One Canal Plaza, Suite 1001
Portland, ME 04101-4156
USA

Tel +1 207 772 0046
Fax +1 207 772 7512

milliman.com

April 17, 2024

Evan Rowe
Deputy Commissioner
Workforce Services and Transformation
Minnesota Department of Employment and Economic Development
Great Northern Building, 180 E Fifth St., Suite 1200
St. Paul MN 55101

RE: Actuarial Analysis for a New Minnesota PFML Program that Includes a Requirement to Use Sick Leave Time Accrued Beyond Ten Days During the 7-day PFML Qualifying Period

Dear Evan,

At your request, we have estimated contribution rates and developed financial projections for a Minnesota Paid Family and Medical Leave (PFML) program that includes a requirement for eligible employees to use sick leave[1] time accrued beyond ten days during the 7-day PFML qualifying period. The program would also provide retroactive PFML benefit payments for any days in the qualifying period not covered by sick leave. For example, a qualifying employee who regularly works five days per week, and whose sick leave balance is 13 days as of the leave begin date, would use three sick leave days during the qualifying period and would receive retroactive PFML benefits for two days. The maximum benefit period is 12 weeks from the leave begin date for both paid family leave and paid medical leave, for a combined maximum benefit period of 20 weeks within a 12-month period.

This program design is different than the PFML program assumed in our initial analysis (see Milliman's report to DEED dated October 27, 2023). In our initial analysis, we assumed no waiting period for bonding claims and a 7-day unpaid waiting period for all other claims. We also assumed the maximum benefit period is 12 weeks from the end of the waiting period (if any) for individual qualifying events, for a combined maximum benefit period of 20 weeks within a 12-month period. All other benefits and provisions are the same between the original program and the new program.

[1] The term "sick leave" in this letter refers to paid sick leave, vacation, and paid time off benefits offered by employers to their employees.

We used the same data and modeling methods as in our initial analysis to estimate contribution rates for the new PFML program. Documentation of the data, modeling methods, and actuarial assumptions is included in Milliman's report from October 27, 2023.

We have estimated contribution rates for the new PFML program based on the same rating methods as in the initial analysis, as summarized below:

1. 268B - The 2026 contribution rate is 0.70% of taxable wages and the premium formula defined in Chapter 268B was used to compute contribution rates for 2027 and beyond; and

2. Alternative - We estimated contribution rates by targeting a higher fund balance in 2026, because there is greater uncertainty when the program begins, and additional margin seems prudent when benefits become effective. We adjusted the contribution rates in later years to maintain a fund ratio (i.e., ratio of fund balance to total expenditure from previous 12 months) of approximately 25%. This approach produces a less volatile pattern of contribution rates for employers and employees than the premium formula defined in Chapter 268B. Note that this approach includes two policy changes: (1) the initial contribution rate is greater than 0.70% and (2) a premium formula was not used to compute rates in future years.

This letter contains estimated contribution rates and financial projections for the new PFML program, along with documentation of the assumptions and methods used in our analysis. Appendix A contains financial projections for the new PFML program and Appendix B contains the original contribution rates included in the October 27, 2023 report.

Estimated Contribution Rates

Tables 1A, 1B, and 1C contain estimated contribution rates for the new PFML program described above. Table 1A contains overall contribution rates; Table 1B contains contribution rates for paid family leave benefits; and Table 1C contains contribution rates for paid medical leave benefits. The contribution rates shown below are higher than the initial contribution rates (included in Appendix B) because the expected claim costs are higher for the new program due to the inclusion of retroactive benefit payments.

Table 1A
Estimated Overall Contribution Rates*
Taxable Wages: OASDI

Scenario	2026	2027	2028	2029	2030	2031	2032	2033+
268B	0.70%	1.01%	0.82%	0.90%	0.88%	0.88%	0.89%	0.87%
Alternative	0.82%	0.82%	0.82%	0.87%	0.87%	0.87%	0.87%	0.87%

* The sum of the estimated contribution rates for paid family leave and paid medical leave below may not match the overall contribution rates above due to rounding.

Table 1B Estimated Paid Family Leave Contribution Rates Taxable Wages: OASDI								
Scenario	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033+**
268B	0.30%	0.32%	0.26%	0.28%	0.28%	0.28%	0.28%	0.28%
Alternative	0.26%	0.26%	0.26%	0.28%	0.28%	0.28%	0.28%	0.28%

Table 1C Estimated Paid Medical Leave Contribution Rates Taxable Wages: OASDI								
Scenario	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033+**
268B	0.40%	0.69%	0.56%	0.61%	0.60%	0.60%	0.60%	0.60%
Alternative	0.56%	0.56%	0.56%	0.59%	0.59%	0.59%	0.59%	0.59%

Analytical Methods and Assumptions

To estimate the costs associated with a PFML program that requires employees to use sick leave time accrued beyond ten days during the PFML qualifying period, we researched paid sick leave, vacation, and paid time off (PTO) policies and experience for public and private employers from the following sources:

- Publicly available reports from the *US Bureau of Labor Statistics* (BLS) containing information on sick leave accrual rates and carryover days for public and private employers[2];

- Publicly available survey data on sick leave utilization among US workers between 2020 and 2023[3]; and

- Publicly available valuation reports from US state retirement systems containing average sick leave balances for public employees[4].

- Publicly available reports on accrual rates and carryover days for PTO and vacation benefits[5].

We noticed significant differences in both sick leave policies and sick leave experience between public and private employers. For example, according to reports from BLS, the average annual accrual rate is 7 days for private employers and 12 days for public employers, and the average limit on the number of carryover days is 39 days for private employers and 136 days for public

[2] https://www.bls.gov/charts/employee-benefits/paid-leave-sick-vacation-days-by-service-requirement.htm; https://www.bls.gov/ebs/factsheets/paid-sick-leave.htm#chart3
[3] https://www.statista.com/forecasts/1260743/number-of-sick-days-taken-from-work-or-school-among-us-adults
[4] e.g., https://etf.wi.gov/resource/accumulated-sick-leave-conversion-credit-program-annual-actuarial-valuation-2020
[5] https://www.forbes.com/advisor/business/pto-statistics/

employers. For these reasons, sick leave balances tend to be much higher for public employees than private employees.

We researched PTO experience from various sources and noticed that US workers accrue an average of 11 PTO days per year and carry over an average of three days per year.

We researched Minnesota employment statistics from the *US Census Bureau QWI Explorer* database[6] to estimate the proportion of Minnesota employees that work for public and private employers. Based on these reports, we have assumed that 13% of employees who are eligible for PFML benefits work for public employers and 87% work for private employers.

We developed a model to project average sick leave balances in 2026 and beyond for employees who are eligible for PFML benefits. We factored in the new Earned Sick and Safe Time (ESST) law effective in Minnesota on January 1, 2024, that mandates the following benefits:

- Eligible Employees earn one hour of sick and safe time for every 30 hours worked and can earn a maximum of 48 hours each year unless the employer agrees to a higher amount.

- Sick and safe time can be used when an employee is sick, to care for a sick family member, or to seek assistance if an employee or their family member has experienced domestic abuse, sexual assault or stalking.

- Employers may set a cap or limit on each employee's ESST accrual. Employers must allow each employee to accrue up to at least 48 hours a year, carried over from year to year, until an 80-hour maximum accrual is reached. These limits of 48 hours each year and a maximum accrual of 80 hours for each employee may be higher if an employer agrees, but not lower.

Although the Minnesota ESST eligibility requirements are different than the Minnesota PFML eligibility requirements, we believe most employees eligible for PFML benefits will also have access to ESST benefits when PFML benefits become effective in 2026. Also, it is reasonable to assume that many employers would have implemented their own sick leave policies before 2026. According to reports from BLS, 78% of private employers and 92% of public employers in the US provided sick leave benefits in 2023[7].

We developed a model to project average sick leave balances in 2026 and beyond in order to estimate the number PFML qualifying period days that would be covered by sick leave. In our model, we assume the 7-day qualifying period is measured in calendar days and the sick leave accruals are measured in workdays. We also assume that eligible employees work five days per week, on average, and that employees are only required to use sick leave time accrued beyond ten days during the PFML qualifying period. We modeled sick leave experience for the following employer types:

---

[6] https://qwiexplorer.ces.census.gov/#x=0&g=0
[7] https://www.bls.gov/news.release/ebs2.t06.htm

1. Private employers in Minnesota that had implemented sick leave policies before ESST benefits became effective.

   Based on our projection for employees in this category, we have estimated that 3.6 days of the 7-day qualifying period would be covered by sick leave.

2. Private employers in Minnesota that had not implemented sick leave policies when ESST benefits became effective.

   Based on our projection for employees in this category, we have estimated that 0.3 days of the qualifying period would be covered by sick leave.

3. Public employers in Minnesota that had implemented sick leave policies before ESST benefits became effective.

   Based on our projection for employees in this category, we have estimated that the entire 7-day qualifying period would be covered by sick leave.

4. Public employers in Minnesota that had not implemented sick leave policies when ESST benefits became effective.

   Based on our projection for employees in this category, we have estimated that 0.3 days of the qualifying period would be covered by sick leave.

We used these results to calibrate our assumptions for average PFML claim durations. We also increased our PFML incidence rate assumptions slightly to account for risk dynamics related to employee behavior, because insurance programs with retroactive benefits can exacerbate moral hazard risk. We used these new assumptions for average PFML claim durations and claim incidence rates to calculate expected claim costs for the new PFML program. The expected claim costs were then used to develop the contribution rates and financial projections included in this letter.

Estimating the impact of the sick leave requirement on PFML program costs is challenging because there are many unknowns, such as sick leave balances when PFML benefit begin and employee behavior. We have developed assumptions for modeling the impact of the sick leave requirement, and it is nearly certain that actual program experience will differ from those assumptions. As such, actual costs may be either higher or lower than the amounts included in this letter.

Limitations

In performing this analysis, Milliman relied on publicly available data including reports from BLS and PFML program data from states with mandated benefits, as well as Minnesota employment statistics and forecasts from DEED. Milliman did not audit or independently verify any of the data and other information, except that we did review the data for reasonableness and consistency. To the extent that any of the data or other information is incorrect or inaccurate, the results of our analysis could be affected and may need to be revised.

Milliman's work is prepared solely for the use and benefit of DEED, for the purpose of evaluating contribution rates for Minnesota's PFML program. Milliman recognizes that this letter may be public records subject to disclosure to third parties. Milliman does not intend to benefit and assumes no duty or liability to any third-party recipients of the report. To the extent that this report is not subject to disclosure under applicable public records laws, DEED shall not disclose Milliman's work to any third parties without our prior written consent.

The projections included in this letter are estimates based on carefully constructed assumptions about PFML experience in Minnesota. Actual experience, however, will almost certainly differ from those assumptions. As such, actual costs may be either higher or lower than the amounts included in this letter.

I certify that all costs, liabilities, and other factors used or provided in this report have been determined on the basis of actuarial assumptions and methods that are individually reasonable and which, in combination, offer our best estimate of anticipated experience of the Minnesota PFML program. I also certify that the development and use of models for performing our analysis conform to the standards established in Actuarial Standards of Practice No. 56 of the Actuarial Standards Board. I further certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, and supporting Recommendations of the American Academy of Actuaries.

I, Paul Correia, am a consulting actuary for Milliman, Inc. and a member of the American Academy of Actuaries. I meet the qualification standards of these organizations for rendering the actuarial opinions contained herein.

Please let me know if you have any questions. I can be reached at paul.correia@milliman.com or (207) 771-1204. Thank you.

Sincerely,

Paul Correia

Paul Correia, FSA, MAAA
Principal and Consulting Actuary

Appendix A
Financial Projections

This appendix contains financial projections for the new PFML program based on the two contribution rate scenarios, summarized below:

- Projection 1: New PFML program with contribution rates based on 268B premium policy.
- Projection 2: New PFML Program with contribution rates based on the Alternative premium policy.

We did not attempt to remove employees covered under private plans from the projected experience below because private plan participation varies significantly among existing PFML programs, and it is not possible to develop an accurate estimate of the proportion of employers who would elect private plans at this time. This does not impact the expected claim rates and contribution rates because the morbidity assumptions, which are based on experience from existing PFML programs, already reflect the impact of private plans. In addition, while we recognize that some employers with favorable risk characteristics may opt out of the state plan for a less expensive private plan, there is also considerable evidence that many employers elect private plans for reasons unrelated to risk and cost and are willing to pay a higher premium for coverage through private plans.

The financial projections shown below depend on a variety of actuarial assumptions about future experience, including but not limited to employment and wage growth, PFML claim experience, expenses, and investment income. It is nearly certain that actual experience will vary from these assumptions, meaning that the program's actual fund balance will be higher or lower than the illustrated values.

Projection 1: New PFML Program with Contribution Rates Based on 268B Premium Policy

	2024 - 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Eligible Employees		2,451,776	2,465,430	2,479,159	2,492,965	2,506,847	2,520,807	2,534,845	2,548,961	2,563,155	2,577,428
Taxable Wages ($ millions)		$174,693.8	$182,869.0	$191,242.8	$200,000.1	$209,158.4	$216,632.8	$224,374.4	$232,392.6	$240,697.3	$249,298.8
Claims											
Family		47,912	42,029	43,531	44,211	44,457	44,705	44,954	45,204	45,456	45,709
Medical		82,544	87,154	90,268	91,679	92,189	92,703	93,219	93,738	94,260	94,785
Total		**130,456**	**129,183**	**133,799**	**135,890**	**136,646**	**137,407**	**138,173**	**138,942**	**139,716**	**140,494**
Benefit Payments ($ millions)											
Family		$492.8	$450.0	$485.2	$512.5	$536.0	$560.5	$580.6	$601.3	$622.8	$645.1
Medical		$881.3	$968.6	$1,044.4	$1,103.1	$1,153.6	$1,206.5	$1,249.6	$1,294.2	$1,340.5	$1,388.4
Total		**$1,374.1**	**$1,418.7**	**$1,529.6**	**$1,615.6**	**$1,689.6**	**$1,767.0**	**$1,830.1**	**$1,895.5**	**$1,963.3**	**$2,033.4**
Expenses ($ millions)											
Start-up	$128.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Family		$34.5	$31.5	$34.0	$35.9	$37.5	$39.2	$40.6	$42.1	$43.6	$45.2
Medical		$61.7	$67.8	$73.1	$77.2	$80.8	$84.5	$87.5	$90.6	$93.8	$97.2
Total		**$96.2**	**$99.3**	**$107.1**	**$113.1**	**$118.3**	**$123.7**	**$128.1**	**$132.7**	**$137.4**	**$142.3**
Total Expenditure ($ millions)											
Family		$527.3	$481.5	$519.2	$548.4	$573.5	$599.8	$621.2	$643.4	$666.4	$690.2
Medical		$942.9	$1,036.4	$1,117.5	$1,180.3	$1,234.4	$1,290.9	$1,337.0	$1,384.8	$1,434.3	$1,485.6
Assistance Grants		$3.1	$3.0	$3.2	$3.2	$3.2	$3.2	$3.3	$3.3	$3.3	$3.3
Total		**$1,473.3**	**$1,521.0**	**$1,639.8**	**$1,731.9**	**$1,811.1**	**$1,893.9**	**$1,961.5**	**$2,031.5**	**$2,104.0**	**$2,179.1**
Contribution Rates											
Family		0.30%	0.32%	0.26%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%
Medical		0.40%	0.69%	0.56%	0.61%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%
Total		**0.70%**	**1.01%**	**0.82%**	**0.90%**	**0.88%**	**0.88%**	**0.89%**	**0.87%**	**0.87%**	**0.87%**
Contributions ($ millions)		**$1,223.2**	**$1,849.3**	**$1,576.0**	**$1,792.8**	**$1,841.0**	**$1,899.5**	**$1,987.2**	**$2,031.2**	**$2,104.1**	**$2,179.2**
Transfer from General Fund ($ millions)	$668.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Appropriations ($ millions)	$128.5	$64.7	$8.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7
Investment Income ($ millions)	$51.8	$10.3	$22.8	$20.0	$25.2	$27.1	$27.4	$29.0	$29.6	$30.6	$31.7
Fund Balance ($ millions)	**$591.6**	**$287.0**	**$629.5**	**$584.9**	**$670.3**	**$726.6**	**$759.0**	**$813.0**	**$841.6**	**$871.6**	**$902.8**
Fund Balance % of Total Expenditure		19%	41%	36%	39%	40%	40%	41%	41%	41%	41%

Projection 2: New PFML Program with Contribution Rates Based on Alternative Premium Policy

	2024 - 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Eligible Employees		2,451,776	2,465,430	2,479,159	2,492,965	2,506,847	2,520,807	2,534,845	2,548,961	2,563,155	2,577,428
Taxable Wages ($ millions)		$174,693.8	$182,869.0	$191,242.8	$200,000.1	$209,158.4	$216,632.8	$224,374.4	$232,392.6	$240,697.3	$249,298.8
Claims											
Family		47,912	42,029	43,531	44,211	44,457	44,705	44,954	45,204	45,456	45,709
Medical		82,544	87,154	90,268	91,679	92,189	92,703	93,219	93,738	94,260	94,785
Total		**130,456**	**129,183**	**133,799**	**135,890**	**136,646**	**137,407**	**138,173**	**138,942**	**139,716**	**140,494**
Benefit Payments ($ millions)											
Family		$492.8	$450.0	$485.2	$512.5	$536.0	$560.5	$580.6	$601.3	$622.8	$645.1
Medical		$881.3	$968.6	$1,044.4	$1,103.1	$1,153.6	$1,206.5	$1,249.6	$1,294.2	$1,340.5	$1,388.4
Total		**$1,374.1**	**$1,418.7**	**$1,529.6**	**$1,615.6**	**$1,689.6**	**$1,767.0**	**$1,830.1**	**$1,895.5**	**$1,963.3**	**$2,033.4**
Expenses ($ millions)											
Start-up	$128.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Family		$34.5	$31.5	$34.0	$35.9	$37.5	$39.2	$40.6	$42.1	$43.6	$45.2
Medical		$61.7	$67.8	$73.1	$77.2	$80.8	$84.5	$87.5	$90.6	$93.8	$97.2
Total		**$96.2**	**$99.3**	**$107.1**	**$113.1**	**$118.3**	**$123.7**	**$128.1**	**$132.7**	**$137.4**	**$142.3**
Total Expenditure ($ millions)											
Family		$527.3	$481.5	$519.2	$548.4	$573.5	$599.8	$621.2	$643.4	$666.4	$690.2
Medical		$942.9	$1,036.4	$1,117.5	$1,180.3	$1,234.4	$1,290.9	$1,337.0	$1,384.8	$1,434.3	$1,485.6
Assistance Grants		$3.1	$3.0	$3.2	$3.2	$3.2	$3.2	$3.3	$3.3	$3.3	$3.3
Total		**$1,473.3**	**$1,521.0**	**$1,639.8**	**$1,731.9**	**$1,811.1**	**$1,893.9**	**$1,961.5**	**$2,031.5**	**$2,104.0**	**$2,179.1**
Contribution Rates											
Family		0.26%	0.26%	0.26%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%
Medical		0.56%	0.56%	0.56%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%
Total		**0.82%**	**0.82%**	**0.82%**	**0.87%**	**0.87%**	**0.87%**	**0.87%**	**0.87%**	**0.87%**	**0.87%**
Contributions ($ millions)		**$1,435.8**	**$1,502.9**	**$1,571.8**	**$1,741.1**	**$1,820.8**	**$1,885.9**	**$1,953.3**	**$2,023.1**	**$2,095.4**	**$2,170.3**
Transfer from General Fund ($ millions)	$668.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Appropriations ($ millions)	$128.5	$64.7	$8.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7
Investment Income ($ millions)	$51.8	$18.2	$18.1	$15.2	$17.7	$18.6	$18.4	$18.5	$18.5	$18.9	$19.2
Fund Balance ($ millions)	**$591.6**	**$507.5**	**$498.8**	**$445.3**	**$471.5**	**$499.1**	**$508.8**	**$518.4**	**$527.8**	**$537.4**	**$547.2**
Fund Balance % of Total Expenditure		34%	33%	27%	27%	28%	27%	26%	26%	26%	25%

Appendix B
Original Contribution Rates from Milliman's Report dated October 27, 2023

The contribution rates shown below were included in our report to DEED dated October 27, 2023. These rates assume the program features a 7-day unpaid waiting period for non-bonding claims and no waiting period for bonding claims. It also assumes the maximum benefit period is 12 weeks from the end of the waiting period (if any) for individual qualifying events, for a combined maximum benefit period of 20 weeks within a 12-month period. All other benefits and provisions are the same between this initial program and the new PFML program discussed in this letter.

Table B1
Estimated Overall Contribution Rates for Minnesota PFML Program
Taxable Wages: OASDI

Scenario	2026	2027	2028	2029	2030	2031	2032	2033+
268B	0.70%	0.92%	0.78%	0.86%	0.84%	0.84%	0.84%	0.83%
Alternative	0.78%	0.78%	0.78%	0.83%	0.83%	0.83%	0.83%	0.83%

Table B2
Estimated Family Contribution Rates for Minnesota PFML Program
Taxable Wages: OASDI

Scenario	2026	2027	2028	2029	2030	2031	2032	2033+
268B	0.30%	0.30%	0.26%	0.28%	0.27%	0.27%	0.28%	0.27%
Alternative	0.26%	0.26%	0.26%	0.27%	0.27%	0.27%	0.27%	0.27%

Table B3
Estimated Medical Contribution Rates for Minnesota PFML Program
Taxable Wages: OASDI

Scenario	2026	2027	2028	2029	2030	2031	2032	2033+
268B	0.40%	0.62%	0.53%	0.58%	0.56%	0.56%	0.57%	0.56%
Alternative	0.52%	0.52%	0.52%	0.56%	0.56%	0.56%	0.56%	0.56%