

October 14, 2024

Mr. Steve Wendling  
Audit Manager  
Washington State Auditor's Office  
3200 Capitol Boulevard  
P.O. Box 40031  
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## **RE: Carried Liability for the Supplemental Pension Fund as of June 30, 2024**

Dear Mr. Wendling,

Deloitte Consulting LLP ("Deloitte Consulting") has completed its review of the State of Washington Department of Labor & Industries' ("the Department") actuarial methodologies, processes and assumptions used in estimating the unpaid claims of the Supplemental Pension Fund as of June 30, 2024. This letter summarizes the findings/conclusions of our review.

The Deloitte Consulting team appreciates the time and effort dedicated by the Department's actuarial team to help us understand their analysis and estimate of unpaid claims for the Supplemental Pension Fund, as well as the resources devoted to providing us with the appropriate data needed to perform our review.

### ***Executive Summary***

The Department's carried discounted liabilities for the Supplemental Pension Fund as of June 30, 2024 are \$27.177 billion based on an internal analysis performed by the Department's actuarial team. The annual interest rate assumed in the discounted carried liability is 1.5%, as selected by the Department. We note that the risk-free interest rate matching the duration of these liabilities (approximately 19.5 years) was 4.64% as of June 30, 2024, 4.12% as of June 30, 2023, 3.60% as of June 30, 2022, and 2.16% as of June 30, 2021. Further details regarding discounting can be found in the Conclusion section below.

Based on our review of the Department's methodology for estimating the liabilities for the Supplemental Pension Fund, and subject to the limitations and reliances discussed below in *Distribution and Limitations*, we believe that the Department's process is consistent with actuarial standards of practice as issued by the Actuarial Standards Board. Therefore, we conclude the Department's estimated liabilities are reasonable.

### ***Background***

The Department is an agency of the State of Washington that administers the State's workers' compensation system, providing medical and limited wage-replacement coverage to workers who suffer

job-related injuries or illnesses. The Department operates as an exclusive state workers' compensation fund.

Financially, the Department is responsible for several different funds, including the "Basic Plan" and a few other related funds. The Basic Plan consists of three funds: the Accident Fund, the Medical Aid Fund, and the Pension Reserve Fund. The Accident Fund covers non-medical claim costs, including, but not limited to, temporary wage-replacement, permanent disability benefits, and some vocational rehabilitation benefits. The Medical Aid Fund covers medical care and related services, including vocational rehabilitation. The Pension Reserve Fund pays structured benefits to claimants and survivors using funds transferred from the Accident Fund. In addition to the Basic Plan, the Department administers the Supplemental Pension Fund, the Second Injury Fund, and the Self-Insured Employer Overpayments and Reimbursement Fund.

The Supplemental Pension Fund provides for the cost-of living-adjustment adjustments ("COLA") on workers' compensation time loss and pension benefit payments for injured workers insured through both the State Fund and self-insurance programs ("self-insured employers"). The Accident Fund and the Pension Reserve Fund (including pension claims that originate with self-insured employers) pay the underlying fixed periodic benefit and the Supplemental Pension Fund pays an additional amount over the fixed period benefit so that the total wage replacement benefit increases proportionately to the Statewide Average Wage. For time loss payments related to self-insured employers, the self-insured employers originally make both the underlying payments and the additional COLA adjustment payments and then seek reimbursement for the COLA adjustment payments from the Supplemental Pension Fund.

By statute, the Supplemental Pension Fund is run on a pay-as-you-go basis and is funded through assessments that are paid 50% by employers and 50% by employees through payroll deductions.

## ***Process Overview – Estimating Liabilities for the Supplemental Pension Fund***

Due to the nature of the liability, the Department's actuarial analysis involves projecting the future COLA adjustment percentages and applying these COLA adjustment percentages to the projected payout of the underlying loss liabilities. The following is a brief description of the Department's actuarial analysis performed as of June 30, 2024.

### ***1. Calculate underlying discounted loss liabilities***

In the Department's analysis and estimate of the unpaid claims on a discounted basis, multiple interest rates are used depending on the type of liability.

In Step #1 of the Department's review of the Supplemental Pension Fund, the liabilities are set at a consistent discount rate. The underlying loss payments are restated to be discounted using a consistent 4.0% annual interest rate. The "underlying payments" refer to various base payments from several benefit types, funds, and self-insured firms that have not been adjusted for cost of living. These "underlying payments" are described in more detail below.

#### ***a. Accident Fund***

The Supplemental Pension Fund pays, or will pay, the COLA adjustment benefits on claims that are currently receiving time loss benefits, whether these claims eventually close or move to the Pension Reserve Fund. In addition, the Supplemental Pension Fund will pay the COLA adjustments on incurred but not reported ("IBNR") claims of the Accident Fund. Therefore, underlying discounted liabilities at 4.0% are needed for time loss payments, future pension payments from fatal claims, and future pension payments from total permanent disability claimants.

In the Department's estimate of unpaid claims, these liabilities were discounted assuming annual interest rates of 1.5%. The future transfer payments to the Pension Reserve Fund were discounted using an annual interest rate of 4.0%. Therefore, these liabilities are simply restated using an annual interest rate of 4.0% for all payments. The discounted liability at 4.0% totals approximately \$4.990 billion as of June 30, 2024.

***b. Self-insured Employers Time Loss & Future Pension Benefits***

The Supplemental Pension Fund will pay the COLA adjustment benefits for claimants from self-insured employers. Therefore, an estimate of the future time loss and pension payments from self-insured employers discounted at an annual interest rate of 4.0% is required.

The Department assumes that the time loss and future benefit liabilities attributable to self-insured employers are proportional to the equivalent liabilities in the Accident Fund and Pension Reserve Fund based on a ratio of these liabilities to hours reported, adjusted for lower self-insured claim and pension frequencies. The Department's analysis also adjusts for differences in historical loss experience per hour reported and historical development patterns. The discounted liability at 4.0% totals \$657 million as of June 30, 2024.

***c. Pension Reserve Fund – State Fund Pensions***

The Supplemental Pension Fund pays the COLA adjustment benefits for claimants that are currently receiving benefits from the Pension Reserve Fund. These include pensions that originated from the Accident Fund, which are already discounted at 4.0% and don't need to be restated. The discounted liability at 4.0% totals approximately \$5.202 billion as of June 30, 2024.

***d. Pension Reserve Fund – Self-Insured Pensions***

The Supplemental Pension Fund pays the COLA adjustment benefits for claimants that are currently receiving benefits from the Pension Reserve Fund. These include pensions that originated from self-insured employers, which are currently discounted at 5.5% and therefore need to be restated at 4.0%. The discounted liability at 4.0% totals approximately \$0.936 billion as of June 30, 2024.

***e. Additional Self-Insured Pensions***

The Supplemental Pension Fund also pays and is responsible for the COLA adjustment benefits for certain "bonded pensions", "undetermined pensions", and Department of Energy pensions. Although the underlying pension payments are made through the Pension Reserve Fund, the Pension Reserve Fund does not actually hold the assets or liabilities for these pensions and the

liabilities for these pensions are not included in the liabilities for the Pension Reserve Fund discussed above. Therefore, an estimate of the discounted liability for these additional self-insured pensions is required. The discounted liability at 4.0% is \$172 million as of June 30, 2024.

***2. Estimate discount factors by year at 4.0%***

The Department derives a payout pattern for all underlying loss payments by reviewing the historical age-to-age run-off of the Accident Fund and Pension Reserve Fund undiscounted payments. This payout pattern is then used to estimate discount factors by fiscal year assuming an annual interest rate of 4.0%. The combined discounted liabilities are \$11.957 billion as of June 30, 2024.

***3. Calculate the undiscounted liabilities and annual payout of all underlying payments***

The undiscounted liabilities of all underlying payments are calculated by dividing the discounted liabilities calculated in Step #1 by the discount factors computed in Step #2. The projected payout of these underlying undiscounted liabilities is then estimated using the same loss payout pattern created in Step #2.

***4. Estimate future Cost of Living Adjustments***

The Supplemental Pension Fund COLA adjustment for fiscal year 2025 of 5.91% was obtained from the Employment Security Department's State Average Annual Wage data and represents the change in calendar year 2023 wages. By statute, the COLAs are based on the annual calendar year change to the states' average wages and are somewhat lagged (e.g. the annual COLA change for fiscal year 2025 is based on the change in calendar year 2023 wages). This year, the Department used the Washington Economic Forecast Council's estimates for calendar years 2024 through 2026 as a proxy for COLA adjustments for fiscal years 2026 through 2028. The COLA adjustments for fiscal years 2029 through 2038 are projected by using a linear interpolation between the fiscal year 2028 COLA adjustment of 4.00% and a long-term constant COLA adjustment assumption of 2.3%. For projected COLA adjustments subsequent to fiscal year 2038, the Department uses the long-term assumption of 2.30% per year. We note that due to the current economic environment and the increase in the expected average wages in the state for the next few years, the effect of updating the future COLA assumptions from those used last year was an increase of \$2.789 billion in the Supplemental Pension Fund discounted liability at 1.5%.

***5. Estimate the undiscounted Supplemental Pension Fund payments***

The underlying payments from Step #3 are computed on the original dollar basis at the time of the injury. They do not reflect any historical COLA adjustments made to the payments over time. Therefore, the Department's next step is to create "on-level" cumulative COLA adjustment factors for each fiscal accident year to adjust the original underlying payments for past historical COLA adjustments through the 2024 fiscal year (i.e., bring them up-to-date for prior COLA adjustments).

On June 5, 2014, the Washington Court of Appeals published a decision related to the one-year COLA freeze with no catch-up, and the delay in the first COLA for claims occurring after June 30, 2011, which were part of the 2011 reforms. The *Crabb v. Department of Labor and Industries* decision stated that the COLA freeze and delay did not apply to the time-loss and pension benefit calculations

for workers receiving the maximum time-loss and pension benefit rate, and therefore those workers are entitled to a recalculation of the time-loss rate despite the one-time COLA freeze and delay. The Department has calculated the impact of the 2014 Crabb decision on the current estimate of discounted unpaid claims to be \$257 million.

Additionally, the Department makes an adjustment for the Crabb decision discussed above. For each fiscal accident year, the Department reviews the total monthly benefits and selects a percentage which is attributable to workers receiving the maximum time-loss rate. This percentage is then multiplied by the fiscal accident year 2012 COLA adjustment of 2.1% for fiscal accident years 2011 and prior, and the subsequent fiscal accident year COLA adjustment for fiscal accident years 2012 and forward (e.g. the fiscal accident year 2013 COLA adjustment of 3.6% for fiscal accident year 2012, etc).

The Department then estimates future Supplemental Pension Fund payments for a given fiscal year as the product of the original underlying payment, the cumulative “on-level” COLA adjustment factor, the Crabb adjustment, and the estimated future COLA adjustments from Step #4.

#### ***6. Estimate the Supplemental Pension Fund discounted liabilities***

The estimated future undiscounted Supplemental Pension Fund payments developed in Step #5 are discounted to present value using a 1.5% annual interest rate, which is consistent with last year’s selection and was selected by the Department.

Our process review entailed reviewing the internal actuarial analyses and calculations for estimating the Supplemental Pension Fund liabilities performed by the Department’s actuarial group. The internal analysis was comprised of a series of Excel worksheets as well as a brief description of the Department’s analyses and assumptions used. Both the internal review work papers and write-up were provided to us directly by the Department.

In addition, we had discussions regarding the process with members of the Department’s actuarial team. Lastly, we performed reasonability checks on the calculations/formulas shown in the Department’s internal analyses and found no material errors in their calculations.

### ***Conclusion***

We have reviewed the Department’s actuarial analysis and estimate of unpaid claims for the Supplemental Pension Fund and believe that the Department used appropriate actuarial methods and reasonable factors and assumptions in its analysis. In addition, we found no apparent errors in their calculations that were not addressed and corrected. Therefore, we believe that the Department’s estimated Supplemental Pension Fund liabilities appear reasonable and consistent with actuarial standards of practice as issued by the Actuarial Standards Board.

#### ***Discounting***

The Department discounts the estimate of unpaid liabilities to reflect the time value of money. The amount of discount is based on an actuarially derived projected payment pattern and selected annual interest rate of 1.5%.

Actuarial Standard of Practice No. 20: "Discounting of Property/Casualty Claim Estimates" applies to actuaries when performing actuarial services that involve the discounting of claim estimates for property/casualty coverages to a present value. The standard also requires disclosure of certain information regarding the actuary's use of discounting. The intended purpose of the discounted estimates is to provide perspective on the impact of the time value of money on the estimates at the annual interest rate provided and used for discounting. In the discount calculations, it is assumed that interest payments will be made in the middle of each successive development period and that the selected payment patterns will apply in the future. The paid development patterns used are based upon the patterns selected in the underlying analysis. The estimates do not include an explicit risk margin.

The total discount amount is \$8.437 billion at an annual interest rate of 1.5%. The interest rate was selected by the Department. We believe that the selected combined interest rate of 1.50% is reasonable based on the duration of the unpaid claim estimates of 19.5 years and the Treasury risk-free returns of 4.43% to 4.54% for 15-year and 25-year maturities as of the June 30, 2024. While the rate selected by the Department is lower than the referenced rates, an explicit risk margin beyond what is implicit in the referenced rates may be appropriate to consider the inherent uncertainty in the timing and amount of payments underlying the unpaid claim estimates.

We note that the interest rates selected for discounting remained the same as last year.

## *Comments and Recommendations*

The process described above regarding the Department's analysis of the liabilities for the Supplemental Pension Fund includes an estimate of the undiscounted liabilities of the underlying time loss payments, future pension transfers from fatal claims, and future pension transfers from total permanent disability claimants within the Accident Fund. During our review of the Department's process, we noted that the Department uses a different methodology to estimate undiscounted loss liabilities for these underlying payments in the Supplemental Pension Fund calculation than is used in the Department's analysis of unpaid claims for the Basic Plan. The Department has worked to reconcile the undiscounted liability underlying the two methodologies and we believe that the difference now is not material.

During our review, we considered the Department's selection of future COLA adjustments. The Department's selections are lower than the most recent or long-term historical average of COLA adjustments. For example, the simple average of the most recent 15 years of COLA adjustments is 4.47% with annual changes varying between 2.79% (at the 30th percentile) and 5.41% (at the 70<sup>th</sup> percentile). These COLA adjustments have been at this level while interest rate and/or inflation rate changes have been declining during this same time period. The materiality of this assumption is significant given that selecting the most recent 15-year historical average COLA adjustment of 4.47% would increase the Supplemental Pension Fund discounted liability by \$15.893 billion (keeping the discount rate at 1.5%). The Department has assumed that there will be a significant correlation between changes in the future COLA adjustments and changes in the interest rates in the future even though the correlation between the two has been weak at best in the past.

It is difficult to determine the reasonableness of this future correlation considering it has not occurred in the past. Therefore, we have decided to consider the reasonableness of the Supplemental Pension Fund liability assuming the historical average COLA adjustments. In doing so, we believe that the selection of

the COLA adjustment should not be considered in isolation but in conjunction with the selection of the interest rate used to discount the liabilities.

We do agree with the Department that wages long-term (and thus COLA Adjustments) will move in the same direction as inflation and the risk-free interest rates. In addition, we believe that there are alternative approaches to calculating the risk-free interest rate used to discount the liabilities that would be high enough to more than offset the low future COLA assumptions the Department is currently using. Therefore, we conclude that the Supplemental Pension Fund liabilities are reasonable overall.

An implicit assumption in the Department's actuarial review is that the cost of living adjustments granted to the claimants in the State of Washington are going to be similar to the cost of living adjustments approved by the Federal Government for Social Security retirement benefit payments. The estimate of unpaid claims could be different, perhaps significantly, if these two cost of living adjustment rates were to diverge in the future.

### *Distribution & Limitations*

This letter has been prepared for the internal use of State Auditor's Office and the Department solely for the purpose of evaluating the reasonableness of the Supplemental Pension Fund liabilities estimated by the Department actuaries. It is neither intended nor necessarily suitable for any other purpose. We have prepared this letter for use by individuals who have a degree of technical competence in insurance matters. This letter should be studied in its entirety before any judgments are made about the conclusions in the letter. It is our intention that this letter be used in its entirety, as a whole, and not segmented for other purposes. Deloitte Consulting personnel are available to discuss any questions or concerns regarding this letter.

To the extent that this report is requested and distributed beyond the State of Washington as required by law, we request a listing of those receiving the report. Deloitte Consulting shall have no liability, regardless of form, to any person or entity other than the State of Washington for any action taken or omitted to be taken by such parties in respect to this report. Third parties should recognize that the furnishing of this letter is not a substitute for their own due diligence and may not place any reliance on this letter or data contained herein that would result in the creation of any duty or liability by Deloitte Consulting to any third party.

Deloitte Consulting has relied upon data provided by the Department for this analysis. A specific audit to verify the accuracy or completeness of the data is beyond the scope of this letter. While we have reviewed the data with regard to its reasonableness and consistency, we have relied on such data without audit or verification and our conclusions are based on the assumption that it is accurate and complete. In addition, Deloitte Consulting reviewed the process and actuarial calculations underlying the Supplemental Pension Fund analysis of unpaid claims prepared by the actuarial team of the Department. If the underlying information provided is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

The services we performed throughout this engagement do not constitute an audit, review, examination, or other form of attestation as those terms are defined by the American Institute of Certified Public

Accountants ("AICPA"). Any use of the word "review" within this letter should be interpreted in the common use of that term, and not in the definition of "review" promulgated by the AICPA.

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Please contact us at the following numbers if you would like to discuss any aspect of this letter or have any questions or comments.

Matthew Crotts and Rod Morris are Fellows of the Casualty Actuarial Society and Members of the American Academy of Actuaries. These organizations have professional standards that, among other provisions, require an actuary perform only assignments for which they are qualified. Matthew Crotts and Rod Morris meet their qualification standards for rendering the opinions in this letter. They have also attested compliance with the Casualty Actuarial Society's Continuing Education Policy as of December 31, 2023 to perform services in 2024. Kim Mitchell, Managing Director, performed a peer review of the work performed and confirmed actuarial standards of practice have been followed as promulgated by the Actuarial Standards Board.

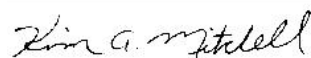
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