



ACTUARIAL VALUATION OF THE

STATE OF ALASKA LONG TERM CARE PROGRAM AS OF  
6/30/2023

SEGAL

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# CONTENTS

**Purpose & Scope**..... 3

    Background and Scope..... 3

    Limits on Distribution and Utilization..... 4

    Confidentiality of Review & Reliances ..... 4

**Summary** ..... 5

    Valuation Results ..... 5

    Assumptions ..... 6

    Claim Reserve (Claims Payable) ..... 11

    Actual Experience to Projected Values ..... 12

    Sensitivity Analysis..... 13

    Projected Cash Flows ..... 14

## PURPOSE & SCOPE

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### BACKGROUND AND SCOPE

The Segal Company ("Segal") retained Lewis & Ellis, Inc. ("L&E") to perform an actuarial analysis of Alaska's Long-Term Care ("LTC") Program as of June 30, 2023. Specifically, our assignment was to develop a projection of future cash flows and to evaluate the adequacy of current assets and premium levels based on those cash flows.

This report summarizes the results of our actuarial valuation of Alaska's LTC Program as of June 30, 2023. Please note that this report is not meant to serve as complete actuarial documentation for this valuation. Additional data/information can be provided upon request.

We developed projected values using a seriatim projection model and we used those projected values along with current program financial information to determine the financial standing of the program. Consistent with the purpose of the valuation, no membership growth was assumed. The projection period is 60 years for the LTC in force. Gains and losses are accumulated at the effective earned rate over the projection period. The value at the end of the projection period could then be discounted at the earned rate to determine the magnitude of the deficiency reserve if the ending value was negative.

The projections of earnings are further dependent on numerous other assumptions that are outlined in detail in the following sections of this report. They are based on program experience where available and otherwise on our knowledge of industry experience. We have not generated liabilities and reserves consistent with statutory reporting requirements as this self-funded plan is not subject to such requirements.

Most of the data utilized by L&E in determining the values was obtained from State of Alaska representatives. We did not attempt to audit or verify the accuracy of this data; however, we did review the information for reasonableness and consistency. Any inaccuracies in this information could affect the results of this report, perhaps materially. The type of information provided includes, but is not limited to:

- Electronic listing of State of Alaska members.
- Claim payments from 2009 to May 31, 2023.
- Plan descriptions and gross premium rates for the model plan/age cells.
- Financial Statements for 2013-2023.

## LIMITS ON DISTRIBUTION AND UTILIZATION

This report has been prepared for Segal and the State of Alaska. L&E has developed this report for the purpose and with the limitations stated above. When distributed, this report must be distributed in its entirety.

Although the valuation projects earnings, this report should not in any way be presented or construed as an actuarial appraisal in accordance with Actuarial Standards of Practice Number 19.

Any reader of this report must possess a substantial level of expertise in areas relevant to this analysis to appreciate the significance of the assumptions and the impact of these assumptions on the illustrated results. This report must be read in its entirety to be understood. The reader should be advised by, among other experts, an actuary competent in the area of actuarial projections of LTC blocks of business so as not to misinterpret any of the projected results.

In addition, any third party with access to this report acknowledges, as a condition of receipt, that L&E does not make any representations or warranty as to the accuracy or completeness of this report. This report is not intended as a representation of the future solvency of the Program and should not be viewed as such.

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## CONFIDENTIALITY OF REVIEW & RELIANCES

This actuarial valuation was performed based on the best estimate assumptions that are appropriate at the date of valuation. We do not reflect the potential for adverse deviations in actual future experiences in our best estimate assumptions. Assumptions could change as more information becomes known, which would impact the funded status reported in this valuation.

All source records and detailed information are maintained at the Plano, Texas office of L&E, and members of L&E staff are available to explain any matter presented herein. Please direct any inquiries to Brian Rankin.

## SUMMARY

The purpose of the remainder of this report is to provide analysis of the reserve adequacy for all plans. Premiums, benefits and expenses were projected for 60 years for the State of Alaska’s LTC program and then discounted back to June 30, 2023 at an appropriate discount rate. This present value was then compared to the total assets at June 30, 2023<sup>i</sup> to determine if the current assets are sufficient to fund future claims and expenses for the next 60 years.

## VALUATION RESULTS

The following table summarizes the present value of cash flows discounted at the net earned rates.

Component	6/30/2021 (\$000)	6/30/2023 (\$000)
1. PV of Future Benefits	\$779,931	\$803,949
2. PV of Future Expenses	\$8,503	\$8,636
3. PV of Future Premiums (PVFP)	\$336,381	\$331,774
4. Cash Flows (3-1-2)	(\$452,053)	(\$480,538)
5. Valuation Assets	\$696,258	\$681,985
6. Valuation Margin (5+4)	\$244,205	\$201,447
Margin as a % of PFVP (6/3)	72.6%	60.7%
Funded Status (5/4)	154.0%	141.9%

## VALUATION MARGIN

The Valuation Margin has fluctuated over the last six years as a result of plan experience, investment returns, actuarial assumptions and the growth of the Program. The table below shows the margin/deficit for the Long-Term Care Program for the valuation reports beginning in 2012 (\$000).

Valuation Date	Margin (Deficit) (\$000)
May 31, 2012	(\$70,875)
May 31, 2012 (Revised)	\$30,289
June 30, 2015	\$27,244
June 30, 2017	\$7,372
June 30, 2019	\$94,564
June 30, 2021	\$244,205
June 30, 2023	\$201,447

<sup>i</sup> The census data for the projections were based on data as of 5/31/2023

### METHODOLOGY

The present value calculations needed to compute Program liabilities consider expected future benefits, expenses and premium revenue discounted to the current valuation date. The present value calculations consider all future variables that affect the members' continued participation in the LTC Program, as well as the benefits or expenses they will generate.

Information was provided to Lewis & Ellis regarding program specifications and supporting data. Claims detail was provided through May 31, 2023. The remaining information was as of June 30, 2023. Seriatim records were used to project future premiums and claims using proprietary software and then summarized by various plans in spreadsheets. All items of income and expenses were projected, as well as all items affecting cash flows. The models recognize the timing of benefit payments, premium income, expenses, and other significant cash flow items.

Appropriate considerations in plan modeling to major plans include the following:

- Type of coverage (nursing home, home health care, or both).
- Benefit period.
- Presence (or absence) of automatic inflation benefit.
- Level of premiums.
- Issue age range.
- Gender.

The above considerations were considered in determining the modeling for each individual.

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### ASSUMPTIONS

L&E relied on Alaska personnel to provide a variety of information and data on the LTC coverage in force. Although we did not independently verify nor audit this information supplied, we did review the information for reasonableness and consistency.

Alaska personnel supplied us with information regarding the gross premium rates, benefits, and coverage outlines for all the LTC plans currently in force. The information was transmitted to us electronically.

Prior valuation assumptions were validated against recent program experience. Future experience is based on projected future claim costs. Actual results will almost certainly differ from projected results. Each assumption utilized for completing the calculations is shown in detail in the remainder of this section.

Loss ratios on Long Term Care business are typically quite low in the early durations but increase significantly by policy duration and as the insured ages. Alaska's experience has been consistent with this pattern. The State of Alaska has established the Retiree LTC Insurance Fund to support future LTC liabilities. As of June 30, 2023, the total assets of the LTC Fund were approximately \$741 million.

Except where the plan provides for an automatic increase in the claim costs, neither the claim costs nor gross premiums have been adjusted for possible future claims inflation.

**MODEL PLANS**

The following model plans are listed with a brief description of each plan.

Benefit	Benefit Summary by Plan Option			
	Bronze	Silver	Gold	Platinum
Lifetime Max	\$200,000*	\$400,000	\$300,000	\$300,000
Inflation Protection	None	None	5% Simple to age 85	5% Compound to Age 85
Elimination Period	90 Day	90 Day	90 Day	90 Day
Benefit Trigger	2 of 5 ADLs	2 of 6 ADLs or CI	2 of 6 ADLs or CI	2 of 6 ADLs or CI
NH Daily Benefit	\$125 in-state, \$75 out-of-state	\$200	\$200	\$200
ALF Daily Benefit	If approved	\$150	\$150	\$150
HHC Daily Benefit	\$75 in-state, \$40 out-of-state	\$125	\$125	\$125
Hospice Daily Benefit	Not covered	\$125	\$125	\$125
Respite Benefit	Not covered	Up to \$200 daily, 14 days per calendar year	Up to \$200 daily, 14 days per calendar year	Up to \$200 daily, 14 days per calendar year

**DISTRIBUTION**

The following tables outline the distribution of current policyholders. :

Benefit Option	Lives	Distribution
Bronze	4,971	22.4%
Silver	8,437	38.0%
Gold	5,887	26.5%
Platinum	2,910	13.1%
Total	22,205	100.0%

Gender	Lives	Distribution
Female	12,656	57.0%
Male	9,549	43.0%
Total	22,205	100.0%



## LAPSES

The lapse assumption reflects the expected portion of participants who terminate their policies each year by not paying the renewal premiums. Lapse assumptions can vary based on a wide variety of factors, including the participants' age at enrollment and the number of years participants have their policies. In general, it is assumed that the longer that participants keep their policies, the less likely they are to lapse. Lapse rate assumptions greatly affect long-term care insurance premiums because when individuals lapse, future liabilities are immediately reduced although current assets are not affected.

Prior valuations have utilized ultimate lapse rate of 0.5%. We believe this is an appropriate ultimate lapse rate and therefore the lapse assumptions are consistent with the prior actuarial valuation.

Policy Year	Voluntary Lapse Rate
1	2.3%
2	1.2%
3	1.0%
4	0.9%
5	0.8%
6	0.7%
7	0.6%
8+	0.5%

## MORTALITY

Sex distinct 1994 GAM Table

## MORBIDITY

For Long-Term Care insurance products, the substantial financial risks lie in morbidity assumptions. The morbidity assumptions reflect the amount of claim costs expected for participants. The key components driving claim costs are:

- Claim Incidence, which is the probability of going on claim.
- Claim continuance, which is the length of time staying on claim.
- Utilization, which is the level of claim payment.

It would be preferable to use the experience from the Alaska LTC Program. However, there have been less than 3,400 claims since the inception of the Program in 1987. Since this data is not fully credible the expected claim costs were developed from L&E's expected incidence rates and continuance tables and adjusted for State of Alaska's experience relative to L&E's expected costs.

**EXPENSES**

We reviewed the actual expenses provided in the financial statements. The administrative expenses have averaged 1.8% for fiscal years 2019 through 2023. Typical LTC insurance industry expense assumptions are significantly higher than this. This projection assumes administration expenses of 2.0% of premium increasing by 1.5% per year.

**DISCOUNT RATE**

We assumed a level 5.0% earned interest rate. The discount rate is a major component of the valuation process and is used to determine present values of the future premiums, expenses, and benefits. We reviewed the Program investment returns over the last five fiscal years. We calculated investment returns based on investment income and the average balance of the fund at the beginning and end of each fiscal year:

Fiscal Year	Investment Results (\$000)		Fund Return
	Net Investment Income	Average Fund Balance	
2018	20,001	456,686	4.4%
2019	39,328	502,959	7.8%
2020	43,259	562,536	7.7%
2021	106,624	649,736	16.4%
2022	(100,403)	685,291	(14.7%)
2023	63,353	713,637	8.9%
Six Year Average	28,694	600,348	4.8%

Based on recent investment experience, the prior valuation rate and input from the State of Alaska we selected a 5.0% earned rate for the LTC valuation. This rate was assumed for all future years of the projection.

The assumed discount rate is 25 basis points less than the expected return of the Retiree LTC Insurance Investment Guidelines. The discount rate is also 20 basis points higher than the average return over the last six years. Removing investment results for 2022 (a non-typical year) the average return is 9.1%. The Sensitivity Analysis section includes results based on changing the discount rate.

### RATE INCREASES

If the State of Alaska LTC Program has a deficit<sup>ii</sup> (liabilities in excess of assets), it can be recovered only through actuarial gains or increases in future premiums. The actuarial valuation does not dictate a premium adjustment at this time. It is important that the financial progress of the Program be monitored closely so that the State of Alaska can act quickly to adjust future premiums to maintain the Program's solvency.

Regarding all assumptions previously discussed, actual experience may differ from that assumed in the projections. To the extent actual experience is different from the assumptions underlying this report, so will actual results differ from the projected results shown here. Sensitivity of results to changes in assumptions is provided in the Sensitivity Analysis section.

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### CLAIM RESERVE (CLAIMS PAYABLE)

The financial statements included a liability of claims payable. We calculated the claim liability by using the seriatim listing that was provided that contained Pending Claims as of the valuation date. We used L&E continuance tables in order to calculate the present value of amounts not yet due (PVANYD). There were only 503 open claims which limits the credibility of the experience. We also reviewed the overall experience of the Alaska LTC Program Experience by calendar year.

Fiscal Year	Claims Payable (\$000)	Source
2018	34,802	L&E
2019	36,015	L&E
2020	51,614	L&E
2021	52,398	L&E
2022	62,223	L&E
2023	58,701	L&E

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<sup>ii</sup> Commercial LTC insurance programs are required to maintain statutory reserves and additional surplus. These two items could be another resource to mitigate rate increases.

## ACTUAL EXPERIENCE TO PROJECTED VALUES

The Alaska LTC Program covers less than 25,000 lives. In addition, LTC experience fluctuates on several factors including demographics, the economy, and access to facilities. We compared the prior valuation to recent experience:

Fiscal Year	Paid Claims (\$000)		Actual - Projected	Actual/Projected
	Actual	Projected		
2022	15,966	18,421	(-2,455)	87%
2023	18,670	21,918	(-3,247)	85%

Claim costs were developed based on a combination of Alaska experience, industry experience, client data and actuarial judgment. To project future claim experience, the claim cost models were calibrated to produce loss ratios that are similar to recent experience.

The future projected claims were generated by applying the claim costs to the 5/31/2023 census. The projected claims (which are used in the actuarial valuation) are somewhat greater than recent experience. The incurred loss ratios are consistent with recent experience.

**SENSITIVITY ANALYSIS**

We ran sensitivity tests to determine if the reported assets are sufficient with respect to morbidity, voluntary lapses, mortality, and investment earning. Results are highly sensitive to the assumptions underlying the calculations. Sensitivity Results (\$000):

Scenario	Sufficiency (Deficiency)	
	5.00%	5.25%
Base	201,447	251,149
Increase morbidity by 3.5%	173,309	225,182
Increase morbidity by 5.0%	161,249	214,053
Voluntary lapse @ 150%	220,770	272,461
Voluntary lapse @ 50%	178,759	227,673
Mortality @ 90%	146,631	193,149

We also ran sensitivity tests to determine what investment rate would be required if the assumptions were all equally adverse. The 4% adverse projections assumed that claims and expenses are 4% greater and that the termination (lapse and mortality) rates are 96% of projected. We also tested the projected experience as 5% adverse. We then determined what investment rate would be required so that there is no future deficiency:

Adverse Experience	Required Investment Return
4.00%	3.71%
5.00%	3.77%

## PROJECTED CASH FLOWS

Fiscal Year	Lives	Earned Premium	Expenses	Paid Claims	Incurred Claims	Loss Ratio
2024	20,401	35,373,113	795,895	18,673,692	21,559,689	61%
2025	19,660	34,087,719	778,478	22,712,859	23,932,545	70%
2026	18,923	32,809,960	760,537	26,752,026	26,506,889	81%
2027	18,181	31,523,239	741,671	28,061,910	29,282,090	93%
2028	17,432	30,225,463	721,805	30,401,562	32,241,222	107%
2029	16,677	28,916,115	700,895	30,476,070	35,349,750	122%
2030	15,915	27,595,501	678,918	33,479,972	38,620,632	140%
2031	15,148	26,264,344	655,860	36,641,617	42,014,892	160%
2032	14,374	24,923,753	631,720	39,941,900	45,503,849	183%
2033	13,597	23,576,452	606,534	43,354,781	49,066,075	208%
2034	12,819	22,226,584	580,384	46,846,686	52,619,837	237%
2035	12,041	20,878,586	553,363	50,373,825	56,139,570	269%
2036	11,268	19,537,188	525,578	53,881,162	59,523,291	305%
2037	10,501	18,207,433	497,153	57,310,681	62,741,817	345%
2038	9,744	16,894,655	468,227	60,596,970	65,696,392	389%
2039	9,000	15,604,382	438,955	63,681,020	68,373,183	438%
2040	8,272	14,342,228	409,502	66,507,361	70,707,195	493%
2041	7,563	13,113,841	380,045	69,020,039	72,609,099	554%
2042	6,878	11,924,835	350,771	71,150,751	74,018,425	621%
2043	6,218	10,780,682	321,872	72,837,599	74,906,233	695%
2044	5,587	9,686,581	293,544	74,033,168	75,242,126	777%
2045	4,987	8,647,331	265,982	74,698,275	74,988,339	867%
2046	4,422	7,667,205	239,372	74,800,964	74,137,976	967%
2047	3,893	6,749,824	213,892	74,322,204	72,697,202	1077%
2048	3,402	5,897,987	189,702	73,268,126	70,743,277	1199%
2049	2,949	5,113,560	166,939	71,657,111	68,242,530	1335%
2050	2,536	4,397,469	145,714	69,503,347	65,213,561	1483%
2051	2,163	3,749,703	126,114	66,832,281	61,777,583	1648%
2052	1,828	3,169,356	108,194	63,699,286	57,978,830	1829%
2053	1,531	2,654,650	91,982	60,171,932	53,908,856	2031%
2054	1,271	2,202,956	77,476	56,327,272	49,680,619	2255%
2055	1,044	1,810,875	64,643	52,247,193	45,312,843	2502%
2056	850	1,474,350	53,419	48,004,123	40,907,222	2775%
2057	686	1,188,803	43,719	43,675,275	36,569,676	3076%
2058	548	949,319	35,436	39,345,648	32,345,602	3407%
2059	433	750,825	28,447	35,093,389	28,333,957	3774%
2060	339	588,249	22,621	30,995,330	24,600,140	4182%
2061	263	456,650	17,824	27,120,855	21,166,633	4635%
2062	203	351,343	13,919	23,517,030	18,056,700	5139%
2063	155	268,001	10,777	20,214,832	15,280,039	5701%
2064	117	202,741	8,275	17,229,845	12,816,172	6321%
2065	88	152,153	6,303	14,562,150	10,657,491	7004%
2066	65	113,314	4,765	12,201,305	8,774,873	7744%
2067	48	83,764	3,575	10,133,493	7,165,044	8554%
2068	35	61,473	2,663	8,343,124	5,805,290	9444%
2069	26	44,795	1,970	6,810,572	4,654,779	10391%
2070	19	32,411	1,446	5,510,659	3,700,463	11417%
2071	13	23,283	1,055	4,419,748	2,919,733	12540%
2072	10	16,598	763	3,515,397	2,283,949	13760%
2073	7	11,738	548	2,772,183	1,766,793	15052%
2074	5	8,229	390	2,166,486	1,356,086	16480%
2075	3	5,715	275	1,677,849	1,030,550	18031%
2076	2	3,930	192	1,287,182	772,294	19651%
2077	2	2,673	132	976,900	572,104	21400%
2078	1	1,797	90	733,027	418,934	23309%
2079	1	1,193	61	543,634	302,007	25309%
2080	0	782	40	398,050	214,703	27467%
2081	0	505	27	287,510	150,261	29771%
2082	-	321	17	204,750	103,356	32204%
Total PV Future:		331,774,411	8,363,385	803,949,163	828,267,070	250%