



Maine Public Employees Retirement System

**Experience Study
as of June 30, 2025**

Produced by Cheiron

July 2026

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July 9, 2026

Board of Trustees
Maine Public Employees Retirement System
139 Capitol Street
P.O. Box 349
Augusta, Maine 04332-0349

Dear Members of the Board:

The purpose of this report is to provide the results of the demographic experience study of the Maine Public Employees Retirement System (MainePERS) covering the experience from June 30, 2020 through June 30, 2025. The report includes analyses and recommendations of demographic assumptions to be used beginning with the June 30, 2026 actuarial valuation and the ratemaking process for fiscal years ending 2028 and 2029.

This report does not include an analysis of the economic assumptions for MainePERS. The economic assumptions are reviewed annually during the June Board of Trustees meeting.

In preparing our report, we relied on information, some oral and some written, supplied by MainePERS. This information includes, but is not limited to, the plan provisions and employee data. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, *Data Quality*.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared for MainePERS for the purposes described herein. This report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

If you have any questions about the report or would like additional information, please let us know.

Sincerely,
Cheiron



Gregory A. Reardon, FSA, EA
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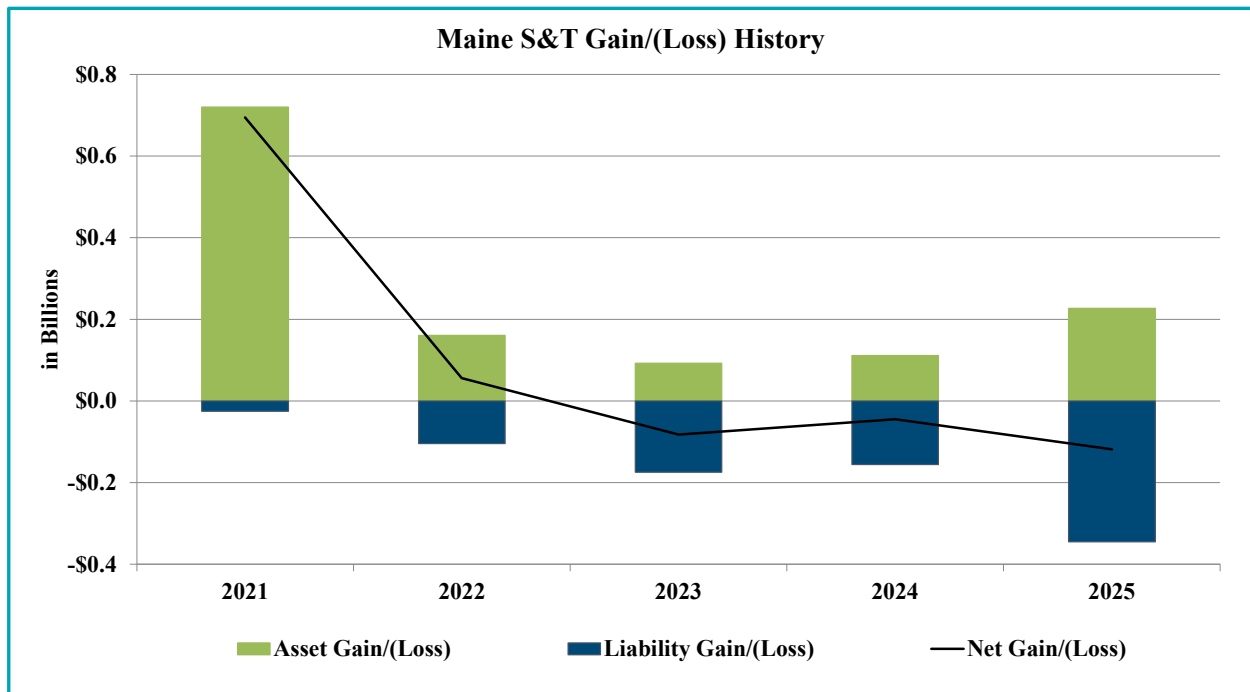
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

SECTION I - EXECUTIVE SUMMARY

Actuarial assumptions are intended to be long-term in nature and should be both individually reasonable and consistent and reasonable in the aggregate. The purpose of this experience study is to evaluate whether the current demographic assumptions adequately reflect the current long-term expectations for MainePERS, and if not, to recommend any adjustments to these assumptions that might be needed. It is important to note that frequent and significant changes in the actuarial assumptions are not typically desirable, unless there are known fundamental changes with respect to MainePERS's membership or plan provisions that would warrant such frequent or significant changes.

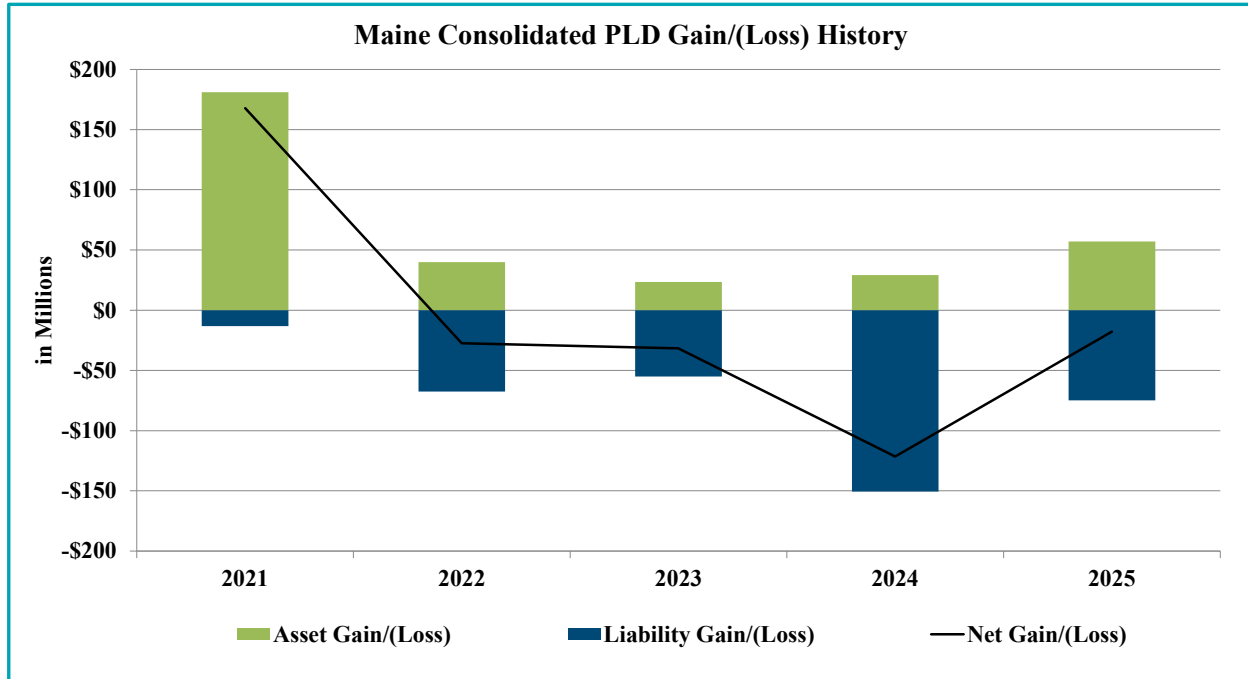
Experience gains and losses can be broken down into two categories – liabilities and investments. The charts below show these two categories for the State Employees and Teachers and the Consolidated PLD Plans over the 5-year period since the prior experience study assumption changes were adopted. These charts do not include any changes in MainePERS's assets and liabilities attributable to changes in benefits, methods, procedures, or assumptions, as they are not the focus of the experience study.

For the State Employees and Teachers Plan, the total liability loss over the 5-year period shown has been approximately \$805 million, and the total investment gain over the same period was approximately \$1,130 million. For the Consolidated PLD Plan, the total liability loss over the 5-year period shown has been approximately \$361 million, and the total investment gain over the same period was approximately \$331 million. The investment losses in these charts are measured based on the smoothed actuarial value of assets. Taken together, the total experience over the 5-year period has been a net gain of \$505 million for the State Employees and Teacher Plan and a net loss of \$30 million for the Consolidated PLD Plan.



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

SECTION I - EXECUTIVE SUMMARY



The following table provides the gain/(loss) history for each of the four Programs in the System for both a 10-year period and a 5-year period for assets and liabilities. As in the prior charts, no changes attributable to changes in benefits, methods, procedures, or assumptions are included. The investment gains have more than offset the liability losses for the recent 5-year period. Over this period, high inflation was identified as a major contributor to these liability losses, appearing in both the salary experience as well as the COLA experience. The inflation assumption is reviewed as part of the annual economic experience analysis and is not included in this report. Demographic trends have been identified within this report, resulting in changes recommended to the applicable assumptions in an effort to mitigate future liability gains and losses.

Gain/(Loss) History (in \$millions)					
		State Employee & Teacher Program	Consolidated Plan for PLDs	Judicial Program	Legislative Program
Fiscal Years Ending 2016-2025	Asset G/(L)	\$1,057	\$285	\$7	\$1
	Liability G/(L)	(1,225)	(333)	0	(2)
	Total G/(L)	(\$168)	(\$48)	\$7	(\$1)
Fiscal Years Ending 2021-2025	Asset G/(L)	\$1,310	\$331	\$8	\$1
	Liability G/(L)	(805)	(361)	(3)	(1)
	Total G/(L)	\$505	(\$30)	\$5	\$0

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

SECTION I - EXECUTIVE SUMMARY

Summary of Demographic Assumption Analysis

This experience study specifically analyzed and offered recommendations for changes to the following demographic assumptions (we have noted the most significant changes within each assumption below as well).

- **Merit salary increases** – increases for Teachers, State employees, and PLD members, a slight increase for Judicial members, and no change for Legislative members
- **Retirement rates** – adjustments to rates for all Tiers for State and Teachers, adjustments for PLD members, including movement to separate tables for Special Plans 1 and 2 through 4, and minor adjustments to Judicial and Legislative members
- **Termination rates** – slight changes in termination rates for Teachers, State Employees, and Legislators as well as PLD members
- **Disability rates** – decreases for Teachers, State Regular Employees, and PLD members; slight increase to State Special disability rates; no disability is assumed for Judicial or Legislative members
- **Mortality rates** – change to the Public Sector 2016 Mortality tables and IRS Adjusted MP-2021 mortality improvement scale for all Programs
- **Family composition** – slight changes in the percent married assumption for female participants, spouse age differences, and ages at which members have children

The details of the full recommendations for each plan are provided in Appendix A to this report.

The most significant demographic assumption change recommended is to the merit salary increase assumptions. Over the entire study period, pay increases have exceeded expectations. While a portion of the liability losses experienced as a result of this can be attributed to high inflation over this period, these increases have also exceeded various metrics analyzed as inflationary-based. Some of these increases are necessary to attract and retain members and are expected to persist into the foreseeable future.

The body of this report provides additional detail and support for our conclusions and recommendations.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MERIT SALARY INCREASES**

The demographic assumptions used in actuarial valuations of pension plans are intended to be long-term in nature and should be both individually reasonable and consistent with each other. The specific assumptions analyzed in this report are as follows:

- **Merit salary increases**
- **Retirement rates**
- **Termination rates**
- **Disability rates**
- **Mortality rates**
- **Family composition**

The factors considered in developing recommendations for these assumptions are primarily based on MainePERS's own experience. In addition to considering the actual experience during the study period, we also considered regulatory and professional standards, expectations for the future, and the preferences and risk tolerance of the MainePERS Board. Finally, while industry trends are not a primary consideration in recommending these assumptions, we did consider them for informational purposes prior to finalizing our recommendations on these demographic assumptions.

These demographic assumptions are generally developed for each individual MainePERS Program rather than for all the Programs as one. The full details of the current and recommended demographic assumptions by each MainePERS Program are provided in Appendix A to this report.

We first discuss the merit salary increase assumptions, with the remainder of this section comprised of analysis relating to the demographic rate assumptions.

Merit Salary Increases

Inflation is one of two components of total individual salary increases. In this section, the analysis develops the second of these individual salary increase components, the merit increase. Generally, newly hired employees are more likely to earn a step increase or receive a promotion, so their salary increases tend to be greater than those for longer-service employees. In some plans, the merit increase is best predicted by service, while in other plans it is best predicted by age. As part of our analysis, we examined both approaches and found service to be a better fit than age for all of the MainePERS Programs.

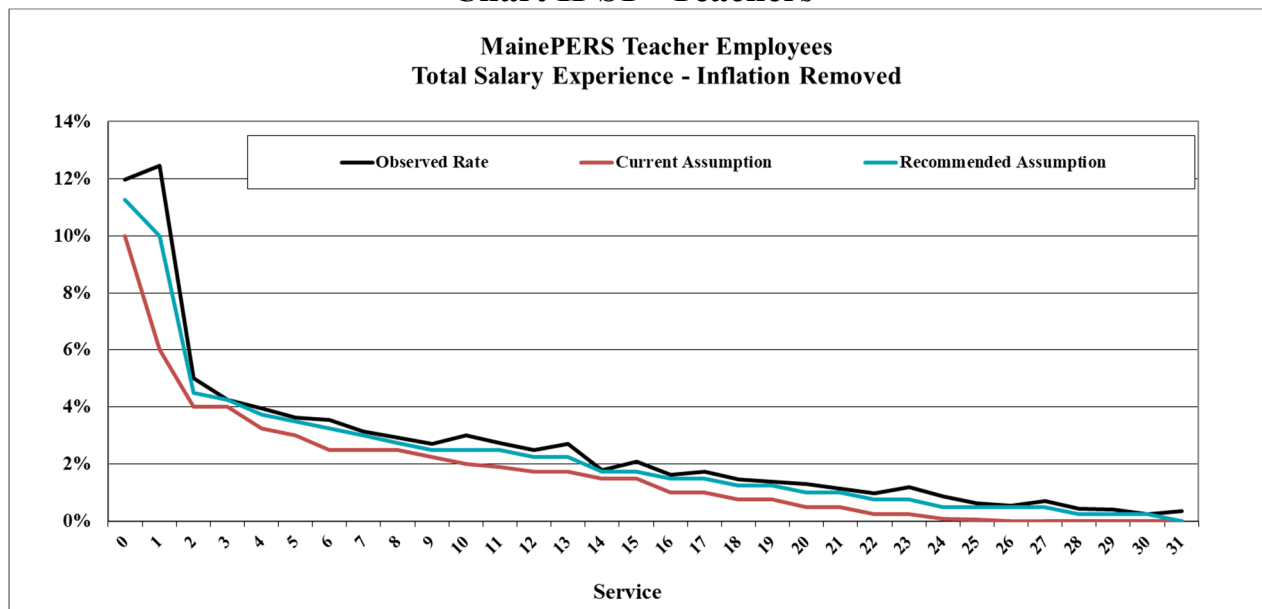
The merit salary increase assumption is applied in addition to the inflation assumption to determine the total salary increase expected for an individual. To analyze the merit component, the increase in the average salary paid to members of the Plan for a given year is reduced by the component assumed to relate to growth due to general wage inflation. Assumed merit salary increases for members of each Program, net of assumed inflation rates, are then developed for each year of service.

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

SECTION II - DEMOGRAPHIC ASSUMPTIONS
MERIT SALARY INCREASES

Charts II-S1, II-S2, and II-S3 show the current total merit salary increase assumption (red line) compared to the actual experience (black line) and the recommended assumption (teal line) for each year of service for Teachers, State Employees, and PLD Employees, respectively. The analysis of salary increases was performed using data from the 2019-2025 valuations (for analyzing only merit salary increases, we reflected an additional year of experience to balance out the effects of low and high inflationary periods). Compared to the current assumption for teachers, the recommended assumption reflects greater salary increases for all employees. Compared to the current assumption for State Employees, the recommended assumption reflects larger total salary increases for nearly all employees. The PLD recommended assumption also recommends greater salary increases than the current assumption for all employees. Details of these recommendations are included in Appendix A of this report.

Chart II-S1 - Teachers



MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

SECTION II - DEMOGRAPHIC ASSUMPTIONS
MERIT SALARY INCREASES

Chart II-S2 - State Employees

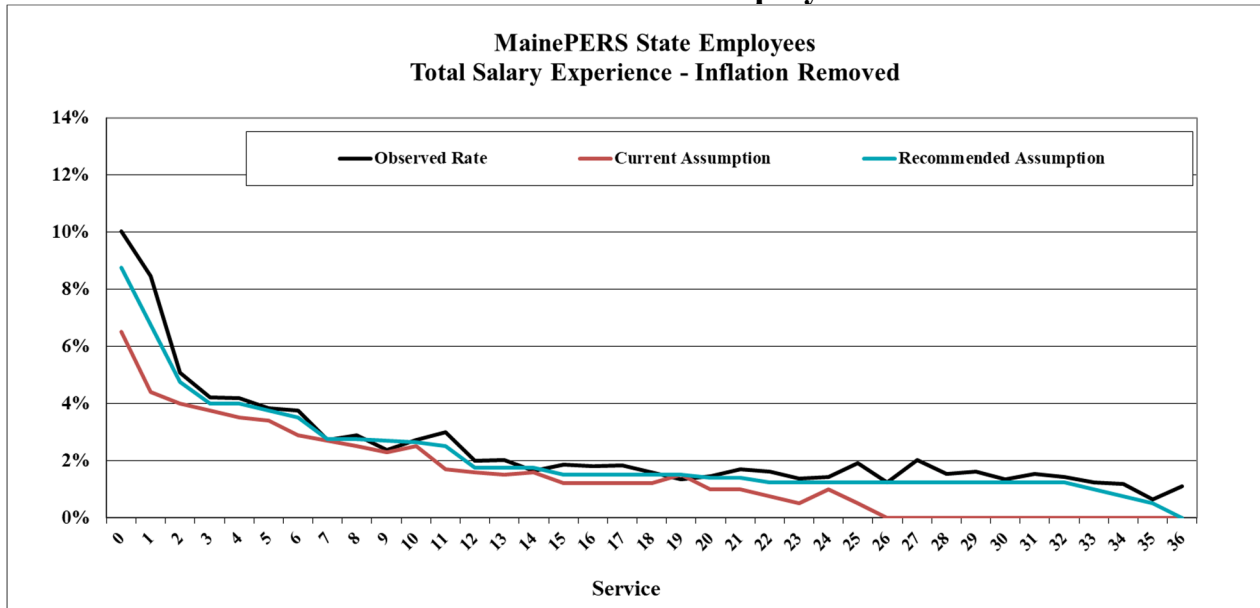
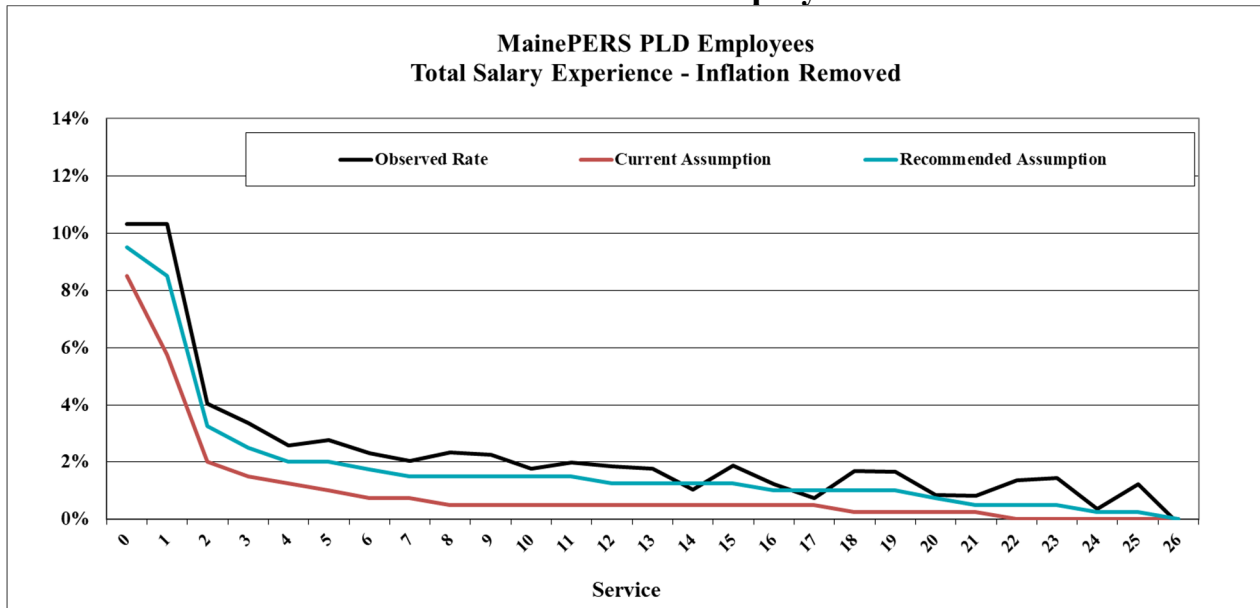


Chart II-S3 - PLD Employees



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MERIT SALARY INCREASES**

In general, salary increases for Judicial and Legislative members are statutorily set using the same basis as cost-of-living adjustments (inflationary only). Salaries for members of the Legislature were reset for 2025 and 2026 in Chapter 446 (L.D. 1155) but are expected to maintain the methodology of inflationary increases in future years. As such, there is no merit component of the salary increase recommended for the Legislative Plan; however, we will refine our salary projection for valuation purposes to be more in line with how Legislative pay is reported to us on the valuation data. For members of the Judicial Plan, our analysis shows higher increases have been provided for this group over this entire study period – even in periods where inflation was lower. We recommend a total salary increase for this group of 3.00% per year, which is comprised of 0.25% in excess of the current inflation assumption of 2.75%.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Introduction to Analysis of Demographic Rate Assumptions

For the remainder of the demographic assumptions, we determined the ratio of the actual number of decrements for each membership group compared to the expected number of decrements (A/E ratio or actual-to-expected ratio). If an assumption were perfect, this ratio would be 100%, and any recommended assumption change should move from the current A/E ratio towards an A/E ratio closer to 100%, unless future experience is expected to be different from the experience during the period of study.

We considered both headcount-weighted assumptions, where each individual is counted once, and benefits-weighted assumptions for each of the assumptions, and determined that it was more appropriate to use headcount-weighted assumptions in all cases but mortality.

We also calculated an r-squared statistic for each assumption. R-squared values measure how well an assumption fits the actual data and can be thought of as the percentage of the variation in the actual data that is explained by the assumption. Ideally, r-squared values would equal 100%, but this is never the case in reality. A recommended assumption will generally increase the r-squared value compared to the r-squared value of the current assumption, moving it closer to 100%, unless the pattern of future decrements is expected to be different from the pattern experienced during the period of study. Note, however, that the recommended assumptions will typically only move the r-squared value closer to 100% rather than all the way, reflecting the desire to adjust assumptions gradually.

In addition, we calculated 90% confidence intervals for each demographic rate assumption, which represent the range within which the true decrement rate during the experience study period fell within 90% confidence. (If there is insufficient data to calculate a confidence interval for a given group and assumption, the confidence interval is shown as the entire range of the graph.) We generally recommend assumption changes when the current assumption is outside the 90% confidence interval of the observed experience. However, adjustments are made to account for differences between future expectations and historical experience, to account for the past experience represented by the current assumption, and to maintain a neutral to slightly conservative bias in the selection of the assumption.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Retirement Rates

The current retirement rates vary primarily by age and are different for Teachers and State Regular Employees, State Special Employees, PLD Regular Employees, PLD Special Plan Employees, Judicial, and Legislative.

For the Teachers, State Regular Employees, and Judicial groups, the current assumptions are further developed based on the following subgroups:

- NRA 60 (Tier 1) – members with at least 10 years of creditable service on July 1, 1993 (Normal Retirement Age = 60),
- NRA 62 (Tier 2) – members with less than 10 years of creditable service on July 1, 1993, but five or more years of creditable service on July 1, 2011 (Normal Retirement Age = 62), and
- NRA 65 (Tier 3) – members with less than five years of creditable service on July 1, 2011 (Normal Retirement Age = 65).

For the PLD Regular Plan Employees, the current assumptions are further developed based on the following subgroups:

- NRA 60 – employees hired prior to July 1, 2014, and
- NRA 65 – employees hired on or after July 1, 2014 (Normal Retirement Age = 65).

For the State Special Plans, we developed separate retirement assumptions, with specific, distinct assumptions for the 25 & Out Plan, the 98 Special Plan, and the Fire Marshals.

For the PLD Special Plans, we developed separate retirement assumptions for Plan 1 due to experience suggesting that this Plan experiences different behavior than Plans 2-4 as a result of the 20-year service retirement eligibility.

We discuss significant changes in the retirement rates for the various Programs in the following sections, but Appendix A of this report should be referred to for complete details of the recommended retirement rates for all of the Programs.

State & Teacher Retirement Program – Retirement Rates

We analyzed the State Regular and Teachers' retirement experience as two separate groups, both excluding the State Special experience. The separate experience proved to be a better fit for the data, so we recommend keeping separate sets of retirement assumption tables for the three tiers for State Regular Employees and Teachers.

Table II-R1 shows the calculation of actual-to-expected ratios and the r-squared statistic for Teachers in the NRA 60 (Tier 1) group, and Chart II-R1 shows this information graphically along with the 90% confidence intervals. The analysis for this group was limited to reviewing only the experience at ages 63 and over because there are no active members under age 63 remaining in Tier 1.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

The data shows higher actual retirement rates than expected at ages prior to 67 under the current assumption. The recommended assumption, shown as the teal line in Chart II-R1, adjusts the assumed rate of retirement and decreases the aggregate A/E ratio from 109% to 104%. The r-squared increases from 0.9573 to 0.9908.

Table II-R1

Teachers Retirement Rates - Tier 1						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
63	114	33	25	29	132%	114%
64	127	41	36	38	115%	108%
65	117	48	40	44	121%	109%
66	92	34	25	29	137%	115%
67	78	22	27	25	81%	90%
68	76	21	21	21	99%	99%
69	64	16	17	17	93%	96%
70	57	18	17	18	105%	102%
71	37	11	11	11	99%	99%
72	27	7	8	8	86%	93%
73	18	5	5	5	93%	94%
74	11	6	4	5	136%	125%
75	5	1	2	2	50%	57%
76	4	2	2	2	125%	118%
77	1	0	0	0	0%	0%
78	1	0	0	0	0%	0%
79	2	0	1	1	0%	0%
80	3	2	3	3	67%	67%
Total	834	267	245	257	109%	104%
R-squared			0.9573	0.9908		

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Chart II-R1

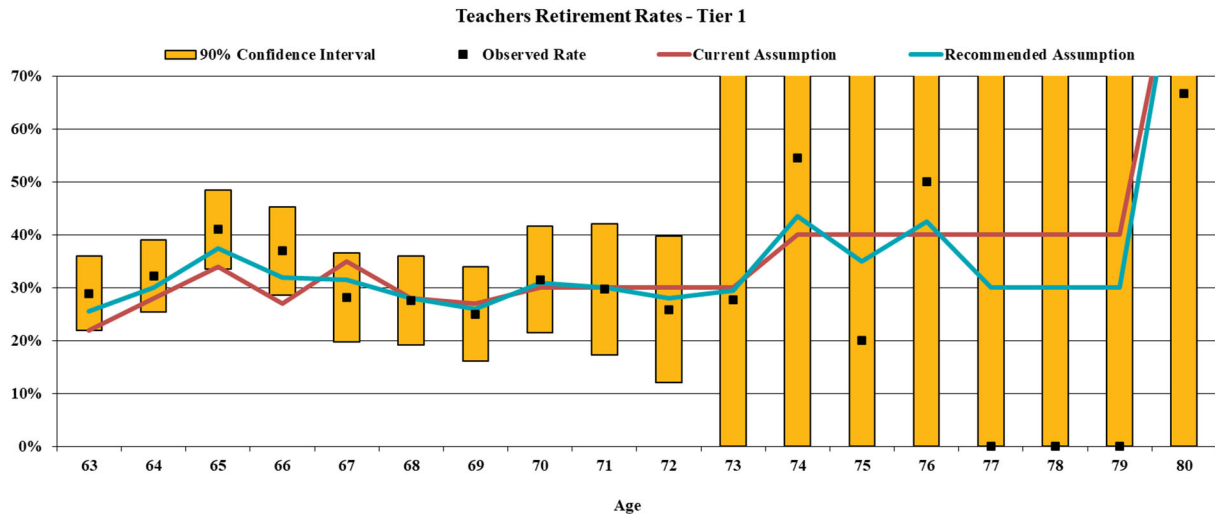


Table II-R2 shows the calculation of actual-to-expected ratios and the r-squared statistic for Teachers in the NRA 62 (Tier 2) group, and Chart II-R2 shows this information graphically along with the 90% confidence intervals.

The data shows higher actual retirement rates than expected under the current assumption for ages 61-74, tapering down for ages 76+. The recommended assumption, shown as the teal line in Chart II-R2, generally increases the assumed rate of retirement and decreases the aggregate A/E ratio from 118% to 106%. The r-squared increases from 0.9878 to 0.9980.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R2

Teachers Retirement Rates - Tier 2						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
57	1,190	35	42	36	84%	98%
58	1,239	60	50	56	121%	108%
59	1,276	75	57	64	131%	118%
60	1,317	113	105	112	107%	101%
61	1,212	363	291	339	125%	107%
62	1,773	505	390	474	129%	106%
63	1,330	302	239	279	126%	108%
64	1,106	294	243	271	121%	108%
65	874	270	262	267	103%	101%
66	640	199	179	189	111%	105%
67	464	149	130	139	115%	107%
68	322	88	71	79	124%	112%
69	243	67	61	64	110%	104%
70	193	58	39	48	150%	120%
71	152	52	30	43	171%	122%
72	116	23	23	23	99%	99%
73	105	26	21	22	124%	118%
74	77	21	15	17	136%	124%
75	54	11	11	11	102%	102%
76	40	6	14	10	43%	62%
77	22	5	8	7	65%	71%
78	16	3	6	5	54%	60%
79	11	2	4	3	52%	59%
80	31	14	31	31	45%	45%
Total	13,803	2,741	2,322	2,589	118%	106%
R-squared			0.9878	0.9980		

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

Chart II-R2

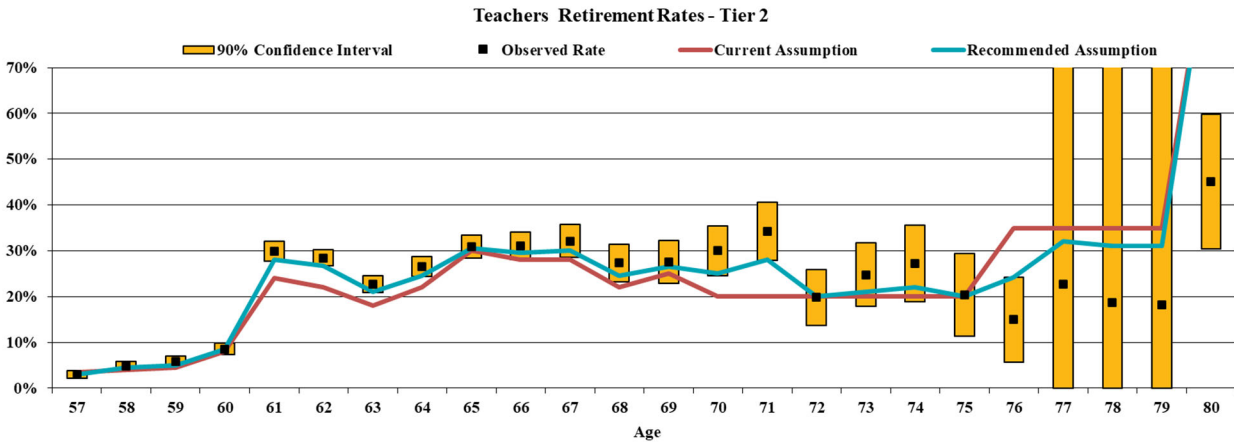


Table II-R3 shows the calculation of actual-to-expected ratios and the r-squared statistic for Teachers in the NRA 65 (Tier 3) group, and Chart II-R3 shows this information graphically along with the 90% confidence intervals.

The data shows moderate adjustments needed at most retirement rates with the emergence of more data within this group than had been available under the prior study. The recommended assumption, shown as the teal line in Chart II-R3, generally decreases the assumed rate of retirement and increases the aggregate A/E ratio from 92% to 94%. The r-squared increases from 0.9032 to 0.9447.

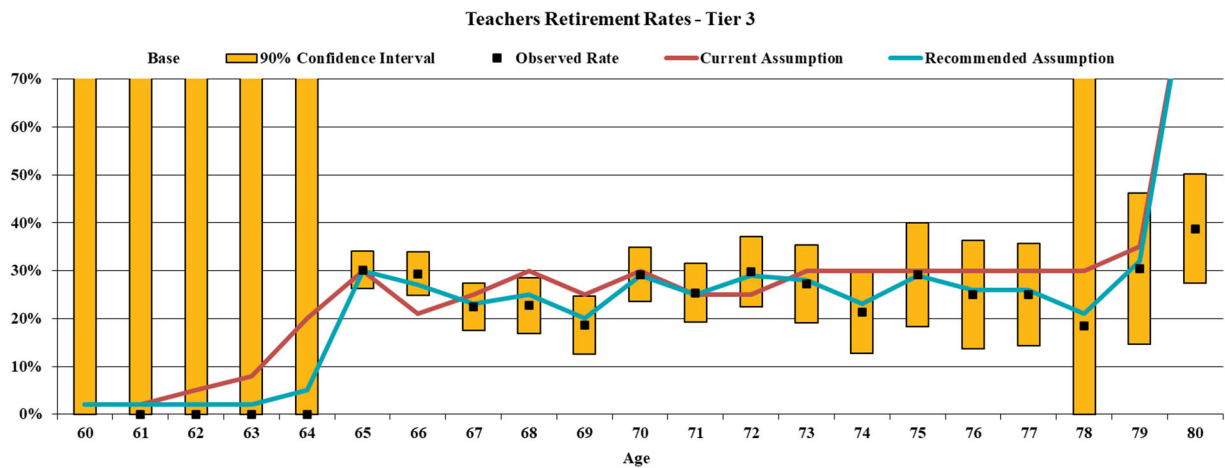
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R3

Teachers Retirement Rates - Tier 3						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
60	1	1	0	0	5000%	5000%
61	1	0	0	0	0%	0%
62	2	0	0	0	0%	0%
63	2	0	0	0	0%	0%
64	3	0	1	0	0%	0%
65	375	113	113	113	100%	100%
66	269	79	56	73	140%	109%
67	192	43	48	44	90%	97%
68	141	32	42	35	76%	91%
69	113	21	28	23	74%	93%
70	178	52	53	52	97%	101%
71	134	34	34	34	101%	101%
72	104	31	26	30	119%	103%
73	81	22	24	23	91%	97%
74	61	13	18	14	71%	93%
75	48	14	14	14	97%	101%
76	40	10	12	10	83%	96%
77	44	11	13	11	83%	96%
78	27	5	8	6	62%	88%
79	23	7	8	7	87%	95%
80	49	19	49	49	39%	39%
Total	1,888	507	549	537	92%	94%
R-squared			0.9032	0.9447		

Chart II-R3



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R4 shows the calculation of actual-to-expected ratios and the r-squared statistic for State Regular Employees in the NRA 60 (Tier 1) group, and Chart II-R4 shows this information graphically along with the 90% confidence intervals. The analysis for this group was limited to reviewing only the experience at ages 63 and over because there are no active members under age 63 remaining in Tier 1.

The data shows that only minor adjustments are needed at most ages. Recommended retirement rates were set at 100% beginning at age 75 (accelerated from the current age 80 assumption) due to the lack of credible data at those advanced ages and for consistency with the State Special Plans. The recommended assumption, shown as the teal line in Chart II-R4, decreases the aggregate A/E ratio from 98% to 89%. The r-squared increases from 0.7101 to 0.7643.

Table II-R4

State Regular Retirement Rates - Tier 1						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
63	62	9	16	12	58%	73%
64	64	16	12	14	132%	114%
65	56	13	12	12	111%	106%
66	50	13	11	12	124%	108%
67	43	4	9	8	47%	52%
68	47	10	14	12	71%	82%
69	42	10	8	9	119%	108%
70	32	8	6	7	125%	109%
71	30	8	6	7	133%	116%
72	21	6	4	5	143%	119%
73	17	8	6	7	134%	115%
74	12	2	4	4	48%	56%
75	9	1	3	9	32%	11%
76	5	3	2	5	171%	60%
77	1	1	0	1	286%	100%
78	0	0	0	0	0%	0%
79	0	0	0	0	0%	0%
80	2	1	2	2	50%	50%
Total	493	113	115	127	98%	89%
R-squared			0.7101	0.7643		

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

Chart II-R4

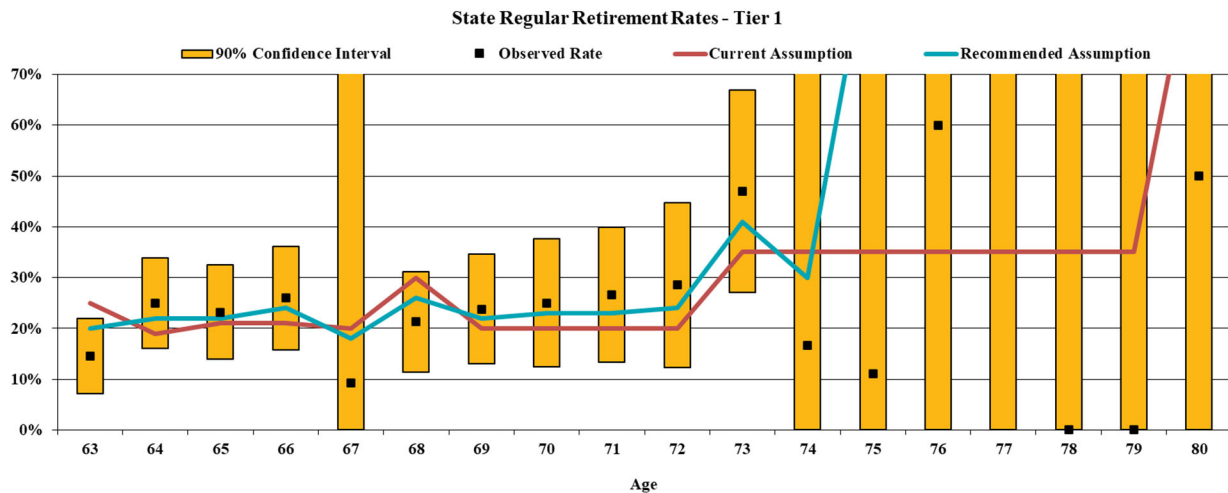


Table II-R5 shows the calculation of actual-to-expected ratios and the r-squared statistic for State Regular employees in the NRA 62 (Tier 2) group, and Chart II-R5 shows this information graphically along with the 90% confidence intervals.

The data shows higher actual retirement rates than expected under the current assumption. Recommended retirement rates were set at 100% beginning at age 75 (accelerated from the current age 80 assumption) due to the lack of credible data at those advanced ages and for consistency with the State Special Plans. The recommended assumption, shown as the teal line in Chart II-R5, generally increases the assumed rate of retirement and decreases the aggregate A/E ratio from 105% to 96%. The r-squared decreases from 0.9919 to 0.9900.

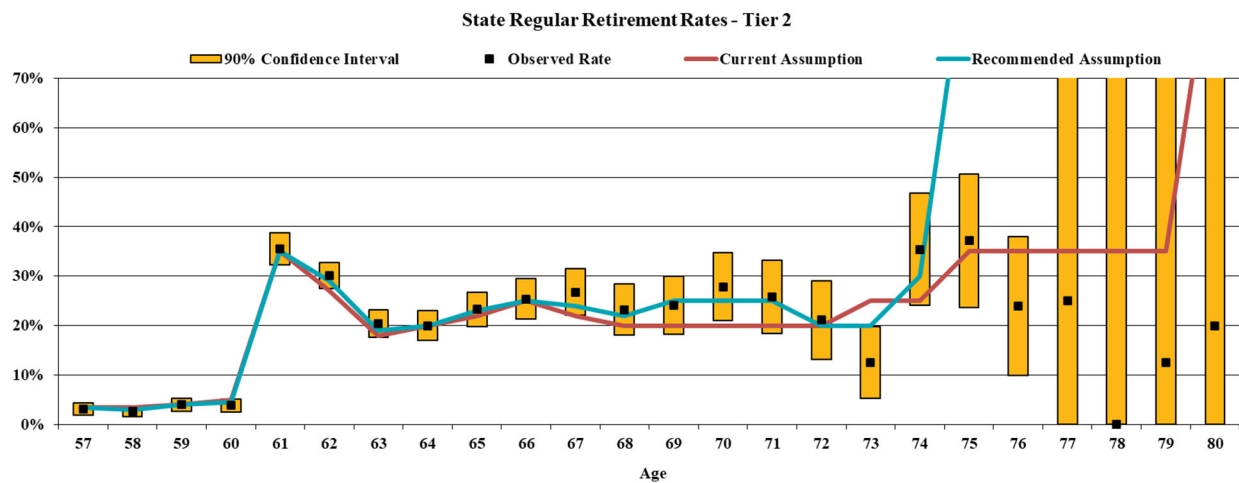
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R5

State Regular Retirement Rates - Tier 2						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
57	520	16	18	18	88%	88%
58	572	15	20	17	75%	87%
59	599	24	24	24	100%	100%
60	622	24	31	28	77%	86%
61	602	214	211	211	102%	102%
62	825	248	223	239	111%	104%
63	587	120	106	112	114%	108%
64	481	96	96	96	100%	100%
65	408	95	90	94	106%	101%
66	315	80	79	79	102%	102%
67	239	64	53	57	122%	112%
68	181	42	36	40	116%	105%
69	141	34	28	35	121%	96%
70	115	32	23	29	139%	111%
71	93	24	19	23	129%	103%
72	71	15	14	14	106%	106%
73	56	7	14	11	50%	63%
74	48	17	12	14	142%	118%
75	35	13	12	35	106%	37%
76	25	6	9	25	69%	24%
77	12	3	4	12	71%	25%
78	9	0	3	9	0%	0%
79	8	1	3	8	36%	13%
80	10	2	10	10	20%	20%
Total	6,574	1,192	1,137	1,241	105%	96%
R-squared			0.9919	0.9900		

Chart II-R5



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R6 shows the calculation of actual-to-expected ratios and the r-squared statistic for State Regular Employees in the NRA 65 (Tier 3) group, and Chart II-R6 shows this information graphically along with the 90% confidence intervals.

The data shows minor adjustments needed at most retirement rates with the emergence of more data within this group than had been available under the prior study. Recommended retirement rates were set at 100% beginning at age 75 (accelerated from the current age 80 assumption) due to the lack of credible data at those advanced ages and for consistency with the State Special Plans. The recommended assumption, shown as the teal line in Chart II-R6, generally increases the assumed rate of retirement and decreases the aggregate A/E ratio from 109% to 89%. The r-squared decreases from 0.9806 to 0.9382.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R6

State Regular Retirement Rates - Tier 3						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
60	2	1	0	0	2500%	1250%
61	0	0	0	0	0%	0%
62	0	0	0	0	0%	0%
63	0	0	0	0	0%	0%
64	0	0	0	0	0%	0%
65	298	81	75	77	109%	105%
66	229	66	62	64	107%	103%
67	160	36	32	40	113%	90%
68	127	33	34	32	96%	104%
69	92	22	18	23	120%	96%
70	117	30	23	29	128%	103%
71	92	27	18	23	147%	117%
72	61	10	12	12	82%	82%
73	51	10	13	11	78%	89%
74	36	9	9	9	100%	100%
75	27	6	7	27	89%	22%
76	17	5	4	17	118%	29%
77	12	7	3	12	233%	58%
78	6	5	2	6	238%	83%
79	3	0	1	3	0%	0%
80	10	4	10	10	40%	40%
Total	1,340	352	324	396	109%	89%
R-squared			0.9806	0.9382		

Chart II-R6

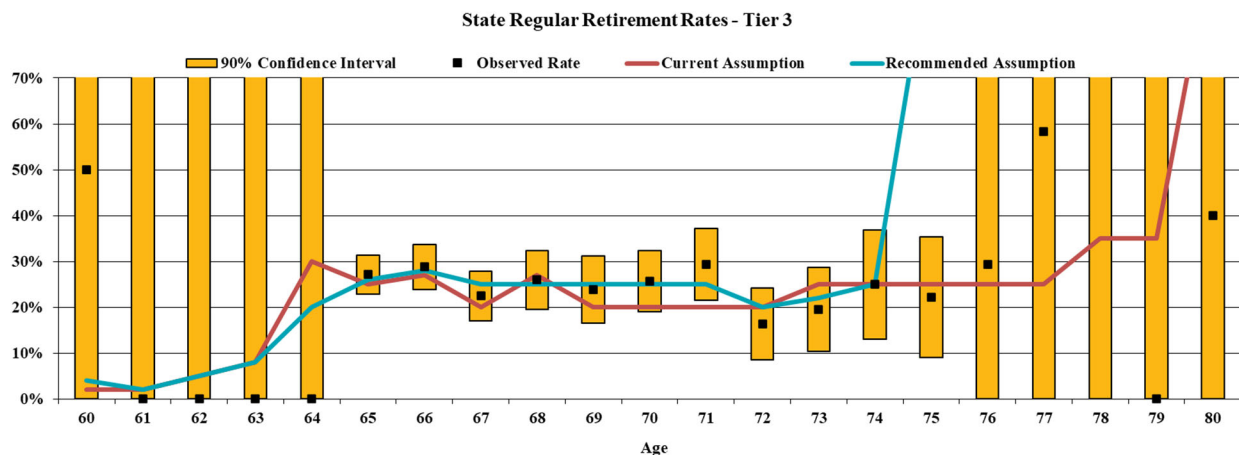


Table II-R7 shows the calculation of actual-to-expected ratios and the r-squared statistic for State Special Employees in the 25 & Out Plan, and Chart II-R7 shows this information graphically along with the 90% confidence intervals.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

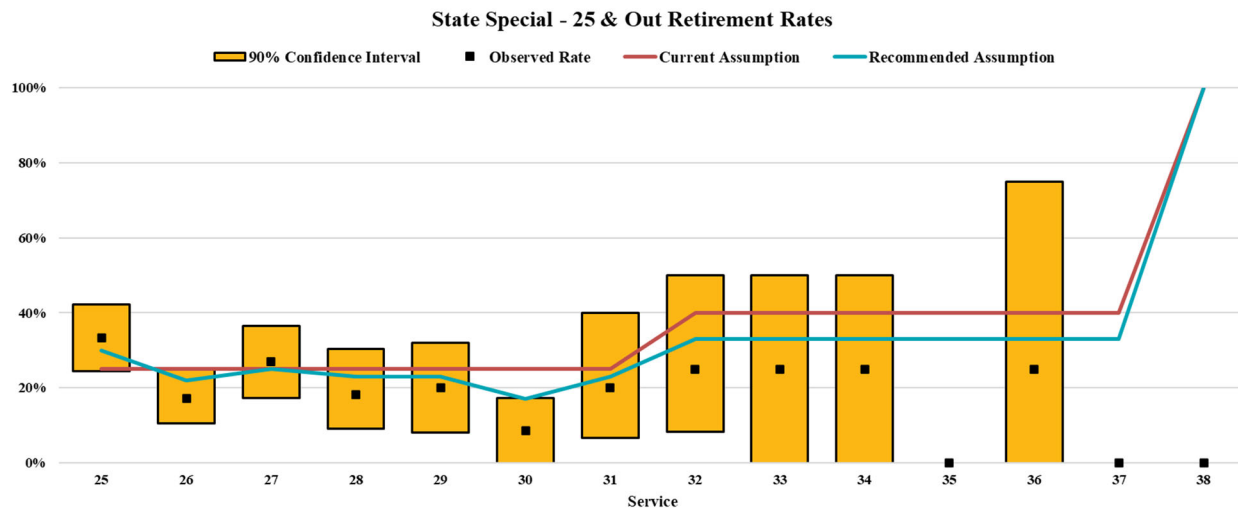
**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

For members of this Plan, retirement rates applicable to their State Regular Plan Tier are assumed prior to reaching 25 years of service. As such, this analysis only includes those who have at least 25 years of service. The analysis shows that actual retirement rates were less than expected under the current assumption across most service levels. Retirement rates are also recommended to increase the age for 100% retirement, regardless of service level, to age 75 from age 70. The recommended assumption, shown as the green line in Chart II-R7, therefore generally decreases the assumed rates of retirement, thus increasing the aggregate A/E ratio from 84% to 88%. The r-squared value increases from 0.8882 to 0.9673.

Table II-R7

State Special - 25 & Out Retirement Rates						
Service	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
25	78	26	20	23	133%	111%
26	76	13	19	17	68%	78%
27	52	14	13	13	108%	108%
28	33	6	8	8	73%	79%
29	25	5	6	6	80%	87%
30	23	2	6	4	35%	51%
31	15	3	4	3	80%	87%
32	12	3	5	4	63%	76%
33	8	2	3	3	63%	76%
34	8	2	3	3	63%	76%
35	5	0	2	2	0%	0%
36	4	1	2	1	63%	76%
37	2	0	1	1	0%	0%
38	1	0	1	1	0%	0%
TOTAL	342	77	92	88	84%	88%
R-squared			0.8882	0.9673		

Chart II-R7



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

The 1998 Special Plan assumptions are based on age with experience divided into those with less than 25 years of service and those with 25 or more years of service. Table II-R8-1 shows the calculation of the actual-to-expected ratios and the r-squared statistic for State Special members in the 1998 Special Plan with less than 25 years of service, and Chart II-R8-1 shows this information graphically along with the 90% confidence intervals.

This shows that actual retirement rates were slightly less than expected under the current assumption at most ages. Recommended retirement rates were set at 100% beginning at age 75 (extended from the current age 70 assumption) for consistency with the State Regular Plans. The recommended assumption, shown as the teal line in Chart II-R8-1, shows adjustments to fit the structure of the actual experience better. This results in an increase in the aggregate A/E ratio from 83% to 93%, and increases the r-squared value from 0.6729 to 0.9029 reflecting the improved alignment of this assumption with actual experience.

Table II-R8-1

State Special - 1998 Special Plan Retirement Rates - Less than 25 Years of Service						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
55	57	13	11	12	114%	109%
56	56	7	8	8	83%	89%
57	54	9	5	7	167%	128%
58	52	6	5	6	115%	105%
59	50	3	5	4	60%	75%
60	38	8	8	8	105%	100%
61	30	2	6	4	33%	51%
62	34	5	10	7	49%	67%
63	32	7	10	8	73%	84%
64	19	5	3	4	158%	120%
65	16	3	4	3	80%	89%
66	12	7	4	4	194%	167%
67	5	2	2	2	109%	105%
68	2	0	1	1	0%	0%
69	2	1	1	1	100%	100%
70	4	1	4	2	25%	50%
71	4	1	4	2	25%	50%
72	3	1	3	2	33%	67%
73	3	0	3	2	0%	0%
74	3	2	3	2	67%	89%
75	0	0	0	0	0%	0%
Total	477	83	100	89	83%	93%
R-squared			0.6729	0.9029		

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Chart II-R8-1

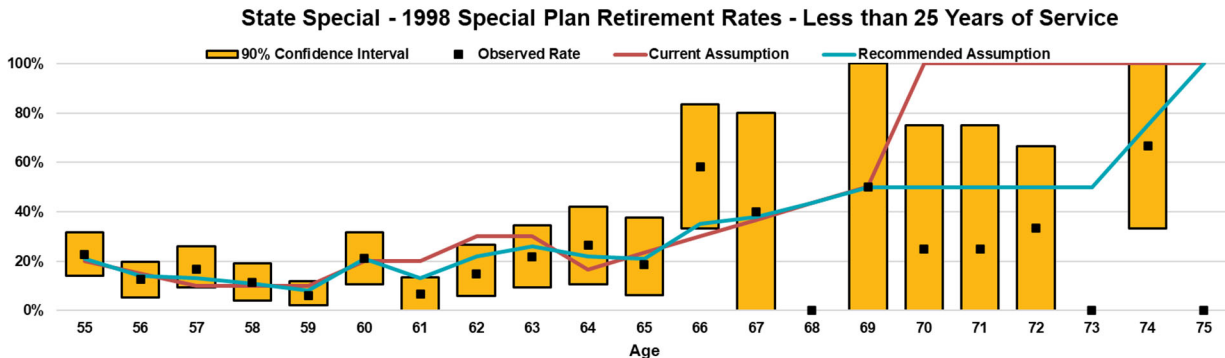


Table II-R8-2 shows the calculation of the actual-to-expected ratios and the r-squared statistic for State Special members in the 1998 Special Plan with greater than 25 years of service, and Chart II-R8-2 shows this information graphically along with the 90% confidence intervals.

This shows that actual retirement rates were generally lower than expected under the current assumption. Recommended retirement rates were set at 100% beginning at age 75 (extended from the current age 70 assumption) for consistency with the State Regular Plans. The recommended assumption, shown as the teal line in Chart II-R8-2, shows adjustments to fit the structure of the actual experience better. This results in an increase in the aggregate A/E ratio from 91% to 93%, and increases the r-squared value from 0.6676 to 0.9191, reflecting the improved alignment of this assumption with actual experience.

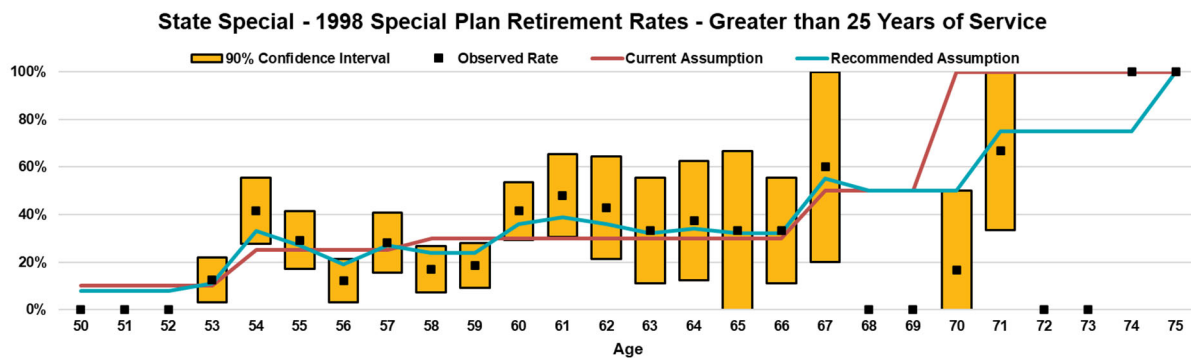
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R8-2

State Special - 1998 Special Plan Retirement Rates - Greater than 25 Years of Service						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
50	14	0	1	1	0%	0%
51	15	0	2	1	0%	0%
52	20	0	2	2	0%	0%
53	32	4	3	4	125%	114%
54	36	15	9	12	167%	126%
55	41	12	10	11	117%	108%
56	33	4	8	6	48%	64%
57	32	9	8	9	113%	104%
58	41	7	12	10	57%	71%
59	43	8	13	10	62%	78%
60	41	17	12	15	138%	115%
61	23	11	7	9	159%	123%
62	14	6	4	5	143%	119%
63	9	3	3	3	111%	104%
64	8	3	2	3	125%	110%
65	6	2	2	2	111%	104%
66	9	3	3	3	111%	104%
67	5	3	3	3	120%	109%
68	3	0	2	2	0%	0%
69	5	0	3	3	0%	0%
70	6	1	6	3	17%	33%
71	6	4	6	5	67%	89%
72	1	0	1	1	0%	0%
73	2	0	2	2	0%	0%
74	1	1	1	1	100%	133%
75	1	1	1	1	100%	100%
Total	447	114	125	123	91%	93%
R-squared			0.6676	0.9191		

Chart II-R8-2



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

The Fire Marshals' Plan does not have sufficient experience upon which to determine an appropriate assumption. Because the Plan structure is similar to the 25 & Out Plan but with retirement eligibility beginning at 20 years instead of 25 years, the recommendation is to apply the 25 & Out Plan assumptions for the Fire Marshals Plan as well – with rates applied at service levels five years earlier. In addition, recommended retirement rates were set at 100% beginning at age 75 (extended from the current age 70 assumption) for consistency with the State Regular Plans.

PLD Consolidated Program – Retirement Rates

Our analysis of retirement rates for the PLDs split apart the Regular Tier 1 (NRA 60), Regular Tier 2 (NRA 65), and Special Plan members. Table II-R9 shows the calculation of actual-to-expected ratios and the r-squared statistic for PLD Regular NRA 60 members, and Chart II-R9 shows this information graphically along with the 90% confidence intervals.

The data shows higher actual retirement rates than expected at ages 59-62, age 66, and ages 68-69 under the current assumption, and members are working well past their NRA. The recommended assumption decreases the overall assumed rate of retirement and increases the aggregate A/E ratio from 83% to 96%. The r-squared increases from 0.7149 to 0.9605.

Table II-R9

PLD Regular Retirement Rates - NRA 60						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
57	146	7	9	7	80%	96%
58	164	8	10	8	81%	98%
59	177	37	18	30	209%	123%
60	867	140	104	130	135%	108%
61	792	113	95	103	119%	110%
62	749	147	120	135	123%	109%
63	641	96	103	96	94%	100%
64	593	120	119	119	101%	101%
65	507	153	152	152	101%	101%
66	375	148	113	135	132%	110%
67	229	51	57	55	89%	93%
68	190	58	48	53	122%	109%
69	133	41	33	37	123%	110%
70	96	27	96	24	28%	113%
71	78	19	78	20	24%	97%
72	72	17	72	18	24%	94%
73	62	10	62	16	16%	65%
74	56	14	56	14	25%	100%
75+	150	38	150	150	25%	25%
Total	6,077	1,244	1,493	1,302	83%	96%
R-squared			0.7149	0.9605		

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Chart II-R9

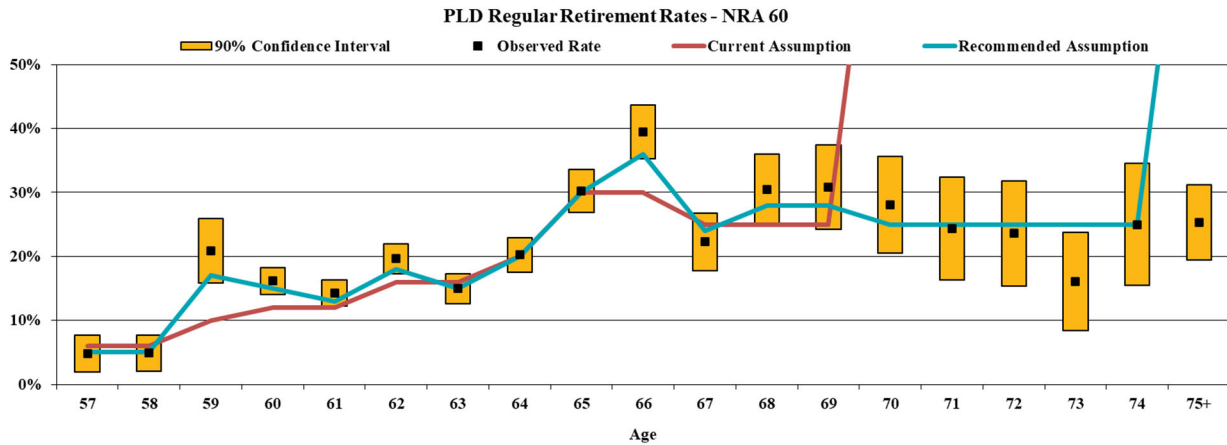


Table II-R10 shows the calculation of actual-to-expected ratios and the r-squared statistic for PLD Regular NRA 65 members, and Chart II-R10 shows this information graphically along with the 90% confidence intervals. The data shows lower actual retirement rates than expected under the current assumption prior to age 64 and higher than expected for most ages 64+. The recommended assumption adjusts the assumed rate of retirement and decreases the aggregate A/E ratio from 112% to 96%. The r-squared increases from 0.8590 to 0.9594.

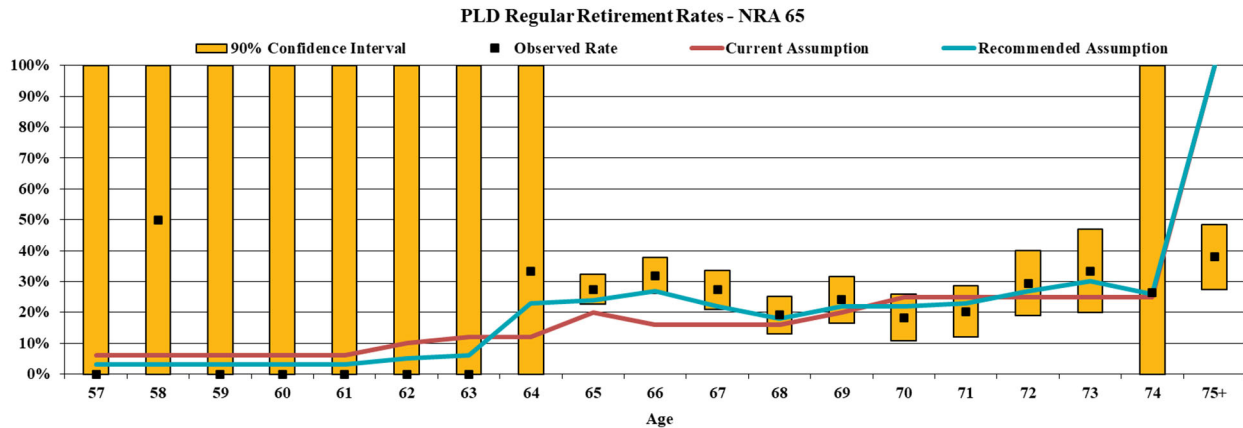
Table II-R10

PLD Regular Retirement Rates - NRA 65						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
57	2	0	0	0	0%	0%
58	2	1	0	0	833%	1667%
59	1	0	0	0	0%	0%
60	1	0	0	0	0%	0%
61	0	0	0	0	0%	0%
62	0	0	0	0	0%	0%
63	2	0	0	0	0%	0%
64	3	1	0	1	278%	145%
65	230	63	46	55	137%	114%
66	169	54	27	46	200%	118%
67	132	36	21	29	170%	124%
68	115	22	18	21	120%	106%
69	87	21	17	19	121%	110%
70	71	13	18	16	73%	83%
71	64	13	16	15	81%	88%
72	51	15	13	14	118%	109%
73	33	11	8	10	133%	111%
74	19	5	5	5	105%	101%
75+	58	22	58	58	38%	38%
Total	1,040	277	248	288	112%	96%
R-squared			0.8590	0.9594		

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

Chart II-R10



In our review of the retirement rates for the PLD Special Plan members, we found a different pattern of retirements for service prior to 30 years between those who participate in Special Plan 1 and those who participate in Special Plans 2-4. As such, we are recommending different tables for service prior to 30 years for Special Plans. Table II-R11-1 shows the calculation of actual-to-expected ratios and the r-squared statistic for PLD Special Plan 1 members, and Chart II-R11-1 shows this information graphically along with the 90% confidence intervals.

The data generally shows higher actual retirement rates than expected under the current assumption for those with less than 27 years of service, and generally lower actual retirement rates than expected under the current assumptions at greater than 26 years of service. The recommended assumption adjusts the assumed rates of retirement and increases the aggregate A/E ratio from 93% to 94%. The r-squared increases from 0.3605 to 0.8772.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R11-1

PLD Special Plan 1 Retirement Rates						
Service	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
< 20	35	10	12	9	82%	114%
20	25	18	9	15	206%	120%
21	16	12	5	10	250%	125%
22	7	4	2	3	204%	127%
23	7	3	2	2	171%	122%
24	7	4	1	3	286%	143%
25	6	2	2	2	95%	95%
26	4	2	1	2	200%	125%
27	3	0	1	1	0%	0%
28	1	0	0	0	0%	0%
29	1	0	0	0	0%	0%
30	30	5	8	7	67%	72%
31	34	10	9	9	118%	118%
32	30	4	8	6	53%	67%
33	35	9	9	9	103%	103%
34	23	4	8	6	53%	70%
35	18	7	6	6	118%	111%
36	12	3	12	6	25%	50%
37	5	1	5	3	20%	40%
38	2	0	2	2	0%	0%
39	3	2	3	3	67%	67%
40	6	2	6	6	33%	33%
TOTAL	310	102	109	108	93%	94%
R-squared			0.3605	0.8772		

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

Chart II-R11-1

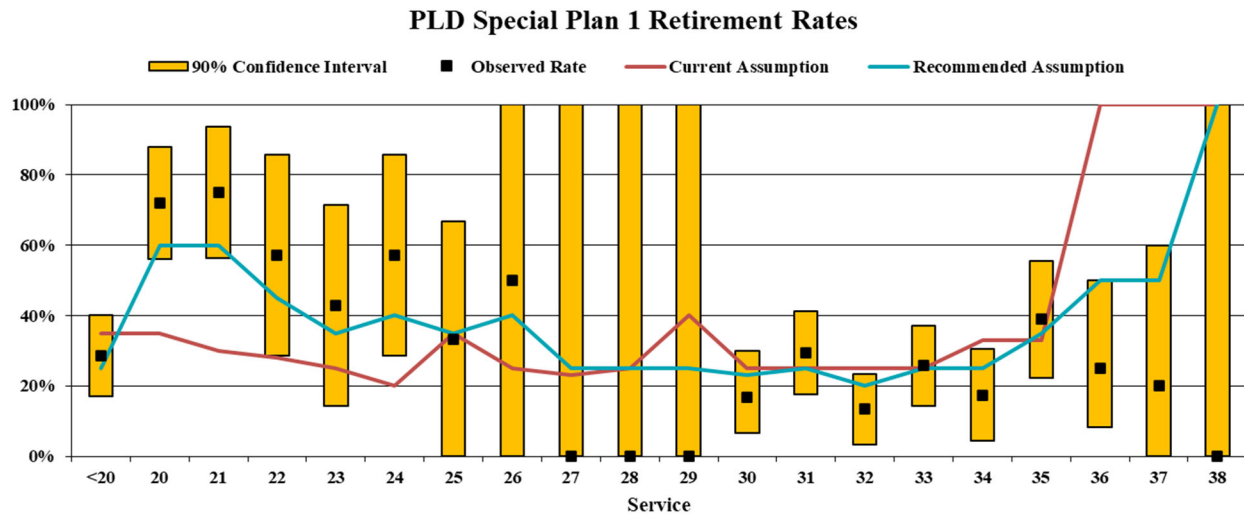


Table II-R11-2 shows the calculation of actual-to-expected ratios and the r-squared statistic for PLD Special Plans 2-4 members, and Chart II-R11-2 shows this information graphically along with the 90% confidence intervals.

The data generally shows lower actual retirement rates than expected for those under 25 years of service and higher for those with more than 24 years under the current assumption. The recommended assumption adjusts the assumed rates of retirement and increases the aggregate A/E ratio from 94% to 95%. The r-squared increases from 0.7280 to 0.9666.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

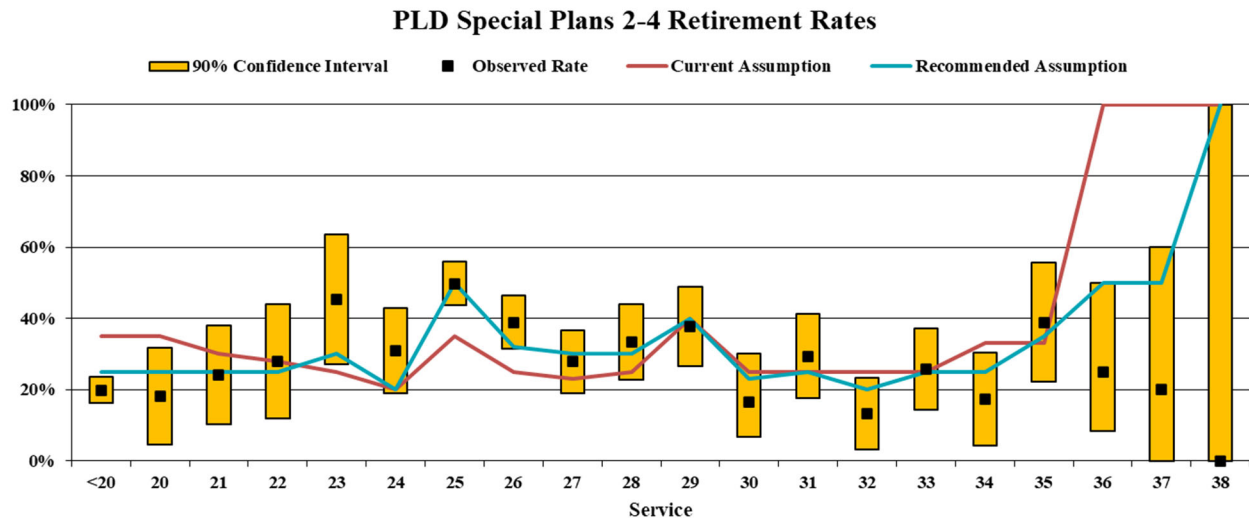
Table II-R11-2

PLD Special Plan 2-4 Retirement Rates						
Service	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
< 20	314	62	110	79	56%	79%
20	22	4	8	6	52%	73%
21	29	7	9	7	80%	97%
22	25	7	7	6	100%	112%
23	22	10	6	7	182%	152%
24	42	13	8	8	155%	155%
25	181	90	63	91	142%	99%
26	108	42	27	35	156%	122%
27	68	19	16	20	121%	93%
28	57	19	14	17	133%	111%
29	45	17	18	18	94%	94%
30	30	5	8	7	67%	72%
31	34	10	9	9	118%	118%
32	30	4	8	6	53%	67%
33	35	9	9	9	103%	103%
34	23	4	8	6	53%	70%
35	18	7	6	6	118%	111%
36	12	3	12	6	25%	50%
37	5	1	5	3	20%	40%
38	2	0	2	2	0%	0%
39	3	2	3	3	67%	67%
40	6	2	6	6	33%	33%
TOTAL	1,111	337	359	355	94%	95%
R-squared			0.7280	0.9666		

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

Chart II-R11-2



Judicial Retirement Program – Retirement Rates

As of the 2025 valuation, there were no active judges with an age 60 normal retirement age (Tier 1).

Table II-R12 shows the calculation of actual-to-expected ratios and the r-squared statistic for Judges in the NRA 62 group, and Chart II-R12 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual retirement rates than expected under the current assumption. The recommended assumption, shown as the teal line in Chart II-R12, generally decreases the assumed rate of retirement and increases the aggregate A/E ratio from 48% to 57%. The r-squared increases from 0.2726 to 0.3723.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R12

Judicial Plan Retirement Rates - NRA 62						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
60	3	0	0	0	0%	0%
61	4	1	0	0	0%	0%
62	8	0	2	1	0%	0%
63	10	2	3	3	73%	80%
64	5	2	2	2	114%	100%
65	7	1	3	2	34%	48%
66	9	2	5	3	44%	63%
67	6	0	3	2	0%	0%
68	7	0	3	1	0%	0%
69	8	3	3	3	107%	107%
70	5	1	2	1	67%	80%
71	4	0	1	1	0%	0%
72	4	1	1	1	100%	100%
73	2	0	1	0	0%	0%
74	2	0	1	0	0%	0%
75	3	0	1	3	0%	0%
Total	87	13	27	23	48%	57%
R-squared			0.2726	0.3723		

Chart II-R12

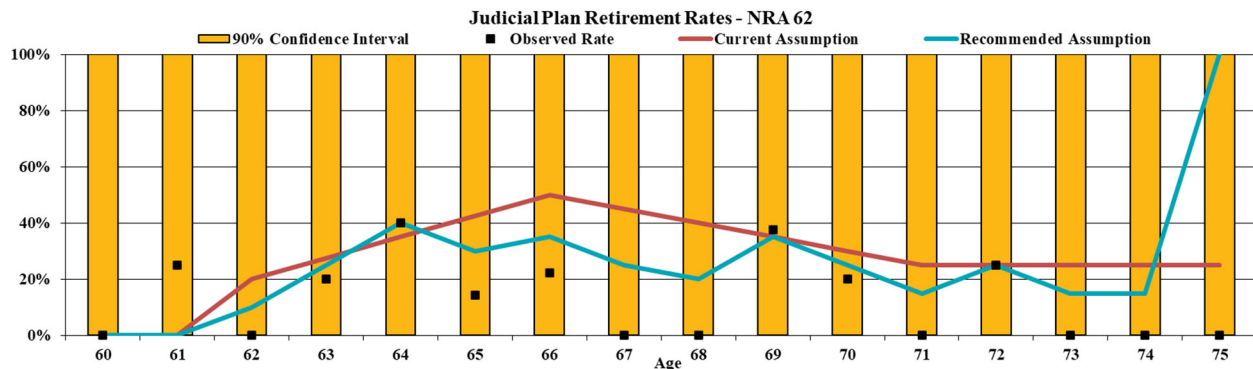


Table II-R13 shows the calculation of actual-to-expected ratios and the r-squared statistic for Judges in the NRA 65 group, and Chart II-R13 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual retirement rates than expected under the current assumption. The recommended assumption, shown as the teal line in Chart II-R13, generally decreases the assumed rate of retirement and increases the aggregate A/E ratio from 36% to 46%. The r-squared increases from 0.0732 to 0.4797.

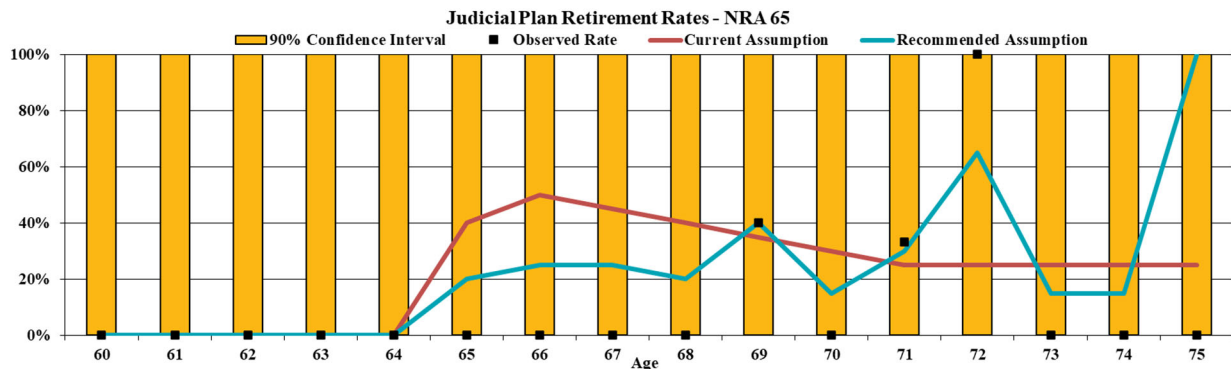
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES**

Table II-R13

Judicial Plan Retirement Rates - NRA 65						
Age	Exposures	Retirements			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
60	0	0	0	0	0%	0%
61	0	0	0	0	0%	0%
62	0	0	0	0	0%	0%
63	0	0	0	0	0%	0%
64	0	0	0	0	0%	0%
65	4	0	2	1	0%	0%
66	4	0	2	1	0%	0%
67	4	0	2	1	0%	0%
68	3	0	1	1	0%	0%
69	5	2	2	2	114%	100%
70	3	0	1	0	0%	0%
71	3	1	1	1	133%	111%
72	1	1	0	1	400%	154%
73	1	0	0	0	0%	0%
74	1	0	0	0	0%	0%
75	1	0	0	1	0%	0%
Total	30	4	11	9	36%	46%
R-squared			0.0732	0.4797		

Chart II-R13



Legislative Retirement Program – Retirement Rates

Legislative retirement assumptions are set differently than the groups above. The House and Senate are up for reelection every two years, and there is a term limit of four consecutive terms. The current assumption is 25% probability of retirement upon reaching eligibility for all tiers and only applies this assumption in years following a biennial term (with 0% rates in the other years) until the assumption of 100% retirement at age 70. We recommend continuing to use the 25% assumption, but only assuming retirement beginning at age 62 and extending the age of 100% retirement to 75.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES**

Rates of termination from active employment have a significant impact on the cost of MainePERS. The current assumption is based on service for State, Teacher, Legislative, and PLD plans, and on age for the Judicial Program.

For each service group, we determined the ratio of the actual number of terminations at each age compared to the expected number of terminations (A/E ratio), similar to what we developed for retirements. If the assumption were perfect, this ratio would be 100%. In addition, we calculated the 90% confidence intervals, which represent the range within which the true termination rate during the experience study period fell with 90% confidence. (If there is insufficient data to calculate a confidence interval, the confidence interval is shown as the entire range of the graph.) We generally recommend assumption changes when the current assumption is outside the 90% confidence interval of the observed experience. However, adjustments are made to account for differences between future expectations and historical experience, to account for the past experience represented by the current assumption, and to maintain a neutral to slightly conservative bias in the selection of the assumption.

State & Teacher Retirement Program – Termination Rates

We analyzed the State and Teacher termination experience separately and on a combined basis, looking at age-based rates, service-based rates, and rates based on gender. The separate service-based experience proved to be a better fit for the data, and gender was not a significant predictor, so we recommend continuing to use separate tables for Teachers and State Employees. In addition, to the extent the data was available, we reduced the number of terminations observed for those who were ultimately rehired at a later date. The netting out of rehires has resulted in a recommendation to lower the rates of termination in order to capture the expected loss that occurs for rehired individuals.

Table II-T1 shows the calculation of actual-to-expected ratios and the r-squared statistic for Teacher employees, and Chart II-T1 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual termination rates than expected under the current assumptions for teachers. The proposed assumption decreases the assumed rates of termination and increases the aggregate A/E ratio from 81% to 93%. The r-squared increases from 0.9851 to 0.9951.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES**

Table II-T1

Teacher Termination Rates						
Service	Exposures	Terminations			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
0-4	41,169	5,099	6,557	5,482	78%	93%
5-9	26,064	1,605	1,940	1,729	83%	93%
10-14	17,208	716	783	746	91%	96%
15-19	16,020	467	546	505	86%	92%
20-24	12,610	349	378	347	92%	101%
25+	8,773	213	263	241	81%	88%
Total	121,844	8,449	10,467	9,051	81%	93%
R-squared			0.9851	0.9951		

Chart II-T1

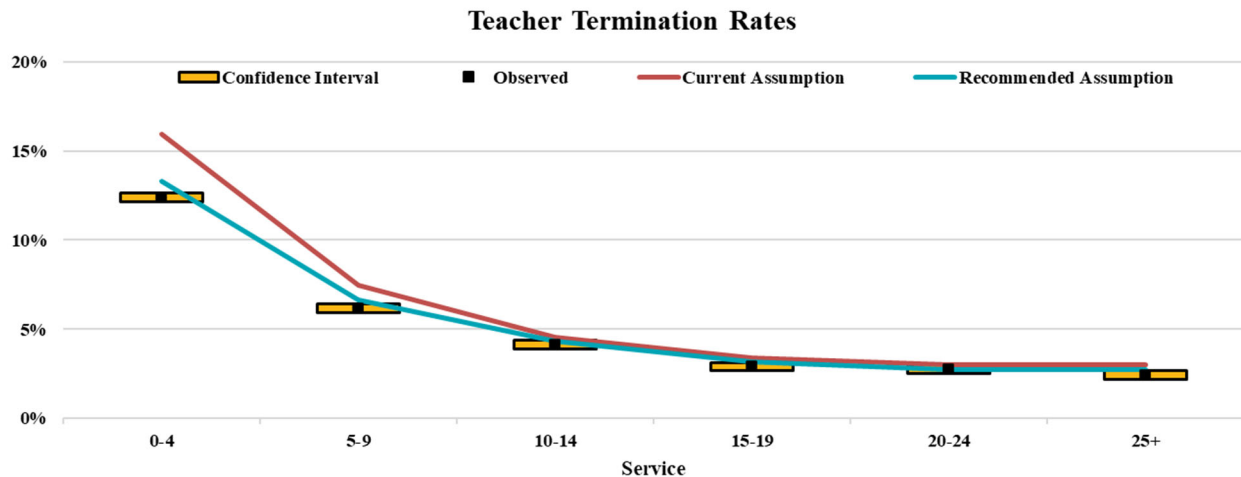


Table II-T2 shows the calculation of actual-to-expected ratios and the r-squared statistic for State Regular Employees, and Chart II-T2 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual termination rates than expected under the current assumptions for state employees. The recommended assumption decreases the assumed rates of termination and increases the aggregate A/E ratio from 89% to 96%. The r-squared increases slightly from 0.9982 to 0.9996.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES**

Table II-T2

State Regular Termination Rates						
Service	Exposures	Terminations			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
0-4	20,003	3,395	3,793	3,523	90%	96%
5-9	10,113	732	858	761	85%	96%
10-14	5,647	280	288	284	97%	98%
15-19	4,463	140	166	164	84%	86%
20-24	3,909	93	114	108	81%	86%
25+	2,401	68	60	60	113%	113%
Total	46,536	4,708	5,278	4,900	89%	96%
R-squared			0.9982	0.9996		

Chart II-T2

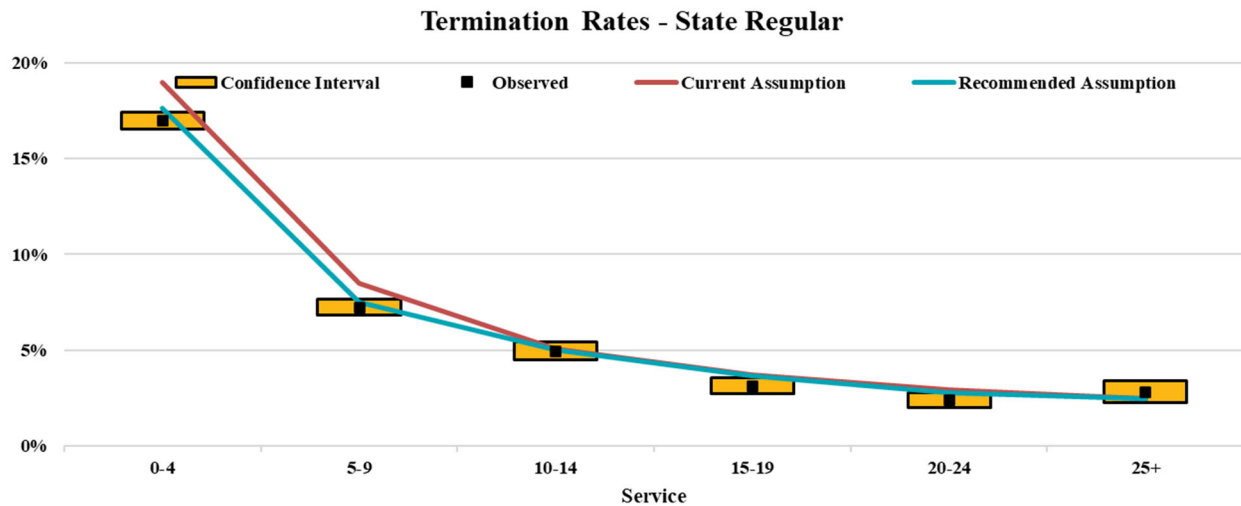


Table II-T3 shows the calculation of actual-to-expected ratios and the r-squared statistic for State Special Employees, and Chart II-T3 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual termination rates than expected under the current assumptions for state special employees. The recommended assumption decreases the assumed rates of termination and increases the aggregate A/E ratio from 90% to 97%. The r-squared increases slightly from 0.9607 to 0.9707.

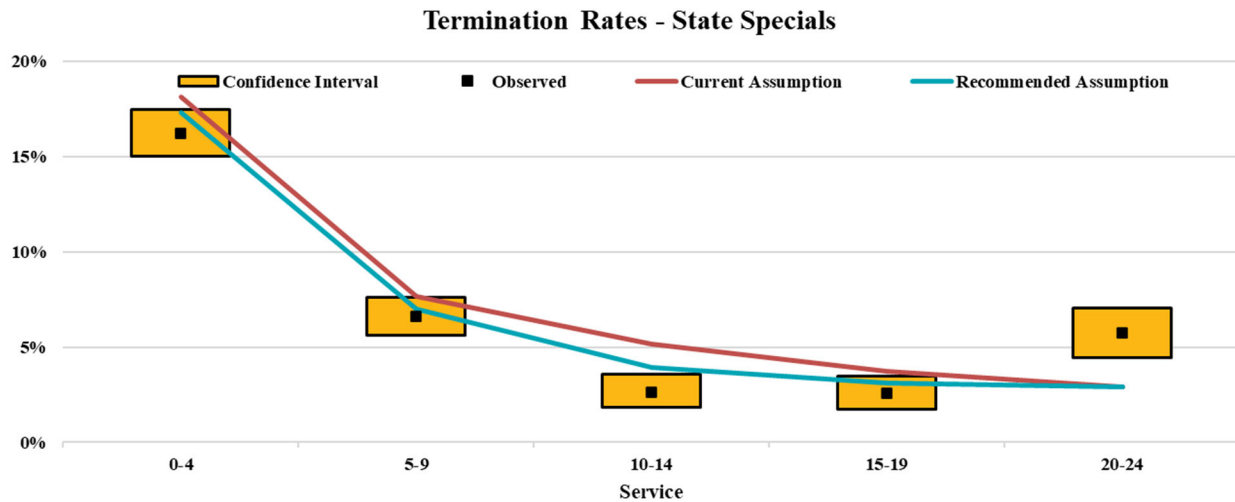
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES**

Table II-T3

State Special Termination Rates						
Service	Exposures	Terminations			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
0-4	2,416	392	438	417	89%	94%
5-9	1,713	113	131	120	86%	94%
10-14	984	26	51	39	51%	67%
15-19	861	22	32	27	69%	82%
20-24	854	49	25	25	197%	197%
25+	136	10	3	3	294%	294%
Total	6,964	612	680	631	90%	97%
R-squared			0.9607	0.9707		

Chart II-T3



PLD Consolidated Retirement Program – Termination Rates

Table II-T4 shows the calculation of actual-to-expected ratios and the r-squared statistic for PLD Regular Employees, and Chart II-T4 shows this information graphically along with the 90% confidence intervals.

The data shows higher actual termination rates than expected under the current assumption. The recommended assumption increases the assumed rates of termination and decreases the aggregate A/E ratio from 115% to 106%. The r-squared increases very slightly from 0.9981 to 0.9997.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES**

Table II-T4

PLD Regular Termination Rates - All Ages						
Service	Exposures	Terminations			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
0-4	20,283	4,084	3,684	3,917	111%	104%
5-9	8,140	749	583	690	129%	109%
10-14	4,402	251	198	223	127%	112%
15-19	2,364	112	83	101	135%	111%
20-24	1,458	60	49	58	123%	103%
25+	628	40	19	25	212%	159%
Total	37,275	5,296	4,615	5,014	115%	106%
R-squared			0.9981	0.9997		

Chart II-T4

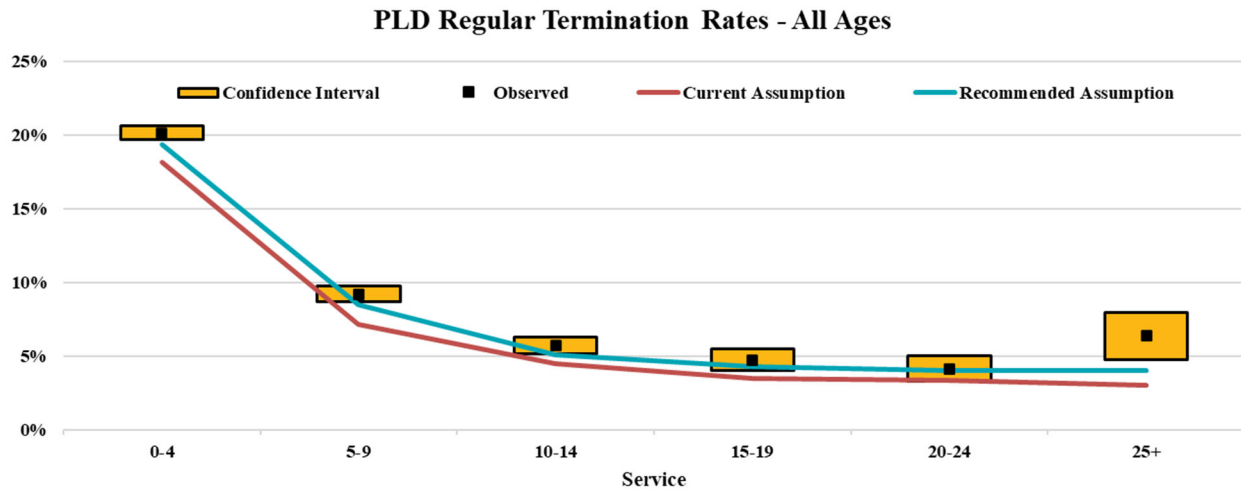


Table II-T5 shows the calculation of actual-to-expected ratios and the r-squared statistic for PLD Special Employees, and Chart II-T5 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual termination rates than expected under the current assumption, with the exception of participants with more than 20 years of service. Changes are being made to the valuation programming to capture some of the high service within retirement eligibility, versus adjusting termination rates for this. The recommended assumption generally decreases the assumed rates of termination and increases the aggregate A/E ratio from 102% to 104%. The r-squared increases from 0.9546 to 0.9610.

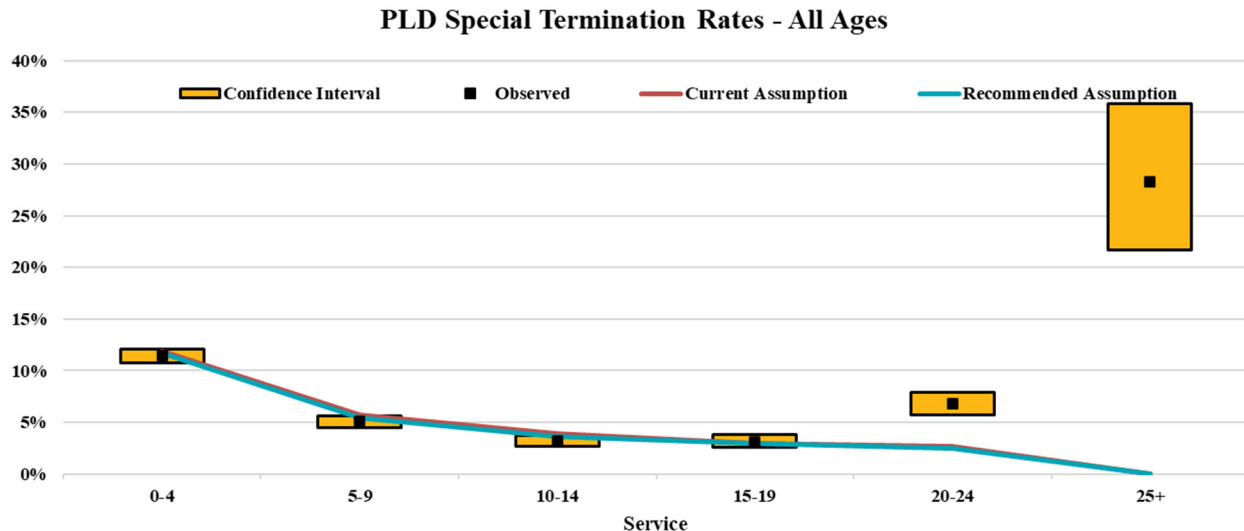
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES**

Table II-T5

PLD Special Termination Rates - All Ages						
Service	Exposures	Terminations			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
0-4	6,431	735	765	750	96%	98%
5-9	3,868	196	219	210	89%	93%
10-14	2,909	92	115	105	80%	87%
15-19	2,226	70	65	67	108%	105%
20-24	1,449	98	39	37	254%	268%
25+	106	30	0	0	0%	0%
Total	16,989	1,221	1,202	1,169	102%	104%
R-squared			0.9546	0.9610		

Chart II-T5



Judicial Retirement Program – Termination Rates

Over the study period, there were only two terminations from the Judicial program out of 169 possible exposure years. The termination rates are already very low (7% at age 25, dropping to 1% at age 55), and due to the lack of credible data, we do not recommend making any changes at this time.

Legislative Retirement Program – Termination Rates

Due to the election cycle and term limits of the House and Senate, the current assumption is a service-based table for the Legislative that is only applied in even years, with zero percent assumed in the odd years. We recommend keeping this format but adjusting the termination rates at certain service amounts to better align with actual experience.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES**

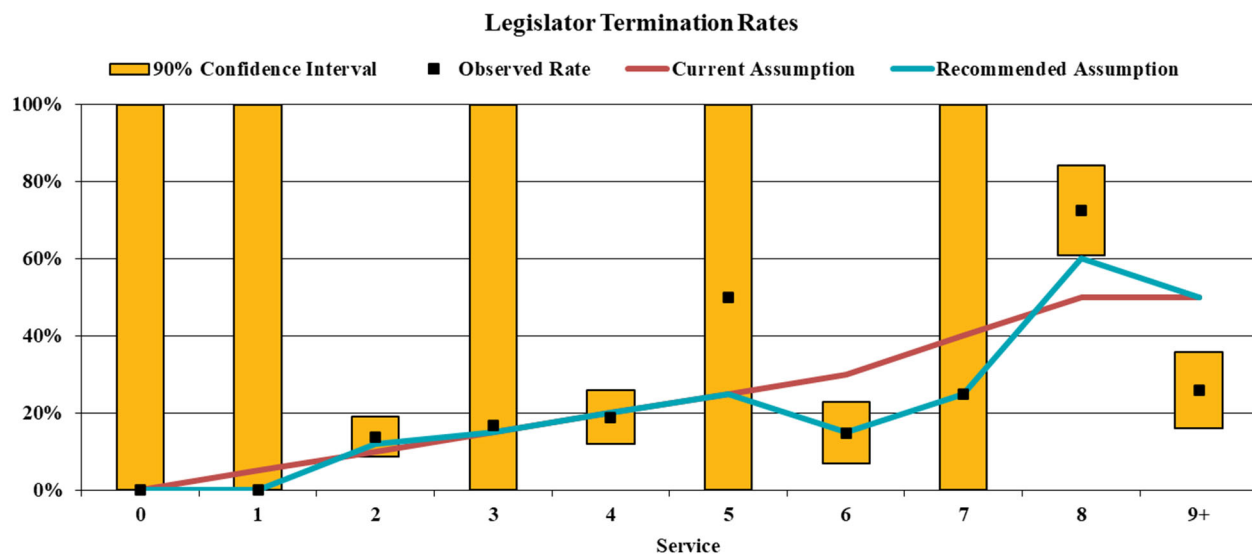
Table II-T6 shows the calculation of actual-to-expected ratios and the r-squared statistic for Legislative Employees, and Chart II-T6 shows this information graphically along with the 90% confidence intervals.

The recommended assumption generally decreases the assumed rates of termination and increases the aggregate A/E ratio from 91% to 94%. The r-squared increases from 0.8252 to 0.9486.

Table II-T6

Legislator Termination Rates						
Service	Exposures	Terminations			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
0	0	0	0	0	0%	0%
1	4	0	0	0	0%	0%
2	116	16	12	14	138%	115%
3	6	1	1	1	111%	111%
4	85	16	17	17	94%	94%
5	4	2	1	1	200%	200%
6	54	8	16	8	49%	99%
7	4	1	2	1	63%	100%
8	40	29	20	24	145%	121%
9+	54	14	27	27	52%	52%
Total	367	87	96	93	91%	94%
R-squared			0.8252	0.9486		

Chart II-T6



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES**

This section analyzes the incidence of disability by the age of the employee for each of the MainePERS Programs. These assumptions are developed as one unisex assumption for males and females at each age, as no significant difference in disability incidence related to gender was seen in the actual experience for these Programs. Similar information and graphs are developed as in the retirement and termination sections.

Teacher Program – Disability Rates

We examined the disability experience for the State Employees and Teachers members and concluded that the best fit was produced by developing assumptions separately for each of the Teachers, State Regular, and State Special. Table II-D1 shows the calculation of actual-to-expected ratios and the r-squared statistic for Teachers, and Chart II-D1 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual disability rates than expected at most ages under the current assumption. The recommended assumption decreases the assumed rates of disability and increases the aggregate A/E ratio from 88% to 91%. The r-squared remains at 0.7272.

Table II-D1

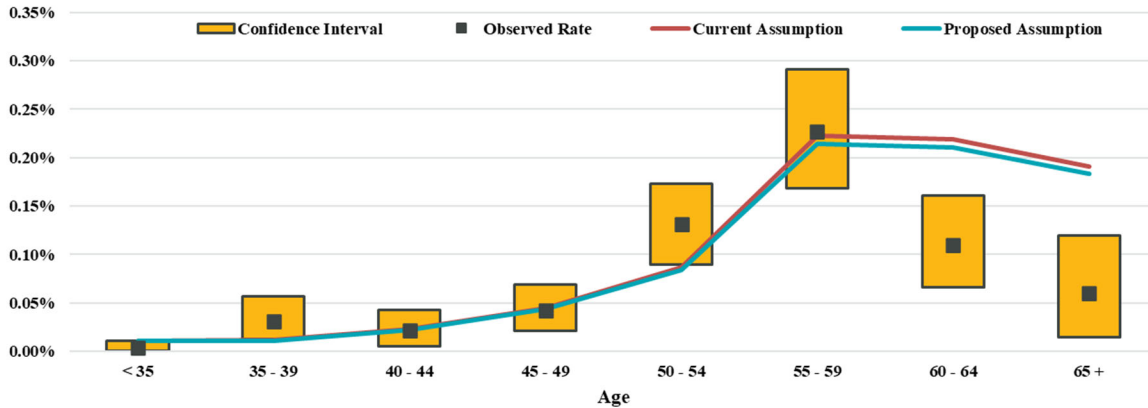
Teacher Disability Incidence Rates						
Age Band	Exposures	Disabilities			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
< 35	28,445	1	3	3	32%	33%
35 - 39	15,952	5	2	2	273%	283%
40 - 44	18,651	4	4	4	92%	96%
45 - 49	18,865	8	8	8	94%	98%
50 - 54	19,070	25	17	16	151%	157%
55 - 59	17,192	39	38	37	102%	106%
60 - 64	13,673	15	30	29	50%	52%
65 +	6,702	4	13	12	31%	32%
Total	138,550	101	115	111	88%	91%
R-squared			0.7272	0.7272		

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES**

Chart II-D1

Teacher Disability Incidence Rates



State Regular Program – Disability Rates

Table II-D2 shows the calculation of actual-to-expected ratios and the r-squared statistic for State Regular Employees, and Chart II-D2 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual disability rates than expected at most ages under the current assumption. The recommended assumption decreases the assumed rates of disability and increases the aggregate A/E ratio from 75% to 86%. The r-squared increases from 0.9720 to 0.9875.

Table II-D2

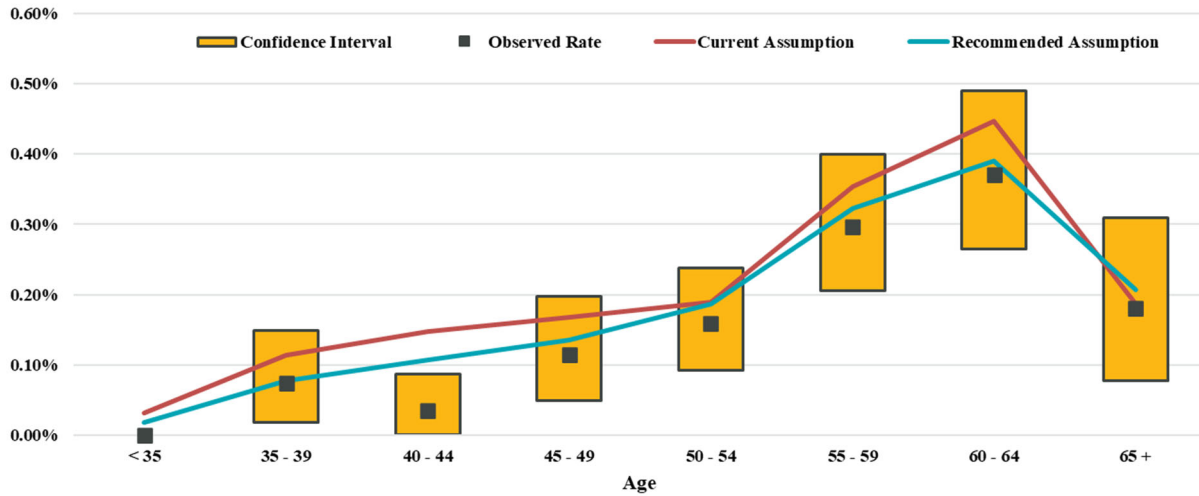
State Regular Disability Incidence Rates						
Age Band	Exposures	Disabilities			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
< 35	10,051	0	3	2	0%	0%
35 - 39	5,370	4	6	4	65%	97%
40 - 44	5,806	2	9	6	23%	32%
45 - 49	6,096	7	10	8	68%	85%
50 - 54	7,568	12	14	14	84%	85%
55 - 59	8,771	26	31	28	84%	92%
60 - 64	7,561	28	34	29	83%	95%
65 +	3,884	7	7	8	97%	87%
Total	55,107	86	114	100	75%	86%
R-squared			0.9720	0.9875		

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

SECTION II - DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES

Chart II-D2

State Regular Disability Incidence Rates



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES**

State Special Program – Disability Rates

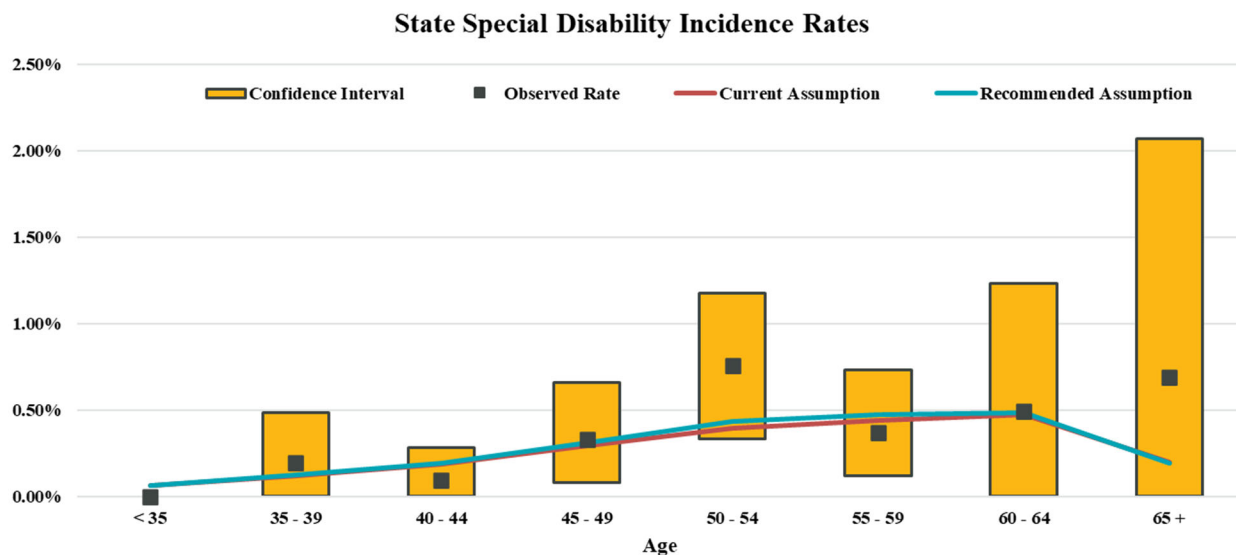
Table II-D3 shows the calculation of actual-to-expected ratios and the r-squared statistic for State Special Employees, and Chart II-D3 shows this information graphically along with the 90% confidence intervals.

The data shows higher actual disability rates than expected under the current assumption. The recommended assumption very slightly increases the assumed rates of disability and decreases the aggregate A/E ratio from 116% to 110%. The r-squared increases from 0.6994 to 0.7294.

Table II-D3

State Special Disability Incidence Rates						
Age Band	Exposures	Disabilities			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
< 35	2,402	0	2	2	0%	0%
35 - 39	1,035	2	1	1	159%	155%
40 - 44	1,067	1	2	2	50%	49%
45 - 49	1,210	4	4	4	112%	106%
50 - 54	1,191	9	5	5	191%	173%
55 - 59	817	3	4	4	83%	78%
60 - 64	405	2	2	2	104%	101%
65 +	145	1	0	0	346%	356%
Total	8,272	22	19	20	116%	110%
R-squared			0.6994	0.7294		

Chart II-D3



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES**

PLD Consolidated Program – Disability Rates

Table II-D4 shows the calculation of actual-to-expected ratios and the r-squared statistic for PLD Regular employees, and Chart II-D4 shows this information graphically along with the 90% confidence intervals.

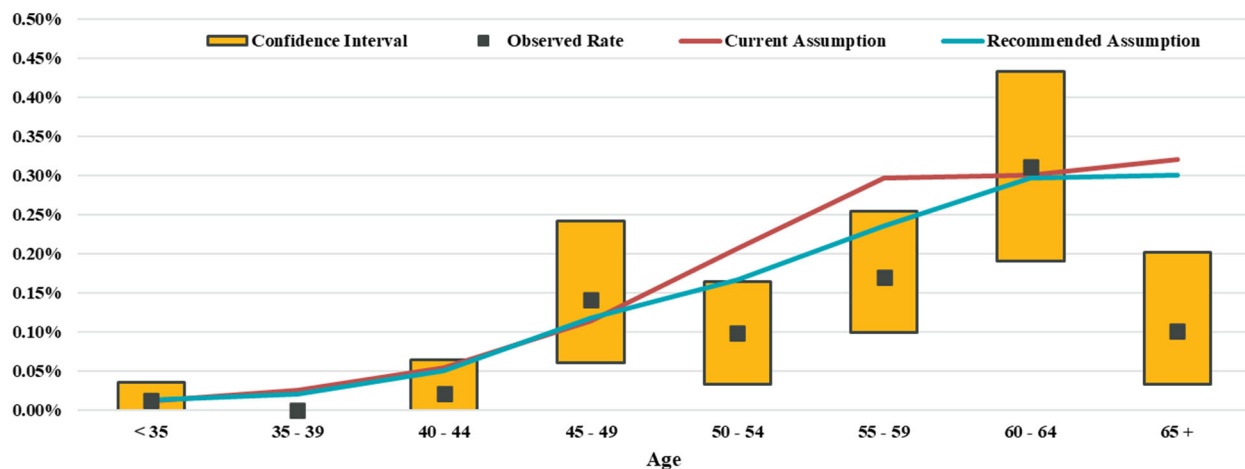
The data shows lower actual disability rates than expected under the current assumption. The recommended assumption decreases the assumed rates of disability and increases the aggregate A/E ratio from 68% to 76%. The r-squared increases from 0.7347 to 0.8340.

Table II-D4

PLD Regular Disability Incidence Rates						
Age Band	Exposures	Disabilities			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
< 35	8,267	1	1	1	99%	91%
35 - 39	4,126	0	1	1	0%	0%
40 - 44	4,683	1	3	2	39%	42%
45 - 49	4,953	7	6	6	124%	120%
50 - 54	6,082	6	13	10	48%	59%
55 - 59	7,065	12	21	17	57%	72%
60 - 64	5,778	18	17	17	104%	105%
65 +	2,977	3	10	9	31%	34%
Total	43,931	48	71	63	68%	76%
R-squared			0.7347	0.8340		

Chart II-D4

PLD Disability Incidence Rates



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES**

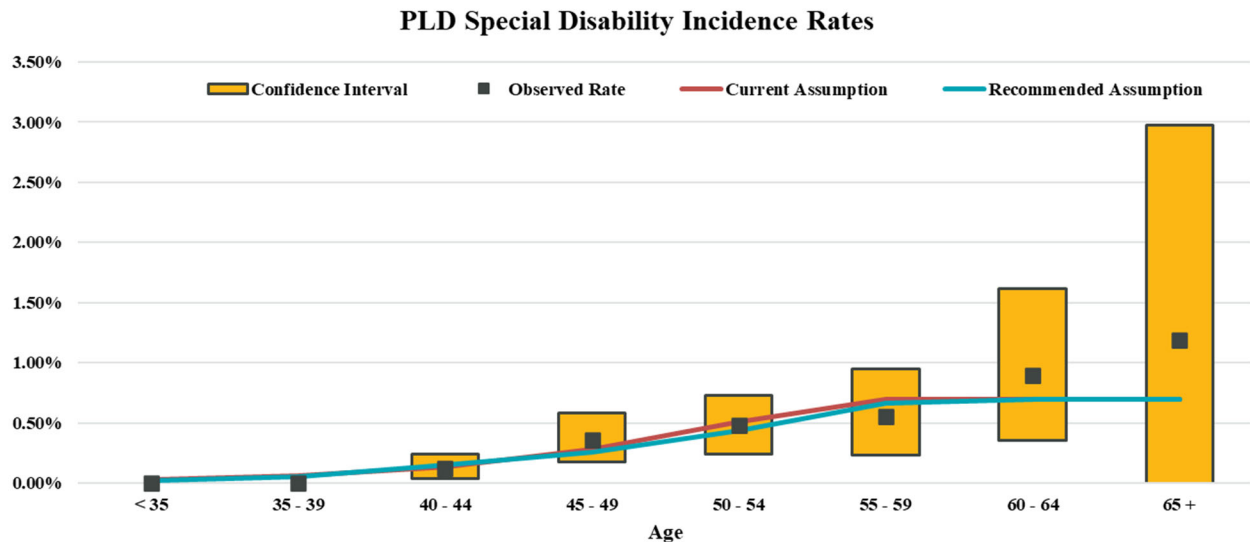
Table II-D5 shows the calculation of actual-to-expected ratios and the r-squared statistic for PLD Special employees, and Chart II-D5 shows this information graphically along with the 90% confidence intervals.

The data shows lower actual disability rates than expected under the current assumption. The recommended assumption decreases the assumed rates of disability and increases the aggregate A/E ratio from 93% to 100%. The r-squared increases from 0.8512 to 0.8534.

Table II-D5

PLD Special Disability Incidence Rates						
Age Band	Exposures	Disabilities			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
< 35	6,891	0	2	2	0%	0%
35 - 39	2,546	0	2	1	0%	0%
40 - 44	2,445	3	3	4	91%	80%
45 - 49	2,220	8	6	6	126%	138%
50 - 54	2,063	10	10	9	96%	111%
55 - 59	1,268	7	9	8	79%	83%
60 - 64	556	5	4	4	128%	128%
65 +	168	2	1	1	170%	170%
Total	18,157	35	38	35	93%	100%
R-squared			0.8512	0.8534		

Chart II-D5



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES**

Judicial and Legislative Program – Disability Rates

Over the experience study period, there were no disabilities in the Judicial and Legislative Programs. We recommend continuing to assume no disability decrement for these programs, as disabilities for these groups are very rare.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Post-retirement mortality assumptions are typically developed separately by gender for both healthy annuitants and disabled annuitants. Pre-retirement mortality assumptions are developed separately for males and females. Unlike most of the other demographic assumptions that rely exclusively on the experience of the Program, for mortality, standard mortality tables and mortality improvement projection scales serve as the primary basis for the assumption, which is then adjusted to reflect the experience of the Program.

In 2025, the Society of Actuaries (SOA) Research Institute's Retirement Plans Experience Committee (RPEC) completed a second extensive study of mortality based on Public Sector experience and released its report, *Pub-2016 Public Retirement Plans Mortality Tables* (Pub-2016). Due to the pandemic, the SOA has not released an updated mortality improvement projection scale since the MP-2021 scale was produced in 2021. In 2023, the IRS released an Adjusted MP-2021 scale that reflected zero mortality improvement for the 2020-2023 period to approximate the effects of the pandemic and a lower ultimate mortality improvement rate reflecting slowed mortality improvement experience seen in recent years. We used the Pub-2016 base mortality tables and the IRS Adjusted MP-2021 mortality improvement scale as the basis for our analysis.

The steps in our analysis are as follows:

1. Select a standard mortality table that is based on experience most closely matching the anticipated experience of the MainePERS group being studied.
2. Compare actual MainePERS experience to what would have been predicted by the selected standard table for the period of the experience study.
3. Adjust the standard table either fully or partially, depending on the level of credibility for the group for MainePERS experience. This adjusted table is called the base table.
4. Select an appropriate standard mortality improvement projection scale and apply it to the developed base table.

Similar to the methodology used to develop the Pub-2016 tables, when actual MainePERS experience is compared to that of the standard table, the experience is weighted based on the amount of benefit being paid for annuitants. Mortality studies in the U.S. have consistently shown that higher-income individuals have longer life expectancies than lower-income individuals. Because higher-income individuals also typically have higher pension benefit amounts, it is important for a pension plan to use assumptions that are weighted to reflect this impact on liabilities.

The fourth step described above develops a generational mortality improvement assumption. With a generational assumption, anticipated improvements in mortality are built into the assumption. Similar to how we evaluate the most recent base mortality tables for an appropriate fit, we recommend using the most recent published mortality improvement scale.

The sections below develop the base tables (that were identified in step three above) for each of the separate mortality assumptions.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Healthy Annuitant Mortality: Teachers

Table II-M1 below summarizes our analysis and development of the base mortality table for teacher healthy male annuitants. We adjusted the Pub-2016 Benefits-Weighted Teacher Healthy Annuitants table to the midpoint of the study period (2023) using the IRS Adjusted MP-2021 improvement scale before making the comparisons. The exposure and retirement counts in the tables in this section are benefits-weighted, so an individual with a larger benefit impacts the developed ratios more than an individual with a lower benefit. This benefit-weighted approach is the one recommended for use with the Pub-2016 tables as previously discussed. Further, for this group and the others analyzed in this mortality section, we restricted the ages used in the analysis to those providing the best fit with the tables being adjusted. Based on this analysis, we recommend rates for healthy male teacher annuitants based on 109.9% of the Pub-2016 Teacher Healthy Annuitant Mortality Table for males. These rates are projected generationally using the IRS Adjusted MP-2021 mortality improvement scale.

Table II-M1

Healthy Retiree Mortality - Base Table for Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	47	-	1,992,507	-	1,262	-	0%	0%
55 - 59	61	1	2,428,893	27,882	6,287	7,357	444%	379%
60 - 64	1,336	8	53,821,285	279,411	260,775	302,011	107%	93%
65 - 69	4,805	26	173,223,906	842,403	1,278,734	1,485,250	66%	57%
70 - 74	7,807	134	267,830,077	4,219,171	3,387,688	3,818,289	125%	110%
75 - 79	6,710	176	228,044,971	5,500,332	5,245,344	5,835,292	105%	94%
80 - 84	3,792	197	127,541,041	6,335,464	5,518,310	6,295,197	115%	101%
85 - 89	1,857	201	59,636,484	6,137,885	5,389,445	5,839,289	114%	105%
90 - 94	641	126	20,110,137	3,828,349	3,154,147	3,464,234	121%	111%
95 +	111	36	3,088,704	976,534	775,436	872,681	126%	112%
Total	27,167	905	937,718,005	28,147,430	25,017,428	27,919,601	113%	101%

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Similarly, for female teachers, we recommend rates for healthy female teacher annuitants based on 98.0% of the Pub-2016 Teacher Healthy Annuitant Mortality Table for females under age 82 and 125.0% of the Pub-2016 Teacher Healthy Annuitant Mortality Table for females age 82+. These rates are projected with the female version of the same projection rates mentioned with the male teacher assumptions.

Table II-M2

Healthy Retiree Mortality - Base Table for Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	7	0	163,210	0	0	0	0%	0%
55 - 59	108	0	2,841,336	0	6,111	6,483	0%	0%
60 - 64	4,159	14	140,954,358	573,184	459,773	460,334	125%	125%
65 - 69	15,685	67	483,730,418	1,948,329	2,203,201	2,311,874	88%	84%
70 - 74	20,690	171	620,104,351	4,859,208	4,809,758	5,218,037	101%	93%
75 - 79	13,319	216	376,233,935	5,918,268	5,529,703	6,061,887	107%	98%
80 - 84	6,912	270	187,655,327	7,739,304	7,701,817	7,406,931	100%	104%
85 - 89	3,299	284	85,939,948	7,493,711	6,817,026	7,472,364	110%	100%
90 - 94	1,659	267	41,384,009	6,609,619	6,050,001	6,574,825	109%	101%
95 +	509	140	10,631,904	2,932,324	2,668,793	2,847,709	110%	103%
Total	66,347	1,429	1,949,638,796	38,073,947	36,246,184	38,360,442	105%	99%

Healthy Annuitant Mortality: Non-Teachers

For non-teachers, we performed the analysis using the non-teacher members of the State Employees and Teacher Program as the most credible group. We recommend that these non-teacher mortality assumptions be applied to all non-teacher members of MainePERS, including State Regular, State Special, PLD Regular, PLD Special, Judicial, and Legislative.

For male non-teachers, we recommend rates based on 112.7% of the Pub-2016 General Healthy Annuitant Mortality Tables for males projected with the same generational projection rates described for the Teachers. This is illustrated in Table II-M3 below.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Table II-M3

Healthy Retiree Mortality - Base Table for Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	251	2	11,209,718	88,197	42,329	42,164	208%	209%
55 - 59	657	3	24,848,775	64,371	140,966	137,655	46%	47%
60 - 64	2,801	16	90,754,865	523,208	788,975	771,866	66%	68%
65 - 69	6,610	84	194,640,448	2,062,441	2,411,546	2,336,056	86%	88%
70 - 74	8,002	170	235,621,690	4,231,778	4,646,521	4,451,861	91%	95%
75 - 79	6,092	190	178,316,577	5,376,748	5,949,101	5,825,497	90%	92%
80 - 84	3,123	226	88,219,956	6,251,402	5,331,150	5,306,859	117%	118%
85 - 89	1,916	233	51,909,435	6,253,519	5,747,488	5,861,440	109%	107%
90 - 94	883	178	23,699,810	4,663,558	4,289,348	4,619,354	109%	101%
95 +	183	49	4,803,734	1,273,066	1,309,259	1,444,660	97%	88%
Total	30,518	1,151	904,025,008	30,788,288	30,656,682	30,797,412	100%	100%

For female non-teachers, we recommend rates based on 117.3% of the Pub-2016 General Healthy Annuitant Mortality Tables for females projected with the same generational projection rates described for the Teachers. This is illustrated in Table II-M4 below.

Table II-M4

Healthy Retiree Mortality - Base Table for Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	19	0	842,359	0	2,540	2,519	0%	0%
55 - 59	182	1	4,419,952	18,755	19,848	17,421	94%	108%
60 - 64	2,431	13	73,409,215	439,848	466,989	402,864	94%	109%
65 - 69	6,815	43	181,428,433	901,888	1,691,367	1,420,361	53%	63%
70 - 74	6,946	86	175,428,125	2,240,685	2,766,709	2,329,518	81%	96%
75 - 79	4,499	126	107,191,321	2,604,551	3,023,912	2,615,326	86%	100%
80 - 84	2,498	139	55,075,119	3,059,742	2,939,660	2,645,934	104%	116%
85 - 89	1,451	151	28,320,352	2,962,880	2,850,405	2,599,951	104%	114%
90 - 94	693	127	13,419,535	2,432,188	2,350,237	2,175,912	103%	112%
95 +	260	73	5,118,581	1,308,567	1,381,960	1,306,687	95%	100%
Total	25,794	759	644,652,994	15,969,105	17,493,627	15,516,494	91%	103%

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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Employee Mortality

Tables II-M5 through II-M8 below summarize our analysis and development of the base mortality tables for active members. Similar to the process for healthy annuitants, we developed gender-specific separate assumptions for teachers and non-teachers. The resulting base tables used for teachers are 101.5% and 102.2% of the Pub-2016 Teacher Employees Mortality Tables for females and males, respectively. The base tables for non-teachers are 101.0% and 119.9% of the Pub-2016 General Employees Mortality Tables for females and males, respectively. Note that in both the case of the healthy annuitant mortality assumptions and the employee mortality assumptions, if mortality rates are needed at ages not defined in the published table, we use the rates from the other table for those ages with the rating for the table that needs extension.

Table II-M5

Teachers Non-Annuitant Mortality - Base Table for Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratio	
				Actual	Current	Recommended	Current	Recommended
20 - 29	3,338	0	3,338	0	1	1	0%	0%
30 - 39	6,890	1	6,890	1	3	3	36%	38%
40 - 49	10,088	8	10,088	8	7	7	120%	108%
50 - 59	10,814	22	10,814	22	16	18	134%	122%
60 - 69	5,525	20	5,525	20	19	19	104%	103%
70 +	697	7	697	7	5	6	130%	122%
Total	37,352	58	37,352	58	51	54	113%	107%

Table II-M6

Teachers Non-Annuitant Mortality - Base Table for Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratio	
				Actual	Current	Recommended	Current	Recommended
20 - 29	12,107	1	12,107	1	1	1	68%	84%
30 - 39	25,647	5	25,647	5	7	6	76%	89%
40 - 49	34,203	18	34,203	18	15	16	120%	111%
50 - 59	35,037	35	35,037	35	34	36	102%	98%
60 - 69	20,680	43	20,680	43	43	44	100%	97%
70 +	1,720	14	1,720	14	9	9	151%	150%
Total	129,394	116	129,394	116	110	112	106%	103%

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Table II-M7

Non-Annuitant Mortality - Base Table for Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratio	
				Actual	Current	Recommended	Current	Recommended
20 - 29	3,407	1	3,407	1	1	2	89%	58%
30 - 39	7,245	3	7,245	3	4	5	73%	61%
40 - 49	8,689	10	8,689	10	8	11	132%	94%
50 - 59	11,688	34	11,688	34	21	31	163%	111%
60 - 69	6,849	48	6,849	48	24	35	201%	139%
70 +	725	15	725	15	5	8	315%	198%
Total	38,603	111	38,603	111	62	90	178%	123%

Table II-M8

Non-Annuitant Mortality - Base Table for Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratio	
				Actual	Current	Recommended	Current	Recommended
20 - 29	3,238	0	3,238	0	0	0	0%	0%
30 - 39	7,164	2	7,164	2	2	2	100%	94%
40 - 49	9,471	5	9,471	5	5	6	108%	87%
50 - 59	13,453	17	13,453	17	15	18	113%	94%
60 - 69	8,474	23	8,474	23	19	22	124%	104%
70 +	646	7	646	7	3	4	223%	196%
Total	42,446	54	42,446	54	44	52	123%	104%

The mortality improvement assumption for the employee mortality is also the same as the healthy annuitants.

Disabled Annuitant Mortality

While MainePERS is not large enough to have very credible experience for disabled annuitant mortality, there is a large body of evidence that disabled annuitant mortality is higher than healthy annuitant mortality. The degree to which disabled mortality is higher depends on a number of factors, particularly the definition of disability used in practice to award disability benefits. Based on the analysis below, we recommend that the Board adopt mortality assumptions for disabled annuitants from the same Pub-2016 study as was used for healthy annuitants.

For male teacher disabled members, we recommend rates based on 106.3% of the Pub-2016 Non-Public Safety Disabled Annuitant Mortality Tables for males projected with the same generational mortality improvements described for Healthy Annuitants. This is illustrated in Table II-M9 below.

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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Table II-M9

Disabled Retiree Mortality - Base Table for Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	14	1	394,583	32,135	6,947	4,361	463%	737%
55 - 59	34	2	1,165,220	56,802	24,655	19,295	230%	294%
60 - 64	60	2	2,343,437	75,906	62,333	55,669	122%	136%
65 - 69	150	4	5,440,524	167,592	170,055	147,812	99%	113%
70 - 74	232	7	7,977,424	206,281	300,148	265,136	69%	78%
75 - 79	167	8	5,915,350	287,054	291,520	285,091	98%	101%
80 - 84	57	7	1,854,695	266,147	131,373	136,770	203%	195%
85 - 89	39	5	1,213,663	153,114	136,271	152,199	112%	101%
90 - 94	15	5	400,241	142,449	66,746	79,126	213%	180%
95 +	6	3	142,115	73,780	31,242	38,481	236%	192%
Total	774	44	26,847,252	1,461,261	1,221,289	1,183,941	120%	123%

For female teacher disabled members, we recommend rates based on 118.2% of the Pub-2016 Non-Public Safety Disabled Annuitant Mortality Tables for females projected with the same generational mortality improvements described for Healthy Annuitants. This is illustrated in Table II-M10 below.

Table II-M10

Disabled Retiree Mortality - Base Table for Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	111	1	3,172,011	34,383	63,213	32,012	54%	107%
55 - 59	195	8	6,193,033	292,053	148,704	97,478	196%	300%
60 - 64	380	12	12,322,503	371,113	319,402	259,566	116%	143%
65 - 69	586	19	18,458,859	679,032	519,421	422,114	131%	161%
70 - 74	573	21	18,367,992	682,388	657,294	532,336	104%	128%
75 - 79	405	20	13,342,170	687,503	685,667	607,395	100%	113%
80 - 84	166	14	4,948,262	410,502	397,888	367,891	103%	112%
85 - 89	66	11	2,097,315	307,756	270,513	247,287	114%	124%
90 - 94	23	2	746,953	97,089	133,838	127,959	73%	76%
95 +	2	0	48,093	0	11,549	11,318	0%	0%
Total	2,507	108	79,697,192	3,561,819	3,207,491	2,705,356	111%	132%

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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

For male non-teacher disabled members, we recommend rates based on 114.5% of the Pub-2016 Non-Public Safety Disabled Annuitant Mortality Tables for males projected with the same generational mortality improvements described for Healthy Annuitants. This is illustrated in Table II-M11 below.

Table II-M11

Disabled Retiree Mortality - Base Table for Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	137	4	3,439,025	105,130	64,899	41,026	162%	256%
55 - 59	205	7	6,176,952	242,591	152,026	110,319	160%	220%
60 - 64	391	14	11,254,954	403,982	339,260	286,469	119%	141%
65 - 69	450	18	12,759,620	426,960	446,662	370,536	96%	115%
70 - 74	387	17	11,489,055	468,283	488,492	408,175	96%	115%
75 - 79	250	17	7,282,049	488,607	410,573	379,053	119%	129%
80 - 84	116	10	2,819,218	249,567	230,347	226,929	108%	110%
85 - 89	54	8	1,274,898	165,849	160,439	168,511	103%	98%
90 - 94	15	5	367,406	126,504	63,610	70,947	199%	178%
95 +	-	-	-	-	-	-	0%	0%
Total	2,005	100	56,863,179	2,677,472	2,356,309	2,061,966	114%	130%

For female non-teacher disabled members, we recommend rates based on 127.7% of the Pub-2016 Non-Public Safety Disabled Annuitant Mortality Tables for females projected with the same generational mortality improvements described for Healthy Annuitants. This is illustrated in Table II-M12 below.

Table II-M12

Disabled Retiree Mortality - Base Table for Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	75	2	2,083,594	51,745	33,590	22,214	154%	233%
55 - 59	230	6	5,923,380	146,606	119,121	102,226	123%	143%
60 - 64	475	18	13,000,891	550,147	281,151	296,027	196%	186%
65 - 69	454	10	12,722,441	246,998	297,075	313,298	83%	79%
70 - 74	419	29	11,440,871	776,889	338,328	354,631	230%	219%
75 - 79	308	18	7,858,894	502,512	344,512	396,583	146%	127%
80 - 84	139	17	3,226,001	363,909	213,927	256,363	170%	142%
85 - 89	49	4	1,217,348	102,319	131,289	155,546	78%	66%
90 - 94	33	9	803,556	239,891	120,763	149,315	199%	161%
95 +	2	1	16,217	8,228	3,224	4,123	255%	200%
Total	2,184	114	58,293,194	2,989,243	1,882,981	2,050,327	159%	146%

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Survivor/Beneficiary Mortality

Table II-M13 below summarizes our analysis and development of the base mortality table for male contingent survivors. The analysis and subsequent results are the same for both teachers and non-teachers contingent survivors. Based on this analysis, we recommend rates for male contingent survivors based on 98.8% of the Pub-2016 Contingent Survivor Mortality Tables for males with the same generational mortality improvements described for Healthy Annuitants.

Table II-M13

Survivors Mortality - Base Table for Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	323	4	3,941,404	14,576	14,457	30,496	101%	48%
55 - 59	394	10	5,505,737	75,165	31,792	50,657	236%	148%
60 - 64	623	9	14,508,023	173,012	124,295	167,827	139%	103%
65 - 69	1,238	12	37,361,428	295,895	468,164	564,119	63%	52%
70 - 74	1,991	43	62,089,391	1,231,924	1,236,358	1,364,322	100%	90%
75 - 79	1,861	59	56,829,873	1,741,719	1,908,129	2,051,791	91%	85%
80 - 84	1,044	73	32,303,693	1,976,191	1,954,044	2,043,758	101%	97%
85 - 89	661	86	18,617,845	2,405,426	2,077,620	2,110,496	116%	114%
90 - 94	360	81	9,276,806	2,043,132	1,689,708	1,731,394	121%	118%
95 +	89	19	2,103,228	383,471	550,735	570,235	70%	67%
Total	8,584	396	242,537,427	10,340,512	10,055,302	10,685,095	103%	97%

For female contingent survivors, we recommend rates based on 110.6% of the Pub-2016 Contingent Survivor Mortality Tables for females projected with the same generational mortality improvements described for Healthy Annuitants. This is illustrated in Table II-M14 below.

Table II-M14

Survivors Mortality - Base Table for Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Recommended	Current	Recommended
50 - 54	520	3	10,202,150	53,460	29,044	35,061	184%	152%
55 - 59	855	6	18,464,530	90,273	74,658	95,058	121%	95%
60 - 64	1,720	11	49,202,604	293,081	280,927	377,936	104%	78%
65 - 69	3,227	32	102,273,038	800,252	874,306	1,112,633	92%	72%
70 - 74	4,666	61	154,637,500	1,888,261	2,222,453	2,511,356	85%	75%
75 - 79	4,413	114	140,550,405	3,100,999	3,586,099	3,714,601	86%	83%
80 - 84	3,655	199	110,264,846	5,473,213	5,263,564	5,251,794	104%	104%
85 - 89	2,602	257	71,639,630	6,929,534	6,424,233	6,217,769	108%	111%
90 - 94	1,648	267	42,730,761	6,719,301	6,742,795	6,441,628	100%	104%
95 +	482	132	10,570,608	2,672,160	2,598,295	2,511,204	103%	106%
Total	23,788	1,082	710,536,071	28,020,533	28,096,374	28,269,040	100%	99%

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES**

Projection of Mortality Improvement

There has been a long history of mortality improvement among pensioners in the U.S., and there is an expectation that mortality rates will continue to improve in the future. From 2014 - 2021, the Society of Actuaries has been publishing projection scales designed to predict future increases in mortality. These are developed based on three key concepts:

- Recently observed experience is the best predictor of future near-term mortality improvement rates.
- Long-term rates of mortality improvement should be based on “expert opinion” and analysis of longer-term mortality patterns.
- Near-term rates should transition smoothly into the assumed long-term mortality improvement rates over appropriately selected convergence periods.

Since the MP-2021 mortality improvement scale was released by the SOA in 2021, which is based on U.S. population mortality experience through 2019, the COVID-19 pandemic changed the landscape of mortality improvements. As a result, the SOA has reviewed the mortality data annually since 2021 and concluded every year since that time that the data is not reliable for publishing a new mortality improvement scale. The IRS and the U.S. Department of the Treasury made adjustments to the MP-2021 mortality improvement scale to remove mortality improvements during the 2020-2023 pandemic and post-pandemic period, in addition to capping all future annual rates of improvement to 0.78%. We believe that these adjustments are appropriate and, as such, we recommend adopting the IRS Adjusted MP-2021 mortality improvement scale.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**SECTION II - DEMOGRAPHIC ASSUMPTIONS
FAMILY COMPOSITION**

Family composition includes assumptions relevant for the valuation of death benefits provided under the Plan for members who have not yet started receiving their retirement benefits. These assumptions are used for all Programs to determine who should receive such death benefits and for how long, based on the provisions of each Plan. Benefits under MainePERS may be payable to a surviving spouse and surviving dependent children in these situations.

MainePERS does not have family data on all members upon which to reliably base these assumptions. For purposes of the percentage of members assumed to be married, we first evaluated the recent retiree population to determine the forms of payment elected. The percentage of members electing a payment form that provides for benefits to a beneficiary upon death is presumed to be a subset of those who are married. We found that 55% of male members and 25% of female members elected a joint and survivor payment form (Options 2-8) with a beneficiary within 25 years of their age (anything outside of this range has been assumed to be someone other than a spouse). We have assumed that 25% of married participants who elect to receive their benefit in Full or under Option 1 are married as well. Therefore, we recommend an assumption of married members as 80% of male participants and 50% of female participants.

In addition to the percentage of members who are married, we have an assumption related to the age of the spouses of members. For this purpose, we evaluated the recent retiree group and determined the average age of spouses. We recommend an assumption that married male members have female spouses 2 years younger and married female members have male spouses 1 year older.

Lastly, surviving dependent children are eligible to receive a temporary death benefit if a member dies in active service with MainePERS. There is no data available from MainePERS on the number and ages of children of its members. For this purpose, we reviewed national studies on the topic of maternal age and the number of dependent children for the State of Maine. Maternal ages have trended up in recent years, and as such, we recommend a change to assume that female members have two children born when the member is 28 and 32, and male members have two children born when the member is 30 and 34. We recommend no change to the assumption that children are assumed to remain dependent until age 18.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**APPENDIX A - SUMMARY OF ASSUMPTIONS
INTRODUCTION**

This Appendix A includes summaries of the assumptions for each MainePERS plan. This information is provided organized by Program. The assumptions shown with no shading are the current assumptions that were in place for the 2025 valuations, while the assumptions shown with grey shading are those recommended in this report and adopted by the MainePERS board for the 2026 valuations.

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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APPENDIX A - SUMMARY OF ASSUMPTIONS
STATE EMPLOYEES AND TEACHERS PROGRAM

A. Actuarial Assumptions

1. Discount Rate:

	Current
State Employees	6.50%
Teachers	6.50

Rate is net of both administrative and investment expense.

2. Cost-of-Living Adjustment (COLA) Assumed Rate:

	Current
State Employees	2.20%
Teachers	2.20

3. Sample Rates of Individual Salary Increases (% at Selected Years of Service):

	Current Assumption		Recommended Assumption	
Service	State Employees	Teachers	State Employees	Teachers
0	9.43%	13.03%	11.74%	14.31%
5	6.24	5.83	6.60	6.35
10	5.32	4.81	5.47	5.32
15	3.98	4.29	4.29	4.55
20	3.78	3.26	4.19	3.78
25	3.26	2.80	4.03	3.26
30	2.75	2.75	4.03	3.01
35	2.75	2.75	3.26	2.75

The current rates include a 2.75% across-the-board increase at each year of service. The recommended rates include a 2.75% across-the-board increase at each year of service.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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4. Sample Rates of Termination (% at Selected Years of Service):

Service	Current Assumption			Recommended Assumption		
	Regular State Employees	Teachers	State Special Employees	Regular State Employees	Teachers	State Special Employees
0	32.5%	26.0%	30.0%	29.00%	20.00%	26.50%
5	10.0	9.0	9.0	9.00	8.25	8.75
10	6.0	5.5	6.5	5.75	5.00	5.00
15	4.0	3.5	4.0	4.00	3.50	3.25
20	3.0	3.0	3.0	3.00	2.75	3.00
25	2.5	3.0	2.5	2.50	2.75	2.50

Non-vested members are assumed to take a refund of contributions with interest. Once vested, the member is assumed to elect the greater of the deferred vested benefit or a refund of member contributions with interest based on present value at the time of termination.

5. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026)				Recommended Assumption (showing values in 2026)			
	State Employees		Teachers		State Employees		Teachers	
	Male	Female	Male	Female	Male	Female	Male	Female
50	30	24	10	6	32	28	12	7
55	45	34	20	17	46	34	24	18
60	69	46	35	26	70	45	41	26
65	100	67	57	36	100	63	68	38
70	154	108	94	58	151	105	111	65
75	259	192	173	110	262	195	200	126
80	469	357	330	309	486	375	388	260
85	873	687	698	615	899	733	771	686
90	1,537	1,300	1,319	1,178	1,651	1,342	1,461	1,302
95	2,418	2,140	2,237	2,114	2,685	2,208	2,524	2,280

State Employees are based on 112.1% and 118.5% of the 2010 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females. Current rates for Teachers are based on the 2010 Public Plan Teacher Benefits-Weighted Healthy Retiree Mortality Table adjusted as follows:

- 98.1% and 87.5% respectively of the rates for males before age 85 and females before age 80

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- 106.4% and 122.3% respectively of the rates for males on and after age 85 and females on and after age 80

The current rates are projected generationally using the RPEC_2020 model, with an ultimate rate of 1.00% for ages 80 and under, grading down to 0.05% at age 95, and further grading down to 0.00% at age 115, along with convergence to the ultimate rates in the year 2027. All other parameters used in the RPEC_2020 model are those included in the published MP-2020 scale.

Recommended rates for State Employees are based on 112.7% and 117.3% of the 2016 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females.

Recommended rates for Teachers are based on the 2016 Public Plan Teacher Benefits-Weighted Healthy Retiree Mortality Table adjusted as follows:

- 109.9% of the rates for males
- 98% of the rates for females prior to age 82, and 125% of the rates for females on and after age 82

The recommended rates are projected generationally using the published IRS Adjusted MP-2021 scale.

6. Sample Rates of Mortality for Active Lives at Selected Ages (number of deaths per 10,000 members)*:

Age	Current Assumption (showing values in 2026)				Recommended Assumption (showing values in 2026)			
	State Employees		Teachers		State Employees		Teachers	
	Male	Female	Male	Female	Male	Female	Male	Female
20	3	1	3	1	4	1	2	1
25	3	1	2	1	5	1	3	1
30	4	2	3	2	7	2	3	2
35	6	3	4	3	8	3	5	2
40	7	4	5	3	11	5	6	4
45	8	5	6	4	14	6	8	5
50	11	7	9	6	18	9	11	7
55	17	11	15	10	26	13	17	10
60	27	17	25	15	41	21	27	16
65	38	24	40	23	59	31	42	26

- * For State Regular and Teachers, 5% of deaths assumed to arise out of and in the course of employment; for State Special, 20% of deaths are assumed to arise out of and in the course of employment.

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Current rates for State Employees are based on 83.5% and 88.6% of the 2010 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. Recommended rates for Teachers are based on 93.1% and 91.9% of the 2010 Public Plan Teacher Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model as described in the healthy annuitant mortality.

Recommended rates for State Employees are based on 119.9% and 101.0% of the 2016 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. Recommended rates for Teachers are based on 102.2% and 101.5% of the 2016 Public Plan Teacher Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 model as described in the healthy annuitant mortality.

7. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026) State				Recommended Assumption (showing values in 2026) State			
	Employees		Teachers		Employees		Teachers	
	Male	Female	Male	Female	Male	Female	Male	Female
25	35	21	31	25	42	13	39	12
30	53	37	47	44	40	22	37	20
35	73	57	64	68	44	34	41	32
40	89	75	79	90	56	47	52	44
45	111	97	98	116	75	62	70	57
50	157	139	138	166	99	89	92	82
55	212	178	186	213	146	137	136	127
60	269	206	236	247	229	217	212	201
65	319	215	280	258	275	235	255	218
70	376	253	330	303	315	273	293	253

Current rates for State Employees are based on 107.3% and 103.2% of the 2010 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. Recommended rates for Teachers are based on 94.2% and 123.8% of the 2010 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model described in the healthy annuitant mortality.

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Recommended rates for State Employees are based on 114.5% and 127.7% of the 2016 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. Recommended rates for Teachers are based on 106.3% and 118.2% of the 2016 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 model as described in the healthy annuitant mortality.

8. Sample Rates of Mortality for Contingent Survivor Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026)				Recommended Assumption (showing values in 2026)	
	State Employees		Teachers		All	
	Male	Female	Male	Female	Male	Female
45	11	6	7	4	57	27
50	30	24	10	6	75	30
55	45	34	20	17	84	43
60	69	46	35	26	103	64
65	100	67	57	36	130	91
70	154	108	94	58	180	135
75	259	192	173	110	293	216
80	469	357	330	309	520	377
85	873	687	698	615	915	691
90	1,537	1,300	1,319	1,178	1,601	1,251

Current assumptions are the same as described for healthy annuitants.

Recommended rates for Contingent Survivors are based on 98.8% and 110.6% of the 2016 Public Plan Contingent Survivor Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 model as described in the healthy annuitant mortality.

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9. Sample Rates of Retirement at Selected Ages (number retiring per 1,000 members):

Age	Current Assumptions State Regular Employees			Current Assumptions Teachers		
	NRA 60	NRA 62	NRA 65	NRA 60	NRA 62	NRA 65
57	4%	3.5%	N/A	4%	3.5%	N/A
59	26	4	N/A	20	4.5	N/A
60	21	5	2%	27.5	8	2%
61	21	35	2	21	24	2
62	21	27	5	23	22	5
63	25	18	8	22	18	8
64	19	20	30	28	22	20
65	21	22	25	34	30	30
70	20	20	20	30	20	30
75	35	35	25	40	20	30
80	100	100	100	100	100	100

Age	Recommended Assumptions State Regular Employees			Recommended Assumptions Teachers		
	NRA 60	NRA 62	NRA 65	NRA 60	NRA 62	NRA 65
57	4%	3.5%	N/A	4%	3%	N/A
59	26	4	N/A	20	5	N/A
60	21	4.5	4%	27.5	8.5	2%
61	21	35	2	21	28	2
62	21	29	5	23	26.8	2
63	20	19	8	25.5	21	2
64	22	20	20	30	24.5	5
65	22	23	26	37.5	30.5	30
70	23	25	25	31	25	29
75	100	100	100	35	20	29
80	100	100	100	100	100	100

In the case of State Regular and Teacher employees, NRA 60 (Tier 1) refers to those who had accrued at least 10 years of service by July 1, 1993. NRA 62 (Tier 2) refers to those who had not accrued at least 10 years of service by July 1, 1993 or were hired after that date but had five years of service by July 1, 2011. NRA 65 (Tier 3) refers to those who did not have five years of service by July 1, 2011. Rates are only applied for early retirement when the member is at least age 57.

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State Special Plans

Members of the 1998 Special Plan are assumed to retire at rates that vary by age and whether service is less than 25 years or not. Sample rates are as follows:

1998 Special Plan				
Age	Current Assumption		Recommended Assumption	
	Service < 25	Service >= 25	Service < 25	Service >= 25
50	0%	10%	0%	8%
55	20	25	21	27%
57	10	25	13	27
60	20	30	21	36
62	30	30	22	36
65	23.4	30	21	32
67	36.8	50	38	55
70	100	100	50	50
75	100	100	100	100

Members of the 25 & Out Plan are assumed to retire at rates that vary by service with 100% retirement assumed by age 75. Sample rates are as follows:

25 & Out Plan		
Service	Current Assumption	Recommended Assumption
<25	Same as State Regular	Same as State Regular (recommended)
25	25%	30%
30	25	17
32	40	33
35	40	33
38+	100	100

Members of the Fire Marshals Plan are currently assumed to retire at a rate of 50% per year, beginning when they reach eligibility for unreduced benefits, with a 100% assumed rate at age 70. Rates are only applied when the member is at least age 50. Recommended change to rates that vary by service with 100% retirement by age 75. Sample rates are as follows:

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Fire Marshals Plan	
Service	Recommended Assumption
<20	0%
20	30
25	17
27	33
30	33
33+	100

10. Sample Rates of Disability at Selected Ages (number becoming disabled per 10,000 members)*:

Current Assumptions				Recommended Assumptions		
State Employees				State Employees		
Age	Regular	Special	Teachers	Regular	Special	Teachers
25	2.5	5.4	1.1	1.3	5.3	1.0
30	3.1	6.5	1.2	1.5	6.3	1.1
35	9.3	9.9	1.2	6.1	10.2	1.1
40	14.0	15.8	1.6	9.9	16.1	1.5
45	16.0	24.4	3.1	12.2	25.0	3.0
50	18.0	36.4	6.6	16.1	40.0	6.4
55	25.0	42.6	22.1	25.0	45.8	21.3
60	43.4	46.4	22.2	38.4	47.5	21.4

* 10% assumed to receive Workers Compensation benefits offsetting disability benefit.

11. Family Composition Assumptions:

Current assumptions are 80% of active members are assumed to be married and have two children born when the member is 24 and 28; children are assumed dependent until age 18; a female spouse is assumed to be three years younger than a male spouse; member is assumed to have no dependent parents; unmarried members are assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

Recommended assumptions are 80% of male active members are assumed to be married and have two children born when the member is 30 and 34; children are assumed dependent until age 18; a female spouse is assumed to be two years younger than a male member; member is assumed to have no dependent parents. 50% of female active members are assumed to be married and have two children born when the member is 28 and 32; children

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are assumed dependent until age 18; a male spouse is assumed to be one year older than a female member; member is assumed to have no dependent parents. An unmarried member is assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

12. Vacation/Sick Leave Credits:

For members who had 10 years of service on July 1, 1993, credits for unused vacation and sick leave may be used to increase final average compensation and/or creditable service. In order to reflect this, projected retirement benefits are increased by 0.48% for state (regular) employees and 0.75% for teachers for impacted members.

No change was recommended to this assumption.

13. . Technical and Miscellaneous Assumptions:

Decrement Timing: Middle of the valuation year

Pay Increase Timing: Salary provided is treated as the rate of pay as of the valuation date. Annual increases are applied as of the beginning of each subsequent valuation.

Reflect actual historical member contribution rates from 1970 through the valuation; future contribution interest to equal the inflation assumption of 2.75%. No change was recommended to this assumption.

COLA Timing: September 1

Special Plan Member Contribution Rates: For members of Special Plans where the contribution rate drops from 8.65% to 7.65% after a given number of years, 8.65% is used for all years for valuation purposes as a simplifying assumption reflecting data limitations.

14. Rationale for Assumptions:

The assumptions were adopted by the Board of Trustees at their March 11, 2021 meeting for all programs except the Consolidated PLD Plan, for which the recommended assumptions were adopted by the Board of Trustees at their May 13, 2021 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2015 through June 30, 2020, and the economic assumptions are based on this experience study along with the advice of the MainePERS investment consultants.

The recommended assumptions were adopted by the Board of Trustees at their March 12, 2026 meeting for all Programs except the Consolidated PLD Plan, for which the recommended assumptions were adopted by the Board of Trustees at their May 14, 2026 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2020 through June 30, 2025.

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A. Actuarial Assumptions

1. Discount Rate:

	Current
PLDs	6.50%

Rate is net of both administrative and investment expense.

2. Cost-of-Living Adjustment (COLA) Assumed Rate:

	Current
PLDs	1.91%

3. Sample Rates of Individual Salary Increases (% at Selected Years of Service):

Years of Service	Current	Recommended
0	11.48%	12.51%
1	8.66	11.48
2	4.81	6.09
3	4.29	5.32
4	4.03	4.81
5	3.78	4.81
10	3.26	4.29
15	3.26	4.03
20	3.01	3.52
25	2.75	3.01
30	2.75	2.75

The current rates include a 2.75% across-the-board increase at each year of service. The recommended rates include a 2.75% across-the-board increase at each year of service.

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4. Sample Rates of Termination (% at Selected Years of Service):

Service	Current Assumption		Recommended Assumption	
	Regular	Special	Regular	Special
0	28.0%	17.90%	29.5%	18.00%
1	21.0	14.4	22.0	14.35
2	15.0	10.5	15.5	10.25
3	12.0	9.5	14.0	9.3
4	10.0	7.8	11.0	7.0
5	9.0	7.9	10.0	6.9
10	5.0	4.5	5.5	4.0
15	3.5	2.9	4.5	3.0
20	3.5	2.7	4.0	3.0
25	3.0	0.0	4.0	0.0

Non-vested members are assumed to take a refund of contributions with interest. Once vested, the member is assumed to elect the greater of the deferred vested benefit or a refund of member contributions with interest based on present value at the time of termination.

5. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
50	30	24	32	28
55	45	34	46	34
60	69	46	70	45
65	100	67	100	63
70	154	108	151	105
75	259	192	262	195
80	469	357	486	375
85	873	687	899	733
90	1,537	1,300	1,651	1,342
95	2,418	2,140	2,685	2,208

Current rates are based on 112.1% and 118.5% of the 2010 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females. The

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recommended rates are projected generationally using the RPEC_2020 model, with an ultimate rate of 1.00% for ages 80 and under, grading down to 0.05% at age 95, and further grading down to 0.00% at age 115, along with convergence to the ultimate rates in the year 2027. All other parameters used in the RPEC_2020 model are those included in the published MP-2020 scale.

Recommended rates are based on 112.7% and 117.3% of the 2016 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females. The recommended rates are projected generationally using the published IRS-Adjusted MP-2021 scale.

6. Sample Rates of Mortality for Active Lives at Selected Ages (number of deaths per 10,000 members)*:

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
20	3	1	4	1
25	3	1	5	1
30	4	2	7	2
35	6	3	8	3
40	7	4	11	5
45	8	5	14	6
50	11	7	18	9
55	17	11	26	13
60	27	17	41	21
65	38	24	59	31

* 5% of deaths assumed to arise out of and in the course of employment.

Recommended rates are based on 83.5% and 88.6% of the 2010 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model as described in the healthy annuitant mortality.

Recommended rates are based on 119.9% and 101.0% of the 2016 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 scale as described in the healthy annuitant mortality.

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7. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
25	35	21	42	13
30	53	37	40	22
35	73	57	44	34
40	89	75	56	47
45	111	97	75	62
50	157	139	99	89
55	212	178	146	137
60	269	206	229	217
65	319	215	275	235
70	376	253	315	273

Current rates for are based on 107.3% and 103.2% of the 2010 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model described in the healthy annuitant mortality.

Recommended rates for are based on 114.5% and 127.7% of the 2016 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 scale described in the healthy annuitant mortality.

8. Sample Rates of Mortality for Contingent Survivor Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption		Recommended Assumption	
	Male	Female	Male	Female
45	11	6	57	27
50	30	24	75	30
55	45	34	84	43
60	69	46	103	64
65	100	67	130	91
70	154	108	180	135
75	259	192	293	216
80	469	357	520	377
85	873	687	915	691
90	1,537	1,300	1,601	1,251

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Current assumptions are the same as described for healthy annuitants.

Recommended rates for Contingent Survivors are based on 98.8% and 110.6% of the 2016 Public Plan Contingent Survivor Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 model as described in the healthy annuitant mortality.

9. Sample Rates of Retirement at Selected Ages (number retiring per 1,000 members):

	Regular Plans			
	Current Assumption		Recommended Assumption	
	NRA 60	NRA 65	NRA 60	NRA 65
45	N/A	N/A	N/A	N/A
50	N/A	N/A	N/A	N/A
55	N/A	N/A	N/A	N/A
60	120	60	150	30
65	250	200	300	240
70	1,000	250	250	220
75	1,000	1,000	1,000	1,000

In the case of PLD employees, NRA 60 refers to those who were hired prior to July 1, 2014, and Tier 2NRA 65 refers to those who were hired on or after July 1, 2014.

Years of Service	Special Plans		
	Current Assumption All Plans	Recommended Assumption	
		Plan 1	Plans 2-4
20	35%	60%	25%
21	30	60	25
22	28	45	25
23	25	35	30
24	20	40	20
25	35	35	50
26	25	40	32
27	23	25	30
28	25	25	30
29	40	25	40
30	25	23	23

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31	25	25	25
32	25	20	20
33	25	25	25
34	33	25	25
35	100	35	35
36-37	100	50	50
38+	100	100	100

Note that all retirement rates are only applied once the member is eligible to retire, so those in 25-year Plans are not assumed to retire at 20 years of service. For Special Plan retirements with less than 20 years of service, we assume 25% retire. We assume 100% retirement at age 70. **Recommend changing to 100% retirement at age 75.**

10. Sample Rates of Disability at Selected Ages (number becoming disabled per 10,000 members)*:

Age	Current Assumption		Recommended Assumption	
	Regular	Special	Regular	Special
25	0.9	2.3	0.9	2.0
30	1.2	3.0	1.0	2.5
35	1.8	4.5	1.5	3.8
40	4.2	10.5	3.3	12.3
45	8.7	21.8	10.3	21.0
50	16.5	41.3	14.5	35.5
55	28.5	70.0	20.3	60.0
60	30.0	70.0	28.8	70.0
65+	30.0	70.0	30.0	70.0

* 10% assumed to receive Workers Compensation benefits offsetting disability benefit.

11. Family Composition Assumptions:

Current assumptions are 80% of active members are assumed to be married and have two children born when the member is 24 and 28; children are assumed dependent until age 18; a female spouse is assumed to be three years younger than a male spouse; member is assumed to have no dependent parents; unmarried members are assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

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Recommended assumptions are 80% of male active members are assumed to be married and have two children born when the member is 30 and 34; children are assumed dependent until age 18; a female spouse is assumed to be two years younger than a male member; member is assumed to have no dependent parents. 50% of female active members are assumed to be married and have two children born when the member is 28 and 32; children are assumed dependent until age 18; a male spouse is assumed to be one year older than a female member; member is assumed to have no dependent parents. An unmarried member is assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

12. Technical and Miscellaneous Assumptions:

Decrement Timing: Middle of the valuation year

Pay Increase Timing: Salary provided is treated as the rate of pay as of the valuation date. Annual increases are applied as of the beginning of each subsequent valuation.

Reflect actual historical member contribution rates from 1970 through the valuation; future contribution interest to equal the inflation assumption of 2.75%. No change was recommended to this assumption.

COLA Timing: September 1

Member Contribution Rates: For purposes of developing liability amounts, the member contribution rates in effect for FY 2025 are assumed to continue for all periods in the future.

13. Rationale for Assumptions:

The assumptions were adopted by the Board of Trustees at their March 11, 2021 meeting for all programs except the Consolidated PLD Plan, for which the recommended assumptions were adopted by the Board of Trustees at their May 13, 2021 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2015 through June 30, 2020, and the economic assumptions are based on this experience study along with the advice of the MainePERS investment consultants.

The recommended assumptions were adopted by the Board of Trustees at their March 12, 2026 meeting for all Programs except the Consolidated PLD Plan, for which the recommended assumptions were adopted by the Board of Trustees at their May 14, 2026 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2020 through June 30, 2025.

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

APPENDIX A - SUMMARY OF ASSUMPTIONS
JUDICIAL PROGRAM

1. Annual Rate of Investment Return:

	Current
Judicial	6.50%

Rate is net of both administrative and investment expense.

2. Cost-of-Living Adjustment (COLA) Assumed Rate:

	Current
Judicial	2.20%

3. Annual Rate of Individual Salary Increase:

	Current
Judicial	3.00%

4. Sample Rates of Termination (% at Selected Ages):

Age	Termination Rate
25	7%
30	6
35	5
40	4
45	3
50	2
55	1

Non-vested members are assumed to take a refund of contributions with interest. Once vested, the member is assumed to elect the greater of the deferred vested benefit or a refund of member contributions with interest based on present value at time of termination. No changes were recommended to these assumptions.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**APPENDIX A - SUMMARY OF ASSUMPTIONS
JUDICIAL PROGRAM**

5. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
50	30	24	32	28
55	45	34	46	34
60	69	46	70	45
65	100	67	100	63
70	154	108	151	105
75	259	192	262	195
80	469	357	486	375
85	873	687	899	733
90	1,537	1,300	1,651	1,342
95	2,418	2,140	2,685	2,208

Current rates are based on 112.1% and 118.5% of the 2010 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females. The recommended rates are projected generationally using the RPEC_2020 model, with an ultimate rate of 1.00% for ages 80 and under, grading down to 0.05% at age 95, and further grading down to 0.00% at age 115, along with convergence to the ultimate rates in the year 2027. All other parameters used in the RPEC_2020 model are those included in the published MP-2020 scale.

Recommended rates are based on 112.7% and 117.3% of the 2016 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females. The recommended rates are projected generationally using the published IRS-Adjusted MP-2021 scale.

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

APPENDIX A - SUMMARY OF ASSUMPTIONS
JUDICIAL PROGRAM

6. Sample Rates of Mortality for Active Lives at Selected Ages (number of deaths per 10,000 members)*:

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
20	3	1	4	1
25	3	1	5	1
30	4	2	7	2
35	6	3	8	3
40	7	4	11	5
45	8	5	14	6
50	11	7	18	9
55	17	11	26	13
60	27	17	41	21
65	38	24	59	31

* 5% of deaths assumed to arise out of and in the course of employment.

Current rates are based on 83.5% and 88.6% of the 2010 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model as described in the healthy annuitant mortality.

Recommended rates are based on 119.9% and 101.0% of the 2016 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 scale as described in the healthy annuitant mortality.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**APPENDIX A - SUMMARY OF ASSUMPTIONS
JUDICIAL PROGRAM**

7. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
25	35	21	42	13
30	53	37	40	22
35	73	57	44	34
40	89	75	56	47
45	111	97	75	62
50	157	139	99	89
55	212	178	146	137
60	269	206	229	217
65	319	215	275	235
70	376	253	315	273

Current rates for are based on 107.3% and 103.2% of the 2010 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model described in the healthy annuitant mortality.

Recommended rates for are based on 114.5% and 127.7% of the 2016 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 scale described in the healthy annuitant mortality.

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

APPENDIX A - SUMMARY OF ASSUMPTIONS
JUDICIAL PROGRAM

8. Sample Rates of Mortality for Contingent Survivor Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption		Recommended Assumption	
	Male	Female	Male	Female
45	11	6	57	27
50	30	24	75	30
55	45	34	84	43
60	69	46	103	64
65	100	67	130	91
70	154	108	180	135
75	259	192	293	216
80	469	357	520	377
85	873	687	915	691
90	1,537	1,300	1,601	1,251

Current assumptions are the same as described for healthy annuitants.

Recommended rates for Contingent Survivors are based on 98.8% and 110.6% of the 2016 Public Plan Contingent Survivor Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 model as described in the healthy annuitant mortality.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**APPENDIX A - SUMMARY OF ASSUMPTIONS
JUDICIAL PROGRAM**

9. Sample Rates of Retirement at Selected Ages:

Age	Current Assumptions		Recommended Assumptions	
	NRA 62	NRA 65	NRA 62	NRA 65
62	20.0%	NA	10%	NA
63	27.5%	NA	25%	NA
64	35.0%	NA	40%	NA
65	42.5%	40%	30%	20%
66	50.0%	50%	35%	25%
67	45.0%	45%	25%	25%
68	40.0%	40%	20%	20%
69	35.0%	35%	35%	40%
70	30.0%	30%	25%	15%
71	25.0%	25%	15%	30%
72	25.0%	25%	25%	65%
73-74	25.0%	25%	15%	15%
75	25.0%	25%	100%	100%
76-79	50.0%	50%	100%	100%
80+	100%	100%	100%	100%

In the case of judicial employees, NRA 60 refers to those who had accrued at least 10 years of service by July 1, 1993 – there are no longer active members in this group. NRA 62 refers to those who had not accrued at least 10 years of service by July 1, 1993 or were hired after that date but had five years of service by July 1, 2011. NRA 65 refers to those who did not have five years of service by July 1, 2011.

10. Rates of Disability

None assumed

11. Family Composition Assumptions:

Current assumptions are 80% of active members are assumed to be married and have two children born when the member is 24 and 28; children are assumed dependent until age 18; a female spouse is assumed to be three years younger than a male spouse; member is assumed to have no dependent parents; unmarried members are assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

Recommended assumptions are 80% of male active members are assumed to be married and have two children born when the member is 30 and 34; children are assumed dependent until age 18; a female spouse is assumed to be two years younger than a male member;

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**APPENDIX A - SUMMARY OF ASSUMPTIONS
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member is assumed to have no dependent parents. 50% of female active members are assumed to be married and have two children born when the member is 28 and 32; children are assumed dependent until age 18; a male spouse is assumed to be one year older than a female member; member is assumed to have no dependent parents. An unmarried member is assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

12. Technical and Miscellaneous Assumptions:

Decrement Timing: Middle of the valuation year

Pay Increase Timing: Salary provided is treated as the rate of pay as of the valuation date. Annual increases are applied as of the beginning of each subsequent valuation.

Reflect actual historical member contribution rates from 1970 through the valuation; future contribution interest to equal the inflation assumption of 2.75%. No change was recommended to this assumption.

The recommended assumptions were adopted by the Board of Trustees at their March 12, 2026 meeting for all Programs except the Consolidated PLD Plan, for which the recommended assumptions were adopted by the Board of Trustees at their May 14, 2026 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2020 through June 30, 2025.

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025

APPENDIX A - SUMMARY OF ASSUMPTIONS
LEGISLATIVE PROGRAM

1. Discount Rate:

Current	
Legislative	6.50%

Rate is net of both administrative and investment expense.

2. Cost-of-Living Adjustment (COLA) Assumed Rate:

Current	
Legislative	2.20%

3. Annual Rate of Individual Salary Increase:

Current	
Legislative	2.75%

4. Sample Rates of Termination (% at Selected Years of Service):

Service	Current Assumption	Service	Recommended Assumption
0	0%	0	0%
1	5	1	0
2	10	2	12
3	15	3	15
4	20	4	20
5	25	5	25
6	30	6	15
7	40	7	25
8	50	8	60
9+	50	9+	50

The rates shown are only applicable in the fiscal years ending in odd years while zero terminations are assumed in the fiscal years ending in even years.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**APPENDIX A - SUMMARY OF ASSUMPTIONS
LEGISLATIVE PROGRAM**

5. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
50	30	24	32	28
55	45	34	46	34
60	69	46	70	45
65	100	67	100	63
70	154	108	151	105
75	259	192	262	195
80	469	357	486	375
85	873	687	899	733
90	1,537	1,300	1,651	1,342
95	2,418	2,140	2,685	2,208

Current rates are based on 112.1% and 118.5% of the 2010 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females. The recommended rates are projected generationally using the RPEC_2020 model, with an ultimate rate of 1.00% for ages 80 and under, grading down to 0.05% at age 95, and further grading down to 0.00% at age 115, along with convergence to the ultimate rates in the year 2027. All other parameters used in the RPEC_2020 model are those included in the published MP-2020 scale.

Recommended rates are based on 112.7% and 117.3% of the 2016 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females. The recommended rates are projected generationally using the published IRS-Adjusted MP-2021 scale.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
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**APPENDIX A - SUMMARY OF ASSUMPTIONS
LEGISLATIVE PROGRAM**

6. Sample Rates of Mortality for Active Lives at Selected Ages (number of deaths per 10,000 members)*:

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
20	3	1	4	1
25	3	1	5	1
30	4	2	7	2
35	6	3	8	3
40	7	4	11	5
45	8	5	14	6
50	11	7	18	9
55	17	11	26	13
60	27	17	41	21
65	38	24	59	31

* 5% of deaths assumed to arise out of and in the course of employment.

Current rates are based on 83.5% and 88.6% of the 2010 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model as described in the healthy annuitant mortality.

Recommended rates are based on 119.9% and 101.0% of the 2016 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 scale as described in the healthy annuitant mortality.

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EXPERIENCE STUDY AS OF JUNE 30, 2025**

**APPENDIX A - SUMMARY OF ASSUMPTIONS
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7. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption (showing values in 2026)		Recommended Assumption (showing values in 2026)	
	Male	Female	Male	Female
25	35	21	42	13
30	53	37	40	22
35	73	57	44	34
40	89	75	56	47
45	111	97	75	62
50	157	139	99	89
55	212	178	146	137
60	269	206	229	217
65	319	215	275	235
70	376	253	315	273

Current rates for are based on 107.3% and 103.2% of the 2010 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model described in the healthy annuitant mortality.

Recommended rates for are based on 114.5% and 127.7% of the 2016 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 scale described in the healthy annuitant mortality.

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8. Sample Rates of Mortality for Contingent Survivor Lives at Selected Ages (number of deaths per 10,000 members):

Age	Current Assumption		Recommended Assumption	
	Male	Female	Male	Female
45	11	6	57	27
50	30	24	75	30
55	45	34	84	43
60	69	46	103	64
65	100	67	130	91
70	154	108	180	135
75	259	192	293	216
80	469	357	520	377
85	873	687	915	691
90	1,537	1,300	1,601	1,251

Current assumptions are the same as described for healthy annuitants.

Recommended rates for Contingent Survivors are based on 98.8% and 110.6% of the 2016 Public Plan Contingent Survivor Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the MP-2021 model as described in the healthy annuitant mortality.

9. Sample Rates of Retirement at Selected Ages:

Ages	Current Assumption		Recommended Assumption	
	Fiscal Years Ending Even	Fiscal Years Ending Odd	Fiscal Years Ending Even	Fiscal Years Ending Odd
57-61	0%	25%	0%	0%
62-69	0%	25%	0%	25%
70-74	0%	100%	0%	25%
75+	0%	100%	0%	100%

Note that all retirement rates are only applied once the member is eligible to retire regardless of years of service.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**APPENDIX A - SUMMARY OF ASSUMPTIONS
LEGISLATIVE PROGRAM**

10. Rates of Disability

None assumed

11. Family Composition Assumptions:

Current assumptions are 80% of active members are assumed to be married and have two children born when the member is 24 and 28; children are assumed dependent until age 18; a female spouse is assumed to be three years younger than a male spouse; member is assumed to have no dependent parents; unmarried members are assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

Recommended assumptions are 80% of male active members are assumed to be married and have two children born when the member is 30 and 34; children are assumed dependent until age 18; a female spouse is assumed to be two years younger than a male member; member is assumed to have no dependent parents. 50% of female active members are assumed to be married and have two children born when the member is 28 and 32; children are assumed dependent until age 18; a male spouse is assumed to be one year older than a female member; member is assumed to have no dependent parents. An unmarried member is assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

12. Technical and Miscellaneous Assumptions:

Decrement Timing: Middle of the valuation year

Pay Increase Timing: Salary provided is treated as the rate of pay as of the valuation date. Annual increases are applied as of the beginning of each subsequent valuation.

Reflect actual historical member contribution rates from 1970 through the valuation; future contribution interest to equal the inflation assumption of 2.75%. No change was recommended to this assumption.

COLA Timing: September 1

13. Rationale for Actuarial Assumptions:

The assumptions were adopted by the Board of Trustees at their July 14, 2016 meeting. The demographic assumptions adopted are based on an experience study covering the period from June 30, 2012 through June 30, 2015, and the economic assumptions are based on this experience study along with the advice of the MainePERS investment consultants. The Board continuously reviews the investment return assumption and adopted a reduced rate of 6.75% effective with the 2018 valuation, at the advice of its investment consultant.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE STUDY AS OF JUNE 30, 2025**

**APPENDIX A - SUMMARY OF ASSUMPTIONS
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The assumptions were adopted by the Board of Trustees at their March 11, 2021 meeting for all programs except the Consolidated PLD Plan, for which the recommended assumptions were adopted by the Board of Trustees at their May 13, 2021 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2015 through June 30, 2020, and the economic assumptions are based on this experience study along with the advice of the MainePERS investment consultants.

The recommended assumptions were adopted by the Board of Trustees at their March 12, 2026 meeting for all Programs except the Consolidated PLD Plan, for which the recommended assumptions were adopted by the Board of Trustees at their May 14, 2026 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2020 through June 30, 2025.

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EXPERIENCE STUDY AS OF JUNE 30, 2025**

APPENDIX B - DISCLOSURE OF MODELS USED

ProVal

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate the liabilities, normal costs, and projected benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in the assumptions or output of ProVal that would affect this study.

Experience Study Tools

We have used Cheiron's Excel-based experience study tools to measure the actual versus expected experience before and after recommended assumption changes. We have not identified any material inconsistencies in the assumptions or output of the experience study tools that would affect this study.