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October 9, 2020

Mr. Shawn Graham
Executive Director
Teacher's Retirement System
State of Montana
1500 Sixth Avenue
Helena, MT 59620-0139

Re: Montana University System Retirement Program Supplemental Contributions

Dear Mr. Graham:

As required by MCA, Section 19-20-621, the purpose of this letter is to determine the financial position of the Montana University System Retirement Program (MUS-RP) and determine the supplemental contribution rate necessary to amortize the past service liability of the university members of the Montana Teachers' Retirement System (TRS) by July 1, 2033. It is our understanding that the contribution to TRS will not stop unless legislative action is taken. However, for the purposes of calculating the MUS-RP supplemental contribution, we have assumed the past service liability will be amortized over a closed 13 year period (until July 1, 2033).

The required supplemental contribution rate for the period beginning July 1, 2021 is 13.90% of Montana University System Retirement Plan member salaries. This represents an increase of 2.01% from the amount that was determined as of July 1, 2018 for the period beginning July 1, 2019. The increase in the required contribution rate is primarily attributed to the failure to adopt prior recommended supplemental contribution increases. In order to maintain the current supplemental contribution rate of 4.72% the MUS would be required to contribute \$233.2 million. The summary of findings is attached to this letter.



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The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the Entry Age Normal cost method. Market value of assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular contributions of payroll determined as a percentage of payroll, on the assumption that payroll will increase by 3.25% annually. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund.

The calculations assume the value of the GABA benefits for MUS members are not financed by the supplemental contributions made as a percent of member salaries but are instead financed by the TRS contribution rate.

In order to prepare the results in this report we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions. We will continue to monitor the situation and advise the Board in the future of any adjustments that we believe would be appropriate.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.



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Future actuarial results may differ significantly from the current results presented in this letter due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Respectfully submit,

A handwritten signature in blue ink that reads "Todd B. Green" followed by a horizontal flourish.

Todd Green, ASA, FCA, MAAA
President

TBG/jw



Montana University System

Retirement Program Supplemental Contributions

Summary of Findings

VALUATION DATE	<u>July 1, 2020</u>	<u>July 1, 2018</u>
Active members		
Number	189	236
Annual compensation	\$ 13,307,615	\$ 16,168,934
Retired members and beneficiaries		
Number	1,624	1,631
Annual allowances	\$ 59,707,334	\$ 50,460,820
Inactive Members		
Vested Terminated Members	56	66
Non-Vested Terminated Members	197	197
Assets		
Market value	\$ 157,955,992	\$ 207,194,027
Unfunded accrued liability	353,115,919	320,422,577
CONTRIBUTION NECESSARY TO AMORTIZE UNFUNDED LIABILITY		
Supplemental Contribution Rate*	13.90%	11.89%
Amortization Period (Years)	13	15
Current Statutory Supplemental Contribution Rate	4.72%	4.72%
Supplemental Contribution Rate Shortfall	9.18%	7.17%
Lump Sum Necessary to Maintain Current Statutory Supplemental Contribution Rate	\$233.2 Million	\$193.2 Million

* The 13.90% contribution rate as of July 1, 2020 would increase to 20.35% for MUS-RP members if the GABA were financed by the supplemental contributions.