Montana Teachers' Retirement System

2022 ANNUAL REPORT

TRS

A Component Unit of the State of Montana

ANNUAL COMPREHENSIVE FINANCIAL REPORT
FISCAL YEAR ENDED JUNE 30, 2022

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Montana Teachers' Retirement System

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FISCAL YEAR ENDED JUNE 30, 2022

Shawn Graham
Executive Director

Tammy Rau
Deputy Executive Director

Prepared by:
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trs.mt.gov

An alternative accessible format of this document will be provided upon request.

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INTRODUCTORY SECTION

Montana Teachers' Retirement System

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January 11, 2023

Honorable Greg Gianforte
Governor of Montana
Room 204, State Capitol
Helena, MT 59620

Dear Governor Gianforte:

On behalf of the Montana Teachers' Retirement Board, we are pleased to present the Montana Teachers' Retirement System's Annual Comprehensive Financial Report (ACFR) for the fiscal year ended June 30, 2022. This report is intended to provide comprehensive information on the financial operations of the Montana Teachers' Retirement System (TRS) for the year. The issuance of the TRS ACFR satisfies the legal requirements of §19-20-201(d) and §19-20-215, Montana Code Annotated (MCA).

TRS management is responsible for the information presented in this report and for establishing and maintaining an internal accounting control structure to reasonably assure the safekeeping of assets and the reliability of financial reporting. Because the cost of internal controls should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

TRS was established by state law in 1937 and has completed its 85th year of operation. As of June 30, 2022 TRS is providing services to 19,975 active members, 17,369 benefit recipients, and has a Net Position valued at approximately $4.724 billion.

Plan Qualification Certification

TRS is statutorily required to maintain its status as a qualified plan under Section 401(a) of the Internal Revenue Code (IRC). Qualified plan status provides tax-favorable treatment of contributions to and assets of the retirement system, including that TRS members and employers may make contributions to the retirement system on a pre-tax basis. TRS' qualified plan status is determined by the Internal Revenue Service (IRS) through periodic review of TRS's plan provisions and is evidenced by the IRS's issuance of a favorable "determination letter."

TRS submitted its most recent request for a qualification determination to the IRS on November 27, 2013. TRS received a favorable determination letter from the IRS on April 23, 2014. The current determination letter establishing that TRS is a tax-qualified pension plan will remain in effect unless and until TRS has a basis to request a new qualification review and a new qualification determination is issued by the IRS.

Plan Funding Status

The TRS plan's Net Funded Ratio increased from 71.43% at July 1, 2021, to 71.73% at July 1, 2022. In addition, the July 1, 2022 Actuarial Valuation shows that the current contribution rates are sufficient to pay the System's normal cost and to amortize the System's Unfunded Actuarial Accrued Liability (UAAL) in 25 years, based on the current funding methods and long term actuarial assumptions.

The total contribution rate as of July 1, 2022 was 20.01% of earned compensation. The rate was made up from employee, employer, and supplemental contributions from the State of Montana. The normal cost and administrative expense load of 10.87% is funded by the total contribution rate. The remaining 9.14% is available to fund the amortization of the UAAL. The UAAL is also funded through an annual contribution of $25 million, payable on July 1st, from the State of Montana general fund. The System's UAAL as of July 1, 2022 is $1.892 billion. Additional information regarding the financial condition of the TRS plan can be found in the Actuarial Section of this report.

Employers of the Montana University System (MUS) contribute 4.72% of pay for members of the MUS Retirement Program (MUS-RP) to fund the past service liabilities of the university system members who remained in TRS after the system was closed in 1993 to new entrants, as required under §19-20-621, MCA. The most recent MUS-RP actuarial valuation, as of July 1, 2022, shows the MUS supplemental employer contribution rate required by this section would have to increase from 4.72% to 13.53% to maintain the amortization of the university system's past service liabilities by July 1, 2033, as required by §19-20-621, MCA.

Actuarially Determined Contribution

The Actuarially Determined Contribution (ADC) is the recommended contribution amount to the plan for the reporting period, determined by the Actuary, in conformity with Actuarial Standards of Practice. If the ADC is received by the plan through contributions, in the reporting period, the contributions received will fund benefits accrued in the current period (the normal cost) as well as amortize the system's UAAL in 30 years or less. As of the most recent actuarial valuation date of July 1, 2022, contributions to the plan are sufficient to fund the normal cost plus amortize the UAAL in 30 years or less (25 years). Therefore, the ADC is equal to the actual contributions to the plan in the amount of $243,408,557, and there is no contribution deficiency.

Investment Activity

The Montana Board of Investments (MBOI) manages the State's Unified Investment Program, which includes the TRS plan investments as required by §19-20-501, MCA. The Unified Investment Program is required by law (§17-6-201, MCA) to operate under the "prudent expert principle," defined as: 1) discharging its duties with the care, skill, prudence, and diligence that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character and like aims; 2) diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return; and 3) discharging its duties solely in the interest of and for the benefit of the funds managed.

The TRS investment portfolio posted a negative total return of (4.33%) for the fiscal year ended June 30, 2022. The System's total annualized rate of return over the last three and five years was positive 7.87% and 7.62% respectively. At June 30, 2022, the total annualized rate of return from the inception date (7/1/1994) was 7.70%. Below is a breakdown of the return rates for the "Short-Term Investment Pool" (STIP) and "Consolidated Asset Pension Pool" (CAPP) and the underlying "Pension Asset Classes" (PACs). MBOI invests the TRS and other pension portfolios for the long-term and its investment strategies, are designed to provide sufficient returns over time. However, there is no guarantee of future investment performance. Performance in any given year is dependent not only on the MBOI's investment performance but also on the performance of the markets themselves, which are impacted by domestic and global economic conditions, interest rates, and government policies. Please refer to the Investment Section of this report for additional detailed information regarding TRS investments.

TRS Investment Rates of Returns

	FY 2022	3-Year	5-Year	Inception to Date
Short Term Investment Pool	0.32%	0.71%	1.19%	2.25%
Consolidated Asset Pension Pool	(4.36%)	7.98%	7.75%	7.99%
Domestic Equity - PAC	(13.62%)	9.83%	10.20%	9.23%
International Equity - PAC	(20.87%)	1.61%	2.71%	4.34%
Core Fixed Income - PAC	(9.24%)	(0.54%)	1.01%	5.28%
Non-Core Fixed Income - PAC	(13.66%)	(0.62%)	1.31%	6.21%
Private Investments - PAC	22.12%	21.29%	17.66%	13.48%
Real Estate - PAC	23.52%	10.57%	9.54%	5.24%
Real Assets - PAC	13.90%	3.76%	3.64%	4.42%
Cash Equivalents - PAC	0.46%	0.77%	1.22%	1.22%
Total Portfolio	(4.33%)	7.87%	7.62%	7.70%

Awards

The Government Finance Officers Association (GFOA) of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to Teachers' Retirement System for its Annual Financial Report for the fiscal year ended June 30, 2021. This is the 15th consecutive year that Teachers' Retirement System has received this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized Annual Comprehensive Financial Report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. TRS believes the current Annual Comprehensive Financial Report continues to meet the Certificate of Achievement Program's requirements and this report will be submitted to GFOA to determine its eligibility for another certificate.

The Public Pension Coordinating Council (PPCC) also awarded TRS the Public Pension Standards Award for Administration for 2022 in recognition of meeting the professional standards for plan administration as set forth in the Public Pension Standards. The PPCC is a coalition of the National Association of State Retirement Administrators, the National Conference on Public Employee Retirement Systems, and the National Council on Teacher Retirement. TRS has received this award for 20 consecutive years.

Independent Auditor

The financial statements contained in the TRS ACFR were audited by the State's Legislative Audit Division (LAD) in accordance with generally accepted auditing standards. The Legislative Auditor is appointed by and reports to the State's Legislative Audit Committee. The LAD issued an unmodified opinion on the TRS financial statements for the fiscal year ended June 30, 2022.

The Management's Discussion and Analysis and financial statements with accompanying notes, required supplementary information with notes, and supporting schedules can be found in the Financial Section of this report.

Conclusion

On behalf of the Board, I would like to thank the staff, the Board's advisors, and the many people whose commitment, dedication, and proficiency has directly contributed to the continued successful operation of the Montana Teachers' Retirement System. The TRS Board and staff look forward to continuing to serve the educators of Montana.

Sincerely,

/s/ Shawn Graham

Shawn Graham
Executive Director

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Montana Teachers' Retirement System

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2021

Christopher P. Morrill

Executive Director/CEO

Public Pension Coordinating Council

Public Pension Standards Award
For Funding and Administration
2022

Presented to

Montana Teachers' Retirement System

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle
Program Administrator

Board of Directors

Kari Elliott, Chair
Appointed by Governor
Active Public School Teacher
Kalispell, Montana
kelliott@mt.gov
Term expires July 1, 2027

Scott Dubbs, Vice Chair
Appointed by Governor
Active Member Representative
Lewistown, Montana
sdubbs@mt.gov
Term expires July 1, 2023

Dee Brown
Appointed by Governor
Retired Member Representative
Hungry Horse, Montana
dee.brown@mt.gov
Term expires July 1, 2026

Sarah Hitchcock
Appointed by Governor
Active Member Representative
Glasgow, Montana
sarah.hitchcock@mt.gov
Term expires July 1, 2026

Daniel Trost
Appointed by Governor
Public Sector Representative
Montana Board of Investments Member
Helena, Montana
dtrost@mt.gov
Term expires July 1, 2024

Daniel Chamberlin
Appointed by Governor
Public Sector Representative
Whitefish, Montana
dchamberlin@mt.gov
Term expires July 1, 2025

Professional Consultants

Alfred Munksgard & Associates
IT Consultant
3625 Thousand Oaks Blvd
Thousand Oaks, CA 91362

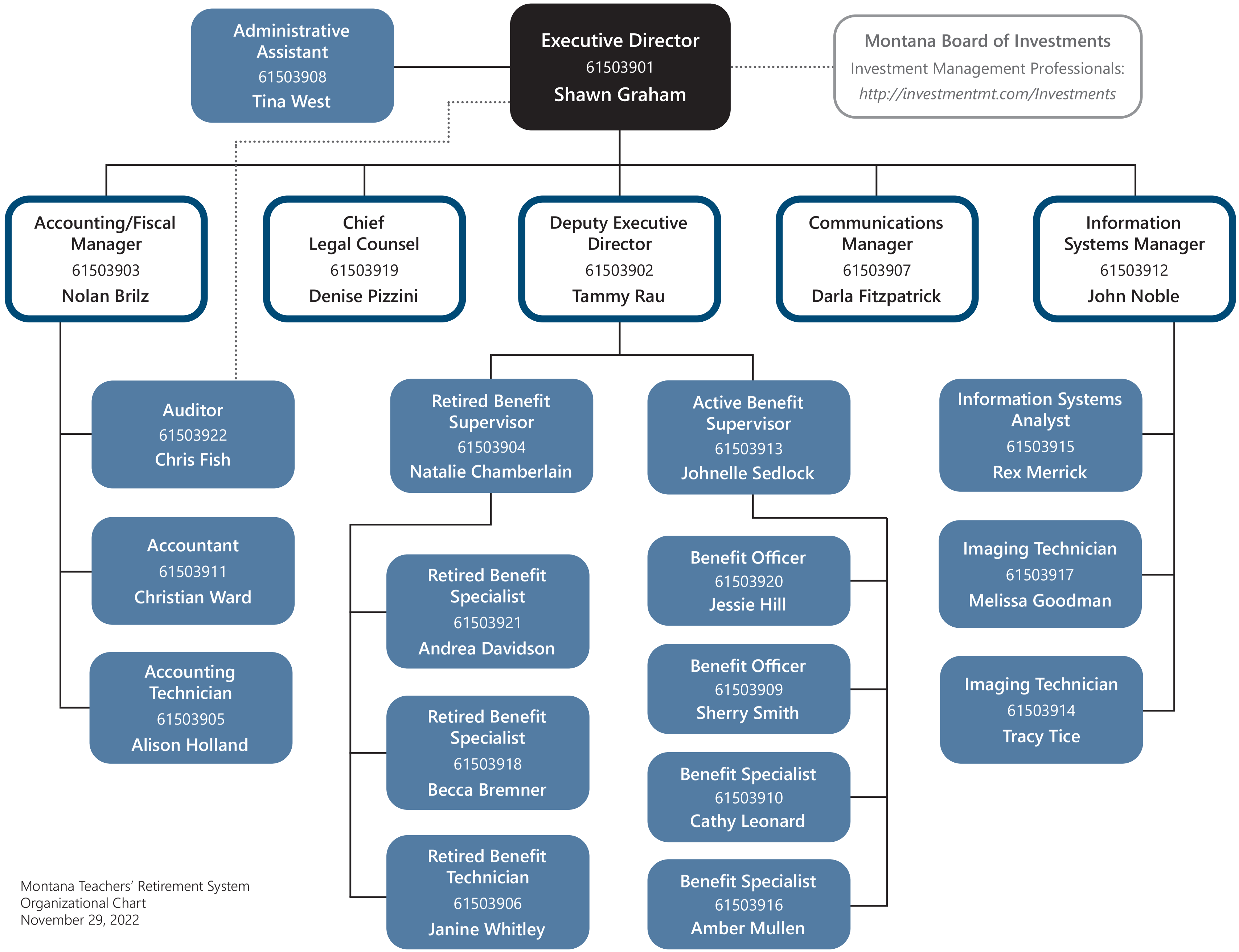
Rising Stars, LLC
IT Consultant
72 Warm Springs Creek Rd
Clancy, MT 59634

Drake Law Firm
Legal and Business Advisors
111 N Last Chance Gulch
Helena, MT 59601

Cavanaugh Macdonald Consulting, LLC
Consulting Actuary
3550 Busbee Pkwy Ste 250
Kennesaw, GA 30144

Ice Miller Legal Counsel
Legal and Business Advisors
One American Square Ste 2900
Indianapolis, IN 46282

TRS ADMINISTRATIVE ORGANIZATIONAL CHART



Montana Teachers' Retirement System
Organizational Chart
November 29, 2022

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FINANCIAL SECTION

LEGISLATIVE AUDIT DIVISION

Angus Maciver, Legislative Auditor
Deborah F. Butler, Legal Counsel

Deputy Legislative Auditors:
Cindy Jorgenson
William Soller

Independent Auditor's Report

The Legislative Audit Committee
of the Montana State Legislature:

Report on the Audit of Financial Statements

Opinion
We have audited the financial statements of the Teachers' Retirement System (system), prepared by the Teachers' Retirement Board (board), a fiduciary component unit of the State of Montana, which are comprised of the Statement of Fiduciary Net Position as of June 30, 2022, and the related Statement of Changes in Fiduciary Net Position for the fiscal year then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the system as of June 30, 2022, and the changes in net position for the fiscal year then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion
We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the "Auditor's Responsibilities for the Audit of the Financial Statements" section of our report. We are required to be independent of the board and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal controls relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the board's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

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Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the board's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the board's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the following be presented to supplement the basic financial statements.

- Management's Discussion and Analysis
- Schedule of Changes in Net Pension Liability - TRS Plan
- Schedule of the Net Pension Liability - TRS Plan
- Schedule of Investment Returns - TRS Plan
- Schedule of Employer and Non-Employer Contributing Entities Contributions - TRS Plan
- Schedule of Proportionate Share of the Net Pension Liability - TRS as Employer of PERS Plan
- Schedule of Contributions - TRS as Employer of PERS Plan

- Other Post-employment Benefits Plan Information
- Related Notes to the Required Supplementary Information

Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of the financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consists of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The Schedule of Administrative Expenses, Schedule of Investment Expenses, and Schedule of Payments to Consultants is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the Introductory, Investment, Actuarial, and Statistical sections but does not include the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated January 11, 2023, on our consideration of the board's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the board's internal control over financial reporting and compliance. It is included in the Legislative Auditor's separately issued report (22-09).

Respectfully submitted,

/s/ Cindy Jorgenson

Cindy Jorgenson, CPA
Deputy Legislative Auditor
Helena, MT

January 11, 2023

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following discussion and analysis of the Montana Teachers' Retirement System (TRS or the System) provides a narrative overview of TRS's financial activities for the fiscal year ended June 30, 2022.

Overview of the Financial Statements

The TRS financial statements, notes to the financial statements, and required supplementary information as of June 30, 2022 were prepared in conformity with GASB Statement No. 67, Financial Reporting for Pension Plans and GASB Statement No. 68, Accounting and Financial Reporting for Pensions.

Because of the long-term nature of a defined benefit pension plan, financial statements alone cannot provide sufficient information to properly reflect the System's ongoing plan perspective. The Statement of Fiduciary Net Position reflects the resources available to pay benefits to retirees and beneficiaries. The Statement of Changes in Fiduciary Net Position presents the changes that occurred in those resources for the fiscal year ended June 30, 2022.

The Notes to the Basic Financial Statements provide additional information that is essential to gain a full understanding of the data provided in the basic financial statements. The required supplementary information (RSI) consists of the following four schedules and notes to those schedules of the defined benefit pension plan administered by TRS: changes in the net pension liability, net pension liability, the money-weighted rate of investment returns, and employer contributions. The RSI also contains the following two schedules and notes to those schedules of the defined benefit pension plan that TRS participates in as an employer: proportionate share of the net pension liability and employer contributions. The RSI also contains a schedule and notes related to Other Post-employment Benefits (OPEB) information.

Financial Highlights

- The TRS fiduciary net position decreased by $392 million from $5.117 billion at 06/30/21 to $4.724 billion at 06/30/22, representing a decrease of 7.7% from year to year.
- The TRS plan net investment income/loss was negative $207 million at 06/30/22 compared to positive $1,129.8 million at 06/30/21.
- The TRS plan rate of return on investments during FY 2022 was negative 4.3% compared with FY 2021 rate of return of 27.7%.
- The TRS benefit payments paid to benefit recipients increased 3.6% from $399.9 million to $414.3 million for FY 2022, which is consistent with previous increases.
- Withdrawals from the System increased by 16.3% from $8.9 million in FY 2021 to $10.3 million in FY 2022.

Condensed Financial Information

For comparative purposes, the Condensed Financial Information for the fiscal year ended June 30, 2022 is presented with the previous fiscal year's financial information.

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Fiduciary Net Position
(in millions)

	FY2022	FY2021	Percent Change*
Cash/Short-Term Investments	$ 55.8	$ 63.6	(12.4%)
Receivables	24.2	21.6	11.7%
Investments (Fair Value)	4,694.0	5,061.6	(7.3%)
Other Assets (Net)	3.4	1.2	185.2%
Total Assets	4,777.3	5,148.1	(7.2%)
Deferred Outflows	0.6	0.6	(3.8%)
Liabilities	52.8	31.7	66.5%
Deferred Inflows	0.7	0.2	283.3%
Net Position	$ 4,724.5	$ 5,116.8	(7.7%)

Change in Fiduciary Net Position
(in millions)

	FY2022	FY2021	Percent Change*
Additions:			
Employer Contributions	$ 109.7	$ 103.2	6.3%
Plan Member Contributions	85.7	81.1	5.7%
Other Contributions	48.0	47.0	2.1%
Net Investment Income	(207.4)	1,129.8	(118.4%)
Total Additions	36.0	1,362.1	(97.4%)
Deductions:			
Benefit Payments	414.3	399.9	3.6%
Withdrawals	10.3	8.9	16.3%
Administrative and Other Expenses	3.7	4.3	(13.3%)
Total Deductions	428.4	413.1	3.7%
Change in Net Position	$ (392.4)	$ 949.0	(141.3%)

**Percentages are calculated based on the actual reported values in the Financial Statements rather than on the amounts rounded to the nearest million in the tables above.*

Financial Analysis

- The increase in Employer Contributions was due in part to HB 377 provisions that took effect in FY 2014, which increase Employer contribution rates by 0.10% each year for ten years.
- The increase in Employer, Plan Member, and Other Contributions are also due do to an increase in Reportable Compensation of the System as a whole.
- The System's Return on Investments was negative in FY 2022, resulting in a net investment loss of $207.4 million.
- Net investment income for FY 2022 was down considerably from the previous fiscal year largely due to abnormally negative returns in domestic and international equities, as well as fixed income securities.
- The increase in benefit payments from year-to-year reflects an increase in the number of retirees and beneficiaries, plus the 1.5% guaranteed annual benefit adjustment. The increase is comparable to previous fiscal years.
- Administrative Expenses for FY 2022 were 0.86% of Benefit Payments. By the laws set forth in the Montana Code Annotated, TRS is required to keep Administrative Expenses under 1.5% of Benefit Payments.
- The increase in Withdrawals is due to new internal controls for managing Terminated Non-Vested members of the system.

Overview of the Actuarial Funding

An actuarial valuation of the System is performed annually. As a result of the actuarial valuation of the benefits in effect under the Montana Teachers' Retirement System as of July 1, 2022, the statutory employer contributions are sufficient to amortize the Unfunded Actuarial Accrued Liability (UAAL) of the Retirement System within 25 years. The Funded Ratio is 71.73%.

MCA 19-20-201 requires the Valuation report to show how market performance is affecting the actuarial funding of the Retirement System. The July 1, 2022 fair value of assets is $75.1 million less than the actuarial value of assets. This is due to the smoothing of investment gains and losses over a four year period. If the fair value of assets was used, the amortization period would be 27 years, and the Funded Ratio would be 70.61%.

The TRS investment portfolio earned (4.13)% net of investment and operating expenses. As a result of cumulative unrecognized gains, the actuarial assets earned 8.14% which is 0.64% more than the actuarial assumption of 7.50%. The return on the actuarial assets differs from the return on fair value of assets because the actuarial value of assets spreads gains and losses over four years.

The following table compares the annual returns for the past five fiscal years.

Fiscal Year	Fair Value Return	Actuarial Return	Fair Value Return Over/(Under) Assumption Rate	Actuarial Return Over/(Under) Assumption Rate
7/01/2017 - 6/30/2018	8.82%	6.85%	1.07%	(0.90)%
7/01/2018 - 6/30/2019	5.69%	7.00%	(1.81)%	(0.50)%
7/01/2019 - 6/30/2020	2.72%	7.00%	(4.78)%	(0.50)%
7/01/2020 - 6/30/2021	27.73%	10.68%	20.23%	3.18%
7/01/2021 - 6/30/2022	(4.13)%	8.14%	(11.63)%	0.64%

Asset gains or losses result when the return on the actuarial value of assets differs from the actuarial investment return assumption of 7.30% effective July 1, 2022.

The net result as of July 1, 2022 is that the fair value of assets is $75.1 million less than the actuarial value of assets. This 75.1 million in unrecognized asset losses will either offset any future investment gains or, if there are none, increase the amortization period of the UAAL in future valuations.

As of July 1, 2022, the System's Actuarial Value of Assets increased by 183.2 million from $4.616 billion at July 1, 2021 to $4.780 billion at July 1, 2022. The Actuarial Accrued Liability at July 1, 2022 was $6.691 billion. This resulted in an UAAL of $1.892 billion at July 1, 2022. This was a net increase in the unfunded position of $44.8 million compared to July 1, 2021.

TEACHERS' RETIREMENT SYSTEM
A COMPONENT UNIT OF THE STATE OF MONTANA
STATEMENT OF FIDUCIARY NET POSITION
AS OF JUNE 30, 2022

	2022
Assets	
Cash and Short Term Investments (Note B)	$55,768,650
Receivables:	
Accounts Receivable	24,114,711
Interest Receivable	62,190
Total Receivables	$24,176,901
Investments, at Fair Value: (Note B)	
Equity in Pooled Investments	$4,645,886,890
Securities Lending Collateral (Note B)	48,067,890
Total Investments	$4,693,954,780
Assets Used in Plan Operations (Note C):	
Leasehold Improvements	$243,881
Accumulated Depreciation	(87,100)
Equipment and Intangible Assets	599,839
Accumulated Depreciation	(16,286)
Intangible Right to Use Building	2,810,123
Accumulated Depreciation	(165,301)
Total Other Assets	3,385,155
Total Assets	$4,777,285,486
Pension Deferred Outflows (Note E)	$435,767
OPEB Deferred Outflows (Note G)	$183,763
Liabilities	
Accounts Payable	$134,481
Securities Lending Liability (Note B)	48,067,890
Compensated Absences (Note B)	216,437
OPEB Implicit Rate Subsidy (Note G)	235,221
Net Pension Liability (Note E)	1,394,112
Standard Lease (Note C)	2,702,072
Total Liabilities	$52,750,212
Pension Deferred Inflows (Note E)	$574,861
OPEB Deferred Inflows (Note G)	$130,460
Net Position Restricted for Pension Benefits	$4,724,449,484

The accompanying Notes to the Financial Statements *is an integral part of this financial statement.*

TEACHERS' RETIREMENT SYSTEM
A COMPONENT UNIT OF THE STATE OF MONTANA
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2022

	2022
Additions	
Contributions:	
Employer	$109,672,148
Plan member	85,736,884
Other	47,999,525
Total Contributions	$243,408,557
Miscellaneous Income	$36,921
Investment Income:	
Net Appreciation/(Depreciation) in Fair Value of Investments	($173,973,343)
Investment Earnings	231,722
Security Lending Income (Note B)	505,851
Investment Income/(Loss)	(173,235,770)
Investment Expense	(34,094,176)
Security Lending Expense (Note B)	(111,143)
Net Investment Income/(Loss)	(207,441,089)
Total Additions	36,004,388
Deductions	
Benefit Payments	$414,346,628
Withdrawals	10,338,308
Administrative Expense	3,555,107
OPEB Expense (Note G)	25,401
Pension Expense (Note E)	138,568
Total Deductions	$428,404,012
Net Increase (Decrease) in Fiduciary Net Position	($392,399,624)
Net Position Restricted for Pension Benefits Beginning of the Year	$5,116,849,108
Prior Period Adjustment (Note B)	$0
Net Position End of Year	$4,724,449,484

The accompanying Notes to the Financial Statements *is an integral part of this financial statement.*

TEACHERS' RETIREMENT SYSTEM
A COMPONENT UNIT OF THE STATE OF MONTANA
NOTES TO THE FINANCIAL STATEMENTS
FISCAL YEAR ENDED JUNE 30, 2022

Note A. Description of the Plan

Teachers' Retirement System (TRS or the System) is a mandatory-participation multiple-employer cost-sharing defined-benefit public pension plan that provides retirement services to individuals employed as teachers, administrators, and other skilled public education professionals in Montana.

The Teachers' Retirement System Board (the Board) and staff administer the retirement system in conformity with the laws set forth in Title 19, chapter 20 of the Montana Code Annotated, and administrative rules set forth in Title 2, chapter 44 of the Administrative Rules of Montana. Additional information pertaining to membership, benefit structure, and prior years' actuarial valuations, as well as links to applicable statutes and administrative rules may be obtained by visiting the TRS website at trs.mt.gov.

The Montana Board of Investments (MBOI) manages the State's Unified Investment Program, which includes the TRS plan investments as required by §19-20-501, MCA. Per the Montana Constitution, Article VIII Section 13(3), investment of TRS assets shall be managed in a fiduciary capacity in the same manner that a prudent expert acting in a fiduciary capacity and familiar with the circumstances would use in the conduct of an enterprise of a similar character with similar aims. MBOI's stand-alone financial statements and information on investment policies, investment activity, investment management fees, and a listing of specific investments owned by the pooled asset accounts can be obtained from the Montana Board of Investments, P.O. Box 200126, Helena, MT 59620-0126. The MBOI website can be found at investmentmt.com.

The Board is the governing body of the System. The System was established by the State of Montana in 1937 to provide retirement, death, and disability benefits to individuals employed in public education in Montana. TRS as an employer does not participate in the plan and acts only as the administrator of the plan.

Board Composition

The Board consists of six members, all appointed by the Governor. Three Board members must be teaching professionals who, when appointed, are active members of TRS; at least one of the active members must be an active classroom teacher. One Board member must be a retired teacher who was a member of TRS at the time of retirement. Two Board members are appointed from the public at large. TRS Board members serve staggered five-year terms. Three Board members constitutes a quorum.

Reporting Entities

At June 30, 2022, the number and type of reporting entities participating in the system were as follows:

Local School Districts, Counties, and Co-ops	350
Community Colleges	3
University System Units	2
State Agencies	7
Total	**362**

System Membership

At July 1, 2022, the date of the most recent actuarial valuation, system membership consisted of the following:

Retirees and Beneficiaries Currently Receiving Benefits	17,369
Terminated Members:	
Vested	2,015
Non-vested	5,656
Active Plan Members:	
Full-Time	13,765
Part-Time	6,210
Deceased Members Pending Account Settlement	407
Total Membership	**45,422**

Summary of Benefits

Through June 30, 2013, all members enrolled in TRS participated in a single-tiered plan (Tier One). In the Tier One plan, employees with a minimum of 25 years of service or who have reached age 60 with 5 years of service are eligible to receive an annual retirement benefit equal to creditable service years divided by 60 times the average final compensation. Final compensation is the average of the highest three consecutive years of earned compensation. Benefits fully vest after 5 years of creditable service. Vested employees may retire at or after age 50 and receive reduced retirement benefits.

Beginning July 1, 2013, new members in TRS participate in a second benefit tier (Tier Two), which differs from Tier One as follows:

- Tier Two uses a 5-year average final compensation (AFC) (as opposed to 3-year AFC in Tier One);
- Tier Two provides for unreduced service retirement benefits at age 60 with 5 years of creditable service or at age 55 with at least 30 years of creditable service (rather than at age 60 with 5 years of service or at any age with creditable service of 25 years in Tier One);
- Tier Two provides for early retirement benefits with 5 years of creditable service at age 55 (rather than age 50 in Tier One);
- Tier Two has a one percent higher normal employee contribution rate (though a temporary 1% supplemental employee contribution rate is also now currently in place for Tier One members), and
- Tier Two provides for an enhanced benefit calculation - 1.85% x AFC x years of creditable service — for members retiring with at least 30 years of creditable service and at least 60 years of age (rather than 1.6667% x AFC x years of creditable service for Tier One).

A guaranteed annual benefit adjustment (GABA) is payable on January 1st of each calendar year for each retiree who has received at least 36 monthly retirement benefit payments prior to that date. The GABA is applicable to both Tier One and Tier Two members. The GABA is calculated at 1.5% of the benefit payable as of January 1st. For Tier Two members, the GABA to be calculated each year may vary from 0.5% to 1.5% based on the retirement system's funding status and the period required to amortize any unfunded accrued actuarial liability as determined in the prior actuarial valuation.

Overview of Contributions

The TRS funding policy provides for monthly employee and employer contributions at rates specified by state law. Plan members, for the fiscal year ending June 30, 2022, were required to contribute 8.15% of their earned compensation. School district, education cooperative, county, and community college employers were required to contribute 9.27% of earned compensation. University System and State Agency employers were required to contribute 11.65% of earned compensation.

The TRS funding policy also provides for monthly supplemental contributions at rates specified by state law. The State's general fund contributes an additional 2.38% of earned compensation for school district, education cooperative, county, and community college employees each month. The State's general fund also contributes an additional 0.11% of earned compensation for all TRS members each month. These monthly general fund contributions along with an annual lump-sum contribution of $25 million from the general fund make up the "Other" contribution category on the financial statements.

Each employer in the Montana University System contributes to TRS a supplemental employer contribution currently at a rate of 4.72% of the total compensation for employees participating in the Montana University System Retirement Program (MUS-RP).

Contribution rates for FY 2021, 2022, and 2023 for school district, education cooperative, county, and community college employers are listed below.

Fiscal Year	Members	Employers	General Fund	Total
July 1, 2020–June 30, 2021	8.15%	9.17%	2.49%	19.81%
July 1, 2021–June 30, 2022	8.15%	9.27%	2.49%	19.91%
July 1, 2022–June 30, 2023	8.15%	9.37%	2.49%	20.01%

Contribution rates for FY 2021, 2022, and 2023 for state agencies and university system employers are listed below.

Fiscal Year	Members	Employers	General Fund	Total
July 1, 2020–June 30, 2021	8.15%	11.55%	0.11%	19.81%
July 1, 2021–June 30, 2022	8.15%	11.65%	0.11%	19.91%
July 1, 2022–June 30, 2023	8.15%	11.75%	0.11%	20.01%

Pursuant to §19-20-609, MCA, the employer contribution rate will increase by 0.10% each year beginning July 1, 2014 through fiscal year 2024.

Note B. Summary of Significant Accounting Policies

Basis of Accounting

Teachers' Retirement System, a fiduciary component unit Pension Trust Fund of the State of Montana financial reporting entity, prepares its financial statements using the accrual basis of accounting. Member contributions and employer contributions are recognized when due. Revenues are recorded in the accounting period in which they are earned, realized, and become measurable in accordance with the terms of the System. Benefit payments and refunds are recognized in the accounting period in which they are due and payable in accordance with the benefit terms. Expenses are recognized in the period incurred. The System adheres to all applicable Governmental Accounting Standards Board (GASB) Statements.

Prior Period Adjustments

Prior period adjustments relate to corrections of errors and changes in accounting policy from prior periods. The System had no prior period adjustments for the year ended June 30, 2022.

Significant Accounting Changes

Significant accounting policies are specific accounting principles and methods used and considered to be the most appropriate to use in current circumstances in order to fairly present the financial statements. GASB Statement No. 87, Leases, was issued in June 2017. The objective of this statement is to increase the usefulness of financial statements by establishing a single model for lease accounting based on the principle that leases are financings of the right to use an asset. Lessees will recognize a lease liability and an intangible right to use asset and lessors will recognize a lease receivable and a deferred inflow of resources. For TRS this standard went into effect for the period ending June 30, 2022. The details of TRS implementing GASB 87 are presented in Note C.

Compensated Absences

Compensated absences represent 100 percent of accrued vacation and 25 percent of accrued sick leave for TRS personnel. Compensated absences were recorded as a liability of $216,437 at June 30, 2022.

Investments

The Montana Board of Investments (MBOI) manages the State's Unified Investment Program, which includes the TRS plan investments as required by §19-20-501, MCA. Per the Montana Constitution, Article VIII Section 13(3), investment of TRS assets shall be managed in a fiduciary capacity in the same manner that a prudent expert acting in a fiduciary capacity and familiar with the circumstances would use in the conduct of an enterprise of a similar character with similar aims. Investments administered by MBOI for TRS are subject to MBOI's investment risk policies. MBOI's stand-alone financial statements and information on investment policies, investment activity, investment management fees, and a listing of specific investments owned by the pooled asset accounts can be obtained from the Montana Board of Investments, P.O. Box 200126, Helena, MT 59620-0126. The MBOI website can be found at investmentmt.com.

At June 30, 2022, TRS investments include the Short-Term Investment Pool (STIP) and the Consolidated Asset Pension Pool (CAPP).

Short-Term Investment Pool (STIP)

The Montana Public Retirement Plans investment in STIP will provide the Plans with exposure to Cash related investments. STIP will be managed internally by MBOI utilizing an active investment strategy. STIP invests primarily in short-term, high quality, fixed income securities with a maximum maturity of 397 days or less. Variable securities shall have a maximum maturity of 2 years. STIP shall maintain a dollar-weighted average portfolio maturity of 120 days or less. This Pool is managed to preserve principal while providing 24-hour liquidity for state agency and local government participants.

Consolidated Asset Pension Pool (CAPP)

CAPP invests directly in the underlying Pension Asset Classes (PACs) on behalf of the nine retirement systems within the MBOI Board-approved asset allocation ranges. Each PAC has an underlying set of MBOI Board-approved investment objectives and investment guidelines. Below is a short description of each PAC within the CAPP. For liquidity purposes, each PAC and external manager has a limited amount of cash/cash equivalents. With the exception of the Cash PAC, it is invested in the State Street Short Term Investment Fund (STIF), which invests in high quality short-term securities. For external managers, it is invested per MBOI established guidelines.

Domestic Equities PAC

Invests primarily in US traded equity securities such as common stock. The type of portfolio structures utilized are separately managed accounts, commingled accounts, limited partnerships, or limited liability companies, and exchange traded funds.

International Equities PAC

Invests primarily in international equity securities that trade on foreign exchanges in developed and emerging markets. The type of portfolio structures utilized are separately managed accounts, commingled accounts, limited partnerships, or limited liability companies, and exchange traded funds.

Private Investments PAC

Invests in the entire capital structure of private companies. The type of portfolio structures include private partnership interests, separate accounts, commingled funds and exchange traded funds. The investments typically have well-defined strategies such as buyout, venture, or distressed debt. Private Equity investments are considered long-term. Exchange traded funds are utilized to minimize the cash position.

Real Estate PAC

Invests primarily in real estate properties. The type of portfolio structures include private partnership interests, real estate investment trusts (REITs), separate accounts, commingled funds and exchange traded funds. The funds typically have well-defined strategies such as core, value-add, or opportunistic. Real Estate investments generally require long, time horizon to realize the value of the assets. Exchange traded funds are utilized to minimize the cash position.

Real Assets PAC

Invests in energy, timber investments or other commodity related assets. The type of portfolio structures include private partnership interests, separate accounts, commingled funds and exchange traded funds. Natural Resources investments generally require a long, time horizon to realize the value of the asset.

Core Fixed Income PAC

Invests primarily in marketable, publicly traded, investment grade fixed income securities denominated in U.S. dollars. The type of portfolio structures include internally managed portfolios or externally managed separate accounts, commingled funds and limited partnerships.

Non-Core Fixed Income PAC

Invests primarily in marketable, publicly traded, high yield corporate debt, emerging market debt, convertible debt and preferred securities. The type of portfolio structures include separately managed accounts, commingled accounts, and limited partnerships.

Cash PAC

Invests primarily in highly liquid, money-market type securities. The type of portfolio structures include the internally managed Short Term Investment Pool (STIP) or cash vehicles managed through MBOI's custodian or other Security Exchange Commission registered U.S. government money market funds.

TRS Investment Portfolio
June 30, 2022

Investment		Fair Value
Short-Term Investment Pool	$	43,839,397
Consolidated Asset Pension Pool		4,645,886,890
Total	**$**	**4,689,726,287**

Consolidated Asset Pension Pool (CAPP)

CAPP is an internal investment pool managed and administered under the direction of the Montana Board of Investments (MBOI) as statutorily authorized by the Unified Investment Program. CAPP is a commingled internal investment pool and only the retirement systems can participate in CAPP. As necessary, redemptions are processed by MBOI in order to maintain required asset allocations and to provide liquidity for retirement benefits. The fair values of the investments in this category have been determined using the Net Asset Value (NAV) per share (or its equivalent) of the investment.

Short Term Investment Pool (STIP)

STIP is an external investment pool managed and administered under the direction of MBOI as statutorily authorized by the Unified Investment Program. It is a commingled pool for investment purposes and participant requested redemptions from the pool are redeemed the next business day. The fair values of the investments in this category have been determined using the NAV per share (or its equivalent) of the investment.

Refer to the fair value measurement note disclosures within MBOI's annual financial statements for the underlying investments within the fair value hierarchy. The hierarchy is no longer specific to pools. MBOI displays the hierarchy in the aggregate for all investment pools.

Investments Measured at Fair Value

Investments	6/30/2022	Fair Value Measurements Using "Quoted Prices in Active Markets for Identical Assets (Level 1)"	"Significant Other Observable Inputs (Level 2)"	"Significant Unobservable (Level 3)"
Total Investments by fair value level	$ -	$ -	$ -	$ -
Investments measured at the NAV				
Consolidated Asset Pension Pool (CAPP)	4,645,886,890			
Short Term Investment Pool (STIP)	43,839,397			
Total investments measured at the NAV	**4,689,726,287**			

Investments Measured at Net Asset Value

Investments	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Consolidated Asset Pension Pool (CAPP)	4,645,886,890	-	Monthly	30 days
Short Term Investment Pool (STIP)	43,839,397	-	Daily	1 day
Total investments measured at the NAV	**$ 4,689,726,287**			

Investment Risks

The investment risks for the pooled investments that TRS participates in are described in the following paragraphs. Investments are administered by MBOI, for TRS, as part of the State of Montana's Unified Investment Program. The MBOI Board approves all Investment Policy Statements (IPS), including risk policies. MBOI's stand-alone financial statements detail the investment risks associated with the securities held by the pools.

Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of the counter-party to a transaction, the entity will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. Per policy, the MBOI's custodial bank must be rated, at a minimum, at the 6th highest investment grade rating by at least two Nationally Recognized Statistical Rating Organizations (NRSROs) on an annual basis.

As of June 30th, all the public securities as well as securities held by the separate public equity account managers were registered in the nominee name for the Montana Board of Investments and held in the possession of the MBOI's custodial bank. The equity index funds, securities held at the State's depository bank, real estate, mortgage, and loan investments were purchased and recorded in the MBOI's name. Commingled fund investments are registered in the name of the Montana Board of Investments. Therefore, the MBOI is not subject to custodial credit risk.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributable to the magnitude of any single investment per issuer name. Investments explicitly guaranteed by the U.S. Government are excluded from the concentration of credit risk requirement. Concentration of credit risk is addressed within all IPS's as set by the MBOI Board.

The STIP IPS limits concentration to credit risk exposure by limiting portfolio investment types to 3% in an issuer except for U.S. Treasury and U.S. Agency securities as well as any repurchase agreements with a financial institution.

Credit Risk

Credit risk is the risk that an issuer or other counter-party to an investment will not fulfill its obligation. Except for U.S. Government securities, CAPP's fixed income instruments have credit risk as measured by NRSRO ratings. Credit risk is contemplated for each individual portfolio in the IPS. Credit risk is managed by constraining portfolio purchases around investment grade NRSRO ratings as appropriate. The U.S. Government guarantees its securities directly or indirectly. Obligations of the U.S. Government or obligations explicitly guaranteed by the U.S. Government are not considered to have credit risk and do not require disclosure of credit risk.

As a matter of STIP investment policy, the MBOI's fixed income investment staff can only purchase securities from a pre-approved "Approved Issuer" list. By STIP policy, permitted money market investments include only SEC registered 2a-7 Institutional Money Market Funds that are considered "US Treasury" or "US Government" money market mutual funds according to the SEC regulations or short-term investment vehicle available through the custodial bank.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. Per MBOI policy, there are maximum restrictions that can be held on non-US securities in a foreign currency and only CAPP is allowed to have foreign currency exposure. According to the CAPP IPS, the Core Fixed Income Asset Class and Non-Core Asset Class sections have maximum restrictions that can be held. Currency exposures may be hedged, in a defensive manner, at the discretion of the active managers to preserve the U.S. dollar value of investment made.

TRS' position in CAPP is approximately 34.77% at June 30, 2022. The Montana BOI CAPP investments in EURO cash and securities had a fair value of approximately $235.7 million at June 30, 2022. The Montana BOI CAPP had cash and securities with a foreign currency value of approximately $1.010 billion at June 30, 2022.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. CAPP uses effective duration as a measure of interest rate risk for all fixed income portfolios and STIP uses the weighted average maturity.

According to the STIP investment policy, "the STIP portfolio will minimize interest rate risk by:

- Structuring the investment portfolio so securities mature to meet cash requirements for ongoing operations thereby normally avoiding the need to sell securities on the open market prior to maturity;
- Maintaining a dollar-weighted average portfolio maturity (WAM) of 120 days or less (for this purpose, the date to the next coupon reset date will be used for all floating or variable rate securities), and
- STIP will maintain a reserve account."

The TRS investments subject to credit and interest rate risk at June 30, 2022 are categorized in the following table:

Investment	Fair Value 6/30/22	Credit Quality Rating 6/30/22	Effective Duration / Weighted Average Maturity 6/30/22
CAPP	4,645,886,890	N/R	N/A
STIP	43,839,397	N/R	0.19 yrs or 68 days WAM

With the exception of the U.S. Government securities, the fixed income instruments have credit risk as measured by major credit rating services. Obligations of the U.S. Government or obligation explicitly guaranteed by the U.S. Government are not considered to have credit risk and do not require disclosure of credit quality. For a more complete picture of the interest rate risk associated with CAPP please see the MBOI financial statements and IPSs. Interest rate risk is addressed within all IPS's as set by the MBOI Board. CAPP and STIP investments have been rated by investment security type. However, CAPP as an external investment pool and STIP as an internal investment pool, have not been rated.

Securities Lending Activity

The MBOI is authorized by law to lend its securities and has contracted with the custodial bank, to lend the MBOI's securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. On any day, including June 30th, the markets may move in a positive or negative direction resulting in under or over collateralization. The custodial bank compensates for market movement by recalculating on the following business day to meet the collateralization requirements. The MBOI and the custodial bank split the earnings 85% and 15% respectively, on securities lending activities. The MBOI retains all rights and risks of ownership during the loan period. The custodial bank indemnifies the MBOI's credit risk exposure to the borrowers. The custodial bank does not have the ability to sell collateral securities unless the borrower defaults. Only CAPP participates in security lending. There were no failures by any borrowers to return or pay distributions thereon during the period that resulted in a declaration and notice of default of the borrower. There were no losses during the fiscal year resulting from a borrower default. As of June 30, 2022, no securities were recalled and not yet returned.

The MBOI has an established schedule with the custodial bank that identifies the minimum credit rating and margin requirements for each securities lending instrument.

Note C. Assets Used in Plan Operations

Assets Used in Plan Operations consist of the amounts shown in the following table as of June 30, 2022. Assets under $5,000 are expensed in the year purchased. Assets valued between $5,000-$500,000 or more are recorded at cost less straight-line depreciation/amortization over the estimated useful life of the asset. Capitalization thresholds are set forth in State of Montana accounting policy and vary by asset type between $5,000 and $500,000. TRS had no asset purchases that met the capitalization thresholds for the fiscal year ended June 30, 2022.

TRS completed Phase II of its upgrade to the pension administration system project (M-Trust) in FY 2017. The system upgrade was implemented on a modular basis with all modules completed by February 2017. In FY 2017 TRS initiated Phase III of the upgrade to the pension administration system project (M-Trust). The system upgrade was implemented on a modular basis with all modules completed by November 2019. The investments in Phase II and Phase III of the M-Trust project as of June 30, 2022 are shown below and on the Basic Financial Statements in the Intangible Assets less Accumulated Amortization line items.

In July 2019 TRS moved to a new location. As part of the move, construction costs were incurred at the new location to make the space fit TRS business needs. The investment in the leasehold improvements at June 30, 2022 are shown below and on the Basic Financial Statements as part of the Leasehold Improvements less Accumulated Depreciation line items.

Assets Used in Plan Operations	2022
Leasehold Improvements	$ 243,881
Less: Accumulated Depreciation	(87,100)
Equipment	16,286
Less: Accumulated Depreciation	(16,286)
Intangible Assets	4,287,347
Less: Accumulated Amortization	(3,703,795)
Intangible Right-to-Use Building	2,810,123
Less: Accumulated Depreciation	(165,301)
Net Other Assets	$ 3,385,155

New Accounting Pronouncement

GASB Statement No. 87, Leases, was issued in June 2017. The objective of this statement is to increase the usefulness of financial statements by establishing a single model for lease accounting based on the principle that leases are financings of the right to use an asset. Lessees will recognize a lease liability and an intangible right to use asset and lessors will recognize a lease receivable and a deferred inflow of resources. For TRS this standard went into effect for the period ending June 30, 2022.

Intangible Right-to-Use Lease Assets

TRS enters into contracts that convey control of the right to use an underlying asset for a period of time, as specified in the contract, in an exchange or exchange-like transaction. For eligible contracts with a term greater than 12 months, TRS records intangible right-to-use lease assets and a related lease liability at the commencement date of the lease. The Standard Lease liability, on the Statement of Fiduciary Net Position, represents TRS's obligation to make lease payments arising from the lease and are measured at the present value of expected lease payments over the term of the lease. The contract does not provide information about the discount rate implicit in the lease. Therefore, TRS has elected to use its incremental borrowing rate of 1.65% at commencement date July 1, 2021 to calculate the present value of the expected lease payments. The intangible right-to-use building lease asset, under Assets Used in Plan Operations on the Statement of Fiduciary Net Position, is based on the initial measure of the lease liability, plus any payments made to the lessor at or before the commencement of the lease term and certain direct costs. The State of Montana has adopted a capitalization threshold of $100,000 for intangible right-to-use lease assets. Intangible right-to-use lease assets are amortized over the term of the contract and the useful life of the underlying asset. Interest expense is recognized ratably over the contract term.

TRS negotiated a 19-year lease for office space in February 2019, at the location of 100 North Park Avenue, Helena, MT. The lease is payable monthly. The lease agreement contains a termination clause whereby TRS can terminate the lease for any reason after June 30, 2022, by providing 729 days (2 year) notice. TRS is not expected to terminate the lease and therefore, the lease liability and right-to-use asset include the entire lease period. The building lease expires on June 30, 2038. The lease provides for increases in future minimum annual rental payments based on an escalation scale of 3% per year. Since, these future increases are considered likely, they are included in the measurement of the lease liability.

The outstanding lease liability as of June 30, 2022 is $2,702,072. Total future minimum lease payments under the lease agreement are as follows:

Fiscal Year Ended June 30:	Principal	Interest	Total Lease Payments
2023	$ 110,451	$ 43,751	$ 154,202
2024	$ 116,948	$ 41,880	$ 158,828
2025	$ 123,694	$ 39,899	$ 163,593
2026	$ 130,695	$ 37,806	$ 168,501
2027	$ 137,962	$ 35,594	$ 173,556
2028-2032	$ 808,704	$ 104,371	$ 949,075
2033-2037	$ 1,035,509	$ 64,729	$ 1,100,238
2038	$ 238,109	$ 2,133	$ 240,242
Totals	$ 2,702,072	$ 406,165	$ 3,108,236

Note D. Net Pension Liability – TRS Plan Reporting

Net Pension Liability – TRS Plan

Fiscal Year Ending June 30, 2022		
Total Pension Liability	$	6,691,274,850
Fiduciary Net Position	$	4,724,449,484
Net Pension Liability	$	1,966,825,366
Ratio of Fiduciary Net Position to Total Pension Liability		70.61%

The net pension liability is the retirement system's total pension liability (TPL) determined in accordance with GASB No. 67 less the fiduciary net position (FNP). As of June 30, 2022, the TRS net pension liability is $1,966,825,366. July 1, 2022 is the date of the actuarial valuation upon which the TPL is based. Roll forward procedures were not used.

Actuarial valuation of the ongoing System involves estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The most recent experience study was performed in May of 2022 for the five year period ending July 1, 2021. The Schedule of Net Pension Liability presents multi-year trend information about whether the plan's fiduciary net position is increasing or decreasing over time relative to the total pension liability. This schedule is presented in the Required Supplementary Information section.

Summary of Actuarial Assumptions – TRS Plan

The TPL as of June 30, 2022, is based on the results of an actuarial valuation date of July 1, 2022. There were several significant assumptions and other inputs used to measure the total pension liability.

The actuarial assumptions used in the July 1, 2022 valuation were based on the results of the last actuarial experience study, dated May 3, 2022. Among those assumptions were the following:

Salary Increases*	3.50% to 9.00%
Investment Rate of Return**	7.30%
Price Inflation	2.75%
Growth in Membership	0.00%
Post-retirement Benefit Increases (Starting Three Years After Retirement) - Tier 1 members	1.50%
Post-retirement Benefit Increases (Starting Three Years After Retirement) - Tier 2 members	0.50%
Interest on Member Accounts	0.25%

**Total Wage Increases include 3.50% general wage increase assumption and a range of 0.00% to 5.50% merit and longevity increases based on years of service.*
***The Investment Rate of Return assumption increased from 7.06% at June 30, 2021 to 7.30% at June 30, 2022.*

Target Allocations – TRS Plan

Asset Class	Target Asset Allocation (a)	Long-Term Expected Real Rate of Return Arithmetic Basis (b)	Portfolio Long-Term Expected Rate of Return* (a) x (b)
Domestic Equity	30.00%	5.90%	1.77%
International Equity	17.00%	7.14%	1.21%
Private Investments	15.00%	9.13%	1.37%
Real Assets	5.00%	4.03%	0.20%
Real Estate	9.00%	5.41%	0.49%
Core Fixed Income	15.00%	1.14%	0.17%
Non-Core Fixed Income	6.00%	3.02%	0.18%
Cash	3.00%	(0.33%)	(0.01%)
Totals	100.00%		5.38%
		Inflation	2.75%
		Portfolio long-term expected rate of return	*8.13%*

**The portfolio long-term expected rate of return above of 8.13% differs from the total TRS long-term rate of return assumption of 7.30% (Discount Rate). The assumed rate of 7.30% is comprised of a 2.75% inflation rate and an expected long-term real rate of return of 4.55%.*

The long-term expected rate of return on pension plan investments of 7.30% is reviewed as part of regular experience studies prepared for the System about every five years. The current long-term rate of return is based on analysis in the experience study report dated May 3, 2022. Several factors are considered in evaluating the long-term rate of return assumption including long-term historical data, estimates inherent in current market data, and an analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation), along with estimates of variability and correlations for each asset class. These ranges were combined to develop the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The assumption is intended to be a long-term assumption (30 to 50 years) and is not expected to change absent a significant change in the asset allocation, a change in the underlying inflation assumption, or a fundamental change in the market that alters expected returns in future years.

The discount rate (long-term rate of return assumption) used to measure the total pension liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that contributions from participating plan members, employers, and non-employer contributing entities will be made based on the Board's funding policy, which establishes the contractually required rates under Montana State Code. These rates are shown in the following tables. In addition to these contributions the State general fund will contribute $25 million annually to the System payable July 1st of each year. Based on those assumptions, the System's fiduciary net position was projected to be adequate to make all the projected future benefit payments of current plan members through the year 2123. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability. No municipal bond rate was used in determining the discount rate.

History of Legislated Contributions – School Districts, Community Colleges, Counties, and Education Cooperatives by Percent of Covered Payroll

	Members	Employers	General Fund	Total
Prior to July 1, 2007	7.15%	7.47%	0.11%	14.73%
July 1, 2007 to June 30, 2009	7.15%	7.47%	2.11%	16.73%
July 1, 2009 to June 30, 2013	7.15%	7.47%	2.49%	17.11%
July 1, 2013 to June 30, 2014	8.15%	8.47%	2.49%	19.11%
July 1, 2014 to June 30, 2015	8.15%	8.57%	2.49%	19.21%
July 1, 2015 to June 30, 2016	8.15%	8.67%	2.49%	19.31%
July 1, 2016 to June 30, 2017	8.15%	8.77%	2.49%	19.41%

History of Legislated Contributions – School Districts, Community Colleges, Counties, and Education Cooperatives by Percent of Covered Payroll

	Members	Employers	General Fund	Total
July 1, 2017 to June 30, 2018	8.15%	8.87%	2.49%	19.51%
July 1, 2018 to June 30, 2019	8.15%	8.97%	2.49%	19.61%
July 1, 2019 to June 30, 2020	8.15%	9.07%	2.49%	19.71%
July 1, 2020 to June 30, 2021	8.15%	9.17%	2.49%	19.81%
July 1, 2021 to June 30, 2022	8.15%	9.27%	2.49%	19.91%
July 1, 2022 to June 30, 2023	8.15%	9.37%	2.49%	20.01%
July 1, 2023 to June 30, 2024	8.15%	9.47%	2.49%	20.11%

State and University Employers

	Members	Employers	General Fund	Total
Prior to July 1, 2007	7.15%	7.47%	0.11%	14.73%
July 1, 2007 to June 30, 2009	7.15%	9.47%	0.11%	16.73%
July 1, 2009 to June 30, 2013	7.15%	9.85%	0.11%	17.11%
July 1, 2013 to June 30, 2014	8.15%	10.85%	0.11%	19.11%
July 1, 2014 to June 30, 2015	8.15%	10.95%	0.11%	19.21%
July 1, 2015 to June 30, 2016	8.15%	11.05%	0.11%	19.31%
July 1, 2016 to June 30, 2017	8.15%	11.15%	0.11%	19.41%
July 1, 2017 to June 30, 2018	8.15%	11.25%	0.11%	19.51%
July 1, 2018 to June 30, 2019	8.15%	11.35%	0.11%	19.61%
July 1, 2019 to June 30, 2020	8.15%	11.45%	0.11%	19.71%
July 1, 2020 to June 30, 2021	8.15%	11.55%	0.11%	19.81%
July 1, 2021 to June 30, 2022	8.15%	11.65%	0.11%	19.91%
July 1, 2022 to June 30, 2023	8.15%	11.75%	0.11%	20.01%
July 1, 2023 to June 30, 2024	8.15%	11.85%	0.11%	20.11%

Pursuant to §19-20-609, MCA, the employer contribution rate will increase by 0.10% each year beginning July 1, 2014, through fiscal year 2024.

Sensitivity Analysis – TRS Plan

	1.0% Decrease (6.30%)	Current Discount Rate	1.0% Increase (8.30%)
Net Pension Liability	$ 2,747,352,933	$ 1,966,825,366	$ 1,313,622,251

In accordance with GASB 67 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the above table presents the net pension liability calculated using the discount rate of 7.30%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.30%) or 1.00% higher (8.30%) than the current rate.

Schedule of Investment Returns – TRS Plan

TRS Plan Schedule of Investment Returns

	2022
Annual Money Weighted Rate Return, Net of Investment Expense	(4.14)%

The annual money-weighted rate of return on pension plan investments expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested.

Note E. Net Pension Liability – Employer Reporting

In accordance with GASB Statement 68, Accounting and Financial Reporting for Pensions, TRS is required to recognize and report certain amounts associated with their participation in the Public Employees' Retirement System (PERS). Statement 68 includes requirements to record and report employers' proportionate share of the collective Net Pension Liability, Pension Expense, Deferred Inflows and Deferred Outflows of resources associated with pensions.

In accordance with Statement 68, the State of Montana has a funding situation that is Special Funding whereby the State general fund provides statutorily required contributions to the PERS plan. Due to the existence of a special funding situation, TRS is required to report the portion of the State of Montana's proportionate share of the collective Net Pension Liability that is associated with TRS. The following table displays the amounts and the percentages of Net Pension Liability for the fiscal years ended June 30, 2022 and June 30, 2021 (reporting dates).

Net Pension Liability – PERS Plan

	Net Pension Liability as of 6/30/22	Net Pension Liability as of 6/30/21	Percent of Collective NPL as 6/30/22	Percent of Collective NPL as 6/30/21	Change in Percent of Collective NPL
TRS Proportionate Share	$ 1,394,112	$ 1,885,625	0.0769%	0.0714%	0.0054%
State of Montana Proportionate Share Associated with TRS	$ 394,640	$ 571,643	0.0218%	0.0217%	0.0001%
Total	$ 1,788,752	$ 2,457,268	0.0987%	0.0931%	0.0055%

At June 30, 2022, TRS recorded a liability of $1,394,112 for its proportionate share of the Net Pension Liability. The Net Pension Liability was measured as of June 30, 2021, and the Total Pension Liability (TPL) used to calculate the Net Pension Liability was determined by an actuarial valuation as of June 30, 2020, with update procedures to roll forward the TPL to the measurement date to June 30, 2021. The roll forward procedure uses a calculation that adds the annual normal cost (also called the service cost), subtracts the actual benefit payments and refunds for the plan year, and then applies the expected investment rate of return for the year. The roll forward procedure will include the effects of any assumption changes and legislative changes. The update procedures are in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board.

TRS' proportion of the Net Pension Liability was based on the employer contributions received by PERS during the measurement period July 1, 2020 through June 30, 2021, relative to the total employer contributions received from all of PERS' participating employers. At June 30, 2022, the TRS' proportion was 0.0769 percent.

Summary of Actuarial Assumptions – PERS Plan

Changes in actuarial assumptions and methods:

The following changes in assumptions or other inputs were made that affected the measurement of the TPL.

- The discount rate was lowered from 7.34% to 7.06%
- The investment rate of return was lowered from 7.34% to 7.06%

Changes in benefit terms:

There have been no changes in benefit terms since the previous measurement date.

Changes in proportionate share:

There were no changes between the measurement date of the collective Net Pension Liability and TRS's reporting date that are expected to have a significant effect on the TRS's proportionate share percentage of the collective NPL.

Pension Expense – PERS Plan

	Pension Expense as of 6/30/22	
TRS Proportionate Share	$	101,659
Proportionate Share of Montana State General Fund Appropriation Associated with TRS	$	36,909
Total	$	138,568

At June 30, 2022, TRS recognized a Pension Expense of 138,568 for its proportionate share of the PERS' pension expense. TRS also recognized grant revenue of $36,909 for the support provided by the State of Montana for the proportionate share of the general fund contributions made to PERS that are associated with TRS.

Deferred Inflows and Outflows – PERS Plan

At June 30, 2022, TRS reported its proportionate share of deferred outflows of resources and deferred inflows of resources related to TRS from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences Between Expected and Actual Economic Experience	$	14,878	$	10,092
Changes in Actuarial Assumptions	$	206,494	$	0
Difference Between Projected and Actual Investment Earnings	$	0	$	564,769
Changes in Proportion and Differences Between TRS Contributions and Proportionate Share of Contributions	$	93,034	$	0
*Contributions Paid to PERS Subsequent to the Measurement Date – FY 2022 Contributions	$	121,361	$	0
Total	$	435,767	$	574,861

**Amounts reported as deferred outflows of resources related to pensions resulting from TRS's contributions in FY 2022 subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2023. Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:*

Fiscal Year Ended June 30:	Amount Recognized as an Increase (or Decrease) to Pension Expense in Future Years	
2023	$	58,812
2024	$	(2,573)
2025	$	(136,406)
2026	$	(180,288)
Thereafter		–

Plan Description – PERS Plan

The PERS-Defined Benefit Retirement Plan (DBRP), administered by the Montana Public Employee Retirement Administration (MPERA), is a multiple-employer, cost-sharing plan established July 1, 1945, and governed by Title 19, chapters 2 and 3, MCA. This plan provides retirement benefits to covered employees of the State, local governments, certain employees of the Montana University System, and school districts.

All new members are initially members of the PERS-DBRP and have a 12-month window during which they may choose to remain in the PERS-DBRP or join the PERS-Defined Contribution Retirement Plan (PERS-DCRP) by filing an irrevocable election. Members may not be members of both the defined contribution and defined benefit retirement plans. All new members from the universities also have a third option to join the university system's Montana University System Retirement

Program (MUS-RP). For members that choose to join the PERS-DCRP or the MUS-RP, a percentage of the employer contributions will be used to pay down the liability of the PERS-DBRP.

The PERS-DBRP provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are established by state law and can only be amended by the Legislature. Benefits are based on eligibility, years of service, and highest average compensation. Member rights are vested after five years of service.

Summary of Benefits – PERS Plan

Eligibility for Benefit

Service retirement:

Hired prior to July 1, 2011:

- Age 60, 5 years of membership service;
- Age 65, regardless of membership service, or
- Any age, 30 years of membership service.

Hired on or after July 1, 2011:

- Age 65, 5 years of membership service;
- Age 70, regardless of membership service.

For PERS-DCRP Plan, members are eligible for benefit at termination of service.

Early retirement, actuarially reduced:

Hired prior to July 1, 2011:

- Age 50, 5 years of membership service, or
- Any age, 25 years of membership service.

Hired on or after July 1, 2011:

- Age 55, 5 years of membership service.

Vesting

Five years of membership service.

For PERS-DCRP Plan, members are vested immediately for participant's contributions and attributable income. Member's must have 5 years of membership to become eligible for the employer's contributions to individual accounts and attributable income.

Member's Highest Average Compensation (HAC)

Hired prior to July 1, 2011:

- Highest average compensation during any consecutive 36 months;

Hired on or after July 1, 2011:

- Highest average compensation during any consecutive 60 months;

Hired on or after July 1, 2013:

- 110% annual cap on compensation considered as part of a member's highest average compensation.

Monthly Benefit Formula

Members hired prior to July 1, 2011:

Less than 25 years of membership service:

- 1.785% of HAC per year of service credit;

25 years of membership service or more:

- 2% of HAC per year of service credit.

Members hired on or after July 1, 2011:

Less than 10 years of membership service:

- 1.5% of HAC per year of service credit.

10 years or more, but less than 30 years of membership service:

- 1.785% of HAC per year of service credit.

30 years or more of membership service:

- 2% of HAC per year of service credit.

For PERS-DCRP, Plan member's benefit depends entirely on vesting and individual account balance. Various payout options are available, including: taxable lump-sum payouts, periodic payments, per member instructions and IRS permitted rollovers.

Guaranteed Annual Benefit Adjustment (GABA)

After the member has completed 12 full months of retirement, the member's benefit increases by the applicable percentage (provided below) each January, inclusive of other adjustments to the member's benefit.

- GABA is 3% for members hired prior to July 1, 2007.
- GABA is 1.5% for members hired on or after July 1, 2007.
- Members hired on or after July 1, 2013:
- (a) 1.5% for each year PERS is funded at or above 90%;
- (b) 1.5% reduced by 0.1% for each 2.0% PERS is funded below 90%; and
- (c) 0% whenever the amortization period for PERS is 40 years or more.

Overview of Contributions – PERS Plan

Rates are specified by state law for periodic member and employer contributions and are a percentage of the member's compensation. Contributions are deducted from each member's salary and remitted by participating employers. The State legislature has the authority to establish and amend contribution rates to the plan.

1. Member contributions to the system of 7.9% are temporary and will be decreased to 6.9% on January 1, following actuary valuation results that show the amortization period has dropped below 25 years and would remain below 25 years following the reduction of both the additional employer and additional member contribution rates.

2. Employer contributions to the system:

   a. Effective July 1, 2014, following the 2013 Legislative Session, PERS-employer contributions increase an additional 0.1% a year and will continue over 10 years through 2024. The additional employer contributions including the 0.27% added in 2007 and 2009, will terminate on January 1, following an actuary valuation that shows the amortization period of the PERS-DBRP has dropped below 25 years and remains below the 25 years following the reduction of both the additional employer and member contributions rates.

b. Effective July 1, 2013, employers are required to make contributions on working retirees' compensation. Member contributions for working retirees are not required.

3. Non-employer Contributions:

   a. Special Funding

      i. The State contributes 0.1% of members' compensation on behalf of local government entities.

      ii. The State contributes 0.37% of members' compensation on behalf of school district entities.

      iii. The state contributed a Statutory Appropriation from the General Fund of $34,290,660.

Stand-Alone Statements – PERS Plan

The PERS financial information is reported in the Public Employees' Retirement Board's (PERB) Annual Comprehensive Financial Report (ACFR) for the fiscal year ended. It is available from the PERB at 100 North Park Ave, PO Box 200131, Helena MT 59620-0131, 406-444-3154.

ACFR information including PERS stand-alone financial statements and the GASB 68 report can be found on their website at mpera.mt.gov.

The latest actuarial valuation and experience study can also be found at their website at mpera.mt.gov.

Actuarial Assumptions – PERS Plan

The Total Pension Liability measured as of June 30, 2021 is based on the results of an actuarial valuation date of June 30, 2020 with update procedures to roll forward the TPL to June 30, 2021. There were several significant assumptions and other inputs used to measure the TPL. The actuarial assumptions used in the valuation and roll-forward procedures were based on the results of the last actuarial experience study, dated May 2017, for the six-year period July 1, 2010 to June 30, 2016. Among those assumptions were the following:

General Wage Growth*	3.50%
*Includes Inflation at	2.40%
Admin Expense as % of Payroll	0.28%
Merit Wage Increases	0% to 4.80%
Investment Return	7.06%
Post-retirement Benefit Increases	

After the member has completed 12 full months of retirement, the member's benefit increases by the applicable percentage (provided below) each January, inclusive of other adjustments to the member's benefit.

- GABA is 3.0% for members hired prior to July 1, 2007.
- GABA is 1.5% for members hired on or after July 1, 2007
- GABA is 1.5% for members hired on or after July 1, 2013 for each year PERS is funded at or above 90%. The 1.5% is reduced by 0.1% for each 2.0% PERS is funded below 90%
- GABA is 0.0% for members hired on or after July 1, 2013 for each year the PERS amortization period is 40 years or more

Mortality assumptions among contributing members, service retired members and beneficiaries based on RP 2000 Combined Employee and Annuitant Mortality Tables projected to 2020 with scale BB, males set back 1 year.

Mortality assumptions among disabled members are based on RP 2000 Combined Mortality Tables with no projections.

Discount Rate – PERS Plan

The discount rate used to measure the Total Pension Liability was 7.06%. The projection of cash flows used to determine the discount rate assumed that contributions from participating plan members, employers, and non-employer contributing entities will be made based on the PERS Board's funding policy, which establishes the contractually required rates under Montana Code Annotated. The State contributes 0.10% of salaries for local governments and 0.37% for school districts.

In addition, the State contributes a statutory appropriation from the general fund. Based on those assumptions, the PERS' fiduciary net position was projected to be adequate to make all the projected future benefit payments of current plan members through the year 2126. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability. No municipal bond rate was incorporated in the discount rate.

Target Allocations – PERS Plan

Asset Class	Target Asset Allocation	Long- Term Expected Real Rate of Return Arithmetic Basis
Cash Equivalents	0.0%	(0.33%)
Domestic Equity	30.0%	5.90%
International Equity	17.0%	7.14%
Private Investments	15.0%	9.13%
Real Assets	5.0%	4.03%
Real Estate	9.0%	5.41%
Core Fixed Income	15.0%	1.14%
Non-Core Fixed Income	6.0%	3.02%
Total	100.0%	

The long-term expected return on pension plan assets is reviewed as part of the regular experience studies prepared for the Plan. The long-term rate of return as of June 30, 2021 was calculated using the average long-term capital market assumptions published in the Survey of Capital Market Assumptions 2021 Edition by Horizon Actuarial Service, LLC, yielding a median real rate of return of 4.66%. The assumed inflation is based on the intermediate inflation of 2.40% in the 2022 OASDI Trustees Report by the Chief Actuary for Social Security to produce 75-year cost projections. Combining these two results yields a nominal return of 7.06%. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of June 30, 2021 are summarized in the Target Allocations – PERS Plan table above.

Sensitivity Analysis – PERS Plan

	1.0% Decrease (6.06%)	Current Discount Rate (7.06%)	1.0% Increase (8.06%)
TRS' Proportion of Net Pension Liability	$ 2,212,935	$ 1,394,112	$ 707,309

In accordance with GASB 68 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the above table presents the net pension liability calculated using the discount rate of 7.06%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.06%) or 1.00% higher (8.06%) than the current rate.

Summary of Significant Accounting Policies – PERS Plan

The Montana Public Employee Retirement Administration (MPERA) prepares its financial statements using the accrual basis of accounting. For the purposes of measuring the Net Pension Liability, deferred inflows of resources and deferred outflows of resources related to pensions, Pension Expense, information about the fiduciary net position, and additions to/ deductions from fiduciary net position have been determined on the same accrual basis as they are reported by MPERA. For this purpose, member contributions are recognized in the period in which contributions are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Revenues are recognized in the accounting period they are earned and become measurable. Benefit payments and refunds are recognized in the accounting period when due and payable in accordance with the benefit terms. Expenses are recognized in the period incurred. Investments are reported at fair value. MPERA adheres to all applicable Governmental Accounting Standards Board (GASB) statements.

Defined Contribution Plan – PERS Plan

TRS contributed to the state of Montana Public Employee Retirement System Defined Contribution Retirement Plan (PERS-DCRP) for TRS employees that have elected the DCRP. The PERS-DCRP plan is administered by MPERA.

All new PERS members are initially members of the PERS-DBRP and have a 12-month window during which they may choose to remain in the PERS-DBRP or join the PERS-DCRP by filing an irrevocable election. Members may not be participants of both the defined benefit and defined contribution retirement plans.

Member and employer contribution rates are specified by state law and are a percentage of the member's compensation. Contributions are deducted from each member's salary and remitted by participating employers. The Montana Legislature has the authority to establish and amend contribution rates. For the year ended June 30, 2022, member contributions were 7.9% of gross compensation and Employers contributed 8.97% of gross compensation on behalf of DCRP members.

Benefits are dependent upon eligibility and individual account balances. Participants are vested immediately in their own contributions and attributable income. Participants are vested after 5 years of membership service for the employer's contributions to individual accounts and the attributable income. Non-vested contributions are forfeited upon termination of employment per 19-3-2117(5), MCA. Such forfeitures are used to cover the administrative expenses of the PERS-DCRP.

At the plan level for the measurement period ended June 30, 2021, TRS did not recognize any net pension liability or pension expense for the defined contribution plan. Plan level non-vested forfeitures for the 340 employers that have participants in the PERS-DCRP totaled $1,103,889.

Note F. TRS Plan Contributions

The TRS funding policy provides for monthly employee and employer contributions at rates specified by state law. Plan members, for the fiscal year ending June 30, 2022, were required to contribute 8.15% of their earned compensation and the employer contribution rate for school district, education cooperative, county, and community college employers for the fiscal year ending June 30, 2022 was 9.27% of earned compensation. For state agency and university system employers, the employer contribution rate was 11.65% of members' earned compensation.

The State's general fund contributed an additional 2.38% of earned compensation for TRS members employed at school districts, community colleges, educational cooperatives, and counties in Montana. In addition, the State's general fund contributed 0.11% of earned compensation for all TRS members. The State's general fund also contributes a statutory supplemental contribution of $25 million to TRS due on July 1st each year. Each employer in the Montana University System contributed 4.72% of earned compensation for all employees participating in the Montana University System Retirement Program (MUS-RP).

The TRS actuary determines the actuarial implications of the funding requirement in annual actuarial valuations. The actuarial method used to determine the implications of the statutory funding level is the entry age actuarial cost method, with both normal cost and amortization of the accrued liability determined as a level percentage of earned compensation. Contribution rates consist of an amount for normal cost, the estimated amount necessary to finance benefits earned by the members during the current year, and an amount for amortization of the unfunded actuarial accrued liability.

Contributions made by employers and members were in accordance with actuarially computed funding requirements. Information with regard to contributions to the System, for the year ended June 30, 2022, is indicated in the Required Supplemental Information, Schedule of Employer Contributions.

Note G. Other Post-Employment Benefits

Plan Description

TRS through the State of Montana provides optional post-employment healthcare benefits in accordance with Section 2-18-704, MCA to the following employees and dependents who elect to continue coverage and pay administratively established contributions: (1) employees and dependents who retire under applicable retirement provisions and (2) surviving dependents of deceased employees. Medical, dental, and vision benefits are available through this plan.

In accordance with GASB Statement No. 75, Accounting and Financial Reporting for Post Employment Benefits Other than Pensions, TRS is required to recognize and report certain amounts associated with their employees and dependents that are eligible to receive health care through the State Group Benefits Plan administered by the Montana Department of Administration. Statement 75 includes requirements to record and report employers' proportionate share of the collective Total OPEB Liability, OPEB Expense, and Deferred Outflows and Deferred Inflows of Resources associated with OPEB.

The State of Montana OPEB plan is not administered through a trust; as such, there are no plan assets accumulated to offset the total OPEB liability. The State of Montana OPEB plan is reported as a single-employer plan.

The State of Montana pays for post-employment healthcare benefits on a pay-as-you-go basis. Section 2-18-811, MCA gives authority for establishing and amending the funding policy to the Department of Administration for the State group health insurance plan. Plan coverage is on a calendar year basis. For GASB Statement No. 75 reporting, the State Group Benefits Plan is considered a single-employer plan.

As of December 31, 2020, the State Plan's administratively established retiree medical contributions vary between $457 and $2,172 per month depending on the medical plan selected, family coverage, and Medicare eligibility. Administratively established dental contributions vary between $41.10 and $70 and vision hardware contributions vary between $7.64 and $22.26 depending on the coverage selected. The plan is financed on a pay-as-you-go basis. Therefore, there are no investment objectives of the OPEB plan.

The following estimates were prepared based on an actuarial valuation prepared as of the year ending December 31, 2020 for the Department of Administration, with update procedures to roll forward the OPEB amounts to the measurement date of March 31, 2022. The resulting State of Montana Actuarial Valuation of Other Post-Employment Benefits (OPEB) contains the TRS data and is available through the following address.

Montana Department of Administration
State Accounting Division
Room 255, Mitchell Bldg
125 N Roberts Street
PO Box 200102
Helena, MT 59620-0102

Total OPEB Liability and Changes in Total OPEB Liability

TRS' Total OPEB Liability as of June 30, 2022 was $235,221. TRS proportionate share of the collective Total OPEB Liability was 0.19026%. The basis on which TRS' proportionate share was calculated was by taking TRS calculated OPEB Liability as a percentage of the Total OPEB Liability for the State of Montana.

The following table presents the Changes in the Total OPEB Liability:

Schedule of Changes in Total OPEB Liability

		TRS
Balance as of 06/30/21	$	280,653
Changes for the Year:		
Service Cost		14,573
Interest		6,632
Diff b/w Expected and Actual Experience		0
Changes of Assumptions and Other Inputs		(71,013)
Benefit Payments (Contributions)		4,376
Net Changes in Total OPEB Liability		(45,432)
Balance as of 06/30/22	$	235,221

Actuarial Assumptions and Other Inputs

The Total OPEB Liability in the latest actuarial valuation dated December 31, 2020, the following assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

- Actuarial valuation date: December 31, 2020
- Experience Study Period: January 1, 2018 through December 31, 2020
- Actuarial measurement date*: March 31, 2022
- Actuarial cost method: Entry age normal funding method
- Actuarial Assumptions:
  - Discount rate: 3.31%
  - Projected payroll increases: 2.50%
  - Participation: Future retirees 40.00%, Future eligible spouses 70.00%
  - Marital status at retirement: 70.00%

** Update procedures were used to roll forward the total OPEB liability to the measurement date March 31, 2022.*

Mortality – Healthy: For the OPEB Plan, healthy mortality is assumed to follow the RP-2000 Healthy Annuitant Mortality Table for ages 50 and above and the RP-2000 Combined Healthy Annuitant Mortality Table for ages below 50, set back four years for males, set back two years for females, with mortality improvements projected by Scale BB to 2018. For all other groups, healthy mortality is assumed to follow the RP-2000 Combined Mortality Table with improvements projected by Scale BB to 2020, set back one year for males.

Mortality – Disabled: For the OPEB Plan, disabled mortality is assumed to follow the RP-2000 Disabled Mortality Table, set forward one year for males and set forward five years for females, with mortality improvements projected by Scale BB to 2018. For all other groups, disabled mortality is assumed to follow the RP-2000 Combined Mortality Table with no projections.

Changes in actuarial assumptions and methods since last measurement date:

- Changes in actuarial assumptions include an increase in the interest/discount rate from 2.23% to 3.31%.

Changes in benefit terms since last measurement date:

- None.

Sensitivity Analysis

Sensitivity of the total OPEB liability to changes in the discount rate:

The following table presents the total OPEB liability of TRS if it were calculated using a discount rate that is 1.00% lower (2.31%) or 1.00% higher (4.31%) than the current discount rate (3.31%):

Discount Rate	1% Decrease (2.31%)	Discount Rate (3.31%)	1% Increase (4.31%)
Total OPEB Liability	$291,178	$235,221	$192,718

Sensitivity of the total OPEB liability to changes in the healthcare cost trend rates:

The following table presents the total OPEB liability of TRS if it were calculated using healthcare cost trend rates that are 1.00% lower (5.0%) or 1.00% higher (7.0%) than the current healthcare cost trend rate (6.0%):

Healthcare Rate	1% Decrease (5.00%)	Healthcare Rate (6.00%)	1% Increase (7.00%)
Total OPEB Liability	$185,195	$235,221	$304,481

OPEB Expense

For the year ended June 30, 2022, TRS recognized an OPEB expense of $25,401.

Deferred Outflow of Resources and Deferred Inflows of Resources Related to OPEB

At June 30, 2022, TRS recorded deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflow of Resources	Deferred Inflow of Resources
Difference between expected and actual experience	$6,016	$56,734
Changes of assumptions of other inputs	$214,426	$101,755
Prior Period Amortization of outflows/inflows	($19,852)	($15,398)
FY 22 Amortization of outflows/inflows	($16,827)	($12,631)
*Benefit Payments associated with transactions subsequent to the measurement date of the total OPEB liability	$0	$0
Total	$183,763	$130,460

**Amounts reported as deferred outflows of resources related to OPEB resulting from TRS's Benefit Payments in FY 2022 (April 1, 2022 through June 30, 2022) subsequent to the measurement date will be recognized as a reduction of the net OPEB liability in the year ended June 30, 2023. Other amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in OPEB expense as follows:*

Fiscal Year	Amount recognized as Increase or (Decrease) to OPEB Expense
2023	$4,196
2024	$4,196
2025	$4,196
2026	$4,196
2027	$4,196
Thereafter	$32,323

Note H. Pending Litigation

As of June 30, 2022, TRS had no pending litigation that would significantly affect the information presented in this financial report.

TEACHERS' RETIREMENT SYSTEM
A COMPONENT UNIT OF THE STATE OF MONTANA
REQUIRED SUPPLEMENTARY INFORMATION AND NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
FISCAL YEAR ENDED JUNE 30, 2022

Schedule of Changes in the Net Pension Liability – TRS Plan

	2022*	2021*	2020*	2019*	2018*
Total Pension Liability					
Service Cost	$ 96,144,734	$ 81,016,509	$ 76,334,643	$ 75,236,616	$ 76,009,950
Interest	463,209,558	461,973,793	452,258,006	441,958,241	428,866,673
Benefit Changes			-	-	-
Difference Between Expected and Actual Experience	21,772,825	21,712,947	22,424,700	6,775,269	14,571,084
Changes of Assumptions	(238,551,692)	200,170,596	107,293,117	(6,059,430)	206,321,172
Benefit Payments	(414,346,628)	(399,897,777)	(384,396,941)	(367,779,905)	(352,854,025)
Refunds of Contributions	(10,338,308)	(8,889,937)	(5,171,751)	(6,008,447)	(5,322,642)
Net Change in Total Liability	(82,109,511)	356,086,131	268,741,774	144,122,344	367,592,212
Total Pension Liability Beginning	$ 6,773,384,361	$ 6,417,298,230	$ 6,148,556,456	$ 6,004,434,112	$ 5,636,841,900
Total Pension Liability Ending (a)	$ 6,691,274,850	$ 6,773,384,361	$ 6,417,298,230	$ 6,148,556,456	$ 6,004,434,112
Fiduciary Net Position					
Contributions - Employer	$ 109,672,148	$ 103,219,072	$ 102,420,318	$ 97,303,048	$ 94,233,469
Contributions - Member	85,736,884	81,120,904	80,194,548	78,150,923	74,594,333
Contributions - Non-Employer Contributing Entities	47,999,525	47,020,904	45,948,388	45,495,334	45,005,672
Miscellaneous Income	36,921	974,981	51,927	31,040	31,829
Net Investment Income	(207,441,090)	1,129,751,837	112,588,645	227,892,287	343,720,833
Benefit Payments	(414,346,628)	(399,897,777)	(384,396,941)	(367,779,905)	(352,854,025)
Administrative Expenses	(3,555,107)	(3,936,633)	(3,767,693)	(2,947,109)	(2,849,527)
Refund of Contributions	(10,338,308)	(8,889,937)	(5,171,751)	(6,008,447)	(5,322,642)
Other	(163,969)	(353,364)	(204,156)	(174,476)	(157,777)
Net Change in Fiduciary Net Position	(392,399,624)	949,009,550	(52,336,715)	71,962,695	197,402,165
Fiduciary Net Position - Beginning	5,116,849,108	4,167,839,558	4,220,285,752	4,148,324,206	3,950,761,443
Prior Period Adjustment	–	–	(109,479)	(1,149)	160,598
Fiduciary Net Position - Ending (b)	$ 4,724,449,484	$ 5,116,849,108	$ 4,167,839,558	$ 4,220,285,752	$ 4,148,324,206
Net Pension Liability - Ending (a - b)	$ 1,966,825,366	$ 1,656,535,253	$ 2,249,458,672	$ 1,928,270,704	$ 1,856,109,906

	2017*	2016*	2015*	2014*
Total Pension Liability				
Service Cost	$ 71,429,117	$ 73,530,938	$ 73,820,438	$ 77,006,174
Interest	417,307,148	402,339,969	390,555,879	373,456,442
Benefit Changes	-	-	-	-
Difference Between Expected and Actual Experience	5,420,919	(5,245,998)	9,660,152	20,297,029
Changes of Assumptions	-	(12,445,656)	(4,670,553)	46,502,421
Benefit Payments	(333,633,717)	(320,810,259)	(303,675,300)	(285,182,358)
Refunds of Contributions	(7,355,344)	(5,086,816)	(5,368,359)	(4,788,688)
Net Change in Total Liability	153,168,123	132,282,178	160,322,257	227,291,020
Total Pension Liability Beginning	$ 5,483,673,777	$ 5,351,391,599	$ 5,191,069,342	$ 4,963,778,322
Total Pension Liability Ending (a)	$ 5,636,841,900	$ 5,483,673,777	$ 5,351,391,599	$ 5,191,069,342
Fiduciary Net Position				
Contributions - Employer	$ 91,853,678	$ 88,643,646	$ 87,290,863	$ 83,439,612
Contributions - Member	74,253,046	72,740,665	72,215,797	70,468,354
Contributions - Non-Employer Contributing Entities	44,414,109	43,902,606	43,389,534	64,923,320
Miscellaneous Income	27,504	29,123	27,297	6,000
Net Investment Income	427,042,359	71,487,661	165,684,953	540,277,362
Benefit Payments	(333,633,717)	(320,810,259)	(303,675,300)	(285,182,358)
Administrative Expenses	(2,459,458)	(2,318,818)	(2,035,081)	(2,022,636)
Refund of Contributions	(7,355,344)	(5,086,816)	(5,368,359)	(4,788,688)
Other	(211,532)	(142,849)	(140,631)	(58,073)
Net Change in Fiduciary Net Position	293,930,645	(51,555,041)	57,389,073	467,062,894
Fiduciary Net Position - Beginning	3,656,830,798	3,708,385,838	3,652,220,265	3,185,064,406
Prior Period Adjustment	–	–	(1,223,501)	92,965
Fiduciary Net Position - Ending (b)	$ 3,950,761,443	$ 3,656,830,798	$ 3,708,385,838	$ 3,652,220,265
Net Pension Liability - Ending (a - b)	$ 1,686,080,457	$ 1,826,842,979	$ 1,643,005,761	$ 1,538,849,077

**Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Note to RSI - Schedule of Changes in the Net Pension Liability and Schedule of Net Pension Liability

The TPL contained in these schedules was provided by the System's actuary, Cavanaugh Macdonald Consulting, LLC. The TPL is measured as the TPL less the amount of the FNP of the Retirement System. Prior to the fiscal year ended June 30, 2018, the Net Investment Income, Net Change in Fiduciary Net Position, and Prior Period Adjustment items in the Schedule of Changes in Fiduciary Net Position matched the Statement of Changes in Net position. However, there was an ACFR only adjustment in FY2018 that was issued by the MBOI after the Schedule of Changes in Fiduciary Net Position above had been complete. The adjustment affected the Net Investment Income, Net Change in Fiduciary Net Position, and Prior Period Adjustment items by $56,880 (the amount of the ACFR only adjustment).

Schedule of the Net Pension Liability – TRS Plan

	2022*	2021*	2020*	2019*	2018*
Total Pension Liability	$ 6,691,274,850	$ 6,773,384,361	$ 6,417,298,230	$ 6,148,556,456	$ 6,004,434,112
Fiduciary Net Position	4,724,449,484	5,116,849,108	4,167,839,558	4,220,285,752	4,148,324,206
Net Pension Liability	$ 1,966,825,366	$ 1,656,535,253	$ 2,249,458,672	$ 1,928,270,704	$ 1,856,109,906
Ratio of Fiduciary Net Position to Total Pension Liability	70.61%	75.54%	64.95%	68.64%	69.09%
Covered Payroll	$ 960,836,370	$ 922,764,585	$ 880,667,518	$ 857,467,932	$ 829,708,595
Net Pension Liability as a Percentage of Covered Payroll	204.70%	179.52%	255.43%	224.88%	223.71%

	2017*	2016*	2015*	2014*
Total Pension Liability	$ 5,636,841,900	$ 5,483,673,777	$ 5,351,391,599	$ 5,191,069,342
Fiduciary Net Position	3,950,761,443	3,656,830,798	3,708,385,838	3,652,220,265
Net Pension Liability	$ 1,686,080,457	$ 1,826,842,979	$ 1,643,005,761	$ 1,538,849,077
Ratio of Fiduciary Net Position to Total Pension Liability	70.09%	66.69%	69.30%	70.36%
Covered Payroll	$ 818,122,561	$ 795,920,906	$ 768,718,699	$ 750,604,063
Net Pension Liability as a Percentage of Covered Payroll	206.09%	229.53%	213.73%	205.01%

**Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Schedule of Investment Returns – TRS Plan

	2022*	2021*	2020*	2019*	2018*
Annual Money Weighted Rate Return, Net of Investment Expense	(4.14)%	27.71%	2.72%	5.61%	8.88%

	2017*	2016*	2015*	2014*
Annual Money Weighted Rate Return, Net of Investment Expense	11.92%	1.99%	4.62%	17.18%

**Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Schedule of Employer and Non-employer Contributing Entities Contributions – TRS Plan

	2022	2021	2020	2019	2018
Actuarially Determined Employer Contributions	$ 157,671,673	$ 150,239,539	$ 148,368,706	$ 143,107,320	$ 139,239,141
Actual Contributions:					
Employers	109,672,148	103,219,072	102,420,318	97,303,048	94,233,469
Non-Employer Contributing Entities	$ 47,999,525	$ 47,020,467	$ 45,948,388	$ 45,495,334	$ 45,005,672
Total	$ 157,671,673	$ 150,239,539	$ 148,368,706	$ 142,798,382	$ 139,239,141
Annual Contribution Deficiency/ (Excess)		–	–	308,938	–
Covered Payroll	960,836,370	922,764,585	880,667,518	857,467,932	829,708,595
Actual Contributions as a Percentage of Covered Payroll	16.41%	16.28%	16.85%	16.65%	16.78%

	2017	2016	2015	2014	2013
Actuarially Determined Employer Contributions	$ 136,267,787	$ 132,546,252	$ 130,680,397	$ 148,362,932	$ 130,533,530
Actual Contributions:					
Employers	91,853,678	88,643,646	87,290,863	83,439,612	74,113,191
Non-Employer Contributing Entities	$ 44,414,109	$ 43,902,606	$ 43,389,534	$ 64,923,320	$ 17,521,347
Total	$ 136,267,787	$ 132,546,252	$ 130,680,397	$ 148,362,932	$ 91,634,538
Annual Contribution Deficiency/ (Excess)	–	–	–	–	38,898,992
Covered Payroll	818,122,561	795,920,906	768,718,699	750,604,063	742,608,987
Actual Contributions as a Percentage of Covered Payroll	16.66%	16.65%	17.00%	19.77%	12.34%

Note to RSI – Schedule of Employer Contributions

The actuarially determined employer contributions and amount of those contributions actually made are presented in the schedule.

Note to RSI – Actuarial Assumptions – TRS Plan

The information presented in the required supplementary schedules was used in the actuarial valuation for purposes of determining the actuarially determined contribution rate. The assumptions and methods used for this actuarial valuation were recommended by the actuary and adopted by the Board. Additional information as of the latest actuarial valuation follows.

Note to RSI – Changes of Benefit Terms – TRS Plan

The following changes to the plan provision were made as identified:

2013 Legislative Changes:

The 2013 Montana Legislature passed HB 377, which provides additional revenue and creates a two-tier benefit structure. A Tier One Member is a person who first became a member before July 1, 2013, and has not withdrawn their member's account balance. A Tier Two Member is a person who first becomes a member on or after July 1, 2013, or after withdrawing their member's account balance, becomes a member again on or after July 1, 2013.

The GABA for Tier 1 members: permanent injunction limits application of the GABA reduction passed under HB 377.

The second tier benefit structure for members hired on or after July 1, 2013 is summarized below:

1. Final Average Compensation: average of earned compensation paid in five consecutive years of full-time service that yields the highest average.
2. Service Retirement: Eligible to receive a service retirement benefit if the member has been credited with at least five full years of creditable service and has attained the age of 60; or has been credited with 30 or more years of full-time or part-time creditable service and has attained age 55.
3. Early Retirement: Eligible to receive an early retirement allowance if a member is not eligible for service retirement, but has at least five years of creditable service and attained age 55.
4. Professional Retirement Option: if the member has been credited with 30 or more years of service and has attained the age of 60, the member is eligible for an enhanced allowance equal to 1.85% of average final compensation times all service at retirement. Otherwise, the multiplier used to calculate the retirement allowance will be equal to 1.67%.
5. Annual Contribution: 8.15% of member's earned compensation.
6. Supplemental Contribution Rate: On or after July 1, 2023, the TRS Board may require a supplemental contribution up to 0.5% if the following three conditions are met:
   a. The average funded ratio of the System based on the last three annual actuarial valuations is equal to or less than 80%, and
   b. The period necessary to amortize all liabilities of the System based on the latest annual actuarial valuation is greater than 20 years, and
   c. A State or employer contribution rate increase or a flat dollar contribution to the Retirement System Trust fund has been enacted that is equivalent to or greater than the supplemental contribution rate imposed by the TRS Board.
7. Disability Retirement: A member will not be eligible for a disability retirement if the member is or will be eligible for a service retirement on the date of termination.
8. Guaranteed Annual Benefit Adjustment (GABA):
   a. If the most recent actuarial valuation shows that Retirement System liabilities are at least 90% funded and the provision of the increase is not projected to cause the System's liabilities to be less than 85% funded, the GABA may increase from the 0.5% floor up to 1.5%, as set by the Board.

HB 377 increased revenue from the members, employers, and the State by means of the following changes:

- An annual State contribution equal to $25 million paid to the System in monthly installments.
- A one-time contribution payable to the Retirement System by the trustees of a school district maintaining a retirement fund. The one-time contribution to the Retirement System shall be the amount earmarked as an operating reserve in excess of 20% of the adopted retirement fund budget for the fiscal year 2013. The amount received was $22 million in FY 2014.

- A 1% supplemental employer contribution, which will increase the current employer rates as follows:
    - School district contributions will increase from 7.47% to 8.47%.
    - Montana University System and State agency contributions will increase from 9.85% to 10.85%.
    - Supplemental employer contributions will increase by 0.1% each fiscal year for fiscal year 2014 through fiscal year 2024. For fiscal years beginning after June 30, 2024, the total supplemental employer contribution will be equal to 2%.
- Members hired prior to July 1, 2013, (Tier One) under HB 377 are required to contribute a supplemental contribution equal to an additional 1% of the member's earned compensation.
- Each employer is required to contribute 9.85% of total compensation paid to all re-employed TRS retirees employed in a TRS reportable position to the System.

Note to RSI - Changes in Actuarial Assumptions and Methods – TRS Plan

The following changes to the actuarial assumptions were adopted in 2022:

- The discount rate was increased from 7.06% to 7.30%.
- The investment rate of return assumption was increased from 7.06% to 7.30%.
- The inflation rate was increased from 2.40% to 2.75%.
- Updated all mortality tables to the PUB-2010 tables for teachers.
- Updated the rates of retirement and termination.
- Updated the salary scale merit rates.

The following changes to the actuarial assumptions were adopted in 2021 for the GASB 67/68 report and disclosures only:

- The discount rate was lowered from 7.34% to 7.06%.
- The investment rate of return assumption was lowered from 7.34% to 7.06%.

The following changes to the actuarial assumptions were adopted in 2020 for the GASB 67/68 report and disclosures only:

- The discount rate was lowered from 7.50% to 7.34%.
- The investment rate of return assumption was lowered from 7.50% to 7.34%.
- The inflation rate was reduced from 2.50% to 2.40%.

The following changes to the actuarial assumptions were adopted in 2019:

- The Guaranteed Annual Benefit Adjustment (GABA) for Tier Two members is a variable rate between 0.50% and 1.50% as determined by the Board. Since an increase in the amount of the GABA is not automatic and must be approved by the Board, the assumed increase was lowered from 1.50% to the current rate of 0.50% per annum.

The following changes to the actuarial assumptions were adopted in 2018:

- Assumed rate of inflation was reduced from 3.25% to 2.50%
- Payroll growth assumption was reduced from 4.00% to 3.25%
- Investment return assumption was reduced from 7.75% to 7.50%.
- Wage growth assumption was reduced from 4.00% to 3.25%
- Mortality among contributing members, service retired members, and beneficiaries was updated to the following:
    - For Males and Females: RP-2000 Healthy Combined Mortality Table projected to 2022 adjusted for partial credibility setback for two years. The tables include margins for mortality improvement which is expected to occur in the future.

- Mortality among disabled members was updated to the following:
  - For Males: RP 2000 Disabled Mortality Table, set back three years, with mortality improvements projected by Scale BB to 2022.
  - For Females: RP 2000 Disabled Mortality Table, set forward two years, with mortality improvements projected by Scale BB to 2022.
- Retirement rates were updated.
- Termination rates were updated.
- Rates of salary increases were updated.

The following changes to the actuarial assumptions were adopted in 2016:

- The normal cost method has been updated to align the calculation of the projected compensation and the total present value of plan benefits so that the normal cost rate reflects the most appropriate allocation of plan costs over future compensation.

The following changes to the actuarial assumptions were adopted in 2015:

- Correctly reflect the proportion of members that are assumed to take a refund of contributions upon termination and appropriately reflect the three year COLA deferral period for Tier 2 Members.
- The 0.63% load applied to the projected retirement benefits of the university members “to account for larger than average annual compensation increases observed in the years immediately preceding retirement” is not applied to benefits expected to be paid to university members on account of death, disability and termination (prior to retirement eligibility.
- The actuarial valuation was updated to reflect the assumed rate of retirement for university members at age 60 is 8.50% as stated in the actuarial valuation report.
- The actuarial valuation was updated to reflect the fact that vested terminations are only covered by the $500 death benefit for the one year following their termination and, once again when the terminated member commences their deferred retirement annuity (they are not covered during the deferral period). Additionally, only the portion of the terminated members that are assumed to “retain membership in the System” are covered by the $500 death benefit after termination.

The following changes to the actuarial assumptions were adopted in 2014:

- Assumed rate of inflation was reduced from 3.50% to 3.25%.
- Payroll Growth Assumption was reduced from 4.50% to 4.00%.
- Assumed real wage growth was reduced from 1.00% to 0.75%.
- Investment return assumption was changed from net of investment and administrative expenses to net of investment expenses only.
- Mortality among contributing members, service retired members, and beneficiaries was updated to the following:
  - For Males: RP 2000 Healthy Annuitant Mortality Table for ages 50 and above and the RP 2000 Combined Healthy Annuitant Mortality Table for ages below 50, set back four years, with mortality improvements projected by Scale BB to 2018.
  - For Females: RP 2000 Healthy Annuitant Mortality Table for ages 50 and above and the RP 2000 Combined Healthy Annuitant Mortality Table for ages below 50, set back two years, with mortality improvements projected by Scale BB to 2018.
- Mortality among disabled members was updated to the following:
  - For Males: RP 2000 Disabled Mortality Table for Males, set forward one year, with mortality improvements projected by Scale BB to 2018.
  - For Females: RP 2000 Disabled Mortality Table for Females, set forward five years, with mortality improvements projected by Scale BB to 2018.

Note to RSI – Method and Assumptions Used in Calculations of Actuarially Determined Contributions – TRS Plan

Actuarial Cost Method	Entry Age
Amortization Method	Level Percentage of Pay, Open
Remaining Amortization Period	24 years
Asset Valuation Method	4-year Smoothed Fair Value
Inflation	2.50 Percent
Salary Increase	3.25 – 7.76 Percent, Including Inflation for Non-University Members and 4.25 Percent for University Members including inflation;
Investment Rate of Return	7.50 Percent, Net of Pension Plan Investment Expense, and Including Inflation

Schedule of Proportionate Share of the Net Pension Liability – TRS as Employer of PERS Plan

TRS' Proportion of the Net Pension Liability
TRS' Proportionate Share of the Net Pension Liability
State of Montana's Proportionate Share of the Net Pension Liability Associated With the TRS
Total NPL
Covered Payroll
TRS' Proportionate Share of the Net Pension Liability as a Percentage of Its Covered Payroll
Fiduciary Net Position as a Percentage of the Total Pension Liability

The amounts presented above for each fiscal year were determined as of June 30th, the measurement date.
Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Schedule of Contributions – TRS as Employer of PERS Plan

Contractually Required Contributions
Contributions in Relation to the Contractually Required Contributions
Contribution Deficiency (Excess)
Covered Payroll
Contributions as a Percentage of Covered Payroll

The amounts presented above for each fiscal year were determined as of June 30th, the most recent fiscal year end.
Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

2022	2021	2020	2019	2018	2017	2016	2015
0.0769%	0.0715%	0.0697%	0.0691%	0.0896%	0.0882%	0.0843%	0.08102%
$1,394,112	$1,885,625	$1,457,558	$1,443,205	$1,745,606	$1,502,397	$1,177,820	$1,009,567
394,640	$571,643	$456,803	$464,136	$0	$0	$0	$0
$1,788,752	$2,457,268	$1,914,361	$1,907,341	$1,745,606	$1,502,397	$1,177,820	$1,009,567
$1,342,785	$1,185,534	$1,137,253	$1,123,898	$1,098,725	$1,043,891	$971,504	$905,963
103.8%	159.1%	128.2%	128.4%	158.9%	143.9%	121.2%	111.4%
79.9%	68.9%	73.9%	73.5%	73.8%	74.7%	78.4%	79.9%

2022	2021	2020	2019	2018	2017	2016	2015
$122,610	$120,200	$104,324	$98,599	$95,649	$93,731	$89,396	$82,288
$122,610	$120,200	$104,324	$98,599	$95,649	$93,731	$89,396	$82,288
$0	$0	$0	$0	$0	$0	$0	$0
$1,423,866	$1,396,241	$1,185,534	$1,137,460	$1,123,898	$1,098,725	$1,043,891	$971,504
8.61%	8.61%	8.80%	8.67%	8.51%	8.53%	8.56%	8.47%

Note to RSI – Changes of Benefit Terms – PERS Plan

The following changes to the plan provision were made as identified:

2013 Legislative Changes:

Working Retirees – House Bill 95

- The law requires employer contributions on working retiree compensation.
- Member contributions are not required.
- Working retiree limitations are not impacted. PERS working retirees may still work up to 960 hours a year, without impacting benefits.

Highest Average Compensation (HAC) Cap – House Bill 97, effective July 1, 2013

- All PERS members hired on or after July 1, 2013, are subject to a 110% annual cap on compensation considered as part of a member's highest or final average compensation.
- All bonuses paid to PERS members on or after July 1, 2013, will not be treated as compensation for retirement purposes.

House Bill 454 - Permanent Injunction Limits Application of the GABA Reduction passed under HB 454

Guaranteed Annual Benefit Adjustment (GABA)

- After the member has completed 12 full months of retirement, the member's benefit increases by the applicable percentage (provided below) each January, inclusive of all other adjustments to the member's benefit.
- 3% for members hired prior to July 1, 2007.
- 1.5% for members hired on or after July 1, 2007, and before July 1, 2013.
- Members hired on or after July 1, 2013:
  - a. 1.5% each year PERS is funded at or above 90%;
  - b. 1.5% is reduced by 0.1% for each 2% PERS is funded below 90%, and
  - c. 0% whenever the amortization period for PERS is 40 years or more.

2015 Legislative Changes:

General Revisions – House Bill 101, effective January 1, 2016

Second Retirement Benefit

1. Applies to PERS members who return to active service on or after January 1, 2016. Members who retire before January 1, 2016, return to PERS-covered employment and accumulate less than 2 years of service credit before retiring again:
   - refund of member's contributions from second employment plus regular interest (currently 0.25%);
   - no service credit for second employment;
   - start same benefit amount the month following termination, and
   - GABA starts again in the January immediately following second retirement.
2. For members who retire before January 1, 2016, return to PERS-covered employment and accumulate two or more years of service credit before retiring again:
   - member receives a recalculated retirement benefit based on laws in effect at second retirement, and
   - GABA starts in the January after receiving recalculated benefit for 12 months.

3. For members who retire on or after January 1, 2016, return to PERS-covered employment and accumulate less than 5 years of service credit before retiring again:
   - refund of member's contributions from second employment plus regular interest (currently 0.25%);
   - no service credit for second employment;
   - start same benefit amount the month following termination, and
   - GABA starts again in the January immediately following second retirement.

4. For members who retire on or after January 1, 2016, return to PERS-covered employment and accumulate five or more years of service credit before retiring again:
   - member receives same retirement benefit as prior to return to service;
   - member receives second retirement benefit for second period of service based on laws in effect at second retirement, and
   - GABA starts on both benefits in January after member receives original and new benefit for 12 months.

Employer Contributions and the Defined Contribution Plan

The Plan Choice Rate (PCR) was paid off effective March 2016 and the contributions of 2.37%, .47%, and the 1.0% increase previously directed to the PCR are now directed to the Defined Contribution or MUS-RP member's account.

2017 Legislative Changes:

Working Retiree Limitations

If a PERS retiree returns as an independent contractor to what would otherwise be PERS-covered employment, general contractor overhead costs are excluded from PERS working retiree limitations.

Refunds

1. Terminating members eligible to retire may, in lieu of receiving a monthly retirement benefit, refund their accumulated contributions in a lump sum.
2. Terminating members with accumulated contributions between $200 and $1,000 who wish to rollover their refund must do so within 90 days of termination of service.
3. Trusts, estates, and charitable organizations listed as beneficiaries are entitled to receive only a lump-sum payment.

Interest credited to member accounts

Effective July 1, 2017, the interest rate credited to member accounts increased from 0.25% to 0.77%.

Lump-sum payouts

Effective July 1, 2017, lump-sum payouts in all systems are limited to the member's accumulated contributions rather than the present value of the member's benefit.

Disabled PERS Defined Contribution (DC) Members

PERS members hired after July 1, 2011 have a normal retirement age of 65. PERS DC members hired after July 1, 2011 who became disabled were previously only eligible for a disability benefit until age 65. Effective July 1, 2017, these individuals will be eligible for a disability benefit until they reach 70, thus ensuring the same 5-year time period available to PERS DC disabled members hired prior to July 1, 2011 who have a normal retirement age of 60 and are eligible for a disability benefit until age 65.

PERS Statutory Appropriation – House Bill 648, effective July 1, 2017

Revenue from coal severance taxes and interest income from the coal severance tax permanent fund previously statutorily-appropriated to the PERS defined benefit trust fund will be replaced with the following statutory appropriations:

1. FY2018 - $31.386 million
2. FY2019 - $31.958 million
3. Beginning July 1, 2019 through at least June 30, 2025, 101% of the contribution from the previous year from the general fund to the PERS defined benefit trust fund, as follows:
   a. FY2020 - $32.277 million
   b. FY2021 - $32.6 million
   c. FY2022 - $32.926 million
   d. FY2023 - $33.255 million
   e. FY2024 - $33.588 million
   f. FY2025 - $33.924 million

Note to RSI – Changes in Actuarial Assumptions and Methods - PERS Plan

Method and assumptions used in calculations of actuarially determined contributions

The following Actuarial Assumptions were adopted from the June 30, 2020 actuarial valuation:

General Wage Growth*	3.50%
Investment Rate of Return*	7.65%
*Includes inflation at	2.75%
Merit salary increases	0% to 8.47%
Asset valuation method	4-year smoothed fair value
Actuarial cost method	Entry age Normal
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Mortality (Healthy members)	For Males and Females: RP 2000 Combined Employee and Annuitant Mortality Table projected to 2020 using Scale BB, males set back 1 year
Mortality (Disabled members)	For Males and Females: RP 2000 Combined Mortality Table
Admin Expense as % of Payroll	0.28%

Administrative expenses are recognized by an additional amount added to the normal cost contribution rate for the System. This amount varies from year to year based on the prior year's actual administrative expenses.

Other Post-employment Benefits Plan Information

	2022*	2021*	2020*	2019*	2018*
TRS Proportionate Share of the Total OPEB Liability	0.19026%	0.19026%	0.18724%	0.24391%	0.27378%
TRS Total OPEB Liability	$235,221	$280,653	$88,643	$135,851	$138,145
Covered Payroll	$1,423,866	$1,396,241	$1,307,760	$1,123,898	$1,098,725
TRS Total OPEB Liability as a percentage of covered payroll	16.52%	20.10%	6.78%	12.09%	12.57%

**The amounts presented above for each fiscal year were determined as of June 30th, the measurement date. Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Note to RSI – OPEB Information

The State of Montana OPEB plan is not administered through a trust; as such, there are no plan assets accumulated to offset the total OPEB liability. The State of Montana OPEB plan is reported as single-employer plan.

Actuarial assumptions and other inputs

The total OPEB liability in the latest actuarial valuation dated December 31, 2020, the following assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

- Actuarial valuation date: December 31, 2020
- Actuarial measurement date*: March 31, 2022
- Actuarial cost method: Entry age normal funding method
- Amortization method: Open basis
- Asset valuation method: Not applicable since no assets meet the definition of plan assets under GASB 75
- Actuarial Assumptions:
    - Discount rate: 3.31%
    - Projected payroll increases: 2.50%
    - Participation: Future retirees 40.00%, Future eligible spouses 70.00%
    - Marital status at retirement: 70.00%

* Update procedures were used to roll forward the total OPEB liability to the measurement date March 31, 2022.

Mortality – Healthy: For the OPEB Plan, healthy mortality is assumed to follow the RP-2000 Healthy Annuitant Mortality Table for ages 50 and above and the RP-2000 Combined Healthy Annuitant Mortality Table for ages below 50, set back four years for males, set back two years for females, with mortality improvements projected by Scale BB to 2018. For all other groups, healthy mortality is assumed to follow the RP-2000 Combined Mortality Table with improvements projected by Scale BB to 2020, set back one year for males.

Mortality – Disabled: For the OPEB Plan, disabled mortality is assumed to follow the RP-2000 Disabled Mortality Table, set forward one year for males and set forward five years for females, with mortality improvements projected by Scale BB to 2018. For all other groups, disabled mortality is assumed to follow the RP-2000 Combined Mortality Table with no projections.

TEACHERS' RETIREMENT SYSTEM
A COMPONENT UNIT OF THE STATE OF MONTANA
SUPPORTING SCHEDULES / SUPPLEMENTARY INFORMATION
FISCAL YEAR ENDED JUNE 30, 2022

SCHEDULE OF ADMINISTRATIVE EXPENSES

Expenses for the administration of the plan, excluding compensated absences, depreciation and amortization are budgeted and approved by the TRS Board. The administrative costs of TRS are financed through realized investment income. The expenses, less amortization of assets, may not exceed 1.50% of retirement benefits paid. Administrative expenses for the fiscal year ended June 30, 2022, were 0.86% of benefits paid. The administrative expenses by category are outlined below:

Administrative Expenses

		2022
Personal Services:		
Salaries	$	1,426,135
Other Compensation		2,900
Employee Benefits		454,851
Total Budgeted Personal Services	**$**	**1,883,886**
Operating Expenses:		
Contracted Services	$	861,227
Supplies and Material		44,128
Communications		98,218
Travel		17,304
Rent		2,268
Repair and Maintenance		17,889
Other Expenses		102,582
Total Budgeted Operating Expenses	**$**	**1,143,616**
Non-Budgeted Expenses:		
OPEB Contribution Expense	$	4,376
Pension Contribution Offset		(122,610)
Compensated Absences		(7,881)
Amortization Expense		411,920
Depreciation Expense		34,840
Lease Amortization Expense		165,301
Lease Interest Expense		41,659
Total Non-Budgeted Expenses	**$**	**527,605**
Total Administrative Expenses	**$**	**3,555,107**

SCHEDULE OF INVESTMENT EXPENSES

Investment		MBOI		Custodial Bank*		External Managers		Other		Total
Short-Term Investment Pool	$	28,271	$	N/A		N/A	$	367	$	28,638
Consolidated Asset Pension Pool	$	1,838,030	$	N/A	$	17,759,976	$	14,467,532	$	34,065,538
Totals	$	**1,866,301**	$	**N/A**	$	**17,759,976**	$	**14,467,899**	$	**34,094,176**

** As of the fiscal year ended June 30, 2022, all Custodial Bank fees were paid out of the State of Montana general fund.*

SCHEDULE OF PAYMENTS TO CONSULTANTS

Costs included in the table below are a result of administrative expenses, as well as several costs associated with the M-Trust project as of June 30, 2022.

		2022
Actuarial Services	$	122,050
Project Consulting Services		119,121
Legal Services		1,780
Audit Services		73,644
Medical Evaluations		682
IT Contracts		17,459
Non-Project IT Services and Consulting		144,000
Project IT Services and Consulting		73,600
Total Consultant Payments	$	**552,336**

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INVESTMENT SECTION

MONTANA
BOARD OF INVESTMENTS

TRS Annual Report Investment Letter

For the fiscal year ended June 30, 2022

The Montana Teachers' Retirement System (TRS) realized a -4.33% net return during a difficult 2022 fiscal year. Net return performance for TRS since inception was 7.70% annualized. Returns over longer frames compare favorably with the public fund, peer universe with 10-year returns ranked in the top decile.

Returns across asset classes were mixed in fiscal year 2022. The portfolio benefited from the diversification and strong returns of private markets. Conversely, public market valuations suffered from higher inflation, increasing interest rates and geopolitical turmoil. Real Estate (23.52%), Private Investments (22.12%), Real Assets (13.90%), and Cash (0.46%) posted positive returns. International Equity (-20.87%), Non-Core Fixed Income (-13.66%), Domestic Equity (-13.62%) and Core Fixed Income (-9.24%) posted negative returns.

The asset allocation approved by the Montana Board of Investments (BOI) is designed to reach the strategic objective of TRS while minimizing risk. It provides a framework to capture gains over the long-term while protecting against unmanageable losses during periodic economic declines.

Going forward, some of the challenges facing the market include: the ongoing war in Ukraine, rising geopolitical tensions, higher global interest rates amid elevated inflation, and slower global growth projections.

Despite the challenges, BOI continues to pursue attractive investment opportunities that are additive to the portfolio over an extended time frame. We expect periods of extreme market volatility and continually mitigate risks to meet the liquidity needs of the pension plan. BOI believes that disciplined execution of our investment process will help us achieve the long-term objective of the TRS pension. This has been demonstrated by the results since inception.

Respectfully submitted,

Jon Putnam, CFA, FRM, CAIA
Chief Investment Officer
Montana Board of Investments

2401 COLONIAL DRIVE, FLOOR THREE, HELENA, MT 59602
P.O. BOX 200126, HELENA, MT 59620 - 0126
406-444-0001 | INVESTMENTMT.COM

Investment Policy

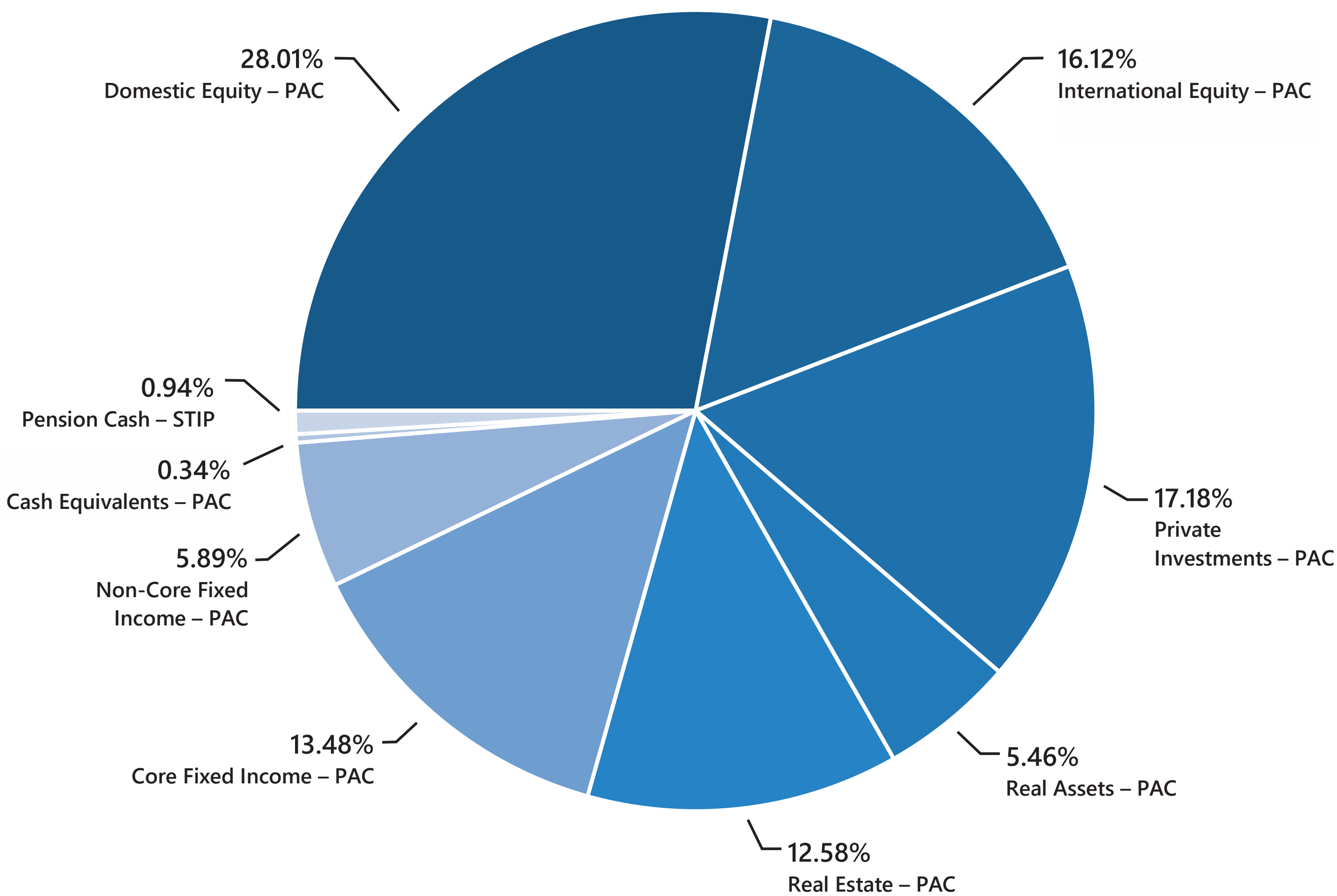
BOI manages the State's Unified Investment Program, which includes TRS plan investments as required by §19-20-501, MCA. The Unified Investment Program is required by law to operate under the "prudent expert principle," defined as:

1) discharging its duties with the care, skill, prudence, and diligence that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character and like aims;
2) diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return, and
3) discharging its duties solely in the interest of and for the benefit of the funds managed.

Basis of Presentation

The BOI provides the investment returns for the Pension Asset Classes (PACs) based on data made available by the fund's custodian, State Street Bank. Performance calculations were prepared using time-weighted rates of return and are net-of-fees unless otherwise indicated.

CAPP INVESTMENT ALLOCATION



INVESTMENT RESULTS

TRS Rates of Returns

	FY 2022	3-Year	5-Year	Inception to Date
Short-term Investment Pool	0.32%	0.71%	1.19%	2.25%
- Short Term Custom Benchmark	*0.21%*	*0.51%*	*1.06%*	*2.17%*
Consolidated Asset Pension Pool	(4.36%)	7.98%	7.75%	7.99%
- CAPP Custom Benchmark	*(9.56%)*	*5.86%*	*6.54%*	*6.74%*
Domestic Equity - PAC	(13.62%)	9.83%	10.20%	9.23%
- Domestic Equity PAC Custom Blend	*(13.74%)*	*9.97%*	*10.74%*	*9.92%*
Internnational Equity - PAC	(20.87%)	1.61%	2.71%	4.34%
- International Equity PAC Custom Blend	*(19.86%)*	*1.55%*	*2.50%*	*4.60%*
Core Fixed Income - PAC	(9.24%)	(0.54%)	1.01%	5.28%
- Core Fixed Income Custom Benchmark	*(10.29%)*	*(1.25%)*	*0.48%*	*4.61%*
Non-Core Fixed Income - PAC	(13.66%)	(0.62%)	1.31%	6.21%
- BBG BARC US HY - 2% Issr Cap	*(12.82%)*	*0.18%*	*2.09%*	*7.25%*
Private Investments - PAC	22.12%	21.29%	17.66%	13.48%
- Private Equity PAC Custom	*(17.71%)*	*6.65%*	*7.47%*	*10.24%*
Real Estate - PAC	23.52%	10.57%	9.54%	5.24%
- Real Estate - PAC Custom Blend	*27.26%*	*4.01%*	*5.29%*	*5.69%*
Real Assets - PAC	13.90%	3.76%	3.64%	4.42%
- Real Assets - PAC Custom Blend	*1.43%*	*(1.08%)*	*3.09%*	*2.18%*
Cash Equivalents - PAC	0.46%	0.77%	1.22%	1.22%
- Short Term Custom Benchmark	*0.21%*	*0.51%*	*1.06%*	*1.07%*
TOTAL PORTFOLIO RETURN	**(4.33%)**	**7.87%**	**7.62%**	**7.70%**

INVESTMENT SUMMARY AND ASSET ALLOCATION

TRS Cash Equivalent and Investment Portfolio
June 30, 2022

Investment	Book Value	Fair Value
Short-term Investment Pool	$ 43,909,343	$ 43,839,397
Consolidated Asset Pension Pool	3,149,856,929	4,645,886,890
Total	$ 3,193,766,272	$ 4,689,726,287

Investment Pool Holdings at June 30, 2022

Domestic Equity Pension Asset Class	*Fair Value*
BLK MSCI USA SMALL CAP EQ	*$468,452,499*
ISHARES CORE S+P TOTAL US STOC	*231,314,904*
APPLE INC	*188,550,825*
MICROSOFT CORP	*154,575,190*
ISHARES CORE S+P 500 ETF	*122,901,473*
AMAZON.COM INC	*82,207,496*
ISHARES RUSSELL 200 EFT	*71,343,408*
ALPHABET INC CL A	*55,385,893*
ALPHABET INC CL C	*52,514,112*
TESLA INC	*49,993,354*

International Equity Pension Asset Class	*Fair Value*
ACWI EX US SUPERFUN	*$903,785,024*
ISHARES MSCI EAFE EFT	*129,604,260*
ISHARES CORE MSCI EMERGING MAR	*68,862,726*
STATE STREET BANK + TRUST CO	*15,732,371*
TAIWAN SEMICONDUCTOR MANUFAC	*11,110,162*
OLYMPUS CORP	*10,612,588*
BLACKROCK ACWI EX US SMALL CAP	*9,893,735*
HDFC BANK LTD ADR	*8,659,443*
MSCI EMF	*8,538,214*
NOVO NORDISK A/S B	*8,364,626*

Private Investments Pension Asset Class	*Fair Value*
OCP ASIAFUND III LP	*$77,712,022*
CRESCENT ASIA CONS AND DVF II	*65,251,557*
DEERPATH CAPITAL ADVANTAGE IV	*62,095,320*
AXIOM ASIA IV LP	*53,937,274*
SUMERU EQUITY PARTNERS III LP	*53,483,604*
NORTHGATE V LP	*52,641,708*
VERITAS CAPITAL FUND VII, L.P	*51,850,863*
VERITAS CAPITAL FD VI LP	*50,910,494*
GRIDIRON CAPITAL FUND III	*50,734,092*
VERITAS CAPITAL FUND V LP	*49,188,110*

Real Assets Pension Asset Class	*Fair Value*
TSY INFL IX N/B	*$99,458,991*
KIMMERIDGE ENERGY EXPLOR FD V	*57,264,714*
MOLPUS WOODLANDS FUND III LP	*40,108,135*
DENHAM INTL POWER FUND LP	*39,975,415*
ORM TIMBER FUND III LLC	*32,761,295*
MOUNTAIN CAPITAL PARTNERS, LP	*31,361,112*
COPENHAGEN INFRASTRUCTURE IV	*29,403,961*
STATE STREET BANK + TRUST CO	*28,236,745*
WARWICK PARTNERS III, L.P.	*26,262,487*
TRILANTIC ENERGY PARTNERS II	*22,083,874*

Real Estate Pension Asset Class	Fair Value
CENTERSQUARE DOMESTIC REIT MU6	$182,334,950
FIDELITY ADVISOR SER IV	129,814,778
STOCKBRIDGE NICHE LOGISTICS FD	110,598,815
PRISA LP	105,134,166
HEITMAN AMERICA RE TRUST LP	98,634,808
AMERICAN CORE REALTY FUND LLC	90,453,703
552992935 JPM STRATEGIC PROPRT	90,307,459
AG CREDO III	89,048,880
UBS TRUMBULL PROPERTY FUND	59,119,573
TRUAMERICA WORKFORCE HS FD I	58,126,743

Core Fixed Income Asset Class	Fair Value
US TREASURY N/B	$514,674,174
FEDERAL FARM CREDIT BANK	85,801,500
FRESB MULTIFAMILY MORTGAGE PAS	34,285,281
FEDERAL HOME LOAN BANK	31,403,260
BANK OF AMERICA CORP	31,003,127
TSY INFL IX N/B	30,288,098
FANNIE MAE	30,152,749
FINANCE OF AMERICA STRUCTURED	29,678,022
AMAZON.COM INC	17,787,600
JPMORGAN CHASE + CO	17,587,855

Non-Core Fixed Income Asset Class	Fair Value
STATE STREET BANK + TRUST CO	$16,767,583
REPUBLIC OF SOUTH AFRICA	8,195,768
TRANSDIGM INC	6,641,724
BANK OF AMERICA CORP	6,613,301
MEX BONOS DESARR FIX RT	6,474,273
CSC HOLDINGS LLC	6,207,386
TENET HEALTHCARE CORP	6,110,001
CCO HLDGS LLC/CAP CORP	6,012,271
CITIGROUP INC	5,774,295
ALTICE FRANCE SA	5,641,573

Cash Equivalents	Fair Value
SHORT TERM INVESTMENT POOL	181,846,868
STATE STREET BANK + TRUST CO	1,000,987

The holdings in the Pension Asset Classes above represent the MBOI overall holdings in the CAPP and STIP pools. TRS owns a portion of each pool (approximately 34.77%). A complete list of the portfolio holdings is available upon request from BOI.

Investment Management Fees

The State Legislature sets the management fees MBOI charges. The maximum fee is set at the aggregate level at the beginning of each fiscal year. The MBOI management fees are allocated to the pools and separately managed accounts according to their proportionate share of the total Unified Investment Program. TRS investment management fees charged to each Pool are shown below:

Schedule of Investment Expenses as of 06/30/2022

Investment	BOI	Custodial Bank*	External Managers	Other	Total
Short-term Investment Pool	$ 28,271	$ N/A	N/A	$ 367	$ 28,638
Consolidated Asset Pension Pool	$ 1,838,030	$ N/A	$ 17,759,976	$ 14,467,532	$ 34,065,538
Totals	$ 1,866,301	$ N/A	$ 17,759,976	$ 14,467,899	$ 34,094,176

** As of the fiscal year ended June 30, 2022, all Custodial Bank fees were paid out of the State of Montana general fund.*

ACTUARIAL SECTION

Teachers' Retirement Board
State of Montana
P.O. Box 200139
Helena, MT 59620-0139

Members of the Board:

We have completed the annual valuation of the Teachers' Retirement System of the State of Montana as of July 1, 2022. The purpose of this valuation is to determine the financial status of the Retirement System. To achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by MCA 19-20-201.

The purpose of this letter is to provide the Actuarial Section, the Schedule of Funding Progress, and the Schedule of Contributions from the Employers and Other Contributing Entities for the System's Comprehensive Annual Financial Report.

The funding objective of the System is to establish contribution rates that will tend to remain level as a percentage of payroll. The contribution rates are:

History of Legislated Contributions
(as a Percent of Pay)

School District and Other Employers				
	Members	Employers	General Fund	Total
Prior to July 1, 2007	7.15%	7.47%	0.11%	14.73%
July 1, 2007 to June 30, 2009	7.15%	7.47%	2.11%	16.73%
July 1, 2009 to June 30, 2013	7.15%	7.47%	2.49%	17.11%
July 1, 2013 to June 30, 2014	8.15%	8.47%	2.49%	19.11%
July 1, 2014 to June 30, 2015	8.15%	8.57%	2.49%	19.21%
July 1, 2015 to June 30, 2016	8.15%	8.67%	2.49%	19.31%
July 1, 2016 to June 30, 2017	8.15%	8.77%	2.49%	19.41%
July 1, 2017 to June 30, 2018	8.15%	8.87%	2.49%	19.51%
July 1, 2018 to June 30, 2019	8.15%	8.97%	2.49%	19.61%
July 1, 2019 to June 30, 2020	8.15%	9.07%	2.49%	19.71%
July 1, 2020 to June 30, 2021	8.15%	9.17%	2.49%	19.81%
July 1, 2021 to June 30, 2022	8.15%	9.27%	2.49%	19.91%
July 1, 2022 to June 30, 2023	8.15%	9.37%	2.49%	20.01%
July 1, 2023 to June 30, 2024	8.15%	9.47%	2.49%	20.11%

State and University Employers				
	Members	Employers	General Fund	Total
Prior to July 1, 2007	7.15%	7.47%	0.11%	14.73%
July 1, 2007 to June 30, 2009	7.15%	9.47%	0.11%	16.73%
July 1, 2009 to June 30, 2013	7.15%	9.85%	0.11%	17.11%
July 1, 2013 to June 30, 2014	8.15%	10.85%	0.11%	19.11%
July 1, 2014 to June 30, 2015	8.15%	10.95%	0.11%	19.21%
July 1, 2015 to June 30, 2016	8.15%	11.05%	0.11%	19.31%
July 1, 2016 to June 30, 2017	8.15%	11.15%	0.11%	19.41%
July 1, 2017 to June 30, 2018	8.15%	11.25%	0.11%	19.51%
July 1, 2018 to June 30, 2019	8.15%	11.35%	0.11%	19.61%
July 1, 2019 to June 30, 2020	8.15%	11.45%	0.11%	19.71%
July 1, 2020 to June 30, 2021	8.15%	11.55%	0.11%	19.81%
July 1, 2021 to June 30, 2022	8.15%	11.65%	0.11%	19.91%
July 1, 2022 to June 30, 2023	8.15%	11.75%	0.11%	20.01%
July 1, 2023 to June 30, 2024	8.15%	11.85%	0.11%	20.11%

In addition to these rates, the System receives $25 million annually payable on July 1st each year.

Finally, employers are now required to contribution 9.85% of total compensation plus the supplemental contribution required under 19-20-609, MCA, of re-employed retirees who are employed in TRS covered positions. Pursuant to MCA 19-20-609, the amount shall increase by 1.00% for fiscal year 2014 and increase by 0.10% each fiscal year through 2024 until the total employer contribution is equal to 11.85% of re-employed retiree compensation.

The July 1, 2022 actuarial valuation indicates that the current employer rate of 11.86% including the anticipated increases in the employer rate is sufficient to pay the System's normal cost and to amortize the System's Unfunded Actuarial Accrued Liability (UAAL) over a 25-year period. The normal cost of 10.87% of pay consists of 2.72% employer contributions and 8.15% employee contributions. The remaining contribution of 9.14% plus the previously mentioned cash contributions go toward funding the amortization of the UAAL, which is $1,891.7 million as of July 1, 2022.

A funding measurement that may be considered is the funding ratio of the Actuarial Accrued Liability to Assets. This ratio is shown in the Schedule of Funding Progress. As the actuarial experience varies from year to year, the funding ratio will reflect actuarial gains and losses. The Actuarial Accrued Liability represents the portion of the total plan benefits and expenses which is not provided for by future Normal Cost contributions.

The actuarial assumptions used in our 2022 actuarial valuation are summarized in Exhibit 1. Adoption dates vary by assumption and are provided in Exhibit 1.

In preparing our actuarial valuation reports, we relied, without audit, on the financial statements prepared by the staff of the System. We also relied upon the employee and beneficiary data provided to us by the staff. We compared the data for the July 1, 2022 actuarial valuation with corresponding information from the prior valuation and tested for missing or incomplete items, such as birth dates and hire dates. Based on these tests, we believe the data to be sufficient and reliable for the purposes of our calculations. It should be noted that if any data or other information is inaccurate or incomplete, our calculations might need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our 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, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

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.

The assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice. The assumptions represent our best estimate of future conditions affecting the System, and we believe they are reasonably related to the past experience of the System. Nevertheless, the emerging costs of the System will vary from those presented in our report to the extent that actual experience differs from that projected by the actuarial assumptions. Gains or losses in future experience may result in changes in future contribution rates. The current actuarial asset method smoothed investment gains and losses over a four year period.

Future actuarial results may differ significantly from the current results presented in this report 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.

Funding and Benefits Policy

The Teachers' Retirement System has adopted a Funding and Benefits Policy to provide general guidelines to help ensure decisions are made based on sound, consistent, and thoroughly examined criteria. The Funding and Benefits Policy includes guidance on the following topics:

1) Additional Funding
    a) The Funding and Benefits Policy states:

        "1. If the amortization period is greater than 30 years, the actuary will recommend the single contribution rate increase that can reasonably expect to fully amortize the UAAL over a closed 30-year period effective July 1, following the next regular legislative session.

        2. If the amortization period is less than 30 years, but greater than 0, and it is projected to continue to decline over the remainder of the closed period, the actuary will not recommend a change in the statutory contribution rates.

        3. If the amortization period is less than 30 years, but has increased over prior valuations and is projected to continue to grow, the actuary will recommend a contribution rate increase that is reasonably expected to reverse the recent trend and reestablish a closed amortization period equal to that of the last valuation."
2) Analysis: The amortization period as of July 1, 2022 is 25 years based on actuarial assets and 27 years based on market assets. Assuming experience follows the actuarial assumptions, the amortization period is projected to decline.
3) Ultimate Goal
    a) The Funding and Benefits Policy states: "It is the desire of the Board to fully fund the System. However, until the System becomes fully funded, any unfunded will be amortized over a closed period of no more than 30 years and funded as a level percent of pay. At such time as the System becomes fully funded and has a stabilization reserve of at least 10% of the actuarial accrued liability, the allowed amortization period for any subsequent unfunded liabilities will be reduced to a closed period of not greater than 20 years."
    b) Analysis: If all the assumptions are met, the amortization period on an actuarial value of asset basis is 25 years and is anticipated to decline.
4) Benefit Enhancements
    a) The Funding and Benefits Policy states: "Any recommendation for a benefit enhancement must include recommendations for necessary additional funding or other benefit reduction to cover any increase in normal cost arising from the recommended enhancement and to amortize any increase in the unfunded actuarial accrued liabilities arising from the recommended enhancement over a period not to exceed 25 years.

        The Board will determine its position with respect to supporting or opposing legislation, on a case-by-case basis, and will apply this policy, actuarial funding standards, and other industry-standard information and resources if finds persuasive, as decision guides. The Board may not support legislation to enhance benefits if the funded ratio is less than 85%, and the amortization period is greater than 20 years."
    b) Analysis: Since the funded ratio at July 1, 2022 of 71.73% is below 85% the Board's Funding and Benefits policy does not currently support enhanced benefits.

Assumption Changes

Since the June 30, 2021 valuation, the Montana Teachers' Retirement System adopted the recommendations made in the experience study for the five-year period ending June 30, 2021. The assumption changes outlined below are effective July 1, 2022:

- Lowered the investment return assumption from 7.50% to 7.30%.
- Increased inflation from 2.50% to 2.75%.
- Updated all mortality tables to the PUB-2010 tables for teachers.
- Updated the rates of retirement and termination.
- Updated the salary scale merit rates.

Benefit Changes

There have been no benefit changes since the previous valuation that would have a material effect on the liabilities of the System.

Contribution Changes

An employer supplemental contribution of 1% of compensation is required beginning in fiscal year 2014 which will increase by 0.10% each subsequent fiscal year through 2024. For fiscal years beginning after June 30, 2024, the supplemental employer contribution will equal 2.00% of compensation.

Method Changes

There have been no method changes since the previous valuation.

Impact of Changes

The following table summarizes how experience has changed the UAAL since the July 1, 2021 Actuarial Valuation.

Changes in the Unfunded Actuarial Accrued Liability (UAAL)
(In millions)

July 1, 2021 Valuation UAAL	$ 1,846.9
Expected Decrease	(22.5)
Expected July 1, 2022 UAAL	$ 1,824.4
Experience Loss on Actuarial Liabilities	$ 18.1
Experience Gain on Actuarial Assets	(28.9)
Assumption & Method Changes	78.1
Plan Changes	0.0
Total Gain	$ 67.3
July 1, 2022 Valuation UAAL	$ 1,891.7

Contributions

As shown in the "History of Legislated Contributions" at the beginning of this section, the employer contributions from the General Fund have increased to 2.49% of pay as of July 1, 2009. The supplemental contribution to ensure university member benefits are funded by university employers was increased from 4.04% to 4.72% of Montana University System Retirement Program (MUS-RP) member pay at July 1, 2007. The valuation that determined the 4.72% contribution rate of MUS-RP member pay was based on the valuation completed as of July 1, 2006. It is our understanding the contribution will not stop unless legislative action is taken. The most recent MUS-RP valuation completed as of July 1, 2022 indicated an increase is needed in the supplemental contribution rate from 4.72% to 13.53% of MUS-RP member compensation rate.

MCA 19-20-608 and MCA 19-20-609 dictate that employers and members are required to make supplemental contributions if the funded ratio of the System is less than 90%. Since the funded ratio is currently 71.73%, Tier One Members are required to contribute an additional 1% of compensation. The individual employers are required to contribute an additional 1% of compensation. The employer contribution shall increase by 0.1% each year following July 1, 2013 until the total employer supplemental contribution is equal to 2% of compensation.

MCA 19-20-607 requires the State to contribute $25 million annually each July 1st to the System.

MCA 19-20-605 requires each employer to contribute 9.85% of total compensation paid to all re-employed TRS retirees employed in a TRS reportable position. Pursuant to MCA 19-20-609, this amount shall increase by 1.00% for fiscal year 2014 and increase by 0.10% each fiscal year through 2024 until the total employer contribution is equal to 11.85% of re-employed retiree compensation.

The following exhibits provide further information.

Exhibit 1	Summary of Actuarial Assumptions and Methods
Exhibit 2	Schedule of Active Member Valuation Data
Exhibit 3	Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
Exhibit 4	Solvency Test
Exhibit 5	Analysis of Financial Experience
Exhibit 6	Provisions of Governing Law
Exhibit 7	Schedule of Funding Progress
Exhibit 8	Schedule of Contributions from Employers and other Contributing Entities

Todd B. Green is a member of the American Academy of Actuaries and a Fellow of the Conference of Consulting Actuaries, and an Associate of the Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

/s/ Todd Green

Todd Green, ASA, EA, FCA, MAAA
President

/s/ Bryan Hoge

Bryan Hoge, FSA, EA, FCA, MAAA
Consulting Actuary

/s/ Beverly V. Bailey

Beverly V. Bailey, ASA, EA, FCA, MAAA
Senior Actuary

TBG/zs
Enclosures

Exhibit 1

MONTANA TEACHERS' RETIREMENT SYSTEM
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions for investment return, price inflation, wage inflation, mortality, retirement and withdrawal have been updated to reflect the experience study for the period ending July 1, 2021 adopted by the Board in May 2022.

The current asset valuation method was adopted for the July 1, 2007 valuation.

Tables A-3 through A-5 give rates of decrement for service retirement, other terminations of employment, and probability of remaining membership.

Actuarial Cost Method

The actuarial valuation was prepared using the entry age actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit. The portion of this actuarial present value allocated to a valuation year is called the normal cost. The normal cost was first calculated for each individual member. The normal cost rate is defined to equal the total of the individual normal costs, divided by the total pay rate.

The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets and (b) the actuarial present value of future normal costs is called the UAAL. The UAAL is amortized as a level percentage of the projected salaries of present and future members of the System.

Records and Data

The data used in the valuation consist of financial information; records of age, sex, service, salary, contribution rates, and account balances of contributing members; and records of age, sex, and amount of benefit for retired members and beneficiaries. All of the data were supplied by the System and are accepted for valuation purposes without audit.

Replacement of Terminated Members

The ages at entry and distribution by sex of future members are assumed to average the same as those of the present members they replace. If the number of active members should increase, it is further assumed that the average entry age of the larger group will be the same, from an actuarial standpoint, as that of the present group. Under these assumptions, the normal cost rates for active members will not vary with the termination of present members.

Employer Contributions

At the time of this valuation, the total employer contribution rate for normal costs and amortization of the UAAL was 11.86% of members' salaries. The employer contribution rate will increase by 0.10% each year beginning July 1, 2014 until the total employer contribution rate equals 11.96%.

Administrative and Investment Expenses

The administrative and investment expenses of the System are assumed to be funded by investment earnings in excess of 7.30% per year.

Exhibit 1
(Continued)

MONTANA TEACHERS' RETIREMENT SYSTEM
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Valuation of Assets – Actuarial Basis

The actuarial asset valuation method spreads asset gains and losses over four years. The expected return is determined each year based on the beginning of year market value and actual cash flows during the year. Any difference between the expected market value return and the actual market value return is recognized evenly over a period of four years. The actuarial value of assets is not allowed to be greater than 120% or less than 80% of the market assets. (Adopted effective July 1, 2007.)

Investment Earnings

The annual rate of investment earnings of the assets of the System is assumed to be 7.30% per year net of administrative and investment expenses, compounded annually. (Adopted effective May 2022)

Interest on Member Contributions

Interest on member contributions is assumed to accrue at a rate of 0.25% per annum, compounded annually. This assumption was set as of July 1, 2022.

Postretirement Benefit Increases

Tier 1 Members:

> On January 1 of each year, the retirement allowance payable is increased by 1.5% if the retiree has received benefits for at least 36 months prior to January 1 of the year in which the adjustment is to be made.

Tier 2 Members:

> On January 1 of each year, the retirement allowance payable is assumed to increase by 0.5% if the retiree has received benefits for at least 36 months prior to January 1 of the year in which the adjustment is to be made.

Future Salaries

The rates of annual salary increase assumed for the purpose of the valuation are illustrated in Table A-2. In addition to increases in salary due to merit and longevity, this scale includes an assumed 3.50% annual rate of increase in the general wage level of the membership. The merit and longevity increases for the MUS members did not show a pattern of increasing or decreasing with service at the time of our most recent study. Therefore, the MUS members have a flat 0.75% merit and longevity assumption. The general wage increase assumption and merit and longevity scales were adopted in May 2022.

Montana University System (MUS) members are assumed to have a 0.63% higher average final compensation to account for the larger than average annual compensation increases observed in the years immediately preceding retirement.

Service Retirement

Table A-3 shows the annual assumed rates of retirement among members eligible for service retirement. Separate rates are used when a member is eligible for reduced benefits, for the first year a member is eligible for full benefits, and for the years following the first year a member is eligible for full benefits. The rates were adopted May 2022.

Exhibit 1
(Continued)

MONTANA TEACHERS' RETIREMENT SYSTEM
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Disablement

The rates of disablement used in this valuation are illustrated in Table A-4. These rates were adopted May 2010.

Mortality

A written description of each mortality table used in this valuation is included in Table A-1. These rates were adopted May 2022.

Other Terminations of Employment

The rates of assumed future withdrawal from active service for reasons other than death, disability or retirement are shown for representative ages in Table A-5. These rates were adopted May 2022.

Part-Time Employees

The valuation data for active members identify part-time members. For part-time members earning more than $1,000, total credited service is adjusted based on the ratio of actual earnings to annualized earnings. The liability and normal cost calculations for these members are based on the adjusted service and actual earnings for the prior year.

Part-time members earning less than $1,000 during the last year were valued at their current member contribution balance.

Montana University System Retirement Program (MUS-RP)

MUS-RP payroll as of June 30, 2022 was $272,876,231.

Effective for fiscal years after June 30, 2007, the MUS-RP contribution rate is 4.72%, pursuant to MCA 19-20-621. It is our understanding the contribution will not stop unless legislative action is taken.

Buybacks, Purchase of Service, and Military Service

The active liabilities and normal cost (excluding liabilities and normal cost in respect of Return of Employee Contributions) were increased to 100.5% of their original value to fund this additional service based on a study of the System's experience for the five calendar years 1995 through 1999. Effective July 1, 2008.

Probability of Marriage & Dependent Children

If death occurs in active status, all members are assumed to have an eligible surviving spouse and two children. The spouse is assumed to be the same age as the member. For members who die prior to age 50, dependent children are assumed to be eight years old. For members who die after age 50 but prior to age 55, children are assumed to be 13 years old. Members who die after age 55 are assumed to have no dependent children under the age of 18.

Records with no Birth Date

New records with no birth date are assumed to be 25 years old. Records that are not new and have no birth date used the same birth date as the prior year's valuation.

Exhibit 1
(Continued)

MONTANA TEACHERS' RETIREMENT SYSTEM
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-1

Summary of Valuation Assumptions

I.	Economic assumptions		
	A.	General wage increases*	3.50%
	B.	Investment return	7.30%
	C.	Price Inflation Assumption	2.75%
	D.	Payroll Growth Assumption	3.25%
	E.	Growth in membership	0.00%
	F.	Postretirement benefit increases (Starting three years after retirement)	
		Tier One	1.50%
		Tier Two	0.50%
	G.	Interest on member accounts	0.25%
II.	Demographic assumptions		
	A.	Individual salary increase due to promotion and longevity	Table A-2
	B.	Retirement	Table A-3
	C.	Disablement	Table A-4
	D.	Mortality among contributing members. PUBT-2010 General Employee mortality table projected to 2021. Projected generationally using MP-2021.	
	E.	Mortality among service retired members. PUBT-2010 Retiree mortality projected to 2021 adjusted 102% for males and 103% for females. Projected generationally using MP-2021.	
	F.	Mortality among beneficiaries. PUBT-2010 Contingent Survivor table projected to 2021. Projected generationally using MP-2021.	
	G.	Mortality among disabled members. PUBT-2010 Disabled Retiree mortality table projected to 2021.	
	H.	Other terminations of employment	Table A-5

** Montana University System (MUS) members are assumed to have a 0.63% higher average final compensation to account for the larger than average annual compensation increases observed in the years immediately preceding retirement.*

Exhibit 1
(Continued)

MONTANA TEACHERS' RETIREMENT SYSTEM
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-2

Future Salaries

	General Members			University Members		
Years of Service	Individual Merit & Longevity	General Wage Increase	Total Salary Increase	Individual Merit & Longevity	General Wage Increase	Total Salary Increase
1	5.50%	3.50%	9.00%	0.75%	3.50%	4.25%
2	4.50	3.50	8.00	0.75	3.50	4.25
3	3.50	3.50	7.00	0.75	3.50	4.25
4	3.50	3.50	7.00	0.75	3.50	4.25
5	2.50	3.50	6.00	0.75	3.50	4.25
6	2.50	3.50	6.00	0.75	3.50	4.25
7	2.50	3.50	6.00	0.75	3.50	4.25
8	1.50	3.50	5.00	0.75	3.50	4.25
9	1.50	3.50	5.00	0.75	3.50	4.25
10	1.50	3.50	5.00	0.75	3.50	4.25
11	1.50	3.50	5.00	0.75	3.50	4.25
12	1.50	3.50	5.00	0.75	3.50	4.25
13	0.50	3.50	4.00	0.75	3.50	4.25
14	0.50	3.50	4.00	0.75	3.50	4.25
15	0.50	3.50	4.00	0.75	3.50	4.25
16	0.50	3.50	4.00	0.75	3.50	4.25
17	0.50	3.50	4.00	0.75	3.50	4.25
18	0.00	3.50	3.50	0.75	3.50	4.25
19	0.00	3.50	3.50	0.75	3.50	4.25
20	0.00	3.50	3.50	0.75	3.50	4.25
21	0.00	3.50	3.50	0.75	3.50	4.25
22 & Up	0.00	3.50	3.50	0.75	3.50	4.25

Exhibit 1
(Continued)

MONTANA TEACHERS' RETIREMENT SYSTEM
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-3

Retirement
Annual Rates

Age	All Members		
	Eligible for Reduced Benefits	First Year Eligible for Full Benefits	Thereafter
45		7.0%	8.0%
46		7.0	8.0
47		7.0	8.0
48		7.0	8.0
49	*	7.0	6.0
50	5.0%	7.0	6.0
51	5.0	7.0	6.3
52	5.0	7.0	9.0
53	5.0	7.0	9.0
54	5.0	7.0	9.0
55	5.0	8.0	10.0
56	5.0	8.0	11.3
57	5.0	15.0	12.5
58	5.0	15.0	13.1
59	5.0	15.0	14.8
60	*	13.5	20.0
61		18.0	24.0
62		18.0	23.0
63		18.0	23.0
64		35.0	27.5
65		35.0	39.0
66		30.0	25.0
67		30.0	25.0
68		30.0	25.0
69		30.0	25.0
70		**	**

* *All benefits are unreduced after attaining age 60. Reduced benefits are not available before age 50.*
** *Immediate retirement is assumed at age 70 or over.*

Exhibit 1
(Continued)

MONTANA TEACHERS' RETIREMENT SYSTEM
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-4

Disablement
Annual Rates

Age	All Members
25	.005%
30	.005
35	.008
40	.028
45	.044
50	.063
55	.084
60	.100

Exhibit 1
(Continued)

MONTANA TEACHERS' RETIREMENT SYSTEM
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-5

Other Terminations of Employment Among Members Not Eligible to Retire
Annual Rates

Years of Service	Full-Time Members	Part-Time Members
Less than 1	28.0%	30.0%
1	16.0	23.0%
2	12.0	19.0
3	9.0	16.0
4	7.0	13.0
5	6.0	11.5
6	5.0	10.5
7	4.0	10.0
8	3.0	9.0
9	3.0	9.0
10	3.0	9.0
11	2.0	9.0
12	2.0	8.0
13	2.0	8.0
14	2.0	8.0
15	2.0	8.0
16	2.0	8.0
17	2.0	8.0
18	2.0	8.0
19	1.0	8.0
20	1.0	8.0
21	1.0	8.0
22	1.0	8.0
23	1.0	8.0
24	1.0	8.0

Exhibit 2

MONTANA TEACHERS' RETIREMENT SYSTEM
SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Full-Time Members				
Valuation Date	Number	Annual Payroll	Average Annual Payroll	Annualized % of Increase in Average Pay
July 1, 2013	12,229	628,832,000	51,421	0.9%
July 1, 2014	12,286	638,467,000	51,967	1.1%
July 1, 2015	12,468	655,204,000	52,551	1.1%
July 1, 2016	12,769	673,891,000	52,776	0.4%
July 1, 2017	12,808	689,638,000	53,844	2.0%
July 1, 2018	13,027	706,351,000	54,22	0.7%
July 1, 2019	13,196	728,831,000	55,231	1.9%
July 1, 2020	13,515	751,479,000	55,603	0.7%
July 1, 2021	13,803	787,155,000	57,028	2.6%
July 1, 2022	13,765	806,077,000	58,560	2.7%

Part-Time Members*				
Valuation Date	Number	Annual Payroll	Average Annual Payroll	Annualized % of Increase in Average Pay
July 1, 2013	5,387	73,430,000	13,631	2.2%
July 1, 2014	5,428	74,300,000	13,688	0.4%
July 1, 2015	5,337	74,449,000	13,950	1.9%
July 1, 2016	5,563	81,141,000	14,586	4.6%
July 1, 2017	5,576	86,293,000	15,476	6.1%
July 1, 2018	5,619	86,148,000	15,332	(0.9)%
July 1, 2019	5,798	90,073,000	15,535	1.3%
July 1, 2020	5,531	89,375,000	16,159	4.0%
July 1, 2021	5,358	93,640,000	17,477	8.2%
July 1, 2022	5,787	107,320,000	18,545	6.1%

** Excludes part-time active members with annual compensation less than $1,000.*

Exhibit 3

MONTANA TEACHERS' RETIREMENT SYSTEM
SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

	Added to Rolls		Removed from Rolls		Rolls End of Year			
Year Ended	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	% Increases in Annual Allowances	Average Annual Allowances
June 30, 2013	834	21,500,000	329	5,018,000	13,868	284,333,000	6.2%	20,503
June 30, 2014	792	24,241,000	312	5,054,489	14,349	303,520,000	6.7%	21,153
June 30, 2015	864	24,213,000	374	6,222,000	14,839	321,511,000	5.9%	21,667
June 30, 2016	767	22,328,000	442	7,374,000	15,164	336,465,000	4.7%	22,188
June 30, 2017	779	22,320,000	377	6,780,000	15,566	352,005,000	4.6%	22,614
June 30, 2018	784	23,386,000	417	7,401,000	15,933	367,990,000	4.5%	23,096
June 30, 2019	741	23,163,000	418	7,658,000	16,256	383,495,000	4.2%	23,591
June 30, 2020	770	24,602,000	421	7,986,000	16,605	400,111,000	4.3%	24,096
June 30, 2021	810	23,957,000	430	8,523,000	16,985	415,545,000	3.9%	24,465
June 30, 2022	822	25,312,000	438	9,910,000	17,369	430,947,000	3.7%	24,811

Exhibit 4

MONTANA TEACHERS' RETIREMENT SYSTEM
SOLVENCY TEST
($ in millions)

		Aggregate Accrued Liabilities For			Portion of Accrued Liabilities Covered by Reported Asset		
Actuarial Valuation Date	Actuarial Value of Assets	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)	(1)	(2)	(3)
July 1, 2013	3,067.9	756.9	2,828.6	1,007.2	100.0%	81.7%	0.0%
July 1, 2014	3,397.4	741.7	3,354.6	1,094.7	100.0%	79.2%	0.0%
July 1, 2015	3,609.8	727.1	3,527.6	1,096.7	100.0%	81.7%	0.0%
July 1, 2016	3,798.9	724.0	3,662.2	1,097.5	100.0%	84.0%	0.0%
July 1, 2017	3,973.5	728.2	3,797.8	1,110.8	100.0%	85.5%	0.0%
July 1, 2018	4,094.4	734.7	4,083.7	1,186.0	100.0%	82.3%	0.0%
July 1, 2019	4,219.5	746.2	4,221.8	1,180.6	100.0%	82.3%	0.0%
July 1, 2020	4,344.0	764.9	4,370.7	1,174.4	100.0%	81.9%	0.0%
July 1, 2021	4,616.3	768.7	4,485.2	1,209.3	100.0%	85.8%	0.0%
July 1, 2022	4,799.5	775.9	4,557.8	1,357.4	100.0%	88.3%	0.0%

Exhibit 5

MONTANA TEACHERS' RETIREMENT SYSTEM
ANALYSIS OF FINANCIAL EXPERIENCE

An analysis of financial experience is performed in conjunction with all regularly scheduled valuations.

The results of our analysis of the financial experience of the System in the two most recent regular actuarial valuations are presented in this Exhibit 5. Each gain or loss shown represents our estimate of how much the given type of experience caused the Unfunded Actuarial Accrued Liability or Funding Reserve to change in the period since the previous actuarial valuation.

Gains and losses shown due to demographic sources are approximate. Demographic experience is analyzed in greater detail in our periodic assumption studies.

Non-recurring gains and losses result from changes in the actuarial assumptions and benefit improvements.

Exhibit 5
(Continued)

MONTANA TEACHERS' RETIREMENT SYSTEM
ANALYSIS OF FINANCIAL EXPERIENCE

($ in millions)

	UAAL (Gain)/Loss		
	June 30, 2022	June 30, 2021	June 30, 2020
Investment Income			
Investment income was (greater) less than expected based on actuarial value of assets	$ (28.9)	$ (135.1)	$ 20.8
Pay Increases			
Pay increases were (less) greater than expected	5.9	16.0	(6.4)
Age & Service Retirements			
Members retired at (older) younger ages or with (less) greater final average pay than expected	27.0	22.1	28.6
Disability Retirements			
Disability claims were (less) greater than expected	0.3	0.3	0.1
Death-in-Service Benefits			
Survivor claims were (less) greater than expected	(0.5)	(3.0)	(1.7)
Withdrawal From Employment			
(More) less reserves were released by withdrawals than expected	17.6	17.4	14.9
Death After Retirement			
Retirees (died younger) lived longer than expected	8.3	13.3	17.4
Data Adjustments and Benefit Payment Timing			
Service purchases, data corrections, etc.	(40.2)	(45.3)	(30.3)
Other			
Miscellaneous (gains) and losses	(0.3)	(0.9)	(0.4)
Total (Gain) or Loss During Period From Financial Experience	$ (10.8)	$ (115.2)	$ 43.0
Non-Recurring Items			
Changes in actuarial assumptions and methods	78.1		
Changes in benefits caused a (gain) loss	-	-	
Composite (Gain) Loss During Period	$ 67.3	$ (115.2)	$ 43.0

Exhibit 6

MONTANA TEACHERS' RETIREMENT SYSTEM
PROVISIONS OF GOVERNING LAW

Effective Date

September 1, 1937.

Vesting Period

Five years. No benefits are payable unless the member has a vested right, except the return of employee contributions with interest.

Tier One Member

A person who became a member before July 1, 2013 and who has not withdrawn the member's account balance.

Tier Two Member

A person who became a member on or after July 1, 2013, or who after withdrawing the member's account balance, became a member again after July 1, 2013.

Final Compensation

Tier One Members

Average of highest three consecutive years of earned compensation.

Tier Two Members

Average of highest five consecutive years of earned compensation.

Normal Form of Benefits

Life only annuity. All benefits cease upon death; however, in no event will the member receive less than the amount of employee contributions with interest.

Normal Retirement Benefits

Tier One Members

Eligibility: 25 years of service or age 60 with five years of service.

Benefit: The retirement benefit is equal to 1/60 of final compensation for each year of service.

Tier Two Members

Eligibility: Age 55 with 30 years of service or age 60 with five years of service.

Benefit: A member age 60 with at least 30 years of creditable service will receive a retirement allowance equal to 1.85% of final compensation for each year of service. Otherwise, the multiplier used to calculate the retirement allowance will equal 1/60 of final compensation for each year of service.

Exhibit 6
(Continued)

Early Retirement Benefits

Tier One Members

Eligibility: Five years of service and age 50.

Benefit: The retirement benefit is calculated in the same manner as described for normal retirement, but the benefit is actuarially reduced by the lesser of the number of years equal to the age of the participant at the early retirement subtracted from age 60 or the number of years of service at early retirement subtracted from 25 years of service.

Tier Two Members

Eligibility: Five years of service and age 55.

Benefit: The retirement benefit is calculated in the same manner as described for normal retirement, but the benefit is actuarially reduced by the lesser of the number of years equal to the age of the participant at the early retirement subtracted from age 60 or the number of years of service at early retirement subtracted from 30 years of service.

Death Benefit

Eligibility: Five years of service.

Benefit: The death benefit is equal to 1/60 of final compensation for each year of service accrued at date of death, with an actuarial adjustment based on the relation of the member's age at death to the beneficiary's age. A monthly benefit of $200 is paid to each child until age 18. In addition, a lump-sum benefit of $500 is paid upon the death of an active or retired member.

Disability Benefit

Eligibility: Five years of service.

Benefit: The disability benefit is equal to 1/60 of final compensation for each year of service accrued at date of disability. The minimum benefit is 1/4 of the final compensation. A Tier Two Member is not eligible for a disability retirement if the member is or will be eligible for a service retirement on or before the member's date of determination.

Withdrawal Benefits

With less than five years of service, the accumulated employee contributions with interest are returned. With more than five years, the member may elect a refund of contributions with interest or leave the contributions and interest in the System and retain a vested right to retirement benefits.

Contributions

Tier One Members

7.15% of compensation. Tier One members are required to contribute a Supplemental Contribution equal to an additional 1% of compensation. The Board may decrease the Supplemental Contribution if the average funded ratio of the System based on the last three actuarial valuations is equal to or greater than 90% and the period necessary to amortize the unfunded liabilities of the System based on the most recent actuarial valuation is less than 15 years. Following one or more decreases in the supplemental contribution the Board may increase the supplemental contribution to a rate not to exceed 1% if the average funded ratio of the System based on the last three annual actuarial valuations is equal to or less than 80% and the period necessary to amortize all liabilities of the System based on the most recent annual actuarial valuation is greater than 20 years.

Exhibit 6
(Continued)

Tier Two Members

8.15% of compensation. The Board may require a Tier Two member to contribute a Supplemental Contribution if the average funded ratio of the System based on the last three actuarial valuations is equal to or less than 80% and the period necessary to amortize the unfunded actuarial accrued liability is greater than 20 years and a State or employer contribution rate increase or a flat dollar contribution to the System has been enacted which is equivalent to or greater than the Supplemental Contribution Rate imposed by the Board. A singe Tier Two Supplemental Contribution Rate increase cannot exceed 0.5% of compensation and in total cannot exceed 9.15% of compensation. The Board may decrease the Supplemental Contribution if the average funded ratio of the System based on the previous three annual actuarial valuations is equal to or greater than 90%; and the period necessary to amortize the unfunded actuarial accrued liability is less than 15 years.

Employers

9.96% of compensation. Employers are required to contribute a supplemental contribution equal to 1% for fiscal year 2014 and increase by 0.1% each fiscal year through 2024. The Board may decrease the Employer Supplemental Contribution if the average funded ratio of the System based on the last three actuarial valuations is equal to or greater than 90% and the period necessary to amortize the unfunded actuarial accrued liability based on the most recent valuation is less than 15 years and the GABA has been increased to the maximum allowable. Following one or more decreases in the Supplemental Contribution Rate the Board may increase the Supplemental Contribution Rate to a rate not to exceed 1% if the average funded ratio of the System based on the last three actuarial valuations is equal to or less than 80% and the period necessary to amortize the unfunded actuarial accrued liability is greater than 20 years.

MCA 19-20-604 specifies that the employer contribution rate will be reduced by 0.11% when the amortization period of the System's UAAL is 10 years or less according to the System's latest actuarial valuation.

State Supplemental Contribution

$25 million per year on an annual basis payable on July 1st of each year.

Re-employed Retirees

Each employer is required to contribute 9.85% of total compensation paid to all re-employed TRS retirees employed in a TRS reportable position. This amount shall increase by 1.00% for fiscal year 2014 and increase by 0.10% each fiscal year through 2024 until the total employer contribution is equal to 11.85% of re-employed retiree compensation.

Interest on Member Contributions

Effective July 1, 2021, the interest credited on member contributions decreased from 0.85% to 0.25% per annum.

Guaranteed Annual Benefit Adjustment (GABA)

On January 1 of each year, if the retiree has received benefits for at least 36 months prior to January 1 of the year in which the adjustment is to be made.

For Tier One Members, the retirement allowance will be increased by 1.5%. For Tier Two Members, the retirement allowance will be increased by an amount equal to or greater than 0.5% but no more than 1.5% if the most recent actuarial valuation shows the System to be at least 90% funded and the provisions of the increase is not projected to cause the funded ratio to be less than 85%.

Exhibit 7

MONTANA TEACHERS' RETIREMENT SYSTEM
SCHEDULE OF FUNDING PROGRESS

($ in millions)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities (AAL)[1]	Unfunded Actuarial Accrued Liabilities (UAAL)[2]	Funded Ratio[3]	Covered Payroll[4]	UAAL as a Percentage of Covered Payroll
July 1, 2022	$4,799.5	$6,691.3	$1,891.7	71.7%	$960.8	196.9%
July 1, 2021	4,616.3	6,463.2	1,846.9	71.4%	922.8	200.1%
July 1, 2020	4,344.0	6,310.0	1,966.0	68.8%	880.7	223.2%
July 1, 2019	4,219.6	6,148.6	1,929.0	68.6%	857.5	225.0%
July 1, 2018	4,094.4	6,004.4	1,910.0	68.2%	829.7	230.2%
July 1, 2017	3,973.5	5,636.8	1,663.3	70.5%	818.1	203.3%
July 1, 2016	3,798.9	5,483.6	1,684.7	69.3%	795.9	211.7%
July 1, 2015	3,609.8	5,351.4	1,741.6	67.5%	768.7	226.6%
July 1, 2014	3,397.4	5,191.1	1,793.6	65.5%	750.6	239.0%
July 1, 2013	3,067.9	4,592.7	1,524.8	66.8%	742.6	205.3%

[1] *Actuarial present value of benefits less actuarial present value of future normal costs based on entry age actuarial cost method.*

[2] *Actuarial accrued liabilities less actuarial value of assets and present value of future university supplemental contributions.*

[3] *Funded Ratio is the ratio of the actuarial value of assets over the actuarial accrued liabilities less the present value of future university supplemental contributions.*

[4] *Covered Payroll includes compensation paid to all active employees on which contributions are calculated.*

Exhibit 8

MONTANA TEACHERS' RETIREMENT SYSTEM
SCHEDULE OF CONTRIBUTIONS FROM EMPLOYERS AND OTHER CONTRIBUTING ENTITIES

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially determined employer contribution	$157,671,673	$150,239,539	$148,368,706	$143,107,320	$139,239,141	$136,267,787	$132,546,252	$130,680,397	$148,362,932	$130,533,530
Actual contributions										
Employers	$109,672,148	$103,219,072	$ 102,420,318	$ 97,303,048	$ 94,233,469	$ 91,853,678	$ 88,643,646	$ 87,290,863	$ 83,439,612	$ 74,113,191
Non-employer contributing entities	47,999,525	47,020,467	45,948,388	45,495,334	45,005,672	44,414,109	43,902,606	43,389,534	64,923,320	17,521,347
Total	$157,671,673	$150,239,539	$148,368,706	$142,798,382	$139,239,141	$136,267,787	$132,546,252	$130,680,397	$148,362,932	$ 91,634,538
Annual contribution deficiency (excess)	$ -	$ -	$ -	$ 308,938	$ -	$ -	$ -	$ -	$ -	$ 38,898,992
Covered-employee payroll	$960,836,370	$922,764,585	$880,667,518	$857,467,932	$829,708,595	$818,122,561	$795,920,906	$768,718,699	$750,604,063	$742,608,987
Actual contributions as a percentage of covered-employee payroll	16.41%	16.28%	16.85%	16.65%	16.78%	16.66%	16.65%	17.00%	19.77%	12.34%

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STATISTICAL SECTION

Statistical Section Narrative

This section of the Teachers' Retirement System Annual Comprehensive Financial Report presents detailed information that expands on the financial statements, note disclosures and required supplementary information that speak to the overall financial health of TRS.

Financial Trends – These schedules contain trend information about how the financial performance and well-being of TRS has changed over time.

Demographic Information – These schedules contain demographic and historical information regarding membership and employer participation in TRS.

Schedule of Changes in Net Position – Last Ten Fiscal Years (in thousands)

Shown below is the abbreviated version of the Schedule of Changes in Net Position for the last 10 years.

	2022	2021	2020	2019	2018
Additions:					
Member Contributions	85,737	81,121	80,195	78,151	75,594
Employer Contributions	109,672	103,219	102,420	97,303	94,233
Other Contributions	48,000	47,020	45,948	45,495	45,006
Misc Income	37	975	51	31	32
Net Investment Income	(207,441)	1,129,752	112,589	227,892	343,664
Total Additions	36,004	1,362,087	341,204	448,872	558,529
Deductions:					
Benefit Payments:					
Retirees	381,702	368,911	354,968	339,908	325,932
Beneficiaries	28,946	27,302	25,743	24,306	23,564
Disabilities	3,700	3,685	3,686	3,566	3,434
Withdrawals	10,338	8,890	5,172	6,008	5,323
Administrative Expenses	3,555	3,937	3,768	2,947	2,850
Other	164	353	204	174	158
Total Deductions	428,404	413,078	393,541	376,910	361,184
Change in Net Position	(392,400)	949,009	(52,337)	71,963	197,345

	2017	2016	2015	2014	2013
Additions:					
Member Contributions	74,253	88,644	87,291	70,468	62,850
Employer Contributions	91,854	72,741	72,216	83,440	74,113
Other Contributions	44,414	43,903	43,389	64,923	17,521
Misc Income	28	29	27	6	8
Net Investment Income	427,042	71,488	165,685	540,277	373,722
Total Additions	637,591	276,804	368,608	759,114	528,214
Deductions:					
Benefit Payments:					
Retirees	307,158	297,199	281,920	277,012	260,791
Beneficiaries	21,411	20,399	18,702	5,055	4,416
Disabilities	3,261	3,212	3,052	3,115	3,044
Withdrawals	7,355	5,087	5,369	4,789	5,119
Administrative Expenses		2,459	2,035	2,023	1,934
Other		2,016	141	58	48
Total Deductions		343,660	311,219	292,052	275,352
Change in Net Position		293,931	57,389	467,062	252,862

Schedule of Average Benefit Payments – Last Ten Fiscal Years

Shown below is the number of retirees with X years of credited service grouped by five-year periods and the retirees' average monthly final compensation (Average AFC) and average monthly benefit (Average Benefit) in nominal dollar amounts.

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Number of Retirees										
5-9	61	70	66	55	71	76	65	85	77	79
10-14	67	54	83	67	70	85	81	79	69	82
15-19	67	75	73	70	71	67	62	74	81	69
20-24	96	88	85	76	96	97	84	108	93	103
25-29	122	119	139	148	119	134	115	126	141	132
30+	178	192	192	183	203	200	233	254	270	275
Average AFC										
5-9	2,585	3,871	2,899	2,763	2,898	2,302	2,697	2,657	2,631	2,322
10-14	3,900	4,361	3,149	3,190	3,175	3,612	2,957	2,907	3,249	3,424
15-19	4,629	4,436	4,490	4,053	4,293	3,493	3,698	3,669	3,892	3,730
20-24	5,329	5,139	5,092	5,260	4,857	4,747	4,593	4,674	4,538	4,593
25-29	6,334	6,140	6,344	5,979	5,591	5,344	5,582	5,541	5,279	5,237
30+	7,026	6,515	6,924	6,604	6,567	6,309	6,127	6,218	6,046	5,787
Average Benefit										
5-9	306	353	325	297	316	287	319	311	329	267
10-14	739	779	620	623	607	699	614	539	616	670
15-19	1,233	1,181	1,259	1,103	1,184	977	1,029	1,017	1,017	987
20-24	1,881	1,797	1,816	1,866	1,710	1,669	1,600	1,655	1,640	1,637
25-29	2,748	2,653	2,739	2,588	2,410	2,307	2,410	2,364	2,297	2,260
30+	3,845	3,548	3,808	3,673	3,714	3,486	3,392	3,491	3,368	3,217

Schedule of Membership for Active and Inactive Members – Ten Years Ended June 30, 2022

Shown below is the number of Active members in the System as of June 30th for the last 10 years.

Period Ended	Active Members	Inactive Vested Members	Inactive Non-vested	Total
June 30, 2022	19,975	2,015	5,656	27,646
June 30, 2021	19,658	1,955	7,869	29,482
June 30, 2020	19,751	1,828	14,941	36,520
June 30, 2019	19,686	1,791	14,261	35,738
June 30, 2018	19,267	1,772	13,967	35,006
June 30, 2017	18,917	1,779	13,712	34,408
June 30, 2016	19,048	1,704	12,888	33,640
June 30, 2015	18,316	1,664	12,839	32,819
June 30, 2014	18,272	1,654	12,308	32,234
June 30, 2013	18,249	1,566	11,710	31,525

Schedule of Retired Members and Benefit Recipients by Type of Benefit – Last Ten Fiscal Years

Shown below is the number of Benefit Recipients in the System as of June 30th for the last 10 years.

Period Ended	Service Retirements & Surviving Beneficiaries	Survivors of Active Deceased Members	Disability Retirements	Total
June 30, 2022	16,711	475	183	17,369
June 30, 2021	16,325	478	182	16,985
June 30, 2020	15,945	470	190	16,605
June 30, 2019	15,589	468	199	16,256
June 30, 2018	15,243	489	201	15,933
June 30, 2017	14,878	485	203	15,566
June 30, 2016	14,478	480	206	15,164
June 30, 2015	14,164	471	204	14,839
June 30, 2014	13,685	460	204	14,349
June 30, 2013	13,206	459	203	13,868
June 30, 2012	12,703	457	203	13,363

Schedule of Retired Members and Beneficiaries by Type of Benefit as of June 30, 2022

Shown below is the number of Benefit Recipients by type in the System as of June 30, 2022. The Recipients are grouped by the amount of their monthly benefit in $500 increments.

Amount of Monthly Benefit	Total Benefit Recipients	Retirees	Beneficiaries	Disability
$0 - 500	2,542	2,087	400	55
501 - 1,000	2,124	1,684	326	114
1,001 - 1,500	1,848	1,423	340	85
1,501 - 2,000	2,438	2,157	248	33
2,001 - 2,500	2,610	2,412	182	16
2,501 - 3,000	2,280	2,165	112	3
3,001 - 3,500	1,616	1,537	78	1
3,501 - 4,000	985	941	44	-
4,001 - 4,500	598	579	19	-
4,501 - 5,000	298	281	17	-
Over 5,000	414	398	14	2
Totals	17,753	15,664	1,780	309
Total Benefit Payments	$414,346,628	$381,701,562	$28,945,526	$3,699,541

Schedule of Principal Participating Employers as of June 30, 2022

Shown below are the twenty largest TRS Employers in the System by Active Member totals and the percent of the overall active membership each employer represents as of June 30, 2022.

Employer	Active Members	Percent of Total Active Members
Billings Public Schools	1,800	8.98%
Great Falls Public Schools	1,205	6.01%
Missoula County Public Schools	1,153	5.75%
Helena Public Schools	965	4.81%
Bozeman Public Schools	830	4.14%
Kalispell Public Schools	686	3.42%
Butte Public Schools	400	2.00%
Belgrade Public Schools	392	1.96%
Browning Public Schools	273	1.36%
Columbia Falls Public Schools	269	1.34%
Hardin Public Schools	257	1.28%
Whitefish Public Schools	231	1.15%
Havre Public Schools	228	1.14%
Laurel Public Schools	225	1.12%
Miles City Public Schools	206	1.03%
East Helena Public Schools	202	1.01%
Flathead Community College	196	0.98%
Livingston Public Schools	193	0.96%
Polson Public Schools	193	0.96%
Sidney Public Schools	190	0.95%

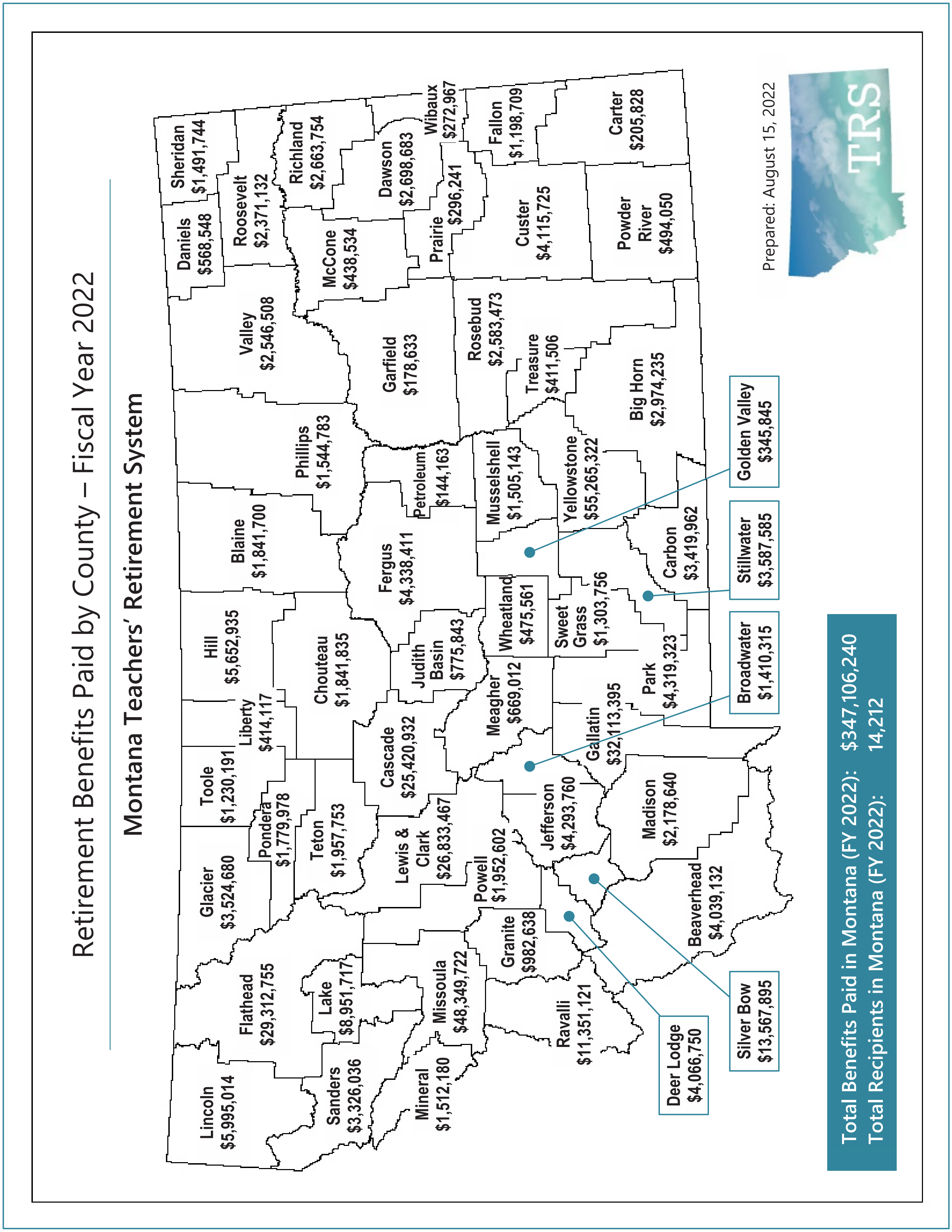
Location of Benefit Recipients by Country and State as of June 30, 2022

Shown below is total benefit in nominal dollars that was distributed in the fiscal year ended June 30, 2022 to each country in the world and each state within the United States.

Country	State	Gross Benefit (in dollars)	Count
Australia		7,068	1
Belgium		4,077	1
Canada		258,392	20
Switzerland		9,262	1
Costa Rica		6,630	1
United Kingdom		79,617	3
Israel		51,185	2
Netherlands		743	1
New Zealand		8,496	1
Thailand		19,211	2
United States	AE	36,495	3
United States	AK	608,278	46
United States	AL	157,152	12
United States	AR	156,835	13
United States	AZ	13,924,611	587
United States	CA	3,331,352	176
United States	CO	2,897,865	155
United States	CT	139,268	10
United States	DC	38,675	3
United States	DE	40,215	2
United States	FL	1,982,432	108
United States	GA	265,945	15
United States	HI	288,939	19
United States	IA	412,353	25
United States	ID	4,292,729	242
United States	IL	498,933	26
United States	IN	362,957	27
United States	KS	290,924	17
United States	KY	252,250	11
United States	LA	88,122	10
United States	MA	365,742	15
United States	MD	112,868	11
United States	ME	158,504	9
United States	MI	651,826	34
United States	MN	2,565,026	134
United States	MO	529,651	41
United States	MS	204,857	6

United States	MT	347,106,240	14,212
United States	NC	770,674	41
United States	ND	2,621,183	140
United States	NE	368,875	22
United States	NH	147,317	6
United States	NJ	29,959	4
United States	NM	737,369	37
United States	NV	2,457,685	126
United States	NY	212,934	17
United States	OH	315,407	24
United States	OK	296,391	25
United States	OR	4,038,216	223
United States	PA	317,329	18
United States	RI	17,983	1
United States	SC	344,831	20
United States	SD	1,535,476	74
United States	TN	404,401	25
United States	TX	1,932,566	118
United States	UT	1,870,827	102
United States	VA	441,063	26
United States	VT	103,233	6
United States	WA	9,362,650	500
United States	WI	670,573	44
United States	WV	5,096	2
United States	WY	2,457,909	151

Shown below is a map depicting the total benefit in nominal dollars that was distributed to recipients in each county in the state of Montana in the fiscal year ending June 30, 2022.



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