A Report
to the
Montana
Legislature

Financial-Compliance Audit

Public Employees' Retirement Board

For the Fiscal Year Ended June 30, 2018

January 2019

Legislative Audit
Division

18-08A

Legislative Audit Committee

Representatives

Kim Abbott
Kim.Abbott@mtleg.gov

Dan Bartel
Danbartel2@gmail.com

Tom Burnett, Vice Chair
Burnett.tom@gmail.com

Denise Hayman
Denise.Hayman@mtleg.gov

Senators

Dee Brown
senatordee@yahoo.com

Terry Gauthier
Mrmac570@me.com

Bob Keenan
Bob.Keenan@mtleg.gov

Margaret MacDonald
Margie.MacDonald@mtleg.gov

Mary McNally, Chair
McNally4MTLeg@gmail.com

Gene Vuckovich
Gene.Vuckovich@mtleg.gov

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§5-13-202(2), MCA

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Financial-Compliance Audits

Financial-compliance audits are conducted by the Legislative Audit Division to determine if an agency's financial operations are properly conducted, the financial reports are presented fairly, and the agency has complied with applicable laws and regulations. In performing the audit work, the audit staff uses standards set forth by the American Institute of Certified Public Accountants and the United States Government Accountability Office. Financial-compliance audit staff members hold degrees with an emphasis in accounting. Most staff members hold Certified Public Accountant (CPA) certificates.

The Single Audit Act Amendments of 1996 and the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards require the auditor to issue certain financial, internal control, and compliance reports in addition to those reports required by *Government Auditing Standards*. This individual agency audit report is not intended to comply with these reporting requirements and is therefore not intended for distribution to federal grantor agencies. The Legislative Audit Division issues a statewide biennial Single Audit Report which complies with the above reporting requirements. The Single Audit Report for the two fiscal years ended June 30, 2017, was issued March 23, 2018. The Single Audit Report for the two fiscal years ended June 30, 2019, will be issued by March 31, 2020.

Audit Staff

Jennifer Erdahl	Natalie H. Gibson
Leslie Lahti	Delsi Osmanson
Joshua Phillips	Shandell VanDonsel
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LEGISLATIVE AUDIT DIVISION

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

Deputy Legislative Auditors
Cindy Jorgenson
Joe Murray

January 2019

The Legislative Audit Committee
of the Montana State Legislature:

This is our financial-compliance audit report of the Public Employees' Retirement Board, a component unit of the state of Montana, for the fiscal year ended June 30, 2018. This report does not contain any recommendations for the board. Included in this report is the Independent Auditor's Report on page A-1 and the Report on Internal Control Over Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards* on page B-1. We issued an unmodified opinion on the financial statements and the accompanying notes prepared by the board personnel. This indicates that a reader can rely on the information presented. Also included in this report, prepared by board personnel, are Management's Discussion and Analysis, required supplementary information, and supplementary information.

The board's response to our audit can be found on page C-1 of the report. We thank the executive director and his staff for their assistance and cooperation throughout the audit.

Respectfully submitted,

/s/ Angus Maciver

Angus Maciver
Legislative Auditor

Room 160 • State Capitol Building • PO Box 201705 • Helena, MT • 59620-1705
Phone (406) 444-3122 • FAX (406) 444-9784 • E-Mail lad@mt.gov

Table of Contents

Tables

Tables

Appointed and Administrative Officials

			Term Expires
Public Employees' Retirement Board	Marty Tuttle, President	Clancy	4/1/19
	Pepper Valdez, Vice President	Billings	4/1/20
	Maggie Peterson	Anaconda	4/1/19
	Julie McKenna	Helena	4/1/22
	Sheena Wilson	Helena	4/1/23
	Robyn Driscoll	Billings	4/1/23
	Vacant		

Administrative Officials

Dore Schwinden, Executive Director

Patricia Davis, Member Services Bureau Chief

Melanie Symons, Chief Legal Counsel

Hollie Koehler, Fiscal Services Bureau Chief

Angela Riley, Information Systems Bureau Chief

For additional information concerning the Montana Public Employees' Retirement Board, contact:

Dore Schwinden, Executive Director
100 North Park Avenue, Suite 200
P.O. Box 200131
Helena, MT 59620-0131
(406) 444-4559

e-mail: DSchwinden@mt.gov

Montana Legislative Audit Division

Financial-Compliance Audit
Public Employees' Retirement Board
For the Fiscal Year Ended June 30, 2018

January 2019 | 18-08A | Report Summary

The actuarial valuations as of June 30, 2018, indicate the Games Wardens' and Peace Officers' Retirement System, Highway Patrol Officers' Retirement System, and the Public Employees' Defined Benefit Retirement Plan are not actuarially sound. The Montana Constitution and state law require all retirement systems to be actuarially sound; meaning the retirement system must amortize in 30 years or less. These three systems currently amortize in 72, 40, and 38 years, respectively. The board intends to seek legislation for the Games Wardens' and Peace Officers' Retirement System, and anticipates that the Highway Patrol Officers' Retirement System and the Public Employees' Defined Benefit Retirement Plan will become sound due to increased gains considered in the calculation of the amortization periods.

Context

The Public Employees' Retirement Board (board) oversees ten retirement plans, an Other Post Employment Benefit (OPEB) plan, and the related member education funds. The retirement plans include eight defined benefit plans and two defined contribution plans. The defined benefit plans are the Public Employees' Retirement System – Defined Benefit Retirement Plan, Judges' Retirement System, Highway Patrol Officers' Retirement System, Sheriffs' Retirement System, Game Wardens' and Peace Officers' Retirement System, Firefighters' Unified Retirement System, and the Volunteer Firefighters' Compensation Act. The defined contribution retirement plans are the Public Employees' Retirement System – Defined Contribution Retirement Plan and the Deferred Compensation Plan.

Financial information for the defined benefit and defined contributions plans is summarized in the following table:

	Defined Benefit Plans	Defined Contribution Plans
Contributions	$343 million	$49 million
Benefit Payments/ Distributions	$486 million	$39 million
Net Investment Income	$614 million	$49 million
Net Position, June 30, 2018	$7.5 billion	$730 million

We focused our audit work on significant activity on the financial statements including investments, contributions, and benefits. We completed testing of state laws related to employer and employee contributions, and benefit payments to members. We reviewed the presentation of the board's financial statements and note disclosures to determine whether they were complete and accurate. Work over the

(continued on back)

board's information system was also completed to evaluate the automated processes for benefits and contributions.

Testing was also performed over key employee data for retirement system members used by the board's actuary to calculate the total pension liability. We traveled to 28 cities across the state and completed approximately 82 samples at 57 participating employers to determine the accuracy and completeness of important member data such as gender, birthdate, hire date, salary, and employment status. No errors were identified in the testing of the census data that indicate the calculation of the total pension liability is inaccurate.

Results

The report does not include recommendations to the board and we issued an unmodified opinion on the board's financial statements for fiscal year 2018. This means the reader may rely upon the information presented in the financial statements. This report contains updated information on the actuarial soundness of the retirement systems, including information on the three systems that are not actuarially sound. We have continued to monitor and communicate actuarial soundness of the retirement systems, but we make no recommendation at this time. We consider this to be material noncompliance as noted in our report starting on page B-1.

For a complete copy of the report (18-08A) or for further information, contact the
Legislative Audit Division at 406-444-3122; e-mail to **lad@mt.gov**; or check the web site at
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Report Fraud, Waste, and Abuse to the Legislative Auditor's FRAUD HOTLINE
Call toll-free 1-800-222-4446, or e-mail **lad@mt.gov.**

Chapter I – Introduction

Audit Scope

We performed a financial-compliance audit of the Public Employees' Retirement Board (board) for the fiscal year ended June 30, 2018. The objectives of our audit were to:

1. Determine whether the board's financial statements present fairly the board's fiduciary net position and changes in fiduciary net position for the fiscal year ended June 30, 2018.
2. Determine the board's compliance with selected laws and regulations.
3. Obtain an understanding of the board's internal control systems to the extent necessary to support our audit of the board's financial statements, and if appropriate, make recommendations for improvement in internal controls.

We focused our audit work on significant activity on the financial statements including investments, contributions, and benefits. We completed testing of state laws related to employer and employee contributions, and benefit payments to members. We reviewed the presentation of the board's financial statements and note disclosures to determine whether they were complete and accurate. Work over the board's information system was also completed to evaluate the automated processes for benefits and contributions.

Our audit work included considering whether any assumptions underlying the calculation of the total pension liability need to be updated. According to Generally Accepted Accounting Principles (GAAP), assumptions can continue to be used in the calculation of the total pension liability until economic factors indicate they need to be updated. In fiscal year 2018 economic factors indicated that the discount rate might need updated. We hire a separate actuary to review the reasonableness of the actuarial procedures, methods, and assumptions used by the board's actuary. As part of this review, we requested a review of the discount rate for fiscal year 2018. We determined that the discount rate used to calculate the total pension liability was still appropriate for fiscal year 2018.

Testing was also performed over key employee data for retirement system members used by the board's actuary to calculate the total pension liability. We traveled to 28 cities across the state and completed approximately 82 samples at 57 participating employers to determine the accuracy and completeness of important member data such as gender, birthdate, hire date, salary, and employment status. No errors were identified in the testing of the census data that indicate the calculation of the total pension liability is inaccurate.

Background

The board is a fiduciary component unit of the state of Montana. The board consists of seven members appointed by the governor to five-year terms. The executive director and his staff perform daily administrative functions as directed by the board. The board administers ten retirement plans, an Other Post Employment Benefit (OPEB) plan, and the related member education funds. The board manages the following defined benefit plans:

- Public Employees' Retirement System – Defined Benefit Retirement Plan
- Judges' Retirement System
- Highway Patrol Officers' Retirement System
- Sheriffs' Retirement System
- Game Wardens' and Peace Officers' Retirement System
- Municipal Police Officers' Retirement System
- Firefighters' Unified Retirement System
- Volunteer Firefighters' Compensation Act

Each of these defined benefit funds provide pension, disability, and death benefits to eligible members and survivors. For all plans except for the Volunteer Firefighters' Compensation Act, the monthly benefits are based on eligibility, years of service, and salary levels while employed. The Volunteer Firefighters' Compensation Act monthly benefits are based only on eligibility and years of service.

The board manages two defined contribution plans. The Public Employees' Retirement System – Defined Contribution Retirement Plan provides retirement and death benefits for plan members. The OPEB plan provides disability benefits for the members of the Public Employees' Retirement System – Defined Contribution Retirement Plan. The Deferred Compensation (457) Plan is a voluntary supplemental retirement savings plan for employees that are employed by the state, the Montana University System, or political subdivisions that contract with the plan. Members contribute a portion of their compensation to the plan.

Actuarial Soundness

Article VIII, Section 15, of the Montana Constitution requires the public retirement systems be funded on an actuarially sound basis. According to state law, a defined benefit retirement system is considered actuarially sound when contributions are sufficient to pay benefit obligations as they become due in the future and the unfunded liabilities can be amortized over a time period that does not exceed 30 years.

In determining whether a system is sound, the board's actuary calculates the amortization period by smoothing the actuarial gains and losses on investments over a four-year period. This reduces the volatility in the valuation results as a portion of the actuarial gain or loss is recognized in each of the four years. For example, when the actuary calculated the amortization period for the fiscal year ended June 30, 2018, they considered one-fourth of the actuarial gains and losses for each of the fiscal years ended June 30, 2015, through June 30, 2018.

An actuarial gain or loss on investments is the difference between the expected return on investments and the actual return on investments. If the actual return on investments is greater than the expected return on investments, then there is an actuarial gain. In fiscal year 2018, there was an actuarial gain on investments for the Public Employees' Defined Benefit Plan as the actual returns of 8.9 percent were greater than the expected return of 7.65 percent. The other defined benefit retirement systems had similar actuarial gains.

The financial-compliance audit for the fiscal year ended June 30, 2017, discussed two systems that were not actuarially sound. The Game Wardens' and Peace Officers' and Highway Patrol Officers' retirement systems did not amortize.

The actuarial valuations as of June 30, 2018, indicated that three defined benefit pension plans are not actuarially sound because they do not amortize within the 30-year time period. We consider this to be material noncompliance as noted in our report starting on page B-1.

The Game Wardens' and Peace Officers' Retirement System amortizes in 72 years. The board plans to seek legislation to improve the funding status of the Game Wardens' and Peace Officers' Retirement System during the 2019 Legislative Session.

The Public Employees' Defined Benefit Retirement Plan and Highway Patrol Officers' Retirement System amortize in 38 and 40 years, respectively. The board does not currently plan to seek legislation to improve the funding status of these systems during the 2019 Legislative Session. The board expects actuarial gains on investments in the coming years. As a result, the valuations in the coming years are anticipated to consider more gains than losses. The board believes this will result in both of these plans amortizing within 30 years. This is based on assumptions regarding projected future investment returns which may not be met due to the market volatility.

Since board officials are monitoring the funding status of the systems, and continued effort has been made to work with the legislature, we make no recommendation at this time. We will continue to monitor and report on the actuarial soundness of the retirement systems and the board's compliance with the constitutional requirement.

Table 1 shows the amortization periods for each defined benefit retirement system at June 30, 2018, and June 30, 2017.

Table 1
Defined Benefit Plan Amortization Periods

System	Amortization period at June 30, 2018	Amortization period at June 30, 2017
Public Employees' – Defined Benefit	38	30
Public Employees' – Defined Contribution Disability OPEB	0	19
Judges'	0	0
Highway Patrol Officers'	40	37
Sheriffs'	21	25
Game Wardens' and Peace Officers'	72	70
Municipal Police Officers'	20	16
Firefighters' Unified	10	10
Volunteer Firefighters' Compensation Act	5	6

Source: Compiled by the Legislative Audit Division from Public Employees' Retirement Board actuarial information.

Pension Liability

The notes to the financial statements disclose the total pension liability and net pension liability for each of the defined benefit systems. The total pension liability is the actuarial present value of projected benefit payments attributable to past periods of member service. The net pension liability is the total pension liability less the plan fiduciary net position. Table 2 (see page 5) shows the Net Pension Liability/(Asset) for the defined benefit plans at June 30, 2018, and June 30, 2017.

Table 2

Net Pension Liability/(Asset) by Defined Benefit Plans

(in thousands)

System	June 30, 2018 Net Pension Liability/ (Asset)	June 30, 2017 Net Pension Liability/ (Asset)	Increase/ (Decrease)
Public Employees' – Defined Benefit	2,087,141	1,947,626	139,515
Judges'	(42,459)	(35,856)	(6,603)
Highway Patrol Officers'	78,382	78,386	(4)
Sheriffs'	75,172	76,097	(925)
Game Wardens' and Peace Officers'	40,947	37,360	3,587
Municipal Police Officers'	171,258	177,913	(6,655)
Firefighters' Unified	115,171	113,035	2,136
Volunteer Firefighters' Compensation Act	7,667	10,087	(2,420)

Source: Compiled by the Legislative Audit Division from Public Employees' Retirement Board actuarial information.

Independent Auditor's Report and Department Financial Schedules

LEGISLATIVE AUDIT DIVISION

Angus Maciver, Legislative Auditor
Deborah F. 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 – Pension (And Other Employee Benefit) Trust Funds of the Public Employees' Retirement Board, a component unit of the state of Montana, as of June 30, 2018, and the related Statement of Changes in Fiduciary Net Position–Pension (And Other Employee Benefit) Trust Funds for the fiscal year then ended, and the related notes to the 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 board'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 board'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 significant accounting estimates made by management, as well as the overall presentation of the financial statements.

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Phone (406) 444-3122 • FAX (406) 444-9784 • E-Mail lad@mt.gov

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 fiduciary net position of the Public Employees' Retirement Board as of June 30, 2018, and the changes in fiduciary net position for the fiscal year then ended in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note A8 to the financial statements, there was a change in how certain investment income is recorded in fiscal year 2018 for the defined benefit pension plans. A majority of the board's investments are held in the Consolidated Asset Pension Pool (CAPP) managed by the Montana Board of Investments (BOI). This pool was established by BOI in March 2017, by consolidating five previously existing pension asset pools into one. Unlike the prior pools, and the Short-Term Investment Pool, CAPP does not distribute investment earnings to pool participants. As a result, there is significantly less interest income reported in fiscal year 2018 than in prior years, and there is no dividend income reported. CAPP investment earnings are reinvested in the pool instead of being distributed to participants, and increase the value of the board's investment in CAPP.

Additionally, under the CAPP structure, the board only realizes gains and losses on investments upon the sale of CAPP participation units. These realized gains and losses are reported as part of Net Appreciation (Depreciation) in Fair Value of Investments. Prior financial statements presented the activity as interest. Our opinion is not modified with respect to these matters.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion & Analysis, Schedule of Changes in Multiple-Employer Plans Net Pension Liability/(Asset), Schedule of Changes in Single Employer Plans Net Pension Liability/(Asset), Schedule of Net Pension Liability/(Asset) for Multiple-Employer Plans, Schedule of Net Pension Liability/(Asset) for Single-Employer Plans, Schedule of Employer and Non-Employer (State) Contributions for Cost-Sharing Multiple-Employer Plans, Schedule of Employer Contributions for Single-Employer Plans, Schedule of Investment Returns for Multiple-Employer Plans, Schedule of Investment Returns for Single-Employer Plans, and the Schedule of Total OPEB (Healthcare) Liability and Related Ratios, Last Ten Fiscal Years, and 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 following schedules are supplementary information presented for purposes of additional analysis and are not a required part of the financial statements: Schedule of Administrative Expenses, Schedule of Investment Expenses, Schedule of Professional/Consultant Fees, the Detail of Fiduciary Net Position (PERS-DBRP and PERS-DBEd), the Detail of Changes in Fiduciary Net Position (PERS-DBRP and PERS-DBEd), the Detail of Fiduciary Net Position (PERS-DCRP, PERS-DCEd), and the Detail of Changes in Fiduciary Net Position (PERS-DCRP, PERS-DCEd) for the fiscal year ended June 30, 2018. 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 Reporting Required by Government Auditing Standards
In accordance with *Government Auditing Standards*, we have also issued our report dated December 14, 2018, 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.

Respectfully submitted,

/s/ Cindy Jorgenson

Cindy Jorgenson, CPA
Deputy Legislative Auditor
Helena, MT

December 14, 2018

Public Employees' Retirement Board

A Component Unit of the State of Montana

Management's Discussion and Analysis

This section presents management's discussion and analysis of the Montana Public Employees' Retirement Board's (PERB) financial presentation and performance of the plans administered by the PERB for the fiscal year ending June 30, 2018. Throughout this discussion and analysis units of measure (i.e., billions, millions, thousands) are approximate, being rounded up or down to the nearest tenth of the respective unit value.

Financial Highlights

- *The PERB's combined total net position of the defined benefit plans increased by $442.9 million or 6.3% in fiscal year 2018. The increase was primarily due to an increase in investment income.*

- *The PERB's defined contribution plans combined total net position increased by $56.3 million or 8.3% in fiscal year 2018. The total increase in net position was primarily due to the increase of contributions in the PERS defined contribution retirement plan and the deferred compensation plan.*

- *Revenues (additions to plan net position) for the PERB's defined benefit plans for fiscal year 2018 were $957.9 million, which includes member and employer contributions of $342.8 million and net investment income of $615.1 million.*

- *Revenues (additions to plan net position) for the PERB's defined contribution plans for fiscal year 2018 were $97.7 million, which includes member and employer contributions of $48.8 million and net investment income of $48.9 million.*

- *Expenses (deductions to plan net position) for the PERB's defined benefit plans increased from $477.4 million in fiscal year 2017 to $515.6 million in fiscal year 2018 or 8.0%. The increase in 2018 is due to an increase in benefit payments and refunds.*

- *Expenses (deductions to plan net position) for the PERB's defined contribution plans increased from $36.9 million in fiscal year 2017 to $41.5 million in fiscal year 2018 or 12.6%. The increase in expenses is primarily due to an increase in member distributions.*

- *The PERB's defined benefit plans' funding objective is to meet long-term benefit obligations. As of June 30, 2018, the date of the latest actuarial valuation, four of the plans amortize the Unfunded Actuarial Liability (UAL) in 30 years or less. They are the Sheriffs' Retirement System (SRS), Municipal Police Officers' Retirement System (MPORS), Firefighters' Unified Retirement System (FURS), and the Volunteer Firefighters' Compensation Act (VFCA). The plans that do not amortize the Unfunded Actuarial Liability in 30 years or less are the Public Employees' Retirement System (PERS), the Highway Patrol Officers' Retirement System (HPORS) and the Game Wardens' and Peace Officers'*

Retirement System (GWPORS). The Judges' Retirement System (JRS) has an actuarial surplus. This means there are more assets than liabilities in the plan. It is important to understand that this measure reflects the Actuarial Value of Assets for each defined benefit plan, which is currently greater than the actual fair value published in the financial statements. Investment earnings are critical to the defined benefit plans. The actuary uses a four-year smoothing method to determine the Actuarial Value of Assets. This method is used to reduce the impact of market volatility. Due to smoothing gains in 2015, 2016 and 2017, and a smoothing loss in 2018, return on actuarial value ranged from 6.59% to 7.01% for all systems. These ranges were less than the 7.65% actuarial assumed rate of return on investments, thus creating actuarial experience losses.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the PERB's financial reporting which is comprised of the following components:

(1) Financial Statements
(2) Notes to the Financial Statements
(3) Required Supplementary Information
(4) Other Supplementary Schedules

Collectively, this information presents the combined net position restricted for pension benefits for each of the plans administered by the PERB as of June 30, 2018. This financial information also summarizes the combined changes in net position restricted for pension benefits for the year then ended. The information in each of these components is briefly summarized as follows:

(1) Financial Statements for the fiscal year ended June 30, 2018, are presented for the fiduciary funds administered by MPERA, staff of the PERB. Fiduciary funds are used to pay for pension benefits and expenses. The fiduciary funds are comprised of 11 trust funds that consist of ten pension and one other post-employment benefit (OPEB).

- The Statement of Fiduciary Net Position is presented for the pension trust funds at June 30, 2018. These financial statements reflect the resources available to pay benefits to retirees and beneficiaries at the end of the fiscal year reported.

- The Statement of Changes in Fiduciary Net Position is presented for the pension trust funds for the year ended June 30, 2018. These financial statements reflect the changes in the resources available to pay benefits to retirees and beneficiaries at the end of the fiscal year reported.

(2) The Notes to the Financial Statements provide additional information that is essential for a full understanding of the data provided in the financial statements. The information in the Notes to the Financial Statements is described as follows:

- Note A provides a summary of significant accounting policies including: the basis of accounting; capital assets and equipment used in operations including PERIS, the new line of business system; operating lease; Governmental Accounting Standards Board (GASB) Statement No. 67 Disclosures regarding Financial Reporting for Pension Plans; GASB Statement No. 74 Financial Reporting for Post-Employment Benefit Plans

Other Than Pension Plans; GASB Statement No. 75 Accounting and Financial Reporting for Post-Employment Benefits Other Than Pensions (OPEB); and summaries of the method to value investments and other significant accounting policies or explanations.

- Note B provides information about litigation.

- Note C describes the membership and descriptions of each of the plans administered by the PERB. Summaries of benefit and contribution information are also provided.

(3) The Required Supplementary Information (RSI) consists of multiple-employer and single-employer plan schedules of changes of employers' net pension liability, employers' net pension liability, employer contributions, and the money-weighted rate of investment returns of the defined benefit pension systems administered by the PERB. The RSI also contains related notes concerning actuarial information of the defined benefit pension plans, Other Post-Employment Benefits (OPEB) for the State Healthcare Benefits and related notes to the OPEB plan.

(4) Other Supplementary Schedules include schedules of administrative expenses, investment expenses, and professional/consultant fees.

Financial Analysis of the Systems – Defined Benefit Plans

Investments

The State of Montana Board of Investments (BOI), as authorized by state law, invests the defined benefit plans' assets in the new Consolidated Asset Pension Pool (CAPP) and the Montana Short Term Investment Pool (STIP). Each plan owns an equity position in the pools and receives proportionate investment income from the pools in accordance with respective ownership. Each plan's allocated share of the investment in the pool is shown in the Statement of Fiduciary Net Position of the plan. Investment gains and losses are reported in the Statement of Changes in Fiduciary Net Position.

Economic Conditions

The Board of Investments' Chief Investment Officer, Joe Cullen, had the following remarks on fiscal year 2018 economic conditions: "The U.S. economic conditions during the past fiscal year can be summarized as solid growth in economic activity, continued improvements in the labor market, with increasing, but still low inflation.

"Real U.S. Gross Domestic Product (GDP), which is a measure of the total output of goods and services, adjusted for price changes, was estimated at 2.8% for fiscal year 2018. The recent increase in real GDP is above the average annual GDP increases (+2.3%) during the current U.S. expansion.

"The U.S. labor market strengthened throughout the fiscal year. The unemployment rate fell approximately 0.5% during the fiscal year ending at 3.9%.

"Inflation rose gradually over the fiscal year but remains subdued compared to the long-term average. Recent inflation measures have been slightly above the Federal Reserve's medium-term target of 2%. Oil prices are a significant contributor to inflation estimates and expectations and increased meaningfully (approximately +60%) throughout the year.

"The Federal Open Market Committee (FOMC) of the Federal Reserve seeks to 'foster maximum employment and price stability'. Based on this philosophy, the FOMC raised the target range for the federal funds rate three times during the fiscal year to the current range of 1.75% to 2%.

"Longer-term U.S. interest rates increased during the last year with the ten-year rate increasing by +0.56% to a nominal yield of 2.86% by June 30, 2018.

"The U.S. Dollar experienced significant volatility (plus and minus 7%) relative to other major currencies during the fiscal year. The U.S. dollar declined relative to other currencies in the first-half of the year but gained back most of its losses in the last few months, resulting in a small depreciation relative to other currencies over the entire year.

"The FOMC continues to maintain an accommodative monetary policy and expects a 'sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2% objective over the medium term'." (Written September 14, 2018)

Defined Benefit Plans Total Investments

At June 30, 2018, the PERB's defined benefit plans held total investments of $7.3 billion, an increase of $460.6 million from fiscal year 2017 investment totals. On the following pages are the schedules of Fiduciary Net Position and Changes in Fiduciary Net Position for the defined benefit plans, including comparative totals from fiscal year 2017.

Analysis of Individual Systems

PERS-DBRP and Education

The PERS-DBRP provides retirement, disability, and death benefits for covered employees of the State, local governments, certain employees of the Montana University System, and school districts. Member and employer contributions and earnings on investments fund the benefits of the plan. 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. The PERS-DBRP and the DB Education Fund have been combined in these comparisons. The PERS-DBRP net position restricted for pension benefits at June 30, 2018 amounted to $5.8 billion, an increase of $307.2 million (5.6%) from $5.5 billion at June 30, 2017.

Additions to the PERS-DBRP net position restricted for pension benefits include contributions from employer, member, and the state; a statutorily-appropriated contribution from the general fund; and investment income. For the fiscal year ended June 30, 2018, contributions increased to $243.9 million in fiscal year 2018 from $233.4 million in fiscal year 2017, an increase of $10.4 million (4.5%). Contributions increased due to an increased employer contribution rate and an expected inflation rate in salaries. The plan recognized total net investment income of $478.7 million for the fiscal year ended June 30, 2018, compared with total net investment income of $591.5 million for the fiscal year ended June 30, 2017, a decrease of $112.8 million (19.07%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

PERS-DBRP receives a supplemental state appropriation from the State's general fund. The total amount received for fiscal year 2018 was $33.6 million. These are recorded as *State Appropriations* on the financial statements.

Fiduciary Net Position - Defined Benefit Plans

As of June 30, 2018 *- and comparative totals for June 30, 2017*

(dollars in thousands)

	PERS		PERS-DCRP DISABILITY OPEB		JRS		HPORS		SRS	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Assets:										
Cash and Receivables	$ 159,525	152,223	350	328	2,344	2,408	4,373	4,025	9,198	8,901
Securities Lending Collateral	36,793	31,162			653	550	947	798	2,284	1,884
Investments	5,652,706	5,326,238	4,111	3,462	100,269	93,939	145,457	136,350	350,935	321,984
Property and Equipment	25	33								
Intangible Assets	1,398	1,298			410	381	348	323	410	381
Total Assets	5,850,447	5,510,954	4,461	3,790	103,676	97,278	151,125	141,496	362,827	333,150
Deferred Outflow of Resources	3									
Liabilities:										
Securities Lending Liability	36,793	31,162			653	550	947	798	2,284	1,884
Other Payables	31,033	4,421	5	1	373	73	979	160	1,664	351
Total Liabilities	67,826	35,583	5	1	1,026	623	1,926	958	3,948	2,235
Deferred Inflow of Resources	$ 64									
Total Net Position	$ 5,782,560	5,475,371	4,456	3,789	102,650	96,655	149,199	140,538	358,879	330,915

Changes In Fiduciary Net Position - Defined Benefit Plans

For the year ended June 30, 2018 *- and comparative totals for June 30, 2017*

(dollars in thousands)

	PERS		PERS-DCRP DISABILITY OPEB		JRS		HPORS		SRS	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Additions:										
Contributions	$ 243,877	233,427	431	392	1,660	2,288	8,495	7,995	18,835	14,751
Investment Income (Loss)	478,731	591,539	288	333	8,467	10,370	12,283	15,101	29,158	35,516
Total Additions	722,608	824,966	719	725	10,127	12,658	20,778	23,096	47,993	50,267
Deductions:										
Benefits	395,339	366,355	52	54	3,723	3,554	11,546	11,037	18,053	16,700
Refunds	13,345	12,326			149		322	245	1,554	1,416
OPEB Expenses	50	104				1				1
Administrative Expenses	4,948	5,121			264	254	256	248	432	387
Miscellaneous Expenses	2,267	1,547								
Total Deductions	415,949	385,453	52	54	4,136	3,809	12,124	11,530	20,039	18,504
Incr/(Decr) in Net Position	$ 306,659	439,513	667	671	5,991	8,849	8,654	11,566	27,954	31,763
Prior Period	528				5		6		11	

	GWPORS		MPORS		FURS		VFCA		TOTAL	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
$	4,695	4,424	26,265	23,630	26,872	24,520	3,238	1,016	236,860	221,475
	1,231	1,002	2,563	2,109	2,660	2,171	232	207	47,363	39,883
	189,125	171,204	393,802	360,476	408,718	371,014	35,568	35,427	7,280,691	6,820,094
									25	33
	410	381	367	341	363	337	334	310	4,040	3,752
	195,461	177,011	422,997	386,556	438,613	398,042	39,372	36,960	7,568,979	7,085,237
									3	
	1,231	1,002	2,563	2,109	2,660	2,171	232	207	47,363	39,883
	709	167	2,121	380	2,018	359	410	123	39,312	6,035
	1,940	1,169	4,684	2,489	4,678	2,530	642	330	86,675	45,918
									64	
$	193,521	175,842	418,313	384,067	433,935	395,512	38,730	36,630	7,482,243	7,039,319

	GWPORS		MPORS		FURS		VFCA		TOTAL	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
$	10,125	9,742	28,644	25,517	28,495	25,864	2,212	2,065	342,774	322,041
	15,573	18,592	33,238	39,781	34,285	40,844	3,127	3,837	615,150	755,913
	25,698	28,334	61,882	65,298	62,780	66,708	5,339	5,902	957,924	1,077,954
	6,523	5,810	24,567	23,475	23,863	22,336	2,944	2,859	486,610	452,180
	1,136	1,036	2,728	1,043	173	169			19,407	16,235
		1							50	107
	369	329	350	339	329	320	293	289	7,241	7,287
							11	6	2,278	1,553
	8,028	7,176	27,645	24,857	24,365	22,825	3,248	3,154	515,586	477,362
$	17,670	21,158	34,237	40,441	38,415	43,883	2,091	2,748	442,338	600,592
	9		10		9		8		586	

Deductions from the PERS-DBRP net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2018, benefits amounted to $395.3 million, an increase of $29.0 million (7.9%) from fiscal year 2017. The increase in benefit payments was due to the increase in benefit recipients and the increase in the average recipient's benefit due to the guaranteed annual benefit adjustment (GABA). For fiscal year 2018, refunds amounted to $13.3 million, an increase of $1.0 million (8.3%) from fiscal year 2017. The increase in refunds was due to an increase in the number of members taking a refund. For fiscal year 2018, the costs of administering the plan's benefits amounted to $4.9 million, a decrease of $173.6 thousand (3.4%) from fiscal year 2017. The decrease in administrative expenses for fiscal year 2018 was due mostly to decreased costs to administer the plan.

An actuarial valuation of the PERS-DBRP assets and benefit obligations is performed annually. At June 30, 2018, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability increased to 38 years from 30 years. The funded status of the plan increased to 73.81% at June 30, 2018 from 72.76% at June 30, 2017.

The PERS-DBRP actuarial value of assets was less than actuarial liabilities by $2.02 billion at June 30, 2018, compared with $2.06 billion at June 30, 2017. The decrease in the unfunded actuarial liability as of the last actuarial valuation is a result of recognizing liability gains of $134.1 million. In recognizing past investment losses of $52.3 million it still resulted in a total gain deducting $81.8 million from the actuarial liability during fiscal year 2018.

PERS-DCRP DISABILITY OPEB

The PERS-DCRP Disability OPEB provides disability benefits for defined contribution plan members. A percentage of employer contributions and earnings on investments fund the benefits of the plan. The DCRP Disability OPEB net position restricted for pensions at June 30, 2018 amounted to $4.5 million, an increase of $667 thousand (17.6%) from $3.8 million at June 30, 2017.

Additions to the DCRP Disability OPEB net position restricted for pension benefits include employer contributions and investment income. For the fiscal year ended June 30, 2018, employer contributions amounted to $431 thousand, an increase of $39 thousand (9.9%) from fiscal year 2017. Contributions increased due to an increase in PERS-DCRP participants. The plan recognized total net investment income of $288 thousand for the fiscal year ended June 30, 2018 compared with total net investment income of $333 thousand for the fiscal year ended June 30, 2017, a decrease of $45 thousand (13.46%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the DCRP Disability OPEB net position restricted for pension benefits are disability retirement benefits. For fiscal year 2018, benefits amounted to $52 thousand, a decrease of $1.8 thousand (3.2%) from fiscal year 2017.

An actuarial valuation of the DCRP Disability OPEB assets and disability benefit obligations is performed annually. The valuation was performed using the June 30, 2018 data and the 2017 experience study demographic and economic assumptions. At June 30, 2018, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability decreased to zero years from 19 years at June 30, 2017. The funded status of the plan increased to 102.32% at June 30, 2018 from 87.14% at June 30, 2017. The unfunded actuarial liability decreased to $(101.2) thousand at June 30, 2018 from $510 thousand at June 30, 2017, as a result of a total gain deducting $583.4 thousand from the expected actuarial liability.

During the year ended June 30, 2018, the DCRP Disability OPEB assets gained 7.24% on an annualized market basis. This return was 3.74% above the DCRP Disability OPEB assumed rate of return of 3.50%. The plan earned $146,925 more than the assumed rate at June 30, 2018, and $114,485 less than the assumed rate at June 30, 2017.

JRS

The JRS provides retirement, disability, and death benefits for all Montana judges of the district courts, justices of the Supreme Court, the Chief Water Judge and the Associate Water Judge. Member and employer contributions and earnings on investments fund the benefits of the plan. The JRS net position restricted for pensions at June 30, 2018 amounted to $102.7 million, an increase of $6.0 million (6.2%) from $96.7 million at June 30, 2017.

Additions to the JRS net position restricted for pension benefits include member and employer contributions, and investment income. For the fiscal year ended June 30, 2018, contributions amounted to $1.7 million, a decrease of $628 thousand (27.5%) from fiscal year 2017. Contributions decreased due to a moratorium on employer contributions starting January 1, 2018. The plan recognized total net investment income of $8.5 million for the fiscal year ended June 30, 2018, compared with total net investment income of $10.4 million for the fiscal year ended June 30, 2017, a decrease of $1.9 million (18.35%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the JRS net position restricted for pension benefits include retirement benefits and administrative expenses. For fiscal year 2018, benefits amounted to $3.7 million, an increase of $168.9 thousand (4.8%) from fiscal year 2017. The increase in benefits was due to an increase in the number of retirees and the average recipient's benefit due to the guaranteed annual benefit adjustment (GABA) or the minimum benefit adjustment for non-GABA recipients. For fiscal year 2018, administrative expenses amounted to $264 thousand, an increase of $10.7 thousand (4.2%) from fiscal year 2017. The increase in administrative expenses for fiscal year 2018 was due to increased costs to administer the plan.

An actuarial valuation of the JRS assets and benefit obligations is performed annually. At June 30, 2018, the date of the most recent actuarial valuation, the years to amortize the unfunded actuarial liability is still zero due to the actuarial surplus. The funded status of the plan decreased to 161.29% at June 30, 2018 from 167.06% at June 30, 2017.

The JRS actuarial value of assets was greater than actuarial liabilities by a $38.5 million actuarial surplus at June 30, 2018, compared with a $39.0 million actuarial surplus at June 30, 2017. There was still an increase in the unfunded actuarial liability as of the last actuarial valuation, which is a result of recognizing liability losses of $2.5 million and in recognizing past investment losses of $727.8 thousand resulting in a total loss adding $3.3 million to the actuarial liability during fiscal year 2018.

HPORS

The HPORS provides retirement, disability, and death benefits for members of the Montana Highway Patrol. HPORS also has an option for members to participate in a Deferred Retirement Option Plan (DROP). Member and employer contributions, a statutory appropriation from the general fund, and earnings on investments fund the benefits of the *plan.* The HPORS net position restricted for pensions at June 30, 2018 amounted to $149.2 million, an increase of $8.7 million (6.2%) from $140.5 million at June 30, 2017.

Additions to the HPORS net position restricted for pension benefits include employer and member contributions, a statutory appropriation from the general fund, and investment income. For the fiscal year ended June 30, 2018, contributions increased to $8.5 million from $8.0 million in fiscal year 2017, an increase of $500 thousand (6.3%). Contributions increased slightly as a result of an increase in active members contributing to the plan. The plan recognized total net investment income of $12.3 million for the fiscal year ended June 30, 2018, compared with total net investment income of $15.1 million for the fiscal year ended June 30, 2017, a decrease of $2.8 million (18.7%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the HPORS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2018, benefits amounted to $11.5 million, an increase of $509 thousand (4.6%) from fiscal year 2017. The slight increase in benefit payments was due to an increase in benefit recipients and the increase in the average recipient's benefit due to the guaranteed annual benefit adjustment (GABA) or the minimum monthly benefit for non-GABA recipients. For fiscal year 2018, refunds amounted to $322 thousand, an increase of $77 thousand (31.6%) from fiscal year 2017. The slight increase in refunded amounts was due to less refunds being processed at larger dollar amounts.

For fiscal year 2018, administrative expenses were $256 thousand, an increase of $8.2 thousand (3.3%) from fiscal year 2017. The increase in administrative expenses for fiscal year 2018 was due to increased costs to administer the plan.

An actuarial valuation of the HPORS assets and benefit obligations is performed annually. At June 30, 2018, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability is 40 years an increase from 37 years at June 30, 2017. The funded status of the plan decreased to 64.03% at June 30, 2018 from 64.35% at June 30, 2017.

The HPORS actuarial value of assets was less than actuarial liabilities by $82.7 million at June 30, 2018, compared with $78.2 million at June 30, 2017. The increase in the unfunded actuarial liability as of the last actuarial valuation is a result of recognizing liability losses of $2.5 million and recognizing past investment losses of $1.1 million resulting in a total loss adding $3.6 million to the actuarial liability during fiscal year 2018.

SRS

The SRS provides retirement, disability, and death benefits for all Department of Justice criminal investigators hired after July 1, 1993, detention officers hired after July 1, 2005, and all Montana sheriffs. Member and employer contributions and earnings on investments fund the benefits of the plan. The SRS net position restricted for pension benefits at June 30, 2018 amounted to $358.9 million, an increase of $27.9 million (8.5%) from $331.0 million at June 30, 2017.

Additions to the SRS net position restricted for pension benefits include member and employer contributions, and investment income. For the fiscal year ended June 30, 2018, contributions increased to $18.8 million from $14.8 million in fiscal year 2017, for an increase of $4.0 million (27.7%). The increase in contributions was due to an increase in active members contributing to the plan and the increase in the member and employer contribution rates. The plan recognized total net investment income of $29.1 million for the fiscal year ended June 30, 2018, compared with total net investment income of $35.5 million for the fiscal year ended June 30, 2017, a decrease of $6.4 million (17.9%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the SRS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2018, benefits amounted to $18.1million, an increase of $1.4 million (8.1%) from fiscal year 2017. The increase in benefit payments was due to an increase in benefit recipients and the average recipient's benefit due to the guaranteed annual benefit adjustment (GABA). For fiscal year 2018, refunds amounted to $1.6 million, an increase of $138 thousand (9.8%) from fiscal year 2017. The increase in refunds was due to an increase in the number of members taking a refund. For fiscal year 2018, administrative expenses amounted to $432 thousand, an increase of $44.7 thousand (11.5%) from fiscal year 2017. The increase in administrative expenses for fiscal year 2018 was due to increased costs to administer the plan.

An actuarial valuation of the SRS assets and benefit obligations is performed annually. At June 30, 2018, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability decreased to 21 years from 25 years at June 30, 2017. The funded status of the plan increased to 81.04% at June 30, 2018 from 80.74% at June 30, 2017.

The SRS actuarial value of assets was less than actuarial liabilities by $82.8 million at June 30, 2018, compared with $79.2 million at June 30, 2017. The increase in the unfunded actuarial liability as of the last actuarial valuation is a result of recognizing liability losses of $2.7 million and recognizing past investment losses of $2.4 million, resulting in a total loss adding $5.1 million to the actuarial liability during fiscal year 2018.

GWPORS

The GWPORS provides retirement, disability, and death benefits for game wardens, warden supervisory personnel and state peace officers. Member and employer contributions and earnings on investments fund the benefits of the plan. The GWPORS net position restricted for pension benefits at June 30, 2018, amounted to $193.5 million, an increase of $17.7 million (10.1%) from $175.8 million at June 30, 2017.

Additions to the GWPORS net position restricted for pension benefits include member and employer contributions, and investment income. For the fiscal year ended June 30, 2018, contributions increased to $10.1 million from $9.7 million in fiscal year 2017, an increase of $383 thousand (3.9%). The increase in contributions was due to an increase in active members contributing to the plan. The plan recognized total net investment income of $15.6 million for the fiscal year ended June 30, 2018, compared with total net investment income of $18.6 million for the fiscal year ended June 30, 2017, a decrease of $3.0 million (16.2%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the GWPORS net position restricted for pensions include retirement benefits, refunds, and administrative expenses. For fiscal year 2018, benefits amounted to $6.5 million, an increase of $713 thousand (12.3%) from fiscal year 2017. The increase in benefit payments was due to the increase in benefit recipients and the increase in the average recipient's benefit due to the guaranteed annual benefit adjustment (GABA). For fiscal year 2018, refunds amounted to $1.1 million, an increase of $100 thousand (9.7%) from fiscal year 2017. The increase in refunds was due to an increase in refund requests from members. For fiscal year 2018, administrative expenses amounted to $369 thousand, an increase of $40.5 thousand (12.3%) from fiscal year 2017. The increase in administrative expenses for fiscal year 2018 was due to increased costs to administer the plan.

An actuarial valuation of the GWPORS assets and benefit obligations is performed annually. At June 30, 2018, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability increased to 72 years from 70 years at June 30, 2017. The funded status of the plan increased to 82.95% at June 30, 2018 from 81.01% at June 30, 2017.

The GWPORS actuarial value of assets was less than actuarial liabilities by $39.2 million at June 30, 2018, compared with $41.3 million at June 30, 2017. The decrease in unfunded actuarial liability as of the last actuarial valuation is a result of recognizing liability gains of $4.4 million and recognizing past investment losses of $1.1 million, resulting in a total gain deducting $3.2 million from the actuarial liability during fiscal year 2018.

MPORS

The MPORS provides retirement, disability, and death benefits for municipal police officers employed by first- and second-class cities, and other cities that adopt the plan. MPORS also has an option for members to participate in a Deferred Retirement Option Plan (DROP). Member, employer, and state contributions and earnings on investments fund the benefits of the plan. The MPORS net position restricted for pension benefits at June 30, 2018 amounted to $418.3 million, an increase of $34.2 million (8.9%) from $384.1 million at June 30, 2017.

Additions to the MPORS net position restricted for pension benefits include employer, member, and state contributions, and investment income. For the fiscal year ended June 30, 2018, contributions increased to $28.6 million from $25.5 million in fiscal year 2017, for an increase of $3.1 million (12.3%). Contributions increased due to an increase in active members contributing to the plan. The plan recognized total net investment income of $33.2 million for the fiscal year ended June 30, 2018, compared with total net investment income of $39.8 million for fiscal year ended June 30, 2017, a decrease of $6.5 million (16.5%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the MPORS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2018 benefits amounted to $24.6 million, an increase of $1.1 million (4.7%) from fiscal year 2017. The increase in benefit payments was due to the increase in benefit recipients and the increase in the average recipient's benefit due to the guaranteed annual benefit adjustment (GABA) or the minimum benefit adjustment for non-GABA recipients. For fiscal year 2018, refunds amounted to $2.7 million, an increase of $1.7 million (161.4%) from fiscal year 2017. The increase in refunds was due to an increase in refund requests from members. For fiscal year 2018, administrative expenses were $350 thousand, an increase of $11 thousand (3.2%) from fiscal year 2017. The increase in administrative expenses for fiscal year 2018 was due to increased costs to administer the plan.

An actuarial valuation of the MPORS assets and benefit obligations is performed annually. At June 30, 2018, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability increased to 20 years from 16 years at June 30,

2017. The funded status of the plan decreased to 67.69% at June 30, 2018 from 68.66% at June 30, 2017.

The MPORS actuarial value of assets was less than actuarial liabilities by $197.4 million at June 30, 2018, compared with $176.3 million at June 30, 2017. The increase in the actuarial liability as of the last actuarial valuation is a result of recognizing other liability losses of $21.5 million and recognizing past investment losses of $3.2 million, resulting in a total liability loss adding $24.8 million to the actuarial liability during fiscal year 2018.

FURS

The FURS provides retirement, disability, and death benefits for firefighters employed by first- and second-class cities; other cities and rural fire departments that adopt the plan; and firefighters hired by the Montana Air National Guard (MANG) on or after October 1, 2001. Member, employer, and state contributions, and earnings on investments fund the benefits of the plan. The FURS net position restricted for pension benefits at June 30, 2018, amounted to $433.9 million, an increase of $38.4 million (9.7%) from $395.5 million at June 30, 2017.

Additions to the FURS net position restricted for pension benefits include employer, member, and state contributions, and investment income. For the fiscal year ended June 30, 2018, contributions increased to $28.5 million from $25.9 million in fiscal year 2017, an increase of $2.6 million (10.2%). Contributions increased due to an increase of active members contributing to the plan. The plan recognized total net investment income of $34.3 million for the fiscal year ended June 30, 2018, compared with total net investment income of $40.8 million for the fiscal year ended June 30, 2017, a decrease of $6.6 million (16.1%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the FURS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2018, benefits amounted to $23.9 million, an increase of $1.5 million (6.8%) from fiscal year 2017. The increase in benefit payments was due to the increase in benefit recipients and the increase in the average recipient's benefit due to the guaranteed annual benefit adjustment (GABA) or the minimum benefit adjustment for non- GABA recipients. For fiscal year 2018, refunds amounted to $173 thousand, an increase of $4 thousand (2.3%) from $169 thousand in fiscal year 2017. The increase in refunds was due to an increase in refund requests from members. For fiscal year 2018, administrative expenses were $329 thousand, an increase of $9 thousand (2.8%) from fiscal year 2017. The increase in administrative expenses for fiscal year 2018 was due to increased costs to administer the plan.

An actuarial valuation of the FURS assets and benefit obligations is performed annually. At June 30, 2018, the date of the most recent actuarial valuation, the years to amortize the unfunded actuarial liability stayed at 10 years, same as at June 30, 2017. The funded status of the plan increased to 78.27% at June 30, 2018 from 76.13% at June 30, 2017.

The FURS actuarial value of assets was less than actuarial liabilities by $119.1 million at June 30, 2018, compared with $124.7 million at June 30, 2017. The decrease in unfunded actuarial liability as of the last actuarial valuation is a result of recognizing other liability gains of $877.6 thousand and recognizing past investment losses of $3.2 million, resulting in a total liability loss adding $2.4 million to the actuarial liability during fiscal year 2018.

VFCA

The VFCA provides retirement, disability, and death benefits for volunteer firefighters who are members of eligible volunteer fire companies in unincorporated areas. State contributions and earnings on investments fund the benefits of the plan. The VFCA net position restricted for pension benefits at June 30, 2018 amounted to $38.7 million, an increase of $2.1 million (5.7%) from $36.6 million at June 30, 2017.

Additions to the VFCA net position restricted for pension benefits include state contributions and investment income. For the fiscal year ended June 30, 2018, contributions increased to $2.2 million from $2.1 million in fiscal year 2017, an increase of $148 thousand (7.1%). Contributions increased because of increased fire insurance premium taxes distributed to the VFCA from the general fund. The plan recognized total net investment income of $3.1 million for the fiscal year ended June 30, 2018, compared with total net investment income of $3.8 million for the fiscal year ended June 30, 2017, a decrease of $711 thousand (18.5%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the VFCA net position restricted for pension benefits include retirement benefits, administrative expenses, and supplemental insurance payments. For fiscal year 2018, benefits amounted to $2.9 million, an increase of $84.6 thousand (3.0%) from fiscal year 2017. The increase in benefit payments was due to the increase in benefit recipients. For fiscal year 2018, administrative expenses amounted to $293 thousand, an increase of $4.2 thousand (1.5%) from fiscal year 2017. The increase in administrative expenses for fiscal year 2018 was due to increased costs to administer the plan. For fiscal year 2018, supplemental insurance payments amounted to $11 thousand, an increase of $5 thousand from fiscal year 2017. The increase was due to an increase of supplemental insurance claims by VFCA companies.

An actuarial valuation of the VFCA assets and benefit obligations is performed annually. At June 30, 2018, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability decreased to 5 years from 6 years at June 30, 2017 and the funded status of the plan increased to 82.76% at June 30, 2018 from 80.56% at June 30, 2017.

The VFCA actuarial value of assets was less than actuarial liabilities by $8.0 million at June 30, 2018, compared with $8.9 million at June 30, 2017. The decrease in unfunded actuarial liability as of the last actuarial valuation is a result of recognizing other liability gains of $112.6 thousand and in recognizing past investment losses of $384.5 thousand, resulting in a total liability loss adding $271.9 thousand to the actuarial liability during fiscal year 2018.

Actuarial Valuations and Funding Progress

An experience study was performed during fiscal year 2017 for the six-year period of July 1, 2010 to June 30, 2016. The experience study resulted in changes to demographic and economic actuarial assumptions and implementation of new actuarial factors.

An actuarial valuation of each of the defined benefit plans is performed annually. The most recent actuarial valuation was performed for fiscal year ended June 30, 2018. The DCRP Disability OPEB plan valuation was last performed on June 30, 2018.

The PERB's funding objective is to meet long-term benefit obligations through investment income and contributions. Employer and member contributions and other contributions for some systems, and the income from investments provide the cash flow needed to finance future retirement benefits. The Actuarial Determined Contribution (ADC) is a critical component of funding for defined benefit plans. The ADC, as defined by GASB, is a target or recommended contribution to a defined benefit pension plan for the reporting period. The ADC is determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Investment earnings are also critical to the defined benefit plans' funding; investment losses deteriorate the plans' funding. Positive market returns were experienced in fiscal years 2010 through 2018. The asset smoothing methods utilized by the plans limits the impacts to four years. The funding status for all defined benefit plans increased in the latest valuation, except for JRS, HPORS and MPORS which had slight decreases.

As required by Article VIII, section 15, of the Montana Constitution and section 19-2-409, MCA, the public retirement plans are to be funded on an actuarially sound basis. Public pension plans are considered actuarially sound if the unfunded actuarial accrued liability amortization period is 30 years or less. All systems were funded on an actuarially sound basis in 2007 and 2008. The impact of negative investment returns in 2008 and 2009 resulted in the PERS-DBRP not amortizing within 30 years in fiscal years 2009 through 2012; SRS not amortizing within 30 years in fiscal years 2009 through 2016; and GWPORS not amortizing within 30 years in fiscal years 2009 through 2017.

According to the PERB's June 30, 2018 actuarial valuations, the unfunded liability of PERS-DBRP, HPORS and GWPORS does not amortize within 30 years.

Overall, funding ratios range from a high of 161.29% (JRS) to a low of 64.03% (HPORS). The actuary performs a smoothing of investment gains or losses over a period of four years. At June 30, 2018, the actuarial value of assets of all plans was less than the market value of assets by $96 million due to an average positive 8.78% market return in fiscal year 2018.

Defined Contribution Plans

The PERB administers two defined contribution plans: The Public Employees' Retirement System-Defined Contribution Retirement Plan (PERS-DCRP) and the Deferred Compensation (457) Plan. The schedules of Fiduciary Net Position and Changes in Fiduciary Net Position for the two defined contribution plans including comparative totals from fiscal year 2017 are also included.

PERS-DCRP

The PERS-DCRP is established under section 401(a) of the Internal Revenue Code and Title 19, chapters 2 & 3 of the Montana Code Annotated (MCA). This plan provides retirement, disability, and death benefits for plan members. This plan was available to all active PERS members effective July 1, 2002. 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. The plan member and employer contributions and earnings on investments fund the benefits of the plan. The PERS-DCRP net position restricted for pension benefits at June 30, 2018, amounted to $227.8 million, an increase of $34.2 million (17.6%) from $193.6 million at June 30, 2017.

Additions to the PERS-DCRP net position restricted for pension benefits include contributions and investment income. For the fiscal year ended June 30, 2018, contributions increased to $25.2 million from $23.0 million in fiscal year 2017, an increase of $2.2 million (9.6%). Contributions increased due to an increase in the total compensation reported as a result of an increase in active participants and an increase in employer contribution rates. The plan recognized net investment income of $19.6 million for fiscal year ended 2018, compared with net investment income of $22.4 million in fiscal year 2017, a decrease of $2.8 million (12.4%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the PERS-DCRP net position restricted for pension benefits include member and beneficiary distributions, administrative expenses, and miscellaneous expenses. For fiscal year 2018, distributions amounted to $9.7 million, an increase of $2.7 million (38.5%) from fiscal year 2017. The increase in distributions was due to more defined contribution members taking IRS permitted rollovers and periodic or lump sum distributions at larger dollar amounts. For fiscal year 2018, the costs of administering the plan amounted to $749 thousand, a decrease of $75 thousand (9.1%) from fiscal year 2017. The decrease in administrative expenses for fiscal year 2018 was due to the decreased costs to administer the plan.

Miscellaneous expenses are the PERB's administrative fees assessed by the vendors based on account balances. Miscellaneous expenses increased to $267 thousand in fiscal year 2018 from $225 thousand in fiscal year 2017, an increase of $41 thousand (18.4%). The increase in miscellaneous expenses was due to increased number of members investing in the plan.

Deferred Compensation (457(b)) Plan

The Deferred Compensation Plan is established under section 457(b) of the Internal Revenue Code and Title 19, chapter 50 of the Montana Code Annotated (MCA). This plan is a voluntary supplemental retirement savings plan for those who are eligible and choose to participate. The Deferred Compensation Plan is funded by contributions and by investment earnings. The Deferred Compensation net position restricted for pension benefits at June 30, 2018 amounted to $502.3 million, an increase of $22.1 million (4.6%) from $480.2 million at June 30, 2017.

Additions to the Deferred Compensation Plan net position restricted for pension benefits include contributions and investment income. For fiscal year 2018, contributions decreased to $23.5 million from $24.4 million in fiscal year 2017, a decrease of $890 thousand (3.6%). The decrease is due to participants not contributing as much to the plan. The plan recognized net investment income of $29.3 million for fiscal year 2018, compared with net investment income of $35.9 million for fiscal year 2017, a decrease of $6.6 million (18.4%). The decrease in investment income is a result of solid but low growth in U.S. and global markets.

Deductions from the Deferred Compensation Plan net position restricted for pension benefits include member and beneficiary distributions, administrative expenses, and miscellaneous expenses. For fiscal year 2018, distributions amounted to $29.3 million, an increase of $2.0 million (7.2%) from $27.3 million in fiscal year 2017. The increase in distributions was due to more deferred compensation participants taking distributions. The administrative expenses decreased to $563 thousand in fiscal year 2018 from $613 thousand in fiscal year 2017, a decrease of $50 thousand (8.2%). The decrease in administrative expenses for fiscal year 2018 was due to the decreased costs to administer the plan.

Miscellaneous expenses are the PERB's administrative fees assessed by the vendors based on account balances. Miscellaneous expenses increased to $898 thousand in fiscal year 2018 from $846 thousand in fiscal year 2017, an increase of $53 thousand (6.2%) from fiscal year 2017. The increase in miscellaneous expense was due to increased number of members investing in the plan.

Fiduciary Net Position - Defined Contribution Plans

As of June 30, 2018 *- and comparative totals for June 30, 2017*

(dollars in thousands)

	PERS-DCRP		457-PLAN		TOTAL	
	2018	2017	2018	2017	2018	2017
Assets:						
Cash and Receivables	$ 2,313	2,067	704	647	3,017	2,714
Securities Lending Collateral						
Investments	225,634	192,153	501,608	479,575	727,242	671,728
Property and Equipment	3	4	2	3	5	7
Intangible Assets	334	310	396	368	730	678
Total Assets	228,284	194,534	502,710	480,593	730,994	675,127
Deferred Outflow of Resources*						
Liabilities:						
Other Payables	494	901	403	403	897	1,304
Total Liabilities	494	901	403	403	897	1,304
Deferred Inflow of Resources	$ 7		3		10	
Total Net Position - restricted for pensions	$ 227,783	193,633	502,304	480,190	730,087	673,823

* Deferred Outflows totaled less than $1,000, as a result will not appear on this statement

Changes in Fiduciary Net Position - Defined Contribution Plans

For the year ended June 30, 2018 *- and comparative totals for June 30, 2017*

(dollars in thousands)

	PERS-DCRP		457-PLAN		TOTAL	
	2018	2017	2018	2017	2018	2017
Additions:						
Contributions	$ 25,255	23,045	23,543	24,434	48,798	47,479
Investment Income (Loss)	19,602	22,368	29,293	35,889	48,895	58,257
Total Additions	44,857	45,413	52,836	60,323	97,693	105,736
Deductions:						
Benefits						
Distributions	9,746	7,038	29,302	27,329	39,048	34,367
OPEB Expenses	5	12	3	8	8	20
Administrative Expenses	749	824	563	613	1,312	1,437
Miscellaneous Expenses	267	225	898	846	1,165	1,071
Total Deductions	10,767	8,099	30,766	28,796	41,533	36,895
Incr/(Decr) in Net Position	$ 34,090	37,314	22,070	31,527	56,160	68,841
Prior Period	$ 61		43		104	

Public Employees' Retirement Board

A Component Unit of the State of Montana

Statement of Fiduciary Net Position - Pension (And Other Employee Benefit) Trust Funds

as of June 30, 2018

	PERS-DBRP	PERS-DCRP DISABILITY OPEB	JRS	HPORS	SRS	GWPORS
Assets						
Cash and Short-term Investments	$ 154,224,251	335,114	2,335,173	4,240,751	8,718,737	4,631,069
Securities Lending Collateral (Note A6)	36,792,892		652,642	946,762	2,284,201	1,230,998
Receivables						
Interest	213,992	510	3,487	5,783	13,205	6,943
Accounts Receivable	4,398,139	13,943	5,091	126,241	466,280	57,201
Due from Other Funds	672,567					
Due from Primary Government						
Notes Receivable	15,952					
Total Receivables	5,300,650	14,453	8,578	132,024	479,485	64,144
Investments, at fair value (Note A6)						
Commingled Equity Securities		4,110,614				
CAPP Investment Pool	5,652,705,617		100,269,124	145,456,514	350,935,023	189,125,428
Defined Contributions Fixed Investments						
Defined Contributions Variable Investments						
Deferred Compensation Life Insurance						
Total Investments	5,652,705,617	4,110,614	100,269,124	145,456,514	350,935,023	189,125,428
Capital Assets						
Property and Equipment, at cost,						
net of Accumulated Depreciation (Note A2)	24,704		366	311	366	366
Intangible Assets at cost,						
net of amortization expense	1,398,370		410,443	348,399	410,443	410,443
Total Capital Assets	1,423,074		410,809	348,710	410,809	410,809
Total Assets	5,850,446,484	4,460,181	103,676,326	151,124,761	362,828,255	195,462,448
Deferred Outflow of Resources	2,698					
Liabilities						
Securities Lending Liability	36,792,892		652,642	946,762	2,284,201	1,230,998
Accounts Payable	30,246,418	4,320	359,728	928,837	1,480,743	585,046
Unearned Revenue	352,690	380	589	7,735	2,677	6,508
Due to Other Funds			12,679	42,559	180,274	117,368
Compensated Absences	360,676					
OPEB Implicit Rate Subsidy LT	73,601					
Total Liabilities	67,826,277	4,700	1,025,638	1,925,893	3,947,895	1,939,920
Deferred Inflow of Resources	64,307					
Net Position - Restricted for Pension Benefits	$ 5,782,558,598	4,455,481	102,650,688	149,198,868	358,880,360	193,522,528

The notes to the financial statements are an integral part of this statement.

Defined Benefit Pension Plans				Defined Contribution Plans			
MPORS	FURS	VFCA	Total Defined Benefit Pension Plans	PERS-DCRP	457 Plan	Total Defined Contribution Plans	Total Pension Trust Funds
9,988,609	10,313,959	3,229,696	198,017,359	2,006,943	149,817	2,156,760	200,174,119
2,563,218	2,660,305	231,507	47,362,525				47,362,525
14,329	14,819	1,511	274,579	2,090	196	2,286	276,865
404,576	386,226	6,438	5,864,135	303,937	553,893	857,830	6,721,965
			672,567				672,567
15,857,660	16,156,512		32,014,172				32,014,172
			15,952				15,952
16,276,565	16,557,557	7,949	38,841,405	306,027	554,089	860,116	39,701,521
			4,110,614				4,110,614
393,802,035	408,718,147	35,567,727	7,276,579,615				7,276,579,615
				14,995,719	226,330,837	241,326,556	241,326,556
				210,638,214	275,264,685	485,902,899	485,902,899
					12,316	12,316	12,316
393,802,035	408,718,147	35,567,727	7,280,690,229	225,633,933	501,607,838	727,241,771	8,007,932,000
328	324	298	27,063	3,033	2,521	5,554	32,617
367,490	362,717	334,082	4,042,387	334,082	396,125	730,207	4,772,594
367,818	363,041	334,380	4,069,450	337,115	398,646	735,761	4,805,211
422,998,245	438,613,009	39,371,259	7,568,980,968	228,284,018	502,710,390	730,994,408	8,299,975,376
			2,698	275	135	410	3,108
2,563,218	2,660,305	231,507	47,362,525				47,362,525
1,960,942	1,881,794	319,670	37,767,498	430,008	372,317	802,325	38,569,823
34,939	29,726	2,298	437,542	2,114		2,114	439,656
124,850	106,679	88,159	672,568				672,568
			360,676	54,606	27,240	81,846	442,522
			73,601	7,507	3,687	11,194	84,795
4,683,949	4,678,504	641,634	86,674,410	494,235	403,244	897,479	87,571,889
			64,307	6,559	3,222	9,781	74,088
418,314,296	433,934,505	38,729,625	7,482,244,949	227,783,499	502,304,059	730,087,558	8,212,332,507

Public Employees' Retirement Board

A Component Unit of the State of Montana

Statement of Changes in Fiduciary Net Position - Pension (And Other Employee Benefit) Trust Funds

for the year ended June 30, 2018

		PERS-DBRP	PERS-DCRP DISABILITY OPEB	JRS	HPORS	SRS	GWPORS
Additions							
Contributions (Note C)							
Employer	$	106,613,081	430,725	1,084,599	5,857,388	10,359,609	4,609,095
Plan Member		101,993,235		575,050	2,385,429	8,454,323	5,508,880
Interest Reserve Buyback		82,036			1,097	14,959	3,268
Retirement Incentive Program		2,068					
Miscellaneous Revenue		526,932		281	1,105	6,532	3,971
State Contributions		1,024,328			250,150		
State Appropriations		33,634,846					
Nonvested Member Forfeitures							
Total Contributions		243,876,526	430,725	1,659,930	8,495,169	18,835,423	10,125,214
Investments (Note A6, Note A8)							
Net Appreciation (Depreciation)							
in Fair Value of Investments		511,205,616	298,826	9,045,355	13,115,558	31,145,096	16,640,227
Interest		2,096,955	4,826	34,433	53,279	130,985	67,862
Dividends							
Investment Expense		(35,238,061)	(15,654)	(624,393)	(903,088)	(2,159,057)	(1,156,845)
Net Investment Income		478,064,510	287,998	8,455,395	12,265,749	29,117,024	15,551,244
Securities Lending Income							
Securities Lending Income		1,108,711		19,651	28,413	67,916	36,397
Securities Lending Rebate and Fees		(442,424)		(7,842)	(11,338)	(27,102)	(14,524)
Net Securities Lending Income		666,287		11,809	17,075	40,814	21,873
Total Net Investment Income		478,730,797	287,998	8,467,204	12,282,824	29,157,838	15,573,117
Total Additions		722,607,323	718,723	10,127,134	20,777,993	47,993,261	25,698,331
Deductions (Note C)							
Benefits		395,338,673	52,383	3,723,271	11,545,732	18,052,544	6,522,921
Refunds/Distributions		12,619,498		149,051	321,840	1,490,014	1,105,281
Refunds to Other Plans		725,998				64,184	30,868
Transfers to MUS-RP		198,062					
Transfers to DCRP		2,068,870					
Supplemental Insurance Payments							
OPEB Expenses		50,013					
Administrative Expenses		4,947,890		264,496	256,309	432,091	369,184
Miscellaneous Expenses							
Total Deductions		415,949,004	52,383	4,136,818	12,123,881	20,038,833	8,028,254
Net Increase (Decrease)		306,658,319	666,340	5,990,316	8,654,112	27,954,428	17,670,077
Net Position Restricted for Pension Benefits							
Beginning of Year		5,475,372,351	3,789,141	96,655,023	140,538,707	330,914,926	175,843,380
Prior Period Adjustments (Note A7)		527,928		5,349	6,049	11,006	9,071
End of Year	$	5,782,558,598	4,455,481	102,650,688	149,198,868	358,880,360	193,522,528

The notes to the financial statements are an integral part of this statement.

		Defined Benefit Pension Plans		Defined Contribution Plans			
MPORS	FURS	VFCA	Total Defined Benefit Pension Plans	PERS-DCRP	457 Plan	Total Defined Contribution Plans	Total Pension Trust Funds 2018
7,721,837	7,034,779		143,711,113	11,898,611	93,500	11,992,111	155,703,224
5,038,941	5,305,658		129,261,516	12,447,453	22,849,597	35,297,050	164,558,566
7,411	9,175		117,946				117,946
			2,068				2,068
36,113	18,386		593,320	108,127	600,256	708,383	1,301,703
15,840,158	16,127,433	2,212,113	35,454,182	54,216		54,216	35,508,398
			33,634,846				33,634,846
				746,144		746,144	746,144
28,644,460	28,495,431	2,212,113	342,774,991	25,254,551	23,543,353	48,797,904	391,572,895
35,498,226	36,618,262	3,336,734	656,903,900	12,784,049	13,522,019	26,306,068	683,209,968
143,192	150,103	13,058	2,694,693	6,880,707	16,734,528	23,615,235	26,309,928
(2,450,041)	(2,531,506)	(227,347)	(45,305,992)	(62,690)	(963,919)	(1,026,609)	(46,332,601)
33,191,377	34,236,859	3,122,445	614,292,601	19,602,066	29,292,628	48,894,694	663,187,295
77,086	79,643	7,156	1,424,973				1,424,973
(30,761)	(31,781)	(2,855)	(568,627)				(568,627)
46,325	47,862	4,301	856,346				856,346
33,237,702	34,284,721	3,126,746	615,148,947	19,602,066	29,292,628	48,894,694	664,043,641
61,882,162	62,780,152	5,338,859	957,923,938	44,856,617	52,835,981	97,692,598	1,055,616,536
24,566,646	23,863,193	2,944,046	486,609,409				486,609,409
2,675,247	173,278		18,534,209	9,746,223	29,302,439	39,048,662	57,582,871
52,810			873,860				873,860
			198,062				198,062
			2,068,870				2,068,870
		11,175	11,175				11,175
			50,013	5,101	2,506	7,607	57,620
350,328	329,234	293,142	7,242,674	749,186	562,688	1,311,874	8,554,548
				266,540	898,099	1,164,639	1,164,639
27,645,031	24,365,705	3,248,363	515,588,272	10,767,050	30,765,732	41,532,782	557,121,054
34,237,131	38,414,447	2,090,496	442,335,666	34,089,567	22,070,249	56,159,816	498,495,482
384,067,551	395,511,561	36,630,943	7,039,323,583	193,632,571	480,190,473	673,823,044	7,713,146,627
9,614	8,497	8,186	585,700	61,361	43,337	104,698	690,398
418,314,296	433,934,505	38,729,625	7,482,244,949	227,783,499	502,304,059	730,087,558	8,212,332,507

Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to the Financial Statements

for the Fiscal Year Ended June 30, 2018

The Public Employees' Retirement Board (PERB) is an independent, seven-member board, appointed by the Governor. The members are assigned five-year, staggered terms. The PERB consists of two members at large, two active defined benefit public employees, one active defined contribution public employee, one member experienced in investments, and one retired public employee. The PERB approves the annual operating budget, developed by the Montana Public Employee Retirement Administration (MPERA) management, before the beginning of the fiscal year. As governed by statute, the PERB's defined benefit administrative expenses may not exceed 1.5 percent of the total defined benefit plan retirement benefits paid. In addition, the PERB decides its legislative priorities, hires the executive director, establishes the policies and procedures that govern operations at MPERA, and hears and rules on appeal matters of disabilities, retirees, and members. Board members do not receive compensation for their service to MPERA, but are reimbursed for necessary expenses incurred while serving.

The PERB oversees ten retirement plans, an OPEB, and the related member education funds. The Public Employees' Retirement System Defined Contribution Disability Other Post-Employment Benefit (PERS-DCRP Disability OPEB) is a trust fund providing a defined benefit for disabled members of the PERS-DCRP. The retirement plans are eight defined benefit plans and two defined contribution plans. The defined benefit retirement plans are the Public Employees' Retirement System (PERS-DBRP), Judges' Retirement System (JRS), Highway Patrol Officers' Retirement System (HPORS), Sheriffs' Retirement System (SRS), Game Wardens' and Peace Officers' Retirement System (GWPORS), Municipal Police Officers' Retirement System (MPORS), Firefighters' Unified Retirement System (FURS), and the Volunteer Firefighters' Compensation Act (VFCA). The defined contribution retirement plans are the Public Employees' Retirement System (PERS-DCRP) and the Deferred Compensation (457) Plan, governed by IRC § 457.

As of fiscal year 2017, the VFCA, for tax reporting purposes, is considered a Length of Service Award Plan.

The PERS-DCRP was implemented July 1, 2002. All new PERS members have a 12-month window to file an irrevocable plan choice election. PERS members are provided education regarding their decision to participate in the Defined Benefit Retirement Plan (PERS-DBRP) or the Defined Contribution Retirement Plan (PERS-DCRP). If members are employees of the university system they have a third choice, the Montana University System Retirement Program (MUS-RP). Further education is provided for the members who choose the PERS-DCRP, including information on investment choices.

The PERB began oversight of the Deferred Compensation (457) Plan on July 1, 1999. The Deferred Compensation Plan is available to all employees of the State, the Montana University System and contracting political subdivisions.

The MPERA, as a state agency, participates as an employer in the PERS-DBRP, PERS-DCRP and the Deferred Compensation Plan.

The assets of each plan are maintained separately, including member education funds. The assets may be used only for the payment of benefits to the members and administrative expenses of the appropriate plan, in accordance with the terms of each plan as prescribed in Title 19 of the Montana Code Annotated (MCA). The financial statements are presented by combining the PERS-DBRP and the DBRP Education Fund and by combining the PERS-DCRP and the DCRP Education Fund. A presentation of the individual funds is shown at the end of the notes.

A. Summary of Significant Accounting Policies

1. Basis of Accounting

The PERB is a fiduciary component unit Pension Trust Fund of the State of Montana financial reporting entity. The MPERA, staff of the PERB, prepares the accounting records and financial statements for the fiduciary pension trust funds using fund accounting principles and the accrual basis of accounting. For the pension trust funds, 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 in which they are earned and become measurable. Benefit payments and refunds/distributions are recognized in the accounting period in which they are due and payable in accordance with benefit terms. Expenses are recognized in the period incurred. Administrative expenses are financed through investment earnings on the pension trust fund for the defined benefit plans. Interfund receivables and payables exist at year-end for defined benefit administrative expenses that are accounted for within PERS-DBRP and allocated to the other defined benefit plans at year-end. Costs specifically related to the computer system upgrades are charged directly to the individual plans.

On a quarterly basis, participants of the PERS-DCRP are charged a basis point fee based on their individual account balances. On a quarterly basis, the participants of the Deferred Compensation Plan are charged a basis point fee on a sliding scale based on their individual account balances. The record keeper, Empower™ Retirement, withholds the basis point fees from participant accounts. The PERB incurs administrative expenses for the cost of Empower™ services and agency expenses. Fees collected from participant accounts are used to offset the costs of Empower™'s fees. Any remaining fees are remitted to the PERB to cover each plan's plan administrative expenses. The excess basis point fees remitted to the PERB are recorded as *Miscellaneous Revenue* on the financial statements.

For financial reporting purposes, the PERB adheres to accounting principles generally accepted by the United States of America. The PERB applies all applicable pronouncements of the Governmental Accounting Standards Board (GASB).

GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans addresses accounting and reporting standards for state and local governmental OPEB plans that are administered through trusts or equivalent arrangements. In reviewing the PERS-DCRP Disability OPEB plan for implementation of GASB No. 74, it has been determined that the liability is immaterial to the plan, therefore, the PERB will not be implementing GASB Statement No. 74.

GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions addresses accounting and financial reporting for OPEB that is provided to the employees of state and local governmental employers. Implementation of this statement is for fiscal year 2018. In reviewing the PERS-DCRP Disability OPEB plan for implementation of GASB No. 75 for the PERS-DCRP participating employers, it has been determined that the liability is immaterial, therefore, no liability disclosures will be sent to the participating employers. This statement also addresses the State of Montana's Healthcare OPEB plan, which is a pay-as-you-go plan and not a trust fund. MPERA as an employer of the State of Montana, participates in the State of Montana's Healthcare OPEB plan, therefore, will be implementing GASB Statement No. 75.

2. Capital Assets and Equipment Used in Operations

Assets under $5,000 are expensed in the year purchased. Assets (equipment) 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 (other intangibles) valued at $100,000 or more are recorded at cost less straight-line depreciation over the estimated useful life of five to ten years. Equipment consists of a primary file server and a ScanPro 3000 fiche film reader. Property consists of a remodel to the office space.

The $4,772,594 *Intangible Assets at Cost* on the Statement of Fiduciary Net Position consists of the PERIS computer system. This is an intangible asset and the intangible asset is amortized over 10 years.

3. Operating Lease

Operating leases are rental agreements where the payments are chargeable as rent and recorded as administrative expenses. MPERA renegotiated a 7-year lease for office space in November 2013, at the location of 100 North Park Avenue, Helena, MT. The lease is payable monthly and includes inflationary adjustments over the period of the lease.

4. Net Pension Liabilty of Employers

The net pension liability (the retirement systems' total pension liability determined in accordance with GASB Statement No. 67 less the fiduciary net position at fair value) as of June 30, 2018, is shown in the Schedule of Employers' Net Pension Liability (NPL) on the next page.

Actuarial valuations of the ongoing systems involve estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. The information used includes, but is not limited to, the plan provisions, employee data, and financial information provided by the PERB. Amounts determined regarding the NPL are subject to revision with each valuation as actual results are compared with past expectations and new estimates are made about the future. The last experience study was performed in 2017 using June 30, 2016 valuation data.

The reporting date for the retirement systems is June 30, 2018. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2018 and the Total Pension Liability (TPL) is based on the results of an actuarial valuation date of June 30, 2017, and rolled forward to June 30, 2018 using generally accepted actuarial procedures.

The Schedule of Employers' Net Pension Liability, presented as Required Supplementary Information (RSI) following the notes to the statements, displays multi-year trend information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the TPL.

A summary of the actuarial assumptions for the retirement plan's GASB No. 67 reporting as of the latest actuarial valuation on June 30, 2018 is shown in the table at the end of this note and in the Notes to the RSI.

The long-term expected rate of return on pension plan investments is reviewed regularly as part of experience studies prepared for the System. Several factors are considered in evaluating the long-term rate of return assumption, including long-term historical data, estimates inherent in current market data, and an analysis in which best estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation). Estimates of variability and correlations for each asset class, were developed by the Plan's investment consultant. The ranges were combined to develop the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The capital market assumptions developed by the investment consultant are often intended for use over a 10-year investment horizon and are not always useful in setting the long-term rate of return investment horizon and are not always useful in setting the long-term rate of return for funding pension plans, which covers a longer time frame. The long-term rate of return assumption is intended to be a long-term assumption (30 to 50 years) and

Employers' Net Pension Liability / (Asset) as of June 30, 2018
(dollar amounts are in thousands)

System	Total Pension Liability (a)	Plan Fiduciary Net Position[1] (b)	Employers' Net Pension Liability / (Asset) (a-b)	Plan Fiduciary Net Position as a % of the Total Pension Liability (b/a)	Covered Payroll (c)	Net Pension Liability / (Asset) as a % of Covered Employee Payroll ((a-b)/c)
PERS-DBRP	$ 7,867,136	$ 5,779,994	$ 2,087,142	73.47%	$ 1,230,105	169.67%
JRS	60,192	102,651	(42,459)	170.54%	7,291	(582.35)%
HPORS	227,581	149,199	78,382	65.56%	15,251	513.93%
SRS	434,052	358,880	75,172	82.68%	77,587	96.89%
GWPORS	234,470	193,523	40,947	82.54%	50,823	80.57%
MPORS	589,572	418,314	171,258	70.95%	52,036	329.11%
FURS	549,106	433,935	115,171	79.03%	47,935	240.27%
VFCA	46,396	38,730	7,667	83.48%	N/A[2]	N/A[2]

[1]The PERS-DB Education Fund balance is not included in the GASB 67 reporting for fiscal year ending June 30, 2018.
[2]Covered payroll is not applicable to VFCA because members are unpaid volunteers.

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. The capital market assumptions provided by the investment consultant yielded a median real rate of return of 3.56%. The average long-term capital market assumptions published in the *Survey of Capital Market Assumptions 2016 Edition* by Horizon Actuarial Service, LLC, yield a median real return of 5.53%. Cavanaugh Macdonald's, PERB's actuary, recommended assumption of 4.9% for the real return reflects granting each source some degree of credibility. Combined with the 2.75% inflation assumption, the resulting nominal return is 7.65%.

Best estimates of arithmetic real rates of return for each major asset class included in the Plans target asset allocation as of June 30, 2018, are summarized in the following Target Allocations table.

Target Allocations as of June 30, 2018

Asset Class	Target Asset Allocation	Long-Term Expected Real Rate of Return Arithmetic Basis
Cash equivalents	2.6%	4.00%
Domestic equity	36.0%	4.55%
Foreign equity	18.0%	6.35%
Fixed income	23.4%	1.00%
Private equity	12.0%	7.75%
Real estate	8.0%	4.00%
Totals	100.0%	

The discount rate used to measure the TPL for all Plans was 7.65% which is the assumed long-term expected rate of return on investments. The projection of cash flows used to determine the discount rate assumed that member, employer, and state contributions will be made at the contribution rates specified in the applicable Montana statutes, which can only be changed by the Legislature. Based on those assumptions, the fiduciary net position of all the Plans was projected to be available to make all the projected future benefit payments of the current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL.

In accordance with GASB No. 67 regarding the disclosure of the sensitivity of the NPL to changes in the discount rate, the NPL of the participating employers is presented as using the discount rate of 7.65%, as well as what the employers' NPL would be if it were calculated using a discount rate that is 1.00% lower (6.65%) or 1.00% higher (8.65%) than the current rate. The table that follows presents the sensitivity disclosures for each plan.

Sensitivity of NPL / (Asset) based on Changes in Discount Rate as of June 30, 2018
(dollar amounts are in thousands)

System	1% Decrease 6.65%	Current Discount Rate 7.65%	1% Increase 8.65%
PERS-DBRP	$ 3,018,491	$ 2,087,142	$ 1,322,356
JRS	(36,544)	(42,459)	(47,564)
HPORS	110,323	78,382	52,575
SRS	136,803	75,172	24,701
GWPORS	76,708	40,947	11,797
MPORS	260,082	171,258	100,222
FURS	197,398	115,171	48,937
VFCA	12,207	7,667	3,821

As can be seen from the table, changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate.

The annual money-weighted rate of return on plan investments shows investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. A schedule of the annual money-weighted rate of return for all Plans is presented in the table to the right and in the RSI.

Annual Money-Weighted Rate of Return as of June 30, 2018			
PERS-DBRP	8.88%	GWPORS	8.82%
JRS	8.87%	MPORS	8.86%
HPORS	8.89%	FURS	8.85%
SRS	8.83%	VFCA	8.97%

Summary of Actuarial Assumptions

	PERS	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Valuation date	6/30/2018	6/30/2018	6/30/2018	6/30/2018	6/30/2018	6/30/2018	6/30/2018	6/30/2018
Actuarial Cost Method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age
Amortization method	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level dollar, open
Remaining amortization period for Actuarial Contribution	30	30	30	30	30	30	30	20
Asset valuation method	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market
Actuarial assumptions:								
Investment rate of return compounded annually (net of investment expenses)	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
Projected salary increases:								
General Wage Growth*	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	N/A
Merit	0% - 4.8%	None	0% - 6.3%	0% - 6.3%	0% - 6.3%	0% - 6.3%	0% - 6.3%	N/A
*Includes inflation at	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%
Administrative Expenses as a Percentage of Payroll	0.26%	0.18%	0.30%	0.21%	0.17%	0.24%	0.23%	$89,298
Mortality (healthy): RP-2000 Combined Mortality projected to 2020 using Scale BB and Mortality (disabled): RP-2000 Combined Mortality with no projections.								
Benefit Adjustments								
GABA	3% or 1.5% for new hires on or after July 1, 2007 and before June 30, 2013; and 1.5% to 0% for new hires on or after July 1,2013; all after 1 year	3% after 1 year	3% after 1 yr or 1.5% after 3 years if hired on or after July 1, 2013	3% or 1.5% for new hires on or after July 1, 2007, after 1 year	3% or 1.5% for new hires on or after July 1, 2007, after 1 year	3% after 1 year	3% after 1 year	N/A
Non-GABA	N/A	Biennial increase to salary of active member in like position	2% per yr service, not to exceed 60% of probationary officer's base pay; and increase not to exceed 5% of previous benefit.	N/A	N/A	Benefit may not be less than one-half of the compensation paid to a newly confirmed police officer	Benefit may not be less than one-half of the compensation paid to a newly confirmed police officer	N/A

Actuarial Assumptions are based on 2017 Experience Study

5. Other Post-Employment Benefits (OPEB for Healthcare)

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

The State of Montana offers an OPEB plan that is not administered through a trust that meets the criteria in paragraph 4 of Statement 75. Rather it is administered through an arrangement in which contributions to the OPEB plan and earnings on those contributions are irrevocable, the OPEB plan assets are dedicated to providing OPEB to plan members in accordance with the benefit terms, and the OPEB plan assets are legally protected from the creditors of the plan members.

There are no assets accumulated to offset the Total OPEB Liability. The State of Montana pays for postemployment healthcare benefits on a pay-as-you-go basis. Section 2-18-8, MCA gives the Department of Administration authority to establish and amend the funding policy for the State group health insurance plan.

Benefits provided: In accordance with Section 2-18-704, MCA, the State provides optional post-employment medical, vision, and dental health care benefits to the following employees and dependents electing to continue coverage and pay administratively established contributions: (1) employees and dependents who retire under applicable retirement provisions and (2) surviving dependents of deceased employees. Plan coverage is on a calendar year basis. For GASB Statement No. 75 reporting, the State Group Benefits Plan is considered an agent multiple-employer plan and MPERA is considered to be a participating employer in the plan.

In addition to the employee benefits, the following post-employment benefits are provided. The Montana Department of Administration established retiree medical premiums varying between \$439 and \$1,633 per month for calendar year 2018 depending on the medical plan selected, family coverage, and Medicare eligibility. Retirees pay 100% of the premiums for medical, dental, and vision. Depending on the coverage selected, administratively-established monthly dental and vision premiums vary between \$41.10 and \$70.00 and \$7.64 and \$22.26, respectively. Basic life insurance in the amount of \$14,000 is provided until age 65 or Medicare eligible at a cost of \$1.90 per month. The State Benefit Plans reimburse all validated medical claims net of member obligations (annual deductibles and coinsurance of the members' selected medical plan). Dental claims are reimbursed at 50% to 100% of the allowable charges, depending on the services provided. The State acts as secondary payer for retired Medicare-eligible claimants.

Benefits Not Included in the Actuarial Valuation: Dental and vision benefits are rated separately for retirees based on actual retiree cost, so there is no implicit subsidy; therefore, no liability for these benefits is calculated in the actuarial valuation. The basic life insurance benefit is not available as an employer-provided group insurance benefit for retirees; therefore, no liability for life insurance is calculated in this valuation.

Employees covered by benefit terms: At December 31, 2017, MPERA had 46 active employees and one retired employee/ spouse/surviving spouse covered by the benefit terms for a total of 47 covered employees.

The estimates were prepared based on an actuarial valuation as of the year ending December 31, 2017, rolled forward to March 31, 2018, for the Department of Administration. The resulting State of Montana Actuarial Valuation of Other Post-Employment Benefits (OPEB) contains the MPERA data and is available through the following address.

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

Schedule of Changes in Total OPEB Liability: At June 30, 2018, MPERA reported a liability of $84,795 for its 0.16805% proportionate share of the total OPEB Liability. At June 30, 2017, MPERA's proportionate share was 0.15259%. MPERA's proportion of the total OPEB liability measurement is based upon MPERA's actuarially determined OPEB liability in comparison to the collective OPEB liability for the State's healthcare plan. MPERA's change in proportion is 0.01546%.

The following table presents the Other Items Related to and Changes in the Total OPEB Liability.

Schedule of Changes in Total OPEB Liability	
Balances at 6/30/2017 (Restated)	$ 76,094
Changes for the year:	
Service Cost	27,891
Interest	29,728
Difference between Expected and Actual Experience	(69,725)
Changes of assumptions or other inputs	(4,363)
Benefit Payments (Contributions)	25,170
Net Changes	8,701
Balances as of 6/30/2018	$ 84,795

Actuarial assumptions and other inputs: The total OPEB liability in the December 31, 2017 actuarial valuation, rolled forward to March 31, 2018, was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

Contributions:	$ 25,170
Actuarial valuation date	December 31, 2017
Actuarial measurement date[1]	March 31, 2018
Actuarial cost method	Entry age normal funding method
Amortization method	Open basis
Remaining amortization period	20 years
Asset valuation method	Not applicable since no assets meet the definition of plan assets under GASB 75
Actuarial Assumptions:	
Discount rate	3.89%
Projected payroll increases	4.00%
Participation:	
Future retirees	55.00%
Future eligible spouses	66.00%
Marital status at retirement	70.00%

[1] Update procedures were used to roll forward the total OPEB liability to the measurement date.

Mortality - Healthy: For MPERA, Healthy mortality is assumed to follow the RP2000 Combined Mortality Table with improvements projected by Scale BB to 2020, set back one year for males.

Mortality - Disabled: For MPERA, disabled mortality is assumed to follow the RP2000 Combined Mortality Table with no projections.

Changes in actuarial assumptions and methods since last measurement date: Changes in actuarial methods: amortization period and actuarial cost method adjusted to conform to the new GASB Statement No. 75 requirements. Changes in actuarial assumptions: revised rates per the Retirement System pension valuations as of July 1, 2017; interest rate based upon the March 31, 2018, 20-year municipal bond index per GASB 75 requirements; changes in revised rates based on actual data; and projected trend and updated projected healthcare trend rates to follow the Getzen model.

Changes in benefit terms since last measurement date: Medical moved from Cigna to Allegiance plans as of January 1, 2016, the State implemented reference-based pricing hospital contracts effect July 1, 2016 and pharmacy moved from URx to Navitus as of January 1, 2017. The State implemented an Employer Group Waiver Program for Medicare retirees effective January 1, 2017.

Sensitivity Analysis: Sensitivity of the total OPEB liability to changes in the discount rate. The following presents the total OPEB liability of MPERA, as well as MPERA's total OPEB liability calculated using a discount rate that is 1.00% lower (2.89%) or 1.00% higher (4.89%) than the current discount rate:

Discount Rate 3/31/18	1% Decrease (2.89%)	Discount Rate (3.89%)	1% Increase (4.89%)
Total OPEB Liability	$ 116,439.00	$ 84,795.00	$ 61,468.00

Sensitivity of the total OPEB liability to changes in the healthcare cost trend rates. The following presents the total OPEB liability of MPERA, as well as MPERA's total OPEB liability calculated using healthcare cost trend rates that are 1.00% lower (6.5%) or 1.00% higher (8.5%) than the current healthcare cost trend rates:

Healthcare Rate 3/31/18	1% Decrease (6.5%)	Current Rate (7.5%)	1% Increase (8.5%)
Total OPEB Liability	$ 60,945.00	$ 84,795.00	$ 118,484.00

OPEB Expense: For the year ended June 30, 2018, MPERA recognized OPEB expense of $57,619.

Deferred Outflows and Deferred Inflows of Resources Related to OPEB -- At June 30, 2018, MPERA recorded deferred outflows and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflow of Resources
Differences between expected and actual experience		$ 69,725.46
Changes of assumptions or other inputs		4,362.95
*Benefit Payments associated with transactions subsequent to the measurement date of the total OPEB liability	$ 3,108.45	
Total	$ 3,108.45	$ 74,088.41

*Amounts reported as deferred outflows of resources related to OPEB resulting from MPERA's benefit payments in FY2018 (April 1, 2018 through June 30, 2018) subsequent to the measurement date.

Amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in future years as an increase or (decrease) to OPEB expense as follows:

Year ended June 30, 2018	Amount recognized as an Increase or (Decrease) to OPEB Expense
2019	$ (378.90)
2020	$ (378.90)
2021	$ (378.90)
2022	$ (378.90)
2023	$ (378.90)
Thereafter	$ (1,709.68)

6. Method Used to Value Investments

According to Article VIII, section 13 of the Montana Constitution and section 19-2-504, MCA, the Board of Investments (BOI) has a fiduciary responsibility for investing the defined benefit plan assets on behalf of the defined benefit plan members. Investments are determined in accordance with the statutorily and constitutionally mandated "prudent expert principle." Pursuant to Article VIII, section 15 of the Montana Constitution and sections 19-2-502 and 19-2-503, MCA, the PERB has a fiduciary responsibility for the administration of the pension trust funds. For the defined benefit pools, the PERB relies on the Investment Policy Statements that are drafted and approved by the BOI. In this process, the BOI utilizes information obtained from RV Kuhns & Associates, Inc., the investment consultant. Investments administered by the BOI for the PERB are subject to their investment risk policies. The PERB does not have an investment policy of its own to address risks. Information on investment policies, investment activity, investment management fees, investment risks, and a listing of specific investments owned by the pooled asset accounts can be obtained by contacting BOI, the investment manager, at the following address:

Montana Department of Commerce
Board of Investments
2401 Colonial Drive, 3rd Floor
Helena, MT 59620-0126

Defined benefit investments are reported at fair value as of June 30, 2018.

BOI has separately issued financial statements that can be accessed by contacting BOI at the above address.

The PERS-DCRP and deferred compensation plan's Montana Fixed Fund is a stable value investment option, administered through outside vendors; Pacific Investment Management Company, LLC (PIMCO), custodial bank State Street Bank and Trust Company (State Street), and third party synthetic Guaranteed Interest Contract (GIC) providers, Transamerica Life Insurance Company (Transamerica), Prudential Insurance Company of America (Prudential), and Voya Retirement Insurance & Annuity Company (Voya). All money invested in the Montana Fixed Fund investment option of the PERS-DCRP and deferred compensation plan money is in a Pooled Trust.

For both the PERS-DCRP and deferred compensation plan, the third party recordkeeper, Empower™ Retirement, tracks and reports the daily trading and valuations of all investment options including the assets held by the individual mutual fund companies.

In addition to the laws cited previously, the PERS-DCRP investments are also governed by section 19-3-2122, MCA and the deferred compensation plan investments are governed by section 19-50-102, MCA.

The PERB has separate investment policy statements for the PERS-DCRP and deferred compensation plans. The investment policies are reviewed and revised, if necessary, by the PERB annually. The investment options are reviewed quarterly for compliance with the established investment policy statement. DCRP and deferred compensation plan investments are reported at fair value as of June 30, 2018.

The following are the summaries of: a) BOI's fiscal year-end statements; b) the Stable Value Group Trust contracts; and c) a statement about the variable investments.

BOI Pooled Investments: Cash and cash equivalents consist of funds deposited in the State Treasurer's pooled cash account and cash invested in the Short-Term Investment Pool (STIP). Pooled investments other than STIP are reported at fair value on a trade date basis. STIP is recorded on a Net Asset Value (NAV) or "fair value" basis. The value of each participating dollar equals the fair value divided by the amortized cost. The fair value of publicly traded stocks and bonds is determined by reference to market prices supplied by State Street Bank (BOI's custodial bank). Because a public market does not exist for private equity and real estate investments, the fair value of these investments is the value reported in the most recent external managers' valuation reports.

As of June 30, 2018, BOI managed two major diversified pools for the retirement funds, Montana Short Term Investment Pool (STIP) and Montana Consolidated Asset Pension Pool (CAPP). The PERS-DCRP Disability OPEB trust fund consists of a portfolio of commingled equity index funds that are recorded under *Commingled Equity Securities* in the financial statements.

Consolidated Asset Pension Pool (CAPP)
The Consolidated Asset Pension Pool (CAPP) invests directly in the underlying Pension Asset Classes (PAC) on behalf of the Montana Public Retirement Plans within the BOI-approved asset allocation ranges. Each PAC has an underlying set of investment objectives and investment guidelines. For liquidity purposes, each PAC and external manager has a limited amount of cash/cash equivalents. With the PAC, it is invested in the State Street Short Term Investment Fund (STIF), which invests in high quality short-term securities. For external managers, it is invested per BOI established guidelines.

CAPP'S Underlying Asset Classes

Domestic Equity	Broad Fixed Income
International Equity	U.S. Treasury / Agency
Private Equity	Investment Grade
Natural Resources	Mortgage Backed Securities
Real Estate	High Yield
TIPS	Cash
Diversifying Strategies	

Domestic Equity PAC – Invests primarily in U.S. traded equity securities such as common stock. The type of portfolio structures utilized are separately managed accounts, commingled accounts, and exchange traded funds.

International Equity PAC – Invests primarily in international equity securities that trade on foreign exchanges in developed and emerging markets. The type of portfolio structures utilized are separately managed accounts, commingled accounts, and exchange traded funds.

Private Equity PAC – Invests in the entire capital structure of private companies. Investments are made via Limited Partnerships managed by a General Partner. The Limited Partnerships typically have well-defined strategies such as buyout, venture, or distressed debt. Private Equity investments are less liquid than other Asset

Classes because the funds require a long holding period. Exchange traded funds are utilized to minimize the cash position.

Real Estate PAC – Invests primarily in real estate properties. Transactions are privately negotiated by a General Partner via a Limited Partnership or an open-end fund. The funds typically have well- defined strategies such as core, value-add, or opportunistic. Private Real Estate investments are less liquid than other Asset Classes because the funds require a long holding period. Exchange traded funds are utilized to minimize the cash position.

Natural Resource PAC – Invests primarily in energy and timber investments, but could include agriculture, water or commodity related funds. The investments are made via Limited Partnerships managed by a General Partner, and the funds are less liquid than other Asset Classes because they require a long holding period. Potential Investment vehicles could include open-end funds, master limited partnerships and exchange traded funds.

Intermediate Treasury Inflation Protected Securities (TIPS) PAC – Invests primarily in intermediate U.S. TIPS or Treasury securities that are indexed to inflation.

Intermediate U.S. Treasury/Agency PAC – Invests primarily in debt obligations of the U.S. government including its agencies and instrumentalities.

Broad Fixed Income PAC – Invests primarily in core fixed income securities as represented in the Bloomberg Barclays U.S. Aggregate Bond Index. The type of portfolio structures utilized are separately managed accounts, commingled accounts, and potentially exchange traded funds.

Intermediate Investment Grade PAC – Invests primarily in intermediate investment grade corporate bonds typically found in the Bloomberg Barclays U.S. Corporate Bond Index. It includes U.S. dollar denominated securities publicly issued by U.S. and non-U.S. industrial, utility, and financial issuers.

Mortgage Backed Securities PAC – Invests primarily in agency mortgage backed securities, asset backed securities and commercial mortgage backed securities.

High Yield PAC – Invests primarily in U.S. dollar denominated corporate bonds that are classified as high yield according to the major ratings agencies such as S&P, Moody's or Fitch. The type of portfolio structures utilized are separately managed accounts and potentially commingled accounts or exchange traded funds.

Cash PAC – Invests primarily in highly liquid, money-market type securities via STIP.

Diversifying Strategies PAC – Invests in a wide spectrum of global public securities investment types (including, but not limited to, equities, commodities, currencies, preferred stocks, convertible bonds, fixed income, and cash equivalents).

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 by BOI utilizing an active investment strategy. STIP invests primarily in short-term, high quality, fixed income securities with a maximum maturity of 397 days or less. Variable securities shall have a maximum maturity of 2 years. STIP shall maintain a dollar-weighted average portfolio maturity of 60 days or less. This

Pool is managed to preserve principal while providing 24-hour liquidity for state agency and local government participants.

PERB Cash Equivalent and Investment Portfolio June 30, 2018		
Investment Pools	Fair Value	Net Asset Value (NAV)
Short-term Investment Pool	$ 148,050,296	$ 148,050,296
CAPP Investment Pool	7,276,579,615	7,276,579,615
Commingled Equity Securities[1]	4,110,614	4,110,614
Total	$ 7,428,740,525	$ 7,428,740,525

[1] DC Disability OPEB is invested by the manager Blackrock in commingled equity index funds measured at NAV

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical method are not classified in the fair value hierarchy. This is the case of the Pension Investment Pool and the Short-Term Investment Pool (STIP).

The Pension Investment Pool, CAPP, is a commingled internal investment pool managed and administered under the direction of Montana BOI as statutorily authorized by the Unified Investment Program. Only the retirement systems can participate in CAPP. 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 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.

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 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.

The PERS-DCRP Disability OPEB trust fund invests in commingled equity index funds through the manager Blackrock Institutional Trust Co., N.A (Blackrock), recorded under *Commingled Equity Securities* in the financial statements. This type of fund consists of institutional investment funds that invest in domestic equities and funds that invest in international equities. The fair values of the investments of this type have been determined using the NAV per share (or its equivalent) of the investments.

At June 30, 2018, the PERB's portion of the defined benefit investment pools is presented in the table below.

PERB Portions of BOI Pools at June 30, 2018		
Investment	Fair Value June 30, 2018	PERB Portion June 30, 2018
STIP	$ 148,050,296	2.56%
CAPP	$ 7,276,579,615	64.34%

Securities Lending Collateral, governed under the provisions of state statutes, BOI authorized the custodial bank, State Street Bank, to lend BOI's 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. BOI and the custodial bank split the earnings, 80%/20% respectively, on security lending activities. At June 30, 2018, 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.

Fair Value Measurements

The BOI categorizes their fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

Level 1: Unadjusted quoted prices for identical instruments in active markets.

Level 2: Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3: Valuations derived from valuation techniques in which significant inputs are unobservable.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The BOI's assessment of the significance of particular inputs to their fair value measurements requires judgment and considers factors specific to each asset or liability.

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

The CAPP, as a mixed pool, is not subject to certain risks, only foreign currency risk. STIP, as an external investment pool, is subject to credit risk and interest rate risk.

<u>Credit Risk</u> - 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.

<u>Foreign Currency Risk</u> - Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. Per the CAPP Investment Policy Statement (IPS), the Investment Grade Credit Asset Class, Agency Mortgage Backed Securities Asset Class and High Yield Asset Class sections have maximum restrictions that can be held on non-U.S. securities in a foreign currency. As of June 30, 2018, there was no receivable or payable balances pertaining to foreign currency forward contracts.

<u>Interest Rate Risk</u> - 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 all fixed income portfolios. 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 PERB's investments subject to credit and interest rate risk at June 30, 2018 are categorized in the following table.

Investment	Fair Value 6/30/2018	Credit Quality Rating 6/30/2018	Effective Duration 6/30/2018
STIP	$ 148,050,296	NR	46 days WAM*
*Weighted Average Maturity (WAM).			

Although the STIP investments have been rated by investment security type, STIP, as an external investment pool, has not been rated. As of June 30, 2018, STIP's portfolio may hold certain fixed and variable rate securities. Interest payments on these securities are based on an underlying reference rate, example is LIBOR.

Stable Value -- Montana Fixed Fund (Fixed Investment) The Montana Fixed Fund is a stable value investment option of the PERS-DCRP and the deferred compensation plan. It is administered through outside vendors, Pacific Investment Management Company LLC (PIMCO); custodial bank, State Street Bank and Trust Company (State Street); and third-party synthetic Guaranteed Interest Contract (GIC) providers - Transamerica Life Insurance Company (Transamerica), Prudential Insurance Company of America (Prudential) and Voya Retirement Insurance & Annuity Company (Voya). When participants invest in the Montana Fixed Fund option they are guaranteed a fixed rate of return, which may be adjusted in accordance with the terms of the respective contracts with the GIC providers. The Montana Fixed Fund employs a synthetic stable value strategy in which the investment and stable value manager, PIMCO, manages a diversified bond portfolio and third party insurers, Transamerica, Prudential, and Voya guarantee the participants' principal investments and earnings in accordance with terms of the respective contract with the GIC provider. Transamerica, Prudential, and Voya calculate a rate of return each quarter called the "crediting rate", which helps smooth participants' earnings over time. The Montana Fixed Fund's structure incorporates a money market-like liquidity strategy and calculates member investments and earnings based on a Net Asset Value (NAV).

The PERS-DCRP and deferred compensation plans' stable value investments are synthetic guaranteed investment contracts (GIC) that are fully benefit responsive, measured at contract value, and do not participate in fair value changes.

The third-party insurers set a fixed quarterly rate of return based on the investment manager's portfolio market value performance, yield, and duration in accordance with the terms of the respective contracts with the GIC providers.

All money invested in the Montana Fixed Fund of the PERS-DCRP and deferred compensation plan are held in a Pooled Trust. The Pooled Trust qualifies as a group trust under sections 401(a), including section 401(a)(24) and 501(a), of the Internal Revenue Code (IRC) of 1986, as amended. The Pooled Trust assets are invested by PIMCO and are held under a custodial agreement with State Street. The Pooled Trust assets are invested by PIMCO based on an investment guideline schedule as agreed upon in the Pooled Trust Contract and approved by the PERB, PIMCO, and any GIC. PIMCO is responsible for setting the investment risk policies for the Pooled Trust. *Credit Risk* is risk that the issuer of a fixed income security may default in making timely principal and interest payments. With the exception of the U.S. Government securities, the Montana Fixed Fund fixed income instruments have credit risk as measured by major credit rating services. Obligations of the U.S. Government or obligations explicitly guaranteed by the U.S. Government are not considered to have credit risk and do not require disclosure of credit quality. The total investments credit quality rating for Montana Fixed Fund is AA. For *Interest Rate Risk* as of June 30, 2018, in accordance with GASB Statement No. 40, PIMCO has selected the effective duration method to disclose interest rate risk. The total effective duration for Montana Fixed Funds fixed income investments, as of June 30, 2018, is 3.82 years. *Foreign Currency Risk* is the risk that changes in exchange rates will adversely affect the fair value of an investment. The Montana Fixed Fund may include securities subject to foreign currency risk.

Variable Investments for the PERS- DCRP and deferred compensation plan are held and managed in a selection of retail and institutional mutual funds, which cover all standard asset classes and categories. The selection of offered mutual funds is designed to provide participants with the ability to diversify investments and meet their individual investment goals and strategies. With advice from an independent investment analyst and assistance from the statutorily-created Employee Investment Advisory Council (EIAC), the PERB conducts annual reviews of the offered mutual funds. The goal of the reviews is to ensure that the offered mutual funds meet standards established in the Investment Policy Statements adopted by the PERB. Each investment alternative is compared to its peers and an appropriate benchmark. *Concentration of Credit Risk* is not addressed in the investment policy statements and investments in mutual funds are not required to be disclosed.

Life Insurance Investment Option Deferred compensation plan participants previously had the option to direct a portion of their deferrals to a term life insurance policy provided through Allianz Life Insurance. The ability to invest in life insurance is allowed under the IRC and was offered to plan participants prior to life insurance being offered as a standard component of health insurance benefit packages. This investment option has been discontinued; however, plan participants who had previously elected this option may continue.

Available investment options in the PERS-DCRP and deferred compensation plan are listed later in this publication. A current listing may also be obtained by contacting MPERA.

The valuation method for investments measured at the net asset value (NAV) per share (or its equivalent) is presented in the following table for the defined benefit investments and on the subsequent page for the defined contribution investments.

PERB Defined Benefit Investments Measured at Fair Value

		Fair Value Measurements Using		
	June 30, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable (Level 3)
Investments by fair value level				
Total Investments by fair value level[1]				
Investments measured at the net asset value (NAV)				
CAPP Investment Pool[2]	$ 7,276,579,615			
Short Term Investment Pool (STIP)	148,050,296			
Commingled Equity Securities[3]	4,110,614			
Total investments measured at the NAV	7,428,740,525			
Total investments measured at fair value	$ 7,428,740,525			

[1] All PERB investments are measured at net asset value (NAV) and not within the fair value level hierarchy.
[2] CAPP Investment Pool replaces five investment pools that have been previously reported prior to fiscal year 2017.
[3] The DC Disability OPEB trust fund is invested by the manager Blackrock in commingled equity index funds measured at NAV.

PERB Defined Benefit Investments Measured at Net Asset Value (NAV)

	June 30, 2018			
	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
CAPP Investment Pool[1]	$ 7,276,579,615		Monthly	30 days
Short Term Investment Pool (STIP)	148,050,296		Daily	1 day
Commingled Equity Securities[2]	4,110,614		Daily	1 day
Total investments measured at the NAV	$ 7,428,740,525			

[1] CAPP Investment Pool replaces five investment pools that have been previously reported prior to fiscal year 2017.
[2] The DC Disability OPEB trust fund is invested by the manager Blackrock in commingled equity index funds measured at NAV.

PERB Defined Contribution and Deferred Compensation Investments

	June 30, 2018	Fair Value Measurements Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable (Level 3)
Investments by fair value level				
Total Investments by fair value level[1]				
Investments measured at the net asset value (NAV)				
Montana Fixed Fund (Stable Value Pool)[2]	$ 241,326,556			
Variable Pooled Investments[3]	485,902,899			
Short Term Investment Pool[4]	1,194,139			
Allianz Life Insurance Investment[5]	12,316			
Total investments measured at the NAV	$ 728,435,910			
Total investments measured at fair value	$ 728,435,910			

[1] All investments are pooled and measured at net asset value (NAV) and not within the fair value level hierarchy.

[2] The Montana Fixed Fund is a stable value option that invests in cash, other liquid investments, and synthetic Guaranteed Investment Contract (GICs) that are fully benefit-responsive and is reported at contract value.

[3] The Variable Pooled Investments are all mutual funds measured at Net Asset Value (NAV).

[4] Short Term Investment Pool (STIP) is an external investment pool managed and administered through Montana Board of Investments (BOI) and fair values are determined using the Net Asset Value (NAV) per share for the investment.

[5] Term life insurance policy investment option provided through Allianz Life Insurance. This option was offered to deferred compensation plan participants prior to life insurance being offered as a standard component of health insurance benefit packages. This investment option has been discontinued; however plan participants who had previously elected this option may continue.

PERB Defined Contribution and Deferred Compensation Investments Measured at Net Asset Value

	June 30, 2018: Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Montana Fixed Fund (Stable Value Pool)[1]	$ 241,326,556		Daily	None
Variable Pooled Investments[2]	485,902,899		Daily	None
Short Term Investment Pool[3]	1,194,139		Daily	1 day
Allianz Life Insurance Investment[4]	12,316		Daily	None
Total investments measured at the NAV	$ 728,435,910			

[1] The Montana Fixed Fund is a stable value option that invests in cash, other liquid investments, and synthetic Guaranteed Investment Contract (GICs) that are fully benefit-responsive and are reported at contract value.

[2] The Variable Pooled Investments are all mutual funds measured at Net Asset Value (NAV).

[3] Short Term Investment Pool (STIP) is an external investment pool managed and administered through Montana Board of Investments (BOI).

[4] Term life insurance policy investment option provided through Allianz Life Insurance. This option was offered to deferred compensation plan participants prior to life insurance being offered as a standard component of health insurance benefit packages. This investment option has been discontinued; however plan participants who had previously elected this option may continue.

The fair values are determined using the Net Asset Value (NAV) per share for the investment.

7. Prior Period Adjustments

Prior period adjustments relate to corrections of errors and changes in accounting policy from prior periods. The Plans had a prior period adjustment recorded for the fiscal year ended June 30, 2018. The adjustment was recorded for the initial recognition of a Total OPEB Liability that was recorded in accordance with GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. Statement 75 required recording and reporting of several OPEB amounts including: Total OPEB Liability, OPEB Expense, and Deferred Inflows and Outflows of resources related to OPEB plans. The prior period adjustment reflects the recording of the portion of the State of Montana's Total OPEB Liability that was allocated to the Plans. Due to the GASB 75 implementation the State of Montana's Total OPEB Liability was significantly reduced from the previous OPEB liability measurement. This reduction in the Total OPEB Liability created an increase to the PERB's Net Position in the amount of $690,398.

8. Significant Accounting Changes

Significant accounting policies are specific accounting principles and methods used and considered to be the most appropriate to use in current circumstances in order to fairly present the financial statements. As of June 30, 2018, the PERB has changed the recording of realized gains in investments in the basic financial statements from *Interest* to *Net Appreciation (Depreciation) in Fair Value of Investments.* The change in recording the realized gains of $17,458,505 has caused a significant accounting change in both of these line items on the basic financial Statement of Changes in Fiduciary Net Position.

B. Litigation

Each of the plans administered by the PERB may be involved in various claims and legal actions arising in the ordinary course of business. In the opinion of management and legal counsel, the disposition of those matters should not have a material, adverse effect on any plan's financial position as a whole. Management and legal counsel also believe the possibility that the plaintiff in Tadman will prevail is remote as the predominant claim in the Complaint was based on reporting mandated in a Private Letter Ruling PERB obtained from the Internal Revenue Service. However, plaintiff continues to try to expand the complaint to include additional issues and individuals so the ultimate outcome is not predictable at this time.

Tadman, et al. v. State of Montana. A retired member of the Sheriffs' Retirement System filed a class action against the State of Montana on October 6, 2015, alleging the inappropriate payment of state and federal income tax on certain line-of-duty disability benefits. Plaintiff is represented by Lawrence A. Anderson, an attorney in Great Falls, Montana. The State was served with the Complaint on November 25, 2015, and is represented by Eric Biehl and Hanna Warhank from Church, Harris, Johnson & Williams PC, in Great Falls, Montana and MPERA legal counsel. The State responded and filed an amended answer to the complaint before filing a motion and brief to change venue and/or to dismiss the matter for lack of subject matter jurisdiction. Following a hearing on June 1, 2017, the State's motions were denied. Discovery requests and responses have been served by both parties. Plaintiff's motion for class certification was filed October 31, 2017. As of August 2018, the motion for class certification remains undecided. A third set of discovery requests to the State prompted plaintiff to request a continuation of the scheduled hearing and to request additional briefing on the class certification issues. An order is expected in late fall 2018.

C. Plan Membership, Descriptions And Contribution Information

The plans are established and amended statutorily by the Legislature. In all defined benefit plans (except VFCA), if a member leaves covered employment before retirement, the member contributions plus accrued interest (accumulated contributions) may be refunded to the member. If a member returns to service and repays the withdrawn accumulated contributions plus the interest the accumulated contributions would have earned had they remained on deposit, service credit is restored. Membership in each plan as of June 30, 2018 is detailed in the following chart.

Plan Membership as of Fiscal Year End June 30, 2018

Type of Plan for Reporting Purposes as of Fiscal Year End June 30, 2018	Single-Employer Defined Benefit		Multi-Employer Defined Benefit						Multi-Employer Defined Contribution	
Plan Designation	**JRS**	**HPORS[1]**	**PERS-DBRP[2]**	**SRS**	**GWPORS**	**MPORS[1]**	**FURS**	**VFCA**	**PERS-DCRP**	**457**
Classification of Member										
Active	55	233	28,646	1,429	1,010	787	691	2,029	2,690	4,904
Inactive: entitled to, but not yet receiving benefits or a refund:										
Vested	3	14	3,793	129	123	78	41	815	559	4,484
Non-Vested	1	23	17,973	539	382	153	66		724	
Inactive members and beneficiaries currently receiving benefits:										
Service Retirements	64	319	21,901	629	298	748	623	1,469	97	
Disability Retirements	1	7	158	27	3	32	9	1	8	
Survivor benefits	5	12	497	25	11	32	20	4	2	
Total Membership	129	608	72,968	2,778	1,827	1,830	1,450	4,318	4,080	9,388

[1] Includes DROP in the Active count.
[2] The PERS-DBRP Inactive Non-Vested count includes dormant accounts that were previously not counted.

Public Employees' Retirement System-DBRP (PERS-DBRP)

Plan Description: The PERS-Defined Benefit Retirement Plan (DBRP) is a multiple-employer, cost-sharing plan established July 1, 1945, and governed by Title 19, chapters 2 & 3, Montana Code Annotated (MCA). This plan covers 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 benefit and defined contribution 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).

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. A brief summary of eligibility and benefits follows.

PERS-DBRP Summary of benefits

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.

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.

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 5 years of membership service

PERS-DBRP Summary of benefits (continued)

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.

Second retirement (requires returning to PERS-covered employment):

Retire **before** January 1, 2016 and accumulate **less than 2 years** additional service credit **or** retire **on or after** January 1, 2016 and accumulate **less than 5 years** additional service credit:

- A refund of member's contributions plus regular interest;
- No service credit for second employment;
- Start the same benefit amount the month following termination; and
- GABA starts again in the January immediately following the second retirement.

Retire **before** January 1, 2016 and accumulate **at least 2 years** of additional service credit:

- A recalculated retirement benefit based on provisions in effect after the initial retirement; and
- GABA starts on the recalculated benefit in the January after receiving the new benefit for 12 months.

Retire **on or after** January 1, 2016 and accumulate **5 or more years** of service credit:

- The same retirement as prior to the return to service;
- A second retirement benefit for years following return to service based on laws in effect upon the rehire date; and
- GABA starts on both benefits in the January after receiving the original and the new benefit for 12 months.

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.

- 3.0% for members hired prior to July 1, 2007;
- 1.5% for members hired between July 1, 2007 and June 30, 2013;
- Members hired on or after July 1, 2013:
  - (a) 1.5% for each year if 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.

PERS-DBRP PARTICIPATING EMPLOYERS		
Employers	June 30, 2018	June 30, 2017
State Agencies	34	34
Counties	55	55
Cities and Towns	98	98
Colleges and Universities	5	5
School Districts	235	231
High Schools	5	5
Other Agencies	112	111
Total	544	539

PERS-DBRP Active Membership by Employer Type		
Employer Type	June 30, 2018	June 30, 2017
State Agencies	10,059	10,933
Counties	5,514	5,482
Cities	3,550	3,437
Universities	2,647	2,742
High Schools	74	79
School Districts	5,630	5,581
Other Agencies	1,172	1,141
Total	28,646	29,395

Contributions: Member and employer contribution rates are established by state law and may be amended only by the Legislature.

Contribution Rates as a % of Covered Payroll	
Fiscal year ended June 30, 2018	
Member	7.90%
State & University Employer	8.57%
Local Government Employer	8.47%
School District Employer	8.20%
State for Local Governments	0.10%
State for School Districts	0.37%

Member contributions are deducted from each member's salary and remitted by participating employers. An individual account is established for each member's contributions and interest allocations until a request for retirement or refund is processed.

The 7.9% member contributions 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. There will be no reduction to the member contributions on January 1, 2019 due to the amortization period being 38 years at June 30, 2018.

The employee education program is funded by 0.04% of the employer's contributions.

Employer contributions temporarily increased 1.0%, effective July 1, 2013. Further, employer contributions increase an additional 0.1% a year over 10 years beginning July 1, 2014, through 2024. The employer additional contributions, including the 0.27% added in 2007 and 2009, terminate 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 member contribution rates. Based on the June 30, 2018 actuarial valuation, the additional contributions will not be terminated on January 1, 2019. (Reference Schedule of Contribution Rates before the RSI).

Employer contributions are required to be paid on working retiree compensation. Member contributions are not required for working retirees.

PERS-DBRP receives a supplemental state appropriation from the general fund of the State of Montana. The total amount received for fiscal year 2018 was $33.6 million. These are recorded as *State Appropriations* on the financial statements.

During the 2017 Legislative Session House Bill (HB) 648 was passed. Effective July 1, 2017, revenue from coal severance taxes and interest income from the coal severance tax permanent fund previously statutorily appropriated to the PERS defined benefit trust fund was replaced with the State statutory appropriation.

Plan Membership Elections: MPERA has included in the financial statements $2,068,870 in *Transfers to DCRP* and $198,062 in *Transfers to MUS-RP*. These transfers reflect the DCRP and MUS-RP contributions of participants that filed elections at or near the June 30 cutoff date. The contributions were transferred in early fiscal year 2019.

Additional Service Purchase Due to a Reduction in Force: Section 19-2-706, MCA allows state and university system employees who are eligible for a service retirement and whose positions have been eliminated due to a reduction in force, to have their employer pay a portion of the total cost of purchasing up to three years of “1-for-5” additional service. The employer has up to ten years to complete payment for the service purchases and is charged the actuarially required rate of return as established by the PERB on the unpaid balance. The employees participating under section 19-2-706, MCA increased from 245 in fiscal year 2017 to 254 in fiscal year 2018. The contributions received (including interest) during fiscal year 2018 totaled $261,836. These are recorded in the *Accounts Receivable* on the financial statements. The outstanding balance at June 30, 2018, totaled $15,952. This is recorded as *Notes Receivable* on the financial statements.

Public Employees' Retirement System-DBRP Education Fund: Education is provided to all members of the PERS regardless of plan choice as governed by section 19-3-112, MCA. The education must be presented with impartial and balanced information about plan choices, investments and retirement planning. The education program consists of ongoing transfer education for new members and investment/retirement planning education for all active members.

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2017 Actuarial Valuation Report for PERS-DBRP.

The discount rate as of June 30, 2018 is 7.65% which is the assumed long-term expected rate of return on PERS-DBRP investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2018, the sensitivity of the NPL to the changes in discount rate are as follows.

As of June 30, 2018	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	$ 8,798,484,550	$ 7,867,135,877	$ 7,102,350,197
Fiduciary Net Position	5,779,994,008	5,779,994,008	5,779,994,008
Net Pension Liability	$ 3,018,490,542	$ 2,087,141,869	$ 1,322,356,189
Fiduciary Net Position as a % of the TPL	65.69%	73.47%	81.38%

During the measurement year there were no changes in benefits.

At June 30, 2018, the PERS-DBRP total pension liability (TPL) was $7.9 billion. The Plan's fiduciary net position was $5.8 billion leaving a net pension liability of $2.1 billion. The Plan fiduciary net position as a percentage of the total pension liability was 73.47% at June 30, 2018.

Actuarial Status: The statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2018, the statutory contribution rates are not sufficient to amortize the unfunded actuarial liability within 30 years. As of June 30, 2018, the PERS-DBRP amortizes in 38 years. The funded ratio is 73.81%.

Public Employees' Retirement System-DCRP Disability OPEB (DCRP Disability OPEB)

Plan Description: The DCRP Disability OPEB is considered a cost-sharing multiple-employer plan that provides an other post-employment defined benefit for the PERS-DCRP members.

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

The DCRP Disability OPEB Trust Fund was established on July 1, 2002, and is governed by section 19-3-2141, MCA. Benefits of this long-term disability plan are established by state law and can only be amended by the Legislature. This benefit is based on eligibility, years of service, and compensation. Member rights are vested after five years of service. A brief summary of eligibility and benefits follows.

PERS-DCRP Disability OPEB Summary of benefits

Member's highest average compensation (HAC)

- Hired prior to July 1, 2011 - HAC during the highest 36 consecutive months.
- Hired on or after July 1, 2011 - HAC during the highest 60 consecutive months.

Eligibility for benefit

- Any age with 5 years of membership service.

Vesting 5 years of membership service

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.
- Benefit is payable to age 65 for disabilities occurring prior to age 60, or up to five years for disabilities occurring after age 60.

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;

PERS-DCRP Disability OPEB Summary of benefits (continued)

Members hired on or after July 1, 2011 (continued):

- 30 years or more of membership service: 2% of HAC per year of service credit.
- Benefit is payable to age 70 for disabilities occurring prior to age 65, or up to five years for disabilities occurring after age 65.

Members cannot receive distributions from their individual defined contribution account while receiving payments from the DCRP Disability OPEB Trust Fund. Participants may choose to receive a distribution from their individual account instead of applying for or receiving a disability benefit.

PERS-DCRP PARTICIPATING EMPLOYERS

Employers	June 30, 2018	June 30, 2017
State Agencies	32	32
Counties	53	53
Cities and Towns	58	55
Universities	5	5
School Districts	117	107
High Schools	4	4
Other Agencies	47	44
Total	316	300

PERS-DCRP Active Membership by Employer Type

Employer Type	June 30, 2018	June 30, 2017
State Agencies	1,296	1,254
Counties	416	383
Cities	320	289
Universities	143	138
High Schools	5	5
School Districts	301	274
Other Agencies	209	198
Total	2,690	2,541

Contributions: Under section 19-3-2117, MCA the employers are the only contributors to the DCRP Disability OPEB. The employer contribution rate is 0.30% of a DCRP member's compensation, which is allocated to the long-term disability plan trust fund to provide disability benefits to eligible DCRP members. (Reference Schedule of Contribution Rates before the RSI).

As of June 30, 2018, there are eight members receiving a benefit from the disability plan, five more than as of June 30, 2017.

Actuarial Status: The statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2018, the most recent actuarial valuation, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability. The DCRP Disability OPEB assets gained 7.24% on an annualized market value basis during the year ended June 30, 2018. This return was above the assumed rate of return of 3.50%, resulting in an investment gain of about $492,589. The actuarial value of assets is set equal to the market value of assets. The DCRP Disability OPEB unfunded actuarial liability was a gain of $0.10 million and the funded ratio was 102.32%. Compared to the June 30, 2017 actuarial valuation, the Plan's unfunded liability was $0.51 million, and the funded ratio was 87.14%.

GASB Statement No. 74 Reporting will not be implemented at this time due to the liability being immaterial to the plan as a whole.

Judges' Retirement System (JRS)

Plan Description: The JRS is a single-employer defined benefit plan established in 1967, and governed by Title 19, chapters 2 & 5 of the MCA. This system provides benefits for all Montana judges of the district courts, justices of the Supreme Court, the Chief Water Judge and the Associate Water Judge. Benefits are established by state law and can only be amended by the Legislature. The JRS provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are based on eligibility, years of service, and compensation. Member rights are vested after five years of service. A brief summary of eligibility and benefits follows.

JRS Summary of benefits

Member's current salary or highest average compensation (HAC)

- Hired prior to July 1, 1997 and non-GABA - monthly compensation at time of retirement.
- Hired on or after July 1, 1997 or electing GABA - HAC during any consecutive 36 months.
- Hired on or after July 1, 2013 - 110% annual cap on compensation considered as part of a members' highest average compensation.

Eligibility for benefit

- Age 60, 5 years of membership service;
- Any age with 5 years of membership service - involuntary termination, actuarially reduced.

Vesting 5 years of membership service

Monthly benefit formula

3-1/3% of current salary (non-GABA) or HAC (GABA) per year of service credit for the first 15 years of service credit, plus 1.785% per year for each year after 15 years.

Guaranteed Annual benefit Adjustment (GABA)

Hired on or after July 1, 1997, or those electing GABA - after the member has completed 12 full months of retirement, the member's benefit increases by a maximum of 3.0% each January, inclusive of all other adjustments to the member's benefit.

Minimum benefit adjustment (non-GABA)

If hired prior to July 1, 1997 and member did not elect GABA - current salary of an active member in same position is used in the calculation of the monthly benefit each time the Legislature increases salaries for active judges.

Contributions: Member and employer contribution rates are established by state law and may be amended only by the Legislature.

Contribution Rates as a % of Covered Payroll	
Fiscal year ended June 30, 2018	
Member	7.00%
Employer	25.81%

Member contributions are deducted from each member's salary and remitted by the participating employer. An individual account is established for each member's contributions and interest allocations until a retirement or refund request is processed.

As a result of the November 2017 Special Legislative Session, Senate Bill 1 was passed temporarily suspending employer contributions beginning the first full pay period of January 2018. This temporary suspension terminates immediately after the last full pay period of June 2019 with employer contributions returning to 25.81% at this time. (Reference Schedule of Contribution Rates before the RSI).

JRS PARTICIPATING EMPLOYERS

Employer	June 30, 2018	June 30, 2017
State Agency - Supreme Court	1	1
Total	1	1

JRS Active Membership by Employee Type

Employee Type	June 30, 2018	June 30, 2017
GABA	52	52
Non-GABA	3	4
Total	55	56

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2017 Actuarial Valuation Report for JRS.

The discount rate as of June 30, 2018 is 7.65% which is the assumed long-term expected rate of return on JRS investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2018, the sensitivity of NPA to changes in the discount rate are as follows.

As of June 30, 2018	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	$ 66,107,090	$ 60,192,186	$ 55,086,754
Fiduciary Net Position	102,650,688	102,650,688	102,650,688
Net Pension Asset	$ (36,543,598)	$ (42,458,502)	$ (47,563,934)
Fiduciary Net Position as a % of the TPL	155.28%	170.54%	186.34%

During the measurement year there were no changes in benefits.

At June 30, 2018, the JRS total pension liability (TPL) was $60.2 million. The Plan's fiduciary net position was $102.7 million leaving a net pension asset of $42.5 million. The Plan fiduciary net position as a percentage of the total pension liability was 170.54% at June 30, 2018.

Actuarial Status: The statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2018, the JRS amortizes in 0 years, meaning it is fully funded. The funded ratio is 161.29%.

Highway Patrol Officers' Retirement System (HPORS)

Plan Description: The HPORS is a single-employer, defined benefit plan established July 1, 1945, and governed by Title 19, chapters 2 & 6 of the MCA. This system provides retirement benefits to all members of the Montana Highway Patrol, including supervisory personnel. Benefits are established by state law and can only be amended by the Legislature. The HPORS provides retirement, disability, and death benefits to plan members and their statutory beneficiaries. Benefits are based on eligibility, years of service, and highest average compensation. Member rights for death and disability are vested immediately. All other rights are vested after five or ten years of service. A brief summary of eligibility and benefits follows.

HPORS Summary of benefits

Member's highest average compensation (HAC)

- Highest average compensation during any consecutive 36 months.
- Hired on or after July 1, 2013 - 110% annual cap on compensation considered as part of a member's highest average compensation.

Eligibility for benefit

- 20 years of membership service, regardless of age.

Early Retirement

- Hired prior to July 1, 2013 - 5 years of membership service, actuarially reduced from age 60.
- Hired on or after July 1, 2013 - 10 years of membership service, actuarially reduced from age 60.

Vesting

- Hired prior to July 1, 2013 - 5 years of membership service
- Hired on or after July 1, 2013 - 10 years of membership service

Monthly benefit formula

- Retire prior to July 1, 2013 - 2.5% of HAC per year of service credit.
- Retire on or after July 1, 2013 - 2.6% of HAC per year of service credit.

Second Retirement

Applies to retirement system members who return on or after July 1, 2017 to active service covered by the system from which they retired.

- If the member works more than 480 hours in a calendar year and accumulates less than 5 years of service credit before terminating again, the member:
  - is not awarded service credit for the period of reemployment;
  - is refunded the accumulated contributions associated with the period of reemployment;
  - starting the first month following termination of service, receives the same retirement benefit previously paid to the member; and
  - does not accrue post-retirement benefit adjustments during the term of reemployment but receives a Guaranteed Annual Benefit Adjustment (GABA) in January immediately following second retirement.

HPORS Summary of benefits (continued)

- If the member works more than 480 hours in a calendar year and accumulates at least 5 years of service credit before terminating again, the member:
  - is awarded service credit for the period of reemployment;
  - starting the first month following termination of service, receives:
    - the same retirement benefit previously paid to the member; and
    - a second retirement benefit for the period of reemployment calculated based on the laws in effect as of the member's rehire date; and
  - does not accrue post-retirement benefit adjustments during the term of reemployment but receives a GABA:
    - on the initial retirement benefit in January immediately following second retirement, and
    - on the second retirement benefit starting in January after receiving that benefit for at least 12 months.
- A member who returns to covered service is not eligible for a disability benefit.

Guaranteed Annual Benefit Adjustment (GABA)

- Hired on or after July 1, 1997, or those electing GABA - after the member has completed 12 full months of retirement, the member's benefit increases by a maximum of 3.0% each January, inclusive of all other adjustments to the member's benefit.

- Hired on or after July 1, 2013 - after the member has completed 36 full months of retirement, the member's benefit increases by a maximum of 1.5% each January, inclusive of all other adjustments to the member's benefit.

Minimum monthly benefit (non-GABA)

If hired prior to July 1, 1997 and member did not elect GABA - monthly benefits are increased each July when they fall below a statutorily guaranteed minimum. Any annual increase is limited to 5.0% over the current benefit and the benefit may not exceed 60% of the current base salary of a probationary officer.

HPORS PARTICIPATING EMPLOYERS

Employer	June 30, 2018	June 30, 2017
State Agency - Department of Justice	1	1
Total	1	1

HPORS Active Membership by Employee Type

Employee Type	June 30, 2018	June 30, 2017
GABA	233	238
Non-GABA	0	0
Total	233	238

Contributions: Member and employer contribution rates are established by state law and may be amended only by the Legislature.

Contribution Rates as a % of Covered Payroll

Fiscal year ended June 30, 2018	
Member:	
Hired prior to 7/1/1997 and not electing GABA	13.00%
Hired after 6/30/1997 or electing GABA	13.05%
Employer	28.15%
State (General Fund)	10.18%

Member contributions are deducted from each member's salary and remitted by the participating employer. An individual account is established for each member's contributions and interest allocations until a retirement or refund request is processed. (Reference Schedule of Contribution Rates before the RSI).

Additional Service Purchase Due to a Reduction in Force: Section 19-2-706, MCA allows state and university system employees who are eligible for a service retirement and whose positions have been eliminated to have their employer pay a portion of the total cost of purchasing up to three years of "1-for-5" additional service. The employer has up to ten years to complete payment for the service purchases and is charged the actuarially required rate of return as established by the PERB on the unpaid balance. No employees have taken advantage of this provision to date.

Supplemental Benefit for Retirees: Section 19-6-709, MCA provides eligible Montana highway patrol officers retired prior to July 1, 1991, or their survivors, an annual supplemental lump-sum payment distributed each September. This lump-sum payment is funded by a statutory appropriation requested by the PERB from the general fund. Factors impacting eligibility include the number of years the recipient has received a service retirement benefit or disability benefit, the recipient's age, and whether the recipient is employed in a position covered by a retirement system under Title 19.

Deferred Retirement Option Program (DROP): Eligible members of HPORS can participate in the DROP by filing a one-time irrevocable election with the PERB. The DROP is governed by Title 19, chapter 6, part 10. A member must have completed at least twenty years of membership service to be eligible. The member may elect to participate in the DROP for a minimum of one month and a maximum of 60 months and may participate in the DROP only once. A participant remains a member of the HPORS, but will not receive membership service or service credit in the system for the duration of the member's DROP period. During participation in the DROP, all mandatory contributions continue to the retirement system, except the member contribution which goes to the member's DROP account. A monthly benefit is calculated based on salary and years of service to date as of the beginning of the DROP period. The monthly benefit is paid into the member's DROP account until the end of the DROP period. At the end of the DROP period, the participant may receive the balance of the DROP account in a lump-sum payment or in a direct rollover to another eligible plan, as allowed by the IRS. If the participant continues employment after the DROP period ends, they will again accrue membership service and service credit. The DROP account cannot be distributed until the employment is formally terminated. As of June 30, 2018, there were 13 DROP participants. The balance of the DROP accounts is $1,173,217.

HPORS DROP Participation

		June 30, 2018
Participants Beginning of Year		10
Participants Added		5
Completed DROP		2
Participants End of Year		13
DROP Distributions	$	231,957

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2017 Actuarial Valuation Report for HPORS.

The discount rate as of June 30, 2018 is 7.65%, which is the assumed long-term expected rate of return on HPORS investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2018, the sensitivity of the NPL to the changes in the discount rate are as follows.

As of June 30, 2018	1% Decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	$ 259,521,549	$ 227,580,553	$ 201,774,314
Fiduciary Net Position	149,198,868	149,198,868	149,198,868
Net Pension Liability	$ 110,322,681	$ 78,381,685	$ 52,575,446
Fiduciary Net Position as a % of the TPL	57.49%	65.56%	73.94%

During the measurement year there were no changes to benefits.

At June 30, 2018, the HPORS total pension liability (TPL) was $227.6 million. The Plan's fiduciary net position was $149.2 million leaving a net pension liability of $78.4 million. The Plan fiduciary net position as a percentage of the total pension liability was 65.56% at June 30, 2018.

Actuarial Status: The statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2018, the statutory contribution rates are not sufficient to amortize the unfunded actuarial liability. As of June 30, 2018, the HPORS amortizes in 40 years. The funded ratio is 64.03%.

Sheriffs' Retirement System (SRS)

Plan Description: The SRS is a multiple-employer, cost-sharing defined benefit plan established July 1, 1974, and governed by Title 19, chapters 2 & 7, MCA. This plan provides retirement benefits to all Department of Justice criminal and gambling investigators hired after July 1, 1993, all detention officers hired after July 1, 2005, and to all Montana sheriffs. Benefits are established by state law and can only be amended by the Legislature. The SRS provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are based on eligibility, years of service, and highest average compensation. Member rights are vested after five years of service. A brief summary of eligibility and benefits follows.

SRS Summary of benefits

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 a part of a member's highest average compensation.

Eligibility for benefit

- 20 years of membership service, regardless of age.

SRS Summary of benefits (continued)

Early Retirement

- Age 50, 5 years of membership service, actuarially reduced.

Vesting 5 years of membership service

Monthly benefit formula

- 2.5% of HAC per year of service credit.

Second Retirement

Applies to retirement system members who return on or after July 1, 2017 to active service covered by the system from which they retired.

- If the member works more than 480 hours in a calendar year and accumulates less than 5 years of service credit before terminating again, the member:
  - is not awarded service credit for the period of reemployment;
  - is refunded the accumulated contributions associated with the period of reemployment;
  - starting the first month following termination of service, receives the same retirement benefit previously paid to the member; and
  - does not accrue post-retirement benefit adjustments during the term of reemployment but receives a Guaranteed Annual Benefit Adjustment (GABA) in January immediately following second retirement.
- If the member works more than 480 hours in a calendar year and accumulates at least 5 years of service credit before terminating again, the member:
  - is awarded service credit for the period of reemployment;
  - starting the first month following termination of service, receives:
    * the same retirement benefit previously paid to the member; and
    * a second retirement benefit for the period of reemployment calculated based on the laws in effect as of the members' rehire date; and
  - does not accrue post-retirement benefit adjustments during the term of reemployment but receives a GABA:
    * on the initial retirement benefit in January immediately following second retirement, and
    * on the second retirement benefit starting in January after receiving that benefit for at least 12 months.
- A member who returns to covered service is not eligible for a disability benefit.

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.

- 3.0% for members hired prior to July 1, 2007;
- 1.5% for members hired on or after July 1, 2007

SRS PARTICIPATING EMPLOYERS		
Employers	June 30, 2018	June 30, 2017
State Agencies - Department of Justice	1	1
Counties	56	56
Total	57	57

SRS Active Membership by Employer Type		
Employer Type	June 30, 2018	June 30, 2017
Dept of Justice	55	55
Counties	1,374	1,360
Total	1,429	1,415

Contributions: Member and employer contribution rates are established by state law and may be amended only by the Legislature.

Contribution Rates as a % of Covered Payroll	
Fiscal year ended June 30, 2018	
Member	10.495%
Employer	13.115%

Member contributions are deducted from each member's salary and remitted by participating employers. An individual account is established for each member's contributions and interest allocations until a retirement or refund request is processed. (Reference Schedule of Contribution Rates before the RSI).

Employer contributions are required to be paid on working retiree compensation. Member contributions are not required for working retirees.

During the 2017 Legislative Session, House Bill 383 was passed temporarily increasing both the employee and employer contributions. Effective July 1, 2017, the employee contributions increased 1.25%, from 9.245% to 10.495%. Effective July 1, 2017, the employer had an additional contribution increase of 3%, from 0.58% to 3.58%, for a total employer contribution rate of 13.115%. The employee contributions will return to 9.245% and the employer contributions will return to 9.535% when reducing the employee contribution and terminating the additional employer contributions will not cause the amortization period to exceed 25 years.

Additional Service Purchase Due to a Reduction in Force: Section 19-2-706, MCA allows state employees who are eligible for a service retirement and whose positions have been eliminated to have their employer pay a portion of the total cost of purchasing up to three years of "1-for-5" additional service. The employer has up to ten years to complete payment for the service purchase and is charged the actuarial rate of return as established by the PERB on the unpaid balance. Three employees have taken advantage of this provision to date. All purchases are paid in full.

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2017 Actuarial Valuation Report for SRS.

The discount rate as of June 30, 2018 is 7.65%, which is the assumed long-term expected rate of return on SRS investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2018, the sensitivity of the NPL to the changes in the discount rate is as follows.

As of June 30, 2018	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	$ 495,682,939	$ 434,052,092	$ 383,581,646
Fiduciary Net Position	358,880,360	358,880,360	358,880,360
Net Pension Liability	$ 136,802,579	$ 75,171,732	$ 24,701,286
Fiduciary Net Position as a % of the TPL	72.40%	82.68%	93.56%

During the measurement year there were no changes in benefits.

At June 30, 2018, the SRS total pension liability (TPL) was $434.1 million. The Plan's fiduciary net position was $358.9 million leaving a net pension liability of $75.2 million. The Plan fiduciary net position as a percentage of the total pension liability was 82.68% at June 30, 2018.

Actuarial Status: The statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2018, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability. As of June 30, 2018, the SRS amortizes in 21 years. The funded ratio is 81.04%.

Game Wardens' and Peace Officers' Retirement System (GWPORS)

Plan Description: The GWPORS is a multiple-employer, cost-sharing defined benefit plan established in 1963 and governed by Title 19, chapters 2 & 8, MCA. This system provides retirement benefits to all persons employed as a game warden, warden supervisory personnel, or state peace officer. Benefits are established by state law and can only be amended by the Legislature. The GWPORS provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are based on eligibility, years of service, and highest average compensation. Member rights are vested after five years of service. A brief summary of eligibility and benefits follows.

GWPORS Summary of benefits

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 a part of a member's highest average compensation.

Eligibility for benefit

- Age 50, 20 years of membership service.

Early Retirement (reduced benefit)

- Age 55, vested members who terminate employment prior to 20 years of membership service.

Vesting 5 years of membership service.

Monthly benefit formula

- 2.5% of HAC per year of service credit.

GWPORS Summary of benefits (continued)

Second Retirement

Applies to retirement system members who return on or after July 1, 2017 to active service covered by the system from which they retired.

- If the member works more than 480 hours in a calendar year and accumulates less than 5 years of service credit before terminating again, the member:
  - is not awarded service credit for the period of reemployment;
  - is refunded the accumulated contributions associated with the period of reemployment;
  - starting the first month following termination of service, receives the same retirement benefit previously paid to the member; and
  - does not accrue post-retirement benefit adjustments during the term of reemployment but receives a Guaranteed Annual Benefit Adjustment (GABA) in January immediately following second retirement.
- If the member works more than 480 hours in a calendar year and accumulates at least 5 years of service credit before terminating again, the member:
  - is awarded service credit for the period of reemployment;
  - starting the first month following termination of service, receives:
    - the same retirement benefit previously paid to the member; and
    - a second retirement benefit for the period of reemployment calculated based on the laws in effect as of the members' rehire date; and
  - does not accrue post-retirement benefit adjustments during the term of reemployment but receives a GABA:
    - on the initial retirement benefit in January immediately following second retirement, and
    - on the second retirement benefit starting in January after receiving that benefit for at least 12 months.
- A member who returns to covered service is not eligible for a disability benefit.

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.

- 3.0% for members hired prior to July 1, 2007;
- 1.5% for members hired on or after July 1, 2007

Contributions: Member and employer contribution rates are established by state law and may be amended only by the Legislature.

Contribution Rates as a % of Covered Payroll	
Fiscal year ended June 30, 2018	
Member	10.56%
Employer	9.00%

Member contributions are deducted from each member's salary and remitted by participating employers. An individual account is established for each member's contributions and interest allocations until a retirement or refund request is processed. (Reference Schedule of Contribution Rates before the RSI).

GWPORS PARTICIPATING EMPLOYERS		
Employers	June 30, 2018	June 30, 2017
State Agencies	4	4
Colleges and Universities	3	3
Total	7	7

GWPORS Active Membership by Employer Type		
Employer	June 30, 2018	June 30, 2017
Dept of Corrections	725	739
Dept FW&P	113	105
Dept of Livestock	41	42
Dept of Transportation	85	81
Universities	46	45
Total	1,010	1,012

Additional Service Purchase Due to a Reduction in Force: Section 19-2-706, MCA allows state and university system employees who are eligible for a service retirement and whose positions have been eliminated to have their employer pay a portion of the total cost of purchasing up to three years of "1-for-5" additional service. The employer has up to ten years to complete payment for the service purchases and is charged the actuarially required rate of return as established by the PERB on the unpaid balance. No employees have taken advantage of this provision to date.

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2017 Actuarial Valuation Report for GWPORS.

The discount rate as of June 30, 2018 is 7.65%, which is the assumed long-term expected rate of return on GWPORS investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2018, the sensitivity of the NPL to the change in the discount rate is as follows.

As of June 30, 2018	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	$ 270,230,544	$ 234,469,658	$ 205,320,023
Fiduciary Net Position	193,522,528	193,522,528	193,522,528
Net Pension Liability	$ 76,708,016	$ 40,947,130	$ 11,797,495
Fiduciary Net Position as a % of the TPL	71.61%	82.54%	94.25%

During the measurement year there were no changes in benefits.

At June 30, 2018, the GWPORS total pension liability was $234.5 million. The Plan's fiduciary net position was $193.5 million leaving a net pension liability of $40.9 million. The Plan fiduciary net position as a percentage of the total pension liability was 82.54% at June 30, 2018.

Actuarial Status: The statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2018, the statutory contribution rates are not sufficient to amortize the unfunded actuarial liability. The GWPORS amortizes in 72 years. The funded ratio is 82.95%.

Municipal Police Officers' Retirement System (MPORS)

Plan Description: The MPORS is a multiple-employer, cost-sharing defined benefit plan established in 1974 and is governed by Title 19, chapters 2 & 9 of the MCA. This plan covers all municipal police officers employed by first- and second-class cities and other cities that adopt the plan. Benefits are established by state law and can only be amended by the Legislature. The MPORS provides retirement, disability, and death benefits to plan members and their statutory beneficiaries. Benefits are based on eligibility, years of service, and compensation. Member rights for death and disability are vested immediately. All other rights are vested after five years of service. A brief summary of eligibility and benefits follows.

<u>MPORS Summary of benefits</u>

Member's final average compensation (FAC)

- Hired prior to July 1, 1977 - average monthly compensation of final year of service;
- Hired on or after July 1, 1977 - final average compensation (FAC) for last consecutive 36 months.
- Hired on or after July 1, 2013 - 110% annual cap on compensation considered as a part of a member's final average compensation.

Eligibility for benefit

- 20 years of membership service, regardless of age.

Second Retirement

- Age 50, re-employed in a MPORS position

Early Retirement

- Age 50, 5 years of membership service.

Vesting 5 years of membership service

Monthly benefit formula

- 2.5% of FAC per year of service credit.

Second retirement benefit formula

<u>Re-calculated using specific criteria for members who return to covered employment prior to July1, 2017:</u>

- Less than 20 years of membership service, upon re-employment, repay benefits and subsequent retirement is based on total MPORS service.
- More than 20 years of membership service, upon re-employment, receives initial benefit and a new retirement benefit based on additional service credit and FAC after re-employment.

MPORS Summary of benefits continued:

Second Retirement

Applies to retirement system members who return on or after July 1, 2017 to active service covered by the system from which they retired.

- If the member works more than 480 hours in a calendar year and accumulates less than 5 years of service credit before terminating again, the member:
  - is not awarded service credit for the period of reemployment;
  - is refunded the accumulated contributions associated with the period of reemployment;
  - starting the first month following termination of service, receives the same retirement benefit previously paid to the member; and
  - does not accrue post-retirement benefit adjustments during the term of reemployment but receives a Guaranteed Annual Benefit Adjustment (GABA) in January immediately following second retirement.
- If the member works more than 480 hours in a calendar year and accumulates at least 5 years of service credit before terminating again, the member:
  - is awarded service credit for the period of reemployment;
  - starting the first month following termination of service, receives:
    * the same retirement benefit previously paid to the member; and
    * a second retirement benefit for the period of reemployment calculated based on the laws in effect as of the members' rehire date; and
  - does not accrue post-retirement benefit adjustments during the term of reemployment but receives a GABA:
    * on the initial retirement benefit in January immediately following second retirement, and
    * on the second retirement benefit starting in January after receiving that benefit for at least 12 months.
- A member who returns to covered service is not eligible for a disability benefit.

Guaranteed Annual Benefit Adjustment (GABA)

Hired on or after July 1, 1997, or those electing GABA - after the member has completed 12 full months of retirement, the member's benefit increases by a maximum of 3.0% each January, inclusive of all other adjustments to the member's benefit.

Minimum benefit adjustment (non-GABA)

If hired before July 1, 1997 and member did not elect GABA - the monthly retirement, disability or survivor's benefit should not be less than ½ the compensation of a newly confirmed officer in the city where the member was last employed.

MPORS Active Membership by Employee Type

Employee Type	June 30, 2018	June 30, 2017
GABA	783	770
Non-GABA	4	5
Total	787	775

MPORS PARTICIPATING EMPLOYERS

Employers	June 30, 2018	June 30, 2017
Cities	33	33
Total	33	33

Contributions: Member and employer contribution rates are established by state law and may be amended only by the Legislature.

Member contribution rates are dependent upon date of hire as a police officer. Contributions are deducted from each member's salary and remitted by participating employers. An individual account is established for each member's contributions and interest allocations until a retirement or refund request is processed.

The State contributions are requested at the beginning of the fiscal year based on the previous fiscal year compensation and are due no later than November 1. (Reference Schedule of Contribution Rates before the RSI).

Contribution Rates as a Percent of Salary	
Fiscal year ended June 30, 2018	
Member:	
Hired after 6/30/1975 and prior to 7/1/1979 and not electing GABA	7.00%
Hired after 6/30/1979 and prior to 7/1/1997 and not electing GABA	8.50%
Hired after 6/30/1997 or members electing GABA	9.00%
Employer	14.41%
State (General Fund)	29.37%

Deferred Retirement Option Plan (DROP): Eligible members of MPORS can participate in the DROP by filing a one-time irrevocable election with the PERB. The DROP is governed by Title 19, chapter 9, part 12, MCA. A member must have completed at least twenty years of membership service to be eligible. They may elect to participate in the DROP for a minimum of one month up to a maximum of 60 months and may participate in the DROP only once. A participant remains a member of the MPORS, but will not receive membership service or service credit in the system for the duration of the member's DROP period. During participation in the DROP, all mandatory contributions continue to the retirement system. A monthly benefit is calculated based on salary and years of service as of the beginning of the DROP period. The monthly benefit is paid into the member's DROP account until the end of the DROP period. At the end of the DROP period, the participant may receive the balance of the DROP account in a lump-sum payment or in a direct rollover to another eligible plan, as allowed by the IRS. If the participant continues employment after the DROP period ends, they will again accrue membership service and service credit. The DROP account cannot be distributed until employment is formally terminated. As of June 30, 2018, there were 62 DROP participants. Since program inception, a total of 160 members have participated in the DROP. The balance of the DROP accounts is $9.8 million.

MPORS DROP Participation

	June 30, 2018	June 30, 2017
Participants Beginning of Year	61	61
Participants Added	12	6
Completed DROP	11	6
Participants End of Year	62	61
DROP Distributions	$ 2,061,444	$ 928,523

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2017 Actuarial Valuation Report for MPORS.

The discount rate as of June 30, 2018 is 7.65%, which is the assumed long-term expected rate of return on MPORS investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2018, the sensitivity of the NPL to the change in the discount rate is as follows.

As of June 30, 2018	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	$ 678,395,940	$ 589,571,910	$ 518,536,361
Fiduciary Net Position	418,314,296	418,314,296	418,314,296
Net Pension Liability	$ 260,081,644	$ 171,257,614	$ 100,222,065
Fiduciary Net Position as a % of the TPL	61.66%	70.95%	80.67%

During the measurement year there were no changes in benefit.

At June 30, 2018, the MPORS total pension liability was $589.6 million. The Plan's fiduciary net position was $418.3 million leaving a net pension liability of $171.3 million. The Plan fiduciary net position as a percentage of the total pension liability was 70.95% at June 30, 2018.

Actuarial Status: The statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2018, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability. As of June 30, 2018, the MPORS amortizes in 20 years. The funded ratio is 67.69%.

Firefighters' Unified Retirement System (FURS)

Plan Description: The FURS is a multiple-employer, cost-sharing defined benefit plan established in 1981, and governed by Title 19, chapters 2 & 13, MCA. This system provides retirement benefits to firefighters employed by first- and second-class cities or by other cities and rural fire district departments that adopt the plan; and to firefighters hired by the Montana Air National Guard (MANG) on or after October 1, 2001. Benefits are established by state law and can only be amended by the Legislature. The FURS provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are based on eligibility, years of service, and compensation. Member rights for death and disability are vested immediately. All other member rights are vested after five years of service. A brief summary of eligibility and benefits follows.

<u>FURS Summary of benefits</u>

Member's compensation

- Hired prior to July 1, 1981 and not electing GABA - highest monthly compensation (HMC);
- Hired on or after July 1, 1981 and those electing GABA - highest average compensation (HAC) during any consecutive 36 months.
- Hired on or after July 1, 2013 - 110% annual cap on compensation considered as a part of a member's highest average compensation.

Eligibility for benefit

- 20 years of membership service, regardless of age.

Early Retirement

- Age 50, 5 years of membership service.

Vesting 5 years of membership service

FURS Summary of benefits (continued)

Monthly benefit formula

1) Members hired prior to July 1, 1981 and not electing GABA are entitled to the greater of:
   2.5% of HMC per year of service; OR
   i) if less than 20 years of service -
      2% of HMC for each year of service;
   ii) if more than 20 years of service -
      50% of the member's HMC plus 2% of the member's HMC for each year of service over 20 years

2) Members hired on or after July 1, 1981 and those electing GABA receive 2.5% of HAC per year of service.

Second Retirement

Applies to retirement system members who return on or after July 1, 2017 to active service covered by the system from which they retired.

- If the member works more than 480 hours in a calendar year and accumulates less than 5 years of service credit before terminating again, the member:
  - ◦ is not awarded service credit for the period of reemployment;
  - ◦ is refunded the accumulated contributions associated with the period of reemployment;
  - ◦ starting the first month following termination of service, receives the same retirement benefit previously paid to the member; and
  - ◦ does not accrue post-retirement benefit adjustments during the term of reemployment but receives a Guaranteed Annual Benefit Adjustment (GABA) in January immediately following second retirement.
- If the member works more than 480 hours in a calendar year and accumulates at least 5 years of service credit before terminating again, the member:
  - ◦ is awarded service credit for the period of reemployment;
  - ◦ starting the first month following termination of service, receives:
    - * the same retirement benefit previously paid to the member; and
    - * a second retirement benefit for the period of reemployment calculated based on the laws in effect as of the members' rehire date; and
  - ◦ does not accrue post-retirement benefit adjustments during the term of reemployment but receives a GABA:
    - * on the initial retirement benefit in January immediately following second retirement, and
    - * on the second retirement benefit starting in January after receiving that benefit for at least 12 months.
- A member who returns to covered service is not eligible for a disability benefit.

Guaranteed Annual Benefit Adjustment (GABA)

Hired on or after July 1, 1997, or those electing GABA - after the member has completed 12 full months of retirement, the member's benefit increases by a maximum of 3.0% each January, inclusive of all other adjustments to the member's benefit.

FURS Summary of benefits (continued)

Minimum benefit adjustment (non-GABA)

If hired before July 1, 1997 and member did not elect GABA, the monthly retirement, disability or survivor's benefit should not be less than ½ the compensation of a newly confirmed firefighter employed by the city that last employed the member (provided the member has at least ten years of membership service).

Contributions: Member and employer contribution rates are established by state law and may be amended only by the Legislature. Contributions are deducted from each member's salary and remitted by participating employers. An individual account is established for each member's contributions and interest allocations until a retirement or refund request is processed.

State contributions are requested at the beginning of each fiscal year based on previous fiscal year salary and are due no later than November 1. (Reference Schedule of Contribution Rates before the RSI).

Contribution Rates as a % of Covered Payroll	
Fiscal year ended June 30, 2018	
Member:	
Hired prior to 7/1/97 and not electing GABA	9.50%
Hired after 6/30/1997 or electing GABA	10.70%
Employer	14.36%
State (General Fund)	32.61%

Effective July 1, 2013, employer and state contributions are required to be paid on working retiree compensation. Member contributions are not required for working retirees.

FURS PARTICIPATING EMPLOYERS		
Employers	June 30, 2018	June 30, 2017
State Agencies - Department of Military Affairs	1	1
Cities	15	15
Rural Fire Districts	11	11
Total	27	27

FURS Active Membership by Employee Type		
Employee Type	June 30, 2018	June 30, 2017
GABA	688	675
Non-GABA	3	3
Total	691	678

Additional Service Purchase Due to a Reduction in Force: Section 19-2-706, MCA allows state and university system employees who are eligible for a service retirement and whose positions have been eliminated to have their employer pay a portion of the total cost of purchasing up to three years of "1-for-5" additional service. The employer has up to ten years to complete payment for the service purchase and is charged the actuarially required rate of return as established by the PERB on the unpaid balance. No employees have taken advantage of this provision to date.

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2017 Actuarial Valuation Report for FURS.

The discount rate as of June 30, 2018 is 7.65%, which is the assumed long-term expected rate of return on FURS investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2018, the sensitivity of the NPL to the changes in the discount rate are as follows.

As of June 30, 2018	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	$ 631,332,152	$ 549,105,969	$ 482,871,236
Fiduciary Net Position	433,934,505	433,934,505	433,934,505
Net Pension Liability	$ 197,397,647	$ 115,171,464	$ 48,936,731
Fiduciary Net Position as a % of the TPL	68.73%	79.03%	89.87%

During the measurement year there were no changes in benefits.

At June 30, 2018, the FURS total pension liability was $549.1 million. The Plan's fiduciary net position was $433.9 million leaving a net pension liability of $115.2 million. The Plan fiduciary net position as a percentage of the total pension liability was 79.03% at June 30, 2018.

Actuarial Status: The statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2018, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability. As of June 30, 2018, the FURS amortizes in 10 years. The funded ratio is 78.27%.

Volunteer Firefighters' Compensation Act (VFCA)

Plan Description: The VFCA is a multiple-employer, cost-sharing defined benefit plan. This compensation plan was established in 1965 and is governed by Title 19, chapter 17, MCA. All members are unpaid volunteers and the State of Montana is the only contributor to the plan. Benefits are established by state law and can only be amended by the Legislature. The VFCA provides pension, disability, and survivorship benefits for all eligible volunteer firefighters who are members of qualified volunteer fire companies in unincorporated areas, towns or villages and includes volunteer fire departments, fire districts, and fire service areas under the laws of the State of Montana. Benefits are based on eligibility and years of service. Member rights are vested after ten years of credited service. VFCA also provides limited benefits for death or injuries incurred in the line of duty.

A member who chooses to retire and draw a pension benefit may return to service with a volunteer fire department without loss of benefits. However, a returning retired member may not be considered an active member accruing credit for service.

VFCA is a qualified Length of Service Award Plan (LOSAP) under 457(e)(11)(B) of the Internal Revenue Service tax code. This is only for tax reporting purposes. This does not change any requirements of the program.

A brief summary of eligibility and benefits follows.

VFCA Summary of Benefits

Eligibility for benefit
- Age 55, 20 years of credited service;
- Age 60, 10 years of credited service.

Vesting 10 years of credited service

VFCA Summary of benefits (continued)

Monthly benefit formula (Effective January 1, 2016)
- $8.75 per year of credited service up to 20 years;
- $7.50 per year of credited service after 20 years

As of January 1, 2016, retirees may receive a benefit per month equal to $8.75 for each year of credited service, for up to 20 years of credited service. All retirees who continued to be an active member beyond 20 years, the benefit must be increased by $7.50 a month for each year of credited service up to 30 years (maximum benefit $250).

Additional benefit
Effective July 1, 2011, members who retire on or after July 1, 2011 and have greater than 30 years of credited service will receive $7.50 per month for each additional year of credited service over 30 years if the pension trust fund is actuarially sound, amortizing any unfunded liabilities in 20 years or less. This determination will be made annually and a member's benefit will be capped at $250 a month (30 years of credited service) if the amortization period grows to greater than 20 years.

Contributions: The State is the only contributor to the VFCA. Contributions are 5% of fire insurance premium taxes collected on certain fire risks. The State Auditor makes annual payments from the general fund to the Volunteer Firefighters' Compensation Act fund. (Reference Schedule of Contribution Rates before the RSI).

Group Insurance Payments: Supplemental payments are available to qualified volunteer fire companies that provide additional group medical insurance for their members in case of death or injury incurred while in the line of duty. The payment is made to the volunteer fire companies and is equal to $75 per year for each mobile firefighting unit owned by the volunteer fire company, up to a maximum of two units.

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2017 Actuarial Valuation Report for VFCA.

The discount rate as of June 30, 2018 is 7.65%, which is the assumed long-term expected rate of return on VFCA investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2018, the sensitivity of the NPL to the changes of the discount rate are as follows.

At June 30, 2018	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	$ 50,937,112	$ 46,396,146	$ 42,550,403
Fiduciary Net Position	38,729,625	38,729,625	38,729,625
Net Pension Liability	$ 12,207,487	$ 7,666,521	$ 3,820,778
Fiduciary Net Position as a % of the TPL	76.03%	83.48%	91.02%

During the measurement year there were no changes in benefits.

At June 30, 2018, the VFCA total pension liability (TPL) was $46.4 million. The Plan's fiduciary net position was $38.7 million leaving a net pension liability of $7.7 million. The Plan fiduciary net position as a percentage of the total pension liability was 83.48% at June 30, 2018.

Actuarial Status: The actuarial contribution decreased to $823,290 at the June 30, 2018 valuation from $915,642 at the June 30, 2017 valuation. The actuarial contribution is determined as the normal cost, administrative expense, and a 20-year open amortization of the unfunded actuarial liability. As of June 30, 2018, the VFCA amortizes in 5 years. The funded ratio is 82.76%.

Public Employees' Retirement System-DCRP (PERS-DCRP)

Plan Description: The PERS-Defined Contribution Retirement Plan (DCRP) is a multiple-employer plan established July 1, 2002 and governed by Title 19, chapters 2 & 3, MCA. This plan is available to eligible employees of the State, Montana University System, local governments, and school districts. All new PERS members are initially members of the PERS-DBRP and have a 12-month window during which they may choose to transfer to the PERS-DCRP or remain in the PERS-DBRP by filing an irrevocable election. If an election is not filed, the member remains in the PERS-DBRP. Members may not be members of both the defined contribution and defined benefit retirement plans. The PERS-DCRP provides retirement, disability, and death benefits to plan members and their beneficiaries.

A brief summary of eligibility and benefits follows.

PERS-DCRP Summary of benefits

Eligibility for benefits
- Termination of Service

Vesting
- Immediate for participant's contributions and attributable income;
- 5 years of membership service for the employer's contributions to individual accounts and attributable income.

Benefit
- Depends upon eligibility and individual account balance;
- Various payout options are available, including: taxable lump sums, periodic payments per participant direction and IRS-permitted rollovers.

Contributions: Member and employer contribution rates are established by state law and may be amended only by the Legislature.

Member contributions are deducted from each member's salary and remitted by participating employers. The entire amount of the member's contribution is credited to the individual account and maintained by the record keeper.

The 7.9% member contributions will be decreased to 6.9% on January 1 following actuary valuation results for the PERS-DBRP 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. There is no reduction to the member contributions on January 1, 2019.

(Reference Schedule of Contribution Rates before RSI).

The total employer rate of 8.57% is allocated as follows: 8.23% to the member's retirement account, 0.04% to the defined contribution education fund, 0.3% to the long term disability plan.

PERS employer contributions temporarily increased 1.0%, effective July 1, 2013.

Beginning July 1, 2014, employer contributions increase an additional 0.1% a year over 10 years, through 2024. The employer additional contributions, including the 0.27% added in 2007 and 2009, terminate on January 1 following actuary valuation results that show the amortization period of the PERS-DBRP has dropped below 25 years and would remain below 25 years following the reduction of both the additional employer and member contribution rates. Based on the June 30, 2018 actuarial valuation, the additional contributions will not be terminated on January 1, 2019.

Contribution Rates as a % of Covered Payroll	
Fiscal year ended June 30, 2018	
Member	7.90%
State & University Employer	8.57%
Local Government Employer	8.47%
School District Employer	8.20%
State for Local Governments	0.10%
State for School Districts	0.37%

PERS-DCRP PARTICIPATING EMPLOYERS

Employers	June 30, 2018	June 30, 2017
State Agencies	32	32
Counties	53	53
Cities and Towns	58	55
Universities	5	5
School Districts	117	107
High Schools	4	4
Other Agencies	47	44
Total	316	300

PERS-DCRP Active Membership by Employer Type

Employer Type	June 30, 2018	June 30, 2017
State Agencies	1,296	1,254
Counties	416	383
Cities	320	289
Universities	143	138
High Schools	5	5
School Districts	301	274
Other Agencies	209	198
Total	2,690	2,541

Plan Membership Elections: The financial statements will reflect employer and employee contribution transfers of DCRP participants that filed elections at or near the June 30 cutoff date. The contributions will not be moved until early fiscal year 2019. At fiscal year end June 30, 2018, there were ongoing transfers of $393.4 thousand.

DCRP Education Fund: The DCRP Education Fund (DCEd), as governed by section 19-3-112, MCA, was established to provide funding for the required education programs for members who have joined the PERS-DCRP. The DCEd was funded by 0.04% of the employers' contributions in fiscal year 2018.

DCRP Disability Fund: The DCRP Disability Fund (DC Disability), as governed by section 19-3-2117, MCA, provides disability benefits to eligible members who elect the PERS-DCRP. The DCRP Disability Fund received 0.3% of the employers' contribution in fiscal year 2018. The DC Disability OPEB is reported on the financial statements under the column heading *PERS-DCRP Disability OPEB.*

Participants of the PERS-DCRP direct their contributions and their portion of employer's contributions among the offered investment options. Participants may invest in any or all of the offered options and transfer between options on a daily basis, if desired. The investment options offered are selected by the PERB in compliance with the PERS-DCRP Investment Policy Statement, the advice of an independent investment consultant, and assistance from the statutorily-created Employee Investment Advisory Council.

The offered investment options fall into two primary types: (1) the variable investment options and (2) the fixed investment option.

Variable investments: The variable investment options include a variety of Large, Mid and Small Cap mutual funds, as well as a fixed income bond fund and Target Date Retirement Funds. Options range from conservative to aggressive. The mutual funds cover all standard asset classes and categories. The investment options as of June 30, 2018 are as follows.

PERS-DCRP Investment Options

International Stock Funds
American Funds New Perspective R6
Oakmark International I
Vanguard Total International Stock Index Adm
Oppenheimer Developing Markets Y

Small Company Stock Funds
Vanguard Small Cap Growth Index Instl
Vanguard Small Cap Index Signal Instl
PGIM QMA Small-Cap Value Z

Mid-Sized Company Stock Funds
Janus Henderson Enterprise - N
MFS Mid-Cap Value
Vanguard Mid Cap Index - Adm

Large Company Stock Funds
Alger Capital Appreciation Z
Black Rock Equity Index - Collective F
Vanguard Equity Income - Adm
JP Morgan US Equity R5

Balanced Funds
Vanguard Balanced Index - I

Bond Funds
PGIM Total Return Bond R6
Neuberger Berman High Income Bond - 1
Vanguard Total Bond Market Index - Adm

Target Date Funds
T. Rowe Price Retirement - Balanced and 2005 through 2055

Fixed Investment Options
Montana Fixed Fund

Fixed Investment: Montana Fixed Fund. The Montana Fixed Fund is a stable value investment option, administered through outside vendors: investment manager, Pacific Investment Management Company LLC (PIMCO); custodial bank, State Street Bank and Trust Company (State Street); and third-party synthetic Guaranteed Interest Contract (GIC) providers, Transamerica Life Insurance Company (Transamerica), Prudential Insurance Company of America (Prudential), and Voya Retirement Insurance & Annuity Company (Voya). When participants invest in the Montana Fixed Fund option, they are guaranteed a fixed rate of return, which may be adjusted in accordance with the terms of the respective GIC provider contracts. The Montana Fixed Fund employs a synthetic stable value strategy where the investment manager, PIMCO, manages a diversified bond portfolio and third party insurers, Transamerica, Prudential, and Voya, guarantee the participants' principal investments and earnings in accordance with the respective contracts with the GIC providers. The third party insurers set a fixed quarterly rate of return based on the investment manager's portfolio market value performance, yield, and duration in accordance with the terms of the respective contracts with the GIC providers.

All money invested in the Montana Fixed Fund of the PERS-DCRP and Deferred Compensation Plan are held in a Pooled Trust. The Pooled Trust qualifies as a group trust under sections 401(a), including section 401(a)(24) and 501(a), of the IRC of 1986, as amended. Under the Pooled Trust agreement, the third party GIC providers provide a guarantee of principal and set a fixed quarterly crediting rate. The Pooled Trust assets are invested by PIMCO and are held under a custodial agreement with State Street. The Pooled Trust assets are invested by PIMCO based on an investment guideline schedule as agreed upon in the Pooled Trust Contract and approved by the PERB, PIMCO, and the GIC providers.

Administrative expenses and revenues are accounted for within the plan. Expenses for the DCRP can generally be classified as 1) administrative, including miscellaneous or 2) investment management. Following is a summary of revenues and expenses.

Administrative funding: The PERB's administrative fee is a basis point (or percent) fee charged on participants' account balances. On a quarterly basis, the recordkeeper, Empower™ Retirement, withholds the fee from each plan participant's account. Empower™ Retirement withholds a portion of the fee collected from the participant to pay their recordkeeping fee and submits the remainder to the PERB. The PERB records this as *Miscellaneous Revenue* in the financial statements.

Recordkeeping fees: The recordkeeper, Empower™ Retirement, charges a set administrative fee to the PERB for all plan participants. These amounts are recorded as *Miscellaneous Expense* in the financial statements.

Montana Fixed Fund fees: The Montana Fixed Fund's crediting rate is declared net of expenses. Fees on the fund are charged by each of the five providers, PIMCO, State Street, Transamerica, Prudential, and Voya. The fees are defined under each contract for specific services. The fees charged by PIMCO and State Street for the externally managed fixed investments are classified as *Investment Expense*. The fees charged by Transamerica, Prudential and Voya are classified as *Miscellaneous Expense.*

Mutual funds/variable investments fees: The variable investments have investment management fees and some may have additional administrative fees. These fees are not presented in the financial statements. Mutual fund earnings are declared net of expenses, both investment management and administrative expenses, in accordance with the Securities and Exchange Commission and other regulatory authorities. Current reporting standards for mutual fund companies do not require costs be made available in the detailed cost reports.

Deferred Compensation Plan (457)

Plan Description: The Deferred Compensation (457) Plan is a voluntary supplemental retirement savings plan established in 1974. The Deferred Compensation Plan is governed by Title 19, chapter 50, MCA, in accordance with Internal Revenue Code (IRC) §457. This plan is available to all employees of the State, Montana University System, and contracting political subdivisions.

Assets of the Deferred Compensation Plan are required to be held in trusts, custodial accounts or insurance company contracts for the exclusive benefit of participants and their beneficiaries. Empower™ Retirement is the recordkeeper for the plan. Participants elect to defer a portion of their salary, within IRC limits. The deferred salary is not available to employees until separation from service, retirement, death, or upon an unforeseeable emergency while still employed, provided IRS-specified criteria are met.

A brief summary of eligibility and benefits follows.

Deferred Compensation Plan Summary

Contribution

- Voluntary, pre-tax deferral or designated Roth contribution

Eligibility for benefit

- Not available to participant until separation from service, retirement, death, or upon an unforeseeable emergency while still employed, provided IRS-specified criteria are met.

Vesting

- Participants are fully vested in their accounts immediately.

Benefit

- Lump sum or periodic benefit payment, at the option of the participant. Based on individual account balances and plan provisions. IRS permitted rollovers are also possible.

DEFERRED COMPENSATION PARTICIPATING EMPLOYERS

Employers	June 30, 2018	June 30, 2017
State of Montana*	1	1
Counties	4	4
Colleges and Universities	5	5
School Districts	15	13
Cities	14	10
Other Agencies	15	13
Total	54	46

*The State of Montana includes 34 agencies; however, due to the nature of the reporting for the 457 plan we are unable to specifically determine which agencies have participating employees.

Contributions: The Deferred Compensation Plan is a voluntary retirement plan designed to supplement retirement savings. Participants designate the amount to contribute within IRC limitations.

Plan participants direct their deferred salary among the offered investment options. The investment options offered are selected by the PERB in compliance with the Deferred Compensation Plan's Investment Policy Statement, the advice of an independent investment analyst, and the statutorily-created Employee Investment Advisory Council. Participants may invest in any or all of the offered options and transfer between options on a daily basis, if desired.

The offered investment options fall into two primary types: (1) the variable investment options and (2) the fixed investment option.

Variable investments: The variable investment options include a variety of Large, Mid and Small Cap mutual funds, as well as a fixed income bond fund and Target Date Retirement funds. Options range from aggressive to conservative. The mutual funds cover all standard asset classes and categories. The investment options as of June 30, 2018 are as follows.

Deferred Compensation (457) Plan
Investment Options

International Stock Funds
Vanguard Total Intl Stock Index - Adm
Artisan International Inv
Franklin Mutual Global Discovery Z
Dodge & Cox International Stock
American Funds New Perspective R6
Oppenheimer Developing Markets Y

Small Company Stock Funds
Vanguard Small Cap Growth Index Instl
Vanguard Small Cap Index Instl
Neuberger Berman Genesis-Trust

Mid Cap Company Stock Funds
Janus Henderson Enterprise - N
Vanguard Mid Cap Index Adm
MFS Mid Cap Value R6

Large Cap Stock Funds
Vanguard Equity Income Adm
Fidelity Contrafund
Vanguard Institutional Index I
Parnassus Core Equity Inst

Balanced Funds
Vanguard Balanced Index I

Bond Funds
Vanguard Total Bond Market Index - Adm
Neuberger Berman High Income Bond Inv
PGIM Total Return Bond R6

Target Date Funds
T. Rowe Price Retirement - Balanced
and 2005 through 2055

Fixed Investment Options
Montana Fixed Fund

In addition to the investments listed, plan participants previously had the option to direct a portion of their deferrals to a term life insurance policy provided through Allianz Life Insurance. The ability to invest in life insurance is allowed under the IRC and was offered to plan participants prior to life insurance being offered as a standard component of health insurance benefit packages. This investment option has been discontinued; however, plan participants who had previously elected this option may continue.

Fixed Investment: Montana Fixed Fund. The Montana Fixed Fund is a stable value investment option, administered through outside vendors: investment manager, Pacific Investment Management Company LLC (PIMCO); custodial bank, State Street Bank and Trust Company (State Street); and third-party synthetic Guaranteed Interest Contract (GIC) providers, Transamerica Life Insurance Company (Transamerica), Prudential Insurance Company of America (Prudential), and Voya Retirement Insurance & Annuity Company (Voya). When participants invest in the Montana Fixed Fund option, they are guaranteed a fixed rate of return, which may be adjusted in accordance with the terms of the respective GIC provider. The Montana Fixed Fund employs a synthetic stable value strategy where the investment manager, PIMCO, manages a diversified bond portfolio and third party insurers, Transamerica, Prudential, and Voya, guarantee the participants' principal investments and earnings in accordance with the respective contract with the GIC provider.

The third party insurers set a fixed quarterly rate of return based on the investment manager's portfolio market value performance, yield, and duration in accordance with the terms of the respective contract with the GIC provider.

All money invested in the Montana Fixed Fund of the PERS-DCRP and Deferred Compensation Plan are held in a Pooled Trust. The Pooled Trust qualifies as a group trust under sections 401(a), including section 401(a)(24) and 501(a), of the IRC of 1986, as amended. Under the Pooled Trust agreement, the third party GIC providers provide a guarantee of principal and set a fixed quarterly crediting rate. The Pooled Trust assets are invested by PIMCO and are held under a custodial agreement with State Street. The Pooled Trust assets are invested by PIMCO based on an investment guideline schedule as agreed upon in the Pooled Trust Contract and approved by the PERB, PIMCO, and the GIC providers.

Administrative expenses and revenues are accounted for within the plan. Expenses for the Deferred Compensation Plan can generally be classified as 1) administrative, including miscellaneous or 2) investment management.

Following is a summary of all revenues and expenses.

Administrative funding: The PERB's administrative fee is a basis point (or percent) fee based on account balances. On a quarterly basis, the recordkeeper, Empower™ Retirement, withholds the fee from each plan participant's account. Empower™ Retirement withholds a portion of the fee collected from the participants to pay their recordkeeping fee and submits the remainder to the PERB. The PERB records this as *Miscellaneous Revenue* in the financial statements.

Recordkeeping fees: The recordkeeper, Empower™ Retirement, charges a set administrative fee to the PERB for all plan participants. These amounts are recorded as *Miscellaneous Expense* in the financial statements.

Montana Fixed Fund fees: The Montana Fixed Fund's crediting rate is declared net of expenses. Fees on the fund are charged by each of the five providers, PIMCO, State Street, Transamerica, Prudential, and Voya. The fees are defined under each contract for specific services. The fees charged by PIMCO and State Street for the externally managed fixed investments are classified as *Investment Expense.* The fees charged by Transamerica, Prudential, and Voya are classified as *Miscellaneous Expense.*

Mutual fund/variable investments fee: The variable investments have investment management fees and some may have additional administrative fees. These fees are not presented on the financial statements. Mutual fund earnings are declared net of both investment management and administrative expenses, in accordance with the Securities Exchange Commission and other regulatory authorities. Current reporting standards for mutual fund companies do not require costs be made available in the detailed cost reports.

FY 2018 Schedule of Contribution Rates

System	Member	Employer	State
PERS-DBRP[1]	**7.9%** [19-3-315(1)(a), MCA]	**8.57%** State & University **8.47%** Local Governments **8.2%** School Districts (K-12) [19-3-316, MCA]	**0.1%** of Local Government payroll – paid from the General Fund **0.37%** School Districts (K-12) payroll – paid from the General Fund [19-3-319, MCA]
PERS-DCRP[1]	**7.9%** [19-3-315(1)(a), MCA]	**8.57%** State & University **8.47%** Local Governments **8.2%** School Districts (K-12) [19-3-316, MCA]	**0.1%** of Local government payroll – paid from the General Fund **0.37%** School Districts (K-12) payroll – paid from the General Fund [19-3-319, MCA]
PERS-DCRP Disability OPEB		**0.3%** - an allocation of the DCRP employer contribution [19-3-2117, MCA]	
JRS[2]	**7.0%** [19-5-402, MCA]	**25.81%** [19-5-404, MCA]	
HPORS	**13.0%** - hired prior to 7/01/97 & not electing GABA **13.05%** - hired after 6/30/97 & members electing GABA [19-6-402, MCA]	**28.15%** [19-6-404(1), MCA]	**10.18%** of salaries – paid from the General Fund [19-6-404(2), MCA]
SRS	**10.495%** [19-7-403, MCA]	**13.115%** [19-7-404, MCA]	
GWPORS	**10.56%** [19-8-502, MCA]	**9.0%** [19-8-504, MCA]	
MPORS	**7.0%** - hired after 6/30/75 & prior to 7/1/79 & not electing GABA [19-9-710(1)(a), MCA] **8.5%** - hired after 6/30/79 and prior to 7/1/97 & not electing GABA [19-9-710(1)(b), MCA] **9.0%** - hired after 6/30/97 & members electing GABA [19-9-710(1)(c), MCA & 19-9-710(2), MCA]	**14.41%** [19-9-703, MCA]	**29.37%** of salaries – paid from the General Fund [19-9-702, MCA]
FURS	**9.5%** - hired prior to 7/1/97 & not electing GABA [19-13-601(2)(a), MCA] **10.7%** - hired after 06/30/97 & members electing GABA [19-13-601(2)(b), MCA]	**14.36%** [19-13-605, MCA]	**32.61%** of salaries – paid from the General Fund [19-13-604, MCA]
VFCA			**5.0%** of fire insurance premium tax, paid from the General Fund [19-17-301, MCA]

[1] The employer and/or member contribution rates increase on July 1, 2018 for PERS-DBRS and PERS-DCRP.

[2] The employer contributions have been temporarily suspended for JRS beginning the first full pay period of January 2018 until after the last full pay period of June 2019, when the employer contributions will return to 25.18%.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Changes in Multiple-Employer Plans Net Pension Liability / (Asset)

as of June 30, 2018

Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
PERS-DBRP					
Total pension liability					
Service cost (Beginning of year)	**$ 132,567,233**	$ 144,475,909	$ 132,620,813	$ 138,049,956	$ 137,452,701
Interest (includes interest on service cost)	**552,036,737**	507,380,846	486,830,869	476,777,225	456,406,491
Changes of benefit terms					
Differences between expected and actual experience	**170,344,495**	55,782,342	12,254,313	(11,276,266)	
Changes of assumptions		354,960,213			
Benefit payments[2]	**(395,338,673)**	(366,354,719)	(344,103,875)	(333,401,463)	(307,741,308)
Refunds of Contributions[3]	**(12,619,498)**	(12,252,007)	(10,379,388)		
Net change in total pension liability	**$ 446,990,294**	$ 683,992,584	$ 277,222,732	$ 270,149,452	$ 286,117,884
Total pension liability-beginning	**7,420,145,583**	6,736,152,999	6,458,930,267	6,188,780,815	5,902,662,931
Total pension liability-ending (a)	**$ 7,867,135,877**	$ 7,420,145,583	$ 6,736,152,999	$ 6,458,930,267	$ 6,188,780,815
Plan fiduciary net position					
Contributions - employer[4, 9]	**$ 106,650,985**	$ 103,537,059	$ 102,327,838	$ 100,175,856	$ 95,820,397
Contributions - non-employer	**34,659,174**	28,757,463	30,800,371	34,466,719	34,561,721
Contributions - member[5]	**102,075,271**	100,768,139	97,342,719	95,424,031	92,160,048
Net investment income[6]	**478,690,356**	591,434,954	101,199,856	225,106,692	732,253,062
Benefit payments[2]	**(395,338,673)**	(366,354,719)	(344,103,875)	(333,401,463)	(307,741,308)
Administrative expense	**(4,168,771)**	(4,472,084)	(3,858,330)	(3,483,531)	(3,522,346)
Refunds of Contributions[3]	**(12,619,498)**	(12,252,007)	(10,379,388)		
Other[7]	**(2,474,018)**	(1,706,733)	(1,580,302)		
Net change in plan fiduciary net position	**$ 307,474,826**	$ 439,712,072	$ (28,251,111)	$ 118,288,304	$ 643,531,574
Plan fiduciary net position - beginning	**5,472,519,182**	5,032,807,110	5,061,058,221	4,942,769,917	4,299,238,343
Beginning of Year Adjustment					
Plan fiduciary net position - ending (b)[6,9]	**$ 5,779,994,008**	$ 5,472,519,182	$ 5,032,807,110	$ 5,061,058,221	$ 4,942,769,917
Net pension liability / (asset) - ending (a-b)	**$ 2,087,141,869**	$ 1,947,626,401	$ 1,703,345,889	$ 1,397,872,046	$ 1,246,010,898
SRS					
Total pension liability					
Service cost (Beginning of year)	**$ 11,484,473**	$ 19,186,527	$ 18,802,901	$ 12,574,185	$ 15,117,708
Interest (includes interest on service cost)	**30,388,560**	27,621,242	22,900,429	25,664,435	23,976,049
Changes of benefit terms		(1,494,604)			
Differences between expected and actual experience	**4,714,268**	(170,781)	749,213	(194,994)	
Changes of assumptions[8]		(94,881,687)	56,788,521	43,058,238	(49,542,278)
Benefit payments[2]	**(18,052,544)**	(16,700,117)	(15,476,437)	(15,280,070)	(13,943,335)
Refunds of Contributions[3]	**(1,490,014)**	(1,383,061)	(1,028,890)		
Net change in total pension liability	**$ 27,044,743**	$ (67,822,481)	$ 82,735,737	$ 65,821,794	$ (24,391,856)
Total pension liability-beginning	**407,007,349**	474,829,830	392,094,093	326,272,299	350,664,155
Total pension liability-ending (a)	**$ 434,052,092**	$ 407,007,349	$ 474,829,830	$ 392,094,093	$ 326,272,299
Plan fiduciary net position					
Contributions - employer[4]	**$ 10,366,141**	$ 7,562,105	$ 7,316,674	$ 6,902,448	$ 6,689,311
Contributions - non-employer					
Contributions - member[5]	**8,469,282**	7,188,857	6,982,217	6,623,175	6,447,179
Net investment income[6]	**29,157,838**	35,511,246	6,063,591	13,041,786	41,789,437
Benefit payments[2]	**(18,052,544)**	(16,700,117)	(15,476,437)	(15,280,070)	(13,943,335)
Administrative expense	**(432,091)**	(387,378)	(322,584)	(247,405)	(203,493)
Refunds of Contributions[3]	**(1,490,014)**	(1,383,061)	(1,028,890)		
Other[7]	**(48,421)**	(33,489)	(77,778)		
Net change in plan fiduciary net position	**$ 27,970,191**	$ 31,758,163	$ 3,456,793	$ 11,039,934	$ 40,779,099
Plan fiduciary net position - beginning	**330,910,169**	299,152,006	295,695,213	284,655,279	243,876,180
Plan fiduciary net position - ending (b)[6]	**$ 358,880,360**	$ 330,910,169	$ 299,152,006	$ 295,695,213	$ 284,655,279
Net pension liability / (asset) - ending (a-b)	**$ 75,171,732**	$ 76,097,180	$ 175,677,824	$ 96,398,880	$ 41,617,020

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.
[2] For fiscal year 2016 forward, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015 the benefit payments include refunds of contribution and transfers.
[3] For fiscal year 2016 forward, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and Transfers.
[4] The Contributions - employer consists of the Employer, Membership Fees, Reduction in Force Program, and Miscellaneous Revenue.
[5] The Contributions - member consists of the Plan Member and Interest Reserve Buyback.
[6] The fiscal year 2017 Net Investment Income and Plan Fiduciary Net Position - ending are different in this schedule from what is presented in the financial statements due to late entries from Board of Investments.
[7] Other consists of the expense for Other Post Employment Benefits (OPEB). For PERS it also includes Refunds to other plans, and Transfers to DCRP and MUS-RP.
[8] The Changes in assumptions for SRS is the adjustment in the discount rate from 7.75% to 6.68% at June 30, 2015 and to 5.93% at June 30, 2016.
[9] The PERS-DBRP amounts will not tie to the financial statements due to the exclusion of the PERS-DB Education (DB Ed) amount on this schedule.

Public Employees' Retirement Board
A Component Unit of the State of Montana
Required Supplementary Information
Schedule of Changes in Multiple-Employer Plans Net Pension Liability / (Asset)
as of June 30, 2018
Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
GWPORS					
Total pension liability					
Service cost (Beginning of year)	**$ 8,097,630**	$ 8,624,297	$ 8,403,076	$ 8,008,155	$ 7,849,828
Interest (includes interest on service cost)	**16,018,113**	14,268,596	12,910,129	12,398,209	11,258,354
Changes of benefit terms					
Differences between expected and actual experience	**4,780,923**	3,742,704	2,705,238	730,818	
Changes of assumptions		5,877,594			
Benefit payments	**(6,522,921)**	(5,809,910)	(5,068,318)	(5,351,847)	(5,229,489)
Refunds of Contributions	**(1,105,281)**	(1,035,917)	(1,065,541)		
Net change in total pension liability	**$ 21,268,464**	$ 25,667,364	$ 17,884,584	$ 15,785,335	$ 13,878,693
Total pension liability / (asset) - beginning	**213,201,194**	187,533,830	169,649,246	153,863,911	139,985,218
Total pension liability / (asset) - ending (a)	**$ 234,469,658**	$ 213,201,194	$ 187,533,830	$ 169,649,246	$ 153,863,911
Plan fiduciary net position					
Contributions - employer[4]	**$ 4,613,066**	$ 4,463,631	$ 4,278,385	$ 4,088,117	$ 3,762,217
Contributions - non-employer					
Contributions - member[5]	**5,512,148**	5,278,141	5,035,648	4,924,265	4,461,889
Net investment income[6]	**15,573,117**	18,589,670	3,166,704	6,434,871	20,069,398
Benefit payments[2]	**(6,522,921)**	(5,809,910)	(5,068,318)	(5,351,847)	(5,229,489)
Administrative expense	**(369,184)**	(328,699)	(269,496)	(200,745)	(161,663)
Refunds of Contributions[3]	**(1,105,281)**	(1,035,917)	(1,065,541)		
Other[7]	**(19,293)**	(549)	(30,640)		
Net change in plan fiduciary net position	**$ 17,681,652**	$ 21,156,367	$ 6,046,742	$ 9,894,661	$ 22,902,352
Plan fiduciary net position - beginning	**175,840,876**	154,684,509	148,637,767	138,743,106	115,840,754
Plan fiduciary net position - ending (b)	**$ 193,522,528**	$ 175,840,876	$ 154,684,509	$ 148,637,767	$ 138,743,106
Net pension liability / (asset) - ending (a-b)	**$ 40,947,130**	$ 37,360,318	$ 32,849,321	$ 21,011,479	$ 15,120,805
MPORS					
Total pension liability					
Service cost (Beginning of year)	**$ 12,248,910**	$ 12,267,430	$ 12,022,841	$ 12,083,166	$ 11,794,994
Interest (includes interest on service cost)	**41,949,138**	39,632,065	37,887,975	36,830,426	35,011,854
Changes of benefit terms					
Differences between expected and actual experience	**640,064**	(5,057,920)	(3,546,948)	(2,014,310)	
Changes of assumptions		16,011,685			
Benefit payments[2]	**(24,566,646)**	(23,474,602)	(21,960,690)	(22,743,995)	(20,527,874)
Refunds of Contributions[3]	**(2,675,247)**	(1,043,487)	(1,240,208)		
Net change in total pension liability	**$ 27,596,219**	$ 38,335,171	$ 23,162,970	$ 24,155,287	$ 26,278,974
Total pension liability / (asset) - beginning	**561,975,691**	523,640,520	500,477,550	476,322,263	450,043,289
Total pension liability / (asset) - ending (a)	**$ 589,571,910**	$ 561,975,691	$ 523,640,520	$ 500,477,550	$ 476,322,263
Plan fiduciary net position					
Contributions - employer[4]	**$ 7,757,950**	$ 7,091,246	$ 6,927,587	$ 6,629,915	$ 6,459,488
Contributions - non-employer	**15,840,158**	13,960,572	13,751,561	13,432,838	13,048,938
Contributions - member[5]	**5,046,352**	4,465,630	4,384,573	4,291,826	4,133,021
Net investment income[6]	**33,237,702**	39,775,778	7,112,851	14,471,898	45,230,427
Benefit payments[2]	**(24,566,646)**	(23,474,602)	(21,960,690)	(22,743,995)	(20,527,874)
Administrative expense	**(350,328)**	(339,344)	(273,951)	(212,017)	(166,807)
Refunds of Contributions[3]	**(2,675,247)**	(1,043,487)	(1,240,208)		
Other[7]	**(37,861)**	(491)	(131,634)		
Net change in plan fiduciary net position	**$ 34,252,080**	$ 40,435,302	$ 8,570,089	$ 15,870,465	$ 48,177,193
Plan fiduciary net position - beginning	**384,062,216**	343,626,914	335,056,825	319,186,360	271,009,167
Plan fiduciary net position - ending (b)[6]	**$ 418,314,296**	$ 384,062,216	$ 343,626,914	$ 335,056,825	$ 319,186,360
Net pension liability / (asset) - ending (a-b)	**$ 171,257,614**	$ 177,913,475	$ 180,013,606	$ 165,420,725	$ 157,135,903

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.
[2] For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015, the benefit payments include refunds of contributions and transfers.
[3] For fiscal year 2016, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and transfers.
[4] The Contributions - employer consists of the Employer, Membership Fees, Reduction in Force Program, and Miscellaneous Revenue.
[5] The Contributions - member consists of the Plan Member and Interest Reserve Buyback.
[6] The fiscal year 2017 Net Investment Income and Plan Fiduciary Net Position - ending are different in this schedule from what is presented in the FY17 financial statements due to late entries from Board of Investments.
[7] Other consists of the expense for Other Post Employment Benefits (OPEB)

Public Employees' Retirement Board
A Component Unit of the State of Montana
Required Supplementary Information
Schedule of Changes in Multiple-Employer Plans Net Pension Liability / (Asset)
as of June 30, 2018
Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
FURS					
Total pension liability					
Service cost (Beginning of year)	**$ 11,819,193**	$ 12,162,734	$ 11,519,465	$ 11,066,391	$ 10,608,895
Interest (includes interest on service cost)	**37,983,963**	35,230,726	33,514,243	32,580,262	30,847,306
Changes of benefit terms					
Differences between expected and actual experience	**14,798,655**	893,628	(1,162,342)	(159,885)	
Changes of assumptions		16,915,553			
Benefit payments[2]	**(23,863,193)**	(22,335,636)	(20,896,200)	(19,747,008)	(19,052,130)
Refunds of Contributions[3]	**(173,278)**	(168,422)	(46,128)		
Net change in total pension liability	**$ 40,565,340**	$ 42,698,583	$ 22,929,038	$ 23,739,760	$ 22,404,071
Total pension liability / (asset) - beginning	**508,540,629**	465,842,046	442,913,008	419,173,248	396,769,177
Total pension liability / (asset) - ending (a)	**$ 549,105,969**	$ 508,540,629	$ 465,842,046	$ 442,913,008	$ 419,173,248
Plan fiduciary net position					
Contributions - employer[4]	**$ 7,053,165**	$ 6,499,776	$ 6,163,464	$ 6,100,252	$ 6,006,863
Contributions - non-employer	**16,127,433**	14,438,412	13,969,719	13,572,990	12,767,624
Contributions - member[5]	**5,314,833**	4,925,425	4,751,806	4,710,082	4,697,333
Net investment income[6]	**34,284,721**	40,838,569	7,311,946	14,640,156	45,464,858
Benefit payments[2]	**(23,863,193)**	(22,335,636)	(20,896,200)	(19,747,008)	(19,052,130)
Administrative expense	**(329,234)**	(320,213)	(259,560)	(197,110)	(153,622)
Refunds of Contributions[3]	**(173,278)**	(168,422)	(46,128)		
Other[7]	**13,978**	(485)	(2,424)		
Net change in plan fiduciary net position	**$ 38,428,425**	$ 43,877,426	$ 10,992,623	$ 19,079,362	$ 49,730,926
Plan fiduciary net position - beginning	**395,506,080**	351,628,654	340,636,031	321,556,669	271,825,743
Plan fiduciary net position - ending (b)[6]	**$ 433,934,505**	$ 395,506,080	$ 351,628,654	$ 340,636,031	$ 321,556,669
Net pension liability / (asset) - ending (a-b)	**$ 115,171,464**	$ 113,034,549	$ 114,213,392	$ 102,276,977	$ 97,616,579
VFCA					
Total pension liability					
Service cost (Beginning of year)	**$ 92,294**	$ 267,843	$ 282,498	$ 221,969	$ 237,639
Interest (includes interest on service cost)	**3,461,285**	3,336,579	3,355,483	2,851,618	2,843,095
Changes of benefit terms				6,173,245	
Differences between expected and actual experience	**(930,963)**	(791,792)	(1,141,179)	(618,854)	
Changes of assumptions		2,281,533			
Benefit payments[2]	**(2,944,046)**	(2,858,443)	(2,623,011)	(2,379,353)	(2,294,676)
Refunds of Contributions[3]					
Net change in total pension liability	**$ (321,430)**	$ 2,235,720	$ (126,209)	$ 6,248,625	$ 786,058
Total pension liability / (asset) - beginning	**46,717,576**	44,481,856	44,608,065	38,359,440	37,573,382
Total pension liability / (asset) - ending (a)	**$ 46,396,146**	$ 46,717,576	$ 44,481,856	$ 44,608,065	$ 38,359,440
Plan fiduciary net position					
Contributions - employer[4]					
Contributions - non-employer	**$ 2,212,113**	$ 2,064,561	$ 2,036,297	$ 1,913,482	$ 1,818,237
Contributions - member[5]					
Net investment income[6]	**3,126,746**	3,836,835	622,331	1,479,954	4,815,491
Benefit payments[2]	**(2,944,046)**	(2,858,443)	(2,623,011)	(2,379,353)	(2,294,676)
Administrative expense	**(293,142)**	(288,897)	(241,726)	(180,466)	(136,079)
Refunds of Contributions[3]					
Other[7]	**(2,478)**	(6,897)	(14,436)		
Net change in plan fiduciary net position	**$ 2,099,193**	$ 2,747,159	$ (220,545)	$ 833,617	$ 4,202,973
Plan fiduciary net position - beginning	**36,630,432**	33,883,273	34,103,818	33,270,201	29,067,228
Plan fiduciary net position - ending (b)[6]	**$ 38,729,625**	$ 36,630,432	$ 33,883,273	$ 34,103,818	$ 33,270,201
Net pension liability / (asset) - ending (a-b)	**$ 7,666,521**	$ 10,087,144	$ 10,598,583	$ 10,504,247	$ 5,089,239

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.
[2] For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015, the benefit payments include refunds of contribution and transfers.
[3] For fiscal year 2016, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and Transfers. Refunds are not applicable to VFCA.
[4] The Contributions - employer consists of the Employer, Membership Fees, Reduction in Force Program, and Miscellaneous Revenue.
[5] The Contributions - member consists of the Plan Member and Interest Reserve Buyback.
[6] The fiscal year 2017 Net Investment Income and Plan Fiduciary Net Position - ending are different in this schedule from what is presented in the FY17 financial statements due to late entries from Board of Investments.
[7] Other consists of the expense for Other Post Employment Benefits (OPEB).

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Changes in Single-Employer Plans Net Pension Liability / (Asset)

as of June 30, 2018

Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
JRS					
Total pension liability					
Service Cost - Beginning of year	**$ 1,664,039**	$ 1,628,290	$ 1,578,705	$ 1,652,926	$ 1,593,854
Interest (includes interest on service cost)	**4,502,928**	4,043,662	3,986,420	3,933,947	3,824,389
Changes of benefit terms					
Differences between expected and actual experience	**(2,900,423)**	862,189	(1,341,333)	(1,032,091)	
Changes of assumptions		3,864,700			
Benefit payments[2]	**(3,872,322)**	(3,554,335)	(3,416,023)	(3,040,988)	(3,022,512)
Net change in total pension liability	**$ (605,778)**	$ 6,844,506	$ 807,769	$ 1,513,794	$ 2,395,731
Total pension liability / (asset) - beginning	**60,797,964**	53,953,458	53,145,689	51,631,895	49,236,164
Total pension liability / (asset) - ending (a)	**$ 60,192,186**	$ 60,797,964	$ 53,953,458	$ 53,145,689	$ 51,631,895
Plan fiduciary net position					
Contributions - employer[9]	**$ 1,084,880**	$ 1,800,105	$ 1,807,493	$ 1,683,990	$ 1,651,483
Contributions - non-employer					
Contributions - member[5]	**575,050**	488,208	729,180	534,091	481,461
Net investment income[8]	**8,467,204**	10,368,402	1,778,748	3,842,387	12,420,597
Benefit payments[2]	**(3,872,322)**	(3,554,335)	(3,416,023)	(3,040,988)	(3,022,512)
Administrative expense	**(264,496)**	(253,789)	(197,445)	(135,815)	(100,567)
Other[3]	**6,737**	(674)	(2,742)		
Net change in plan fiduciary net position	**$ 5,997,053**	$ 8,847,917	$ 699,211	$ 2,883,665	$ 11,430,462
Plan fiduciary net position - beginning	**96,653,635**	87,805,718	87,106,507	84,222,842	72,792,380
Plan fiduciary net position - ending (b)[8]	**$ 102,650,688**	$ 96,653,635	$ 87,805,718	$ 87,106,507	$ 84,222,842
Net pension liability / (asset) - ending (a-b)	**$ (42,458,502)**	$ (35,855,671)	$ (33,852,260)	$ (33,960,818)	$ (32,590,947)
HPORS					
Total pension liability					
Service Cost - Beginning of year	**$ 3,643,015**	$ 3,664,857	$ 3,798,553	$ 3,598,464	$ 3,464,399
Interest (includes interest on service cost)	**16,293,615**	15,121,088	14,545,022	14,112,116	13,517,924
Changes of benefit terms[4]				1,855,618	
Differences between expected and actual experience	**589,270**	2,773,680	18,339	267,336	
Changes of assumptions		7,892,479			
Benefit payments[2]	**(11,545,732)**	(11,036,794)	(10,482,414)	(10,000,856)	(9,443,007)
Refund of Contributions[5]	**(321,840)**	(244,597)	(93,811)		
Net change in total pension liability	**$ 8,658,328**	$ 18,170,713	$ 7,785,689	$ 9,832,678	$ 7,539,316
Total pension liability / (asset) - beginning	**218,922,225**	200,751,512	192,965,823	183,133,145	175,593,829
Total pension liability / (asset) - ending (a)	**$ 227,580,553**	$ 218,922,225	$ 200,751,512	$ 192,965,823	$ 183,133,145
Plan fiduciary net position					
Contributions - employer[6]	**$ 5,858,493**	$ 5,782,258	$ 5,915,644	$ 5,839,336	$ 5,735,507
Contributions - non-employer[6]	**250,150**	262,884	242,749		
Contributions - member[7]	**2,386,526**	1,949,795	1,917,487	1,624,327	1,458,042
Net investment income[8]	**12,282,824**	15,098,813	2,605,256	5,738,373	18,678,284
Benefit payments[2]	**(11,545,732)**	(11,036,794)	(10,482,414)	(10,000,856)	(9,443,007)
Administrative expense	**(256,309)**	(248,124)	(197,034)	(144,253)	(109,140)
Refund of Contributions[5]	**(321,840)**	(244,597)	(93,811)		
Other[3]	**8,067**	(466)	(2,276)		
Net change in plan fiduciary net position	**$ 8,662,179**	$ 11,563,769	$ (94,399)	$ 3,056,927	$ 16,319,686
Plan fiduciary net position - beginning	**140,536,689**	128,972,920	129,067,319	126,010,392	109,690,706
Plan fiduciary net position - ending (b)[8]	**$ 149,198,868**	$ 140,536,689	$ 128,972,920	$ 129,067,319	$ 126,010,392
Net pension liability / (asset) - ending (a-b)	**$ 78,381,685**	$ 78,385,536	$ 71,778,592	$ 63,898,504	$ 57,122,753

[1] *This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*
[2] *For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015, the benefit payments include refunds of contributions and transfers.*
[3] *Other consists of the expense for Other Post Employment Benefits (OPEB).*
[4] *For fiscal year 2015, the HPORS Changes of benefit terms was the addition of the DROP.*
[5] *For fiscal year 2016, the Refunds of Contributions includes refunds of member contributions.*
[6] *The fiscal year 2014 and 2015, HPORS employer and non-employer contribution differences are due to considering all non-employer contributions as employer.*
[7] *The HPORS Contributions - member consists of Plan Member and Interest Reserve Buyback on the financial statements.*
[8] *The fiscal year 2017 Net Investment Income and Plan Fiduciary Net Position - ending are different in this schedule from what is presented in the financial statements due to late entries from Board of Investments*
[9] *For fiscal year 2018 the JRS employer contributions decreased due to Senate Bill 1 temporarily suspending employer contributions.*

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Public Employees' Retirement Board
A Component Unit of the State of Montana
Required Supplementary Information
Schedule of Net Pension Liability / (Asset) for Multiple-Employer Plans
as of June 30, 2018
Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
PERS-DBRP					
Total Pension Liability	**$ 7,867,135,877**	$ 7,420,145,583	$ 6,736,152,999	$ 6,458,930,267	$ 6,188,780,815
Plan Fiduciary Net Position[2,4]	**5,779,994,008**	5,472,519,182	5,032,807,110	5,061,058,221	4,942,769,917
Multiple-Employers' Net Pension Liability / (Asset)	**$ 2,087,141,869**	$ 1,947,626,401	$ 1,703,345,889	$ 1,397,872,046	$ 1,246,010,898
Plan fiduciary net position as a percentage of the total pension liability	**73.47%**	73.75%	74.71%	78.36%	79.87%
Covered Payroll[3]	**$ 1,230,105,350**	$ 1,232,066,537	$ 1,185,646,179	$ 1,154,866,605	$ 1,120,266,025
Net pension liability / (asset) as a percentage of covered payroll[2]	**169.67%**	158.08%	143.66%	121.04%	111.22%
SRS					
Total Pension Liability	**$ 434,052,092**	$ 407,007,349	$ 474,829,830	$ 392,094,093	$ 326,272,299
Plan Fiduciary Net Position[2]	**358,880,360**	330,910,169	299,152,006	295,695,213	284,655,279
Multiple-Employers' Net Pension Liability / (Asset)	**$ 75,171,732**	$ 76,097,180	$ 175,677,824	$ 96,398,880	$ 41,617,020
Plan fiduciary net position as a percentage of the total pension liability	**82.68%**	81.30%	63.00%	75.41%	87.24%
Covered Payroll	**$ 77,587,294**	$ 74,581,258	$ 70,593,304	$ 68,045,517	$ 64,672,635
Net pension liability / (asset) as a percentage of covered payroll	**96.89%**	102.03%	248.86%	141.67%	64.35%
GWPORS					
Total Pension Liability	**$ 234,469,658**	$ 213,201,194	$ 187,533,830	$ 169,649,246	$ 153,863,911
Plan Fiduciary Net Position[2]	**193,522,528**	175,840,876	154,684,509	148,637,767	138,743,106
Multiple-Employers' Net Pension Liability / (Asset)	**$ 40,947,130**	$ 37,360,318	$ 32,849,321	$ 21,011,479	$ 15,120,805
Plan fiduciary net position as a percentage of the total pension liability	**82.54%**	82.48%	82.48%	87.61%	90.17%
Covered Payroll	**$ 50,823,150**	$ 49,381,004	$ 47,108,310	$ 44,884,739	$ 41,636,566
Net pension liability / (asset) as a percentage of covered payroll	**80.57%**	75.66%	69.73%	46.81%	36.32%

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

[2] The fiscal year 2017 Plan Fiduciary Net Position is different in this schedule from what was presented in the FY17 Statement of Fiduciary Net Position due to late entries from Board of Investments.

[3] The fiscal year 2014 covered payroll for PERS-DBRP has been re-stated due to the transfer of compensation from the PERS-DBRP to the PERS-DCRP. This also affected the dollar amount of the Actuarially Determined Contribution because it was determined as a percent of payroll.

[4] The PERS-DBRP amounts will not tie to the financial statements due to the exclusion of the PERS-DB Education (DB Ed) amount on this schedule.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Net Pension Liability / (Asset) for Multiple-Employer Plans

as of June 30, 2018

Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
MPORS					
Total Pension Liability	**$ 589,571,910**	$ 561,975,691	$ 523,640,520	$ 500,477,550	$ 476,322,263
Plan Fiduciary Net Position[2]	**418,314,296**	384,062,216	343,626,914	335,056,825	319,186,360
Multiple-Employers' Net Pension Liability / (Asset)	**$ 171,257,614**	$ 177,913,475	$ 180,013,606	$ 165,420,725	$ 157,135,903
Plan fiduciary net position as a percentage of the total pension liability	**70.95%**	68.34%	65.62%	66.95%	67.01%
Covered Payroll	**$ 52,035,958**	$ 48,603,580	$ 47,233,801	$ 45,736,127	$ 44,426,617
Net pension liability / (asset) as a percentage of covered payroll	**329.11%**	366.05%	381.11%	361.69%	353.70%
FURS					
Total Pension Liability	**$ 549,105,969**	$ 508,540,629	$ 465,842,046	$ 442,913,008	$ 419,173,248
Plan Fiduciary Net Position[2]	**433,934,505**	395,506,080	351,628,654	340,636,031	321,556,669
Multiple-Employers' Net Pension Liability / (Asset)	**$ 115,171,464**	$ 113,034,549	$ 114,213,392	$ 102,276,977	$ 97,616,579
Plan fiduciary net position as a percentage of the total pension liability	**79.03%**	77.77%	75.48%	76.91%	76.71%
Covered Payroll	**$ 47,934,517**	$ 45,208,091	$ 43,118,925	$ 41,627,233	$ 39,891,869
Net pension liability / (asset) as a percentage of covered payroll	**240.27%**	250.03%	264.88%	245.70%	244.70%
VFCA					
Total Pension Liability	**$ 46,396,146**	$ 46,717,576	$ 44,481,856	$ 44,608,065	$ 38,359,440
Plan Fiduciary Net Position[2]	**38,729,625**	36,630,432	33,883,273	34,103,818	33,270,201
Multiple-Employers' Net Pension Liability / (Asset)	**$ 7,666,521**	$ 10,087,144	$ 10,598,583	$ 10,504,247	$ 5,089,239
Plan fiduciary net position as a percentage of the total pension liability	**83.48%**	78.41%	76.17%	76.45%	86.73%
Covered Payroll	**N/A**	N/A	N/A	N/A	N/A
Net pension liability / (asset) as a percentage of covered payroll	**N/A**	N/A	N/A	N/A	N/A

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

[2] The fiscal year 2017 Plan Fiduciary Net Position is different in this schedule from what was presented in the FY17 Statement of Fiduciary Net Position due to late entries from Board of Investments.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Net Pension Liability / (Asset) for Single-Employer Plans

as of June 30, 2018

Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
JRS					
Total Pension Liability	**$ 60,192,186**	$ 60,797,964	$ 53,953,458	$ 53,145,689	$ 51,631,895
Plan Fiduciary Net Position[2]	**102,650,688**	96,653,635	87,805,718	87,106,507	84,222,842
Single-Employers' Net Pension Liability / (Asset)	**$ (42,458,502)**	$ (35,855,671)	$ (33,852,260)	$ (33,960,818)	$ (32,590,947)
Plan fiduciary net position as a percentage of the total pension liability	**170.54%**	158.98%	162.74%	163.90%	163.12%
Covered Payroll	**$ 7,290,904**	$ 6,974,470	$ 6,920,367	$ 6,524,569	$ 6,354,763
Net pension liability / (asset) as a percentage of covered payroll	**-582.35%**	-514.10%	-489.17%	-520.51%	-512.86%
HPORS					
Total Pension Liability	**$ 227,580,553**	$ 218,922,225	$ 200,751,512	$ 192,965,823	$ 183,133,145
Plan Fiduciary Net Position[2]	**149,198,868**	140,536,689	128,972,920	129,067,319	126,010,392
Single-Employers' Net Pension Liability / (Asset)	**$ 78,381,685**	$ 78,385,536	$ 71,778,592	$ 63,898,504	$ 57,122,753
Plan fiduciary net position as a percentage of the total pension liability	**65.56%**	64.19%	64.25%	66.89%	68.81%
Covered Payroll	**$ 15,251,339**	$ 14,778,975	$ 15,275,964	$ 14,549,378	$ 14,149,269
Net pension liability / (asset) as a percentage of covered payroll	**513.93%**	530.39%	469.88%	439.18%	403.72%

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

[2] The fiscal year 2017 Plan Fiduciary Net Position is different in this schedule from what was presented in the FY17 Statement of Fiduciary Net Position due to late entries from Board of Investments.

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Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to the Required Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuations for funding purposes at the dates indicated. Additional information as of latest actuarial valuation follows:

	PERS-DBRP	JRS	HPORS
Valuation date	June 30, 2018	June 30, 2018	June 30, 2018
Actuarial cost method	Entry Age	Entry Age	Entry Age
Amortization method	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open
Remaining amortization period in years:			
Unfunded Liability[1]	38		40
Unfunded Credit [2]		0	
Asset valuation method	4-Year smoothed market	4-Year smoothed market	4-Year smoothed market
Actuarial assumptions:			
Investment rate of return compounded annually (net of investment expense)	7.65%	7.65%	7.65%
Projected salary increases			
General Wage Growth*	3.50%	3.50%	3.50%
Merit	0% - 4.8%	None	0% - 6.3%
*Includes inflation at	2.75%	2.75%	2.75%
Administrative Expenses as a Percentage of Payroll[3]	0.26%	0.17%	0.27%
Benefit Adjustments			
GABA	3% if hired prior to July 1, 2007; or 1.5% if hired between July 1, 2007 and June 30, 2013; or 9% to 1.5% if hired on or after July 1, 2013; after 1 year	3% after 1 yr	3% after 2 year or 1.5% after 3 years if hired on or after July 1, 2013
Non-GABA	N/A	Biennial increase to salary of active member in like position	2% per yr service, not to exceed 5%, for probationary officer's base pay

[1] The unfunded actuarial liability in the PERS, HPORS and GWPORS do not amortize in 30 years.
[2] Assets are larger than the past service liability – creating an unfunded credit; the credit is amortized over future costs.
[3] The administrative expenses are recognized by an additional amount added to the normal cost contribution rate for the System. This amount varies from year to year based on the prior year's actual administrative expenses.

SRS	GWPORS	MPORS	FURS	VFCA
June 30, 2018	June 30, 2018	June 30, 2018	June 30, 2018	June 30, 2018
Entry Age	Entry Age	Entry Age	Entry Age	Entry Age
Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percent of inflation, open
21	72	20	10	5
				Based on Current Revenue
4-Year smoothed market	4-Year smoothed market	4-Year smoothed market	4-Year smoothed market	4-Year smoothed market
7.65%	7.65%	7.65%	7.65%	7.65%
3.50%	3.50%	3.50%	3.50%	N/A
0% - 6.3%	0% - 6.3%	0% - 6.6%	0% - 6.3%	N/A
2.75%	2.75%	2.75%	2.75%	N/A
0.23%	0.23%	0.23%	0.25%	$70,586
3% or 1.5% for new hires on or after July 1, 2007, after 1 year	3% or 1.5% for new hires on or after July 1, 2007, after 1 year	3% after 1 yr	3% after 1 yr	N/A
N/A	N/A	50% newly confirmed officer	50% newly confirmed officer	N/A

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Employer and Non-Employer (State) Contributions

for Cost-Sharing Multiple-Employer Plans

as of June 30, 2018

(in thousands)

Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
PERS-DBRP					
Actuarially Determined Contribution	**$ 141,310**	$ 132,295	$ 133,128	$ 131,424	$ 137,681
Contributions in Relation to the					
Actuarially Determined Contribution					
Employer Contributions[2, 4]	**106,651**	103,537	102,328	100,176	95,820
Non-Employer Contributions (State)	**34,659**	28,758	30,800	34,467	34,562
Total Contributions	**$ 141,310**	$ 132,295	$ 133,128	$ 134,643	$ 130,382
Contribution Deficiency / (Excess)	**$ 0**	$ 0	$ 0	$ (3,219)	$ 7,299
Covered Payroll[3]	**$ 1,230,105**	$ 1,232,067	$ 1,185,646	$ 1,154,867	$ 1,120,266
Contributions as a Percentage of					
Covered Payroll[3]	**11.49%**	10.74%	11.23%	11.66%	11.64%
SRS					
Actuarially Determined Contribution	**$ 10,366**	$ 10,095	$ 8,640	$ 9,737	$ 9,779
Contributions in Relation to the					
Actuarially Determined Contribution					
Employer Contributions[2]	**10,366**	7,562	7,317	6,902	6,689
Non-Employer Contributions (State)					
Total Contributions	**$ 10,366**	$ 7,562	$ 7,317	$ 6,902	$ 6,689
Contribution Deficiency / (Excess)	**$ 0**	$ 2,533	$ 1,323	$ 2,835	$ 3,090
Covered Payroll	**$ 77,587**	$ 74,581	$ 70,593	$ 68,046	$ 64,673
Contributions as a Percentage of					
Covered Payroll	**13.36%**	10.14%	10.36%	10.14%	10.34%

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.
[2] Employer consists of the Employer, Membership Fees, Reduction in Force Program and Miscellaneous Revenue.
[3] The fiscal year 2014 covered payroll of PERS-DBRP has been re-stated due to the transfer of compensation from the PERS-DBRP to the PERS-DCRP. This also affected the dollar amount of the Actuarially Determined Contribution (ADC) because it was determined as a percentage of payroll.
[4] The PERS-DBRP amounts will not tie to the financial statements due to the exclusion of the PERS-DB Education (DB Ed) amount on this schedule.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Employer and Non-Employer (State) Contributions

for Cost-Sharing Multiple-Employer Plans

as of June 30, 2018

(in thousands)

Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
GWPORS					
Actuarially Determined Contribution	**$ 5,213**	$ 5,495	$ 4,707	$ 5,256	$ 4,976
Contributions in Relation to the					
Actuarially Determined Contribution					
Employer Contributions[2]	**4,613**	4,464	4,278	4,088	3,762
Non-Employer Contributions (State)					
Total Contributions	**$ 4,613**	$ 4,464	$ 4,278	$ 4,088	$ 3,762
Contribution Deficiency / (Excess)	**$ 600**	$ 1,031	$ 429	$ 1,168	$ 1,214
Covered Payroll	**$ 50,823**	$ 49,381	$ 47,108	$ 44,885	$ 41,637
Contributions as a Percentage of					
Covered Payroll	**9.08%**	9.04%	9.08%	9.11%	9.04%
MPORS					
Actuarially Determined Contribution	**$ 23,598**	$ 21,052	$ 20,679	$ 17,229	$ 17,922
Contributions in Relation to the					
Actuarially Determined Contribution					
Employer Contributions[2]	**7,758**	7,091	6,928	6,630	6,459
Non-Employer Contributions (State)	**15,840**	13,961	13,751	13,433	13,049
Total Contributions	**$ 23,598**	$ 21,052	$ 20,679	$ 20,063	$ 19,508
Contribution Deficiency / (Excess)	**$ 0**	$ 0	$ 0	$ (2,834)	$ (1,586)
Covered Payroll	**$ 52,036**	$ 48,604	$ 47,234	$ 45,736	$ 44,427
Contributions as a Percentage of					
Covered Payroll	**45.35%**	43.31%	43.78%	43.87%	43.91%

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

[2] *Employer consists of the Employer, Membership Fees, Reduction in Force Program and Miscellaneous Revenue.*

Public Employees’ Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Employer and Non-Employer (State) Contributions

for Cost-Sharing Multiple-Employer Plans

as of June 30, 2018

(in thousands)

Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
FURS					
Actuarially Determined Contribution	**$ 23,181**	$ 20,938	$ 20,133	$ 13,279	$ 13,699
Contributions in Relation to the					
Actuarially Determined Contribution					
Employer Contributions[2]	**7,053**	6,500	6,163	6,100	6,007
Non-Employer Contributions (State)	**16,128**	14,438	13,970	13,573	12,767
Total Contributions	**$ 23,181**	$ 20,938	$ 20,133	$ 19,673	$ 18,774
Contribution Deficiency / (Excess)	**$ 0**	$ 0	$ 0	$ (6,394)	$ (5,075)
Covered Payroll	**$ 47,935**	$ 45,208	$ 43,119	$ 41,627	$ 39,892
Contributions as a Percentage of Covered Payroll	**48.36%**	46.32%	46.69%	47.26%	47.06%
VFCA					
Actuarially Determined Contribution	**$ 2,212**	$ 2,065	$ 2,037	$ 890	$ 1,116
Contributions in Relation to the					
Actuarially Determined Contribution			2,036	1,913	1,818
Employer Contributions					
Non-Employer Contributions (State)	**2,212**	2,065			
Total Contributions	**$ 2,212**	$ 2,065	$ 2,036	$ 1,913	$ 1,818
Contribution Deficiency / (Excess)	**$ 0**	$ 0	$ 1	$ (1,023)	$ (702)
Covered Payroll	**N/A**	N/A	N/A	N/A	N/A
Contributions as a Percentage of Covered Payroll	**N/A**	N/A	N/A	N/A	N/A

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.
[2] Employer consists of the Employer, Membership Fees, Reduction in Force Program and Miscellaneous Revenue.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to the Required Supplementary Information

The information presented in the GASB Statement No. 67 required supplementary schedules was determined as part of the actuarial valuations for accounting purposes at the dates indicated.

Valuation date: June 30, 2017

Key Methods and Assumptions Used to Determine the Actuarially Determined Contribution (ADC) for fiscal year end 2018:

Timing	ADC are determined on the valuation date payable in the fiscal year beginning immediately following the valuation date
Actuarial cost method	Entry age Normal
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	4-year smoothed market
Wage Inflation	3.50%
Inflation	2.75%
Salary increases	3.50%, including inflation
Investment rate of return	7.65%, net of pension plan investment expense, including inflation
Mortality (Healthy)	RP 2000 Combined Employee and Annuitant Mortality Table Projected to 2020 using Scale BB, set back one year for males.
Mortality (Disabled)	RP-2000 Combined Employee and Annuitant Mortality Table with no projections.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Employer Contributions

for Single-Employer Plans

as of June 30, 2018

(in thousands)

Last 10 Fiscal Years[1]

Fiscal Year	2018	2017	2016	2015	2014
JRS[2]					
Actuarially Determined Contribution					
Contributions in Relation to the					
Actuarially Determined Contribution:					
Employer Contributions[3]	**$ 1,085**	$ 1,800	$ 1,807	$ 1,684	$ 1,651
Total Contributions	**$ 1,085**	$ 1,800	$ 1,807	$ 1,684	$ 1,651
Contribution Deficiency / (Excess)	**$ (1,085)**	$ (1,800)	$ (1,807)	$ (1,684)	$ (1,651)
Covered Payroll	**$ 7,291**	$ 6,974	$ 6,920	$ 6,525	$ 6,355
Contributions as a Percentage of					
Covered Payroll	**14.88%**	25.81%	26.11%	25.81%	25.98%
HPORS[2]					
Actuarially Determined Contribution	**$ 6,530**	$ 6,045	$ 6,158	$ 5,706	$ 6,121
Contributions in Relation to the					
Actuarially Determined Contribution:					
Employer Contributions[3, 4]	**6,109**	6,045	6,158	5,839	5,736
Total Contributions	**$ 6,109**	$ 6,045	$ 6,158	$ 5,839	$ 5,736
	$ 421	$ 0	$ 0	$ (133)	$ 385
Covered Payroll	**$ 15,251**	$ 14,779	$ 15,276	$ 14,549	$ 14,149
Contributions as a Percentage of					
Covered Payroll	**40.05%**	40.90%	40.31%	40.13%	40.54%

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

[2] **Notes to Schedule**

Valuation date: June 30, 2017

Key Methods and Assumptions Used to Determine the Actuarially Determined Contribution (ADC) for fiscal year end 2018:

Timing	ADC is determined on the actuarial valuation date payable in the fiscal year beginning immediately following the valuation date
Actuarial cost method	Entry age Normal
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	4-year smoothed market
Wage Inflation	3.50%
Inflation	2.75%
Salary increases	3.50%, including inflation
Investment rate of return	7.65%, net of pension plan investment expense, including inflation
Mortality (Healthy)	RP-2000 Combined Employee and Annuitant Mortality Tables Projected to 2020 using Scale BB, set back one year for males
Mortality (Disabled)	RP-2000 Combined Employee and Annuitant Mortality Table

[3] Employer consists of the Employer, Membership Fees, Reduction in Force Program and Miscellaneous Revenue.

[4] For fiscal year 2014, the HPORS contributions for the supplemental benefit payment were classified as a non-employer contribution. It has been determined that the supplemental contribution should be classified as an employer contribution.

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Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Investment Returns for Multiple-Employer Plans

as of June 30, 2018

Last 10 Fiscal Years[1]

	Year Ended June 30	PERS-DBRP	SRS	GWPORS
Annual money-weighted rate of return, net investment expense				
	2018	**8.88%**	**8.83%**	**8.82%**
	2017	11.94%	11.96%	11.97%
	2016	2.04%	2.05%	2.09%
	2015	4.60%	4.59%	4.59%
	2014	17.18%	17.15%	17.12%

	Year Ended June 30	MPORS	FURS	VFCA
Annual money-weighted rate of return, net investment expense				
	2018	**8.86%**	**8.85%**	**8.97%**
	2017	11.92%	11.93%	11.89%
	2016	2.18%	2.19%	1.85%
	2015	4.66%	4.66%	4.63%
	2014	17.16%	17.15%	17.23%

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Investment Returns for Single-Employer Plans

as of June 30, 2018

Last 10 Fiscal Years[1]

	Year Ended June 30	JRS	HPORS
Annual money-weighted rate of return, net investment expense			
	2018	**8.87%**	**8.89%**
	2017	11.96%	11.92%
	2016	2.03%	2.02%
	2015	4.60%	4.61%
	2014	17.17%	17.19%

[1] This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Total OPEB (Healthcare) Liability and Related Ratios, Last Ten Fiscal Years[1]

Fiscal Year		2018
Total OPEB Liability		
Service cost	$	27,891
Interest		29,728
Changes of benefit terms		
Difference between expected and actual experience		(69,725)
Changes of assumptions or other inputs		(4,363)
Benefit payments		25,170
Net change in total OPEB liability	$	8,701
Total OPEB liability - Beginning		76,094
Total OPEB liability - Ending	$	84,795
Proportionate Share of Total OPEB Liability		0.16805%
Covered employee payroll	$	3,703,606
Total OPEB liability as a percentage of covered employee payroll		2.29%

[1] Schedules are intended to present information for 10 years. Additional years will be displayed as they become available.

In accordance with GASB Statement No. 75, the above information is presented to reflect the funding progress of the Healthcare OPEB Plan for MPERA as a State of Montana employer and is determined by the State of Montana. No assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement No. 75.

Factors that significantly affect trends in the amounts reported:
Changes of benefit terms, the medical plan coverage moved from Cigna to Allegiance as of January 1, 2016, the State implemented reference-based pricing hospital contracts effect July 1, 2016, the pharmacy plan moved from URx to Navitus as of January 1, 2017, and the State implemented an employer group waiver program for Medicare retirees effective January 1, 2017.

At June 30, 2018, the most recent actuarial valuation available was performed by the State of Montana as of January 1, 2017 for the calendar year ending December 31, 2017. This actuarial valuation is performed every two years with the next valuation to be performed as of January 1, 2019 for the calendar year ending December 31, 2019. The State of Montana finances claims on a pay-as-you-go basis and does not advance fund the OPEB liability. This is the OPEB obligation for MPERA as a State of Montana employer and is determined by the State of Montana.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to Required Supplementary Information for OPEB (Healthcare)

Actuarial valuation date	December 31, 2017
Actuarial measurement date[1]	March 31, 2018
Actuarial cost method	Entry age normal funding method
Amortization method	Open basis
Remaining amortization period	20 years
Asset valuation method	Not applicable because no assets meeting the definition of plan assets under GASB 75
Actuarial assumptions:	
Discount rate	3.89%
Projected payroll increases	4.00%
Participation:	
Future retirees	55.00%
Future eligible spouses	60.00%
Marital status at retirement	70.00%

[1] Update procedures were used to roll forward the total OPEB liability to the measurement date.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Administrative Expenses

Year Ended June 30, 2018

	Defined Benefit Plans	PERS-DBRP Education Fund	Defined Contribution PERS-DCRP	Deferred Compensation (457) Plan
Personal Services	$ 1,858,750	$ 467,876	$ 275,281	$ 143,350
Board Members' Per Diem	2,408		224	168
Employee Benefits	636,063	187,569	90,045	44,672
Total Personal Services	2,497,221	655,445	365,550	188,190
Other Services				
Consulting and Professional Services	2,274,767		223,757	241,913
Legal Fees and Court Costs	57,385		245	240
Audit Fees	103,506		9,628	7,221
Medical Services	6,691		279	
Records Storage	4,996		465	349
Computer Processing	186,941	699	10,916	4,116
Printing and Photocopy Charges	17,311	1,447	815	2,943
Warrant Writing Services	50,898			3,551
Other	284,322	7,600	28,938	15,361
Total Other Services	2,986,817	9,746	275,043	275,694
Communications				
Recruitment Costs				
Postage and Mailing	59,562	976	1,315	11,432
Telephone	44,920	10,596	5,749	3,284
Total Communications	104,482	11,572	7,064	14,716
Other Expenses				
Supplies and Materials	78,002	15,251	9,463	6,072
Travel	16,171	5,193	4,080	3,114
Rent	208,374	53,622	27,351	15,300
Repairs and Maintenance	329	87	44	24
Compensated Absences	(61,606)	(5,350)	(1,981)	3
OPEB Expenses	35,642	11,672	5,101	2,506
Miscellaneous	635,798	34,219	62,572	59,575
Total Other Expenses	912,710	114,694	106,630	86,594
Total Administrative Expenses	**$ 6,501,230**	**$ 791,457**	**$ 754,287**	**$ 565,194**

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Investment Expenses

Year Ended June 30, 2018

Plan	Investment Manager	Fees	
PERS-DBRP	Board of Investments	$	35,238,061
PERS-DCRP DISABILITY OPEB	Board of Investments		15,654
JRS	Board of Investments		624,393
HPORS	Board of Investments		903,088
SRS	Board of Investments		2,159,057
GWPORS	Board of Investments		1,156,845
MPORS	Board of Investments		2,450,041
FURS	Board of Investments		2,531,506
VFCA	Board of Investments		227,347
DC	PIMCO		29,723
	State Street Bank		2,307
	Transamerica		10,038
	Prudential		10,058
	Voya		10,564
457	PIMCO		456,922
	State Street Bank		35,489
	Transamerica		154,373
	Prudential		154,675
	Voya		162,460
Total Investment Expense		**$**	**46,332,601**

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Professional/Consultant Fees

Year Ended June 30, 2018

Individual or Firm	Nature of Service	Amount Paid	
Consultant Fees			
Agamenon & Frank Court Reporting	Court Reporting Services	$	150
Cavanaugh Macdonald Consulting	Actuarial Audit		258,510
Cheryl Romsa	Court Reporting Services		192
CMS Communication and Management	HR Consulting		8,193
Conduent	Mutual Funds Performance Review		96,000
Department of Administration	Risk Data Management Services		2,097
Government Finance Officers Assoc.	CAFR Review		1,095
Ice Miller	Tax Consultants		25,269
Lexis Nexis	Risk Data Management Services		360
Pension Benefit Information, LLC	Death Validation Services		3,500
Public Pension Coordinating Council	Pension Standards Award		100
Sagitec Solutions, LLC	Pension Systems Design		2,344,824
Stephen T Schmitz	Litigation Services		147
Consultant Fees Subtotal			2,740,437
Other Professional Fees			
Dean Gregg, PHD	Medical Consultant		325
Department of Justice	Legal Services		11,861
Legislative Audit Division	Independent Auditors		120,355
Timothy D. Schofield, MD PLLC	Medical Consultant		5,480
Other Professional Fees Subtotal			138,021
Total Professional/Consultant Fees		$	2,878,458

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Public Employees' Retirement Board

A Component Unit of the State of Montana

Detail of Fiduciary Net Position (PERS-DBRP and PERS-DBEd)

as of June 30, 2018

	PERS-DBRP	PERS-DBEd	TOTAL
Assets			
Cash and Short-term Investments	$ 151,567,601	$ 2,656,650	$ 154,224,251
Securities Lending Collateral	36,792,892		36,792,892
Receivables			
Interest	209,546	4,446	213,992
Accounts Receivables	4,382,659	15,480	4,398,139
Due from Other Funds	672,567		672,567
Due from Primary Government			
Notes Receivable	15,952		15,952
Total Receivables	5,280,724	19,926	5,300,650
Investments, at fair value			
CAPP Participant Pool	5,652,705,617		5,652,705,617
Total Investments	5,652,705,617		5,652,705,617
Capital Assets			
Property and Equipment, at cost,			
net of Accumulated Depreciation	23,288	1,416	24,704
Intangible Assets at cost,			
net of amortization expense	1,398,370		1,398,370
Total Capital Assets	1,421,658	1,416	1,423,074
Total Assets	5,847,768,492	2,677,992	5,850,446,484
Deferred Outflow of Resources	2,032	666	2,698
Liabilities			
Securities Lending Liability	36,792,892		36,792,892
Accounts Payable	30,211,302	35,116	30,246,418
Unearned Revenue	352,570	120	352,690
Due to Other Funds			
Compensated Absences	315,865	44,811	360,676
OPEB Implicit Rate Subsidy LT	55,444	18,157	73,601
Total Liabilities	67,728,073	98,204	67,826,277
Deferred Inflow of Resources	48,443	15,864	64,307
Net Position Restricted for Pension Benefits	**$ 5,779,994,008**	**$ 2,564,590**	**$ 5,782,558,598**

Public Employees' Retirement Board

A Component Unit of the State of Montana

Detail of Changes in Fiduciary Net Position (PERS-DBRP and PERS-DBEd)

for the Fiscal Year Ended June 30, 2018

	PERS-DBRP	PERS-DBEd	TOTAL
Additions			
Contributions			
Employer	$ 106,121,985	$ 491,096	$ 106,613,081
Plan Member	101,993,235		101,993,235
Interest Reserve Buyback	82,036		82,036
Retirement Incentive Program	2,068		2,068
Miscellaneous Revenue	526,932		526,932
State Contributions	1,024,328		1,024,328
State Appropriations	33,634,846		33,634,846
Total Contributions	243,385,430	491,096	243,876,526
Investment Income			
Net Appreciation (Depreciation)			
in Fair Value of Investments	511,205,902	(286)	511,205,616
Interest	2,056,228	40,727	2,096,955
Dividends			
Investment Expense	(35,238,061)		(35,238,061)
Net Investment Income	478,024,069	40,441	478,064,510
Securities Lending Income			
Securities Lending Income	1,108,711		1,108,711
Securities Lending Rebate and Fees	(442,424)		(442,424)
Net Securities Lending Income	666,287		666,287
Total Net Investment Income	478,690,356	40,441	478,730,797
Total Additions	722,075,786	531,537	722,607,323
Deductions			
Benefits	395,338,673		395,338,673
Refunds/Distributions	12,619,498		12,619,498
Refunds to Other Plans	725,998		725,998
Transfers to MUS-RP	198,062		198,062
Transfers to DCRP	2,068,870		2,068,870
OPEB Expenses	37,675	12,338	50,013
Administrative Expenses	4,168,771	779,119	4,947,890
Total Deductions	415,157,547	791,457	415,949,004
Net Increase (Decrease)	306,918,239	(259,920)	306,658,319
Net Position Restricted for Pension Benefits			
Beginning of Year	**5,472,598,205**	**2,774,146**	**5,475,372,351**
Prior Year Adjustments	**477,564**	**50,364**	**527,928**
End of Year	**$ 5,779,994,008**	**$ 2,564,590**	**$ 5,782,558,598**

Public Employees' Retirement Board

A Component Unit of the State of Montana

Detail of Fiduciary Net Position (PERS-DCRP, PERS-DCEd)

as of June 30, 2018

	PERS-DCRP	PERS-DCEd	TOTAL
Assets			
Cash and Short-term Investments	$ 1,828,014	$ 178,929	**$ 2,006,943**
Securities Lending Collateral			
Receivables			
Interest	1,795	295	**2,090**
Accounts Receivables	300,050	3,887	**303,937**
Due from Other Funds			
Total Receivables	301,845	4,182	**306,027**
Investments, at fair value			
Defined Contributions Fixed Investments	14,995,719		**14,995,719**
Defined Contributions Variable Investments	210,638,214		**210,638,214**
Total Investments	225,633,933		**225,633,933**
Property and Equipment, at cost,			
net of Accumulated Depreciation (Note A2)	2,831	202	**3,033**
Intangible Assets at cost,			
net of amortization expense	334,082		**334,082**
Total Capital Assets	336,913	202	**337,115**
Total Assets	228,100,705	183,313	**228,284,018**
Deferred Outflow of Resources	204	71	**275**
Liabilities			
Securities Lending Liability			
Accounts Payable	426,224	3,784	**430,008**
Unearned Revenue	2,056	58	**2,114**
Compensated Absences	49,069	5,537	**54,606**
OPEB Implicit Rate Subsidy LT	5,554	1,953	**7,507**
Total Liabilities	482,903	11,332	**494,235**
Deferred Inflow of Resources	4,853	1,706	**6,559**
Net Position Restricted for Pension Benefits	**$ 227,613,153**	**$ 170,346**	**$ 227,783,499**

Public Employees' Retirement Board

A Component Unit of the State of Montana

Detail of Changes in Fiduciary Net Position (PERS-DCRP, PERS-DCEd)

for the Fiscal Year Ended June 30, 2018

	PERS-DCRP	PERS-DCEd	TOTAL
Additions			
Contributions			
Employer	$ 11,888,727	$ 64,100	$ 11,952,827
Plan Member	12,447,453		12,447,453
Miscellaneous Revenue	108,127		108,127
Nonvested Member Forfeitures	746,144		746,144
Total Contributions	25,190,451	64,100	25,254,551
Investment Income			
Net Appreciation (Depreciation)			
in Fair Value of Investments	12,784,049		12,784,049
Interest	6,878,013	2,694	6,880,707
Investment Expense	(62,690)		(62,690)
Net Investment Income	19,599,372	2,694	19,602,066
Securities Lending Income			
Securities Lending Income			
Securities Lending Rebate and Fees			
Net Securities Lending Income			
Total Net Investment Income	19,599,372	2,694	19,602,066
Total Additions	44,789,823	66,794	44,856,617
Deductions			
Distributions	9,746,223		9,746,223
OPEB Expenses	3,774	1,327	5,101
Administrative Expenses	665,872	83,314	749,186
Miscellaneous Expenses	266,540		266,540
Total Deductions	10,682,409	84,641	10,767,050
Net Increase (Decrease)	34,107,414	(17,847)	34,089,567
Net Position Restricted for Pension Benefits			
Beginning of Year	**193,449,652**	**182,919**	**193,632,571**
Prior Year Adjustments	**56,087**	**5,274**	**61,361**
End of Year	**$ 227,613,153**	**$ 170,346**	**$ 227,783,499**

Report on Internal Control and Compliance

LEGISLATIVE AUDIT DIVISION

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

Deputy Legislative Auditors
Cindy Jorgenson
Joe Murray

Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

The Legislative Audit Committee
of the Montana State Legislature:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to the financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Public Employees' Retirement Board, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the board's basic financial statements, and have issued our report thereon dated December 14, 2018.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the board's internal control over financial reporting to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the board's internal control. Accordingly, we do not express an opinion on the effectiveness of the board's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal controls was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the board's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*. The identified instances of noncompliance are described below:

The board administers eight defined benefit retirement systems. The Montana Constitution and state law require all retirement systems to be actuarially sound; meaning the retirement system must amortize in 30 years or less. The actuarial valuations as of June 30, 2018, indicate the Games Wardens' and Peace Officers' Retirement System, Highway Patrol Officers' Retirement System, and Public Employees' Defined Benefit Retirement Plan are not actuarially sound as they amortize in 72, 40, and 38 years, respectively.

Public Employee's Retirement Board Response to Findings

The board's response to the findings identified in our audit are described on page C-1 of this report. The board's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the board's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the board's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Respectfully submitted,

/s/ Cindy Jorgenson

Cindy Jorgenson, CPA
Deputy Legislative Auditor
Helena, MT

December 14, 2018

Public Employees' Retirement Board

Board Response

MONTANA PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION

STEVE BULLOCK
GOVERNOR

DORE SCHWINDEN
EXECUTIVE DIRECTOR

STATE OF MONTANA

HELENA (406) 444-3154
TOLL FREE (877) 275-7372
FAX (406) 444-5428

100 N PARK, STE 200
PO BOX 200131
HELENA MT 59620-0131
mpera.mt.gov

January 3, 2019

Angus Maciver, Legislative Auditor
Legislative Audit Division
State Capitol, Room 160
Helena, MT 59620

Dear Mr. Maciver:

The Montana Public Employee Retirement Administration (MPERA) has reviewed the financial audit report for fiscal year 2018. We are pleased with the findings of the report and will work hard to continue to provide the highest quality service possible to our members.

We understand the report has no current recommendations; however, it does address the actuarial soundness of the Public Employees' Retirement System (PERS), Highway Patrol Officers' Retirement System (HPORS), and the Game Wardens' and Peace Officers' Retirement System (GWPORS).

As you are aware and as constitutionally required by Article VIII § 15 of the Montana Constitution, MPERA and the MPERB monitors and confronts all defined benefit plan funding shortfalls and recommends funding legislation when necessary for plans that will not amortize within 30 years. MPERA, on behalf of the MPERB, is monitoring closely the funding status of both PERS and HPORS without bringing forth specific funding legislation for either system during the 66th Legislative Session. This decision is based upon the expert opinion furnished to MPERA and MPERB by its actuary, Cavanaugh Macdonald Consulting LLC, during the most recent valuation for each system. More specifically, based upon the advice and opinion of MPERA's actuary, MPERA and the MPERB expect actuarial gains on investments for each system in future fiscal years. As such, as long as the adopted actuarial assumptions of the MPERB are met for each of these systems during these years, the future valuations of PERS and HPORS are set to recognize more actuarial gains than losses. It is therefore the belief of MPERA and the MPERB that these gains will result in each system amortizing in less than 30 years in the near term without the need for the passage of additional funding legislation.

In order to address the actuarial unsoundness of GWPORS, and after working closely with plan stakeholders throughout the legislative interim, MPERA will be introducing LC0468 during the 66th Legislative Session to increase the funding status and overall actuarial soundness of the GWPORS system. If passed and signed into law, the provisions of this bill will increase contributions for GWPORS employers by 2% and will decrease the amortization period of the system from 72 years to 23 years.

Regards,

Dore Schwinden
Executive Director