\$6,370,000
IBNR	\$527,000	\$485,000	\$571,000	\$715,000	\$961,000
(1) <i>All Years</i>	\$6,096,000	\$5,994,000	\$6,170,000	\$6,479,000	\$6,996,000
(2) <i>Total Paid Losses</i>		\$4,173,500			
Percentile Estimates of Required Reserves as of June 30, 2023					
(3) <i>All Years</i>	<i>Expected</i> \$1,922,000	<i>50th %-ile</i> \$1,821,000	<i>60th %-ile</i> \$1,997,000	<i>75th %-ile</i> \$2,306,000	<i>90th %-ile</i> \$2,823,000
Percentile Estimates of Discounted Required Reserves as of June 30, 2023					
(4) <i>All Years</i>	<i>Expected</i> \$1,702,000	<i>50th %-ile</i> \$1,613,000	<i>60th %-ile</i> \$1,768,000	<i>75th %-ile</i> \$2,042,000	<i>90th %-ile</i> \$2,500,000

* Percentile estimates are based on a lognormal distribution as shown in Appendix A5
IBNR distribution derived from forecast study as of 6/30/2023

Line (1): Totals are not summed, but are based on the combined distribution of all years experience

Line (2): Exhibit 4

Line (3) = Line (1) - Line (2)

Line (4) = Line (3), discounted at 4.0%

**Aggregate Loss Distribution
 For the 7/1/24-25 Fiscal Year**

(A) Probability That Losses Will Be Less Than Or Equal to Each Column	(B) Undiscounted Estimated Ultimate Losses For 7/1/24-25	(C) Undiscounted Cost Per Class 1 Equivalents For 7/1/24-25	(D) Discounted Estimated Ultimate Losses For 7/1/24-25	(E) Discounted Cost Per Class 1 Equivalents For 7/1/24-25	(F) Probability That Losses Will Be Greater Than Each Column
50%	\$382,000	\$163	\$324,000	\$138	50%
55%	\$416,000	\$177	\$353,000	\$151	45%
60%	\$454,000	\$194	\$385,000	\$164	40%
65%	\$496,000	\$212	\$421,000	\$180	35%
70%	\$548,000	\$234	\$465,000	\$198	30%
75%	\$601,000	\$256	\$510,000	\$218	25%
80%	\$659,000	\$281	\$559,000	\$238	20%
85%	\$724,000	\$309	\$614,000	\$262	15%
90%	\$816,000	\$348	\$692,000	\$295	10%
95%	\$971,000	\$414	\$824,000	\$351	5%
<u>Expected</u>					
56%	\$426,000	\$182	\$361,000	\$154	44%

- Percentile Estimates Derived from Combined Distributions for Frequency and Severity
 Frequency Distribution based on Poisson Distribution
 Severity (average claim size) Distribution based on Lognormal Distribution

Summary of Fund and Expense Allocations
Department Totals

(A) Department Name	(B) Workers Compensation Discounted 65th Percentile 7/1/24-25 Forecast Losses	(C) Automobile Liability Discounted 65th Percentile 7/1/24-25 Forecast Losses	(D) General Liability Discounted 65th Percentile 7/1/24-25 Forecast Losses	(E) Medical Professional Discounted 65th Percentile 7/1/24-25 Forecast Losses	(F) Workers Compensation Expenses	(G) Non - Workers Compensation Expenses	(H) Total 7/1/24-25 Allocation	(I) Percent Change
Agriculture	\$150,688	\$71,202	\$8,046	\$0	\$72,332	\$103,314	\$405,582	7.8%
Attorney General	\$15,665	\$657	\$7,141	\$0	\$7,519	\$10,165	\$41,146	10.6%
Children Services	\$1,576,736	\$18,419	\$154,505	\$0	\$756,848	\$225,437	\$2,731,944	18.1%
Commerce & Insurance	\$46,639	\$10,926	\$10,260	\$0	\$22,387	\$27,620	\$117,832	4.9%
Commissions	\$88,963	\$18,097	\$16,066	\$0	\$42,703	\$44,538	\$210,367	11.4%
Community Services Agencies	\$23,997	\$312	\$698	\$0	\$11,519	\$1,317	\$37,844	2.3%
Comptroller	\$17,305	\$328	\$11,529	\$0	\$8,306	\$15,459	\$52,927	3.0%
Correction	\$2,891,000	\$166,852	\$418,240	\$0	\$1,387,707	\$762,770	\$5,626,568	-4.9%
District Attorney General	\$40,025	\$6,510	\$198,400	\$0	\$19,213	\$267,136	\$531,284	47.4%
Drug Task Force	\$0	\$38,339	\$0	\$0	\$0	\$49,981	\$88,320	32.4%
Economic & Community Development	\$6,015	\$657	\$2,485	\$0	\$2,887	\$4,096	\$16,140	14.0%
Education	\$120,575	\$5,695	\$16,565	\$0	\$57,877	\$29,019	\$229,732	-0.5%
Environment & Conservation	\$742,370	\$110,178	\$218,238	\$0	\$356,344	\$428,148	\$1,855,278	15.7%
Executive	\$2,009	\$0	\$959	\$0	\$964	\$1,251	\$5,184	-7.7%
Finance & Administration	\$34,172	\$11,132	\$41,209	\$0	\$16,403	\$68,235	\$171,151	10.8%
Financial Institutions	\$22,385	\$0	\$3,463	\$0	\$10,745	\$4,515	\$41,108	2.8%
General Services	\$97,770	\$11,478	\$6,051	\$0	\$46,930	\$22,852	\$185,081	1.1%
Health	\$644,882	\$10,596	\$43,328	\$12,786	\$309,549	\$86,969	\$1,108,111	-3.2%
Higher Education	\$2,994	\$0	\$2,784	\$0	\$1,437	\$3,629	\$10,843	0.2%
Human Resources	\$11,457	\$328	\$3,240	\$0	\$5,499	\$4,652	\$25,177	9.8%
Human Services	\$390,046	\$1,731	\$44,013	\$0	\$187,226	\$59,635	\$682,651	6.4%
Judicial-Court	\$28,645	\$509	\$16,931	\$0	\$13,750	\$22,736	\$82,571	2.8%
Legislative	\$10,455	\$0	\$8,344	\$0	\$5,019	\$10,878	\$34,695	0.5%
Locally Governed Institutions	\$1,085,713	\$252,491	\$77,106	\$62,752	\$521,152	\$511,496	\$2,510,710	-2.7%
Mental Health	\$1,376,818	\$6,915	\$55,955	\$4,202	\$660,885	\$87,441	\$2,192,218	-6.8%
DIDD	\$548,182	\$32,968	\$47,447	\$113	\$263,132	\$104,982	\$996,824	-3.5%
Military	\$119,435	\$23,839	\$5,353	\$0	\$57,330	\$38,058	\$244,016	8.6%
Past Conviction Defenders	\$1,803	\$0	\$427	\$0	\$865	\$557	\$3,652	-4.6%
Probation & Parole	\$993	\$0	\$1,327	\$0	\$477	\$1,731	\$4,528	3.9%
Public Defender	\$20,127	\$0	\$11,126	\$0	\$9,661	\$14,504	\$55,418	3.0%
Revenue	\$36,249	\$10,788	\$12,526	\$0	\$17,400	\$30,394	\$107,356	5.8%
Safety	\$1,230,851	\$252,117	\$113,054	\$0	\$590,820	\$476,065	\$2,662,907	13.4%
Secretary of State	\$16,323	\$1,313	\$5,046	\$0	\$7,835	\$8,291	\$38,809	4.6%
Tennessee Board of Regents	\$575,287	\$131,625	\$40,856	\$0	\$276,143	\$224,859	\$1,248,771	-7.5%
Tennessee Education Lottery Corporation	\$0	\$27,339	\$2,796	\$0	\$0	\$39,287	\$69,423	39.7%
T.B.I.	\$236,594	\$98,449	\$11,793	\$0	\$113,567	\$143,719	\$604,123	14.9%
Tennessee Veterans Home	\$190,296	\$4,620	\$6,555	\$0	\$91,344	\$14,568	\$307,382	-15.8%
T.W.R.A.	\$238,622	\$112,214	\$10,491	\$0	\$114,541	\$159,967	\$635,834	5.7%
TennCare	\$26,268	\$0	\$21,155	\$0	\$12,609	\$27,579	\$87,611	8.4%
Tourist Development	\$19,215	\$509	\$1,972	\$0	\$9,223	\$3,235	\$34,155	8.2%
Transportation	\$2,688,000	\$678,601	\$2,087,000	\$0	\$1,290,265	\$3,605,448	\$10,349,314	-1.4%
Treasury	\$33,080	\$221	\$6,999	\$0	\$15,878	\$9,412	\$65,589	1.9%
University of Tennessee	\$1,839,000	\$321,047	\$303,080	\$341,146	\$675,737	\$735,889	\$4,215,899	6.6%
Veteran Affairs	\$29,395	\$6,212	\$1,594	\$0	\$14,110	\$10,177	\$61,488	11.0%
Workforce Development	\$80,954	\$2,787	\$14,848	\$0	\$38,859	\$22,990	\$160,437	4.2%
Total	\$17,358,000	\$2,448,000	\$4,071,000	\$421,000	\$8,125,000	\$8,525,000	\$40,948,000	2.1%