Montana Teachers' Retirement System

A Component Unit of the State of Montana

Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2016

Montana Teachers' Retirement System
A Component Unit of the State of Montana

COMPREHENSIVE ANNUAL FINANCIAL REPORT
FISCAL YEAR ENDED JUNE 30, 2016

Shawn Graham
Executive Director

Tammy Rau
Deputy Executive Director

Prepared by:
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http://www.trs.mt.gov

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

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Montana
Teachers' Retirement System

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December 10, 2016

Honorable Steve Bullock
Governor of Montana
Room 204, State Capitol
Helena, MT 59620

Dear Governor Bullock:

On behalf of the Montana Teachers' Retirement Board, we are pleased to present the Montana Teachers' Retirement System's Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2016. 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 CAFR 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 control 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 79th year of operation. TRS is providing services to 19,048 active members, 15,164 benefit recipients, and through the Board of Investments, manages assets valued at approximately $3.66 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 until a new qualification determination is issued by the IRS.

Plan Funding Status

The TRS plan's Net Funded Ratio increased from 67.46% at July 1, 2015, to 69.28% at July 1, 2016. In addition, the July 1, 2016 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 24 years, based on the current funding methods and long term actuarial assumptions.

The total contribution rate for the fiscal year ended June 30, 2016 was 19.31% of earned compensation. The rate was made up from employee, employer and supplemental contributions from the State of Montana. The normal cost of 9.87% of pay for the year beginning on July 1, 2016 is funded by the total contribution rate. The remaining 9.44% is available to fund the administrative expense load and 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, 2016 is $1.685 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 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 shows the MUS supplemental employer contribution rate required by this section would have to increase from 4.72% to 10.22% 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

TRS implemented the Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Pension Plans, in fiscal year 2014. The new guidance under GASB 67 established a decided shift in financial disclosure requirements from a funding-based approach to an accounting-based approach. As a result, separate actuarial valuations have been performed for funding and accounting purposes. Therefore, the disclosure and use of the annual required contribution (ARC) as a funding benchmark is no longer a required reporting element. This philosophical shift compelled the development of a plan-specific actuarially determined contribution (ADC) benchmark against which to gauge the adequacy of TRS' statutory contribution rates.

The 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, 2016, contributions to the plan are sufficient to fund the normal cost plus amortize the UAAL in less than 30 years. Therefore, for the fiscal year ended June 30, 2016, the ADC is equal to the actual contributions to the plan in the amount of $205,286,917, and there is no contribution deficiency.

Investment Activity

The Montana Board of Investments (BOI) 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 positive total return of 2.08% for the fiscal year ended June 30, 2016. The System's total annualized rate of return over the last five and ten years was 7.69% and 5.89% respectively. Below is a breakdown of the return rates for the investment pools. The BOI invests the TRS and other pension portfolios for the long-term and its investment strategies, based on an asset/liability study completed in May 2006, 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 BOI'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 2016	3-Year	5-Year	10-Year
Retirement Funds Bond Pool	5.97%	4.48%	4.61%	5.90%
MT Domestic Equities Pool	1.66%	10.96%	11.42%	7.10%
MT International Equities Pool	-8.90%	2.02%	0.53%	1.31%
MT Private Equities Pool	7.35%	11.76%	12.04%	10.02%
MT Real Estate Pool	12.11%	12.30%	11.38%	2.70%
Short-Term Investment Pool	0.41%	0.22%	0.24%	1.32%
Total Portfolio	**2.08%**	**7.75%**	**7.69%**	**5.89%**

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 Consolidated Annual Financial Report for the fiscal year ended June 30, 2015. This is the tenth 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 Consolidated Annual Financial Report. This report must satisfy both generally accepted accounting principles (GAAP) and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe our current Consolidated Annual Financial Report continues to meet the Certificate of Achievement Program's requirements and we are submitting it 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 2016 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.

Independent Auditor

The financial statements contained in the TRS CAFR 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, 2016.

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 Teachers' Retirement 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 Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2015

Executive Director/CEO

Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2016

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 Peiffer, Chair
Appointed by Governor
Active Public School Teacher
Kalispell, Montana
kpeiffer@mt.gov
Term expires July 1, 2017

Scott Dubbs, Vice Chair
Appointed by Governor
Active Member Representative
Lewistown, Montana
sdubbs@mt.gov
Term expires July 1, 2018

Daniel Chamberlin
Appointed by Governor
Public Sector Representative
Helena, Montana
dchamberlin@mt.gov
Term expires July 1, 2020

Janice Muller
Appointed by Governor
Active Member Representative
Hamilton, Montana
jmuller@mt.gov
Term expires July 1, 2021

Marilyn Ryan
Appointed by Governor
Retired Member Representative
Montana Board of Investments Member
Missoula, Montana
mryan2@mt.gov
Term expires July 1, 2021

Daniel Trost
Appointed by Governor
Public Sector Representative
Helena, Montana
dtrost@mt.gov
Term expires July 1, 2019

Professional Consultants

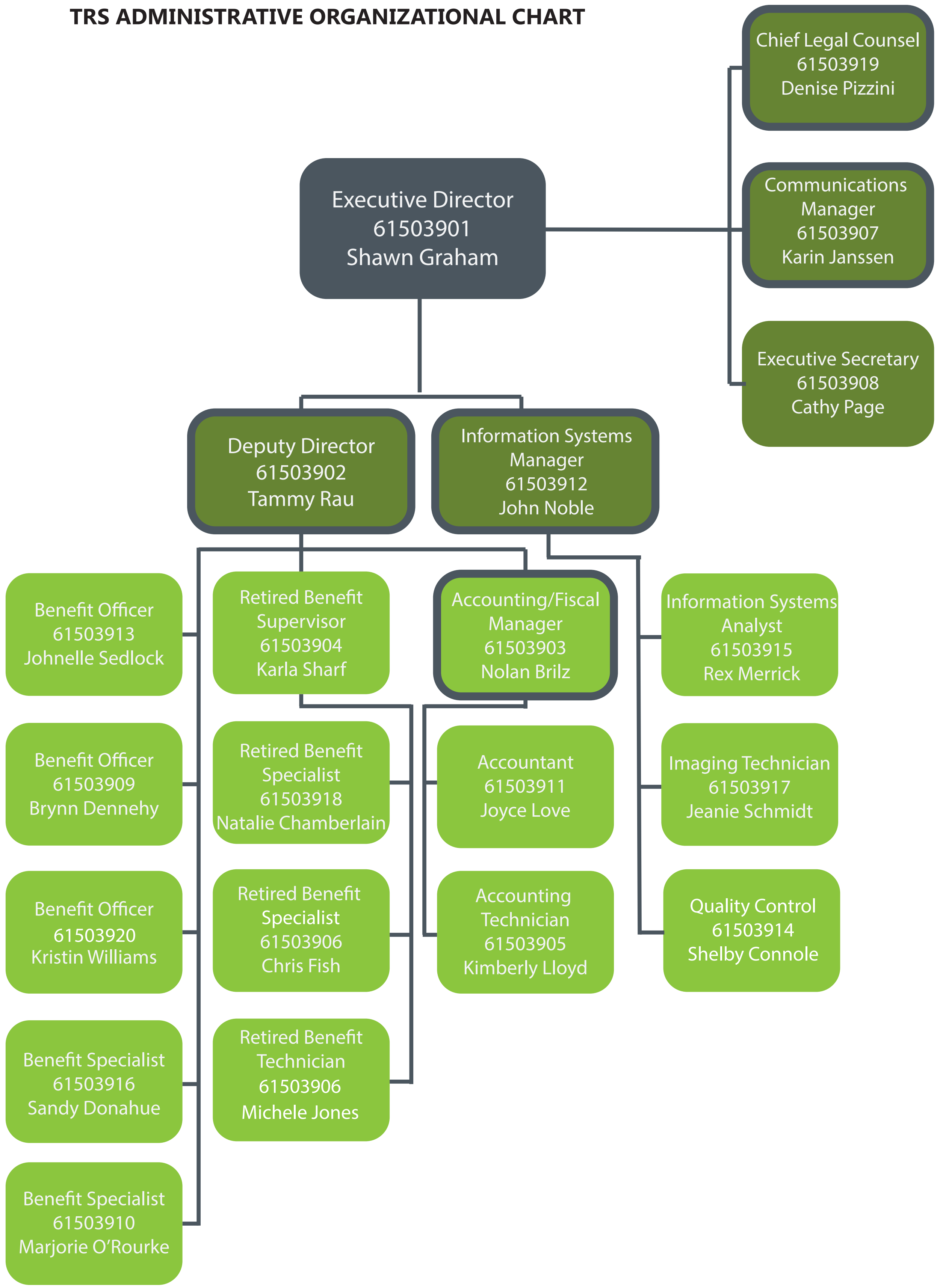
Alfred Munksgard
IT Consultant
Thousand Oaks, CA 91362

Amdec Software Consulting
IT Consultant
PO Box 136
Helena, MT 59624

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

Icemiller
Legal and Business Advisors
Indianapolis, IN 46282

TRS ADMINISTRATIVE ORGANIZATIONAL CHART



FINANCIAL SECTION

LEGISLATIVE AUDIT DIVISION

Angus Maciver, Legislative Auditor
Deborah Butler, Legal Counsel

Deputy Legislative Auditors
Cindy Jorgenson
Joe Murray

Independent Auditor's Report

The Legislative Audit Committee
of the Montana State Legislature:

Introduction
We have audited the accompanying Statement of Fiduciary Net Position of the Teachers' Retirement System (system), prepared by the Teachers' Retirement Board (board), a component unit of the State of Montana, as of June 30, 2016, and the related Statement of Changes in Fiduciary Net Position for the fiscal year then ended, and the related notes which collectively comprise the system's basic financial statements.

Management's Responsibility 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; this responsibility includes designing, implementing, and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to the system's preparation and fair presentation of the financial statements 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 system's internal control, and accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of

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significant accounting estimates made by management, as well as the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Teachers' Retirement System as of June 30, 2016, 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.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the 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 Postemployment Benefits Plan Information Schedule of Funding Progress, and the related notes be presented to supplement the basic financial statements. Such information, 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 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 consisted 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 financial statements as a whole. The Schedule of Administrative Expenses, Schedule of Investment Expenses, and Schedule of Payments to Consultants are presented for purposes of additional analysis and are 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

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The Introductory, Investment, Actuarial, and Statistical sections were presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 8, 2016, 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 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 (16-09A).

Respectfully submitted,

/s/ Cindy Jorgenson

Cindy Jorgenson, CPA
Deputy Legislative Auditor

December 8, 2016

The following discussion and analysis of the Montana Teachers' Retirement System's (TRS or the System) provides a narrative overview of TRS's financial activities for the fiscal year ended June 30, 2016.

Overview of the Financial Statements

The TRS 2016 financial statements, notes to the financial statements, and required supplementary information were prepared in conformity with GASB Statement No. 67, Financial Reporting for Pension Plans and 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, 2016.

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 consists of the following four schedules of the defined benefit pension plan administered by TRS: changes of employers' net pension liability, employers' net pension liability, employer contributions, and the money-weighted rate of investment returns.

Financial Highlights

- The TRS fiduciary net position decreased by $51.5 million from $3.708 billion at 06/30/15 to $3.657 billion at 06/30/16, representing a decrease of 1.4% from year to year.
- The TRS plan net investment income was $71.5 million at 06/30/16 compared to $165.7 million at 06/30/15.
- The TRS plan rate of return on investments during FY 2016 was 2.1% compared with FY 2015 rate of return of 4.6%.
- The TRS benefit payments paid to benefit recipients increased 5.6% to $320.8 million for FY 2016, which is consistent with increases in prior years.
- The TRS plan had a Total Pension Liability of $5.484 billion and Fiduciary Net Position of $3.657 billion for a Net Pension Liability of $1.827 billion. Net Pension Liability as a percentage of covered payroll was 229.53% as of June 30, 2016.

Condensed Financial Information

For comparative purposes, the Condensed Financial Information below the fiscal year ended June 30, 2016 is presented with FY 2015 financial information.

Fiduciary Net Position

(in millions)

	FY2016	FY2015	Percent Change
Cash/Short-Term Investments	$ 106.8	$ 78.5	36.1%
Receivables	27.0	27.1	(0.3%)
Investments (Fair Value)	3,623.6	3,743.3	(3.2%)
Other Assets (Net)	2.2	1.5	46.7%
Total Assets	3,759.6	3,850.4	(2.4%)
Pension Deferred Outflows	0.1	0.1	0.0%
Liabilities	102.8	141.8	(27.5%)
Pension Deferred Inflows	0.1	0.3	(66.7%)
Net Position	**$ 3,656.8**	**$ 3,708.4**	**(1.4%)**

Change in Fiduciary Net Position
(in millions)

	FY2016	FY2015	Percent Change
Additions			
Employer Contributions	$ 88.6	$ 87.3	1.3%
Plan Member Contributions	72.7	72.2	0.7%
Other Contributions	43.9	43.4	1.5%
Net Investment Income	71.5	165.7	(71.5%)
Total Additions	**276.8**	**368.6**	**(24.9%)**
Deductions			
Benefit Payments	320.8	303.7	5.6%
Withdrawals	5.1	5.4	(5.6%)
Administrative and Other Expenses	2.4	2.2	9.0%
Total Deductions	**328.4**	**311.2**	**5.5%**
Change in Net Position	**$ (51.5)**	**$ 57.4**	**(189.7%)**

Financial Analysis

- The increase in Employer Contributions and Plan Member Contributions was due to HB 377 provisions that took effect in FY 2014, which increase contribution rates by 0.10% each year for ten years.
- The increase in Plan Member and Other Contributions are due do to an increase in Reportable Compensation of the System as a whole.
- The decrease in Net Investment Income for FY 2016 was due to a slow down in the economy and capital market conditions.
- Net investment income for FY 2016 was positive. However, the investment income was down significantly from previous fiscal years.
- The increase in Other Assets was due to an investment in an upgrade to the current Pension Administration System. The system will be implemented in stages and the overall cost will be capitalized. The total costs of the project as of 06/30/16 were recorded as Construction Work in Progress.
- 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 comparative to previous fiscal years.
- Administrative Expenses for FY 2016 were 0.75% 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.

Overview of the Actuarial Funding

An actuarial valuation of the System is performed annually. As of July 1, 2016, the date of the most recent actuarial valuation, the funded ratio of the System was 69.28%. This was an increase from the System's July 1, 2015 valuation funded ratio of 67.46%.

In determining contribution rates, an actuarial value of assets is used rather than a market value of assets. The actuarial value of assets is based on a smoothed income investment rate. The TRS plan experienced an actuarial asset gain over the last year. The market value of assets had a positive return of 2.08% net of investment and operating expenses. The actuarial value of assets earned 8.79%, which is 1.04% greater than the actuarial assumption of 7.75%. Actuarial gains or losses result when the return on the actuarial value of assets differs from the actuarial investment return assumption.

MCA §19-20-201 requires the actuarial report to show how market performance is affecting the actuarial funding of the retirement system. The July 1, 2016 market value of assets is $142 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 market value of assets was used, the amortization period the System would be 28 years, and the funded ratio would be 66.69%.

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

Fiscal Year	Market Return	Actuarial Return	Actuarial Return Over/ (Under) 7.75%
7/01/2013-6/30/2014	17.09%	13.21%	5.46%
7/01/2014-6/30/2015	4.57%	9.59%	1.84%
7/01/2015-6/30/2016	2.08%	8.79%	1.04%

As of July 1, 2016, the System's Actuarial Value of Assets increased by $189 million from $3.610 billion at July 1, 2015 to $3.799 billion at July 1, 2016. This resulted in an Unfunded Actuarial Accrued Liability (UAAL) of $1.685 billion at July 1, 2016. This was a net decrease in the unfunded position of $56.8 million compared to July 1, 2015.

TEACHERS' RETIREMENT SYSTEM
A COMPONENT UNIT OF THE STATE OF MONTANA
STATEMENT OF FIDUCIARY NET POSITION
FISCAL YEAR ENDED JUNE 30, 2016

		2016
Assets		
Cash/Cash Equivalents-Short Term Investment Pool (Note B)	$	106,788,491
Receivables:		
Accounts Receivable		22,096,228
Interest Receivable		4,934,351
Total Receivables	**$**	**27,030,579**
Investments, at Fair Value: (Note B)		
Equity in Pooled Investments	$	3,522,665,695
Other Investments		-
Securities Lending Collateral (Note B)		100,939,896
Total Investments	**$**	**3,623,605,591**
Assets Used in Plan Operations:		
Land and Buildings	$	193,844
Less: Accumulated Depreciation		(150,545)
Equipment		229,000
Less: Accumulated Depreciation		(177,354)
Construction Work in Progress		2,062,527
Total Other Assets		**2,157,472**
Total Assets	**$**	**3,759,582,133**
Pension Deferred Outflows (Note E)	$	128,277
Liabilities		
Accounts Payable	$	148,655
Securities Lending Liability (Note B)		100,939,896
Compensated Absences (Note B)		175,277
OPEB Implicit Rate Subsidy (Note G)		327,604
Net Pension Liability (Note E)		1,177,820
Total Liabilities	**$**	**102,769,251**
Pension Deferred Inflows (Note E)	$	110,361
Net Position Restricted for Pension Benefits	**$**	**3,656,830,798**

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
FISCAL YEAR ENDED JUNE 30, 2016

		2016
Additions		
Contributions:		
Employer	$	88,643,646
Plan member		72,740,665
Other		43,902,606
Total Contributions	**$**	**205,286,917**
Miscellaneous Income	**$**	**29,123**
Investment Income:		
Net Appreciation/(Depreciation) in Fair Value of Investments	$	(84,549,668)
Investment Earnings		177,329,931
Security Lending Income (Note B)		1,056,684
Investment Income/(Loss)		93,836,947
Less: Investment Expense		(22,014,737)
Less: Security Lending Expense (Note B)		(334,549)
Net Investment Income/(Loss)		**71,487,661**
Total Additions		**276,803,701**
Deductions		
Benefit Payments	$	320,810,259
Withdrawals		5,086,816
Administrative Expense		2,318,818
OPEB Expense (Note G)		54,594
Pension Expense (Note E)		88,255
Total Deductions	**$**	**328,358,741**
Net Increase (Decrease) in Fiduciary Net Position	**$**	**(51,555,040)**
Net Position Restricted for Pension Benefits Beginning of the Year	$	3,708,385,838
Prior Period Adjustment		-
Net Position End of Year	**$**	**3,656,830,798**

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 YEARS ENDED JUNE 30, 2016

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 in other professional and skilled positions employed in public education 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 web site at www.trs.mt.gov.

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 as teachers, administrators, and in other professional and skilled positions 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, 2016, the number and type of reporting entities participating in the system were as follows:

Local School Districts and Co-ops	359
Community Colleges	3
University System Units	2
State Agencies	9
Total	**373**

System Membership

At July 1, 2016, the date of the most recent actuarial valuation, system membership consisted of the following:

Retirees and Beneficiaries Currently Receiving Benefits	15,164
Terminated Members:	
Vested	1,704
Non-vested	12,888
Active Plan Members:	
Full-Time	12,769
Part-Time	6,279
Total Membership	**48,804**

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 in 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).

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, 2016, were required to contribute 8.15% of their earned compensation. School district and community college employers were required to contribute 8.67% of earned compensation. The State's general fund contributes an additional 2.38% of earned compensation for school district and community college employers. University System and State Agency employers were required to contribute 11.05% of earned compensation. The State's general fund also contributes an additional 0.11% of total earned compensation of all TRS members. 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 of employees participating in the Montana University System Retirement Program (MUS-RP).

Contribution rates for FY 2015, 2016, and 2017 for school district and community college employers are listed below.

Fiscal Year	Members	Employers	General Fund	Total
July 1, 2014– June 30, 2015	8.15%	8.57%	2.49%	19.21%
July 1, 2015– June 30, 2016	8.15%	8.67%	2.49%	19.31%
July 1, 2016– June 30, 2017	8.15%	8.77%	2.49%	19.41%

Contribution rates for FY 2015, 2016, and 2017 for state agencies and university system employers are listed below.

Fiscal Year	Members	Employers	General Fund	Total
July 1, 2014– June 30, 2015	8.15%	10.95%	0.11%	19.21%
July 1, 2015– June 30, 2016	8.15%	11.05%	0.11%	19.31%
July 1, 2016– June 30, 2017	8.15%	11.15%	0.11%	19.41%

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

TRS, 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. Employee and employer contributions are recognized as revenues in the period when due pursuant to statutory requirements and investment income is recognized when earned. Benefit and withdrawal payments are recorded in the period in which the liabilities are due and payable.

The System adheres to all applicable Governmental Accounting Standards Board (GASB) Statements.

GASB Statement No. 67 which was adopted during the year ended June 30, 2014, addresses accounting and financial reporting requirements for pension plans. The statement required changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes included an actuarial calculation of total and net pension liability. It also included comprehensive footnote disclosures regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures. The implementation of GASB Statement No. 67 did not significantly impact the accounting for accounts receivable and investment balances. The total pension liability, determined in accordance with GASB Statement No. 67, is presented in Note D.

GASB Statement No. 68 which was adopted during the year ended June 30, 2015, addresses accounting and financial reporting requirements for public pension plan employers. As an active employer in the Public Employees' Retirement System (PERS), TRS is required to comply with GASB Statement No. 68. The statement requires additional notes to the financial statements and required supplementary information. Significant changes include recording and reporting of pension amounts including: Net Pension Liability, Pension Expense, and Deferred Inflows and Outflows of resources. The GASB Statement No. 67 actuarial calculation of total and net pension liability for PERS was allocated to each employer of PERS based on the employer contributions. The allocated pension amounts, determined in accordance with GASB Statement No. 68, are presented in Note E.

Prior Period Adjustments

Prior period adjustments relate to corrections of errors and changes in accounting policy from prior periods. There was no prior period adjustment for the fiscal year ended June 30, 2016.

Compensated Absences

Compensated absences represent 100 percent of accrued vacation and 25 percent of accrued sick leave for TRS personnel. Compensated absences were recored as a liability of $175,277 at June 30, 2016.

Investments

The Montana Board of Investments (BOI) 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 BOI for TRS are subject to BOI's investment risk policies. 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 Board of Investments, P.O. Box 200126, Helena, MT 59620-0126. The BOI website can be found at investmentmt.com.

TRS investments include: Short-Term Investment Pool (STIP), Retirement Funds Bond Pool (RFBP), Montana Domestic Equity Pool (MDEP), Montana International Equity Pool (MTIP), Montana Private Equity Pool (MPEP), and Montana Real Estate Pool (MTRP).

Montana Domestic Equity Pool (MDEP)
The Montana Public Retirement Plans investment in the Montana Domestic Equity Pool (MDEP) will provide the Plans with exposure to a broad and diverse spectrum of equity-related securities across different industries and market capitalization ranges. Primarily, these equity investments will be managed by external asset managers that invest in the common shares of equity for entities that have their headquarters based in the United States and are traded on eligible U.S. exchanges. MDEP will be diversified across a number of investment portfolios and investment managers that will utilize either an active or an index focused investment strategy.

Montana International Equity Pool (MTIP)
The Montana Public Retirement Plans investment in the Montana International Equity Pool (MTIP) will provide the Plans with exposure to a broad and diverse spectrum of equity-related securities across different industries and market capitalization ranges. Primarily, these equity investments will be managed by external asset managers that invest in the common shares of equity for entities that have their headquarters based outside of the United States. MTIP will be diversified across a number of investment portfolios and investment managers that will utilize either an active or an index focused investment strategy.

Montana Private Equity Pool (MPEP)
The Montana Public Retirement Plans investment in the Montana Private Equity Pool (MPEP) will provide the Plans with exposure to a diverse spectrum of private investment opportunities across different industries, both within and outside the United States. Primarily, these investments will be private equity partnership interests, which may be direct limited partnerships or vehicles that primarily invest in direct limited partnerships, including fund-of-funds and secondary funds. MPEP will be diversified across a number of funds, vintage years, investment opportunities, and geographies.

Montana Real Estate Pool (MTRP)
The Montana Public Retirement Plans investment in the Montana Real Estate Pool (MTRP) will provide the Plans with exposure to a diverse spectrum of real estate related investment opportunities both within and outside the United States. Primarily, these investments will be made in an open-ended institutional commingled fund or a closed-ended private investment fund. MTRP will be diversified across a number of funds, vintage years, investment opportunities, and geographies.

Montana Retirement Funds Bond Pool (RFBP)
The Montana Public Retirement Plans investment in the Retirement Funds Bond Pool (RFBP) will provide the Plans with exposure to a broad and diverse spectrum of fixed income-related securities across different sectors, industries, credit ratings and maturities. These fixed income investments will be managed internally as well as by external asset managers utilizing an active investment strategy.

Short-Term Investment Pool (STIP)
The Montana Public Retirement Plans investment in the Short-Term Investment Pool (STIP) will provide the Plans with exposure to Cash related investments. STIP will be managed internally utilizing an active investment strategy.

TRS Investment Portfolio
June 30, 2016

Investment		Book Value		Fair Value
Short-Term Investment Pool	$	97,160,326		97,180,439
Retirement Funds Bond Pool		770,732,231		855,977,383
MT Domestic Equities Pool		380,709,156		1,367,756,297
MT International Equities Pool		372,222,961		559,611,260
MT Private Equities Pool		177,915,055		404,387,166
MT Real Estate Pool		260,556,789		334,933,589
Total	**$**	**2,059,296,519**	**$**	**3,619,846,134**

Pension Investment Pools

RFBP, MDEP, MTIP, MPEP, and MTRP are internal investment pools managed and administered under the direction of the Montana Board of Investments (BOI) as statutorily authorized by the Unified Investment Program. They are commingled internal investment pools, and only the retirement systems can participate in these pools. On a monthly basis, redemptions are processed by BOI 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 NAV per share (or its equivalent) of the investment. Refer to the fair value measurement note disclosures within BOI's annual financial statements for the underlying investments within the fair value hierarchy.

Short Term Investment Pool (STIP)

STIP is an external investment pool managed and administered under the direction of BOI 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 net asset value (NAV) per share (or its equivalent) of the investment. Refer to the fair value measurement note disclosures within BOI's annual financial statements for the underlying investments within the fair value hierarchy.

Investments Measured at Fair Value

Investments		6/30/2016		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								
Retirement Funds Bond Pool (RFBP)	$	855,977,383						
Montana Domestic Equity Pool (MDEP)		1,367,756,297						
Montana International Equity Pool (MTIP)		559,611,260						
Montana Private Equity Pool (MPEP)		404,387,166						
Montana Real Estate Pool (MTRP)		334,933,589						
Short Term Investment Pool (STIP)		97,180,439						
Total investments measured at the NAV		**3,619,846,134**						
Total investments measured at fair value	$	**3,619,846,134**						

Investments Measured at Net Asset Value

Investments		"Fair Value"	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Retirement Funds Bond Pool (RFBP)	$	855,977,383	-	Monthly	30 days
Montana Domestic Equity Pool (MDEP)		1,367,756,297	-	Monthly	30 days
Montana International Equity Pool (MTIP)		559,611,260	-	Monthly	30 days
Montana Private Equity Pool (MPEP)		404,387,166	-	Monthly	30 days
Montana Real Estate Pool (MTRP)		334,933,589	-	Monthly	30 days
Short Term Investment Pool (STIP)		97,180,439	-	Daily	1 day
Total investments measured at the NAV	$	**3,619,846,134**			

Investment Risks

The investment risks for the pooled investments that TRS participates in are described in the following paragraphs. Investments are administered by BOI for TRS as part of the State of Montana's Unified Investment Program, and BOI is responsible for setting investment risk policies.

Credit Risk – Credit risk is defined as the risk that an issuer or other counter-party to an investment will not fulfill its obligation. With the exception of U.S. Government securities, the fixed income instruments in the investment pools have credit risk as measured by major credit rating services.

Custodial Credit Risk - Custodial credit risk is the risk that, in the event of the failure of the counter-party to a transaction, the BOI may not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. As of June 30, 2016, 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 Board's custodial bank, State Street Bank.

Concentration of Credit Risk – Concentration of credit risk is the risk of loss attributed to the magnitude of BOI's investment in a single issuer. Investments explicitly guaranteed by the U.S. Government are excluded from the concentration of credit risk requirement. In 2008, the U.S. government extended the explicit guarantee to certain government agencies such as Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (FHLMC-Freddie Mac). Given the explicit guarantee extension, the BOI had no concentration of credit risk exposure to Fannie Mae and Freddie Mac in either the Bond Pools or STIP.

Bond Pools - The RFBP Core Internal Bond Portfolios Investment Policy Statement (IPS) provides for a 2% portfolio limit for dollar denominated debt obligations of domestic and foreign corporations (Yankee bonds) and a 3% portfolio limit in non-agency Mortgage Pass-through (MBS) securities. The four RFBP external managers are limited to debt obligations of domestic and foreign corporations up to 3% of portfolio assets per issuer.

STIP – The STIP Investment Policy limits concentration of credit risk exposure by limiting portfolio investment types to 3% in any issuer with the exception of US Treasury and US Agency securities as well as any repurchase agreements with a financial institution.

Foreign Currency Risk – Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment Although the MTIP, RFBP, and MTRP do not have a formal policy to limit foreign currency risk, the MTIP policy provides for the "external managers to hedge currency in a defensive manner. The managers are not allowed to engage in currency speculation, such as over-hedging, reverse hedging, cross-hedging or other trading activity not specifically aimed at minimizing risk versus their benchmark or preserving the U.S. dollar value of investments. The managers' Investment Guidelines provide for currency hedging and emerging market limitations. At the Pool level, MTIP will be managed on an un-hedged basis." The MPEP policy does not address foreign currency risk, but identifies "country risk as including all of the risks associated with international alternative investments along with the political, economic and currency risks associated with investing outside of the United States."

Interest Rate Risk – Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. In accordance with GASB Statement No. 40, the BOI uses effective duration as a measure of interest rate risk for the Bond Pool. Duration for two fixed income external managers must be within 25% of the established Index duration. MDEP domestic equity managers are allowed to maintain up to 5% of assets in short-term investments and index domestic equity managers are allowed to maintain up to 3% of assets in short-term investments and individual securities. MTIP international equity managers are allowed to maintain up to 5% of assets in short-term investments.

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 60 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, 2016 are categorized in the following table:

Investment	Fair Value 6/30/16	Credit Quality Rating 6/30/16	Effective Duration 6/30/16
RFBP	855,977,383	NR	5.38 yrs
STIP	97,180,439	NR	0.11 yrs

With the exception of the U.S. Government securities, the RFPB 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. Although the RFBP investments have been rated by investment security type, RFBP as an external investment pool, has not been rated. STIP investments have also been rated by investment security type. However, STIP as an external investment pool, has not been rated.

MPEP, MTRP, MTIP, and RFBP include assets subject to foreign currency risk. TRS' position in these pools is approximately 36% at June 30, 2016. The Montana BOI MPEP and MTRP investments in EURO currency had a fair value of approximately $32,145,000 at June 30, 2016. The Montana BOI MTIP and RFBP had cash and securities with a foreign currency value of approximately $415,503,000 at June 30, 2016.

Securities Lending – Under the provisions of state statutes, BOI is authorized to lend its securities and has contracted with the custodial bank to lend the BOI securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. The custodial bank is required to maintain collateral equal to 102 percent of the fair value of domestic securities and 105 percent of the fair value of international securities while the securities are on loan. The BOI and the custodial bank split the earnings, 80/20% respectively, on security lending activities. The BOI retains all rights and risks of ownership during the loan period. At June 30, 2016, the BOI had no credit risk exposure to borrowers. The private equity and real estate pools do not participate in securities 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.

NOTE C. PROPERTY AND EQUIPMENT

Property and equipment consist of the amounts shown in the following table as of June 30, 2016. Assets under $5,000 are expensed in the year purchased. Assets valued at $5,000 or more are recorded at cost less straight-line depreciation over the estimated useful life of five to ten years. Assets valued at $100,000 or more are recorded at cost less straight-line depreciation over the estimated useful life of five to ten years. There were no significant leases as of June 30, 2016. As of June 30, 2016, TRS has completed several modules of its upgraded pension administration system project (M-Trust). The system upgrade is being implemented on a modular basis with all modules expected to be completed by December 1, 2016. The cost of implementing and upgrading the system as of June 30, 2016 is shown below and on the Basic Financial Statements in the Construction Work in Progress line item. The upgrade will be amortized once the project is complete. The Board approved a $2.7 million investment in the upgraded system in the spring of 2014.

		2016
Land and Buildings	$	193,844
Less: Accumulated Depreciation		(150,545)
Equipment		229,000
Less: Accumulated Depreciation		(177,354)
Construction Work in Progress	$	2,062,527
Net Property and Equipment	$	2,157,472

NOTE D. NET PENSION LIABILITY — TRS PLAN REPORTING

Net Pension Liability — TRS Plan

Fiscal Year Ending June, 30 2016		
Total Pension Liability	$	5,483,673,777
Fiduciary Net Position	$	3,656,830,798
Net Pension Liability	$	1,826,842,979
Ratio of Fiduciary Net Position to Total Pension Liability		66.69%

The net pension liability, 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, 2016, is as shown above. July 1, 2016 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 the spring of 2014 for the five year period ending July 1, 2013. 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, 2016, is based on the results of an actuarial valuation date of July 1, 2016. There were several significant assumptions and other inputs used to measure the total pension liability. The actuarial assumptions used in the July 1, 2016, valuation were based on the results of the last actuarial experience study, dated May 1, 2014. Among those assumptions were the following:

Total Wage Increases*	8.51%
Investment Return	7.75%
Price Inflation	3.25%
Growth in Membership	0.00%
Post-retirement Benefit Increases (Starting Three Years After Retirement)	1.50%
Interest on Member Accounts	5.00%

**Total Wage Increases include 4.00% general wage increase assumption and a range of 0.00% to 4.51% merit and longevity increases based on years of service.*

Target Allocations – TRS Plan

Asset Class	Target Asset Allocation (a)	Real Rate of Return Arithmetic Basis (b)	Long-Term Expected Portfolio Real Rate of Return* (a) x (b)
Broad US Equity	36.00%	4.80%	1.73%
Broad International Equity	18.00%	6.05%	1.09%
Private Equity	12.00%	8.50%	1.02%
Intermediate Bonds	23.40%	1.50%	0.35%
Core Real Estate	4.00%	4.50%	0.18%
High Yield Bonds	2.60%	3.25%	0.08%
Non-Core Real Estate	4.00%	7.50%	0.30%
Totals	**100.00%**		**4.75%**
		Inflation	3.25%
		Expected Arithmetic Nominal Return	8.00%

**The long-term expected nominal rate of return above of 8.00% differs from the total TRS long-term rate of return assumption of 7.75%. The assumed rate is comprised of a 3.25% inflation rate and a real long-term expected rate of return of 4.50%.*

The assumed long-term expected return on pension plan assets is reviewed as part of the regular experience studies prepared every four years for the System. The most recent analysis, performed for the period covering fiscal years 2008 through 2013, is outlined in a report dated May 1, 2014. 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 a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and, inflation) were developed by the investment consultant for each major asset class. These ranges were combined to produce 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 capital market assumptions developed by the investment consultant are intended for use over a 10-year horizon and may not be useful in setting the long-term rate of return for funding pension plans which covers a longer time frame. The assumption is intended to be a long-term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years. Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation as of June 30, 2016, is summarized in the above table.

The discount rate (long-term rate of return assumption) used to measure the total pension liability was 7.75%. 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 2122. 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.

History of Legislated Contributions – School District and Other Employers

by percent of covered payroll

	Members	Employers	General Fund	Total Employee
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%

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 (6.75%)	Current Discount Rate	1.0% Increase (8.75%)
Net Pension Liability	$ 2,451,115,994	$ 1,826,842,979	$ 1,301,274,168

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 7.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.75%) or 1.00% higher (8.75%) than the current rate.

Schedule of Investment Returns – TRS Plan

TRS Plan Schedule of Investment Returns

	2016*	2015*	2014*
Annual Money Weighted Rate Return, Net of Investment Expense	1.986%	4.618%	17.18%

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

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 became effective June 30, 2015, and 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 not Special Funding whereby the State General Fund provides contributions from the Coal Severance Tax and interest. All employers are required to report the portion of Coal Severance Tax and interest attributable to the employer as grant revenue. However, since TRS does not receive any other contributions from the state as a result of being an employer of PERS, the State of Montana Proportionate share is $0 as seen below.

Net Pension Liability – TRS as an Employer of PERS Plan

	Net Pension Liability as of 6/30/16	Net Pension Liability as of 6/30/15	Percent of Collective NPL as 6/30/16	Percent of Collective NPL as 6/30/15	Change in Percent of Collective NPL
TRS Proportionate Share	$ 1,177,820	$ 1,009,567	0.084258%	0.081024%	0.003234%
State of Montana Proportionate Share Associated with TRS	$ 0	$ 0	0.000000%	0.000000%	0.000000%
Total	**$ 1,177,820**	**$ 1,009,567**	**0.084258%**	**0.081024%**	**0.003234%**

At June 30, 2016, TRS recorded a liability of $1,177,820 for its proportionate share of the Net Pension Liability. The Net Pension Liability was measured as of June 30, 2015, and the Total Pension Liability (TPL) used to calculate the Net Pension Liability was determined by an actuarial valuation as of June 30, 2014, with update procedures to roll forward the TPL to the measurement date of June 30, 2015. TRS' proportion of the Net Pension Liability was based on the employer contributions received by PERS during the measurement period July 1, 2014, through June 30, 2015, relative to the total employer contributions received from all of PERS' participating employers. At June 30, 2016, the TRS' proportion was 0.084258 percent.

Summary of Actuarial Assumptions – PERS Plan

Changes in actuarial assumptions and methods: There were no changes in assumptions or other inputs that affected the measurement of the Total Pension Liability.

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 the employer's reporting date that are expected to have a significant effect on the employer's proportionate share of the collective NPL.

Pension Expense – TRS as an Employer of PERS Plan

		Pension Expense as of 6/30/16
TRS Proportionate Share	$	59,989
Proportionate Share of Coal Severance Tax Contributions Associated with TRS	$	28,266
Total	**$**	**88,255**

At June 30, 2016, TRS recognized a Pension Expense of $88,255 for its proportionate share of the PERS' pension expense. TRS also recognized grant revenue of $28,266 for the support provided by the State of Montana for the proportionate share of the Coal Severance Tax contributions made to PERS that are associated with TRS.

Deferred Inflows and Outflows - TRS as an Employer of PERS Plan

At June 30, 2016, 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	$	0	$	7,126
Changes in Actuarial Assumptions	$	0	$	0
Difference Between Projected and Actual Investment Earnings	$	0	$	99,715
Changes in Proportion and Differences Between TRS Contributions and Proportionate Share of Contributions	$	38,033	$	3,520
Changes in Proportion		N/A		N/A
*Contributions Paid to PERS Subsequent to the Measurement Date—FY 2016 Contributions	$	90,244	$	0
Total	**$**	**128,277**	**$**	**110,361**

**Amounts reported as deferred outflows of resources related to pensions resulting from TRS's contributions in FY 2016 subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2017. Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:*

Year Ended June 30:		Amount Recognized as an Increase (or Decrease) to Pension Expense in Future Years
2017	$	(32,979)
2018	$	(32,979)
2019	$	(32,304)
2020	$	25,934
2021		–
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-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 vesting is immediate 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 depend 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)

- GABA is 3% for members hired prior to July 1, 2007.
- GABA is 1.5% for members hired on or after July 1, 2007 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.

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. Member and employer contribution rates are shown in the table below.

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.
   c. The portion of employer contributions allocated to the PCR are included in the employers reporting. The PCR was paid off effective March 2016, and the contributions previously directed to the PCR are now directed to member accounts.

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.

b. Not Special Funding
  i. The State contributes a portion of Coal Severance Tax income and earnings from the Coal Trust Permanent Trust fund.

Stand-Alone Statements – PERS Plan

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

CAFR information including PERS stand-alone financial statements can be found on their website at http://mpera.mt.gov/annualReports.shtml.

The latest actuarial valuation and experience study can be found at their website at http://mpera.mt.gov/actuarialValuations.asp.

Actuarial Assumptions – PERS Plan

The Total Pension Liability as of June 30, 2015, is based on the results of an actuarial valuation date of June 30, 2014, with update procedures to roll forward the TPL to June 30, 2015. There were several significant assumptions and other inputs used to measure the TPL. The actuarial assumptions used in the June 30, 2014, valuation were based on the results of the last actuarial experience study, dated June 2010, for the six year period July 1, 2003, to June 30, 2009. Among those assumptions were the following:

General Wage Growth*	4.00%
*Includes Inflation at	3.00%
Merit Wage Increases	0% to 6.00%
Investment Return	7.75%

Post-retirement Benefit Increases

3% for Members hired prior to July 1, 2007

1.5% for Members hired on or after July 1, 2007

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.

Mortality assumptions among contributing members, terminated vested members, service retired members and beneficiaries based on RP 2000 Combined Employee and Annuitant Mortality Tables projected to 2015 with scale AA.

Mortality assumptions among Disabled Retirees are based on RP 2000 Combined Employee and Annuitant Mortality Tables with no projections. No future mortality improvement is assumed.

Discount Rate – PERS Plan

The discount rate used to measure the Total Pension Liability was 7.75%. 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 0.1% of salaries for local governments and 0.37% for school districts. In addition, the State contributes coal severance tax and interest money from the general fund. The interest is contributed monthly, and the severance tax is contributed quarterly. 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 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 incorporated in the discount rate.

Target Allocations – PERS Plan

Asset Class	Target Asset Allocation	Real Rate of Return Arithmetic Basis
Cash Equivalents	2.00%	-0.25%
Domestic Equity	36.00%	4.55%
Foreign Equity	18.00%	6.10%
	100.00%	

Asset Class	Target Asset Allocation	Real Rate of Return Arithmetic Basis
Fixed Income	24.00%	1.25%
Private Equity	12.00%	8.00%
Real Estate	8.00%	4.25%
	100.00%	

The long-term expected return on pension plan assets is reviewed as part of the regular experience studies prepared for the PERS. The most recent analysis, performed for the period covering fiscal years 2003 through 2009, is outlined in a report dated June 2010, which is located on the MPERA website. Several factors are considered in evaluating the long-term rate of return assumption including rates of return adopted by similar public sector systems, and by using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense, and inflation) are developed by the investment consultant for each major asset class. These ranges were combined to produce 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 and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years. Best estimates are presented as the arithmetic real rates of return for each major asset class included in the PERS target asset allocation as of June 30, 2015, is summarized in the Target Allocations - PERS Plan table on the previous page.

Sensitivity Analysis – TRS as an Employer of PERS Plan

	1.0% Decrease (6.75%)	Current Discount Rate	1.0% Increase (8.75%)
TRS' Proportion of Net Pension Liability	$ 1,815,944	$ 1,177,820	$ 638,940

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 7.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.75%) or 1.00% higher (8.75%) 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.

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, 2016, were required to contribute 8.15% of their earned compensation and the employer contribution rate for the fiscal year ending June 30, 2016, was 8.67% of earned compensation. For State

Agency and University System employers, the employer contribution rate was 11.05% of members' earned compensation.

The State's general fund contributed an additional 2.38% of earned compensation for school district and community college employers. In addition, the State's general fund contributed .11% of earned compensation for all TRS members. 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, 2016, is indicated in the Required Supplemental Information, Schedule of Employer Contributions.

NOTE G. OTHER POST-EMPLOYMENT BENEFITS

Plan Description

TRS employees and dependents are eligible to receive health care through the State Group Benefits Plan administered by the Montana Department of Administration (MDOA). In accordance with §2-18-704, MCA, the State provides optional post-employment medical, vision, and dental health care benefits for retirees and their dependents and beneficiaries that elect to continue coverage and pay administratively established premiums. Plan coverage is on a calendar year basis. For GASB 45 reporting, the State Group Benefits Plan is considered an agent multiple-employer plan, and TRS is considered to be a separate employer participating in the plan. Information about the State of Montana Other Post-employment Benefits (OPEB) can be obtained from the Department of Administration, State Financial Services Division, P.O. Box 200102, Helena, MT 59620-0102.

The OPEB plan allows retirees to participate, as a group, at a rate that does not cover all of the related costs. This results in the reporting of an "implied rate" subsidy in the related financial statements and footnotes. While this liability is disclosed for financial statement purposes, it does not represent a legal liability of TRS.

Funding and Investment Policy

The contribution requirements of plan members are established and may be amended by the MDOA. The monthly premium for plan members ranges from $416 to $1,506 for calendar year 2016, depending on the medical plan selected, family coverage, and Medicare eligibility. The plan is financed on a pay-as-you-go basis. Therefore, there are no investment objectives of the OPEB plan.

Annual OPEB Expense

The annual required contribution (ARC) is the OPEB expense that is actuarially determined in accordance with the parameters of GASB Statement No. 45. The OPEB expense represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed 30 years.

Annual OPEB Expense

	TRS
Annual Required Contribution/OPEB Expense	$ 51,186
Interest on Net OPEB Obligation	15,799
Amortization on Net OPEB Obligation	(12,392)
Annual OPEB Expense	54,594
Contributions Made	(13,564)
Increase in Net OPEB Obligation	41,030
Net OPEB Obligation – Beginning of Year	286,574
Net OPEB Obligation – End of Year	$ 327,604

The 2016 ARC is calculated for all the plan's employers and then allocated to each participating employer. The TRS 2016 ARC is $51,186. The 2016 ARC is equal to an annual amount required each year to fully fund the liability over 30 years. The amount of the estimated OPEB actuarial accrued liability was determined in accordance with GASB Statement 45. The liability is measured every two years by the actuary and as of December 31, 2015, the liability for TRS is estimated at $524,423. (The actuarial accrued liability is the present value of future retiree benefits and expenses.) For fiscal year 2016, the TRS allocated annual OPEB expense was $54,594. The TRS annual OPEB expense, the percentage of annual OPEB expense contributed to the plan, and the net OPEB obligation for 2016 and the five preceding years were as follows:

Fiscal Year Ended	Annual OPEB Expense	Percent of Annual OPEB Expense Contributed	Net OPEB Obligation
6/30/2011	$ 62,837	27.9%	$ 134,832
6/30/2012	$ 59,112	9.4%	$ 164,529
6/30/2013	$ 59,793	12.0%	$ 194,444
6/30/2014	$ 58,073	21.0%	$ 240,329
6/30/2015	$ 64,400	28.2%	$ 286,574
6/30/2016	$ 54,894	24.8%	$ 327,604

OPEB Funded Status and Funding Progress

Other Post-employment Benefits Plan Information Schedule of Funding Progress
(all dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded (UAAL) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll (c)	UAAL as % of Covered Pay-roll (b-a/c)
12/31/2007	-	$ 449,321	$ 449,321	0%	$ 519,969	86.41%
12/31/2009	-	$ 357,664	$ 357,664	0%	$ 526,794	67.89%
12/31/2011	-	$ 361,053	$ 361,053	0%	$ 558,646	64.63%
12/31/2013	-	$ 493,412	$ 493,412	0%	$ 828,985	59.52%
12/31/2015	-	$ 524,423	$ 524,423	0%	$ 973,509	53.87%

The funded status of the TRS allocation of the plan as of December 31, 2015, the most recent valuation date was as follows:

Actuarial Accrued Liability (AAL)	$ 524,423
Actuarial Value of Plan Assets	$ 0
Unfunded Actuarial Accrued Liability (UAAL)	$ 524,423
Funded Ratio (Actuarial Value of Plan Assets/AAL)	0
TRS Covered Payroll (Active Plan Members)	$ 973,509
UAAL as a Percentage of Covered Payroll	53.87%

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. Actuarial calculations reflect a long-term perspective. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Projections of benefits for financial reporting progress are based on the substantive plan (the plan as understood by the employer and the plan members), and includes the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations on the pattern of cost sharing between the employer and plan members in the future.

OPEB Plan Actuarial Methods and Assumptions

As of December 31, 2015, the TRS actuarially accrued liability (AAL) for benefits was $524,423 with no actuarial value of assets, resulting in an unfunded actuarial accrued liability (UAAL) of $524,423, and the ratio of the UAAL to the covered payroll was 53.87%. The UAAL is being amortized as a level dollar amount over an open basis for 30 years.

In the December 31, 2015, actuarial valuation, the projected unit credit funding method was used for the State. The actuarial assumptions included a 4.25% discount rate and a 2.50% payroll growth rate (inflation rate). The assumed participation rate is 55% of future retirees. The projected annual healthcare cost trend rate is 3.4% (medical) and 10.8% (prescription drug) for 2015.

NOTE H. PENDING LITIGATION

As of June 30, 2016, 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

Schedule of Changes in the Net Pension Liability – TRS Plan

	2016*	2015*	2014*
Total Pension Liability			
Service Cost	$ 73,530,938	$ 73,820,438	$ 77,006,174
Interest	402,339,969	390,555,879	373,456,442
Benefit Changes	-	-	-
Difference Between Expected and Actual Experience	(5,245,998)	9,660,152	20,297,029
Changes of Assumptions	(12,445,656))	(4,670,553)	46,502,421
Benefit Payments	(320,810,259)	(303,675,300)	(285,182,358)
Refunds of Contributions	(5,086,816)	(5,368,359)	(4,788,688)
Net Change in Total Liability	132,282,178	160,322,257	227,291,020
Total Pension Liability Beginning	$ 5,351,391,599	$ 5,191,069,342	$ 4,963,778,322
Total Pension Liability Ending (a)	**$ 5,483,673,777**	**$ 5,351,391,599**	**$ 5,191,069,342**
Fiduciary Net Position			
Contributions - Employer	$ 88,643,646	$ 87,290,863	$ 83,439,612
Contributions - Member	72,740,665	72,215,797	70,468,354
Contributions - Non-Employer Contributing Entities	43,902,606	43,389,534	64,923,320
Miscellaneous Income	29,123	27,297	6,000
Net Investment Income	71,487,661	165,684,953	540,277,362
Benefit Payments	(320,810,259)	(303,675,300)	(285,182,358)
Administrative Expenses	(2,318,818)	(2,035,081)	(2,022,636)
Refund of Contributions	(5,086,816)	(5,368,359)	(4,788,688)
Other	(142,849)	(140,631)	(58,073)
Net Change in Fiduciary Net Position	(51,555,041)	57,389,073	467,062,894
Fiduciary Net Position - Beginning	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)	**$ 3,656,830,798**	**$ 3,708,385,838**	**$ 3,652,220,265**
Net Pension Liability - Ending (a - b)	**$ 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 Systems actuary, Cavanaugh Macdonald Consulting, LLC. The NPL is measured as the TPL less the amount of the FNP of the Retirement System.

Schedule of the Net Pension Liability – TRS Plan

	2016*	2015*	2014*
Total Pension Liability	$ 5,483,673,777	$ 5,351,391,599	$ 5,191,069,342
Fiduciary Net Position	3,656,830,798	3,708,385,838	3,652,220,265
Net Pension Liability	$ 1,826,842,979	$ 1,643,005,761	$ 1,538,849,077
Ratio of Fiduciary Net Position to Total Pension Liability	66.69%	69.30%	70.36%
Covered – Employee Payroll	$ 795,920,906	$ 768,718,699	$ 750,604,063
Net Pension Liability as a Percentage of Covered-Employee Payroll	**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

	2016*	2015*	2014*
Annual Money Weighted Rate Return, Net of Investment Expense	1.986%	4.618%	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

	2016	2015	2014	2013	2012
Actuarially Determined Employer Contributions	$ 132,546,252	$ 130,680,397	$ 148,362,932	$ 130,533,530	$ 108,993,492
Actual Contributions:					
Employers	88,643,646	87,290,863	83,439,612	74,113,191	72,422,404
Non-Employer Contributing Entities	$ 43,902,606	$ 43,389,534	$ 64,923,320	$ 17,521,347	$ 16,843,766
Total	**$ 132,546,252**	**$ 130,680,397**	**$ 148,362,932**	**$ 91,634,538**	**$ 89,266,170**
Annual Contribution Deficiency/(Excess)	–	–	–	38,898,992	19,727,322
Covered -Employee Payroll	795,920,906	768,718,699	750,604,063	742,608,987	735,586,961
Actual Contributions as a Percentage of Covered-Employee Payroll	16.65%	17.00%	19.77%	12.34%	12.14%

	2011	2010	2009	2008	2007
Actuarially Determined Employer Contributions	$ 91,879,263	$ 90,967,180	$ 80,997,968	$ 81,414,325	$ 40,807,133
Actual Contributions:					
Employers	72,879,950	72,179,128	66,850,644	67,921,950	61,943,986
Non-Employer Contributing Entities	$ 17,437,366	$ 17,241,610	$ 14,147,324	$ 13,492,375	$ 720,266
Total	**$ 90,317,316**	**$ 89,420,738**	**$ 80,997,968**	**$ 81,414,325**	**$ 62,664,252**
Annual Contribution Deficiency/(Excess)	1,561,947	1,546,442	–	–	(21,857,119)
Covered -Employee Payroll	746,694,434	747,037,330	683,235,462	657,435,444	664,100,000
Actual Contributions as a Percentage of Covered-Employee Payroll	12.10%	11.97%	11.86%	12.38%	9.44%

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:

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 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 Market
Inflation	3.25 Percent
Salary Increase	4.00 – 8.51 Percent, Including Inflation for Non-University Members and 5.00 Percent for University Members;
Investment Rate of Return	7.75 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

	2016	2015
TRS' Proportion of the Net Pension Liability	0.084258%	0.081024%
TRS' Proportionate Share of the Net Pension Liability	$ 1,177,820	$ 1,009,567
State of Montana's Proportionate Share of the Net Pension Liability Associated With the TRS	$ 0	$ 0
Total NPL	$ 1,177,820	$ 1,009,567
TRS' Covered-Employee Payroll	$ 971,504	$ 905,963
TRS' Proportionate Share of the Net Pension Liability as a Percentage of Its Covered-Employee Payroll	121.2%	111.4%
Fiduciary Net Position as a Percentage of the Total Pension Liability	78.4%	79.9%

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

	2016	2015
Contractually Required Contributions	$ 89,396	$ 82,288
Contributions in Relation to the Contractually Required Contributions	$ 89,396	$ 82,288
Contribution Deficiency (Excess)	$ 0	$ 0
Employer's Covered-Employee Payroll	$ 1,043,891	$ 971,504
Contributions as a Percentage of Covered-Employee Payroll	8.56%	8.47%

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

Note to RSI – PERS Plan

Changes of Benefit Terms

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 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.

Changes in Actuarial Assumptions and Methods

Method and assumptions used in calculations of actuarially determined contributions

The following addition to the actuarial assumptions was adopted in 2014 based upon implementation of GASB Statement 68:

Admin Expense as % of Payroll	0.27%

The following changes were adopted in 2013 based on the 2013 Economic Experience study:

General Wage Growth*	4.00%
*Includes inflation at	3.00%
Investment rate of return	7.75%, net of pension plan investment expense, and including inflation

The following Actuarial Assumptions are from the June 2010 Experience Study:

General Wage Growth*	4.25%
*Includes inflation at	3.00%
Merit increase	0% to 7.3%
Investment rate of return	8.00%, net of pension plan investment expense, and including inflation
Asset valuation method	4-year smoothed market
Actuarial cost method	Entry age
Amortization method	Level percentage of pay, open

Other Post-employment Benefits Plan Information

Schedule of Funding Progress
(all dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded (UAAL) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll (c)	UAAL as Percent of Covered Payroll (b-a/c)
12/31/2007	-	$ 449,321	$ 449,321	0%	$ 519,969	86.41%
12/31/2009	-	$ 357,664	$ 357,664	0%	$ 526,794	67.89%
12/31/2011	-	$ 361,053	$ 361,053	0%	$ 558,646	64.63%
12/31/2013	-	$ 493,412	$ 493,412	0%	$ 828,985	59.52%
12/31/2015	-	$ 524,423	$ 524,423	0%	$ 973,509	53.87%

Note to RSI - OPEB

The funded status of the TRS allocation of the plan as of December 31, 2015, the most recent valuation date was as follows:

Actuarial Accrued Liability (AAL)	$	524,423
Actuarial Value of Plan Assets	$	0
Unfunded Actuarial Accrued Liability (UAAL)	$	524,423
Funded Ratio (Actuarial Value Of Plan Assets/AAL)		0
TRS Covered Payroll (Active Plan Members)	$	973,509
UAAL as a Percentage of Covered Payroll		53.87%

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. Actuarial calculations reflect a long-term perspective. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Projections of benefits for financial reporting progress are based on the substantive plan (the plan as understood by the employer and the plan members), and includes the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations on the pattern of cost sharing between the employer and plan members in the future.

TEACHERS' RETIREMENT SYSTEM
A COMPONENT UNIT OF THE STATE OF MONTANA
SUPPORTING SCHEDULES / SUPPLEMENTARY INFORMATION
FISCAL YEARS ENDED JUNE 30, 2016

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 the TRS are financed through realized investment income. The expenses, less amortization of assets, may not exceed 1.5% of retirement benefits paid. Administrative expenses for the fiscal year ended June 30, 2016, were 0.75% of benefits paid. The administrative expenses by category are outlined below:

Administrative Expenses

		2016
Personnel Services:		
Salaries	$	1,051,214
Other Compensation		2,764
Employee Benefits		298,058
Total Budgeted Personal Services	**$**	**1,352,036**
Operating Expenses:		
Contracted Services	$	572,551
Supplies and Material		61,918
Communications		105,960
Travel		28,201
Rent		71,218
Repair and Maintenance		35,518
Other Expenses		62,150
Total Budgeted Operating Expenses	**$**	**937,514**
Non-Budgeted Expenses:		
Compensated Absences	$	12,870
Depreciation		16,398
Amortization		—
Total Non-Budgeted Expenses	**$**	**29,268**
Total Administrative Expenses	**$**	**2,318,818**

SUPPLEMENTARY INFORMATION - SUPPORTING SCHEDULES

SCHEDULE OF INVESTMENT EXPENSES

as of June 30, 2016

Investment	BOI	Custodial Bank	External Managers	Other	Total
Short-Term Investment Pool	$ 22,960	$ 8,761	N/A	$ 103,603	$ 135,324
Retirement Funds Bond Pool	$ 281,162	$ 68,554	$ 467,719	$ 3,681	$ 821,116
Montana Domestic Equity Pool	$ 276,006	$ 245,957	$ 3,256,309	$ 1,218,351	$ 4,996,624
Montana International Pool	$ 247,061	$ 89,515	$ 1,297,810	$ 176,579	$ 1,810,965
Montana Private Equity Pool	$ 400,305	$ 19,393	$ 6,391,081	$ 2,629,674	$ 9,440,452
Montana Real Estate Pool	$ 250,223	$ 15,484	$ 3,974,964	$ 569,586	$ 4,810,257
Totals	**$ 1,477,716**	**$ 447,664**	**$15,387,884**	**$4,701,473**	**$ 22,014,737**

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 (Intangible Assets - Capital Work in Progress) as of June 30, 2016.

	2016
Actuarial Services	$ 209,452
Project Consulting Services	82,370
Legal Services	3,862
Audit Services	69,642
Medical Evaluations	375
IT Contracts	27,722
Non-Project IT Services and Consulting	49,583
Project IT Services and Consulting	543,390
Total Consultant Payments	**$ 986,396**

INVESTMENT SECTION

MONTANA
BOARD OF INVESTMENTS

Department of Commerce

Street Address:
2401 Colonial Drive, 3rd Floor
Helena, MT 59601

Mailing Address:
P.O. Box 200126
Helena, MT 59620-0126

Phone: 406/444-0001
Facsimile: 406/449-6579
Website: www.investmentmt.com

TRS Annual Report Investment Letter

For the fiscal year ended 6/30/2016

The fiscal year 2016 return of 2.08% represented the seventh consecutive year of positive returns. All of the plan's underlying asset class pools had positive returns this year with the exception of international equities. The annualized three year plan return of 7.75% and annualized five year plan return of 7.69% are consistent with long-term expectations. The ten year annualized return of 5.89% is below long-term expectations, but relative to a public fund peer universe as reported by our investment consultant, the ten year return ranks in the top decile.

The returns across the six asset class pools this fiscal year were dispersed, illustrating the impact of asset allocation to help reduce the volatility of annual returns while focusing on the longer-term performance objectives. Real estate, like last year, was the only asset class to have a double-digit return (12.11%). Out of the remaining asset classes, fixed income (5.97%) and private equity (5.77%) performed the best and international equity (-8.90%) the worst. As with recent years, international equity performance was negatively influenced by the emerging market component. The short-term investment pool (STIP), as expected given the low level of interest rates throughout the fiscal year, had a performance of 0.41%.

The impact that each asset pool has on the overall plan return is determined by the combination of each asset pool return and the percentage allocation of each asset pool as a percent of total plan assets. The largest contributor to the overall fiscal return of 2.08% was fixed income (+1.20%) and the largest detractor was international equity (-1.24%).

Throughout the fiscal year, the Board of Investments continued to hold the asset allocation ranges consistent with the ranges approved during the last few years. The asset allocation ranges provide a balance to target the longer-term investment objectives, provide the liquidity to fund the regular net cash need to pay benefits, as well as the flexibility to manage risk in response to the economic and capital market cycles.

The actual asset allocation changes during the fiscal year were minimal. Net sales/distributions of domestic equity, real estate, private equity, and fixed income were made and STIP and international equities had net purchases. This activity combined with performance in the different markets led to a slight decrease in both domestic equity (-1.9%) and international equity (-1.1%) exposures while the allocations to fixed income (+1.3%), STIP (+0.8%), private equity (+0.5%), and real estate (+0.4%) all increased modestly. The asset allocation exposures as of the end of the fiscal year are presented in a table following this letter. Overall, the asset allocation mix continues to be heavily weighted towards the equity oriented asset classes that provide a greater opportunity to achieve returns consistent with longer-term expectations. The remaining asset classes contribute to the overall diversification and liquidity needs of the plans.

The pension plan assets continue to be managed with a long-term focus. It is expected that over shorter time periods, investment performance will remain volatile. The consensus view of the market is that global growth will remain low with many of the world's central bankers striving to keep interest rates low to stimulate growth. The markets expect that the U.S. Federal Reserve may be in the minority of central bankers with a bias to gradually increase short-term interest rates.

The Board of Investments will continue to manage the assets with a belief that asset allocation remains the most significant driver of investment performance and that consistent execution of the investment process will have a significant influence on achieving the pension's objectives.

Respectfully submitted,

/s/ Joseph M. Cullen

Joseph M. Cullen, CFA, CAIA, FRM
Chief Investment Officer
Montana Board of Investments

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 Investment Pools 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.

Investment Results

TRS Rates of Returns

	FY 2016	3-Year	5-Year	10-Year
Short-term Investment Pool	0.41%	0.22%	0.24%	1.32%
- 1 Mo LIBOR Index	0.35%	0.23%	0.23%	1.23%
Retirement Funds Bond Pool	5.97%	4.48%	4.61%	5.90%
- Barclays US Agg Bond Index	6.00%	4.06%	3.76%	5.13%
Montana Domestic Equity Pool	1.66%	10.96%	11.42%	7.10%
- S&P 1500 Comp Index	3.64%	11.52%	11.94%	7.53%
Montana International Equity Pool	(8.90%)	2.02%	0.53%	1.31%
- International Custom Benchmark	(9.61%)	1.57%	0.34%	2.04%
Montana Private Equity Pool	7.35%	11.76%	12.04%	10.02%
- S&P 1500+4% (Qtr Lag)	5.18%	15.59%	15.37%	11.07%
Montana Real Estate Pool	12.11%	12.30%	11.38%	2.70%
- NCREIF ODCE Index (AWA) (Net) (Qtr Lag)	12.62%	12.59%	12.20%	5.38%
Total Portfolio	**2.08%**	**7.75%**	**7.69%**	**5.89%**

Investment Summary and Asset Allocation

TRS Cash Equivalent and Investment Portfolio
June 30, 2016

Investment		Book Value		Fair Value
Short-term Investment Pool	$	97,180,439	$	97,200,551
Retirement Funds Bond Pool		770,732,231		855,977,383
MT Domestic Equities Pool		380,709,156		1,367,756,297
MT International Equities Pool		372,222,961		559,611,260
MT Private Equities Pool		177,915,055		404,387,166
MT Real Estate Pool		260,556,789		334,933,589
Total	**$**	**2,059,316,361**	**$**	**3,619,866,246**

TRS Asset Allocation at June 30, 2016

Segments	Market Value ($)	Allocation (%)
Domestic Equity	1,367,756,297	37.75
International Equity	559,611,260	15.46
Domestic Fixed Income	855,977,383	23.67
Real Estate	334,933,589	9.28
Private Equity	404,387,166	11.16
Cash Equivalent	97,200,551	2.68

Source: RVK. *Montana Board of Investments: Investment Performance Analysis*. June, 30 2016.

Investment Pool Holdings at June 30, 2015

Ten Largest Bond Holdings (RFBP):	Fair Value
US TREASURY N/B	$ 539,611,389
WF RBS COMMERCIAL MORTGAGE TRU	54,370,972
COMM MORTGAGE TRUST	48,827,403
FANNIE MAE	38,423,453
NEW RESIDENTIAL MORTGAGE LOAN	27,335,928
JPMORGAN CHASE + CO	21,375,442
FED HM LN PC POOL C91856	20,310,836
FED HM LN PC POOL C91782	20,008,796
PROVINCE OF QUEBEC	19,073,172
ONTARIO (PROVINCE OF)	18,719,714

Ten Largest Domestic Public Equity Holdings (MDEP):	Fair Value
BLACKROCK EQUITY INDEX FUND	$ 2,084,724,683
DIMENSIONAL FUND ADVISORS INC	68,436,615
BLACKROCK MIDCAP EQUITY IND FD	63,896,106
MICROSOFT CORP	25,705,454
AMAZON.COM INC	18,603,973
APPLE INC	18,134,651
WELLS FARGO + CO	12,744,123
ALPHABET INC CL C	12,319,380
PFIZER INC	12,318,113
FACEBOOK INC A	11,961,345

Ten Largest International Equity Holdings (MTIP):	Fair Value
BLACKROCK ACWI EX US SUPERFUND	$ 910,653,947
DFA INTERNATIONAL SMALL COMPAN	75,392,471
BLACKROCK MSCI EM MKT FR FD B	29,682,894
BLACKROCK ACWI EX US SMALL CAP	27,472,924
TAIWAN SEMICONDUCTOR SP ADR	6,061,753
ROYAL DUTCH SHELL PLC A SHS	6,022,230
BRITISH AMERICAN TOBACCO PLC	5,943,374
EAFE STOCK PERFORMANCE INDEX	5,222,224
TEVA PHARMACEUTICAL SP ADR	5,043,293
RELX PLC	4,960,189

The holdings in the pools above represent the BOI overall holdings. TRS owns a portion of each pool (approximately 36%). A complete list of the portfolio holdings is available upon request from BOI.

Investment Management Fees

The Legislature sets the maximum management fee the BOI may charge the accounts it manages. The maximum fee is set at the aggregate level and at the beginning of each fiscal year. The BOI allocates the aggregate fees across the Pools. Custodial bank fees are paid by a statutory appropriation from the state general fund. The BOI allocates custodial bank fees across the Pools and accounts invested outside the Pools and deposits the proceeds in the general fund. The State Treasurer then pays the monthly custodial bank fees from the general fund. External manager fees are paid directly from the accounts they manage. TRS investment management fees charged to each Pool are shown below:

Schedule of Investment Expenses as of 6/30/16

Investment	BOI	Custodial Bank	External Managers	Other	Total
Short-term Investment Pool	$ 22,960	$ 8,761	N/A	$ 103,603	$ 135,324
Retirement Funds Bond Pool	$ 281,162	$ 68,554	$ 467,719	$ 3,681	$ 821,116
Montana Domestic Equity Pool	$ 276,006	$ 242,957	$ 3,256,309	$ 1,218,351	$ 4,996,624
Montana International Pool	$ 247,061	$ 89,515	$ 1,256,309	$ 176,579	$ 1,810,965
Montana Private Equity Pool	$ 400,305	$ 19,393	$ 6,391,081	$ 2,629,674	$ 9,440,452
Montana Real Estate Pool	$ 250,223	$ 15,484	$ 3,974,964	$ 569,586	$ 4,810,257
Totals	**$ 1,477,716**	**$ 447,664**	**$15,387,884**	**$ 4,701,473**	**$ 22,014,737**

ACTUARIAL SECTION

Teachers' Retirement Board
State of Montana
1500 Sixth Avenue
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, 2016. 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. All results prior to July 1, 2009 were determined by the prior actuarial firm.

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, 2016 actuarial valuation indicates that the current employer rate of 11.26% 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 24-year period. The normal cost of 9.87% of pay consists of 1.72% employer contributions and 8.15% employee contributions. The employer rate also includes 0.31% of payroll which is a load for administrative expenses that occur during the year. The remaining contribution of 9.23% plus the previously mentioned cash contributions go toward funding the amortization of the UAAL, which is $1,684.7 million as of July 1, 2016.

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 2016 actuarial valuation are summarized in Exhibit 1. Adoption dates vary by assumption and are provided in Exhibit 1.n 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, 2016 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.

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, 2016 is 24 years based on actuarial assets and 28 years based on market assets. Assuming experience follows the actuarial assumptions, the amortization period is projected to decline. Therefore additional funding is not necessary at this time.

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: The amortization period on an actuarial value of asset basis is 24 years and is anticipated to decline. This is within the parameters of ultimate goal of the Retirement System.

3. 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, 2016 of 69.28% is below 80% the Board's Funding and Benefits policy does not currently support enhanced benefits.

Assumption Changes

There have been no assumption changes since the previous valuation.

Benefit Changes

There have been no benefit changes since the previous valuation.

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

Since the previous valuation, 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.

Impact of Changes

The following table summarizes how experience has changed the UAAL since the July 1, 2015 Actuarial Valuation.

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

July 1, 2015 Valuation UAAL	$	1,741.5
Expected Increase		(1.8)
Expected July 1, 2016 UAAL	$	1,739.7
Experience Loss on Actuarial Liabilities	$	(5.7)
Experience Gain on Actuarial Assets		(36.9)
Assumption & Method Changes		(12.4)
Plan Changes		0.0
Total Gain	$	(55.0)
July 1, 2016 Valuation UAAL	$	1,684.7

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. In prior valuations, the Supplemental Contribution of 4.72% of MUS-RP payroll was assumed to cease in 2033. 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, 2016 indicated an increase is needed in the supplemental contribution rate from 4.72% to 10.22% 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 69.28%, 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

Edward A. Macdonald and Todd B. Green are members of the American Academy of Actuaries and a Fellow of the Conference of Consulting Actuaries, and an Associate of the Society of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

/s/ Edward A. Macdonald

Edward A. Macdonald, ASA, FCA, MAAA
President

/s/ Todd Green

Todd Green, ASA, FCA, MAAA
Principal and Consulting Actuary

EAM/kc

Enclosures

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Retirement, disablement and termination of employment assumptions reflect the five-year experience study for the period ending 2009 adopted by the Board on May 13, 2010.

The assumed rates of mortality have been updated based a five-year experience study for the period ending 2013 adopted by the Board on May 13, 2014.

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

Tables A-3 through A-6 give rates of decrement for service retirement, disablement, mortality, and other terminations of employment.

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.

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Employer Contributions

At the time of this valuation, the total employer contribution rate for normal costs and amortization of the UAAL was 11.26% 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 investment expenses of the System are assumed to be funded by investment earnings in excess of 7.75% per year.

Administrative expenses are assumed to equal 0.31% of payroll.

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 7.75% per year net of investment expenses, compounded annually. (Adopted effective July 1, 2014)

Interest on Member Contributions

Interest on member contributions is assumed to accrue at a rate of 5% per annum, compounded annually. This assumption was set as of July 1, 2004.

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.

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

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 4.0% 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 1% merit and longevity assumption. The general wage increase assumption was adopted July 1, 2004 and the merit and longevity scales were adopted July 1, 2002.

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 for General Members were adopted May 13, 2010. The rates for University Members were adopted May 13, 2010.

Disablement

The rates of disablement used in this valuation are illustrated in Table A-4. These rates were adopted May 13, 2010.

Mortality

The mortality rates used in this valuation are illustrated in Table A-5. A written description of each table used is included in Table A-1. These rates were adopted July 1, 2014.

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-6. These rates were adopted May 13, 2010.

Benefits for Terminating Members

Members terminating with less than five years of service are assumed to request an immediate withdrawal of their contributions with interest. Table A-7 shows the assumed probability of retaining membership in the System among members terminating with five or more years of service. These rates were adopted July 1, 2002.

We estimated the present value of future benefits for terminated vested members based on the greater of the present value of their deferred benefit at age 60 or their available contribution account.

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, 2016 was $236,465,298.

Effective for fiscal years after June 30, 2007, the MUS-RP contribution rate is 4.72%, pursuant to MCA 19-20-621. In the prior valuations, the Supplemental Contribution of 4.72% of MUS-RP payroll was assumed to cease in 2033. 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 and 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.

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-1 Summary of Valuation Assumptions

I.	Economic assumptions		
	A.	General wage increases* (Adopted July 1, 2014)	4.00%
	B.	Investment return (Adopted July 1, 2004)	7.75%
	C.	Price Inflation Assumption (Adopted July 1, 2014)	3.25%
	D.	Growth in membership	0.00%
	E.	Postretirement benefit increases (Starting three years after retirement) Tier One Tier Two	 1.50% 0.50%
	F.	Interest on member accounts (Adopted July 1, 2004)	5.00%
II.	Demographic assumptions		
	A.	Individual salary increase due to promotion and longevity (General Member assumptions adopted July 1, 2002) (University Member assumptions adopted July 1, 2000)	Table A-2
	B.	Retirement (adopted May 13, 2010)	Table A-3
	C.	Disablement (adopted May 13, 2010)	Table A-4
	D.	Mortality among contributing members, service retired members, and beneficiaries. The tables include margins for mortality improvement which is expected to occur in the future. *For Males*: 1992 Base Rates from the RP 2000 Healthy Annuitant Mortality Table for ages 50 and above and 1992 Base Rates from 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 (adopted July 1, 2014). *For Females*: 1992 Base Rates from the RP 2000 Healthy Annuitant Mortality Table for ages 50 and above and 1992 Base Rates from 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 (adopted July 1, 2014).	Table A-5
	E.	Mortality among disabled members *For Males*: RP 2000 Disabled Mortality Table for Males, set forward one year, with mortality improvements projected by Scale BB to 2018 (adopted July 1, 2014). *For Females*: RP 2000 Disabled Mortality Table for Females, set forward five years, with mortality improvements projected by Scale BB to 2018 (adopted July 1, 2014).	Table A-5
	F.	Other terminations of employment (adopted May 13, 2010)	Table A-6
	G.	Probability of retaining membership in the System upon vested termination (adopted July 1, 2002)	Table A-7

*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.

TEACHERS' RETIREMENT SYSTEM OF MONTANA

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	4.51%	4.00%	8.51%	1.00%	4.00%	5.00%
2	4.09	4.00	8.09	1.00	4.00	5.00
3	3.46	4.00	7.46	1.00	4.00	5.00
4	2.94	4.00	6.94	1.00	4.00	5.00
5	2.52	4.00	6.52	1.00	4.00	5.00
6	2.21	4.00	6.21	1.00	4.00	5.00
7	1.89	4.00	5.89	1.00	4.00	5.00
8	1.68	4.00	5.68	1.00	4.00	5.00
9	1.47	4.00	5.47	1.00	4.00	5.00
10	1.31	4.00	5.31	1.00	4.00	5.00
11	1.16	4.00	5.16	1.00	4.00	5.00
12	1.00	4.00	5.00	1.00	4.00	5.00
13	0.84	4.00	4.84	1.00	4.00	5.00
14	0.68	4.00	4.68	1.00	4.00	5.00
15	0.58	4.00	4.58	1.00	4.00	5.00
16	0.47	4.00	4.47	1.00	4.00	5.00
17	0.37	4.00	4.37	1.00	4.00	5.00
18	0.26	4.00	4.26	1.00	4.00	5.00
19	0.21	4.00	4.21	1.00	4.00	5.00
20	0.16	4.00	4.16	1.00	4.00	5.00
21	0.11	4.00	4.11	1.00	4.00	5.00
22 & Up	0.00	4.00	4.00	1.00	4.00	5.00

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-3 Retirement Annual Rates

	General Members			University Members		
Age	*Eligible for Reduced Benefits*	*First Year Eligible for Full Benefits*	*Thereafter*	*Eligible for Reduced Benefits*	*First Year Eligible for Full Benefits*	*Thereafter*
45		8.0%	5.5%		17.0%	8.0%
46		8.0	5.5		17.0	8.0
47		8.0	5.5		17.0	8.0
48		8.0	5.5		17.0	8.0
49	*	8.0	5.5	*	17.0	8.0
50	5.0%	8.0	5.5	7.0%	17.0	8.0
51	5.0	8.0	6.3	7.0	17.0	8.0
52	5.0	8.0	8.0	7.0	17.0	8.0
53	5.0	9.0	7.3	7.0	17.0	8.0
54	5.0	9.0	8.2	7.0	17.0	8.0
55	7.0	9.0	9.8	7.0	15.0	8.0
56	7.0	12.0	11.3	7.0	15.0	8.0
57	7.0	11.8	12.5	7.0	15.0	8.0
58	7.0	14.8	13.1	7.0	15.0	8.0
59	7.0	17.4	14.8	7.0	15.0	8.0
60	*	14.6	17.0	*	15.0	8.5
61		21.3	25.0		14.0	14.5
62		23.8	25.0		20.0	19.0
63		11.4	25.0		14.0	14.5
64		19.0	25.0		20.0	18.0
65		40.0	35.0		28.0	26.0
66		8.0	20.0		21.0	21.0
67		30.0	20.0		21.0	24.5
68		6.0	20.0		21.0	19.5
69		6.0	20.0		21.0	30.0
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.

TEACHERS' RETIREMENT SYSTEM OF MONTANA

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

Table A-5 Mortality Annual Rates

	Contributing Members, Service Retired Members and Beneficiaries		Disabled Members	
Age	*Men*	*Women*	*Men*	*Women*
25	0.03%	0.02%	2.14%	0.71%
30	0.04	0.02	2.14	0.71
35	0.05	0.04	2.14	0.71
40	0.08	0.06	2.14	0.71
45	0.11	0.09	2.26	1.09
50	0.15	0.14	2.87	1.57
55	0.55	0.26	3.48	2.00
60	0.58	0.41	3.83	2.34
65	0.79	0.68	4.20	3.03
70	1.23	1.11	5.02	4.20
75	2.03	1.85	6.62	5.82
80	3.48	3.03	8.80	8.06
85	5.90	5.03	11.30	11.27
90	10.39	8.79	16.37	15.94
95	17.93	15.29	25.48	21.31

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-6 Other Terminations of Employment Among Members Not Eligible to Retire Annual Rates

Years of Service	All Members
1	36.5%
2	20.5
3	14.6
4	10.5
5	8.5
6	7.0
7	6.4
8	5.8
9	5.4
10	5.0
11	4.3
12	3.9
13	3.5
14	3.2
15	2.9
16	2.6
17	2.3
18	2.0
19	1.9
20	1.8
21	1.7
22	1.6
23	1.5
24	1.5

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Table A-7 Probability of Retaining Membership in the System Upon Vested Termination

Age	Probability of Retaining Membership
25	54%
30	54
35	58
40	58
45	60
50	70
55	75

TEACHERS' RETIREMENT SYSTEM OF MONTANA

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, 2007	12,634	568,351,000	44,986	4.1%
July 1, 2008	12,694	592,514,000	46,677	3.8%
July 1, 2009	12,673	613,077,000	48,377	3.6%
July 1, 2010	12,711	630,444,000	49,598	2.5%
July 1, 2011	12,506	633,005,000	50,616	2.1%
July 1, 2012	12,202	622,140,000	50,987	0.7%
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%

Part-Time Members*

Valuation Date	Number	Annual Payroll	Average Annual Payroll	Annualized % of Increase in Average Pay
July 1, 2007	4,994	61,100,000	12,235	2.6%
July 1, 2008	5,077	64,900,000	12,783	4.5%
July 1, 2009	5,270	69,900,000	13,264	3.8%
July 1, 2010	5,642	74,571,000	13,217	(0.4)%
July 1, 2011	5,400	73,275,000	13,569	2.7%
July 1, 2012	5,534	73,788,000	13,334	(1.7)%
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%

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

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

	Added to Rolls		Removed from Rolls		Rolls End of Year		% Increases in	Average
Year Ended	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	Annual Allowances	Annual Allowances
June 30, 2007	668	$16,737,000	331	$2,614,000	11,356	$195,237,000	7.8%	$17,192
June 30, 2008	762	17,688,000	330	3,940,000	11,788	208,985,000	7.0%	17,729
June 30, 2009	512	12,072,000	264	1,790,000	12,036	219,267,000	4.9%	18,218
June 30, 2010	698	16,124,000	294	1,343,000	12,440	234,048,000	6.7%	18,814
June 30, 2011	789	20,846,000	330	4,394,000	12,899	250,500,000	7.0%	19,420
June 30, 2012	777	22,108,000	313	4,757,000	13,363	267,851,000	6.9%	20,044
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

TEACHERS' RETIREMENT SYSTEM OF MONTANA

SOLVENCY TEST
(all dollar amounts 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, 2009	$2,762.2	$832.8	$2,415.8	$1,082.4	100.0%	79.9%	0.0%
July 1, 2010	2,956.6	823.9	2,557.0	1,137.2	100.0%	83.4%	0.0%
July 1, 2011	2,866.5	803.3	2,721.4	1,133.8	100.0%	75.8%	0.0%
July 1, 2012	2,852.0	780.7	2,898.9	1,135.1	100.0%	71.5%	0.0%
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%

TEACHERS' RETIREMENT SYSTEM OF MONTANA

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.

TEACHERS' RETIREMENT SYSTEM OF MONTANA

ANALYSIS OF FINANCIAL EXPERIENCE

(all dollar amounts in millions)

	UAAL (Gain)/Loss		
	June 30, 2016	June 30, 2015	June 30, 2014
Investment Income			
Investment income was (greater) less than expected based on actuarial value of assets.	$ (36.9)	$ (61.4)	$ (165.6)
Pay Increases			
Pay increases were (less) greater than expected.	(16.1)	(10.3)	(28.1)
Age and Service Retirements			
Members retired at (older) younger ages or with (less) greater final average pay than expected	5.3	8.3	18.8
Disability Retirements			
Disability claims were (less) greater than expected	0.4	0.6	0.2
Death-in-Service Benefits			
Survivor claims were (less) greater than expected	(3.3)	(2.8)	(2.8)
Withdrawal From Employment			
(More) less reserves were released by withdrawals than expected	5.7	5.1	20.0
Death After Retirement			
Retirees (died younger) lived longer than expected	9.1	9.0	12.0
Data Adjustments and Benefit Payment Timing			
Service purchases, data corrections, etc.	(5.3)	0.7	(1.6)
Other			
Miscellaneous (gains) and losses	(1.5)	1.2	(0.4)
Total (Gain) or Loss During Period From Financial Experience	$ (42.6)	$ (49.6)	$ (147.5)
Non-Recurring Items.			
Changes in actuarial assumptions and methods	(12.4)	(4.7)	46.5
Changes in benefits caused a (gain) loss	-	-	405.2
Composite (Gain) Loss During Period	$ (55.0)	$ (54.3)	$ 304.2

TEACHERS' RETIREMENT SYSTEM OF MONTANA

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.

Early Retirement Benefits

Tier One Member

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 Member

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 Member

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.

Tier Two Member

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.

Employer

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

Effective July 1, 2014, the interest credited on member contributions contributions is reduced from 0.25% to 0.20% 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%.

TRS PLAN

SCHEDULE OF FUNDING PROGRESS
(all dollar amounts in millions)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities (AAL)1	Unfunded Actuarial Accrued Lia-bilities (UAAL)2	Funded Ratio3	Covered Payroll4	UAAL as a Percentage of Covered Payroll
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%
July 1, 2012	2,852.0	4,814.7	1,962.7	59.2%	735.6	266.8%
July 1, 2011	2,866.5	4,658.6	1,792.1	61.5%	746.7	240.0%
July 1, 2010	2,956.6	4,518.2	1,561.6	65.4%	747.0	209.0%

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.

TRS PLAN

SCHEDULE OF CONTRIBUTIONS FROM EMPLOYERS AND OTHER CONTRIBUTING ENTITIES

(all dollar amounts in thousands)

	2016	2015	2014	2013	2012
Actuarially determined employer contribution	$ 132,546,252	$ 130,680,397	$ 148,362,932	$ 130,533,530	$ 108,993,492
Actual contributions					
Employers	$ 88,643,646	$ 87,290,863	$ 83,439,612	$ 74,113,191	$ 72,422,404
Non-employer contributing entities	43,902,606	43,389,534	64,923,320	17,521,347	16,843,766
Total	$ 132,546,252	$ 130,680,397	$ 148,362,932	$ 91,634,538	$ 89,266,170
Annual contribution deficiency (excess)	$ -	$ -	$ -	$ 38,898,992	$ 19,727,322
Covered-employee payroll	$ 795,920,906	$ 768,718,699	$ 750,604,063	$ 742,608,987	$ 735,586,961
Actual contributions as a percentage of covered-employee payroll	16.65%	17.00%	19.77%	12.34%	12.14%

	2011	2010	2009	2008	2007
Actuarially determined employer contribution	$ 91,879,263	$ 90,967,180	$ 80,997,968	$ 81,414,325	$ 40,807,133
Actual contributions					
Employers	$ 72,879,950	$ 72,179,128	$ 66,850,644	$ 67,921,950	$ 61,943,986
Non-employer contributing entities	17,437,366	17,241,610	14,147,324	13,492,375	720,266
Total	$ 90,317,316	$ 89,420,738	$ 80,997,968	$ 81,414,325	$ 62,664,252
Annual contribution deficiency (excess)	$ 1,561,947	$ 1,546,442	$ -	$ -	$ (21,857,119)
Covered-employee payroll	$ 746,694,434	$ 747,037,330	$ 683,235,462	$ 657,435,444	$ 664,100,000
Actual contributions as a percentage of covered-employee payroll	12.10%	11.97%	11.86%	12.38%	9.44%

STATISTICAL SECTION

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

	2016	2015	2014	2013	2012
Additions:					
Member Contributions	$ 88,644	87,291	70,468	62,850	62,746
Employer Contributions	72,741	72,216	83,440	74,113	72,422
Other Contributions	43,903	43389	64,923	17,521	16,844
Misc Income	29	27	6	8	10
Net Investment Income	71,488	165,685	540,277	373,722	66,341
Total Additions	$ 276,804	368,608	759,114	528,214	218,363
Deductions:					
Benefit Payments:					
Retirees	$ 297,199	281,920	277,012	260,791	244,071
Beneficiaries	20,399	18,702	5,055	4,416	4,336
Disabilities	3,212	3,052	3,115	3,044	3,004
Withdrawals	5,087	5,369	4,789	5,119	5,295
Administrative Expenses	2,319	2,035	2,023	1,934	1,830
Other	143	141	58	48	46
Total Deductions	$ 328,359	311,219	292,052	275,352	258,582
Change in Net Position	**$(51,555)**	**57,389**	**467,062**	**252,862**	**(40,219)**

	2011	2010	2009	2008	2007
Additions:					
Member Contributions	62,993	62,845	57,256	59,552	56,509
Employer Contributions	72,880	72,179	66,851	67,922	61,944
Other Contributions	17,437	17,242	14,147	13,492	50,720
Misc Income	17	65	16	16	16
Net Investment Income	539,028	294,954	(613,028)	(153,312)	484,532
Total Additions	692,355	447,285	(474,758)	(12,330)	653,721
Deductions:					
Benefit Payments:					182,827
Retirees	227,840	213,130	203,096	189,441	
Beneficiaries	4,399	4,173	4,063	3,898	
Disabilities	2,884	2,890	2,784	2,721	
Withdrawals	4,365	4,166	5,170	5,695	5,595
Administrative Expenses	1,843	1,905	1,854	1,751	1,434
Other	49	47	49	47	502
Total Deductions	241,380	226,311	217,016	203,553	190,358
Change in Net Position	**450,975**	**220,974**	**(691,774)**	**(215,883)**	**463,363**

Schedule of Average Benefit Payments by Fiscal Year Ten Years Ended June 30, 2016

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

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Number of Retirees										
5-9	58	56	51	60	72	69	70	52	62	34
10-14	60	51	46	65	67	58	75	63	66	63
15-19	49	79	45	49	67	60	68	78	72	56
20-24	67	74	56	67	83	76	103	93	107	76
25-29	143	144	98	129	130	145	132	139	126	113
30+	223	208	172	249	248	259	275	270	254	229
Average AFC										
5-9	2,539	2,375	2,234	2,535	2,386	2,582	2,307	2,997	2,915	2,866
10-14	2,909	2,766	3,117	3,056	2,891	3,163	3,518	3,354	2,982	3,016
15-19	3,535	3,784	3,931	3,551	3,849	3,802	3,749	3,891	3,684	3,769
20-24	4,257	4,350	4,307	4,379	4,677	4,413	4,593	4,538	4,673	4,718
25-29	4,763	4,934	4,800	5,010	4,984	5,240	5,237	5,308	5,541	5,585
30+	5,145	5,429	5,445	5,626	5,983	5,959	5,787	6,046	6,218	6,148
Average Benefit										
5-9	295	271	261	291	280	315	267	381	344	323
10-14	507	558	597	593	573	612	686	636	556	626
15-19	893	975	1,014	957	1,024	969	989	1,016	1,020	1,043
20-24	1,525	1,510	1,509	1,490	1,629	1,561	1,637	1,640	1,665	1,652
25-29	2,035	2,112	2,053	2,133	2,151	2,282	2,260	2,311	2,360	2,408
30+	2,793	2,956	3,006	3,123	3,344	3,264	3,208	3,361	3,473	3,406

Schedule of Membership for Active and Inactive Members
Ten Years Ended June 30, 2016

Period Ended	Active Members	Inactive Vested Members	Inactive Non-vested	Total
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
June 30, 2012	18,372	1,566	11,172	31,110
June 30, 2011	18,484	1,580	10,727	30,791
June 30, 2010	18,953	1,553	10,304	30,810
June 30, 2009	18,456	1,640	9,868	29,964
June 30, 2008	18,292	1,649	9,574	29,515
June 30, 2007	18,188	1,660	8,856	28,704

Retired Members and Benefit Recipients
Ten Years Ended June 30, 2016

Period Ended	Retirement	Survivors	Disability	Total
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
June 30, 2011	12,247	445	207	12,899
June 30, 2010	11,620	504	316	12,440
June 30, 2009	11,228	498	310	12,036
June 30, 2008	11,043	438	307	11,788
June 30, 2007	10,242	424	305	10,971

Schedule of Retired Members and Beneficiaries by Type of Benefit as of June 30, 2016

Amount of Monthly Benefit	Total Benefit Recipients	Retirees	Beneficiaries	Disability
$0 - 500	2,177	1,758	348	71
501 - 1,000	1,915	1,448	339	128
1,001 - 1,500	2,007	1,648	284	75
1,501 - 2,000	2,685	2,451	210	24
2001 - 2,500	2,411	2,287	115	9
2,501 - 3,000	1,733	1,670	62	1
3,001 - 3,500	978	942	36	-
3,501 - 4,000	572	548	24	-
4,001 - 4,500	290	279	11	-
4,501 - 5,000	140	137	3	-
Over 5,000	196	192	4	-
Total	**15,104**	**13,360**	**1,436**	**308**
Total Benefit Payments	**$316,474,888**	**$292,863,428**	**$20,399,146**	**$3,212,314**

Schedule of Principal Participating Employers
as of June 30, 2016

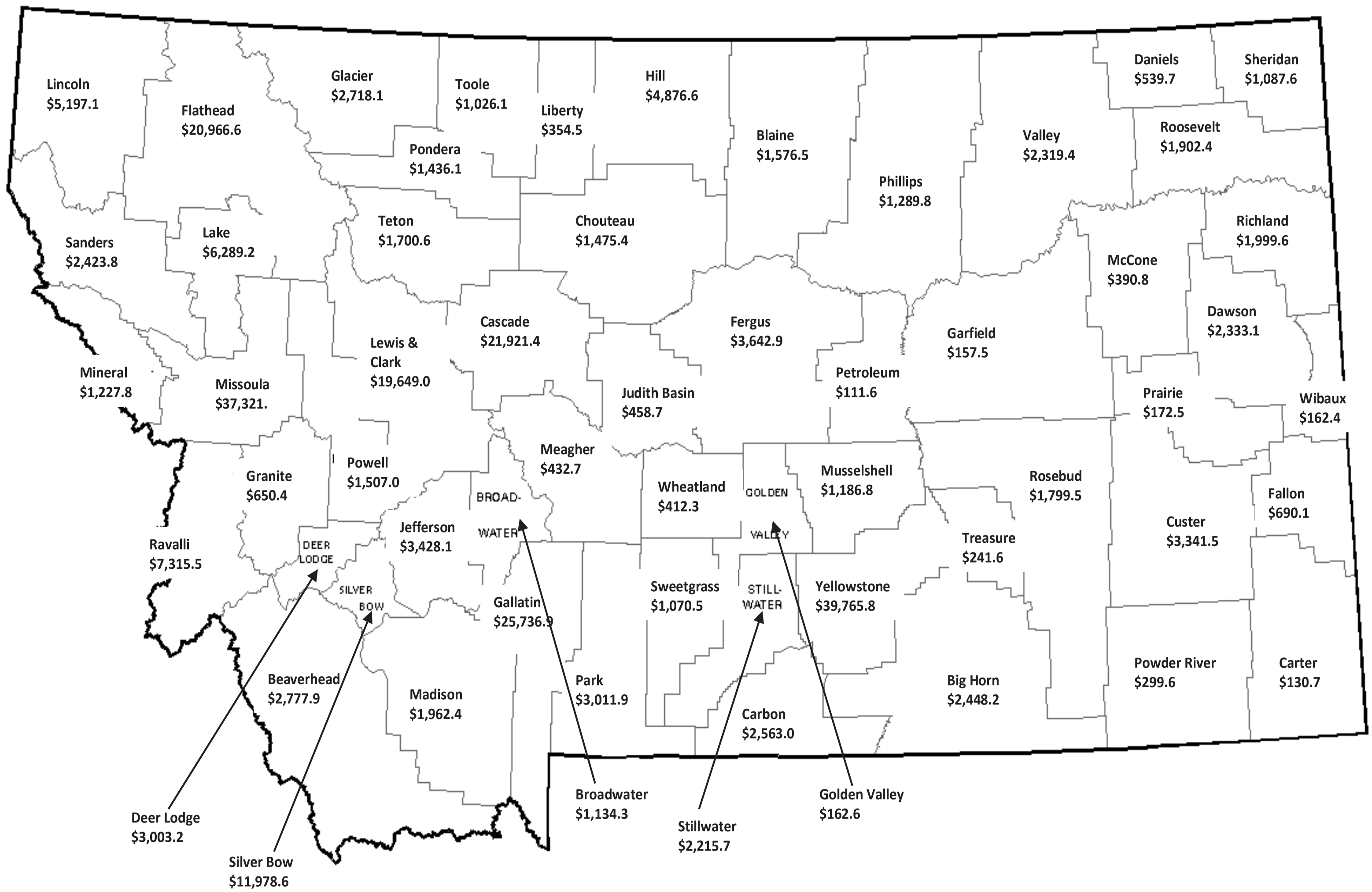
Employer	Active Members	Percent of Total Active Members
Billings Public Schools	1,528	7.99%
Great Falls Public Schools	1,222	6.39%
Missoula County Public Schools	1,064	5.57%
Helena Public Schools	943	4.93%
Bozeman Public Schools	715	3.74%
Kalispell Public Schools	599	3.13%
Butte Public Schools	401	2.10%
Belgrade Public Schools	365	1.91%
Browning Public Schools	323	1.69%
Hardin Public Schools	289	1.51%
Havre Public Schools	269	1.41%
Columbia Falls Public Schools	266	1.39%
Laurel Public Schools	216	1.13%
Hamilton Public Schools	211	1.10%
Flathead Community College	208	1.09%
Miles City Public Schools	199	1.04%
Polson Public Schools	195	1.02%
Sidney Public Schools	194	1.01%
Ronan Public Schools	178	0.93%
Glendive Public Schools	175	0.92%

Location of Benefit Recipients by Country and State as of June 30, 2016

Country	State	Gross Benefit	Count
Australia		$12,309	2
Canada		$168,459	19
Germany		$4,253	1
Israel		$46,119	2
Marshall Islands		$33,028	1
New Zealand		$7,655	1
Switzerland		$8,346	1
United Kingdom		$71,737	3
United States	AE	$7,858	1
United States	AK	$663,621	38
United States	AL	$80,241	9
United States	AP	$49,090	3
United States	AR	$159,732	13
United States	AZ	$9,565,768	481
United States	CA	$2,644,698	157
United States	CO	$2,119,418	128
United States	CT	$70,990	6
United States	DC	$56,032	5
United States	DE	$64,563	2
United States	FL	$1,475,622	81
United States	GA	$155,836	11
United States	HI	$211,919	13
United States	IA	$434,112	21
United States	ID	$2,976,008	175
United States	IL	$263,196	19
United States	IN	$213,509	15
United States	KS	$187,395	16
United States	KY	$173,392	9
United States	LA	$82,178	9
United States	MA	$288,211	13
United States	MD	$170,415	14
United States	ME	$76,416	4
United States	MI	$434,132	28
United States	MN	$1,590,480	90
United States	MO	$368,533	29
United States	MS	$170,343	7
United States	MT	$251,159,293	11,379
United States	NC	$609,726	36

United States	ND	$1,980,422	119
United States	NE	$258,654	22
United States	NH	$120,765	5
United States	NJ	$27,995	5
United States	NM	$715,665	37
United States	NV	$2,235,960	127
United States	NY	$179,258	15
United States	OH	$167,633	12
United States	OK	$242,586	18
United States	OR	$3,295,003	202
United States	PA	$177,103	16
United States	RI	$27,974	2
United States	SC	$178,783	12
United States	SD	$874,020	61
United States	TN	$203,595	15
United States	TX	$1,580,447	99
United States	UT	$1,047,503	66
United States	VA	$377,365	23
United States	VT	$41,000	4
United States	WA	$6,911,171	432
United States	WI	$317,005	26
United States	WV	$4,637	2
United States	WY	$1,979,330	135

Montana Teachers' Retirement System
Retirement Benefits Paid by County – Fiscal Year 2016
(in Thousands)



Total Benefits Paid in Montana: $266,090,994
Total Recipients in Montana: 11,753

Prepared: October 18, 2016