February 11, 2015

VIA ELECTRONIC MAIL

Mr. Dore Schwinden
Executive Director
Public Employee Retirement Administration
100 North Park, Suite 200
Helena, Montana 59620

Re: June 30, 2014 PERS Actuarial Valuation Audit Report

Dear Dore:

We have reviewed Report of the Actuarial Audit of the June 30, 2014 Actuarial Valuation of the Public Employees' Retirement System Defined Benefit Plan (PERS), prepared by Cavanaugh Macdonald Consulting (CMC) and dated February 4, 2015. The report appears to be very thorough and we offer the following comments in response to concerns raised by CMC.

Review of Valuation Procedures

CMC noted that the actuarial valuation report contained certain measures required under the Financial Accounting Standards Board which are not necessary or informative as relating to the valuation of a public sector retirement system. These measures are in Section V of the valuation report. The 2014 year was somewhat of a transition year into GASB Statements No. 67 and 68, and we expect to modify this section for the 2015 report. We will discuss the contents of our revised Section V with MPERA prior to commencing the valuation.

Review of Demographic and Economic Actuarial Assumptions

CMC has suggested including a review and analysis of actuarial methods within the next experience study. We agree with this comment and would intend on including a review of actuarial methods (i.e. actuarial cost method, actuarial asset method, and amortization method) within the next actuarial experience study.

Review of the Actuarial Cost Method and the Actuarial Valuation Method

We agree with CMC's comment that five-year smoothing is more common than four-year-smoothing among public employee retirement systems. We have mentioned this previously to the Board during various valuation presentations. CMC also mentioned the possibility of placing a 50% corridor around market value such that the resulting smoothed actuarial value would always be between 50% and 150% of market value. If adopted, this corridor may or may not come into play, but we note that even after the large market value loss that occurred prior to the 2009 actuarial valuation, the actuarial value was "only" 133% of market value. For the last four valuations, the ratio of actuarial value to market value has ranged from 93% to 97%. Both of these issues can be addressed at the next experience study.

Accuracy of Calculations and Verification of Valuation Results

CMC has made a number of observations on pages 13 and 14 of their report:

- Active member pre-retirement death benefits: CMC derived present values which were 14.85%, or $4,254, higher than we had shown in our test cases. While we do not know the reasons for this difference, we will note that ancillary benefits such as death benefits are sometimes difficult to match by another actuary, which we have found to be true in actuarial audits we have performed as well as in conversions of ongoing actuarial work from other actuarial firms. We have rechecked our coding and do not believe any changes need to be made.

- Early retirement benefits for pre-2011 members: House Bill No. 122, passed during the 2011 legislative session changed the early retirement reduction from percentage factors to true actuarial equivalence. Our initial interpretation of this provision was that for persons with less than 30 years of service, the reduction would be from age 60 and we provided tables on this basis for MPERA's use in benefit calculations. In subsequent conversations with staff at MPERA, it was determined that the actuarial equivalent reductions should be taken from the age at which the individual would have completed 30 years of service. We provided MPERA with updated early retirement factors to reflect this interpretation. However, we did not change the coding in our valuation system. We will make this change prior to the 2015 valuation. We do not expect a material impact on valuation results.

- Inactive terminated vested members: CMC noted a difference in the annuitized value of twice the member's account balance. This difference was due to us using a 5% interest assumption for projecting balances from the current valuation date. The assumption of 5% for employee accounts was changed to 3.5% effective with the 2010 actuarial valuation. While we made this change in our valuation system for active members we did not make it for terminated vested members. We will make a change for terminated vested members prior to the 2015 valuation. We do not expect a material impact on the results.

- Retired members with "pop-up" joint and survivor elections: CMC noted that we are using an approximation in the valuation system to value the"pop-up" feature rather than valuing the feature directly. We will make this change for affected members prior to the 2015 valuation. We do not expect a material impact on the results.

- Pre-retirement death benefits for members expected to terminate with vested benefits: CMC noted that we are using an approximation in the valuation system to value the actuarial equivalence rather than valuing the equivalence directly. We will review this coding prior to the 2015 actuarial valuation. Given the small magnitude of this liability, we expect there to be negligible impact on valuation results.

- Entry age normal issue for post-2011 member contributions: CMC commented on an apparent inconsistency in how member accounts are projected back to entry age. Entry age normal cost for a plan with employee contributions can be determined in two different ways. The first method, is to calculate the normal cost for all benefits and include the employee contributions (the normal cost for employee contributions will be negative). The second method is to calculate the normal cost for all benefits without regard to employee contributions, determine a normal cost rate and then subtract the employee contribution rate. The second method is the method we use for PERS, for which CMC's comment above would not apply.

In summary, we are pleased with CMC's overall findings of no material discrepancies in the 2014 actuarial valuation of PERS. Their independent review and audit should be a reassurance to all of those who use the actuarial valuation results, especially since such results are currently the basis for fiscal analyses of bills being introduced in the Montana Legislature.

To the best of my knowledge, this letter and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as a credentialed actuary, I meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this letter. This letter does not address any contractual or legal issues. I am not an attorney and our firm does not provide any legal services or advice.

This letter was prepared exclusively for the Montana Public Employees' Retirement Board for the purposes as stated above. This letter is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

We will be pleased to discuss with you any of the contents of this letter, or of CMC's report.

Sincerely,
Cheiron

Stephen T. McElhaney, FCA, FSA, MAAA
Principal Consulting Actuary

cc: Barbara Quinn
Margaret Tempkin, FSA, MAAA
Alison Chafin, ASA, MAAA