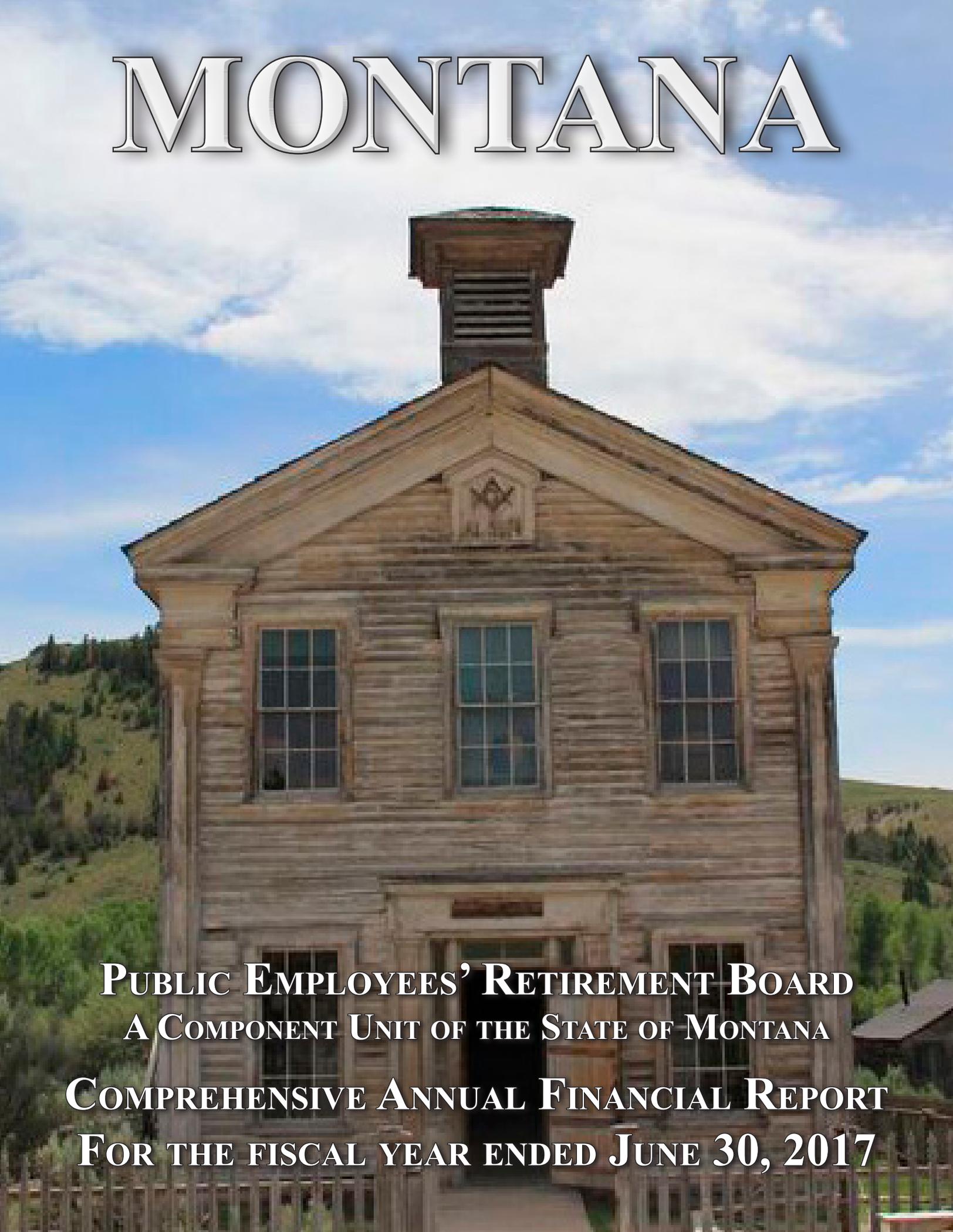


MONTANA



PUBLIC EMPLOYEES' RETIREMENT BOARD
A COMPONENT UNIT OF THE STATE OF MONTANA

COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR THE FISCAL YEAR ENDED JUNE 30, 2017

STATE OF MONTANA
Public Employees' Retirement Board
A Component Unit of the State of Montana
Comprehensive Annual Financial Report



For the Fiscal Year Ended
June 30, 2017

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

Public Employees' Retirement System - Defined Contribution Retirement Plan

Deferred Compensation (457) Plan

Public Employees' Retirement System - DCRP Disability OPEB

Prepared By:
The Fiscal Services Bureau
Public Employee Retirement Administration
100 North Park, Suite 200 ~ PO Box 200131
Helena, MT 59620-0131
(406) 444-3154

Table of Contents

Introductory Section

Letter of Transmittal	5
Public Employees' Retirement Board.....	12
Montana Public Employee Retirement Administration Organizational Chart	13
Legislative Update	14

Financial Section

Independent Auditor's Report.....	19
Management's Discussion & Analysis	22
Basic Financial Statements:	
<i>Statement of Fiduciary Net Position - Pension Trust Funds</i>	40
<i>(The notes to the financial statements are an integral part of this statement)</i>	
<i>Statement of Changes in Fiduciary Net Position - Pension Trust Funds</i>	42
<i>(The notes to the financial statements are an integral part of this statement)</i>	
<i>Notes to the Financial Statements</i>	44
Required Supplementary Information:	
Schedule of Changes in Multiple-Employer Plans Net Pension Liability/(Asset)	96
Schedule of Changes in Single-Employer Plans Net Pension Liability/(Asset).....	99
Schedule of Net Pension Liability/(Asset) for Multiple-Employer Plans	100
Schedule of Net Pension Liability/(Asset) for Single-Employer Plans	102
Notes to Required Supplementary Information	104
Schedule of Employer and Non-Employer (State) Contributions for Cost-Sharing Multiple-Employer Plans.....	106
Notes to Required Supplementary Information.....	109
Schedule of Employer and Non-Employer (State) Contributions for Single-Employer Plans	110
Schedule of Investment Returns for Multiple-Employer Plans	112
Schedule of Investment Returns for Single-Employer Plans.....	113
Schedule of Funding Progress for OPEB (Healthcare)	114
Notes to Required Supplementary Information for OPEB (Healthcare)	115
Supporting Schedules:	
Schedule of Administrative Expenses	116
Schedule of Investment Expenses	117
Schedule of Professional/Consultant Fees.....	118
Detail of Fiduciary Net Position (PERS-DBRP and PERS-DBEd)	120
Detail of Changes in Fiduciary Net Position (PERS-DBRP and PERS-DBEd)	121
Detail of Fiduciary Net Position (PERS-DCRP and PERS-DCEd)	122
Detail of Changes in Fiduciary Net Position (PERS-DCRP and PERS-DCEd)	123

Investment Section

Board of Investments' Investment Letter	125
Report on Investment Activity	127
Total Rates of Annualized Returns by Asset Class	128
Schedules of Asset Mix	136
Schedule of Largest Holdings.....	144
Investment Summary	150

Actuarial Section

Actuary's Certification.....	155
Summary of Actuarial Assumptions and Methods	159
Schedule of Active Member Valuation Data	166
Schedule of Active Member Composition.....	168
Schedule of Retiree Member Composition.....	169
Schedule of Beneficiary Member Composition.....	170
Schedule of Disabled Member Composition.....	171
Schedule of Converted Disabled Member Composition.....	172
Schedule of Retirees and Beneficiaries Added to and Removed from Rolls.....	174
Solvency Test.....	176
Schedule of Funding Progress	179
Summary of Actuarial (Gain)/Loss by Source.....	182
Summary of Defined Benefit Retirement Plans' Provisions as of June 30, 2017.....	184

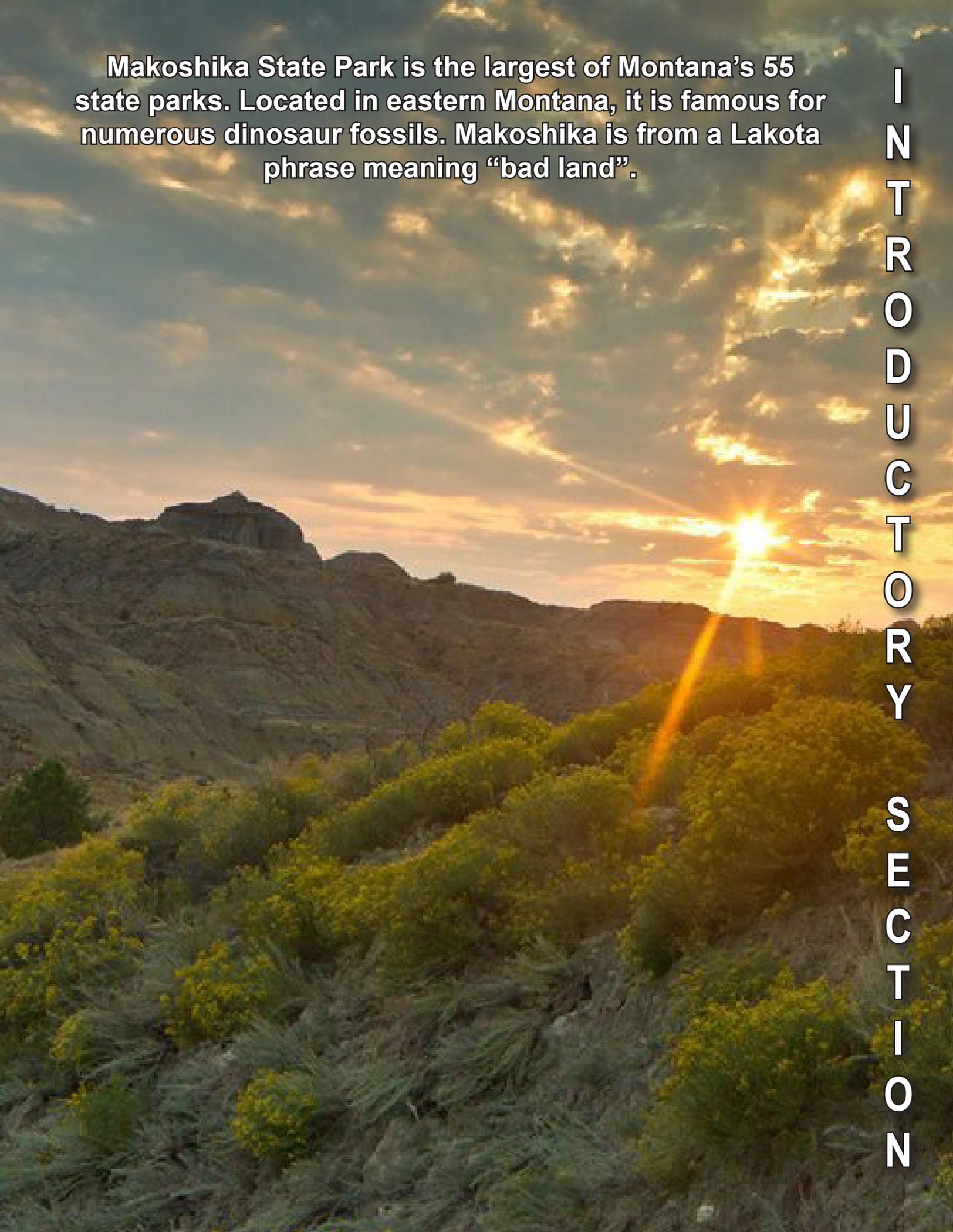
Statistical Section

Summary of Statistical Data	215
Changes in Fiduciary Net Position, Last Ten Fiscal Years	216
History of Actuarial Liabilities	225
Schedule of Fair Values by Type of Investment, Last Ten Fiscal Years	228
Schedule of Contribution Rate History.....	237
History of Membership in Retirement Plans, Last Ten Fiscal Years	240
Schedule of Benefit Expenses and Refunds by Type, Last Ten Fiscal Years.....	244
Schedule of Distributions Processed, Last Ten Fiscal Years	248
Schedule of Retired Members by Type of Benefit.....	250
Schedule of Active Members by Age and Gender.....	256
Schedule of Retired Members by Age and Gender	257
Average Benefit Payments, Last Ten Fiscal Years.....	258
Schedule of Average Monthly Benefit Payments, All Retirees	268
Principal Participating Employers	270
Schedule of Participating Employers.....	274

Makoshika State Park is the largest of Montana's 55 state parks. Located in eastern Montana, it is famous for numerous dinosaur fossils. Makoshika is from a Lakota phrase meaning "bad land".

**I
N
T
R
O
D
U
C
T
O
R
Y

S
E
C
T
I
O
N**



Mission Statement of the PERB

The Montana Public Employees' Retirement Board, as fiduciaries, administers its retirement plans and trust funds, acting in the best interest of the members and beneficiaries.

Mission Statement of the MPERA

The Montana Public Employee Retirement Administration efficiently provides quality benefits, education and service to help our plan members and beneficiaries realize a successful retirement.

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

December 21, 2017

The Honorable Steve Bullock
Governor of Montana
Room 204, State Capitol
PO Box 200801
Helena, MT 59620-0801

Dear Governor Bullock:

The Public Employees' Retirement Board (PERB) and its staff, the Montana Public Employee Retirement Administration (MPERA), are pleased to submit this Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2017, in accordance with § 19-2-407, Montana Code Annotated. The purpose of this letter is to introduce the basic financial statements and provide an analytical overview of the trust funds' financial activities. This letter of transmittal is intended to complement the Management's Discussion and Analysis (MD&A) and the two should be read in conjunction.

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the MPERA management, which uses a comprehensive framework of internal controls to ensure such accuracy, completeness, and fairness. Because the cost of the internal control should not exceed anticipated benefits to be derived, the objective is to provide reasonable, not absolute, assurance that the financial statements are free of any material misstatements. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the fiduciary funds administered by MPERA.

For financial reporting purposes, MPERA adheres to accounting principles generally accepted in the United States of America (U.S.). MPERA applies all applicable pronouncements of the Governmental Accounting Standards Board (GASB), including the MD&A. Defined Benefit, Defined Contribution and Other Employee Benefit transactions are reported on the accrual basis of accounting. Investments are presented at fair value.

The external auditor conducted an independent audit of the basic financial statements in accordance with U.S. generally accepted auditing standards. This audit is described in the Independent Auditor's Report included in the Financial Section on page 19. Management provided the external auditors with full and unrestricted access to MPERA staff to facilitate independent validation of the integrity of the plans' financial reporting.

INTRODUCTORY SECTION

The MD&A, included in the Financial Section beginning on page 22, is a management discussion of the financial position of the retirement plans and provides an overview and analysis of the plans' basic financial statements. The Statistical Section, beginning on page 215, includes statistics regarding active and retiree membership, employer contributions, assets held, and benefits or distributions paid in accordance with the five objectives required by GASB Statement 44 - financial trends, revenue capacity, debt capacity, demographic and economic information, and operating information.

PROFILE OF THE PERB

The PERB is a fiduciary component unit Pension Trust Fund of the State of Montana financial reporting entity. For this reason, the financial statements contained in this report are also included in the State of Montana's CAFR. Fiduciary responsibility for the systems rests with the PERB, which consists of seven members, appointed by the Governor. The members are assigned five-year, staggered terms. The PERB is required to approve a final budget before the beginning of the fiscal year. The MPERA management develops the budget for all plans administered and presents it to the PERB. 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. Costs for the PERB to administer the defined contribution plans are also defined in statute and the funding is provided by the fees assessed on account balances. The budget is monitored throughout the year and updates are provided to the PERB.

The PERB oversees ten separate retirement plans and one Other Post Employment Benefit (OPEB) plan, each reported in this CAFR. There are nine defined benefit retirement plans including the Public Employees' Retirement System-Defined Benefit Retirement Plan (PERS-DBRP) in its 72nd year of operation, the Judges' Retirement System (JRS), the Highway Patrol Officers' Retirement System (HPORS), the Sheriffs' Retirement System (SRS), the Game Wardens' and Peace Officers' Retirement System (GWORS), the Municipal Police Officers' Retirement System (MPORS), the Firefighters' Unified Retirement System (FURS), and the Volunteer Firefighters' Compensation Act (VFCA). The Public Employees' Retirement System - DCRP Disability OPEB (PERS-DCRP Disability OPEB) was statutorily-created through § 19-3-2141, MCA, and is completely separate from the other defined benefit plans. The PERS-DCRP Disability OPEB is self-insured and provides a defined benefit disability payment for disabled members of the PERS-DCRP.

The two defined contribution retirement plans are the Public Employees' Retirement System-Defined Contribution Retirement Plan (PERS-DCRP) and the Deferred Compensation (457(b)) Plan. The PERS-DCRP was implemented July 1, 2002. New hires in PERS have the option of choosing participation in either the PERS-DBRP or PERS-DCRP within 12 months of hire. The PERB contracts with Empower™ Retirement to provide recordkeeping services for the PERS-DCRP. University employees, in positions covered by PERS, have a third retirement option: the Montana University System Retirement Program (MUS-RP) administered by the Teachers Insurance and Annuity Association (TIAA New York, NY). State and University employees, and employees of local government entities that contract with the PERB, also have the option to

INTRODUCTORY SECTION

supplement their retirement income by voluntarily participating in the Deferred Compensation (457(b)) Plan. The PERB contracts with Empower™ Retirement to provide recordkeeping services for the Deferred Compensation Plan. Participants in the Deferred Compensation Plan can elect to defer money either into a pre-tax account or an after-tax (Roth) account.

ECONOMIC CONDITION AND OUTLOOK

INVESTMENTS

The economic condition of the defined benefit plans is based primarily upon investment earnings. For fiscal year 2017, the PERS-DBRP under the new Consolidated Asset Pension Pool (CAPP) experienced a 3.03% rate of return for the three months invested in the pool (April 1, 2017 to June 30, 2017). The PERS-DBRP also experienced in the previous investment pools arrangement a 11.94% rate of return for fiscal year 2017; the average annualized rate of return for the last three years was 6.12%; for the last five years was 9.62%; and for the last ten years was 5.33%. The ten year rate of return is below the actuarial return assumption of 7.65%. The actuarial return assumption was changed from 7.75% to 7.65% as a result of the experience study performed during fiscal year 2017. The plans are required by law to be maintained on an actuarially sound basis which protects participants' future benefits. A summary of the investment activity can be found in the *Investment Section* of this CAFR on page 150.

The investment portfolio mix at fair value under the CAPP as of June 30, 2017 for the PERS-DBRP was 35.66% domestic equity, 16.93% international equity, 10.46% private equity, 2.39% cash equivalents (short-term), 24.97% domestic fixed income, 7.56% real estate, and 2.03% natural resources. See MD&A, starting on page 22, and *Investment Section*, page 125, for more detailed analysis and information. The System's investment outlook is long term, allowing the portfolio to take advantage of the favorable risk-return characteristics of domestic equities by placing more emphasis on this category.

The funded status of all the MPERA administered retirement systems decreased in fiscal year 2017, with the exception of the JRS and VFCA. JRS funded status experienced a slight increase of 0.58% from 166.48% in 2016 to 167.06% in 2017. VFCA funded status experienced a slight increase of 0.35% from 80.21% in 2016 to 80.56% in 2017. A single year's funded ratio, by itself, does not provide a measure of the funding direction. The status and funding progress of the defined benefit retirement systems can be found in the *Actuarial Section* of this report on pages 180-181 in accordance with GASB 67. The PERS-DCRP Disability OPEB schedule of funding progress can be found on page 179.

FUNDING

The primary funding objectives of the PERB for the pension trust funds are to: 1) ensure that the systems are financially sound and pay all benefits promised using assets accumulated from required employer and member contributions and investment income; and 2) achieve a well-funded status with a range of safety to absorb market volatility without creating an Unfunded Actuarial Liability (UAL). PERB's long-term goal is for all retirement systems to be 100% funded and up to 120% funded to allow a reserve in times of slow markets. The PERB's short-term goal is to obtain actuarial soundness for the systems that do not amortize in 30 years or less.

INTRODUCTORY SECTION

The information received from the annual actuarial valuation is used by the PERB to recommend funding increases or system changes or both to the Legislature to address financial sustainability. The contribution rates are statutorily set through the Legislature. The rate of the employer contributions to the Systems is composed of the normal cost, amortization of the UAL, and an allowance for administrative expenses. The allowance for the administrative expenses is based upon the average recent history of administrative expenses for each System.

Funds are accumulated to meet future benefit obligations to retirees and beneficiaries. This accumulated balance is referred to as the “net position restricted for pension benefits” in the Statement of Changes in Fiduciary Net Position – Pension Trust Funds in the *Financial Section*, page 42 of this report. The total pension liability is not reported in the basic financial statements; however, it is disclosed in Note 4 to the basic financial statements and in the required supplementary information. The total pension liability is determined by the actuary and is a measure of the present value of actuarial accrued liabilities estimated to be payable in the future to current retirees and beneficiaries. The net pension liability is measured as the total pension liability less the amount of the pension plan’s fiduciary net position. The net pension liability is an accounting measurement for financial statement purposes. The plan fiduciary net position as a percentage of the total pension liability for each System is shown in the table below. This information also appears in Note 4 to the basic financial statements and in the required supplementary information.

Plan Fiduciary Net Position as a Percentage of the Total Pension Liability			
PERS-DBRP	73.75%	GWPORS	82.48%
JRS	158.98%	MPORS	68.34%
HPORS	64.19%	FURS	77.77%
SRS	81.30%	VFCA	78.41%

ACCOMPLISHMENTS

The past fiscal year 2017 saw the implementation of MPERA’s new computer system PERIS. MPERA has been working on this project since fiscal year 2011. Along with PERIS, the employer reporting portal, ERIC, was also implemented. At this time, MPERA is just beginning to roll out the member services portal, MSS.

AWARDS

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Montana Public Employees’ Retirement Board for its comprehensive annual financial report for the fiscal year ended June 30, 2016. This was the nineteenth consecutive year that the Montana Public Employees’ Retirement Board has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government entity must publish an easily readable and efficiently organized Comprehensive Annual Financial Report. This report must satisfy both generally

INTRODUCTORY SECTION

accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe our current Comprehensive Annual Financial Report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

MPERA also received the Public Pension Coordinating Council (PPCC) Public Pension Standards Award for 2017 in recognition of meeting the professional standards for funding and plan administration set forth in the Public Pension Standards. This is the fifteenth year the PPCC is offering the PPCC Standards Award Program to public retirement systems and the twelfth time MPERA has received the PPCC award. The Public Pension Standards are intended to reflect minimum expectations for public retirement system management and administration, as well as serve as a benchmark by which all defined benefit public plans should be measured.

ACKNOWLEDGEMENTS

The compilation of this report reflects the efforts of the MPERA Fiscal Services Bureau accounting staff. This report is intended to provide complete and reliable information to facilitate the management decision process, serve as a means of determining compliance with legal provisions, and to serve as a means of determining responsible stewardship of the plans' funds. MPERA received an unmodified opinion from our independent auditors on the financial statements included in this report. This opinion provides assurance that the financial statements can be relied upon.

The reporting employers of each retirement system form the link between the plans and the members. Their cooperation contributes significantly to the success of the plans. We hope the employers and their employees find this report informative.

We would like to take this opportunity to express our gratitude to the staff, the advisors, and the many people who have worked so diligently to assure the successful operation of the plans.

Respectfully submitted,

/s/ Dore Schwinden

Dore Schwinden, Executive Director
Montana Public Employee
Retirement Administration

/s/ Hollie Koehler

Hollie Koehler, Fiscal Services Bureau Chief
Montana Public Employee
Retirement Administration



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Montana Public Employees'
Retirement Board**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2016

A handwritten signature in black ink, reading "Jeffrey R. Egan".

Executive Director/CEO



Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2017

Presented to

Montana Public Employees' Retirement Administration

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

Presented by the Public Pension Coordinating Council, a confederation of

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

A handwritten signature in black ink that reads "Alan H. Winkle". The signature is written in a cursive style with a large, prominent 'A' and 'W'.

Alan H. Winkle
Program Administrator

INTRODUCTORY SECTION

Public Employees' Retirement Board

*A Component Unit of the State of Montana
as of June 30, 2017*



Left to right: Pepper Valdez, Marty Tuttle, Sheena Wilson, Timm Twardoski, Maggie Peterson, Julie McKenna, and Mike McGinley.

Sheena Wilson, President
Helena,
PERS Retired Member
PERS Board Representative - BOI
Appointed 4/1/2013
Term Expires 3/31/2018
Email: Sheena.Wilson@mt.gov

Maggie Peterson, Vice President
Anaconda, Experience in Investment
Management
Appointed 6/5/2014
Term Expires 3/31/2019
Email: Maggie.Peterson@mt.gov

Timm Twardoski
Helena,
Member at Large
Reappointed 4/1/2016
Term Expires 3/31/2021
Email: Timm.Twardoski@mt.gov

Mike McGinley
Dillon,
Member at Large
Appointed 4/1/2013
Term Expires 3/31/2018
Email: Mike.McGinley@mt.gov

Marty Tuttle
Clancy, Active DC Plan Member
Public Employee
Appointed 7/31/2015
Term Expires 3/31/2019
Email: Marty.Tuttle@mt.gov

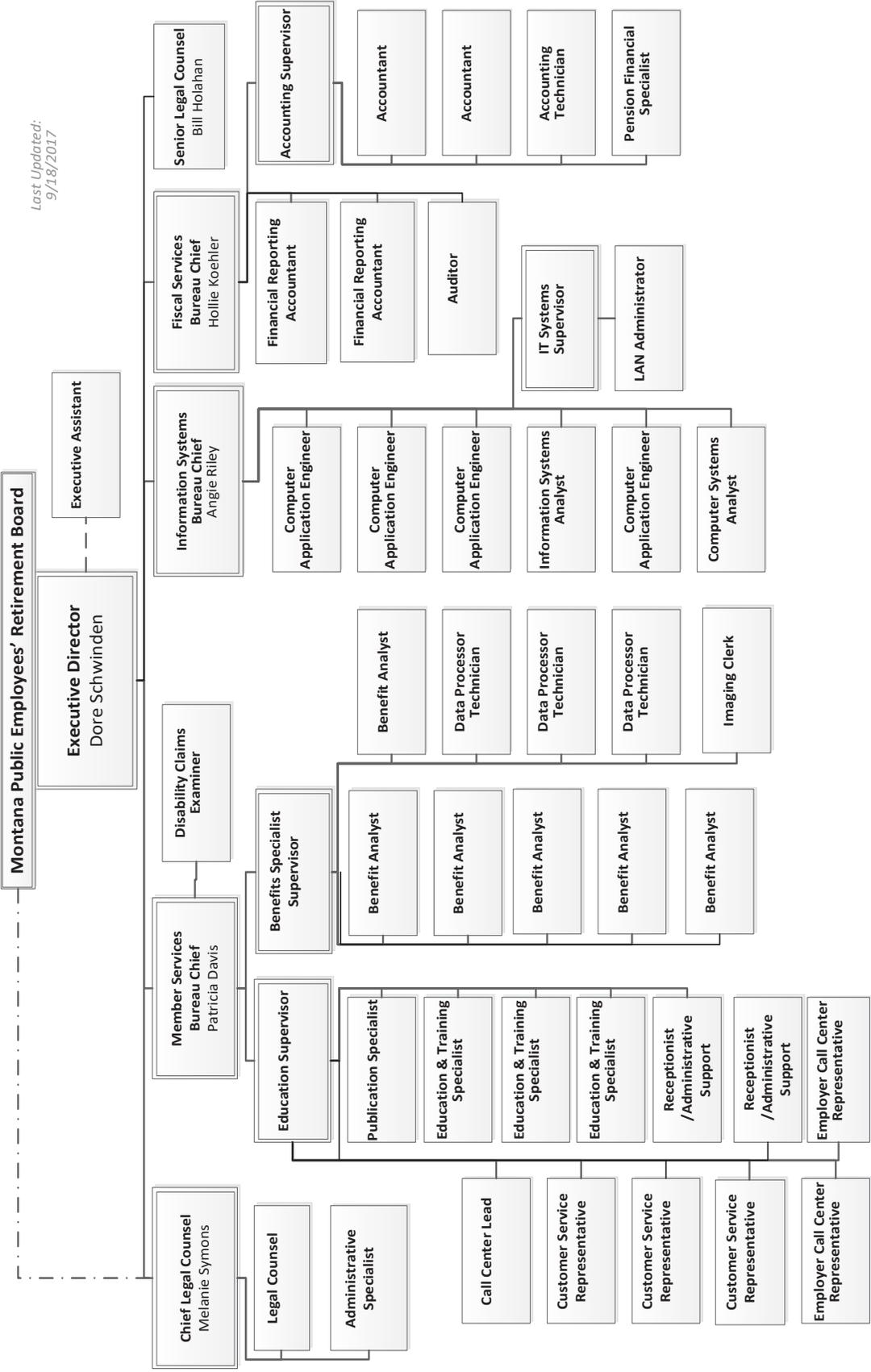
Julie McKenna
Helena,
Active Public Employee
Reappointed 4/1/2017
Term Expires 3/31/2022
Email: Julie.McKenna@mt.gov

Pepper Valdez
Billings,
Active Public Employee
Appointed 7/31/2015
Term Expires 3/31/2020
Email: Pepper.Valdez@mt.gov

Public Employees' Retirement Board

A Component Unit of the State of Montana

MPERA Organizational Chart



Last Updated:
9/18/2017

INTRODUCTORY SECTION

2017 LEGISLATIVE CHANGES

During the 2017 Legislative Session, the PERB proposed three bills, one to generally revise retirement statutes and two to address SRS and GWPORS funding concerns. This summary includes those bills and legislation proposed by others that impacted our retirement systems.

General Revisions - House Bill 101, effective July 1, 2017

Working Retiree Limitations – for HPORS, GWPORS, FURS and MPORS

1. Applies to retirement system members who return on or after July 1, 2017 to covered employment in the system from which they retired.
2. Members who return for less than 480 hours in a calendar year:
 - a. may not become an active member in the system; and
 - b. are subject to a \$1 reduction in their retirement benefit for each \$3 earned in excess of \$5,000 in the calendar year.
3. Members who return for 480 or more hours in a calendar year:
 - a. must become an active member of the system;
 - b. will stop receiving a retirement benefit from the system; and
 - c. will be eligible for a second retirement benefit if they earn 5 or more years of service credit through their second employment.
4. Employee, employer and state contributions, if any, apply as follows:
 - a. Employer contributions and state contributions (if any) must be paid on all working retirees;
 - b. Employee contributions must be paid on working retirees who return to covered employment for 480 or more hours in a calendar year.

Note: These limits currently apply to SRS and PERS has its own limits.

PERS Working Retiree Limitations

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

Second Retirement Benefit – for HPORS, SRS, GWPORS, FURS and MPORS

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

INTRODUCTORY SECTION

2. 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:
 - a. is not awarded service credit for the period of reemployment;
 - b. is refunded the accumulated contributions associated with the period of reemployment;
 - c. starting the first month following termination of service, receives the same retirement benefit previously paid to the member; and
 - d. 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.

3. 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:
 - a. is awarded service credit for the period of reemployment;
 - b. starting the first month following termination of service, receives:
 - i. the same retirement benefit previously paid to the member; and
 - ii. a second retirement benefit for the period of reemployment calculated based on the laws in effect as of the member's rehire date; and
 - c. does not accrue post-retirement benefit adjustments during the term of reemployment but receives a GABA:
 - i. on the initial retirement benefit in January immediately following second retirement, and
 - ii. on the second retirement benefit starting in January after receiving that benefit for at least 12 months.

4. A member who returns to covered service is not eligible for a disability benefit.

Terminating Employers - Recovery of actuary costs – for PERS, MPORS and FURS

Employers who terminate participation in PERS, MPORS or FURS must pay the actuarial liability associated with that termination. Starting July 1, 2017, the terminating employer must also pay for the cost of the actuarial study used to determine that liability.

Refunds

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

INTRODUCTORY SECTION

Family Law Orders

If a Family Law Order (FLO) is silent regarding the apportionment of post-retirement benefit adjustments such as the Guaranteed Annual Benefit Adjustment (GABA), the FLO is presumed to require apportionment of the post-retirement benefit adjustment in the same percentage as the monthly retirement benefit is apportioned.

Disabled PERS Defined Contribution (DC) Members

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

Survivor Benefit – for GWPORS

Beneficiaries of GWPORS members who die prior to retirement are eligible for either a lump-sum benefit or a monthly survivor benefit. The monthly survivor benefit may be paid out as an option 1, 2, 3 or 4, at the survivor's discretion. Previously, statute provided for lump-sum payments only.

Eligibility to Participate – for MPORS DROP

Eligibility to participate in the DROP is determined on years of membership service, not age. A MPORS member must have 20 years of membership service to participate in the DROP even if they have reached age 50.

Eligibility to Participate – for FURS Part-Paid Firefighters

Part-paid firefighters become eligible to participate in FURS once they have earned \$300 in a fiscal year. Previously, statute was unclear on whether the limit applied to a calendar year or a fiscal year.

Medical and Funeral Benefits – for VFCA

Medical and funeral benefits for VFCA members can be paid either directly to the provider or, with proper documentation, to the individual submitting the claim to MPERA. Previously, payment was to the provider only.

SRS Funding - House Bill 383, effective July 1, 2017

Increase in SRS Employee and Employer Contributions

1. SRS employee contributions increase 1.25%, from 9.245% to 10.495%.

INTRODUCTORY SECTION

2. SRS employer additional contributions increase 3%, from 0.58% to 3.58%, for a total employer contributions rate of 13.115%.
3. SRS employee contributions will return to 9.245% and SRS 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.

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

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

1. FY 2018 - \$31.386 million
2. FY 2019 - \$31.958 million
3. Beginning July 1, 2019 through at least June 30, 2025, 101% of the contribution from the previous year from the general fund to the PERS defined benefit trust fund, as follows:
 - a. FY 2020 – \$32.277 million
 - b. FY 2021 – \$32.6 million
 - c. FY 2022 – \$32.926 million
 - d. FY 2023 – \$33.255 million
 - e. FY 2024 – \$33.588 million
 - f. FY 2025 – \$33.924 million

INTRODUCTORY SECTION

This page intentionally left blank

**F
I
N
A
N
C
I
A
L

S
E
C
T
I
O
N**



West of Great Falls is the First People's Buffalo Jump State Park. It features a mile long sandstone cliff where native peoples would drive buffalo. There are up to 18 feet of buffalo remains below the cliff.

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 (board), a component unit of the state of Montana, as of June 30, 2017, 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.

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, 2017, 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 C, the Game Wardens' and Peace Officers' retirement system and Highway Patrol Officers' retirement system were not actuarially sound at June 30, 2017, as required by the Montana Constitution because they amortize in 70 years and 37 years, respectively. The maximum allowable amortization period is 30 years, as defined by state law. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion & Analysis, and the 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, the Schedule of Funding Progress for OPEB (Healthcare), 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, Detail of Fiduciary Net Position (PERS-DBRP and PERS-DBEd), Detail of Changes in Fiduciary Net Position (PERS-DBRP and PERS-DBEd), Detail of Fiduciary Net Position (PERS-DCRP, PERS-DCEd), and Detail of Changes in Fiduciary Net Position (PERS-DCRP, PERS-DCEd) for the fiscal year ended June 30, 2017. 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, other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Other Information

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

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 20, 2017, on our consideration of the Public Employees' Retirement 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 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 Public Employees' Retirement Board's internal control over financial reporting and compliance. It is included in the Legislative Auditor's separately issued report (16-08B).

Respectfully submitted,

/s/ Cindy Jorgenson

Cindy Jorgenson, CPA
Deputy Legislative Auditor
Helena, MT

December 20, 2017

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, 2017. It is presented as a narrative overview and analysis and should be read in conjunction with the Letter of Transmittal included in the Introductory Section, the financial statements and other information presented in the Financial Section of this Component Unit Financial Report. 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 \$600.6 million or 9.3% in fiscal year 2017. The increase was primarily due to an increase in investment income.*
- The PERB's defined contribution plans combined total net position increased by \$68.8 million or 11.4% in fiscal year 2017. The total increase in net position was primarily due to the increase of investment income 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 2017 were \$1.1 billion, which includes member and employer contributions of \$322.0 million and net investment income of \$755.9 million.*
- Revenues (additions to plan net position) for the PERB's defined contribution plans for fiscal year 2017 were \$105.7 million, which includes member and employer contributions of \$47.5 million and net investment income of \$58.2 million.*
- Expenses (deductions to plan net position) for the PERB's defined benefit plans increased from \$445.7 million in fiscal year 2016 to \$477.4 million in fiscal year 2017 or 7.1%. The increase in 2017 is primarily due to an increase in benefit payments.*
- Expenses (deductions to plan net position) for the PERB's defined contribution plans increased from \$27.3 million in fiscal year 2016 to \$36.9 million in fiscal year 2017 or 35.3%. The increase in expenses is primarily due to a increase in member distributions.*
- The PERB's defined benefit plans' funding objective is to meet long-term benefit obligations. As of June 30, 2017, the date of the latest actuarial valuation, five of the plans amortize the Unfunded Actuarial Liability (UAL) in 30 years or less. They are the Public Employees' Retirement System (PERS), Sheriff's 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 Highway Patrol Officers' Retirement System (HPORS) and*

the Game Wardens' and Peace Officers' Retirement System (GWORS). 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 the defined benefit plans, which are 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 2014, 2015, 2016, and 2017, return on actuarial value ranged from 7.89% to 8.25% for all systems, creating actuarial experience gains. These ranges were greater than the actuarial assumed rate of return on investments of 7.75%.

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, 2017. 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, 2017, 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, 2017. 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, 2017. 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

FINANCIAL SECTION

Statement No. 43 Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans; GASB Statement No. 45 Employer Disclosures regarding Other Post-Employment Benefits (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, as related notes concerning actuarial information of the defined benefit pension plans, Other Post-Employment Benefits (OPEB) for the State Healthcare Benefits and the PERS-DCRP Disability OPEB and the related notes to the OPEB plans.
- (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 (CAAP) 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 2017 economic conditions: "Although much change took place in the capital markets and across the political landscape, the economic conditions remained relatively stable with some small improvements. The U.S. economic conditions during the past fiscal year can be summarized as moderate growth, continued improvements in the labor market, with continued 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 2.2% for fiscal year 2017. Although positive, and consistent with the annual average during the recent expansion, it is below the average of GDP increases during other recent U.S. expansions.

“The labor market strengthened, with the recent unemployment rate of 4.4%, showing continued improvement during the last year and approximately 0.5% below the level of unemployment measured at the beginning of the fiscal year.

“Measures of inflation continued to be subdued with annual estimates of 1%-2%, less than half of the 50-year average and still below the Federal Reserve’s target level of 2%. Oil, which is a significant contributor to inflation estimates and expectations, started the fiscal year near \$48/barrel, experienced some volatility in price, but finished the fiscal year near the level it started.

“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 to 1 ¼ percent.

“Longer-term U.S. interest rates increased during the last year with the ten-year rate increasing by +0.83% to a nominal yield of 2.30% by June 30, 2017.

“The U.S. Dollar experienced significant volatility (plus and minus 7%) relative to other major currencies during the fiscal year. At the beginning of the year, global investors anticipated that the FOMC would continue to raise the Fed Funds rate at a faster pace relative to the world’s other central bankers raising their rates, causing the U.S. dollar to appreciate. However, during the last half of the fiscal year, the U.S. dollar gave back all its gains resulting in a small depreciation relative to other currencies.

“The FOMC continues to maintain an accommodative monetary policy and expects

the economic activity will continue to expand moderately and labor market conditions will continue to improve.” (Written September 12, 2017)

Defined Benefit Plans Total Investments

At June 30, 2017, the PERB’s defined benefit plans held total investments of \$6.8 billion, an increase of \$614.9 million from fiscal year 2016 investment totals. On the following pages 26 and 27, are the schedules of Fiduciary Net Position and Changes in Fiduciary Net Position for the defined benefit plans, including comparative totals from fiscal year 2016.

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, 2017 amounted to \$5.5 billion, an increase of \$439.5 million (8.7%) from \$5.0 billion at June 30, 2016.

Additions to the PERS-DBRP net position restricted for pension benefits includes contributions from employer, member and the state; a statutorily-appropriated coal tax contribution from the general fund; and

FINANCIAL SECTION

investment income. For the fiscal year ended June 30, 2017, contributions increased to \$233.4 million in fiscal year 2017 from \$230.9 million in fiscal year 2016, an increase of \$2.5 million (1.1%). Contributions increased due to an increased employer contribution rate and an

Fiduciary Net Position - Defined Benefit Plans

As of June 30, 2017 - and comparative totals for June 30, 2016

(dollars in thousands)

	PERS-DCRP									
	PERS		DISABILITY OPEB		JRS		HPORS		SRS	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Assets:										
Cash and Receivables	\$ 152,223	161,002	328	283	2,408	2,673	4,025	4,327	8,901	8,867
Securities Lending Collateral	31,162	139,758		1	550	2,431	798	3,568	1,884	8,314
Investments	5,326,238	4,875,780	3,462	2,835	93,939	84,832	136,350	124,427	321,984	290,138
Property and Equipment ¹	33	31				1				1
Intangible Assets	1,298				381		323		381	
Capital Assets		1,195				351		298		351
Total Assets	5,510,954	5,177,766	3,790	3,119	97,278	90,288	141,496	132,620	333,150	307,671
Liabilities:										
Securities Lending Liability	31,162	139,758		1	550	2,431	798	3,568	1,884	8,314
Other Payables	4,421	2,149	1		73	51	160	79	351	205
Total Liabilities	35,583	141,907	1	1	623	2,482	958	3,647	2,235	8,519
Total Net Position¹	\$ 5,475,371	5,035,859	3,789	3,118	96,655	87,806	140,538	128,973	330,915	299,152

¹Due to rounding to thousands instead of hundreds on this Comparative Statement, the Property and Equipment amounts for all systems, but PERS, will not show the 2017 figures. Therefore, the Total Net Position for 2017 will not tie to the Net Position - Restricted for Pension Benefits on the Statement of Fiduciary Net Position on page 40.

Changes In Fiduciary Net Position - Defined Benefit Plans

For the year ended June 30, 2017 - and comparative totals for June 30, 2016

(dollars in thousands)

	PERS-DCRP									
	PERS		DISABILITY OPEB		JRS		HPORS		SRS	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Additions:										
Contributions	\$ 233,427	230,953	392	368	2,288	2,536	7,995	8,076	14,751	14,299
Investment Income (Loss)	591,539	101,213	333	11	10,370	1,779	15,101	2,605	35,516	6,064
Total Additions	824,966	332,166	725	379	12,658	4,315	23,096	10,681	50,267	20,363
Deductions:										
Benefits	366,355	344,104	54	42	3,554	3,416	11,037	10,483	16,700	15,476
Refunds	12,326	10,645					245	94	1,416	1,104
OPEB Expenses ¹	104	88			1	3		2	1	3
Administrative Expenses	5,121	4,173			254	197	248	197	387	323
Miscellaneous Expenses	1,547	1,235								
Total Deductions	385,453	360,245	54	42	3,809	3,616	11,530	10,776	18,504	16,906
Incr/(Decr) in Net Position¹	\$ 439,513	(28,079)	671	337	8,849	699	11,566	(95)	31,763	3,457

¹Due to rounding to thousands instead of hundreds, the OPEB Expense amounts for all systems but PERS, will not show the 2017 figures. Therefore, the Incr/(Decr) in Net Position may not tie to the Statement of Changes in Fiduciary Net Position on page 42.

FINANCIAL SECTION

increase in active members contributing to the plan. The plan recognized total net investment income of \$591.5 million for the fiscal year

ended June 30, 2017, compared with total net investment income of \$101.2 million for the fiscal year ended June 30, 2016, an increase

	GWPORS		MPORS		FURS		VFCA		TOTAL	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
\$	4,424	4,979	23,630	24,037	24,520	24,158	1,016	2,772	221,475	233,098
	1,002	4,286	2,109	9,157	2,171	9,381	207	895	39,883	177,791
	171,204	149,488	360,476	319,442	371,014	327,308	35,427	30,950	6,820,094	6,205,200
		1				1			33	35
	381		341		337		310		3,752	
		351		314		310		285		3,455
	177,011	159,105	386,556	352,950	398,042	361,158	36,960	34,902	7,085,237	6,619,579
	1,002	4,286	2,109	9,157	2,171	9,381	207	895	39,883	177,791
	167	134	380	166	359	148	123	124	6,035	3,056
	1,169	4,420	2,489	9,323	2,530	9,529	330	1,019	45,918	180,847
\$	175,842	154,685	384,067	343,627	395,512	351,629	36,630	33,883	7,039,319	6,438,732

	GWPORS		MPORS		FURS		VFCA		TOTAL	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
\$	9,742	9,314	25,517	25,064	25,864	24,885	2,065	2,036	322,041	317,531
	18,592	3,167	39,781	7,113	40,844	7,312	3,837	623	755,913	129,887
	28,334	12,481	65,298	32,177	66,708	32,197	5,902	2,659	1,077,954	447,418
	5,810	5,068	23,475	21,961	22,336	20,896	2,859	2,623	452,180	424,069
	1,036	1,093	1,043	1,369	169	46			16,235	14,351
	1	3		3		2		2	107	106
	329	270	339	274	320	260	289	242	7,287	5,936
							6	12	1,553	1,247
	7,176	6,434	24,857	23,607	22,825	21,204	3,154	2,879	477,362	445,709
\$	21,158	6,047	40,441	8,570	43,883	10,993	2,748	(220)	600,592	1,709

FINANCIAL SECTION

of \$490.3 million (484.5%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

As a result of 2013 legislation that became effective July 1, 2013, PERS-DBRP receives additional contributions from the State's coal severance tax fund and interest income from the coal severance tax permanent fund. The coal severance tax collections are credited to the general fund of the State of Montana and are statutorily appropriated on July 1 each year to the trust fund for the PERS-DBRP. The coal tax is transferred quarterly and the interest income is credited monthly. The amount that was received for fiscal year 2017 was \$27.9 million. These are recorded as *Coal Tax Transfers* on the financial statements.

Deductions from the PERS-DBRP net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2017, benefits amounted to \$366.4 million, an increase of \$22.3 million (6.5%) from fiscal year 2016. 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 2017, refunds amounted to \$12.3 million, an increase of \$1.7 million (15.8%) from fiscal year 2016. Even though there was a decrease in the number of members taking a refund, the increase in refunds was due to refunds being processed for larger dollar amounts. For fiscal year 2017, the costs of administering the plan's benefits amounted to \$5.1 million, an increase of \$948.9 thousand (22.7%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to

modernize administration of the PERS-DBRP and disclosure and audit costs associated with Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

An actuarial valuation of the PERS-DBRP assets and benefit obligations is performed annually. At June 30, 2017, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability increased to 30 years from 26 years. The funded status of the plan decreased to 72.76% at June 30, 2017 from 77.31% at June 30, 2016.

The PERS-DBRP actuarial value of assets was less than actuarial liabilities by \$2.1 billion at June 30, 2017, compared with \$1.5 billion at June 30, 2016. The increase in the unfunded actuarial liability as of the last actuarial valuation is a result of recognizing liability losses of \$153.7 million and \$365.9 million due to the changes in actuarial assumptions and methods. However, even in recognizing past investment gains of \$17.2 million it still resulted in a total loss adding \$502.4 million to the actuarial liability during fiscal year 2017.

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, 2017 amounted to \$3.8 million, an increase of \$671 thousand (21.5%) from \$3.1 million at June 30, 2016.

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, 2017, employer contributions amounted to \$392 thousand, an increase of \$24 thousand

(6.5%) from fiscal year 2016. Contributions increased due to an increase in participants. The plan recognized total net investment income of \$333 thousand for the fiscal year ended June 30, 2017 compared with total net investment income of \$11 thousand for the fiscal year ended June 30, 2016, an increase of \$322 thousand (2,907%). The increase is due to a transfer of \$2.8 million dollars from the Short-term Investment Pool (STIP) to the Commingled Equity Securities in June 2016. This resulted in a significant increase in the daily investment interest.

Deductions from the DCRP Disability OPEB net position restricted for pension benefits are disability retirement benefits. For fiscal year 2017, benefits amounted to \$54 thousand, an increase of \$12.3 thousand (29.5%) from fiscal year 2016.

An actuarial valuation of the DCRP Disability OPEB assets and disability benefit obligations is performed annually. The valuation was performed using the June 30, 2017 data and the 2017 experience study demographic and economic assumptions. At June 30, 2017, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability decreased to 19 years from not amortizing at June 30, 2016. The funded status of the plan increased to 87.14% at June 30, 2017 from 86.83% at June 30, 2016. The unfunded actuarial liability increased to \$510 thousand at June 30, 2017 from \$473 thousand at June 30, 2016, as a result of a loss adding \$16.1 thousand to the expected actuarial liability.

During the year ended June 30, 2017, the DCRP Disability OPEB assets gained 0.02% on an annualized market basis. This return was 3.48% below the DCRP Disability OPEB assumed rate of return of 3.50%. The plan

earned \$114,485 less than the assumed rate at June 30, 2017, and \$91,932 less than the assumed rate at June 30, 2016.

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, 2017 amounted to \$96.7 million, an increase of \$8.8 million (10.1%) from \$87.8 million at June 30, 2016.

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, 2017, contributions amounted to \$2.3 million, a decrease of \$247 thousand (9.8%) from fiscal year 2016. Contributions decreased slightly as a result of an above average service purchase that took place during fiscal year ended June 30, 2016 that increased fiscal year 2016's contributions. The plan recognized total net investment income of \$10.4 million for the fiscal year ended June 30, 2017, compared with total net investment income of \$1.8 million for the fiscal year ended June 30, 2016, an increase of \$8.6 million (483.0%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

Deductions from the JRS net position restricted for pension benefits include retirement benefits and administrative expenses. For fiscal year 2017, benefits amounted to \$3.6 million, an increase of \$138 thousand (4.0%) from fiscal year 2016. The increase in benefits was due to an increase in the average recipient's benefit due to the guaranteed annual benefit

FINANCIAL SECTION

adjustment (GABA) or the minimum benefit adjustment for non-GABA recipients. For fiscal year 2017, administrative expenses amounted to \$254 thousand, an increase of \$56 thousand (28.5%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to modernize administration of the JRS and disclosure and audit costs associated with Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

An actuarial valuation of the JRS assets and benefit obligations is performed annually. At June 30, 2017, 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 increased to 167.06% at June 30, 2017 from 166.48% at June 30, 2016.

The JRS actuarial value of assets was greater than actuarial liabilities by a \$39.0 million actuarial surplus at June 30, 2017, compared with a \$36.4 million actuarial surplus at June 30, 2016. There was still an increase in the unfunded actuarial liability as of the last actuarial valuation, which is a result of recognizing liability gains of \$2.1 million and a liability loss of \$3.6 million due to the changes in actuarial assumptions and methods. However, even in recognizing past investment gains of \$428.9 thousand it still resulted in a total loss adding \$1.0 million to the actuarial liability during fiscal year 2017.

HPORS

The HPORS provides retirement, disability, and death benefits for members of the Montana Highway Patrol. 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, 2017 amounted to \$140.5 million, an increase of \$11.5 million (9.0%) from \$129.0 million at June 30, 2016.

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, 2017, contributions decreased to \$8.0 million from \$8.1 million in fiscal year 2016, a decrease of \$81 thousand (1.0%). Contributions decreased slightly as a result of an above average service purchase that took place during fiscal year 2016 which resulted in an increase in fiscal year 2016's contributions. The plan recognized total net investment income of \$15.1 million for the fiscal year ended June 30, 2017, compared with total net investment income of \$2.6 million for the fiscal year ended June 30, 2016, an increase of \$12.5 million (479.63%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

Deductions from the HPORS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2017, benefits amounted to \$11.0 million, an increase of \$553 thousand (5.3%) from fiscal year 2016. The 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 2017, refunds amounted to \$245 thousand, an increase of \$151 thousand (160.7%) from fiscal year 2016. The increase in refunded amounts was due to an increase in refund requests.

For fiscal year 2017, administrative expenses were \$248 thousand, an increase of \$51 thousand (25.9%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to modernize administration of the HPORS and disclosure and audit costs associated with Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

An actuarial valuation of the HPORS assets and benefit obligations is performed annually. At June 30, 2017, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability is 37 years an increase from 28 years at June 30, 2016. The funded status of the plan decreased to 64.35% at June 30, 2017 from 65.84% at June 30, 2016.

The HPORS actuarial value of assets was less than actuarial liabilities by \$78.2 million at June 30, 2017, compared with \$69.5 million at June 30, 2016. The increase in the unfunded actuarial liability as of the last actuarial valuation is a result of recognizing liability losses of \$817 thousand and \$7.9 million due to the changes in actuarial assumptions and methods. However, even in recognizing past investment gains of \$664 thousand it still resulted in a total loss adding \$8.0 million to the actuarial liability during fiscal year 2017.

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, 2017 amounted to \$331.0 million, an increase of \$31.8 million (10.6%) from \$299.2 million at June 30, 2016.

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, 2017, contributions increased to \$14.8 million from \$14.3 million in fiscal year 2016, for an increase of \$452 thousand (3.2%). The increase in contributions was due to an increase in active members contributing to the plan. The plan recognized total net investment income of \$35.5 million for the fiscal year ended June 30, 2017, compared with total net investment income of \$6.1 million for the fiscal year ended June 30, 2016, an increase of \$29.5 million (485.7%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

Deductions from the SRS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2017, benefits amounted to \$16.7 million, an increase of \$1.2 million (7.9%) from fiscal year 2016. 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 2017, refunds amounted to \$1.4 million, an increase of \$312 thousand (28.3%) from fiscal year 2016. The increase in refunds was due to refunds being processed at larger dollar amounts. For fiscal year 2017, administrative expenses amounted to \$387 thousand, an increase of \$64.8 thousand (20.1%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system

FINANCIAL SECTION

to modernize administration of the SRS and disclosure and audit costs associated with Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

An actuarial valuation of the SRS assets and benefit obligations is performed annually. At June 30, 2017, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability decreased to 25 years from does not amortize. The funded status of the plan decreased to 80.74% at June 30, 2017 from 83.21% at June 30, 2016.

The SRS actuarial value of assets was less than actuarial liabilities by \$79.2 million at June 30, 2017, compared with \$62.6 million at June 30, 2016. The increase in the unfunded actuarial liability as of the last actuarial valuation is a result of recognizing liability losses of \$2.5 million, \$14.3 million due to the changes in actuarial assumptions and methods, and a gain of \$1.3 million due to a change in benefits. However, even in recognizing past investment gains of \$1.5 million, it still resulted in a total loss adding \$14.0 million to the actuarial liability during fiscal year 2017.

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, 2017, amounted to \$175.8 million, an increase of \$21.1 million (13.7%) from \$154.7 million at June 30, 2016.

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, 2017, contributions increased to \$9.7 million from \$9.3 million in fiscal year 2016, an increase of \$428 thousand (4.6%). The increase in contributions was due to an increase in active members contributing to the plan. The plan recognized total net investment income of \$18.6 million for the fiscal year ended June 30, 2017, compared with total net investment income of \$3.2 million for the fiscal year ended June 30, 2016, an increase of \$15.4 million (487.1%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

Deductions from the GWPORS net position restricted for pensions include retirement benefits, refunds, and administrative expenses. For fiscal year 2017, benefits amounted to \$5.8 million, an increase of \$742 thousand (14.6%) from fiscal year 2016. 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 2017, refunds amounted to \$1.0 million, a decrease of \$58 thousand (5.3%) from fiscal year 2016. The decrease in refunds was due to fewer refund requests from members. For fiscal year 2017, administrative expenses amounted to \$329 thousand, an increase of \$58 thousand (21.5%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to modernize administration of the GWPORS and disclosure and audit costs associated with Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

An actuarial valuation of the GWPORS assets and benefit obligations is performed annually.

At June 30, 2017, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability decreased to 70 years from does not amortize. The funded status of the plan decreased to 81.01% at June 30, 2017 from 84.06% at June 30, 2016.

The GWPORS actuarial value of assets was less than actuarial liabilities by \$41.3 million at June 30, 2017, compared with \$30.5 million at June 30, 2016. The increase in unfunded actuarial liability as of the last actuarial valuation is a result of recognizing liability losses of \$6.0 million and \$5.3 million due to changes in actuarial assumptions and methods. However, even in recognizing past investment gains of \$645.3 thousand, it still resulted in a total loss adding \$10.7 million to the actuarial liability during fiscal year 2017.

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, 2017 amounted to \$384.1 million, an increase of \$40.4 million (11.8%) from \$343.6 million at June 30, 2016.

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, 2017, contributions increased to \$25.5 million from \$25.1 million in fiscal year 2016, for an increase of \$454 thousand (1.8%). Contributions increased due to an

increase in active members contributing to the plan. The plan recognized total net investment income of \$39.8 million for the fiscal year ended June 30, 2017, compared with total net investment income of \$7.1 million for fiscal year ended June 30, 2016, an increase of \$32.7 million (459.3%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

Deductions from the MPORS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2017 benefits amounted to \$23.5 million, an increase of \$1.5 million (6.9%) from fiscal year 2016. 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 2017, refunds amounted to \$1.0 million, a decrease of \$326 thousand (23.8%) from fiscal year 2016. The decrease in refunds was due to fewer refund requests from members. For fiscal year 2017, administrative expenses were \$339 thousand, an increase of \$65.4 thousand (23.9%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to modernize administration of the MPORS and disclosure and audit costs associated with Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

An actuarial valuation of the MPORS assets and benefit obligations is performed annually. At June 30, 2017, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability

FINANCIAL SECTION

decreased to 16 years from 18 years at June 30, 2016. The funded status of the plan decreased to 68.66% at June 30, 2017 from 68.79% at June 30, 2016.

The MPORS actuarial value of assets was less than actuarial liabilities by \$176.3 million at June 30, 2017, compared with \$162.0 million at June 30, 2016. The increase in the actuarial liability as of the last actuarial valuation is a result of recognizing other liability gains of \$485.5 thousand and losses of \$16.5 million due to changes in actuarial assumptions and methods. However, even in recognizing past investment gains of \$922.1 thousand, it still resulted in a total liability loss adding \$16.0 million to the actuarial liability during fiscal year 2017.

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, 2017, amounted to \$395.5 million, an increase of \$43.9 million (12.5%) from \$351.6 million at June 30, 2016.

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, 2017, contributions increased to \$25.9 million from \$24.9 million in fiscal year 2016, an increase of \$979 thousand (3.9%). Contributions increased due to an increase of active members contributing to the plan. The plan recognized total net investment income of \$40.8 million for the fiscal year ended June

30, 2017, compared with total net investment income of \$7.3 million for the fiscal year ended June 30, 2016, an increase of \$33.5 million (458.6%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

Deductions from the FURS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2017, benefits amounted to \$22.3 million, an increase of \$1.4 million (6.9%) from fiscal year 2016. 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 2017, refunds amounted to \$169 thousand, an increase of \$123 thousand (267.3%) from \$46 thousand in fiscal year 2016. Although the number of refund requests stayed the same, the increase in refunded amounts was due to refunds being processed for larger dollar amounts. For fiscal year 2017, administrative expenses were \$320 thousand, an increase of \$60.7 thousand (23.4%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to modernize administration of the FURS and disclosure and audit costs associated with Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

An actuarial valuation of the FURS assets and benefit obligations is performed annually. At June 30, 2017, the date of the most recent actuarial valuation, the years to amortize the unfunded actuarial liability increased to 10 years from 9 years at June 30, 2016. The

funded status of the plan decreased to 76.13% at June 30, 2017 from 78.27% at June 30, 2016.

The FURS actuarial value of assets was less than actuarial liabilities by \$124.7 million at June 30, 2017, compared with \$101.4 million at June 30, 2016. The increase in unfunded actuarial liability as of the last actuarial valuation is a result of recognizing other liability losses of \$13.3 million and \$17.7 million due to changes in actuarial assumptions and methods. However, even in recognizing past investment gains of \$909.7 thousand, it still resulted in a total liability loss adding \$30.1 million to the actuarial liability during fiscal year 2017.

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, 2017 amounted to \$36.6 million, an increase of \$2.7 million (8.1%) from \$33.9 million at June 30, 2016.

Additions to the VFCA net position restricted for pension benefits include state contributions and investment income. For the fiscal year ended June 30, 2017, contributions increased to \$2.1 million from \$2.0 million in fiscal year 2016, an increase of \$28 thousand (1.4%). 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 \$3.8 million for the fiscal year ended June 30, 2017, compared with total net investment income of \$623 thousand for the fiscal year ended June 30, 2016, an increase of \$3.2 million (515.6%). The increase in investment

income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

Deductions from the VFCA net position restricted for pension benefits include retirement benefits, administrative expenses, and supplemental insurance payments. For fiscal year 2017, benefits amounted to \$2.9 million, an increase of \$236 thousand (9.0%) from fiscal year 2016. The increase in benefit payments was due to the increase in benefit recipients. For fiscal year 2017, administrative expenses amounted to \$289 thousand, an increase of \$47 thousand (19.5%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to modernize administration of the VFCA and disclosure and audit costs associated with Governmental Accounting Standards Board (GASB) Statements No. 67 and 68. For fiscal year 2017, supplemental insurance payments amounted to \$6 thousand, a decrease of \$6 thousand from fiscal year 2016. The decrease was due to delayed submission of supplemental insurance claims by VFCA companies.

An actuarial valuation of the VFCA assets and benefit obligations is performed annually. At June 30, 2017, the date of the most recent actuarial valuation, the number of years to amortize the unfunded actuarial liability decreased to 6 years from 7 years at June 30, 2016 and the funded status of the plan increased to 80.56% at June 30, 2017 from 80.21% at June 30, 2016.

The VFCA actuarial value of assets was less than actuarial liabilities by \$8.9 million at June 30, 2017, compared with \$8.7 million at June 30, 2016. The increase in unfunded actuarial liability as of the last actuarial valuation is a

FINANCIAL SECTION

result of recognizing other liability gains of \$619.2 thousand and \$2.1 million due to the changes in actuarial assumptions and methods. However, even in recognizing past investment gains of \$48.3 thousand, it still resulted in a total liability loss adding \$1.5 million to the actuarial liability during fiscal year 2017.

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, 2017. The DCRP Disability OPEB plan valuation was last performed on June 30, 2017.

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 2017. The asset smoothing methods utilized by the plans limits the impacts to four years. The funding status for all defined benefit plans decreased in the latest valuation, except for JRS and VFCA which had slight increases.

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 in fiscal years 2009, 2010, 2011, and 2012; SRS not amortizing 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, 2017 actuarial valuations, the unfunded liability of HPORS and GWPORS does not amortize within 30 years.

Overall, funding ratios range from a high of 167.06% (JRS) to a low of 64.35% (HPORS). The Schedule of Funding Progress, in the Actuarial Section of this report, shows the funding for the last ten fiscal years. The table also shows the amount by which actuarial assets exceeded or fell short of actuarial liabilities. The actuary performs a smoothing of investment gains or losses over a period of four years. At June 30, 2017, the actuarial value of assets of all plans was more than the market value of assets by \$49 million due to an average positive 11.78% market return in fiscal year 2017.

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 2016 are presented on page 39.

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, 2017, amounted to \$193.6 million, an increase of \$37.3 million (23.9%) from \$156.3 million at June 30, 2016.

Additions to the PERS-DCRP net position restricted for pension benefits include contributions and investment income. For the fiscal year ended June 30, 2017, contributions increased to \$23.0 million from \$17.5 million in fiscal year 2016, an increase of \$5.5 million (31.7%). 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 \$22.4 million for fiscal year ended

2017, compared with net investment income of \$1.4 million in fiscal year 2016, an increase of \$20.9 million (1,466.8%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

Deductions from the PERS-DCRP net position restricted for pension benefits include member distributions, administrative expenses, and miscellaneous expenses. For fiscal year 2017, distributions amounted to \$7.0 million, an increase of \$1.7 million (32.8%) from fiscal year 2016. 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 2017, the costs of administering the plan amounted to \$824 thousand, an increase of \$164 thousand (24.8%) from fiscal year 2016. The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to modernize administration of the PERS-DCRP.

Miscellaneous expenses are the PERB’s administrative fees assessed by the vendors based on account balances. *Miscellaneous expenses* increased to \$225 thousand in fiscal year 2017 from \$164 thousand in fiscal year 2016, an increase of \$61 thousand (37.2%). The increase in miscellaneous expenses was due to increased investment income.

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

FINANCIAL SECTION

is funded by contributions and by investment earnings. The Deferred Compensation net position restricted for pension benefits at June 30, 2017 amounted to \$480.2 million, an increase of \$31.5 million (7.0%) from \$448.7 million at June 30, 2016.

Additions to the Deferred Compensation Plan net position restricted for pension benefits include contributions and investment income. For fiscal year 2017, contributions increased to \$24.4 million from \$22.2 million in fiscal year 2016, an increase of \$2.2 million (10.2%). The increase is due to more participants actively contributing to the plan. The plan recognized net investment income of \$35.9 million for fiscal year 2017, compared with net investment income of \$7.3 million for fiscal year 2016, an increase of \$28.6 million (391.1%). The increase in investment income is a result of moderate growth and continued improvements in the labor market, with combined low inflation.

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 2017, distributions amounted to \$27.3 million, an increase of \$7.1 million (35.3%) from \$20.2 million in fiscal year 2016. The increase in distributions was due to more deferred compensation participants taking distributions. The administrative expenses increased to \$613 thousand in fiscal year 2017 from \$512 thousand in fiscal year 2016, an increase of \$101 thousand (19.7%). The increase in administrative expenses for fiscal year 2017 was due to the increased expenses associated with the implementation of a new computer system to modernize administration of the Deferred Compensation Plan.

Miscellaneous expenses are the PERB's administrative fees assessed by the vendors based on account balances. *Miscellaneous expenses* increased to \$846 thousand in fiscal year 2017 from \$427 thousand in fiscal year 2016, an increase of \$419 thousand (98.1%) from fiscal year 2016. The increase in miscellaneous expenses was due to the increased investment income.

FINANCIAL SECTION

Fiduciary Net Position - Defined Contribution Plans

As of June 30, 2017 - and comparative totals for June 30, 2016

(dollars in thousands)

	PERS-DCRP		457-PLAN		TOTAL	
	2017	2016	2017	2016	2017	2016
Assets:						
Cash and Receivables	\$ 2,067	2,125	647	540	2,714	2,665
Securities Lending Collateral		4		1		5
Investments	192,153	154,050	479,575	448,142	671,728	602,192
Property and Equipment	4	4	3	3	7	7
Intangible Assets	310		368		678	
Capital Assets		285		339		624
Total Assets	194,534	156,468	480,593	449,025	675,127	605,493
Liabilities:						
Securities Lending Liability		4		1		5
Other Payables	901	146	403	360	1,304	506
Total Liabilities	901	150	403	361	1,304	511
Total Net Position - restricted for pensions	\$ 193,633	156,318	480,190	448,664	673,823	604,982

Changes In Fiduciary Net Position - Defined Contribution Plans

For the year ended June 30, 2017 - and comparative totals for June 30, 2016

(dollars in thousands)

	PERS-DCRP		457-PLAN		TOTAL	
	2017	2016	2017	2016	2017	2016
Additions:						
Contributions	\$ 23,045	17,499	24,434	22,174	47,479	39,673
Investment Income (Loss)	22,368	1,428	35,889	7,308	58,257	8,736
Total Additions	45,413	18,927	60,323	29,482	105,736	48,409
Deductions:						
Benefits						
Distributions	7,038	5,299	27,329	20,193	34,367	25,492
OPEB Expenses	12	11	8	9	20	20
Administrative Expenses	824	660	613	512	1,437	1,172
Miscellaneous Expenses	225	164	846	427	1,071	591
Total Deductions	8,099	6,134	28,796	21,141	36,895	27,275
Incr/(Decr) in Net Position	\$ 37,314	12,793	31,527	8,341	68,841	21,134

FINANCIAL SECTION

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, 2017

	PERS-DCRP					
	PERS-DBRP	DISABILITY OPEB	JRS	HPORS	SRS	GWPORS
Assets						
Cash and Short-term Investments	\$ 142,261,072	302,356	2,405,344	3,802,572	8,545,606	4,396,362
Securities Lending Collateral (Note A6)	31,162,478		549,614	797,749	1,883,850	1,001,673
Receivables						
Interest	131,118	248	2,197	3,291	7,862	4,222
Accounts Receivable	3,115,546	20,325	229	219,184	347,094	24,194
Due from Other Funds	638,328	5,272				
Due from Primary Government	6,051,738					
Notes Receivable	25,634					
<i>Total Receivables</i>	9,962,364	25,845	2,426	222,475	354,956	28,416
Investments, at fair value (Note A6)						
Commingled Equity Securities		3,461,740				
CAPP Investment Pool	5,326,238,203		93,939,152	136,349,879	321,984,454	171,204,195
Defined Contributions Fixed Investments						
Defined Contributions Variable Investments						
Deferred Compensation Life Insurance						
<i>Total Investments</i>	5,326,238,203	3,461,740	93,939,152	136,349,879	321,984,454	171,204,195
Capital Assets						
Property and Equipment, at cost,						
net of Accumulated Depreciation (Note A2)	33,307		366	311	366	366
Intangible Assets at cost,						
net of amortization expense	1,297,993		380,981	323,391	380,981	380,981
<i>Total Capital Assets</i>	1,331,300		381,347	323,702	381,347	381,347
Total Assets	5,510,955,417	3,789,941	97,277,883	141,496,377	333,150,213	177,011,993
Liabilities						
Securities Lending Liability	31,162,478		549,614	797,749	1,883,850	1,001,673
Accounts Payable	2,936,534	800	53,209	105,986	187,351	59,362
Unearned Revenue	176,366		589	680	2,402	6,508
Due to Other Funds	286,421		14,046	47,161	150,625	91,946
Compensated Absences	427,290		53	45	53	53
OPEB Implicit Rate Subsidy LT	593,977		5,349	6,049	11,006	9,071
<i>Total Liabilities</i>	35,583,066	800	622,860	957,670	2,235,287	1,168,613
<i>Net Position - Restricted for Pension Benefits</i>	\$ 5,475,372,351	3,789,141	96,655,023	140,538,707	330,914,926	175,843,380

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

FINANCIAL SECTION

Defined Benefit Pension Plans				Defined Contribution Plans			Total Pension Trust Funds
MPORS	FURS	VFCA	Total Defined Benefit Pension Plans	PERS-DCRP	457 Plan	Total Defined Contribution Plans	
9,450,613	9,784,215	1,010,429	181,958,569	1,611,803	96,398	1,708,201	183,666,770
2,109,054	2,170,708	207,276	39,882,402				39,882,402
8,442	8,882	1,414	167,676	976	130	1,106	168,782
210,444	288,445	4,265	4,229,726	172,679	551,152	723,831	4,953,557
			643,600	281,149		281,149	924,749
13,960,571	14,438,412		34,450,721				34,450,721
			25,634				25,634
14,179,457	14,735,739	5,679	39,517,357	454,804	551,282	1,006,086	40,523,443
			3,461,740				3,461,740
360,475,945	371,013,776	35,427,313	6,816,632,917				6,816,632,917
				14,154,738	238,057,498	252,212,236	252,212,236
				177,998,074	241,505,107	419,503,181	419,503,181
					12,316	12,316	12,316
360,475,945	371,013,776	35,427,313	6,820,094,657	192,152,812	479,574,921	671,727,733	7,491,822,390
328	324	298	35,666	4,053	3,333	7,386	43,052
341,111	336,681	310,101	3,752,220	310,101	367,691	677,792	4,430,012
341,439	337,005	310,399	3,787,886	314,154	371,024	685,178	4,473,064
386,556,508	398,041,443	36,961,096	7,085,240,871	194,533,573	480,593,625	675,127,198	7,760,368,069
2,109,054	2,170,709	207,275	39,882,402				39,882,402
210,189	221,799	17,427	3,792,657	776,318	329,270	1,105,588	4,898,245
32,684	17,840	1,030	238,099				238,099
127,369	110,990	96,191	924,749				924,749
47	47	44	427,632	56,587	27,237	83,824	511,456
9,614	8,497	8,186	651,749	68,097	46,645	114,742	766,491
2,488,957	2,529,882	330,153	45,917,288	901,002	403,152	1,304,154	47,221,442
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

FINANCIAL SECTION

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, 2017

	PERS-DCRP					
	PERS-DBRP	DISABILITY OPEB	JRS	HPORS	SRS	GWPORS
Additions						
Contributions (Note C)						
Employer	\$ 103,702,242	392,100	1,800,105	5,782,258	7,542,219	4,463,401
Plan Member	100,709,749		488,208	1,949,795	7,188,307	5,262,410
Interest Reserve Buyback	58,390				550	15,731
Retirement Incentive Program	70,335					
Miscellaneous Revenue	129,317				19,886	230
State Contributions	896,324			262,884		
Coal Tax Transfers	27,861,139					
Nonvested Member Forfeitures						
Total Contributions	233,427,496	392,100	2,288,313	7,994,937	14,750,962	9,741,772
Investments (Note A6)						
Net Appreciation (Depreciation)						
in Fair Value of Investments	340,218,861	332,198	6,227,974	8,481,582	22,149,916	12,279,000
Interest	268,475,808	2,289	4,442,961	7,057,647	14,397,721	6,855,483
Dividends	9,576,416		167,550	244,644	573,200	298,658
Investment Expense	(27,684,610)	(1,712)	(485,376)	(707,368)	(1,661,927)	(870,821)
Net Investment Income	590,586,475	332,775	10,353,109	15,076,505	35,458,910	18,562,320
Securities Lending Income						
Securities Lending Income	1,570,674	7	27,519	40,128	94,189	49,255
Securities Lending Rebate and Fees	(618,560)	(3)	(10,838)	(15,802)	(37,096)	(19,401)
Net Securities Lending Income	952,114	4	16,681	24,326	57,093	29,854
Total Net Investment Income	591,538,589	332,779	10,369,790	15,100,831	35,516,003	18,592,174
Total Additions	824,966,085	724,879	12,658,103	23,095,768	50,266,965	28,333,946
Deductions (Note C)						
Benefits	366,354,719	54,135	3,554,335	11,036,794	16,700,117	5,809,910
Refunds/Distributions	12,252,007			244,597	1,383,061	1,035,917
Refunds to Other Plans	73,930				32,940	
Transfers to DCRP	1,419,600					
Transfers to MUS-RP	127,663					
Supplemental Insurance Payments						
OPEB Expenses	104,250		674	466	549	549
Administrative Expenses	5,120,478		253,789	248,124	387,378	328,699
Miscellaneous Expenses						
Total Deductions	385,452,647	54,135	3,808,798	11,529,981	18,504,045	7,175,075
Net Increase (Decrease)	439,513,438	670,744	8,849,305	11,565,787	31,762,920	21,158,871
Net Position Restricted for Pension Benefits						
Beginning of Year	5,035,858,913	3,118,397	87,805,718	128,972,920	299,152,006	154,684,509
End of Year	\$ 5,475,372,351	3,789,141	96,655,023	140,538,707	330,914,926	175,843,380

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

FINANCIAL SECTION

Defined Benefit Pension Plans				Defined Contribution Plans			Total Pension Trust Funds 2017
MPORS	FURS	VFCA	Total Defined Benefit Pension Plans	PERS-DCRP	457 Plan	Total Defined Contribution Plans	
			137,246,817	10,751,840	77,241	10,829,081	148,075,898
7,081,194	6,483,298						
4,464,528	4,925,341		124,988,338	11,827,865	23,769,800	35,597,665	160,586,003
1,102	84		75,857				75,857
			70,335				70,335
10,052	16,478		175,963	68,475	586,754	655,229	831,192
13,960,572	14,438,412	2,064,561	31,622,753				31,622,753
			27,861,139				27,861,139
				396,650		396,650	396,650
25,517,448	25,863,613	2,064,561	322,041,202	23,044,830	24,433,795	47,478,625	369,519,827
26,093,998	27,080,376	2,074,318	444,938,223	17,912,572	23,068,072	40,980,644	485,918,867
14,845,381	14,953,019	1,874,369	332,904,678	4,512,349	13,794,081	18,306,430	351,211,108
642,176	658,942	62,802	12,224,388				12,224,388
(1,864,390)	(1,913,928)	(180,362)	(35,370,494)	(57,034)	(973,290)	(1,030,324)	(36,400,818)
39,717,165	40,778,409	3,831,127	754,696,795	22,367,887	35,888,863	58,256,750	812,953,545
105,520	108,313	10,258	2,005,863	29	3	32	2,005,895
(41,572)	(42,672)	(4,039)	(789,983)	(13)	(1)	(14)	(789,997)
63,948	65,641	6,219	1,215,880	16	2	18	1,215,898
39,781,113	40,844,050	3,837,346	755,912,675	22,367,903	35,888,865	58,256,768	814,169,443
65,298,561	66,707,663	5,901,907	1,077,953,877	45,412,733	60,322,660	105,735,393	1,183,689,270
23,474,602	22,335,636	2,858,443	452,178,691				452,178,691
1,043,487	168,422		16,127,491	7,037,396	27,329,422	34,366,818	50,494,309
			106,870				106,870
			1,419,600				1,419,600
			127,663				127,663
		6,450	6,450				6,450
491	485	447	107,911	11,770	7,915	19,685	127,596
339,344	320,213	288,897	7,286,922	824,160	612,807	1,436,967	8,723,889
				225,104	845,518	1,070,622	1,070,622
24,857,924	22,824,756	3,154,237	477,361,598	8,098,430	28,795,662	36,894,092	514,255,690
40,440,637	43,882,907	2,747,670	600,592,279	37,314,303	31,526,998	68,841,301	669,433,580
343,626,914	351,628,654	33,883,273	6,438,731,304	156,318,268	448,663,475	604,981,743	7,043,713,047
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

Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to the Financial Statements

for the Fiscal Year Ended June 30, 2017

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 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, after July 1, 2002, 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 financial section on pages 120 to 123.

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 MPERActiv program are charged directly to the individual plans.

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. Implementation of this statement is for fiscal year 2017. 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.

On a quarterly basis, participants of the PERS-DCRP are charged a flat 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

FINANCIAL SECTION

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.

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 two servers purchased for the MPERA data cleansing project, a primary file server, and a ScanPro 3000 fiche film reader. Property consists of a remodel to the office space.

The \$4,430,012 *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 will be 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 LIABILITY 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, 2017, is shown in the Schedule of Employers' Net Pension Liability (NPL) at the bottom of 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 study 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, 2017. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2017 and the Total Pension Liability (TPL) is based on the results of an actuarial valuation date of June 30, 2016, and rolled forward to June 30, 2017 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

FINANCIAL SECTION

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 system's GASB No. 67 reporting as of the latest actuarial valuation on June 30, 2017 is shown in the table at the bottom of the next page and is shown in the Notes to the RSI on page 104 and 105. The assumptions used for the retirement systems are based on the results of the 2017 experience study. The discount rate was lowered from 7.75% to 7.65%. The inflation rate was reduced from 3.00% to 2.75%. The wage inflation rate was reduced from 4.00% to 3.50%. The non-disabled mortality and withdrawal assumptions were updated and the salary merit scale was updated.

The long-term expected rate of return on pension plan investments is reviewed regularly as part of experience studies

prepared for the System. The results of the most recent experience study was presented in a report dated May 5, 2017. 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 System'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

Employers' Net Pension Liability / (Asset) as of June 30, 2017

(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 Position Liability / (Asset) as a % of Covered Employee Payroll ((a-b)/c)
PERS-DBRP	\$7,420,146	\$5,472,519	\$1,947,626	73.75%	\$1,232,067	158.08%
JRS	60,798	96,654	(35,856)	158.98%	6,974	(514.10)%
HPORS	218,922	140,537	78,386	64.19%	14,779	530.39%
SRS	407,007	330,910	76,097	81.30%	74,581	102.03%
GWPORS	213,201	175,841	37,360	82.48%	49,381	75.66%
MPORS	561,976	384,062	177,913	68.34%	48,604	366.05%
FURS	508,541	395,506	113,035	77.77%	45,208	250.03%
VFCA	46,718	36,630	10,087	78.41%	N/A ²	N/A ²

¹The PERS-DB Education Fund balance is not included in the GASB 67 reporting for fiscal year ending June 30, 2017.

²Covered payroll is not applicable to VFCA because members are unpaid volunteers.

FINANCIAL SECTION

long-term rate of return for funding pension plans, which covers a longer timeframe. The long-term rate of return assumption is intended to be a long-term assumption (30 to 50 years) and is not expected to change absent a significant change in the asset allocation, a change in the 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

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 Systems target asset allocation as of June 30, 2017, are summarized in the following Target Allocations table.

Asset Class	Target Asset Allocation	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%	

Summary of Actuarial Assumptions

	PERS	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Valuation date	6/30/2017	6/30/2017	6/30/2017	6/30/2017	6/30/2017	6/30/2017	6/30/2017	6/30/2017
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% - 6.3%	None	0% - 6.3%	0% - 6.3%	0% - 6.3%	0% - 6.6%	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 June 30, 2013; or 1.5% to 0% if hired on or after July 1, 2013; 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 5%, of probationary officer's base pay	N/A	N/A	50% newly confirmed officer	50% newly confirmed officer	N/A

The discount rate used to measure the TPL for all Systems 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 Systems 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 below presents the sensitivity disclosures for each plan.

Sensitivity of NPL / (Asset) based on Changes in Discount Rate as of June 30, 2017 (dollar amounts are in thousands)			
System	1% Decrease 6.65%	Current Discount Rate 7.65%	1% Increase 8.65%
PERS-DBRP	\$ 2,836,551	\$ 1,947,626	\$ 1,201,441
JRS	(29,908)	(35,856)	(40,986)
HPORS	108,542	78,386	53,937
SRS	134,369	76,097	28,423
GWPORS	70,055	37,360	10,736
MPORS	259,049	177,913	112,860
FURS	187,835	113,035	52,600
VFCA	14,675	10,087	6,202

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 Systems is presented in the table at the top of the next column and in the RSI on pages 112 and 113.

Annual Money-Weighted Rate of Return as of June 30, 2017			
PERS-DBRP	11.94%	GWPORS	11.97%
JRS	11.96%	MPORS	11.92%
HPORS	11.92%	FURS	11.93%
SRS	11.96%	VFCA	11.89%

5. OTHER POST-EMPLOYMENT BENEFITS (OPEB FOR HEALTH CARE)

Plan Description: MPERA employees and dependents are eligible to receive health care through the State Group Benefits Plan administered by the Montana Department of Administration. 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 premiums: (1) employees who retire under applicable retirement provisions and their dependents; and (2) surviving dependents of deceased employees. Plan coverage is on a calendar year basis. For GASB Statement No. 45 reporting, the State Group Benefits Plan

FINANCIAL SECTION

is considered an agent multiple-employer plan and MPERA is considered to be a separate employer participating 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 2017 depending on the medical plan selected, family coverage, and Medicare eligibility. Retirees pay 100% of the premiums for medical, dental, and vision. Administratively established monthly dental premiums vary between \$41.10 and \$70.00; monthly vision premiums vary between \$7.64 and \$22.26; both premiums vary depending on the coverage selected. 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 fully-insured and retirees pay 100% of the cost for both; 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.

Funding Policy: The following estimates

were prepared based on an actuarial valuation prepared as of the year ending December 31, 2015 for the Department of Administration. The resulting State of Montana Actuarial Valuation of Other Post-Employment Benefits Plan (Plan) 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

GASB Statement No. 45 requires the Plan's participants, including MPERA, to report the Annual Required Contribution (ARC) each year. The ARC is an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. It represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year of retiree health care costs and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed 30 years. The 2017 ARC is calculated collectively for the State Plan's participants and allocated to individual participants. MPERA's 2017 allocated portion of the ARC is estimated at \$118,872 and is based on the Plan's current ARC rate of 5.26% of participants' annual covered payroll. MPERA's 2017 ARC is equal to an annual amount required each year to fully fund the liability over 30 years.

Actuarial Methods and Assumptions: Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and includes the types of benefits provided

at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in the actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations. Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Many of the assumptions adopted by the State of Montana are the same as those used in the actuarial valuations for the pension plans that cover the same employees. Examples include assumptions about marital status at time of retirement, mortality, projected payroll increases, discount rate, participation in the health care system, and the healthcare cost trend. The results of the valuation represent reasonable estimates. However, variation from these or any other estimates of future retiree medical costs is probable, as actual future costs may vary significantly from estimates. Significant differences between actual and expected liability can come from health cost trend or demographic experience which differ from expectations, as well as changes made to benefits offered or to valuation assumptions used.

The Schedule of Funding Progress for OPEB, presented as RSI following the notes to the statements, presents information concerning the actuarial value of plan assets and liabilities. In the January 1, 2015 actuarial valuation, the projected unit cost funding method is used. The actuarial assumptions did not include an investment rate of return since no assets meet the definition of plan

assets under GASB Statements No. 43 or No. 45. Annual healthcare costs trend rates of 12% were used for both medical and prescription claims. The unfunded actuarial accrued liability is amortized following a 30-year level percent of pay amortization on an open basis, using a 4.25% discount rate and a 2.50% payroll growth rate assumption.

The State finances claims on a pay-as-you-go basis and does not advance-fund the OPEB liability. While this liability is disclosed for financial statement purposes, it does not represent a legal liability of the State of Montana or MPERA. Therefore, the following cost information shows no value for Plan Assets made by MPERA.

Annual Other Post-Employment Benefits (OPEB) Cost: For the fiscal year ending June 30, 2017, the annual OPEB cost (expense) allocated to MPERA increased to \$127,595 from the June 30, 2016 amount of \$126,238. For the fiscal year ending June 30, 2017, the cumulative interest on the net OPEB obligation increased by \$3,911, while in fiscal year 2016 the cumulative interest increased by \$9,971.

The PERB annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation for 2017 and prior are as follows.

Annual OPEB Cost			
Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
6/30/2017	127,595	24.60%	766,490
6/30/2016	126,238	24.84%	670,287
6/30/2015	106,126	28.19%	575,413

FINANCIAL SECTION

FY 2017 Net OPEB Obligation	
Annual Required Contribution	\$ 118,872
Cumulative Interest on Net OPEB	40,444
Less Amortization	31,721
Annual OPEB cost	127,595
Less Contributions Made	31,392
Change in Net OPEB for Year	96,203
FY2016 Net OPEB obligation -	
Beginning of Year	670,287
Net OPEB obligation -	
End of Year	\$ 766,490

Funded Status and Funding Progress: The most recent actuarial valuation available by the State of Montana is as of calendar year ending December 31, 2015. This actuarial valuation is completed every two years with the next valuation as of calendar year ending December 31, 2017.

The MPERA allocation of the plan as of the calendar year ending December 31, 2015 was as follows.

Actuarial Accrued Liability (AAL)	\$ 1,306,704
Actuarial Value of Plan Assets	\$ 0
Unfunded Actuarial Accrued Liability (UAAL)	\$ 1,306,704
Funded Ratio	
(Actuarial Value of Plan Assets/AAL)	0%
Covered Payroll (Active Plan Members)	\$ 2,340,438
UAAL as a Percentage of Covered Payroll	55.83%

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
PO Box 200126
Helena, MT 59620-0126.

Defined benefit investments are reported at fair value as of June 30, 2017.

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 are 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 on an annual basis. The investment options are reviewed quarterly by an investment analyst who is an independent third party consultant. In the review, each investment alternative is compared to its peers and the appropriate benchmark. In addition, each investment alternative is reviewed for other indicators including, but not limited to: style drift, duplication, and fund manager or other organizational changes. Investment alternatives that are determined to have a sub-standard performance rating or other negative indicators may be recommended for probation or termination. During the reviews, the PERB may decide to retain, replace or place in a probation status any

of the offered mutual funds. DCRP and 457 investments are reported at fair value as of June 30, 2017.

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. Effective October 2015, 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.

Prior to November 2016, the asset allocation for the pension-only funds focused on five pools: the Montana Domestic Equity Pool, Montana International Equity Pool, Retirement Funds Bonds Pool, Montana Private Equity Pool, and the Montana Real Estate Pool. The only participants within these pools were the pension systems. In November 2016, upon recommendation from the BOI's Chief Investment Officer, BOI approved that the pension asset allocation was to focus on 13 asset classes versus the five pension only pools. On March 31, 2017,

FINANCIAL SECTION

BOI converted the five pension only pools into a single "Consolidated Asset Pension Pool" (CAPP), with 13 underlying asset classes, to align with BOI's accounting and performance standards with the more detailed assets allocation as formally approved in November 2016 by BOI.

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
Diversified Strategies*	
*Not funded as of October 1, 2017	

As of June 30, 2017, 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.

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.

Diversified Strategies PAC – This asset class was approved by BOI in regard to asset allocation in November 2016. This asset class has not been funded as of October 1, 2017. Prior to funding, the BOI's Chief Investment Officer will propose the PAC Investment Objectives and Guidelines for approval by the BOI.

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 invests primarily in short-term, high quality, fixed income securities with a maximum maturity of 397 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, 2017		
Investment Pools	Fair Value	Net Asset Value (NAV)
Short-term Investment Pool	\$ 170,663,421	\$ 170,663,421
CAPP Investment Pool	6,816,632,917	6,816,632,917
Commingled Equity Securities ¹	3,461,740	3,461,740
Total	\$6,990,758,078	\$6,990,758,078

¹DC 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).

FINANCIAL SECTION

The Pension Investment Pool, CAPP, is an 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 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, 2017, the PERB's portion of the defined benefit investment pools is presented in the table below.

<u>Investment</u>	Fair Value June 30, 2017	PERB Portion June 30, 2017
STIP	\$ 170,663,421	2.39%
CAPP	6,816,632,917	64.08%

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, 2017, 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.

Credit Risk - Credit risk is defined as the risk that an issuer or other counterparty 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.

Foreign Currency Risk - 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, 2017, there was no receivable or payable balances pertaining to foreign currency forward contracts.

Interest Rate Risk - Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. 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."

FINANCIAL SECTION

The PERB’s investments subject to credit and interest rate risk at June 30, 2017 are categorized in the following table

<u>Investment</u>	<u>Fair Value</u>	<u>Credit</u>	<u>Effective</u>
	<u>6/30/2017</u>	<u>Quality</u> <u>Rating</u>	<u>Duration</u>
STIP	\$ 170,633,421	NR	39 days
*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, 2017, STIP's portfolio held certain variable rate issues. 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, and 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 contract with the GIC provider. 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 and are 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 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 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, 2017, 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, 2017, is 3.79 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.

Available investment options in the PERS-DCRP and Deferred Compensation Plan are listed on pages 89-90 and 92-93, respectively. 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 table on the following page for the defined benefit investments and on page 61 for the defined contribution investments.

FINANCIAL SECTION

PERB Defined Benefit Investments Measured at Fair Value

	Fair Value Measurements Using			
	June 30, 2017	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	\$6,816,632,917			
Short Term Investment Pool (STIP)	170,663,421			
Commingled Equity Securities ³	3,461,740			
Total investments measured at the NAV	\$6,990,758,078			
Total investments measured at fair value	\$6,990,758,078			

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

²CAPP Investment Pool is new this fiscal year instead of the five investment pools that have been previously reported.

³The 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, 2017			
	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
CAPP Investment Pool ¹	\$6,816,632,917		Monthly	30 days
Short Term Investment Pool (STIP)	170,663,421		Daily	1 day
Commingled Equity Securities ²	3,461,740		Daily	1 day
Total investments measured at the NAV	\$6,990,758,078			

¹CAPP Investment Pool is new this fiscal year instead of the five investment pools that have been previously reported.

²The 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
Measured at Fair Value**

	Fair Value Measurements Using			
	June 30, 2017	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	\$	252,212,236		
Variable Pooled Investments ³		419,503,181		
Short Term Investment Pool ⁴		1,082,988		
Total investments measured at the NAV	\$	672,798,405		
Total investments measured at fair value	\$	672,798,405		

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

²The 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.

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

⁴Short 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.

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

	June 30, 2017			
	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Montana Fixed Fund (Stable Value Pool) ¹	\$ 252,212,236		Daily	None
Variable Pooled Investments ²	419,503,181		Daily	None
Short Term Investment Pool ³	1,082,988		Daily	1 day
Total investments measured at the NAV	\$ 672,798,405			

¹The 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.

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

³Short Term Investment Pool (STIP) is an external investment pool managed and administered through Montana Board of Investments (BOI). The fair values are determined using the Net Asset Value (NAV) per share for the investment.

FINANCIAL SECTION

7. SUBSEQUENT EVENTS

During the November 2017 Special Legislative Session, Senate Bill 1 was passed temporarily suspending employer contributions to the Judges Retirement System (JRS) beginning the first full pay period of January 2018. This temporary suspension will terminate immediately after the last full pay period of June 2019 and employer contributions will return to 25.81% at this time.

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. The Wrzesien case was decided by the Montana Supreme Court in favor of the PERB and the State and will not impact PERS' financial position. 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.

Wrzesien v. State. Certain members of PERS who elected to participate in either the PERS Defined Contribution Retirement Plan or the Montana University System Retirement Program (MUS-RP) sued the State of Montana and MPERA in late 2012 over the use of employer contributions to pay off the PERS plan choice rate (PCR). The complaint alleged equal protection and due process violations, and requested issuance of a declaratory

judgment granting plaintiffs the employer contributions paid toward the plan choice rate. The complaint was amended in 2013 to include the 1% in employer contributions for DCRP plan members that, pursuant to HB 454 (2013), went to the PERS defined benefit retirement plan starting July 1, 2013. The First Judicial District Court, Judge Reynolds presiding, ruled against the plaintiffs and found that neither the PCR nor the allocation of the additional 1% employer contribution to the defined benefit plan's unfunded actuarial liability violated the plaintiffs' equal protection or substantive due process rights. Plaintiffs appealed this decision to the Montana Supreme Court, which affirmed the lower court on September 28, 2016. The PCR was satisfied effective March 14, 2016 and the employer contributions previously used to pay off the PCR are now paid into PERS-DCRP and MUS-RP plan member accounts.

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.

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, membership service is restored. Membership in each plan as of June 30, 2017 is detailed in the following chart.

Type of Plan for Reporting Purposes as of Fiscal Year end June 30, 2017	Single-Employer Defined Benefit		Multi-Employer Defined Benefit						Multi-Employer Defined Contribution	
	JRS	HPORS ¹	PERS-DBRP ²	SRS	GWPORS	MPORS ¹	FURS	VFCA	PERS-DCRP	457
Classification of Member										
Active	56	238	29,395	1,415	1,012	775	678	1,957	2,541	4,898
Inactive: entitled to, but not yet receiving benefits or a refund:										
Vested	2	16	3,677	108	114	75	39	824	475	4,341
Non-Vested	1	17	16,659	465	304	143	54		653	
Inactive members and beneficiaries currently receiving benefits:										
Service Retirements	62	313	21,181	595	262	731	604	1,435	58	
Disability Retirements	1	6	161	29	3	30	6	1	3	
Survivor Benefits	5	12	463	24	11	30	20	2	3	
Total Membership	127	602	71,536	2,636	1,706	1,784	1,401	4,219	3,733	9,239

¹Includes DROP in the Active count.

²The PERS-DBRP Inactive Non-Vested count includes dormant accounts that were previously not counted.

FINANCIAL SECTION

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). For members that choose to join the PERS-DCRP or the MUS-RP, a percentage of the employer contribution was used to pay down the liability of the PERS-DBRP until March 2016 when this liability was retired.

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.

PERS-DBRP Summary of Benefits (continued)

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

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 (.25%);
- 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 as prior to the second period of 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.

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.

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.

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.

FINANCIAL SECTION

PERS-DBRP PARTICIPATING EMPLOYERS		
Employers	June 30, 2017	June 30, 2016
State Agencies	34	34
Counties	55	55
Cities and Towns	98	98
Colleges and Universities	5	5
School Districts	231	229
High Schools	5	5
Other Agencies	111	109
Total	539	535

PERS-DBRP Active Membership by Employer Type		
Employer Type	June 30, 2017	June 30, 2016
State Agencies	10,933	10,668
Counties	5,482	5,426
Cities	3,437	3,360
Universities	2,742	2,661
High Schools	79	63
School Districts	5,581	5,097
Other Agencies	1,141	1,115
Total	29,395	28,390

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, 2017	
Member	7.90%
State & University Employer	8.47%
Local Government Employer	8.37%
School District Employer	8.10%
State for Local Governments	0.10%
State for School Districts	0.37%

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, 2018 due to the amortization period being 30 years at June 30, 2017.

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 contribution 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, 2017 actuarial valuation, the additional contributions will not be terminated on January 1, 2018. (Reference Schedule of Contribution Rates on page 95).

Effective July 1, 2013, PERS-DBRP received additional contributions from the coal severance tax fund and interest income from the coal severance tax permanent fund. The coal severance taxes collected are credited to the general fund of the State of Montana and are statutorily appropriated on July 1 each year to the trust fund for the PERS-DBRP. The coal tax is transferred quarterly and the interest income is credited monthly. The amount received for fiscal year 2017 was \$27.9 million. These contributions are recorded as *Coal Tax Transfers* in 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 will be replaced with the following statutory appropriations:

- Fiscal Year 2018.....\$31.386 Million
- Fiscal Year 2019.....\$31.958 Million
- Beginning July 1, 2019 through at least June 30, 2025, 101% of the general fund contribution from the previous year will be statutorily-appropriated to the PERS defined benefit trust fund.

Employers are required to make contributions on working retirees' compensation. Member contributions for working retirees are not required.

Plan Membership Elections: MPERA has included in the financial statements transfers of \$1,419,600 in Transfers to DCRP and \$127,663 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 2018.

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 242 in fiscal year 2016 to 245 in fiscal year 2017. The contributions received (including interest) during fiscal year 2016 totaled \$70,335. The outstanding balance at June 30, 2017, totaled \$25,634.

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.

The education program was funded by 0.04% of PERS-covered payroll in fiscal year 2017.

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, 2016 Actuarial Valuation Report for PERS-DBRP.

As a result of the experience study performed during fiscal year 2017, the following actuarial assumptions were used to measure the Total Pension Liability (TPL): discount rate was lowered from 7.75% to 7.65%; inflation rate was reduced from 3.00% to 2.75%; wage inflation rate was reduced from 4.00% to 3.50%; the non-disabled mortality and withdrawal assumptions were updated; and the salary merit scale was updated.

The discount rate as of June 30, 2017 is 7.65% which is the assumed long-term expected

FINANCIAL SECTION

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, 2017, the sensitivity of the NPL to the changes in discount rate are as follows.

As of June 30, 2017	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$8,309,070,553	\$7,420,145,583	\$6,673,960,353
Fiduciary Net Position	5,472,519,182	5,472,519,182	5,472,519,182
Net Pension Liability	<u>\$2,836,551,371</u>	<u>\$1,947,626,401</u>	<u>\$1,201,441,171</u>
Fiduciary Net Position as a % of the TPL	65.86%	73.75%	82.00%

During the measurement year there were no changes in benefits.

At June 30, 2017, the PERS-DBRP total pension liability (TPL) was \$7.4 billion. The

Plan's fiduciary net position was \$5.5 billion leaving a net pension liability of \$1.9 billion. The Plan fiduciary net position as a percentage of the total pension liability was 73.75% at 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, 2017, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability within 30 years. The funded ratio is 72.76%

Under the provisions of HB 454 (2013), the additional member and employer contributions, effective July 1, 2013, will remain in effect on January 1, 2018.

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 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 on the top of the next page.

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 later of age 65 for disabilities occurring prior to age 60, or five years for disabilities occurring after age 65.

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.
- Benefit is payable to age 70 for disabilities occurring prior to age 65, or 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		
<u>Employers</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
State Agencies	32	33
Counties	53	50
Cities and Towns	55	53
Universities	5	5
School Districts	107	105
High Schools	4	3
Other Agencies	<u>44</u>	<u>40</u>
Total	300	289

PERS-DCRP Active Membership by Employer Type		
<u>Employer Type</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
State Agencies	1,254	1,175
Counties	383	373
Cities	289	285
Universities	138	125
High Schools	5	3
School Districts	274	256
Other Agencies	<u>198</u>	<u>192</u>
Total	2,541	2,409

FINANCIAL SECTION

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 on page 95).

As of June 30, 2017, there are three members receiving a benefit from the disability plan, four less than as of June 30, 2016.

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, 2017, the most recent actuarial valuation, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability. The DCRP Disability OPEB

assets gained 0.02% on an annualized market value basis during the year ended June 30, 2017. This return was below the assumed rate of return of 3.50%, resulting in an investment loss of about \$114,485 for year ended June 30, 2017. The actuarial value of assets is set equal to the market value of assets. As of the June 30, 2017 Actuarial Valuation, the DCRP Disability OPEB unfunded actuarial liability was \$0.51 million and the funded ratio was 87.14%. At the June 30, 2016 actuarial valuation, the Plan's unfunded liability was \$0.47 million, and the funded ratio was 86.83%.

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 salary¹ or highest average compensation (HAC)²

- Hired prior to July 1, 1997 and non-GABA¹ - monthly compensation at time of retirement.
- Hired on or after July 1, 1997 or electing GABA² - 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.

JRS Summary of Benefits continued

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 salary¹ (non-GABA) or HAC² (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.

JRS PARTICIPATING EMPLOYERS		
<u>Employer</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
State Agency - Supreme Court	1	1
Total	1	1

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 on page 95).

JRS Active Membership by Employee Type		
<u>Employee Type</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
GABA	52	49
Non-GABA	4	6
Total	56	55

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, 2016 Actuarial Valuation Report for JRS.

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

As a result of the experience study performed during fiscal year 2017, the following actuarial assumptions were used to measure the Total Pension Liability (TPL): discount rate was lowered from 7.75% to 7.65%; inflation rate was reduced from 3.00% to 2.75%; wage inflation rate was reduced from 4.00%

Contribution Rates as a % of Covered Payroll	
<i>Fiscal year ended June 30, 2017</i>	
Member	7.00%
Employer	25.81%

FINANCIAL SECTION

to 3.50%; the non-disabled mortality and withdrawal assumptions were updated; and the salary merit scale was updated.

The discount rate as of June 30, 2017 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, 2017, the sensitivity of NPA to changes in the discount rate are as follows.

	1% decrease	Discount Rate	1% Increase
As of June 30, 2017	6.65%	7.65%	8.65%
Total Pension Liability	\$ 66,745,485	\$ 60,797,964	\$ 55,667,690
Fiduciary Net Position	96,653,635	96,653,635	96,653,635
Net Pension Asset	\$(29,908,150)	\$(35,855,671)	\$(40,985,945)
Fiduciary Net Position as a % of the TPL	144.81%	158.98%	173.63%

During the measurement year there were no changes in benefits.

At June 30, 2017, the JRS total pension liability (TPL) was \$60.8 million. The Plan's fiduciary net position was \$96.7 million leaving a net pension asset of \$35.9 million. The Plan fiduciary net position as a percentage of the total pension liability was 158.98% at 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, 2017, the JRS amortizes in 0 years, meaning it is fully funded. The funded ratio is 167.06%.

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.

HPORS Summary of Benefits continued:

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.

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 may not exceed 60% of the current base salary of a probationary officer.

HPORS PARTICIPATING EMPLOYERS		
Employer	June 30, 2017	June 30, 2016
State Agency - Department of Justice	1	1
Total	1	1

All HPORS member contributions, regardless of hire date, will increase 1.0% annually, effective July 1, 2013 and ending July 1, 2016.

HPORS Active Membership by Employee Type		
Employee Type	June 30, 2017	June 30, 2016
GABA	238	228
Non-GABA	0	0
Total	238	228

Contribution Rates as a % of Covered Payroll	
<i>Fiscal year ended June 30, 2017</i>	
Member:	
Hired prior to 7/1/1997 and not electing GABA	13.00%
Hired after 6/30/1997 and electing GABA	13.05%
Employer	28.15%
State (General Fund)	10.18%

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 the participating employer. An individual account

FINANCIAL SECTION

is established for each member's contributions and interest allocations until a retirement or refund request is processed. (Reference Schedule of Contribution Rates on page 95).

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): Beginning October 1, 2015, 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, 2017, there were ten DROP participants. The balance of the DROP accounts is \$679,980.

HPORS DROP Participation	
	<u>June 30, 2017</u>
Participants Beginning of Year	6
Participants Added	4
Completed DROP	0
Participants End of Year	10
DROP Distributions	\$ 0.00

GASB Statement No. 67 Reporting: The membership data, method and assumptions used in calculations of the actuarially

FINANCIAL SECTION

determined contributions, and plan provisions are the same as were described in the June 30, 2016 Actuarial Valuation Report for HPORS.

As a result of the experience study performed during fiscal year 2017, the following actuarial assumptions were used to measure the Total Pension Liability (TPL): discount rate was lowered from 7.75% to 7.65%; inflation rate was reduced from 3.00% to 2.75%; wage inflation rate was reduced from 4.00% to 3.50%; the non-disabled mortality and withdrawal assumptions were updated; and the salary merit scale was updated.

The discount rate as of June 30, 2017 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, 2017, the sensitivity of the NPL to the changes in the discount rate are as follows in next column.

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

As of June 30, 2017	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 249,078,193	\$ 218,922,225	\$ 194,473,533
Fiduciary Net Position	140,536,689	140,536,689	140,536,689
Net Pension Liability	<u>\$ 108,541,504</u>	<u>\$ 78,385,536</u>	<u>\$ 53,936,844</u>
Fiduciary Net Position as a % of the TPL	56.42%	64.19%	72.27%

At June 30, 2017, the HPORS total pension liability (TPL) was \$218.9 million. The Plan's fiduciary net position was \$140.5 million leaving a net pension liability of \$78.4 million. The Plan fiduciary net position as a percentage of the total pension liability was 64.19% at June 30, 2017.

During the measurement year there were no changes to benefits.

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, 2017, the HPORS amortizes in 37 years. The funded ratio is 64.35%.

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.

FINANCIAL SECTION

SRS Summary of Benefits continued:

- 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, actuarially reduced.

Vesting 5 years of membership service

Monthly benefit formula

- 2.5% of HAC per year of service credit.

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		
<u>Employers</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
State Agencies - Department of Justice	1	1
Counties	56	56
Total	57	57

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 on page 95).

SRS Active Membership by Employer Type		
<u>Employer Type</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
Dept of Justice	55	57
Counties	1,360	1,307
Total	1,415	1,364

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

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

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 increase 1.25%, from 9.245% to 10.495%. Effective July 1, 2017, the employer has 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

Contribution Rates as a % of Covered Payroll	
<i>Fiscal year ended June 30, 2017</i>	
Member	9.245%
Employer	10.115%

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 purchases 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, 2016 Actuarial Valuation Report for SRS.

As a result of the experience study performed during fiscal year 2017, the following actuarial assumptions were used to measure the Total Pension Liability (TPL): discount rate was lowered from 7.75% to 7.65%; inflation rate was reduced from 3.00% to 2.75%; wage inflation rate was reduced from 4.00% to 3.50%; the non-disabled mortality and withdrawal assumptions were updated; and the salary merit scale was updated.

The discount rate as of June 30, 2017 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, 2017, the sensitivity of the NPL to the changes in the discount rate is as follows.

	1% decrease	Discount Rate	1% Increase
As of June 30, 2017	6.65%	7.65%	8.65%
Total Pension Liability	\$ 465,279,449	\$ 407,007,349	\$ 359,333,600
Fiduciary Net Position	330,910,169	330,910,169	330,910,169
Net Pension Liability	\$ 134,369,280	\$ 76,097,180	\$ 28,423,431
Fiduciary Net Position as a % of the TPL	71.12%	81.30%	92.09%

At June 30, 2017, the SRS total pension liability (TPL) was \$407.0 million. The Plan’s fiduciary net position was \$330.9 million leaving a net pension liability of \$76.1 million. The Plan fiduciary net position as a percentage of the total pension liability was 81.30% at June 30, 2017.

During the measurement year there were no changes in benefits.

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, 2017, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability. As of June 30, 2017, the SRS amortizes in 25 years. The funded ratio is 80.74%.

FINANCIAL SECTION

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.

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

FINANCIAL SECTION

GWPORS PARTICIPATING EMPLOYERS		
<u>Employers</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
State Agencies	4	4
Colleges and Universities	<u>3</u>	<u>3</u>
Total	7	7

GWPORS Active Membership by Employer Type		
<u>Employer</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
Dept of Corrections	739	723
Dept FW&P	105	109
Dept of Livestock	42	34
Dept of Transportation	81	81
Universities	<u>45</u>	<u>42</u>
Total	1,012	989

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	
<i>Fiscal year ended June 30, 2017</i>	
Member	10.56%
Employer	9.00%

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 on page 95).

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, 2016 Actuarial Valuation Report for GWPORS.

As a result of the experience study performed during fiscal year 2017, the following actuarial assumptions were used to measure the Total Pension Liability (TPL): discount rate was lowered from 7.75% to 7.65%; inflation rate was reduced from 3.00% to 2.75%; wage inflation rate was reduced from 4.00% to 3.50%; the non-disabled mortality and withdrawal assumptions were updated; and the salary merit scale was updated.

The discount rate as of June 30, 2017 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, 2017, the sensitivity of the NPL to the change in the discount rate is as follows.

	1% decrease	Discount Rate	1% Increase
As of June 30, 2017	6.65%	7.65%	8.65%
Total Pension Liability	\$ 245,895,770	\$ 213,201,194	\$ 186,576,542
Fiduciary Net Position	<u>175,840,876</u>	<u>175,840,876</u>	<u>175,840,876</u>
Net Pension Liability	<u>\$ 70,054,894</u>	<u>\$ 37,360,318</u>	<u>\$ 10,735,666</u>
Fiduciary Net Position as a % of the TPL	71.51%	82.48%	94.25%

FINANCIAL SECTION

At June 30, 2017, the GWPORS total pension liability was \$213.2 million. The Plan's fiduciary net position was \$175.8 million leaving a net pension liability of \$37.4 million. The Plan fiduciary net position as a percentage of the total pension liability was 82.48% at June 30, 2017.

During the measurement year there were no changes in benefits.

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, 2017, the statutory contribution rates are not sufficient to amortize the unfunded actuarial liability. The GWPORS amortizes in 70 years. The funded ratio is 81.01%

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.

MPORS Summary of Benefits

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.

MPORS Summary of Benefits continued:

Second retirement benefit formula

Re-calculated using specific criteria:

- Less than 20 years of membership service, upon re-employment, repays 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.

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 may 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		
<u>Employee Type</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
GABA	770	756
Non-GABA	5	6
Total	775	762

MPORS PARTICIPATING EMPLOYERS		
<u>Employers</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
Cities	33	32
Total	33	32

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 on page 95).

Contribution Rates as a Percent of Salary	
<i>Fiscal year ended June 30, 2017</i>	
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 and members electing GABA	9.00%
Employer	14.41%
State (General Fund)	29.37%

Deferred Retirement Option Plan (DROP): Beginning July 2002, eligible members of MPORS can participate in the DROP by filing a one-time irrevocable

FINANCIAL SECTION

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 and 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 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 employment is formally terminated. As of June 30, 2017, there were 61 DROP participants. Since program inception, a total of 149 members have participated in the DROP. The balance of the DROP accounts is \$9.0 million.

MPORS DROP Participation		
	June 30, 2017	June 30, 2016
Participants Beginning of Year	61	51
Participants Added	6	15
Completed DROP	6	5
Participants End of Year	61	61
DROP Distributions	\$ 928,523	\$ 796,713

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, 2016 Actuarial Valuation Report for MPORS.

As a result of the experience study performed during fiscal year 2017, the following actuarial assumptions were used to measure the Total Pension Liability (TPL): discount rate was lowered from 7.75% to 7.65%; inflation rate was reduced from 3.00% to 2.75%; wage inflation rate was reduced from 4.00% to 3.50%; the non-disabled mortality and withdrawal assumptions were updated; and the salary merit scale was updated.

The discount rate as of June 30, 2017 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, 2017, the sensitivity of the NPL to the change in the discount rate is as follows.

	1% decrease	Discount Rate	1% Increase
As of June 30, 2017	6.65%	7.65%	8.65%
Total Pension Liability	\$643,111,089	\$561,975,691	\$496,922,192
Fiduciary Net Position	384,062,216	384,062,216	384,062,216
Net Pension Liability	<u>\$259,048,873</u>	<u>\$177,913,475</u>	<u>\$112,859,976</u>
Fiduciary Net Position as a % of the TPL	59.72%	68.34%	77.29%

At June 30, 2017, the MPORS total pension liability was \$562.0 million. The Plan's fiduciary net position was \$384.1 million leaving a net pension liability of \$177.9 million. The Plan fiduciary net position as a percentage of the total pension liability was 68.34% at June 30, 2017.

During the measurement year there were no changes in benefit.

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, 2017, the MPORS amortizes in 16 years. The funded ratio is 68.66%.

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; 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.

FURS Summary of Benefits

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

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

FINANCIAL SECTION

FURS Summary of Benefits continued:

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

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 may 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).

FURS PARTICIPATING EMPLOYERS		
<u>Employers</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
State Agencies - Department of Military Affairs	1	1
Cities	15	15
Rural Fire Districts	<u>11</u>	<u>10</u>
Total	27	26

FURS Active Membership by Employee Type		
<u>Employee Type</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
GABA	675	640
Non-GABA	3	4
Total	<u>678</u>	<u>644</u>

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 on page 95).

Contribution Rates as a % of Covered Payroll	
<i>Fiscal year ended June 30, 2017</i>	
Member:	
Hired prior to 7/1/97 and not electing GABA	9.50%
Hired after 6/30/1997 and 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.

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, 2016 Actuarial Valuation Report for FURS.

As a result of the experience study performed during fiscal year 2017, the following actuarial assumptions were used to measure the Total Pension Liability (TPL): discount rate was lowered from 7.75% to 7.65%; inflation rate was reduced from 3.00% to 2.75%; wage inflation rate was reduced from 4.00% to 3.50%; the non-disabled mortality and withdrawal assumptions were updated; and the salary merit scale was updated.

The discount rate as of June 30, 2017 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.

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

Changes in the discount rate affect the measurement of the TPL. At June 30, 2017, the sensitivity of the NPL to the changes in the discount rate are as follows.

	1% decrease	Discount Rate	1% Increase
As of June 30, 2017	6.65%	7.65%	8.65%
Total Pension Liability	\$583,341,055	\$508,540,629	\$448,105,809
Fiduciary Net Position	395,506,080	395,506,080	395,506,080
Net Pension Liability	\$187,834,975	\$113,034,549	\$ 52,599,729
Fiduciary Net Position as a % of the TPL	67.80%	77.77%	88.26%

At June 30, 2017, the FURS total pension liability was \$508.5 million. The Plan’s fiduciary net position was \$395.5 million leaving a net pension liability of \$113.0 million. The Plan fiduciary net position as a percentage of the total pension liability was 77.77% at June 30, 2017.

During the measurement year there were no changes in benefits.

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, 2017, the FURS amortizes in 10 years. The funded ratio is 76.13%

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.

FINANCIAL SECTION

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.

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 is a qualified Length of Service Award Plan (LOSAP) under 457(e)(11)(B) of the

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

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 on page 95).

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, 2016 Actuarial Valuation Report for VFCA.

As a result of the experience study performed during fiscal year 2017, the following actuarial assumptions were used to measure the Total Pension Liability (TPL): discount rate was lowered from 7.75% to 7.65%; inflation rate was reduced from 3.00% to 2.75%; wage inflation rate was reduced from 4.00% to 3.50%; the non-disabled mortality and withdrawal assumptions were updated; and the salary merit scale was updated.

The discount rate as of June 30, 2017 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, 2017, the sensitivity of the NPL to the changes of the discount rate are as follows.

	1% decrease	Discount Rate	1% Increase
At June 30, 2017	6.65%	7.65%	8.65%
Total Pension Liability	\$51,305,478	\$46,717,576	\$42,832,255
Fiduciary Net Position	36,630,432	36,630,432	36,630,432
Net Pension Liability	\$14,675,046	\$10,087,144	\$6,201,823
Fiduciary Net Position as a % of the TPL	71.40%	78.41%	85.52%

At June 30, 2017, the VFCA total pension liability (TPL) was \$46.7 million. The Plan’s fiduciary net position was \$36.6 million leaving a net pension liability of \$10.1 million. The Plan fiduciary net position as a percentage of the total pension liability was 78.41% at June 30, 2017.

During the measurement year there were no changes in benefits.

Actuarial Status: The actuarial contribution decreased to \$1,029,969 at the June 30, 2017 valuation from \$1,109,996 at the June 30, 2016 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, 2017, the VFCA amortizes in 6 years. The funded ratio is 80.56%

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 on top of the next page.

FINANCIAL SECTION

PERS-DCRP Summary of Benefits

Eligibility for benefit

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.

PERS-DCRP PARTICIPATING EMPLOYERS		
<u>Employers</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
State Agencies	32	33
Counties	53	50
Cities and Towns	55	53
Universities	5	5
School Districts	107	105
High Schools	4	3
Other Agencies	44	40
Total	300	289

Contribution Rates as a % of Covered Payroll	
<i>Fiscal year ended June 30, 2017</i>	
Member	7.90%
State & University Employer	8.47%
Local Government Employer	8.37%
School District Employer	8.10%
State for Local Governments	0.10%
State for School Districts	0.37%

PERS-DCRP Active Membership by Employer Type		
<u>Employer Type</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>
State Agencies	1,254	1,175
Counties	383	373
Cities	289	285
Universities	138	125
High Schools	5	3
School Districts	274	256
Other Agencies	198	192
Total	2,541	2,409

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, 2018. (Reference Schedule of Contribution Rates on page 95).

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

The total employer rate of 8.47% is allocated as follows: 8.13% 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 increased 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, 2017 actuarial valuation, the additional contributions will not be terminated on January 1, 2018.

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 2018. At fiscal year end June 30, 2017, there were no transfers.

DCRP Education Fund: Implemented July 1, 2002, 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 2017.

DCRP Disability Fund: Implemented July 1, 2002, 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 2017. 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 contribution 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 their 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, 2017 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

FINANCIAL SECTION

Prudential Small Cap Value Z

Mid-Sized Company Stock Funds

Janus Henderson Enterprise - N
MFS Mid-Cap Value

Large Company Stock Funds

Alger Capital Appreciation Z
BlackRock Equity Index - Collective F
Vanguard Equity Income - Adm
JP Morgan US Equity R5

Balanced Funds

Vanguard Balanced Index - I

Bond Funds

Prudential Total Bond Q
Neuberger Berman High Income Bond - 1

Target Date Funds

T. Rowe Price Retirement 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. 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 record keeper, 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.

Record keeping fees: The record keeper, 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 record keeper 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.

FINANCIAL SECTION

Deferred Compensation Plan Summary (continued)

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, 2017	June 30, 2016
State of Montana*	1	1
Counties	4	4
Colleges and Universities	5	5
School Districts	13	11
Cities	10	10
Other Agencies	<u>13</u>	<u>13</u>
Total	46	44

*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 their 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, 2017 are as follows.

Deferred Compensation (457) Plan Investment Options

International Stock Funds

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

Neuberger Berman High Income Bond Inv
Prudential Total Return Bond Q

Target Date Funds

T. Rowe Price Retirement 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.

FINANCIAL SECTION

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 record keeper, 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.

Record keeping fees: The record keeper, 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.

FINANCIAL SECTION

FY 2017 Schedule of Contribution Rates			
System	Member	Employer	State
PERS-DBRP*	7.9% [19-3-315(1)(a), MCA]	8.47% State & University 8.37% Local Governments 8.1% 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*	7.9% [19-3-315(1)(a), MCA]	8.47% State & University 8.37% Local Governments 8.1% 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	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*	9.245% [19-7-403, MCA]	10.115% [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 against risk premiums, paid from the General Fund [19-17-301, MCA]

*The employer and/or member contribution rates increase on July 1, 2017 for PERS-DBRS, PERS-DCRP and SRS.

FINANCIAL SECTION

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, 2017

Last 10 Fiscal Years¹

Fiscal Year	2017	2016	2015	2014
PERS-DBRP				
Total pension liability				
Service cost (Beginning of year)	\$ 144,475,909	\$ 132,620,813	\$ 138,049,956	\$ 137,452,701
Interest (includes interest on service cost)	507,380,846	486,830,869	476,777,225	456,406,491
Changes of benefit terms				
Differences between expected and actual experience	55,782,342	12,254,313	(11,276,266)	
Changes of assumptions	354,960,213			
Benefit payments ²	(366,354,719)	(344,103,875)	(333,401,463)	(307,741,308)
Refunds of Contributions ³	(12,252,007)	(10,379,388)		
Net change in total pension liability	\$ 683,992,584	\$ 277,222,732	\$ 270,149,452	\$ 286,117,884
Total pension liability-beginning	6,736,152,999	6,458,930,267	6,188,780,815	5,902,662,931
Total pension liability-ending (a)	\$ 7,420,145,583	\$ 6,736,152,999	\$ 6,458,930,267	\$ 6,188,780,815
Plan fiduciary net position				
Contributions - employer ^{4,9}	\$ 103,537,059	\$ 102,327,838	\$ 100,175,856	\$ 95,820,397
Contributions - non-employer	28,757,463	30,800,371	34,466,719	34,561,721
Contributions - member ⁵	100,768,139	97,342,719	95,424,031	92,160,048
Net investment income ⁶	591,434,954	101,199,856	225,106,692	732,253,062
Benefit payments ²	(366,354,719)	(344,103,875)	(333,401,463)	(307,741,308)
Administrative expense	(4,472,084)	(3,858,330)	(3,483,531)	(3,522,346)
Refunds of Contributions ³	(12,252,007)	(10,379,388)		
Other ⁷	(1,706,733)	(1,580,302)		
Net change in plan fiduciary net position	\$ 439,712,072	\$ (28,251,111)	\$ 118,288,304	\$ 643,531,574
Plan fiduciary net position - beginning	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) ^{8,9}	\$ 5,472,519,182	\$ 5,032,807,110	\$ 5,061,058,221	\$ 4,942,769,917
Net pension liability / (asset) - ending (a-b)	\$ 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)	\$ 19,186,527	\$ 18,802,901	\$ 12,574,185	\$ 15,117,708
Interest (includes interest on service cost)	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	(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	(16,700,117)	(15,476,437)	(15,280,070)	(13,943,335)
Refunds of Contributions ³	(1,383,061)	(1,028,890)		
Net change in total pension liability	\$ (67,822,481)	\$ 82,735,737	\$ 65,821,794	\$ (24,391,856)
Total pension liability-beginning	474,829,830	392,094,093	326,272,299	350,664,155
Total pension liability-ending (a)	\$ 407,007,349	\$ 474,829,830	\$ 392,094,093	\$ 326,272,299
Plan fiduciary net position				
Contributions - employer ⁴	\$ 7,562,105	\$ 7,316,674	\$ 6,902,448	\$ 6,689,311
Contributions - non-employer				
Contributions - member ⁵	7,188,857	6,982,217	6,623,175	6,447,179
Net investment income ⁶	35,511,246	6,063,591	13,041,786	41,789,437
Benefit payments ²	(16,700,117)	(15,476,437)	(15,280,070)	(13,943,335)
Administrative expense	(387,378)	(322,584)	(247,405)	(203,493)
Refunds of Contributions ³	(1,383,061)	(1,028,890)		
Other ⁷	(33,489)	(77,778)		
Net change in plan fiduciary net position	\$ 31,758,163	\$ 3,456,793	\$ 11,039,934	\$ 40,779,099
Plan fiduciary net position - beginning	299,152,006	295,695,213	284,655,279	243,876,180
Plan fiduciary net position - ending (b) ⁸	\$ 330,910,169	\$ 299,152,006	\$ 295,695,213	\$ 284,655,279
Net pension liability / (asset) - ending (a-b)	\$ 76,097,180	\$ 175,677,824	\$ 96,398,880	\$ 41,617,020

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

²For 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

³For fiscal year 2016 forward, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and Transfers

⁴The Contributions - employer consists of the Employer, Membership Fees, Retirement Incentive Program, and Miscellaneous Revenue.

⁵The Contributions - member consists of the Plan Member and Interest Reserve Buyback.

⁶The 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.

⁷Other 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.

⁸The 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.

⁹The 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.

FINANCIAL SECTION

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, 2017

Last 10 Fiscal Years¹

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

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

²For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015, the benefit payments include refunds of contributions and transfers.

³For fiscal year 2016, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and transfers.

⁴The Contributions - employer consists of the Employer, Membership Fees, Retirement Incentive Program, and Miscellaneous Revenue.

⁵The Contributions - member consists of the Plan Member and Interest Reserve Buyback.

⁶The 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.

⁷Other consists of the expense for Other Post Employment Benefits (OPEB).

FINANCIAL SECTION

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, 2017

Last 10 Fiscal Years¹

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

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

²For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015, the benefit payments include refunds of contribution and transfers.

³For fiscal year 2016, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and Transfers. Refunds are not applicable to VFCA.

⁴The Contributions - employer consists of the Employer, Membership Fees, Retirement Incentive Program, and Miscellaneous Revenue.

⁵The Contributions - member consists of the Plan Member and Interest Reserve Buyback.

⁶The 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.

⁷Other consists of the expense for Other Post Employment Benefits (OPEB).

FINANCIAL SECTION

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, 2017

Last 10 Fiscal Years¹

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

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

²For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015, the benefit payments include refunds of contributions and transfers.

³Other consists of the expense for Other Post Employment Benefits (OPEB).

⁴For fiscal year 2015, the HPORS Changes of benefit terms was the addition of the DROP.

⁵For fiscal year 2016, the Refunds of Contributions includes refunds of member contributions.

⁶The fiscal year 2014 and 2015, HPORS employer and non-employer contribution differences are due to considering all non-employer contributions as employer.

⁷The HPORS Contributions - member consists of Plan Member and Interest Reserve Buyback on the financial statements.

⁸The 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.

FINANCIAL SECTION

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, 2017

Last 10 Fiscal Years¹

Fiscal Year	2017	2016	2015	2014
PERS-DBRP				
Total Pension Liability	\$7,420,145,583	\$6,736,152,999	\$6,458,930,267	\$6,188,780,815
Plan Fiduciary Net Position ^{2,4}	5,472,519,182	5,032,807,110	5,061,058,221	4,942,769,917
Multiple-Employers' Net Pension Liability (Asset)	\$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	73.75%	74.71%	78.36%	79.87%
Covered Payroll ³	\$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	158.08%	143.66%	121.04%	111.22%
SRS				
Total Pension Liability	\$ 407,007,349	\$ 474,829,830	\$ 392,094,093	\$ 326,272,299
Plan Fiduciary Net Position ²	330,910,169	299,152,006	295,695,213	284,655,279
Multiple-Employers' Net Pension Liability / (Asset)	\$ 76,097,180	\$ 175,677,824	\$ 96,398,880	\$ 41,617,020
Plan fiduciary net position as a percentage of the total pension liability	81.30%	63.00%	75.41%	87.24%
Covered Payroll	\$ 74,581,258	\$ 70,593,304	\$ 68,045,517	\$ 64,672,635
Net pension liability / (asset) as a percentage of covered payroll	102.03%	248.86%	141.67%	64.35%
GWPORS				
Total Pension Liability	\$ 213,201,194	\$ 187,533,830	\$ 169,649,246	\$ 153,863,911
Plan Fiduciary Net Position ²	175,840,876	154,684,509	148,637,767	138,743,106
Multiple-Employers' Net Pension Liability / (Asset)	\$ 37,360,318	\$ 32,849,321	\$ 21,011,479	\$ 15,120,805
Plan fiduciary net position as a percentage of the total pension liability	82.48%	82.48%	87.61%	90.17%
Covered Payroll	\$ 49,381,004	\$ 47,108,310	\$ 44,884,739	\$ 41,636,566
Net pension liability / (asset) as a percentage of covered payroll	75.66%	69.73%	46.81%	36.32%

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

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

³The 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.

⁴The PERS-DBRP amounts will not tie to the financial statements due to the exclusion of the PERS-DB Education 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, 2017

Last 10 Fiscal Years¹

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

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

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

FINANCIAL SECTION

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, 2017

Last 10 Fiscal Years¹

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

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

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

This page intentionally left blank

FINANCIAL SECTION

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, 2017	June 30, 2017	June 30, 2017
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	30		37
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% - 6.3%	None	0% - 6.3%
*Includes inflation at	2.75%	2.75%	2.75%
Administrative Expenses as a Percentage of Payroll ³	0.26%	0.18%	0.30%
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 0% to 1.5% if hired on or after July 1, 2013; after 1 year	3% after 1 yr	3% after 1 yr 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 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.

FINANCIAL SECTION

SRS	GWPORS	MPORS	FURS	VFCA
June 30, 2017	June 30, 2017	June 30, 2017	June 30, 2017	June 30, 2017
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
25	70	16	10	6 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
0.21%	0.17%	0.24%	0.23%	\$89,298
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

FINANCIAL SECTION

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, 2017

(in thousands)

Last 10 Fiscal Years¹

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

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

²Employer consists of the Employer, Membership Fees, Retirement Incentive Program and Miscellaneous Revenue.

³The 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.

⁴The 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, 2017

(in thousands)

Last 10 Fiscal Years¹

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

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

²Employer consists of the Employer, Membership Fees, Retirement Incentive Program and Miscellaneous Revenue.

FINANCIAL SECTION

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, 2017

(in thousands)

Last 10 Fiscal Years¹

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

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

²Employer consists of the Employer, Membership Fees, Retirement Incentive 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, 2016

Key Methods and Assumptions Used to Determine the Actuarially Determined Contribution (ADC)
for fiscal year end 2017:

Timing	ADC rates are calculated based on the actuarial valuation just prior to the beginning of the year
Actuarial cost method	Entry age
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	4-year smoothed market
Inflation	3.00%
Salary increases	4.00% plus merit/seniority increases, where applicable
Investment rate of return	7.75% net of investment expenses
Mortality (Healthy)	Male and Female RP-2000 Combined Mortality projected to 2015 using Scale AA
Mortality (Disabled)	RP-2000 Combined Employee and Annuitant

FINANCIAL SECTION

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, 2017

(in thousands)

Last 10 Fiscal Years¹

Fiscal Year	2017	2016	2015	2014
JRS²				
Actuarially Determined Contribution				
Contributions in Relation to the Actuarially Determined Contribution:				
Employer Contributions ³	\$ 1,800	\$ 1,807	\$ 1,684	\$ 1,651
Total Contributions	\$ 1,800	\$ 1,807	\$ 1,684	\$ 1,651
Contribution Deficiency / (Excess)	\$ (1,800)	\$ (1,807)	\$ (1,684)	\$ (1,651)
Covered Payroll	\$ 6,974	\$ 6,920	\$ 6,525	\$ 6,355
Contributions as a Percentage of Covered Payroll	25.81%	26.11%	25.81%	25.98%
HPORS²				
Actuarially Determined Contribution	\$ 6,045	\$ 6,158	\$ 5,706	\$ 6,121
Contributions in Relation to the Actuarially Determined Contribution:				
Employer Contributions ^{3,4}	6,045	6,158	5,839	5,736
Total Contributions	\$ 6,045	\$ 6,158	\$ 5,839	\$ 5,736
Contribution Deficiency / (Excess)	\$ 0	\$ 0	\$ (133)	\$ 385
Covered Payroll	\$ 14,779	\$ 15,276	\$ 14,549	\$ 14,149
Contributions as a Percentage of Covered Payroll	40.90%	38.73%	40.13%	40.54%

¹This 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, 2016

Key Methods and Assumptions Used to Determine the Actuarially Determined Contribution (ADC) for fiscal year end 2017:

Timing	ADC rates are calculated based on the actuarial valuation just prior to the beginning of the plan year
Actuarial cost method	Entry age
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	4-year smoothed market
Inflation	3.00%
Salary increases	4.00% plus merit/seniority increases, where applicable
Investment rate of return	7.75%, net of investment expenses
Mortality (Healthy)	Male and Female RP-2000 Combined Mortality projected to 2015 using Scale AA
Mortality (Disabled)	RP-2000 Combined Employee and Annuitant

³Employer consists of the Employer, Membership Fees, Retirement Incentive Program and Miscellaneous Revenue.

⁴For 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.

This page intentionally left blank

FINANCIAL SECTION

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, 2017

Last 10 Fiscal Years¹

	Year Ended June 30	PERS-DBRP	SRS	GWPORS
Annual money-weighted rate of return, net investment expense	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	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%

¹This 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, 2017

Last 10 Fiscal Years¹

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

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

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Funding Progress for OPEB (Healthcare)

(in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio % (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
1/1/2015		\$ 1,306,704	\$ 1,306,704	0.00%	\$2,340,438	55.83%
1/1/2013		\$ 969,127	\$ 969,127	0.00%	\$1,991,739	48.66%
1/1/2011 ¹		\$ 733,935	\$ 733,935	0.00%	\$1,664,229	44.64%

At June 30, 2017, the most recent actuarial valuation available was performed by the State of Montana as of January 1, 2015 for the calendar year ending December 31, 2015. This actuarial valuation is performed every two years with the next valuation to be performed as of January 1, 2017 for the calendar year ending December 31, 2017. The State of Montana finances claims on a pay-as-you-go basis and does not advance fund the OPEB liability. Therefore, the funded ratio remains at 0% at June 30, 2017. This is the OPEB obligation for MPERA as a State of Montana employer and is determined by the State of Montana.

¹The Actuarial Accrued Liability (AAL) and Unfunded AAL (UAAL) were adjusted for the actuarial valuation date 1/1/2011 to show the inactive membership that was not included in the amounts reported in the FY2012 CAFR.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to Required Supplementary Information for OPEB (Healthcare)

Valuation Date	January 1, 2015
Actuarial cost method	Projected unit credit funding method
Amortization method	Level percent of payroll, open
Remaining amortization period	30 years
Asset valuation method	Not applicable because no assets meeting the definition of plan assets under GASB 45

Actuarial assumptions:

Projected salary increases	2.50%
Participation	
Future retirees	55.0%
Future eligible spouses	60.0%
Interest/Discount Rate	4.25%

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Administrative Expenses

Year Ended June 30, 2017

	Defined Benefit Plans	PERS-DBRP Education Fund	Defined Contribution PERS-DCRP	Deferred Compensation (457) Plan
<i>Personal Services</i>				
Salaries	\$ 1,896,003	\$ 359,576	\$ 267,574	\$ 176,632
Board Members' Per Diem	2,911		355	284
Employee Benefits	683,270	144,008	92,778	59,882
Total Personal Services	2,582,184	503,584	360,707	236,798
<i>Other Services</i>				
Consulting and Professional Services	2,453,300		233,314	268,868
Legal Fees and Court Costs	23,066		216	173
Audit Fees	29,787		3,633	2,906
Medical Services	5,074		267	
Records Storage	4,625		564	451
Computer Processing	302,682	400	32,971	12,612
Printing and Photocopy Charges	21,194	3,371	2,080	1,880
Warrant Writing Services	54,050		6,591	5,273
Other	428,934	3,737	36,323	16,710
Total Other Services	3,322,712	7,508	315,959	308,873
<i>Communications</i>				
Recruitment Costs				
Postage and Mailing	66,318	4,726	2,197	2,943
Telephone	45,841	8,894	5,832	4,539
Total Communications	112,159	13,620	8,029	7,482
<i>Other Expenses</i>				
Supplies and Materials	90,702	15,467	11,845	9,310
Travel	21,973	3,475	4,162	3,474
Rent	218,502	43,700	28,093	21,850
Repairs and Maintenance	377	28	47	37
Compensated Absences	(32,929)	39,584	11,307	(14,094)
OPEB Expenses	89,200	18,710	11,770	7,915
Miscellaneous	322,849	21,428	84,011	39,077
Total Other Expenses	710,674	142,392	151,235	67,569
Total Administrative Expenses	\$ 6,727,729	\$ 667,104	\$ 835,930	\$ 620,722

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Investment Expenses

Year Ended June 30, 2017

<u>Plan</u>	<u>Investment Manager</u>	<u>Fees</u>
PERS-DBRP	Board of Investments	\$ 27,684,610
PERS-DCRP DISABILITY OPEB	Board of Investments	\$1,712
JRS	Board of Investments	485,376
HPORS	Board of Investments	707,368
SRS	Board of Investments	1,661,927
GWPORS	Board of Investments	870,821
MPORS	Board of Investments	1,864,390
FURS	Board of Investments	1,913,928
VFCA	Board of Investments	180,362
DC	PIMCO	27,096
	State Street Bank	2,236
	Transamerica	9,070
	Prudential	9,088
	Voya	9,544
457	PIMCO	462,444
	State Street Bank	38,120
	Transamerica	154,779
	Prudential	155,078
	Voya	162,869
Total Investment Expense		\$ 36,400,818

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Professional/Consultant Fees

Year Ended June 30, 2017

<u>Individual or Firm</u>	<u>Nature of Service</u>	<u>Amount Paid</u>
Consultant Fees		
Cavanaugh Macdonald Consulting	Actuarial Audit	\$ 286,316
Cheiron, Inc	Actuarial Consultant	11,008
Comserv, Inc.	Death Validation Services	1,365
Conduent	Mutual Funds Performance Review	31,332
Department of Administration	Internal Audit	700
Genuent USA LLC	Project Management	20,535
Government Finance Officers Assoc.	CAFR Review	725
Ice Miller	Tax Consultants	35,960
Lexis Nexis	Risk Data Management Services	390
Public Pension Coordinating Council	Pension Standards Award	100
Sagitec Solutions, LLC	Pension Systems Design	2,362,515
Ventera Corporation	Data Services	134,372
Xerox Corporation dba Buck Consultants	Mutual Funds Performance Review	70,164
Consultant Fees Subtotal		2,955,482
Other Professional Fees		
Dean Gregg, PHD	Medical Consultant	1,105
Department of Justice	Legal Services	3,373
Legislative Audit Division	Independent Auditors	36,326
Timothy D. Schofield, MD PLLC	Medical Consultant	4,236
Other Professional Fees Subtotal		45,040
Total Professional/Consultant Fees		\$ 3,000,522

This page intentionally left blank

FINANCIAL SECTION

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, 2017

	PERS-DBRP	PERS-DBEd	TOTAL
Assets			
Cash and Short-term Investments	\$ 139,342,997	\$ 2,918,075	\$ 142,261,072
Securities Lending Collateral	31,162,478		31,162,478
Receivables			
Interest	128,520	2,598	131,118
Accounts Receivable	3,101,652	13,894	3,115,546
Due from Other Funds	638,328		638,328
Due from Primary Government	6,051,738		6,051,738
Notes Receivable	25,634		25,634
<i>Total Receivables</i>	9,945,872	16,492	9,962,364
Investments, at fair value			
CAPP Participant Pool	5,326,238,203		5,326,238,203
<i>Total Investments</i>	5,326,238,203		5,326,238,203
Capital Assets			
Property and Equipment, at cost, net of Accumulated Depreciation	31,574	1,733	33,307
Intangible Assets at Cost net of amortization expense	1,297,993		1,297,993
<i>Total Capital Assets</i>	1,329,567	1,733	1,331,300
Total Assets	5,508,019,117	2,936,300	5,510,955,417
Liabilities			
Securities Lending Liability	31,162,478		31,162,478
Accounts Payable	2,891,464	45,070	2,936,534
Unearned Revenue	176,366		176,366
Due to Other Funds	286,156	265	286,421
Compensated Absences	377,129	50,161	427,290
OPEB Implicit Rate Subsidy LT	527,319	66,658	593,977
Total Liabilities	35,420,912	162,154	35,583,066
Net Position Restricted for Pension Benefits	\$ 5,472,598,205	\$ 2,774,146	\$ 5,475,372,351

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, 2017

	PERS-DBRP	PERS-DBEd	TOTAL
Additions			
Contributions			
Employer	\$ 103,337,407	\$ 364,835	\$ 103,702,242
Plan Member	100,709,749		100,709,749
Interest Reserve Buyback	58,390		58,390
Retirement Incentive Program	70,335		70,335
Miscellaneous Revenue	129,317		129,317
State Contributions	896,324		896,324
Coal Tax Transfers	27,861,139		27,861,139
<i>Total Contributions</i>	233,062,661	364,835	233,427,496
Investment Income			
Net Appreciation (Depreciation) in Fair Value of Investments	340,219,024	(163)	340,218,861
Interest	268,451,074	24,734	268,475,808
Dividends	9,576,416		9,576,416
Investment Expense	(27,684,610)		(27,684,610)
<i>Net Investment Income</i>	590,561,904	24,571	590,586,475
Securities Lending Income			
Securities Lending Income	1,570,599	75	1,570,674
Securities Lending Rebate and Fees	(618,526)	(34)	(618,560)
<i>Net Securities Lending Income</i>	952,073	41	952,114
Total Net Investment Income	591,513,977	24,612	591,538,589
Total Additions	824,576,638	389,447	824,966,085
Deductions			
Benefits	366,354,719		366,354,719
Refunds/Distributions	12,252,007		12,252,007
Refunds to Other Plans	73,930		73,930
Transfers to DCRP	1,419,600		1,419,600
Transfers to MUS-RP	127,663		127,663
OPEB Expenses	85,540	18,710	104,250
Administrative Expenses	4,472,084	648,394	5,120,478
Total Deductions	384,785,543	667,104	385,452,647
Net Increase (Decrease)	439,791,095	(277,657)	439,513,438
Net Position Restricted for Pension Benefits			
Beginning of Year	5,032,807,110	3,051,803	5,035,858,913
End of Year	\$ 5,472,598,205	\$ 2,774,146	\$ 5,475,372,351

FINANCIAL SECTION

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, 2017

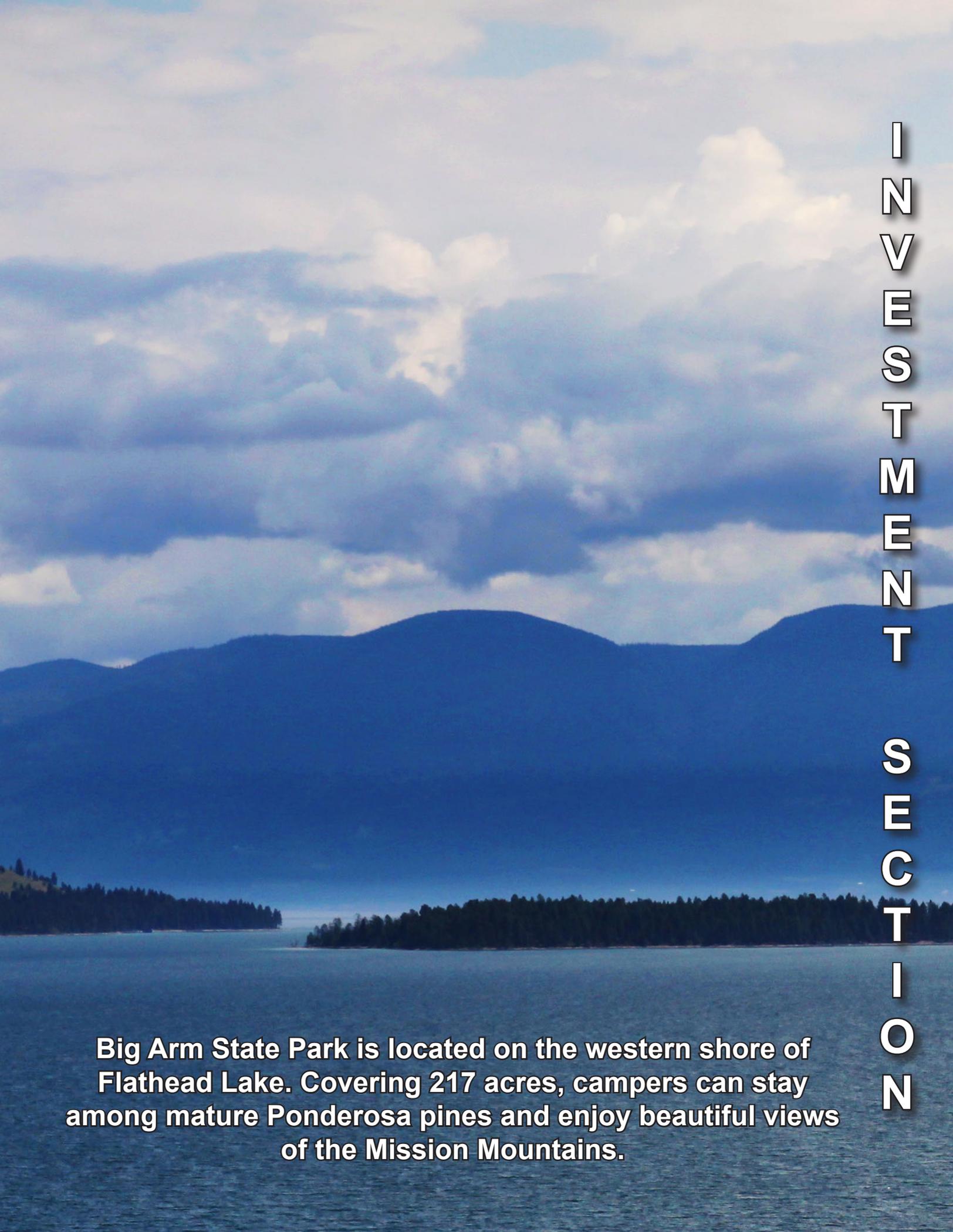
	PERS-DCRP	PERS-DCEd	TOTAL
Assets			
Cash and Short-term Investments	\$ 1,412,300	\$ 199,503	\$ 1,611,803
Securities Lending Collateral			
Receivables			
Interest	799	177	976
Accounts Receivables	168,901	3,778	172,679
Due from Other Funds	280,446	703	281,149
<i>Total Receivables</i>	450,146	4,658	454,804
Investments, at fair value			
Defined Contributions Fixed Investments	14,154,738		14,154,738
Defined Contributions Variable Investments	177,998,074		177,998,074
<i>Total Investments</i>	192,152,812		192,152,812
Property and Equipment, at cost, net of Accumulated Depreciation (Note A2)	3,806	247	4,053
Intangible Assets at cost, net of amortization expense	310,101		310,101
Construction Work in Progress			
Total Capital Assets	313,907	247	314,154
Total Assets	194,329,165	204,408	194,533,573
Liabilities			
Securities Lending Liability			
Accounts Payable	770,304	6,014	776,318
Compensated Absences	48,138	8,449	56,587
OPEB Implicit Rate Subsidy LT	61,071	7,026	68,097
Total Liabilities	879,513	21,489	901,002
Net Position Restricted for Pension Benefits	\$ 193,449,652	\$ 182,919	\$ 193,632,571

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, 2017**

	PERS-DCRP	PERS-DCEd	TOTAL
Additions			
Contributions			
Employer	\$ 10,693,375	\$ 58,465	\$ 10,751,840
Plan Member	11,827,865		11,827,865
Miscellaneous Revenue	68,475		68,475
Forfeiture of Nonvested Member	396,650		396,650
<i>Total Contributions</i>	22,986,365	58,465	23,044,830
Investment Income			
Net Appreciation (Depreciation) in Fair Value of Investments	17,912,572		17,912,572
Interest	4,510,637	1,712	4,512,349
Investment Expense	(57,034)		(57,034)
<i>Net Investment Income</i>	22,366,175	1,712	22,367,887
Securities Lending Income			
Securities Lending Income	24	5	29
Securities Lending Rebate and Fees	(11)	(2)	(13)
<i>Net Securities Lending Income</i>	13	3	16
Total Net Investment Income	22,366,188	1,715	22,367,903
Total Additions	45,352,553	60,180	45,412,733
Deductions			
Distributions	7,037,396		7,037,396
OPEB Expenses	9,634	2,136	11,770
Administrative Expenses	740,994	83,166	824,160
Miscellaneous Expenses	225,104		225,104
Total Deductions	8,013,128	85,302	8,098,430
Net Increase (Decrease)	37,339,425	(25,122)	37,314,303
Net Position Restricted for Pension Benefits			
Beginning of Year	156,110,227	208,041	156,318,268
End of Year	\$ 193,449,652	\$ 182,919	\$ 193,632,571

FINANCIAL SECTION

This page intentionally left blank



**I
N
V
E
S
T
M
E
N
T

S
E
C
T
I
O
N**

Big Arm State Park is located on the western shore of Flathead Lake. Covering 217 acres, campers can stay among mature Ponderosa pines and enjoy beautiful views of the Mission Mountains.

MONTANA BOARD OF INVESTMENTS

Department of Commerce

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

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



Phone: 406/444-0001
Facsimile: 406/449-6579
Rateline: 406/444-3557
Website: www.investmentmt.com

PERS Annual Report Investment Letter For the fiscal year ended 6/30/2017

The fiscal year 2017 return of 11.94% represented the eighth consecutive year of positive returns. The annualized five-year and ten-year plan returns were 9.62% and 5.33% respectively. Relative to a public fund peer universe as reported by our investment consultant, the ten-year return ranked in the top thirteen percent.

The asset allocation ranges approved by the Board of Investments provide a balance for considering the longer-term investment assumptions, providing the liquidity to fund the regular net cash needed to pay benefits and expenses, as well as maintaining the flexibility to manage risk in response to the economic and capital market cycles.

All asset classes except for fixed income had strong returns over the year. The impact that each asset class has on the plan return is determined by the combination of each asset class net return and the percentage allocation to each asset class as a percent of plan assets. Domestic equity had a strong return of 17.9% and as the largest asset class within the pension, contributed the most to the plan return. International Equity was the second largest contributor to the plan return while being the strongest performing asset class with a return of 20.4%. The Private Equity and Real Estate asset class experienced returns of 13.3% and 9.9% respectively. Fixed Income was the only asset class to post a negative net return for the year at -0.5%, which was a small detractor to the plan return.

During the fiscal year, the structure of plan investments was made more efficient by creating and utilizing a Consolidated Asset Pension Pool (CAPP). Instead of the plan having direct exposure to all the asset classes as it has in the past, it now invests directly in CAPP and the Short-Term Investment Pool (STIP). All the non-cash asset classes are consolidated into CAPP.

The asset allocation changes during the fiscal year were minimal. Overall, the asset allocation mix continues to be heavily weighted towards the equity oriented asset classes that provide a greater opportunity to achieve returns consistent with the long-term actuarial investment assumption. The remaining asset classes contribute to the overall diversification and liquidity needs of the plans.

INVESTMENT SECTION

The consensus view of the market is that U.S. and global growth will remain low. It is expected that over shorter time periods, investment performance will remain volatile. The Board of Investments will continue to manage the assets with belief that consistent execution of the investment process will have a significant influence on achieving the pension's objectives.

Respectfully submitted,

/s/ Joseph M. Cullen

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

Public Employees' Retirement Board

A Component Unit of the State of Montana

Report on Investment Activity

INTRODUCTION

The Montana Constitution and various Montana statutes govern the investment activity of the retirement funds administered by the Public Employees' Retirement Board (PERB). The "prudent expert principle" contained in the Montana Constitution and Montana statute requires the fiduciaries of the funds, including the Montana Board of Investments (BOI), to discharge their duties in the same manner that a prudent expert acting in a fiduciary capacity with the same resources, familiar with like matters, and under the same circumstances, exercises in the conduct of an enterprise of a similar character with similar objectives.

The prudent expert principle permits diversification of the holdings of the fund to minimize the risk of loss and maximize the rate of return. The opportunity to diversify among various asset classes enables a fund to reduce volatility and increase returns.

The BOI prepares and provides information related to the defined benefit plan investments for the PERB. The Montana Public Employee Retirement Administration (MPERA), staff of the PERB, is responsible for the presentation of the report of investment activity.

INVESTMENT GOALS AND OBJECTIVES

The basic goals influencing the investment activity for the PERB are two-fold. The first is to realize compounded rates of return sufficient to fund benefits as provided for in statute. The second is to provide services at the lowest possible cost to employers and members.

The basic investment objective of BOI is the achievement of a total rate of return greater than the assumed actuarial return over the long term. In addition, BOI will seek to outperform the appropriate market benchmarks for each asset class year to year and provide returns comparable to those attained by similar public fund peers.

To calculate the PERB's defined benefit plan investment returns, State Street Bank, BOI's custodial bank and an independent third party, uses the time-weighted total rate of return method.

RISK TOLERANCE

In view of the long time horizon of the pension plans, subject to the need for sufficient liquidity to pay benefits, all funds have an above-average ability to assume risk.

INVESTMENT MANAGEMENT AND RESULTS

The funds of each defined benefit system are invested by BOI as part of the unified investment program. The portfolio is broadly diversified between the various asset classes including, but not limited to, stocks, bonds, real estate, and private equity. A complete list of portfolio information is available through BOI. State Street Bank compiles the rates of return for the investments. The total rates of return for fiscal year 2017 are reported by the BOI for each defined benefit fund. The following tables are a summary of the information received from the BOI.

INVESTMENT SECTION

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

3-Month Period ending June 30, 2017

Asset Class	<u>INDEX</u>	<u>PERS-DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		0.26%	0.26%	0.26%	0.26%
<i>Libor 1 Month</i>	0.27%				
Other		3.12%	3.12%	3.12%	3.12%
<i>CAPP Custom Benchmark¹</i>		2.62%	2.62%	2.62%	2.62%
Total Plan		3.03%	3.03%	3.03%	3.03%
<i>Index Composite²</i>		2.55%	2.55%	2.54%	2.55%

	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		0.26%	0.26%	0.26%	0.26%
<i>Libor 1 Month</i>	0.27%				
Other		3.12%	3.12%	3.12%	3.12%
<i>CAPP Custom Benchmark¹</i>		2.62%	2.62%	2.62%	2.62%
Total Plan		3.03%	3.04%	3.03%	3.04%
<i>Index Composite²</i>		2.54%	2.55%	2.55%	2.54%

¹ From inception to present:

The portfolio weighted average of MSCI US IMI Gross, MSCI ACWI ex US IMI Net, MSCI AC World Commodity Prod Net, BBG Barclays US Intermediate TIPS, BBG BARC Tys Int, BBG BARC US Corp Int Inv GRD Idx, BBG BARC US MBS Idx, BBG BARC US HY - 2% Issr Cap, MSCI US REIT INDEX GROSS, MSCI USA Small Cap Gross, BBG BARC US Agg, LIBOR 1 Month

² From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans, and are reported net of all management fees and expenses.

INVESTMENT SECTION

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

12-Month Period ending June 30, 2017

Asset Class	<u>INDEX</u>	<u>PERS- DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		0.83%	0.83%	0.83%	0.83%
<i>Libor 1 Month</i>	<i>0.78%</i>				
Total Plan		11.94%	11.96%	11.93%	11.96%
<i>Index Composite</i>¹		11.95%	11.97%	11.94%	11.97%
	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		0.83%	0.83%	0.83%	0.83%
<i>Libor 1 Month</i>	<i>0.78%</i>				
Total Plan		11.96%	11.93%	11.93%	11.93%
<i>Index Composite</i>¹		11.98%	11.95%	11.96%	11.93%

¹ From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans, and are reported net of all management fees and expenses.

INVESTMENT SECTION

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

Three-Year Period ending June 30, 2017

Asset Class	<u>INDEX</u>	<u>PERS- DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		0.45%	0.45%	0.45%	0.45%
<i>Libor 1 Month</i>	<i>0.43%</i>				
Total Plan		6.12%	6.12%	6.11%	6.12%
<i>Index Composite</i>¹		6.58%	6.59%	6.58%	6.58%

	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		0.45%	0.45%	0.45%	0.45%
<i>Libor 1 Month</i>	<i>0.43%</i>				
Total Plan		6.12%	6.11%	6.12%	6.09%
<i>Index Composite</i>¹		6.59%	6.58%	6.58%	6.58%

¹ From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans, and are reported net of all management fees and expenses.

INVESTMENT SECTION

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

Five-Year Period ending June 30, 2017

Asset Class	<u>INDEX</u>	<u>PERS- DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		0.35%	0.35%	0.35%	0.35%
<i>Libor 1 Month</i>	<i>0.33%</i>				
Total Plan		9.62%	9.61%	9.62%	9.61%
<i>Index Composite</i>¹		10.05%	10.05%	10.06%	10.05%
	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		0.35%	0.35%	0.35%	0.35%
<i>Libor 1 Month</i>	<i>0.33%</i>				
Total Plan		9.60%	9.62%	9.62%	9.60%
<i>Index Composite</i>¹		10.05%	10.04%	10.04%	10.06%

¹ From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans, and are reported net of all management fees and expenses.

INVESTMENT SECTION

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

Ten-Year Period ending June 30, 2017

Asset Class	<u>INDEX</u>	<u>PERS- DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		0.85%	0.85%	0.85%	0.85%
<i>Libor 1 Month</i>	<i>0.78%</i>				
Total Plan		5.33%	5.34%	5.33%	5.33%
<i>Index Composite</i>¹		5.65%	5.67%	5.66%	5.67%

	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		0.85%	0.85%	0.85%	0.85%
<i>Libor 1 Month</i>	<i>0.78%</i>				
Total Plan		5.67%	5.61%	5.63%	5.65%
<i>Index Composite</i>¹		5.67%	5.61%	5.63%	5.65%

¹ From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans, and are reported net of all management fees and expenses.

ASSET ALLOCATION

Asset allocation is the main determinant of investment returns, and will therefore impact the BOI's success in meeting long-term investment objectives. The asset allocation table on the next page represents a diversified mix of asset classes designed to meet the long-term return needs of the plans while balancing this objective with risk and liquidity considerations. The actual asset mix as of fiscal year end 2017 is listed in the table on the

next page, along with the approved allocation ranges for the short term investment pool (STIP) and the 12 underlying asset classes of the CAPP.

INVESTMENT SECTION

Fiscal Year 2017 ASSET ALLOCATION					
	Allocation Range	Actual Investment		Allocation Range	Actual Investment
PERS-DBRP			GWPORS		
STIP	1% to 6%	2.39%	STIP	1% to 6%	2.25%
Domestic Equity	24% to 38%	35.66%	Domestic Equity	24% to 38%	35.71%
International Equities	12% to 18%	16.93%	International Equities	12% to 18%	16.96%
Private Equity	9% to 15%	10.46%	Private Equity	9% to 15%	10.48%
Natural Resources	0% to 6%	2.03%	Natural Resources	0% to 6%	2.03%
Real Estate	4% to 12%	7.56%	Real Estate	4% to 12%	7.57%
TIPS	0% to 4%	3.02%	TIPS	0% to 4%	3.03%
Broad Fixed Income	1% to 3%	2.27%	Broad Fixed Income	1% to 3%	2.27%
US Treasury/Agency Fixed Income	5% to 14%	7.24%	US Treasury/Agency Fixed Income	5% to 14%	7.25%
Investment Grade Credit	2% to 6%	4.96%	Investment Grade Credit	2% to 6%	4.97%
Agency Mortgage-Backed Securities	2% to 8%	4.43%	Agency Mortgage-Backed Securities	2% to 8%	4.43%
High Yield	1% to 5%	1.98%	High Yield	1% to 5%	1.98%
Cash Equivalents (CAPP STIP)	1% to 6%	1.07%	Cash Equivalents (CAPP STIP)	1% to 6%	1.07%
JRS			MPORS		
STIP	1% to 6%	2.32%	STIP	1% to 6%	2.48%
Domestic Equity	24% to 38%	35.68%	Domestic Equity	24% to 38%	35.63%
International Equities	12% to 18%	16.95%	International Equities	12% to 18%	16.92%
Private Equity	9% to 15%	10.47%	Private Equity	9% to 15%	10.45%
Natural Resources	0% to 6%	2.03%	Natural Resources	0% to 6%	2.03%
Real Estate	4% to 12%	7.56%	Real Estate	4% to 12%	7.55%
TIPS	0% to 4%	3.03%	TIPS	0% to 4%	3.02%
Broad Fixed Income	1% to 3%	2.27%	Broad Fixed Income	1% to 3%	2.26%
US Treasury/Agency Fixed Income	5% to 14%	7.25%	US Treasury/Agency Fixed Income	5% to 14%	7.24%
Investment Grade Credit	2% to 6%	4.96%	Investment Grade Credit	2% to 6%	4.96%
Agency Mortgage-Backed Securities	2% to 8%	4.43%	Agency Mortgage-Backed Securities	2% to 8%	4.42%
High Yield	1% to 5%	1.97%	High Yield	1% to 5%	1.97%
Cash Equivalents (CAPP STIP)	1% to 6%	1.07%	Cash Equivalents (CAPP STIP)	1% to 6%	1.07%
HPORS			FURS		
STIP	1% to 6%	2.17%	STIP	1% to 6%	2.48%
Domestic Equity	24% to 38%	35.74%	Domestic Equity	24% to 38%	35.63%
International Equities	12% to 18%	16.97%	International Equities	12% to 18%	16.92%
Private Equity	9% to 15%	10.49%	Private Equity	9% to 15%	10.45%
Natural Resources	0% to 6%	2.03%	Natural Resources	0% to 6%	2.03%
Real Estate	4% to 12%	7.58%	Real Estate	4% to 12%	7.55%
TIPS	0% to 4%	3.03%	TIPS	0% to 4%	3.02%
Broad Fixed Income	1% to 3%	2.27%	Broad Fixed Income	1% to 3%	2.26%
US Treasury/Agency Fixed Income	5% to 14%	7.26%	US Treasury/Agency Fixed Income	5% to 14%	7.24%
Investment Grade Credit	2% to 6%	4.97%	Investment Grade Credit	2% to 6%	4.96%
Agency Mortgage-Backed Securities	2% to 8%	4.44%	Agency Mortgage-Backed Securities	2% to 8%	4.42%
High Yield	1% to 5%	1.98%	High Yield	1% to 5%	1.97%
Cash Equivalents (CAPP STIP)	1% to 6%	1.07%	Cash Equivalents (CAPP STIP)	1% to 6%	1.07%
SRS			VFCA		
STIP	1% to 6%	2.51%	STIP	1% to 6%	2.50%
Domestic Equity	24% to 38%	35.62%	Domestic Equity	24% to 38%	35.62%
International Equities	12% to 18%	16.91%	International Equities	12% to 18%	16.91%
Private Equity	9% to 15%	10.45%	Private Equity	9% to 15%	10.45%
Natural Resources	0% to 6%	2.03%	Natural Resources	0% to 6%	2.03%
Real Estate	4% to 12%	7.55%	Real Estate	4% to 12%	7.55%
TIPS	0% to 4%	3.02%	TIPS	0% to 4%	3.02%
Broad Fixed Income	1% to 3%	2.26%	Broad Fixed Income	1% to 3%	2.26%
US Treasury/Agency Fixed Income	5% to 14%	7.24%	US Treasury/Agency Fixed Income	5% to 14%	7.24%
Investment Grade Credit	2% to 6%	4.95%	Investment Grade Credit	2% to 6%	4.96%
Agency Mortgage-Backed Securities	2% to 8%	4.42%	Agency Mortgage-Backed Securities	2% to 8%	4.42%
High Yield	1% to 5%	1.97%	High Yield	1% to 5%	1.97%
Cash Equivalents (CAPP STIP)	1% to 6%	1.07%	Cash Equivalents (CAPP STIP)	1% to 6%	1.07%

INVESTMENT SECTION

PERS-DCRP DISABILITY OPEB

Pursuant to MPERA and BOI’s plan to provide diversification of PERS-DCRP Disability OPEB assets, the assets of the PERS-DCRP Disability OPEB were further diversified into longer term asset classes beginning during the fiscal year ending June 30, 2016. In prior fiscal years, the assets had been solely invested in the STIP.

INVESTMENT FEES AND COMMISSIONS

Throughout the fiscal year, the investment expense for certain investments (pools, real estate) are netted against the investment earnings. At year end, investment earnings are “grossed up” to report the investment expense for the external manager, custodial bank fees and the BOI administrative cost. This process was implemented July 1, 1995, in compliance with GASB Statement No. 25.

Fiscal 2017 BOI Administrative Expense Reconciliation

	<u>PERS</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>	<u>TOTAL</u>
CAPP	\$ 27,444,554	\$ 481,326	\$ 701,101	\$ 1,647,978	\$ 863,790	\$ 1,847,425	\$ 1,896,957	\$ 178,669	\$ 35,061,802
STIP	240,056	4,050	6,267	13,949	7,031	16,965	16,971	1,693	306,982
Totals	\$27,684,610	\$ 485,376	\$ 707,368	\$ 1,661,927	\$ 870,821	\$ 1,864,390	\$ 1,913,928	\$ 180,362	\$ 35,368,784

This page intentionally left blank

INVESTMENT SECTION

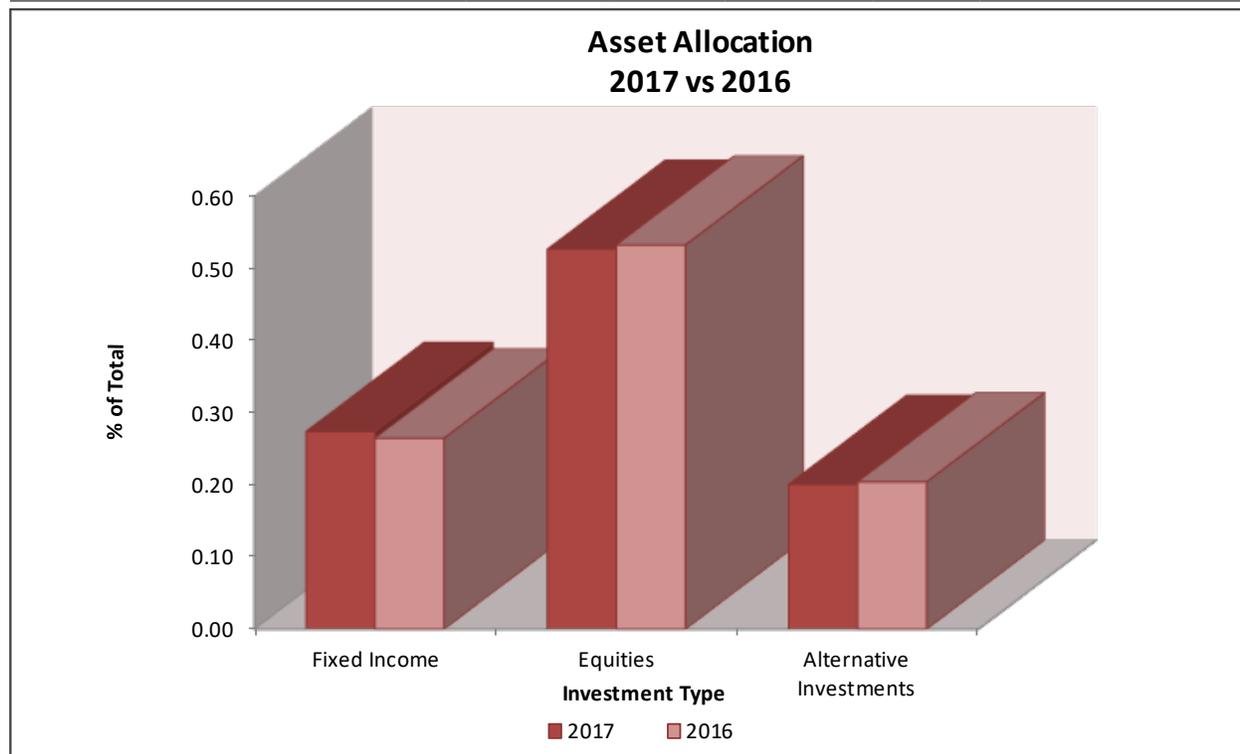
PERS-DBRP

Asset Mix (fair value)

as of June 30, 2017 and 2016

(in thousands)

Investment Type	2017 Fair Value	% of Total	2016 Fair Value	% of Total	Dollar Change	% Change
Fixed Income:						
Retirement Funds Bond Pool (RFBP)			\$ 1,184,758	23.61%	\$ (1,184,758)	-100.00%
STIP	\$ 130,510	2.39%	142,167	2.83%	(11,657)	-8.20%
TIPS	165,022	3.02%			165,022	
Broad Fixed Income	123,691	2.27%			123,691	
US Treasury & Agency	395,286	7.24%			395,286	
Investment Grade Credit	270,666	4.96%			270,666	
Mortgage Backed	241,600	4.43%			241,600	
High Yield	107,778	1.98%			107,778	
Cash Equivalents	58,442	1.07%			58,442	
Total Fixed Income	\$ 1,492,995	27.36%	\$ 1,326,925	26.44%	\$ 166,070	12.52%
Equities:						
Domestic Equity	\$ 1,945,789	35.66%	\$ 1,893,160	37.74%	\$ 52,629	2.78%
International Equity	923,780	16.93%	774,561	15.43%	149,219	19.26%
Total Equities	\$ 2,869,569	52.59%	\$ 2,667,721	53.17%	\$ 201,848	7.57%
Alternative Investments:						
Private Equity	\$ 570,940	10.46%	\$ 559,719	11.15%	\$ 11,221	2.00%
Natural Resources	110,770	2.03%			110,770	
Real Estate	412,474	7.56%	463,582	9.24%	(51,108)	-11.02%
Total Alternative Investments	\$ 1,094,184	20.05%	\$ 1,023,301	20.39%	\$ 70,883	6.93%
Total	\$ 5,456,748	100.00%	\$ 5,017,947	100.00%	\$ 438,801	8.74%

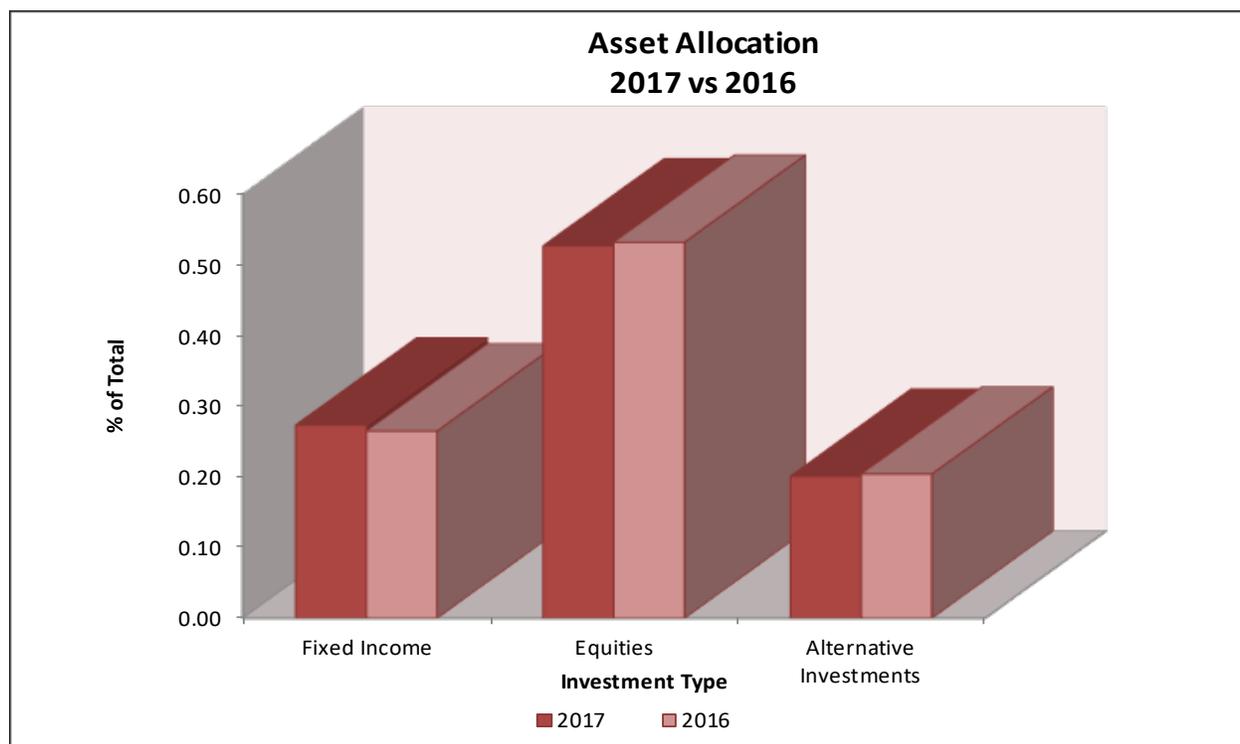


INVESTMENT SECTION

JRS

Asset Mix (fair value) as of June 30, 2017 and 2016 (in thousands)

Investment Type	2017 Fair Value	% of Total	2016 Fair Value	% of Total	Dollar Change	% Change
Fixed Income:						
Retirement Funds Bond Pool (RFBP)			\$ 20,613	23.60%	\$ (20,613)	-100.00%
STIP	\$ 2,233	2.32%	2,502	2.86%	(269)	-10.75%
TIPS	2,912	3.03%			2,912	
Broad Fixed Income	2,179	2.27%			2,179	
US Treasury & Agency	6,971	7.25%			6,971	
Investment Grade Credit	4,772	4.96%			4,772	
Mortgage Backed	4,265	4.43%			4,265	
High Yield	1,898	1.97%			1,898	
Cash Equivalents	1,033	1.07%			1,033	
Total Fixed Income	\$ 26,263	27.30%	\$ 23,115	26.46%	\$ 3,148	13.62%
Equities:						
Domestic Equity	\$ 34,316	35.68%	\$ 32,938	37.72%	\$ 1,378	4.18%
International Equity	16,298	16.95%	13,477	15.43%	2,821	20.94%
Total Equities	\$ 50,614	52.63%	\$ 46,415	53.15%	\$ 4,199	9.05%
Alternative Investments:						
Private Equity	\$ 10,070	10.47%	\$ 9,738	11.15%	\$ 332	3.41%
Natural Resources	1,954	2.03%			1,954	
Real Estate	7,271	7.57%	8,066	9.24%	(795)	-9.86%
Total Alternative Investments	\$ 19,295	20.07%	\$ 17,804	20.39%	\$ 1,491	8.37%
Total	\$ 96,172	100.00%	\$ 87,334	100.00%	\$ 8,838	10.12%



INVESTMENT SECTION

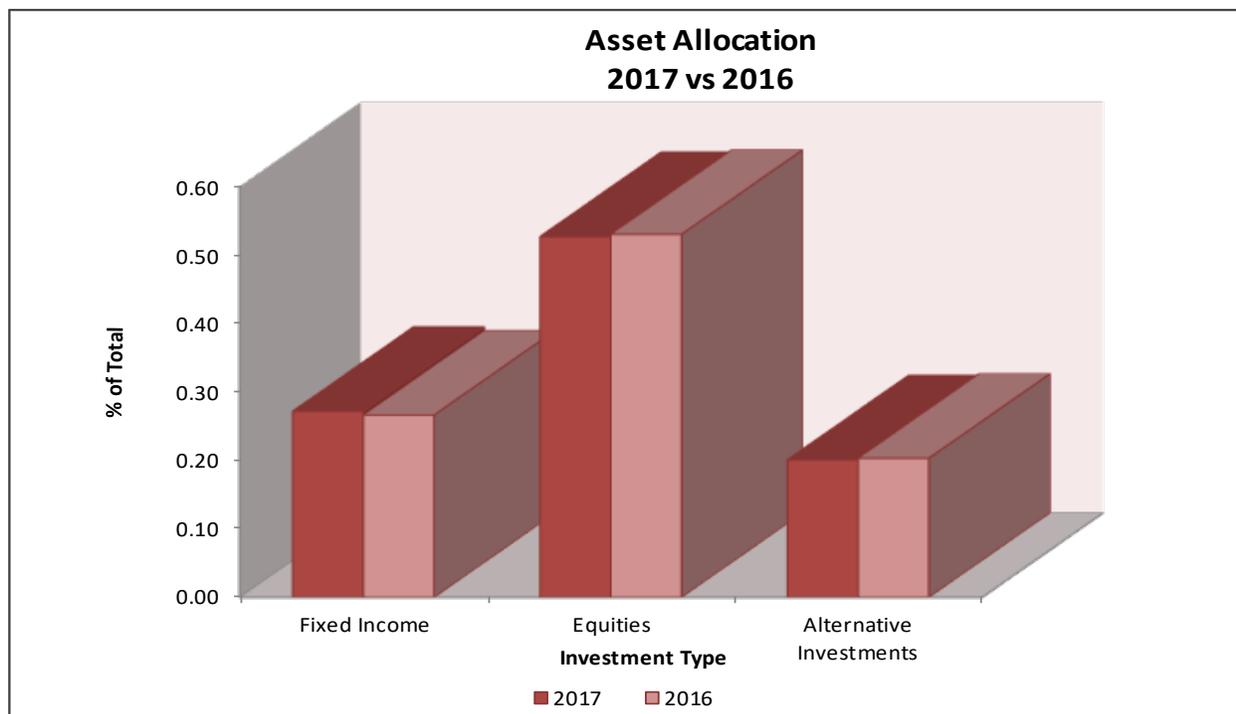
HPORS

Asset Mix (fair value)

as of June 30, 2017 and 2016

(in thousands)

Investment Type	2017 Fair Value	% of Total	2016 Fair Value	% of Total	Dollar Change	% Change
Fixed Income:						
Retirement Funds Bond Pool (RFBP)			\$ 30,235	23.55%	\$ (30,235)	-100.00%
STIP	\$ 3,025	2.17%	3,972	3.09%	(947)	-23.84%
TIPS	4,224	3.03%			4,224	
Broad Fixed Income	3,166	2.27%			3,166	
US Treasury & Agency	10,120	7.26%			10,120	
Investment Grade Credit	6,929	4.97%			6,929	
Mortgage Backed	6,185	4.44%			6,185	
High Yield	2,759	1.98%			2,759	
Cash Equivalents	1,496	1.07%			1,496	
Total Fixed Income	\$ 37,904	27.19%	\$ 34,207	26.64%	\$ 3,697	10.81%
Equities:						
Domestic Equity	\$ 49,812	35.74%	\$ 48,312	37.63%	\$ 1,500	3.10%
International Equity	23,648	16.97%	19,766	15.40%	3,882	19.64%
Total Equities	\$ 73,460	52.71%	\$ 68,078	53.03%	\$ 5,382	7.91%
Alternative Investments:						
Private Equity	\$ 14,616	10.49%	\$ 14,284	11.12%	\$ 332	2.32%
Natural Resources	2,836	2.03%			2,836	
Real Estate	10,559	7.58%	11,830	9.21%	(1,271)	-10.74%
Total Alternative Investments	\$ 28,011	20.10%	\$ 26,114	20.33%	\$ 1,897	7.26%
Total	\$ 139,375	100.00%	\$ 128,399	100.00%	\$ 10,976	8.55%



INVESTMENT SECTION

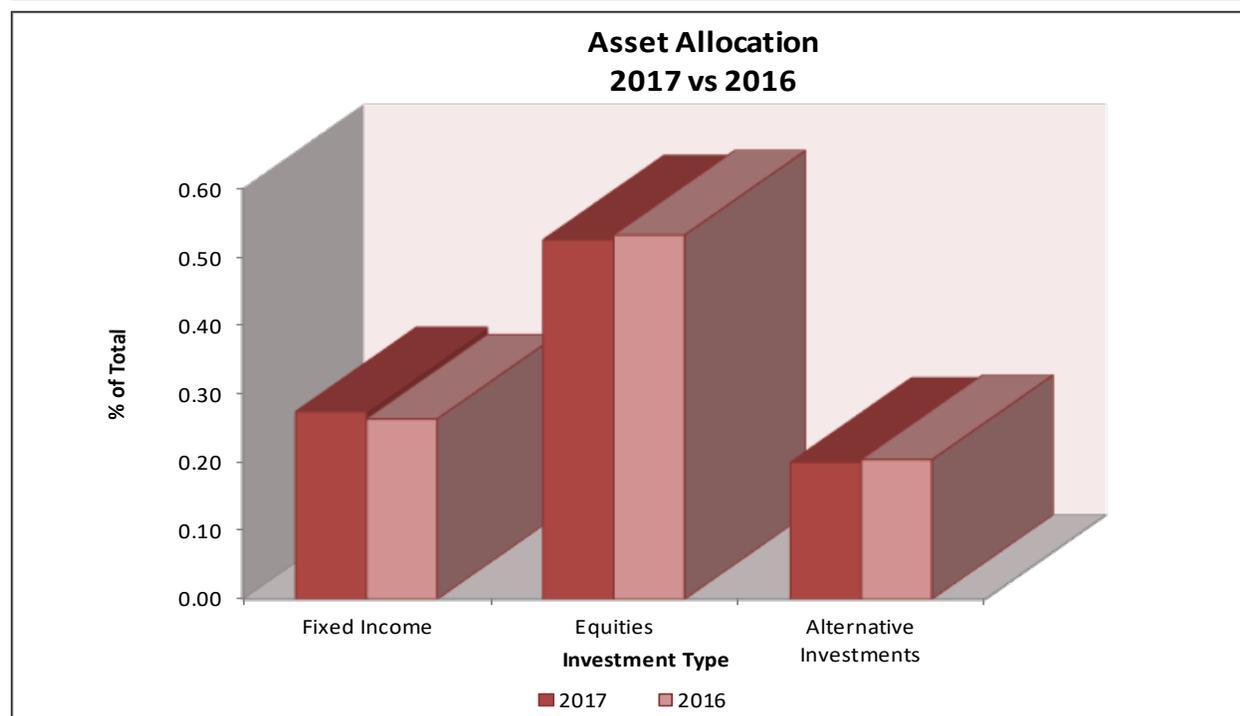
SRS

Asset Mix (fair value)

as of June 30, 2017 and 2016

(in thousands)

Investment Type	2017 Fair Value	% of Total	2016 Fair Value	% of Total	Dollar Change	% Change
Fixed Income:						
Retirement Funds Bond Pool (RFBP)			\$ 70,501	23.64%	\$ (70,501)	-100.00%
STIP	\$ 8,276	2.51%	8,097	2.71%	179	2.21%
TIPS	9,976	3.02%			9,976	
Broad Fixed Income	7,477	2.26%			7,477	
US Treasury & Agency	23,896	7.24%			23,896	
Investment Grade Credit	16,362	4.95%			16,362	
Mortgage Backed	14,605	4.42%			14,605	
High Yield	6,516	1.97%			6,516	
Cash Equivalents	3,533	1.07%			3,533	
Total Fixed Income	\$ 90,641	27.44%	\$ 78,598	26.35%	\$ 12,043	15.32%
Equities:						
Domestic Equity	\$ 117,628	35.62%	\$ 112,653	37.78%	\$ 4,975	4.42%
International Equity	55,845	16.91%	46,091	15.45%	9,754	21.16%
Total Equities	\$ 173,473	52.53%	\$ 158,744	53.23%	\$ 14,729	9.28%
Alternative Investments:						
Private Equity	\$ 34,515	10.45%	\$ 33,307	11.17%	\$ 1,208	3.63%
Natural Resources	6,696	2.03%			6,696	
Real Estate	24,935	7.55%	27,586	9.25%	(2,651)	-9.61%
Total Alternative Investments	\$ 66,146	20.03%	\$ 60,893	20.42%	\$ 5,253	8.63%
Total	\$ 330,260	100.00%	\$ 298,235	100.00%	\$ 32,025	10.74%



INVESTMENT SECTION

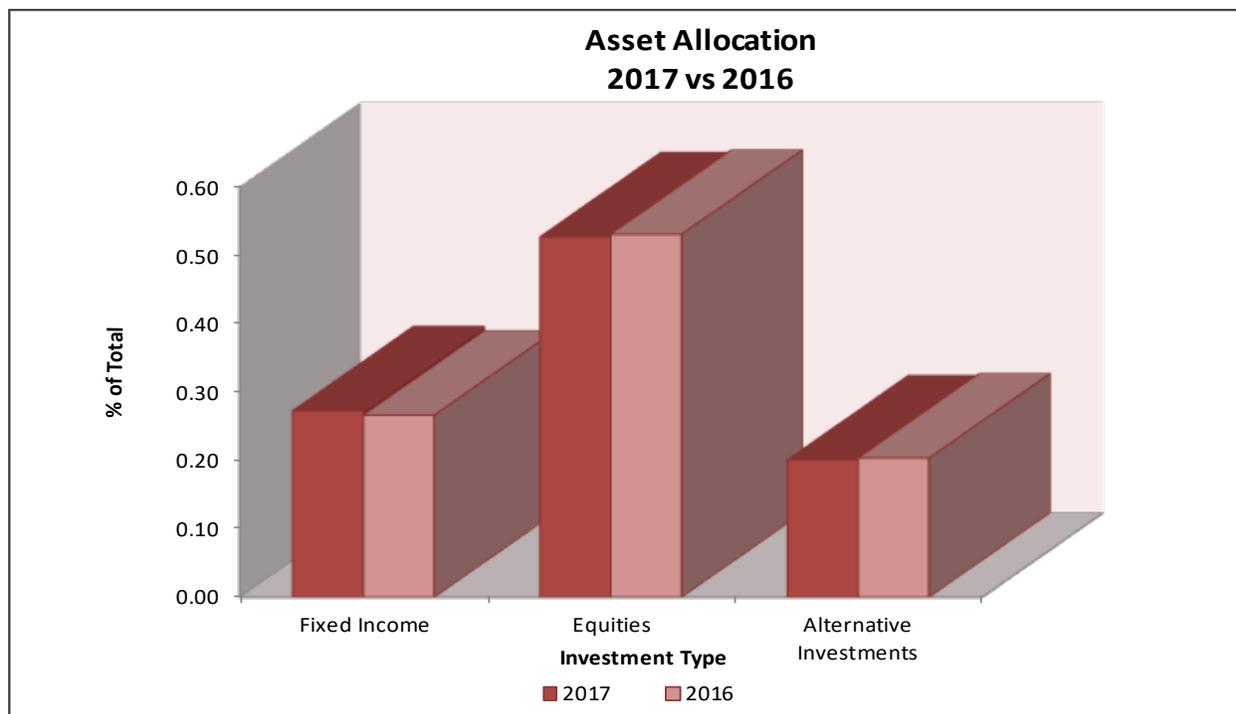
GWPORS

Asset Mix (fair value)

as of June 30, 2017 and 2016

(in thousands)

Investment Type	2017 Fair Value	% of Total	2016 Fair Value	% of Total	Dollar Change	% Change
Fixed Income:						
Retirement Funds Bond Pool (RFBP)			\$ 36,325	23.56%	\$ (36,325)	-100.00%
STIP	\$ 3,940	2.25%	4,716	3.05%	(776)	-16.45%
TIPS	5,304	3.03%			5,304	
Broad Fixed Income	3,976	2.27%			3,976	
US Treasury & Agency	12,706	7.26%			12,706	
Investment Grade Credit	8,700	4.97%			8,700	
Mortgage Backed	7,766	4.43%			7,766	
High Yield	3,464	1.98%			3,464	
Cash Equivalents	1,879	1.07%			1,879	
Total Fixed Income	\$ 47,735	27.25%	\$ 41,041	26.61%	\$ 6,694	16.31%
Equities:						
Domestic Equity	\$ 62,544	35.71%	\$ 58,041	37.64%	\$ 4,503	7.76%
International Equity	29,694	16.95%	23,748	15.40%	5,946	25.04%
Total Equities	\$ 92,238	52.66%	\$ 81,789	53.04%	\$ 10,449	12.78%
Alternative Investments:						
Private Equity	\$ 18,352	10.48%	\$ 17,161	11.13%	\$ 1,191	6.94%
Natural Resources	3,561	2.03%			3,561	
Real Estate	13,258	7.57%	14,213	9.22%	(955)	-6.72%
Total Alternative Investments	\$ 35,171	20.08%	\$ 31,374	20.35%	\$ 3,797	12.10%
Total	\$ 175,144	100.00%	\$ 154,204	100.00%	\$ 20,940	13.58%



INVESTMENT SECTION

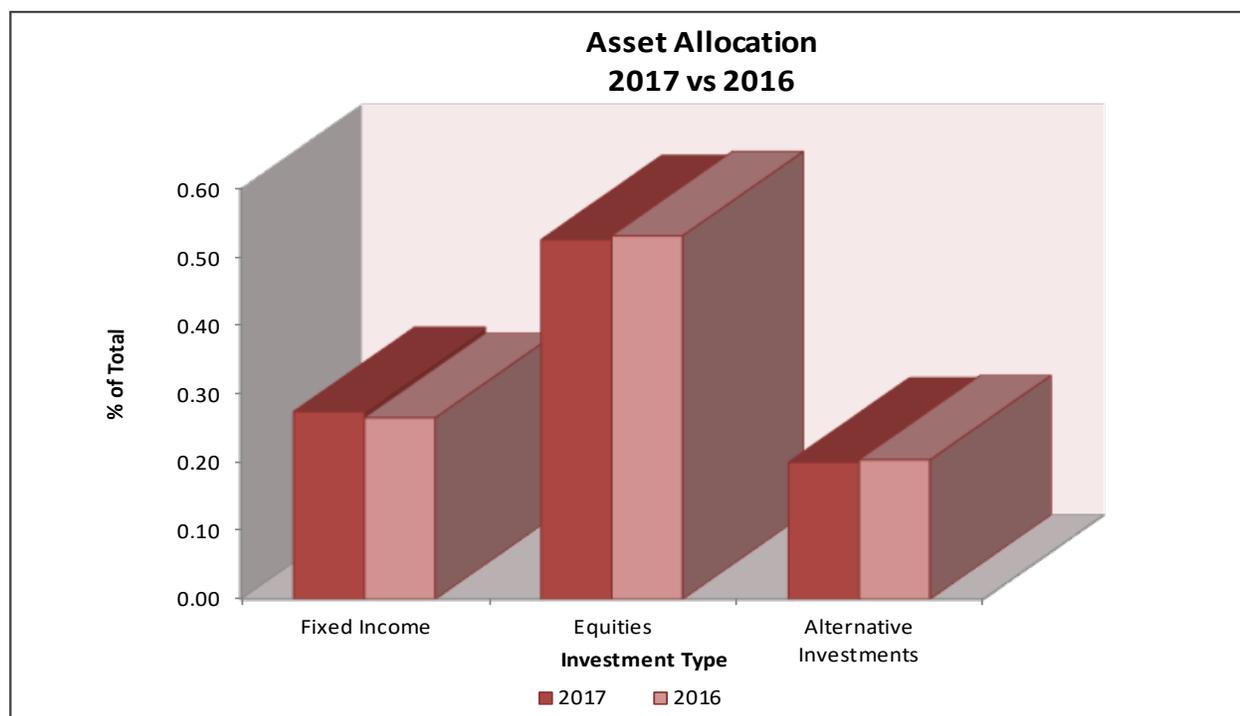
MPORS

Asset Mix (fair value)

as of June 30, 2017 and 2016

(in thousands)

Investment Type	2017 Fair Value	% of Total	2016 Fair Value	% of Total	Dollar Change	% Change
Fixed Income:						
Retirement Funds Bond Pool (RFBP)			\$ 77,621	23.59%	\$ (77,621)	-100.00%
STIP	\$ 9,147	2.48%	9,642	2.93%	(495)	-5.13%
TIPS	11,175	3.02%			11,175	
Broad Fixed Income	8,363	2.26%			8,363	
US Treasury & Agency	26,747	7.24%			26,747	
Investment Grade Credit	18,312	4.95%			18,312	
Mortgage Backed	16,366	4.43%			16,366	
High Yield	7,282	1.97%			7,282	
Cash Equivalents	3,965	1.07%			3,965	
Total Fixed Income	\$ 101,357	27.42%	\$ 87,263	26.52%	\$ 14,094	16.15%
Equities:						
Domestic Equity	\$ 131,682	35.63%	\$ 124,032	37.69%	\$ 7,650	6.17%
International Equity	62,542	16.92%	50,746	15.42%	11,796	23.24%
Total Equities	\$ 194,224	52.55%	\$ 174,778	53.11%	\$ 19,446	11.13%
Alternative Investments:						
Private Equity	\$ 38,643	10.45%	\$ 36,671	11.14%	\$ 1,972	5.38%
Natural Resources	7,498	2.03%			7,498	
Real Estate	27,901	7.55%	30,372	9.23%	(2,471)	-8.14%
Total Alternative Investments	\$ 74,042	20.03%	\$ 67,043	20.37%	\$ 6,999	10.44%
Total	\$ 369,623	100.00%	\$ 329,084	100.00%	\$ 40,539	12.32%



INVESTMENT SECTION

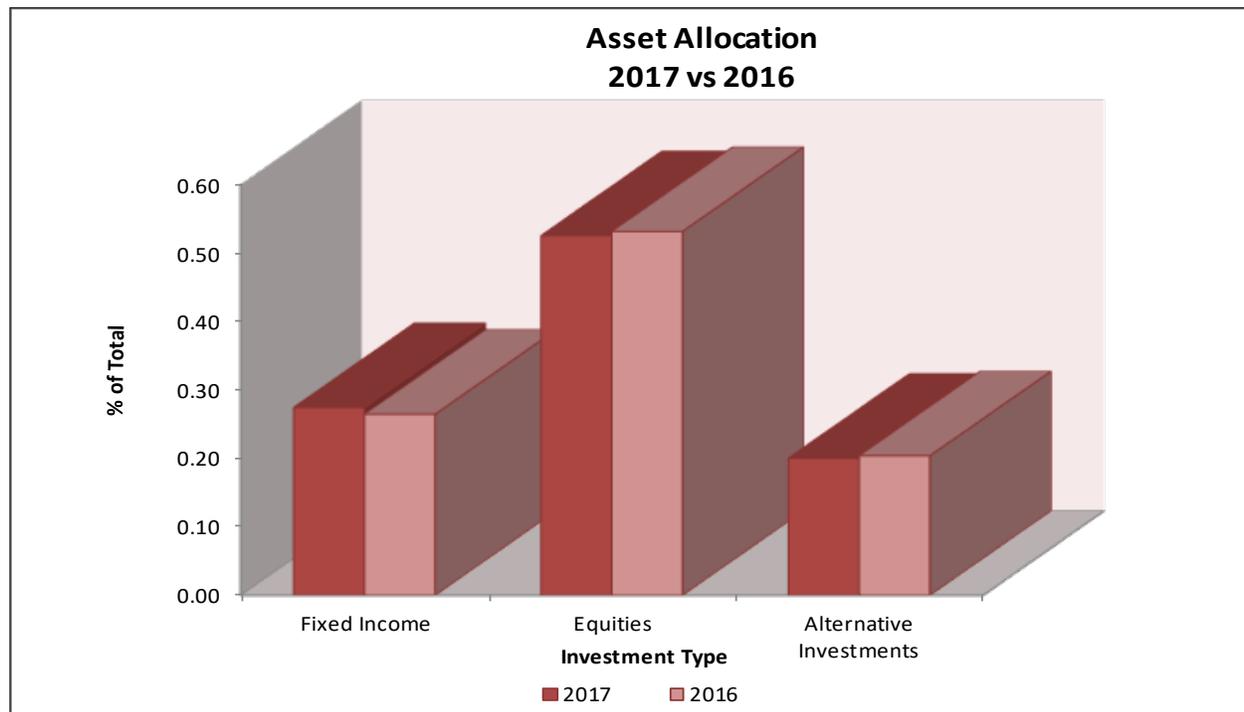
FURS

Asset Mix (fair value)

as of June 30, 2017 and 2016

(in thousands)

Investment Type	2017 Fair Value	% of Total	2016 Fair Value	% of Total	Dollar Change	% Change
Fixed Income:						
Retirement Funds Bond Pool (RFBP)			\$ 79,532	23.61%	\$ (79,532)	-100.00%
STIP	\$ 9,430	2.48%	9,563	2.84%	(133)	-1.39%
TIPS	11,502	3.02%			11,502	
Broad Fixed Income	8,608	2.26%			8,608	
US Treasury & Agency	27,529	7.24%			27,529	
Investment Grade Credit	18,848	4.96%			18,848	
Mortgage Backed	16,844	4.43%			16,844	
High Yield	7,494	1.97%			7,494	
Cash Equivalents	4,081	1.07%			4,081	
Total Fixed Income	\$ 104,336	27.43%	\$ 89,095	26.45%	\$ 15,241	17.11%
Equities:						
Domestic Equity	\$ 135,531	35.62%	\$ 127,086	37.73%	\$ 8,445	6.65%
International Equity	64,371	16.92%	51,996	15.43%	12,375	23.80%
Total Equities	\$ 199,902	52.54%	\$ 179,082	53.16%	\$ 20,820	11.63%
Alternative Investments:						
Private Equity	\$ 39,773	10.45%	\$ 37,573	11.15%	\$ 2,200	5.85%
Natural Resources	7,717	2.03%			7,717	
Real Estate	28,716	7.55%	31,120	9.24%	(2,404)	-7.72%
Total Alternative Investments	\$ 76,206	20.03%	\$ 68,693	20.39%	\$ 7,513	10.94%
Total	\$ 380,444	100.00%	\$ 336,870	100.00%	\$ 43,574	12.93%



INVESTMENT SECTION

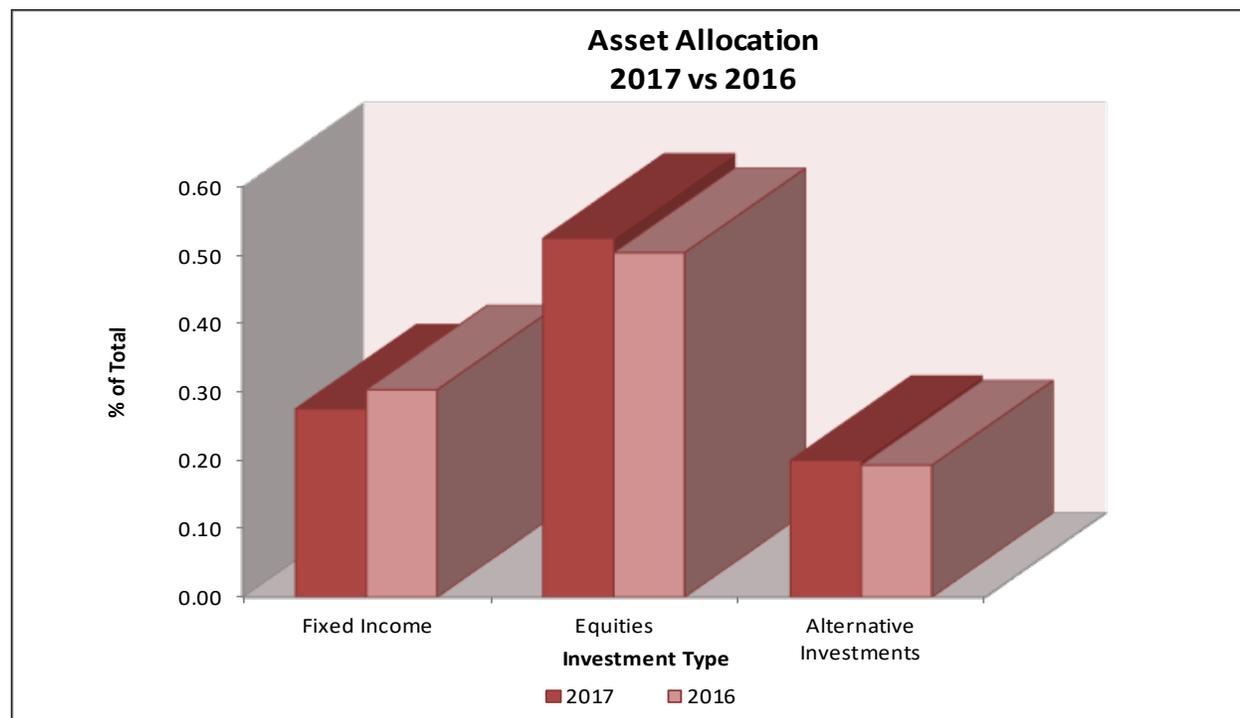
VFCA

Asset Mix (fair value)

as of June 30, 2017 and 2016

(in thousands)

Investment Type	2017 Fair Value	% of Total	2016 Fair Value	% of Total	Dollar Change	% Change
Fixed Income:						
Retirement Funds Bond Pool (RFBP)			\$ 7,520	22.36%	\$ (7,520)	-100.00%
STIP	\$ 954	2.62%	2,679	7.97%	(1,725)	-64.39%
TIPS	1,098	3.02%			1,098	
Broad Fixed Income	823	2.26%			823	
US Treasury & Agency	2,629	7.22%			2,629	
Investment Grade Credit	1,800	4.95%			1,800	
Mortgage Backed	1,607	4.42%			1,607	
High Yield	717	1.97%			717	
Cash Equivalents	389	1.07%			389	
Total Fixed Income	\$ 10,017	27.53%	\$ 10,199	30.33%	\$ (182)	-1.78%
Equities:						
Domestic Equity	\$ 12,942	35.57%	\$ 12,017	35.73%	\$ 925	7.70%
International Equity	6,144	16.89%	4,917	14.62%	1,227	24.95%
Total Equities	\$ 19,086	52.46%	\$ 16,934	50.35%	\$ 2,152	12.71%
Alternative Investments:						
Private Equity	\$ 3,798	10.44%	\$ 3,553	10.57%	\$ 245	6.90%
Natural Resources	737	2.03%			737	
Real Estate	2,743	7.54%	2,943	8.75%	(200)	-6.80%
Total Alternative Investments	\$ 7,278	20.01%	\$ 6,496	19.32%	\$ 782	12.04%
Total	\$ 36,381	100.00%	\$ 33,629	100.00%	\$ 2,752	8.18%



INVESTMENT SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Largest Holdings (by portfolio base market value)

as of June 30, 2017

(in thousands)

A complete list of the portfolio holdings can be obtained by contacting the Montana Board of Investments. The information below is PERB's presentation of the largest holdings.

Par Value	Broad Fixed Income Pension Asset Class	Base Market Value
136,560,000	US Treasury N/B	\$ 135,304,271
25,075,000	FNMA TBA 30 YR 3	25,002,412
10,772,010	Fannie Mae Aces	10,661,482
5,293,347	Montana ST	4,935,016
4,884,736	FHLMC Multifamily Structured P	4,902,576
4,665,000	JP Morgan Chase & Co	4,701,477
3,615,000	Daimler Finance NA LLC	3,617,264
3,435,000	Wells Fargo & Company	3,491,116
3,411,296	GNMA Pool AD0091	3,314,771
3,102,961	FNMA Pool AM2182	3,103,972

PERS' shares represent 50.07% of the total Broad Fixed Income Pension Asset Class at market.

JRS' shares represent 0.88% of the total Broad Fixed Income Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Broad Fixed Income Pension Asset Class at market.

SRS' shares represent 3.03% of the total Broad Fixed Income Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total Broad Fixed Income Pension Asset Class at market.

MPORS' shares represent 3.39% of the total Broad Fixed Income Pension Asset Class at market.

FURS' shares represent 3.49% of the total Broad Fixed Income Pension Asset Class at market.

VFCA's shares represent 0.33% of the total Broad Fixed Income Pension Asset Class at market.

Par Value	Domestic Equity Pension Asset Class	Base Market Value
130,991,673	BLK MSCI U.S. Equity Index FD	\$ 1,881,267,168
22,988,196	BLK MSCI USA Small Cap Eq	313,451,567
28,201	Dimensional Fund Advisors Inc	78,390,414
266,404	SPDR S&P500 ETF Trust	64,416,487
300,999	ISHARES Core S&P Mid Cap ETF	52,358,776
178,552	Apple Inc	25,715,059
320,373	Microsoft Corp	22,083,311
109,938	United Health Group Inc	20,384,704
122,432	Facebook Inc A	18,484,783
18,344	Amazon.Com Inc	17,756,992

PERS' shares represent 50.07% of the total Domestic Equity Pension Asset Class at market.

JRS' shares represent 0.88% of the total Domestic Equity Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Domestic Equity Pension Asset Class at market.

SRS' shares represent 3.03% of the total Domestic Equity Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total Domestic Equity Pension Asset Class at market.

MPORS' shares represent 3.39% of the total Domestic Equity Pension Asset Class at market.

FURS' shares represent 3.49% of the total Domestic Equity Pension Asset Class at market.

VFCA's shares represent 0.33% of the total Domestic Equity Pension Asset Class at market.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Largest Holdings (by portfolio base market value)

as of June 30, 2017

(in thousands)

Par Value	High Yield Pension Asset Class	Base Market Value
3,345,000	CCO HLDGS LLC/Cap Corp	\$ 3,514,979
3,225,000	HCA Inc	3,472,221
3,197,000	Tenet Healthcare Corp	3,364,313
2,810,000	Sprint Corp	3,149,938
3,100,000	Davita Inc	3,133,500
2,890,000	SFR Group SA	3,063,769
2,755,000	Ally Financial Inc	2,903,661
2,585,000	Park Aerospace Holdings	2,701,152
2,422,000	HRG Group Inc	2,543,100
2,600,000	Frontier Communications	2,299,519

PERS' shares represent 50.07% of the total High Yield Pension Asset Class at market.

JRS' shares represent 0.88% of the total High Yield Pension Asset Class at market.

HPORS' shares represent 1.28% of the total High Yield Pension Asset Class at market.

SRS' shares represent 3.03% of the total High Yield Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total High Yield Pension Asset Class at market.

MPORS' shares represent 3.39% of the total High Yield Pension Asset Class at market.

FURS' shares represent 3.49% of the total High Yield Pension Asset Class at market.

VFCA's shares represent 0.33% of the total High Yield Pension Asset Class at market.

Par Value	International Equity Pension Asset Class	Base Market Value
36,464,075	Blackrock ACWI Ex US Superfund	\$ 937,929,566
4,607,104	DFA Interational Small Company	92,049,942
4,893,028	Blackrock ACWI Ex US Small Cap	64,093,334
1,380,000	ISHARES MSCI Emerging Markets	57,118,200
760,000	ISHARES MSCI EAFE ETF	49,552,000
1,312,336	DFA Emerging Markets Small Cap	28,503,937
164,872	Blackrock MSCI Em Mkt FR FD B	7,712,760
247,518	Royal Dutch Shell PLC A Shs	6,552,914
182,800	Taiwan Semiconductor SP ADR	6,390,688
3,044	Samsung Electronics Co LTD	6,323,985

PERS' shares represent 50.07% of the total International Equity Pension Asset Class at market.

JRS' shares represent 0.88% of the total International Equity Pension Asset Class at market.

HPORS' shares represent 1.28% of the total International Equity Pension Asset Class at market.

SRS' shares represent 3.03% of the total International Equity Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total Internatioal Equity Pension Asset Class at market.

MPORS' shares represent 3.39% of the total International Equity Pension Asset Class at market.

FURS' shares represent 3.49% of the total International Equity Pension Asset Class at market.

VFCA's shares represent 0.33% of the total International Equity Pension Asset Class at market.

INVESTMENT SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Largest Holdings (by portfolio base market value)

as of June 30, 2017

(in thousands)

Par Value	Investment Grade Credit Pension Asset Class	Base Market Value
15,360,000	Goldman Sachs Group Inc	\$ 15,715,805
15,400,000	Shell International Fin	15,443,308
15,000,000	Verizon Communications	15,263,000
14,000,000	Bank of America Corp	13,812,040
13,000,000	JP Morgan Chase & Co	13,569,330
12,500,000	AT&T Inc	12,576,745
11,000,000	Discover Bank	11,373,040
11,000,000	John Deere Capital Corp	10,903,870
10,500,000	General Mills Inc	10,825,290
10,240,000	Morgan Stanley	10,664,087

PERS' shares represent 50.07% of the total Investment Grade Credit Pension Asset Class at market.

JRS' shares represent 0.88% of the total Investment Grade Credit Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Investment Grade Credit Pension Asset Class at market.

SRS' shares represent 3.03% of the total Investment Grade Credit Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total Investment Grade Credit Pension Asset Class at market.

MPORS' shares represent 3.39% of the total Investment Grade Credit Pension Asset Class at market.

FURS' shares represent 3.49% of the total Investment Grade Credit Pension Asset Class at market.

VFCA's shares represent 0.33% of the total Investment Grade Credit Pension Asset Class at market.

Par Value	Mortgage Backed Pension Asset Class	Base Market Value
26,289,073	Fannie Mae	\$ 26,752,169
25,920,487	Comm Mortgage Trust	26,407,735
23,159,362	New Residential Mortgage Loan	24,012,353
16,044,171	Fed HM LN PC Pool C91856	16,706,956
15,104,698	Fed HM LN PC Pool C91782	15,728,069
14,521,247	Fed HM LN PC Pool G08732	14,499,320
13,500,216	Fed HM LN PC Pool G16019	14,069,520
13,549,331	FNMA Pool AS7388	13,924,648
12,784,778	FNMA Pool AL5528	13,472,087
12,774,330	Freddie Mac	12,668,890

PERS' shares represent 50.07% of the total Mortgage Backed Pension Asset Class at market.

JRS' shares represent 0.88% of the total Mortgage Backed Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Mortgage Backed Pension Asset Class at market.

SRS' shares represent 3.03% of the total Mortgage Backed Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total Mortgage Backed Pension Asset Class at market.

MPORS' shares represent 3.39% of the total Mortgage Backed Pension Asset Class at market.

FURS' shares represent 3.49% of the total Mortgage Backed Pension Asset Class at market.

VFCA's shares represent 0.33% of the total Mortgage Backed Pension Asset Class at market.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Largest Holdings (by portfolio base market value)

as of June 30, 2017

(in thousands)

Par Value	Natural Resources Pension Asset Class	Base Market Value
39,059,058	Molpus Woodlands Fund III LP	\$ 47,906,091
28,362,000	Orm Timber Fund III LLC	31,692,294
20,153,070	EIF US Power Fund IV LP	25,889,380
20,168,260	RMS Forest Growth III LP	25,072,475
14,231,507	Trilantic Energy	20,409,404
12,762,685	Warwick Partners III LP	17,903,788
13,860,500	White Deer Energy II LP	16,169,715
10,387,771	Arclight Energy Partner FD VI LP	11,510,035
13,045,103	Arclight Energy Partners FD V	11,352,827
6,426,857	Quintana Energy Partners TE LP	5,102,198

PERS' shares represent 50.07% of the total Natural Resources Pension Asset Class at market.

JRS' shares represent 0.88% of the total Natural Resources Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Natural Resources Pension Asset Class at market.

SRS' shares represent 3.03% of the total Natural Resources Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total Natural Resources Pension Asset Class at market.

MPORS' shares represent 3.39% of the total Natural Resources Pension Asset Class at market.

FURS' shares represent 3.49% of the total Natural Resources Pension Asset Class at market.

VFCA's shares represent 0.33% of the total Natural Resources Pension Asset Class at market.

Par Value	Private Equity Pension Asset Class	Base Market Value
372,200	IShares Russell 2000 ETF	\$ 52,450,424
23,387,327	Northgate V LP	35,894,472
20,264,096	American Securities Partners VI	35,236,750
18,382,531	Veritas Capital Partners IV	31,690,086
20,508,967	Performance Venture Capital II	28,304,692
22,848,870	BDCM Opportunity Fund III LP	27,703,044
14,886,139	HCI Equity Partners IV LP	26,609,122
23,644,229	Audax Private Equity Fund IV	24,610,640
15,509,454	Axiom Asia Private Cap Fund III	23,838,403
9,572,879	Axiom Asia Private Cap Fund II	23,608,424

PERS' shares represent 50.07% of the total Private Equity Pension Asset Class at market.

JRS' shares represent 0.88% of the total Private Equity Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Private Equity Pension Asset Class at market.

SRS' shares represent 3.03% of the total Private Equity Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total Private Equity Pension Asset Class at market.

MPORS' shares represent 3.39% of the total Private Equity Pension Asset Class at market.

FURS' shares represent 3.49% of the total Private Equity Pension Asset Class at market.

VFCA's shares represent 0.33% of the total Private Equity Pension Asset Class at market.

INVESTMENT SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Largest Holdings (by portfolio base market value)

as of June 30, 2017

(in thousands)

Par Value	Real Estate Pension Asset Class	Base Market Value
7,373	UBS Trumbull Property Fund	\$ 80,058,782
55,152	Prisa LP	80,000,000
26,284	552992935 JPM Strategic Proprt.	76,847,586
309	Invesco Core Real Estate USA	53,460,239
87,961	TIAA Cref Asset Management	50,710,339
506,100	Vanguard Reit ETF	42,122,703
25,244,581	Stockbridge Value Fund II	29,043,032
19,137,433	DRA Growth and Income Fund VII	27,673,341
20,396,510	CBRE Strat Partns. US	24,318,494
21,442,032	DRA Growth and Income Fund VIII	23,007,729

PERS' shares represent 50.07% of the total Real Estate Pension Asset Class at market.

JRS' shares represent 0.88% of the total Real Estate Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Real Estate Pension Asset Class at market.

SRS' shares represent 3.03% of the total Real Estate Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total Real Estate Pension Asset Class at market.

MPORS' shares represent 3.39% of the total Real Estate Pension Asset Class at market.

FURS' shares represent 3.49% of the total Real Estate Pension Asset Class at market.

VFCA's shares represent 0.33% of the total Real Estate Pension Asset Class at market.

Par Value	TIPS Pension Asset Class	Base Market Value
328,234,740	TSY Infl IX N/B	\$ 325,160,224

PERS' shares represent 50.07% of the total TIPS Pension Asset Class at market.

JRS' shares represent 0.88% of the total TIPS Pension Asset Class at market.

HPORS' shares represent 1.28% of the total TIPS Pension Asset Class at market.

SRS' shares represent 3.03% of the total TIPS Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total TIPS Pension Asset Class at market.

MPORS' shares represent 3.39% of the total TIPS Pension Asset Class at market.

FURS' shares represent 3.49% of the total TIPS Pension Asset Class at market.

VFCA's shares represent 0.33% of the total TIPS Pension Asset Class at market.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Largest Holdings (by portfolio base market value)

as of June 30, 2017

(in thousands)

Par Value	US Treasury Pension Asset Class	Base Market Value
601,690,000	US Treasury N/B	\$ 600,460,536
59,000,000	Federal Home Loan Bank	59,774,100
22,000,000	Fannie Mae	20,859,080
15,000,000	Federal Farm Credit Bank	14,983,650
11,441,980	FNMA Pool 471456	11,762,699
10,155,259	FNMA Pool 466675	10,591,428
10,000,000	Freddie Mac	9,726,900
6,480,362	FNMA Pool 469739	6,890,958
6,500,000	FNMA Pool AM9704	6,705,855
6,250,000	FNMA Pool AM1928	6,204,688

PERS' shares represent 50.07% of the total US Treasury Pension Asset Class at market.

JRS' shares represent 0.88% of the total US Treasury Pension Asset Class at market.

HPORS' shares represent 1.28% of the total US Treasury Pension Asset Class at market.

SRS' shares represent 3.03% of the total US Treasury Pension Asset Class at market.

GWPORS' shares represent 1.61% of the total US Treasury Pension Asset Class at market.

MPORS' shares represent 3.39% of the total US Treasury Pension Asset Class at market.

FURS' shares represent 3.49% of the total US Treasury Pension Asset Class at market.

VFCA's shares represent 0.33% of the total US Treasury Pension Asset Class at market.

INVESTMENT SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Investment Summary

as of June 30, 2017

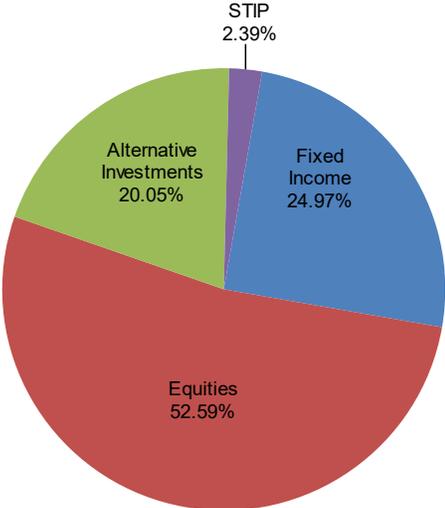
(in thousands)

Type of Investment	PERS-DBRP ¹		JRS		HPORS		SRS	
	Fair Value	% of Total	Fair Value	% of Total	Fair Value	% of Total	Fair Value	% of Total
		Fair Value		Fair Value		Fair Value		Fair Value
<i>Fixed Income</i>								
TIPS	\$ 165,022	3.02%	\$ 2,912	3.03%	\$ 4,224	3.03%	\$ 9,976	3.02%
Broad Fixed Income	123,691	2.27%	2,179	2.27%	3,166	2.27%	7,477	2.26%
US Treasury & Agency	395,286	7.24%	6,971	7.25%	10,120	7.26%	23,896	7.24%
Investment Grade Credit	270,666	4.96%	4,772	4.96%	6,929	4.97%	16,362	4.95%
Mortgage Backed	241,600	4.43%	4,265	4.43%	6,185	4.44%	14,605	4.42%
High Yield	107,778	1.98%	1,898	1.97%	2,759	1.98%	6,516	1.97%
Cash Equivalents	58,442	1.07%	1,033	1.07%	1,496	1.07%	3,533	1.07%
<i>Equities</i>								
Domestic Equity	1,945,789	35.66%	34,316	35.68%	49,812	35.74%	117,628	35.62%
International Equity	923,780	16.93%	16,298	16.95%	23,648	16.97%	55,845	16.91%
<i>Alternative Investments</i>								
Private Equity	570,940	10.46%	10,070	10.47%	14,616	10.49%	34,515	10.45%
Natural Resources	110,770	2.03%	1,954	2.03%	2,836	2.03%	6,696	2.03%
Real Estate	412,474	7.56%	7,271	7.57%	10,559	7.58%	24,935	7.55%
<i>Short Term Investments</i>								
Short Term Investment Pool(STIP) ¹	130,510	2.39%	2,233	2.32%	3,025	2.17%	8,276	2.51%
Total	\$ 5,456,748	100.00%	\$ 96,172	100.00%	\$139,375	100.00%	\$330,260	100.00%

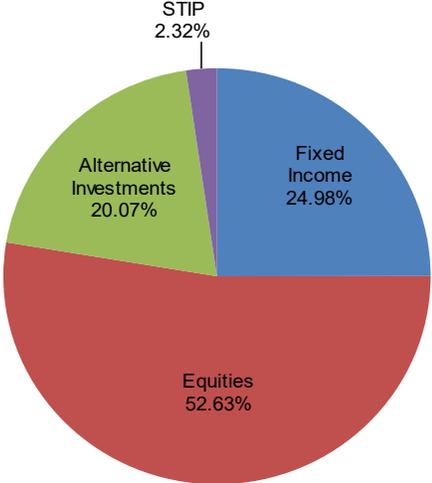
¹These figures only include those of the PERS-Defined Benefit Retirement Plan, whereas the financial statements include the total in the Defined Benefit Retirement Plan and the Defined Benefit Education Program.

INVESTMENT SECTION

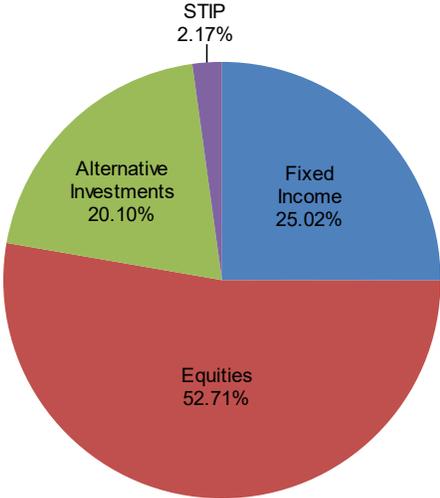
PERS-DBRP



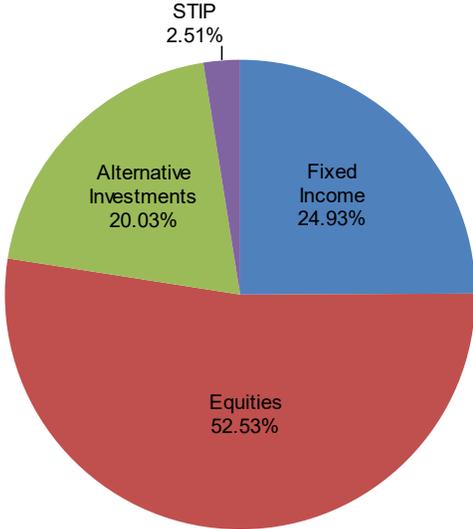
JRS



HPORS



SRS



INVESTMENT SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Investment Summary

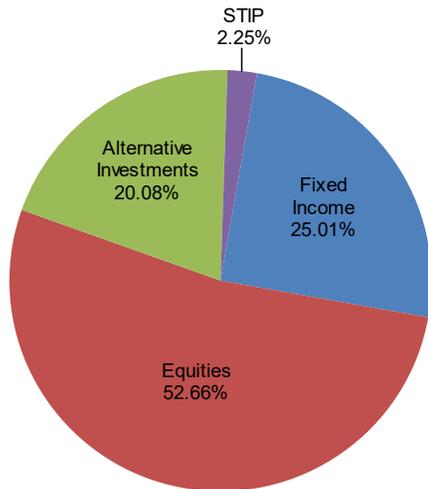
as of June 30, 2017

(in thousands)

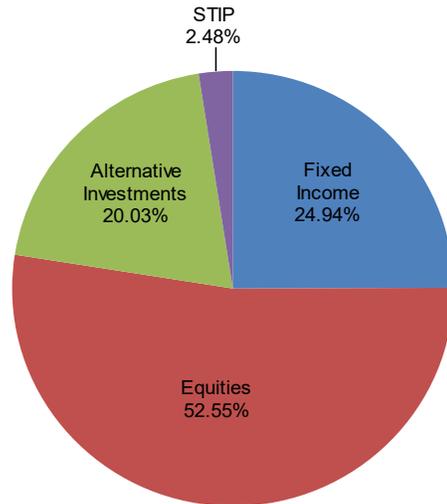
Type of Investment	GWPORS		MPORS		FURS		VFCA	
	% of Total		% of Total		% of Total		% of Total	
	Fair Value	Fair Value	Fair Value	Fair Value	Fair Value	Fair Value	Fair Value	Fair Value
<i>Fixed Income</i>								
TIPS	\$ 5,304	3.03%	\$ 11,175	3.02%	\$ 11,502	3.02%	\$ 1,098	3.02%
Broad Fixed Income	3,976	2.27%	8,363	2.26%	8,608	2.26%	823	2.26%
US Treasury & Agency	12,706	7.26%	26,747	7.24%	27,529	7.24%	2,629	7.22%
Investment Grade Credit	8,700	4.97%	18,312	4.95%	18,848	4.96%	1,800	4.95%
Mortgage Backed	7,766	4.43%	16,366	4.43%	16,844	4.43%	1,607	4.42%
High Yield	3,464	1.98%	7,282	1.97%	7,494	1.97%	717	1.97%
Cash Equivalents	1,879	1.07%	3,965	1.07%	4,081	1.07%	389	1.07%
<i>Equities</i>								
Domestic Equity	62,544	35.71%	131,682	35.63%	135,531	35.62%	12,942	35.57%
International Equity	29,694	16.95%	62,542	16.92%	64,371	16.92%	6,144	16.89%
<i>Alternative Investments</i>								
Private Equity	18,352	10.48%	38,643	10.45%	39,773	10.45%	3,798	10.44%
Natural Resources	3,561	2.03%	7,498	2.03%	7,717	2.03%	737	2.03%
Real Estate	13,258	7.57%	27,901	7.55%	28,716	7.55%	2,743	7.54%
<i>Short Term Investments</i>								
Short Term Investment Pool(STIP)	3,940	2.25%	9,147	2.48%	9,430	2.48%	954	2.62%
Total	\$ 175,144	100.00%	\$ 369,623	100.00%	\$ 380,444	100.00%	\$ 36,381	100.00%

INVESTMENT SECTION

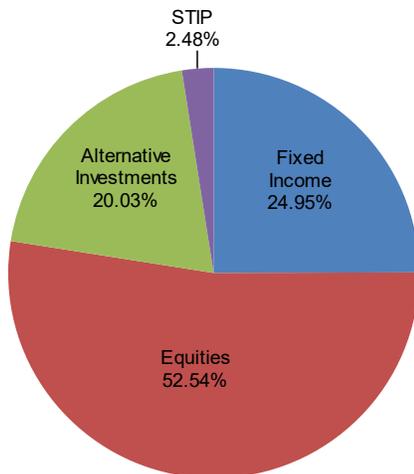
GWPORS



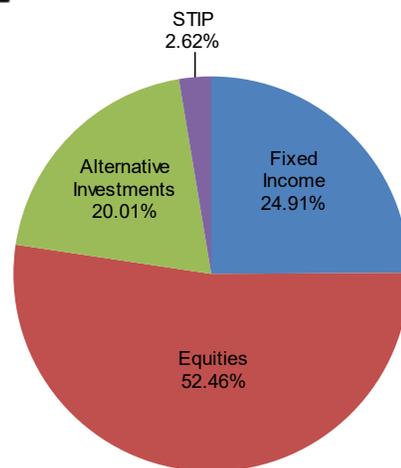
MPORS



FURS



VFCA



INVESTMENT SECTION

This page intentionally left blank

**Hell Creek State Park is located north of Fort Peck Lake.
Covering 337 acres, Hell Creek State Park provides
facilities for water recreation and is a launching point for
the Missouri River Breaks.**

**A
C
T
U
A
R
I
A
L

S
E
C
T
I
O
N**





Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve

Via Electronic Mail

October 23, 2017

Public Employees' Retirement Board
100 North Park Avenue, Suite 200
Helena, Montana 59620

Dear Members of the Board:

At your request, we have conducted the June 30, 2017 actuarial valuation for each of the eight funded pension programs administered by the Public Employees' Retirement Board. Actuarial valuations are performed annually. This valuation reflects the benefit provisions and contribution rates in effect as of July 1, 2017.

Valuation Results

The calculations have been made on a basis consistent with our understanding of the Systems' funding requirements and goals. The funding objective for each System is to pay the Normal Cost plus an amount that amortizes the Unfunded Actuarial Liability over a period of not more than 30 years. The member, employer, and state contributions are determined by statute. Our valuations demonstrate that the projected income stream from the expected contributions are sufficient to pay the Normal Costs and amortize the Unfunded Actuarial Liability as a level percentage of future payroll for the following six Systems. The amortization periods are shown below.

- Public Employees' Retirement System (PERS) 30 years
- Highway Patrol Officers' Retirement System (HPORS) 37 years
- Municipal Police Officers' Retirement System (MPORS) 16 years
- Firefighters' Unified Retirement System (FURS) 10 years
- Sheriffs' Retirement System (SRS) 25 Years
- Game Wardens' and Peace Officers' Retirement System (GWPORS) 70 Years

The amortization periods using the Market Value of Assets for all of the Systems except GWPORS are shown below. The Unfunded Actuarial Liability does not amortize for GWPORS using the Market Value of Assets.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com
Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE

ACTUARIAL SECTION

Public Employees' Retirement Board

October 23, 2017

Page 2



- Public Employees' Retirement System (PERS) 30 years
- Highway Patrol Officers' Retirement System (HPORS) 38 years
- Municipal Police Officers' Retirement System (MPORS) 17 years
- Firefighters' Unified Retirement System (FURS) 11 years
- Sheriffs' Retirement System (SRS) 25 Years

Based on the assumed level of future revenue, the Unfunded Actuarial Liability for the Volunteer Firefighters' Compensation Act (VFCA) is expected to be amortized over 6 years using the Actuarial Value of Assets and over 7 years using Market Value of Assets. The Judges' Retirement System (JRS) has an Actuarial Surplus as of June 30, 2017.

The changes in funded status (on an Actuarial Value of Assets basis) for each System are shown below:

	<u>2016</u>	<u>2017</u>
PERS	77%	73%
JRS	166%	167%
HPORS	66%	64%
SRS	83%	81%
GWPORS	84%	81%
MPORS	69%	69%
FURS	78%	76%
VFCA	80%	81%

The asset values used to determine unfunded liabilities are not market values but less volatile market related values. A smoothing technique is applied to market values to determine the market related values. Due to net investment losses, which are being recognized over four years, the Actuarial Value of Assets as of June 30, 2017 are greater than the Market Value of Assets for each of the Systems. If the Market Value of Assets had been used to determine the funded status, the funded status of each of the Systems would have been lower compared to using the Actuarial Value of Assets.

HB 454 requires the PERS actuarial valuation to determine whether certain funded statuses and amortization thresholds are met. Once met, certain temporary employer and member contributions are discontinued. Based upon our June 30, 2017 valuation results, temporary employer and member contributions must remain in place.

At the request of the Board, we also performed a valuation as of June 30, 2017 of the PERS Long Term Disability Plan under the Defined Contribution Plan. Our findings indicate that the employer contributions are sufficient to pay Normal Costs and amortize the Unfunded Actuarial Liability over 19 years. The funded ratio remained unchanged from 87%.

***Assumptions and Methods***

The actuarial assumptions used in the valuations are based on an experience study for the six-year period ending June 30, 2016 which was adopted by the Board for the June 30, 2017 valuation. The assumptions and methods used for funding purposes conform to the parameters set by accounting principles of the United States of America as promulgated by the Governmental Accounting Standards Board. In addition, the assumptions and methods used for funding purposes meet the parameters set forth by Actuarial Standards of Practice.

The actuarial assumptions reflect our understanding of the likely future experience of the System, and the assumptions as a whole represent the best estimate for the future experience of the System. Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Determinations for purposes other than meeting these requirements may be significantly different from the results in this letter. Accordingly, additional determinations may be needed for other purposes.

Reliance on Others

In preparing the actuarial valuations, we relied on information supplied by the staff of the Public Employee Retirement Administration. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Supporting Schedules

The following schedules in this Actuarial Section were provided by Cavanaugh Macdonald Consulting to support these actuarial results:

- Schedule of Active Member Composition
- Schedule of Retiree Member Composition
- Schedule of Disabled Member Composition
- Schedule of Converted Disabled Member Composition
- Schedule of Beneficiary Member Composition

ACTUARIAL SECTION

Public Employees' Retirement Board
October 23, 2017
Page 4



Other information presented in this Actuarial Section as of June 30, 2017, and in various parts of the Financial and Statistical Sections is based on information found in our actuarial valuation reports. Numbers reported for years prior to the fiscal year ending June 30, 2016 were developed by the prior actuary and are reported per their valuation reports.

Certification

This is to certify that the independent consulting actuaries, Edward Macdonald and Todd Green, are Members of the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. They have experience in performing valuations for public retirement systems. The valuations were prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

This letter was prepared exclusively for the Public Employees' Retirement Board for the purpose described herein. Other users of this letter are not intended users as defined in the Actuarial Standards of Practice, and Cavanaugh Macdonald Consulting LLC assumes no duty or liability to any other user.

Respectfully submitted,

/s/ Edward A. Macdonald

/s/ Todd B. Green

Edward A. Macdonald, ASA, FCA, MAAA
President

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

Public Employees' Retirement Board*A Component Unit of the State of Montana***SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS****BACKGROUND**

An experience study was performed by the PERB's actuary, Cavanaugh Macdonald Consulting, LLC. during fiscal year 2017 examining the plans' experience during the six year period July 1, 2010 to June 30, 2016. The experience study investigated the actual experience of each plan administered by the PERB. The methods, assumptions, and factors adopted by the PERB were based on Cavanaugh Macdonald's recommendations. The actuarial assumptions were approved by the PERB on May 11, 2017 and were used in the fiscal year 2017 actuarial valuation. The recommendations were formed on the basis of recent experience of the plans and on the current expectations of future economic conditions. The actuarial methods, assumptions, factors, and any changes in the actuarial assumptions are described in this section.

Demographic assumptions are based on expected membership behavior. These include the retirement rates, termination rates, disability rates, mortality rates, and miscellaneous assumptions including marital status. Economic assumptions are based on common system elements such as investment returns, inflation, and administrative expenses. Salary increases can be considered either demographic (membership oriented) or economic (given the inflation component).

The assumptions are intended to estimate the future experience of the plans and the members of the plans in areas which affect the projected benefit flow and anticipated investment earnings. Any variations in future

experience from that expected based on these assumptions will result in corresponding changes in the estimated cost of the plans' benefits.

Assumptions related to future member contribution rates for PERS have been updated based on revised projections, which incorporate plan experience over the year ending on the valuation date.

RECORDS AND DATA

The data used in the valuation consists of financial information and records of age, service and income of contributing members, former contributing members and their survivors where applicable. All data supplied to the actuary by MPERA was accepted for valuation purposes without audit.

ACTUARIAL FUNDING AND METHOD

A fundamental principle in financing the liabilities of a retirement program is to relate the cost of benefits to when they are earned, rather than when they are paid. There are a number of methods in use for making that determination. The funding method used to determine costs in these valuations is the Entry Age Actuarial Cost Method. Under this funding method, a normal cost rate is determined by taking the value of each member's projected future benefits as of entry age into the plan.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future normal cost. The difference between this liability and funds

ACTUARIAL SECTION

accumulated as of the same date is referred to as the unfunded actuarial liability.

The portion of the actuarial liability in excess of plan assets is amortized to develop an additional cost or savings which is added to each year's employer normal cost. Under this cost method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability.

ACTUARIAL VALUE OF ASSETS

Asset values were supplied by MPERA and were accepted without audit by the actuary. The Actuarial Value of Assets is the current market value, adjusted by a four-year smoothing of gains and losses on a market value basis. The asset adjustment method lessens the volatility in asset values that could occur because of fluctuations in market conditions. Each year's gain or loss is determined as the difference between the actual market return and the expected market return using the assumed rate of investment return.

INVESTMENT RETURNS

As a result of the experience study performed during fiscal year 2017, the actuarial assumption for the rate of investment return decreased to 7.65% from 7.75%. The future investment earnings of the assets of the plans are assumed to accrue at an annual rate of 7.65%, net investment-related expenses.

ADMINISTRATIVE EXPENSE

As a result of the experience study during fiscal year 2017, the administrative expense amounts will be independent for each system and vary from year to year based on the prior year's actual administrative expenses of the system. Previously, the administrative

expense assumption was explicitly stated as a cost element rather than being included implicitly within the investment return.

AMORTIZATION METHODS

The unfunded actuarial liability is amortized as a level percentage of future payroll, except for VFCA, which is amortized as level dollar amounts because there is no payroll.

INTEREST ON MEMBER CONTRIBUTIONS

As a result of the experience study performed during fiscal year 2017, the actuarial assumption for the interest on member contributions decreased to 2.75% from 3.50%. Interest on member contributions at the time of the valuation was assumed to accrue at a net annual rate of 2.75%, with the exception of VFCA, which has no member contributions.

CAPITAL PRESERVATION PREMIUM ON MPORS DROP ACCOUNTS

Effective July 1, 2009, the interest earned on MPORS DROP accounts changed from the actual trust fund earnings with a floor of zero to the actuarial assumed rate of return.

FUTURE SALARIES

Estimates of future salaries are based on two types of assumptions. Rates of increase in the general wage level of the membership are directly related to inflation, while individual salary changes due to promotion and longevity, referred to as the merit scale, occur even in the absence of inflation. As a result of the experience study performed during fiscal year 2017, the assumed increase in future salaries due to general wage growth is 3.50% per year for all plans, a decrease from 4.00% in previous valuations. The merit scale is based on years of service and is in addition

ACTUARIAL SECTION

to the wage growth. The merit scale is calculated independently for each plan based on the factors applicable to the plan. VFCA is excluded from this calculation because members are unpaid volunteers.

MARRIAGE

As a result of the experience study performed during fiscal year 2017, there was no change in this assumption. The probability of marriage assumption is 100% of all non-retired members. Male spouses are assumed to be three years older than female spouses for all systems.

MORTALITY

As a result of the experience study performed during fiscal year 2017, the mortality assumptions among contributing members, terminated vested members, service retired members, and beneficiaries are based on RP-2000 Combined Employee and Annuitant Mortality Tables projected to 2020 with scale BB, set back one year for males. In past actuarial valuations the actuarial assumption for the probability of mortality was based on RP-2000 Combined Healthy Male and Female Mortality Tables projected to 2015 with scale AA. The sample mortality rates for healthy retirees, beneficiaries and non-retired members for all plans is presented in the table at the top of the next column.

Healthy Retirees, Beneficiaries and Non-Retired Members Sample Mortality Rates		
<u>Age</u>	<u>Male</u>	<u>Female</u>
50	0.1879%	0.1578%
55	0.3010%	0.2458%
60	0.5271%	0.4135%
65	0.9041%	0.7624%
70	1.4636%	1.3151%
75	2.5057%	2.2077%
80	4.2816%	3.6037%
85	7.3750%	6.0833%
90	13.0721%	10.5549%

As a result of the experience study performed during fiscal year 2017, there will be no change to the mortality assumption for the disabled retirees. The mortality assumptions among Disabled Retirees are based on the RP-2000 Combined Employee and Annuitant Mortality Tables with no projections. No future mortality improvement is assumed. The sample mortality rates for the disabled retirees for all plans is presented in the following table.

Disabled Retirees Sample Mortality Rates		
<u>Age</u>	<u>Male</u>	<u>Female</u>
50	0.214%	0.168%
55	0.362%	0.272%
60	0.675%	0.506%
65	1.274%	0.971%
70	2.221%	1.674%
75	3.783%	2.811%
80	6.437%	4.588%
85	11.076%	7.745%
90	18.341%	13.168%

ACTUARIAL SECTION

SERVICE RETIREMENT

There is no change to the assumed rate service retirement as a result of the experience study performed during fiscal year 2017. The assumed rates of service retirement used in the valuations are dependent upon age and years of service and differ between plans. The rates are based on the actual experience of the individual plans. Under all plans, vested terminated members are assumed to retire when first eligible for an unreduced benefit.

DISABLEMENT

There is no change to the assumed rate of disablement as a result of the experience study performed during fiscal year 2017. The assumed rates of disablement are dependent upon age and differ between plans. It is further assumed that 75% of all disabilities are duty-related for HPORS, SRS, and GWPORS. For JRS it is assumed that 10% of all disabilities are duty-related. For PERS and VFCA all disabilities are assumed to be duty related. For MPORS and FURS there is no distinction between duty and non-duty related disabilities. It is assumed that all disabilities are permanent and that no disabled member will recover and return to work.

OTHER TERMINATIONS OF MEMBERSHIP

The assumed rates of termination, other than for retirement, death, or disability, are calculated individually for each plan. The JRS does not assume termination for any reason other than retirement, death, or disability.

TERMINATING MEMBERS ELECTING A REFUND

It is assumed that all terminating members that are non-vested will receive an immediate withdrawal of their member accumulated contributions. The probability of a terminating,

vested member electing a refund of the member account balance is based on age and is different for each plan as described in the actuarial valuation. These assumptions do not apply to the JRS or VFCA.

ACTUARIAL FACTORS

Retirement actuarial factors are used in determining joint, survivor and period certain annuities.

ACTUARIAL AUDIT

An actuarial audit was performed in January 2015 by an independent auditing actuary Cavanaugh Macdonald Consulting, LLC. The audit was limited to reviewing then actuary Cheiron's work in preparing the June 30, 2014 actuarial valuation for the PERS-DBRP. The scope of the requested audit was limited to the in-depth review of a sample set of individual calculations selected rather than a complete replication of the results.

The PERB has periodic audits performed to monitor the quality of actuarial services performed on behalf of the pension plan; to enhance the credibility of the actuarial valuation process; to increase public trust in how the pension plan is being governed; to help plan fiduciaries assess whether the plan is meeting its funding objectives; to remedy errors, if discovered; and to acquire recommendations for improving the actuarial valuation process. Overall the audit did not result in any material differences in any of the above points.

This is the second valuation performed by the PERB's actuary, Cavanaugh Macdonald Consulting, LLC. All results shown for valuations from July 1, 2009 to June 30, 2015 were derived from reports prepared by the prior actuary, Cheiron.

CALCULATIONS BASED ON THE MARKET VALUE OF ASSETS

Section 19-2-407, MCA, as amended by the 2007 Legislature, requires the actuarial report to show how market performance is affecting the actuarial funding of the retirement systems. In the following paragraphs, the effect on each one of the defined benefit retirement systems is explained using the market value of assets.

At June 30, 2017, the market value of assets for **PERS-DBRP** was \$41.5 million less than the actuarial value of assets. If the market value of assets was used rather than the actuarial value of assets, the funded ratio on the valuation date would be 72.21% and the amortization period for the unfunded actuarial liability would be 30 years. Using the actuarial value of assets in the valuation, the funded ratio at June 30, 2017 is 72.76% and the amortization period for the unfunded actuarial liability is 30 years.

At June 30, 2017, the valuation of the **PERS-DCRP Disability OPEB Plan** is performed based on the market value of assets. As of June 30, 2017, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability, the funded ratio is 87.14%. The Plan's assets gained 0.02% on an annualized market value basis. This was below the assumed rate of return of 3.50%. The actuarial value of assets is set equal to the market value of assets.

At June 30, 2017, the market value of assets for **JRS** was \$412 thousand less than the actuarial value of assets. If the market value of assets was used rather than the actuarial value of assets, the funded ratio on the valuation date would be 166.35% and the amortization period for the unfunded actuarial liability would be zero years since the plan has a surplus. Using the actuarial value of assets in the valuation, the funded ratio at June 30, 2017 is 167.06% and the amortization period for the unfunded

actuarial liability is still zero years due to the plan surplus.

At June 30, 2017, the market value of assets for **HPORS** was \$699 thousand less than the actuarial value of assets. If the market value of assets was used rather than the actuarial value of assets, the funded ratio on the valuation date would be 64.03% and the amortization period for the unfunded actuarial liability would be 38 years. Using the actuarial value of assets in the valuation, the funded ratio at June 30, 2017 is 64.35% and the amortization period for the unfunded actuarial liability is 37 years.

At June 30, 2017, the market value of assets for **SRS** was \$1.3 million less than the actuarial value of assets. If the market value of assets was used rather than the actuarial value of assets, the funded ratio on the valuation date would be 80.44% and the amortization period for the unfunded actuarial liability would be 25 years. Using the actuarial value of assets in the valuation, the funded ratio at June 30, 2017 is 80.74% and the amortization period for the unfunded actuarial liability is 25 years.

At June 30, 2017, the market value of assets for **GWPORS** was \$470 thousand less than the actuarial value of assets. If the market value of assets was used rather than the actuarial value of assets, the funded ratio on the valuation date would be 80.79% and the statutory contribution rates are not sufficient to amortize the unfunded actuarial liability within a 30-year amortization period. Using the actuarial value of assets in the valuation, the funded ratio at June 30, 2017 is 81.01% and the amortization period is 70 years.

At June 30, 2017, the market value of assets for **MPORS** was \$2.2 million less than the actuarial value of assets. If the market value of assets was used rather than the actuarial value

ACTUARIAL SECTION

of assets, the funded ratio on the valuation date would be 68.27% and the amortization period for the unfunded actuarial liability would be 17 years. Using the actuarial value of assets in the valuation, the funded ratio at June 30, 2017 is 68.66% and the amortization period is 16 years.

At June 30, 2017, the market value of assets for **FURS** was \$2.1 million less than the actuarial value of assets. If the market value of assets was used rather than the actuarial value of assets, the funded ratio on the valuation date would be 75.73% and the amortization period for the unfunded actuarial liability would be 11 years. Using the actuarial value of assets in the valuation, the funded ratio at June 30, 2017 is 76.13% and the amortization period for the unfunded actuarial liability is 10 years.

At June 30, 2017, the market value of assets for **VFCA** was \$324 thousand less than the actuarial value of assets. If the market value of assets was used rather than the actuarial value of assets, the funded ratio on the valuation date would be 79.85%. Using the actuarial value of assets in the valuation, the funded ratio at June 30, 2017 is 80.56% and the amortization period for the unfunded actuarial liability is 6 years.

This page intentionally left blank

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Active Member Valuation Data

System	Valuation Date	Number Members (a)	Nbr ERs (b)	Covered Payroll (c)	Average Annual Pay ¹ (c/a)	% Pay Increase
PERS-DBRP	June 30, 2017	29,395	539	\$ 1,232,066,537	\$ 41,914	0.36%
	June 30, 2016	28,390	535	1,185,646,179	41,763	2.11%
	June 30, 2015	28,237	539	1,154,866,605	40,899	2.25%
	June 30, 2014	28,229	541	1,129,109,402	39,998	2.90%
	June 30, 2013	28,401	540	1,103,999,865	38,872	2.63%
	June 30, 2012	28,548	538	1,081,288,177	37,876	1.32%
	June 30, 2011	28,659	533	1,071,376,488	37,384	-0.54%
	June 30, 2010	28,834	533	1,083,779,866	37,587	4.43%
	June 30, 2009	28,983	529	1,043,214,752	35,994	2.34%
	June 30, 2008	28,293	528	995,112,779	35,172	3.86%
JRS	June 30, 2017	56	1	6,974,470	124,544	-1.02%
	June 30, 2016	55	1	6,920,367	125,825	6.07%
	June 30, 2015	55	1	6,524,569	118,629	2.67%
	June 30, 2014	55	1	6,354,763	115,541	-0.58%
	June 30, 2013	54	1	6,275,682	116,216	1.34%
	June 30, 2012	54	1	6,192,732	114,680	9.70%
	June 30, 2011	54	1	5,645,110	104,539	-6.25%
	June 30, 2010	51	1	5,686,874	111,507	11.30%
	June 30, 2009	51	1	5,109,726	100,191	0.27%
	June 30, 2008	51	1	5,095,771	99,917	5.27%
HPORS ²	June 30, 2017	228	1	14,778,975	64,820	-5.80%
	June 30, 2016	222	1	15,275,964	68,811	13.98%
	June 30, 2015	241	1	14,549,378	60,371	-2.29%
	June 30, 2014	229	1	14,149,269	61,787	0.35%
	June 30, 2013	219	1	13,484,125	61,571	-1.43%
	June 30, 2012	218	1	13,617,653	62,466	7.19%
	June 30, 2011	214	1	12,471,575	58,278	2.82%
	June 30, 2010	230	1	13,035,971	56,678	10.13%
	June 30, 2009	222	1	11,424,902	51,464	0.40%
	June 30, 2008	212	1	10,866,291	51,256	6.07%
SRS	June 30, 2017	1,415	57	74,581,258	52,708	1.84%
	June 30, 2016	1,364	57	70,593,304	51,755	1.61%
	June 30, 2015	1,336	57	68,045,517	50,932	2.93%
	June 30, 2014	1,307	57	64,672,635	49,482	2.72%
	June 30, 2013	1,276	57	61,467,169	48,172	0.33%
	June 30, 2012	1,241	57	59,582,678	48,012	3.53%
	June 30, 2011	1,230	57	57,041,471	46,375	0.16%
	June 30, 2010	1,181	57	54,680,650	46,300	6.63%
	June 30, 2009	1,185	57	51,456,506	43,423	2.03%
	June 30, 2008	1,109	57	47,196,418	42,558	5.00%

¹Average Annual Pay is based on Covered Payroll. The actuary valuation average annual salary is based on Annual Payroll which is different than Covered Payroll.

²The number of members for HPORS and MPORS does not include the DROP members.

The last actuarial valuation was performed as of June 30, 2017.

ACTUARIAL SECTION

System	Valuation Date	Number Members (a)	Nbr ERs (b)	Covered Payroll (c)	Average Annual Pay ¹ (c/a)	% Pay Increase
GWPORS	June 30, 2017	1,012	7	\$49,381,004	48,795	2.44%
	June 30, 2016	989	7	47,108,310	47,632	5.38%
	June 30, 2015	993	7	44,884,739	45,201	3.68%
	June 30, 2014	955	7	41,636,566	43,598	7.25%
	June 30, 2013	971	7	39,471,105	40,650	3.12%
	June 30, 2012	972	7	38,316,733	39,421	-2.13%
	June 30, 2011	951	7	38,306,496	40,280	-1.33%
	June 30, 2010	966	7	39,435,882	40,824	7.66%
	June 30, 2009	950	7	36,023,244	37,919	3.69%
	June 30, 2008	885	7	32,365,266	36,571	4.25%
MPORS²	June 30, 2017	727	33	48,603,580	66,855	-0.64%
	June 30, 2016	702	32	47,233,801	67,285	2.10%
	June 30, 2015	694	32	45,736,127	65,902	3.10%
	June 30, 2014	695	32	44,426,617	63,923	4.26%
	June 30, 2013	698	31	42,795,697	61,312	2.96%
	June 30, 2012	701	31	41,744,760	59,550	5.91%
	June 30, 2011	702	31	39,470,441	56,226	4.99%
	June 30, 2010	695	30	37,220,334	53,554	2.36%
	June 30, 2009	663	29	34,687,120	52,318	4.70%
	June 30, 2008	644	27	32,180,590	49,970	8.24%
FURS	June 30, 2017	678	27	45,208,091	66,679	-0.41%
	June 30, 2016	644	26	43,118,925	66,955	0.85%
	June 30, 2015	627	26	41,627,233	66,391	2.52%
	June 30, 2014	616	25	39,891,869	64,760	4.06%
	June 30, 2013	610	25	37,962,748	62,234	1.50%
	June 30, 2012	590	24	36,176,675	61,316	1.87%
	June 30, 2011	579	24	34,852,160	60,194	2.91%
	June 30, 2010	570	23	33,338,599	58,489	8.21%
	June 30, 2009	558	21	30,159,570	54,049	-2.68%
	June 30, 2008	525	19	29,158,206	55,539	9.93%
VFCA	June 30, 2017	1,957				
	June 30, 2016	1,895				
	June 30, 2015	1,977				
	June 30, 2014	1,935				
	June 30, 2013	2,101				
	June 30, 2012	2,106				
	June 30, 2011	2,105				
	June 30, 2010	2,315				
	June 30, 2009	2,253				
	June 30, 2008	2,301				

Covered payroll is not applicable. Members are unpaid volunteers and do not contribute to the fund.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Active Member Composition

as of June 30, 2017

	PERS-DBRP	JRS	HPORS ¹	SRS	GWORS	MPORS ¹	FURS	VFCA ²	PERS-DCRP
Average Age	48.1	58.5	39.7	40.0	42.0	38.2	39.9	45.5	46.3
Average Service	9.6	9.0	9.6	7.2	8.1	8.8	10.6	9.5	7.4
Average Salary	\$ 47,628	\$ 131,924	\$ 64,943	\$ 51,103	\$ 51,944	\$ 69,408	\$ 69,536	N/A	\$ 57,125
Under Age 25									
Number Members	972		7	133	64	22	21	123	39
Average Salary	\$ 28,980		\$ 55,399	\$ 30,891	\$ 40,955	\$ 56,055	\$ 34,128	N/A	\$ 33,532
Ages 25-29									
Number Members	1,988		32	203	114	119	71	183	146
Average Salary	\$ 39,093		\$ 58,391	\$ 39,258	\$ 43,207	\$ 60,355	\$ 52,008	N/A	\$ 45,518
Ages 30-34									
Number Members	2,583		38	210	139	153	133	194	282
Average Salary	\$ 43,438		\$ 61,045	\$ 50,506	\$ 47,415	\$ 65,618	\$ 61,308	N/A	\$ 54,063
Ages 35-39									
Number Members	3,129	1	44	203	140	140	137	221	363
Average Salary	\$ 45,446	\$ 135,523	\$ 65,342	\$ 52,962	\$ 51,639	\$ 70,071	\$ 70,310	N/A	\$ 58,196
Ages 40-44									
Number Members	2,772	3	43	177	134	107	119	201	356
Average Salary	\$ 52,726	\$ 130,504	\$ 67,963	\$ 61,964	\$ 54,994	\$ 72,455	\$ 73,533	N/A	\$ 58,131
Ages 45-49									
Number Members	3,422	5	27	180	139	99	108	227	359
Average Salary	\$ 49,796	\$ 130,521	\$ 70,286	\$ 58,546	\$ 57,581	\$ 78,255	\$ 78,865	N/A	\$ 69,281
Ages 50-54									
Number Members	4,015	8	28	136	133	46	44	248	310
Average Salary	\$ 50,255	\$ 132,355	\$ 67,852	\$ 57,440	\$ 55,983	\$ 78,783	\$ 87,026	N/A	\$ 58,101
Ages 55-59									
Number Members	4,976	15	6	105	89	19	28	219	367
Average Salary	\$ 50,567	\$ 132,890	\$ 73,215	\$ 55,015	\$ 57,034	\$ 72,352	\$ 87,165	N/A	\$ 56,184
Ages 60-64									
Number Members	3,830	11	3	52	50	8	13	158	213
Average Salary	\$ 50,221	\$ 130,434	\$ 65,526	\$ 55,826	\$ 55,080	\$ 85,404	\$ 81,888	N/A	\$ 52,100
Ages 65-69									
Number Members	1,240	10		13	8	1	4	107	82
Average Salary	\$ 46,745	\$ 132,725		\$ 58,042	\$ 56,798	\$ 110,879	\$ 86,877	N/A	\$ 56,435
Age 70 & Over									
Number Members	455	3		3	2			76	24
Average Salary	\$ 41,419	\$ 130,504		\$ 41,165	\$ 48,463			N/A	\$ 37,854

¹ The number of members for HPORS does not include 10 DROP members; MPORS does not include 48 DROP members.

² Average Salary is not applicable to VFCA, members are unpaid volunteers.

The last actuarial valuation was performed as of June 30, 2017.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Retiree Member Composition

as of June 30, 2017

	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Total Count	20,640	62	295	550	244	664	549	1,435
Average Age	72.4	76.2	69.7	65.1	67.3	66.6	69.0	71.3
Average Age at Retirement	60.1	62.9	49.4	54.1	57.4	48.8	51.4	59.7
Average Service at Retirement	18.7	17.6	23.4	19.7	18.3	20.1	24.9	19.0
Average Annual Benefit	\$ 17,543	\$ 53,200	\$ 34,007	\$ 27,003	\$ 22,294	\$ 30,787	\$ 37,648	\$ 1,998

Under Age 45

Number Members	51		6	9		13	2	
Average Annual Benefit	\$ 6,640		\$ 29,201	\$ 24,232		\$ 23,933	\$ 40,235	

Ages 45-49

Number Members	29		13	17		24	13	
Average Annual Benefit	\$ 14,045		\$ 36,695	\$ 30,983		\$ 36,677	\$ 32,024	

Ages 50-54

Number Members	142		26	37	11	71	37	
Average Annual Benefit	\$ 21,735		\$ 39,668	\$ 24,629	\$ 29,392	\$ 26,489	\$ 37,699	

Ages 55-59

Number Members	788	1	30	87	41	89	74	85
Average Annual Benefit	\$ 24,044	\$ 19,038	\$ 33,873	\$ 27,434	\$ 22,156	\$ 31,319	\$ 37,505	\$ 2,467

Ages 60-64

Number Members	3,047	3	20	123	57	110	92	233
Average Annual Benefit	\$ 21,671	\$ 56,291	\$ 38,120	\$ 29,207	\$ 24,564	\$ 31,060	\$ 45,653	\$ 2,135

Ages 65-69

Number Members	5,219	16	39	133	62	122	92	349
Average Annual Benefit	\$ 19,537	\$ 54,150	\$ 38,285	\$ 28,632	\$ 17,021	\$ 34,442	\$ 44,129	\$ 1,982

Ages 70-74

Number Members	4,281	15	46	70	32	87	77	292
Average Annual Benefit	\$ 17,477	\$ 59,371	\$ 35,374	\$ 25,541	\$ 20,717	\$ 33,133	\$ 41,043	\$ 1,918

Ages 75-79

Number Members	2,948	5	53	46	17	47	70	234
Average Annual Benefit	\$ 15,181	\$ 51,599	\$ 33,744	\$ 25,706	\$ 24,440	\$ 27,924	\$ 33,121	\$ 1,937

Age 80 & Over

Number Members	4,135	22	62	28	24	101	92	242
Average Annual Benefit	\$ 12,514	\$ 49,796	\$ 26,793	\$ 15,648	\$ 28,089	\$ 27,421	\$ 24,599	\$ 1,879

The last actuarial valuation was performed as of June 30, 2017.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Beneficiary Member Composition

as of June 30, 2017

	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Total Count	463	5	12	24	11	30	20	2
Average Age	63.3	70.6	51.6	60.2	52.6	65.1	69.6	53.5
Average Service at Retirement	18.6	14.1	10.5	15.2	13.4	11.1	15.9	17.0
Average Annual Benefit	\$ 11,584	\$ 28,941	\$ 19,804	\$ 23,426	\$ 11,603	\$ 26,346	\$ 26,092	\$ 1,710

Under Age 45

Number Members	61		5	5	3	4	3	
Average Annual Benefit	\$ 7,417		\$ 17,978	\$ 15,539	\$ 12,041	\$ 26,811	\$ 27,501	

Ages 45-49

Number Members	21		2	3		1	1	
Average Annual Benefit	\$ 7,462		\$ 9,551	\$ 18,729		\$ 34,817	\$ 31,070	

Ages 50-54

Number Members	28		1	1	1	1		1
Average Annual Benefit	\$ 8,430		\$ 7,068	\$ 43,883	\$ 3,509	\$ 22,686		\$ 2,370

Ages 55-59

Number Members	52		1	2	1	5	2	1
Average Annual Benefit	\$ 10,186		\$ 26,172	\$ 46,414	\$ 27,641	\$ 24,698	\$ 21,491	\$ 1,050

Ages 60-64

Number Members	65	1		4	2	2	1	
Average Annual Benefit	\$ 11,551	\$ 62,749		\$ 27,559	\$ 14,618	\$ 29,495	\$ 26,229	

Ages 65-69

Number Members	75	2	1	2	2	6	2	
Average Annual Benefit	\$ 13,864	\$ 16,221	\$ 12,866	\$ 26,567	\$ 7,130	\$ 28,365	\$ 29,110	

Ages 70-74

Number Members	56	1	2	2	2	3	2	
Average Annual Benefit	\$ 13,413	\$ 16,518	\$ 41,276	\$ 22,329	\$ 8,430	\$ 23,450	\$ 34,881	

Ages 75-79

Number Members	51					1	2	
Average Annual Benefit	\$ 11,098					\$ 39,048	\$ 23,227	

Age 80 & Over

Number Members	54	1		5		7	7	
Average Annual Benefit	\$ 16,312	\$ 32,995		\$ 16,718		\$ 23,368	\$ 23,516	

The last actuarial valuation was performed as of June 30, 2017.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Disabled Member Composition

as of June 30, 2017

	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Total Count	161	1	6	29	3	30	6	1
Average Age	55.0	58.5	45.9	52.0	47.2	44.8	44.0	66.0
Average Age at Disablement	48.7	57.1	39.4	42.9	43.6	39.1	37.8	60.5
Average Service at Retirement	15.7	15.1	11.2	10.2	10.8	10.1	10.2	3.0
Average Annual Benefit	\$ 11,817	\$ 59,938	\$ 29,122	\$ 26,616	\$ 14,980	\$ 30,213	\$ 31,790	\$ 1,050

Under Age 45

Number Members	4		1	3	1	10	3	
Average Annual Benefit	\$ 9,530		\$ 27,013	\$ 30,857	\$ 16,759	\$ 30,888	\$ 27,919	

Ages 45-49

Number Members	14		5	9	2	18	3	
Average Annual Benefit	\$ 7,978		\$ 29,543	\$ 27,110	\$ 14,091	\$ 30,273	\$ 35,660	

Ages 50-54

Number Members	44			7		2		
Average Annual Benefit	\$ 10,931			\$ 27,095		\$ 26,304		

Ages 55-59

Number Members	91	1		9				
Average Annual Benefit	\$ 12,702	\$ 59,938		\$ 23,324				

Ages 60-64

Number Members	8			1				
Average Annual Benefit	\$ 14,484			\$ 35,716				

Ages 65-69

Number Members								1
Average Annual Benefit								\$ 1,050

Ages 70-74

Number Members								
Average Annual Benefit								

Ages 75-79

Number Members								
Average Annual Benefit								

Age 80 & Over

Number Members								
Average Annual Benefit								

The last actuarial valuation was performed as of June 30, 2017.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Converted Disabled Member Composition

as of June 30, 2017

	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Total Count	541		18	45	18	67	55	
Average Age	71.0		62.0	66.3	64.6	67.3	69.7	
Average Age at Disablement	51.2		44.2	47.8	52.7	42.4	44.8	
Average Service at Retirement	11.4		11.1	10.7	14.3	11.8	16.1	
Average Annual Benefit	\$ 10,559		\$ 25,619	\$ 21,500	\$ 19,199	\$ 24,913	\$ 27,167	

Under Age 45

Number Members

Average Annual Benefit

Ages 45-49

Number Members

Average Annual Benefit

Ages 50-54

Number Members

Average Annual Benefit

Ages 55-59

Number Members

Average Annual Benefit

Ages 60-64

Number Members

Average Annual Benefit

Ages 65-69

Number Members

Average Annual Benefit

Ages 70-74

Number Members

Average Annual Benefit

Ages 75-79

Number Members

Average Annual Benefit

Age 80 & Over

Number Members

Average Annual Benefit

The last actuarial valuation was performed as of June 30, 2017.

Converted disabilities include those members who are disabled, but have reached normal retirement age and are no longer recorded as disabled by MPERA.

This page intentionally left blank

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Retirees and Beneficiaries

Added to and Removed from Rolls

Year Ended	Added		Removed		End of Year ⁴	Benefits ²	Average Annual Benefit ³	% Benefit Increase
	No.	Annual Benefits ¹	No.	Annual Benefits ¹				
PERS-DBRP								
June 30, 2017	1,312	\$ 31,596,750	840	\$ 9,548,655	21,805	\$ 366,354,719	\$ 17,450	-3.04%
June 30, 2016	1,318	19,195,422	666	4,630,708	21,333	344,103,875	17,997	6.21%
June 30, 2015	1,255	18,427,160	655	4,854,984	20,681	319,501,818	16,945	4.41%
June 30, 2014	1,226	15,851,006	596	4,376,529	20,081	296,183,076	16,230	4.21%
June 30, 2013	1,261	16,288,261	548	4,058,927	19,451	274,021,249	15,574	18.19%
June 30, 2012	1,220	16,262,411	605	4,117,597	18,738	252,762,398	13,177	-3.29%
June 30, 2011	1,169	15,407,952	558	3,428,851	18,123	231,222,603	13,625	8.35%
June 30, 2010	905	11,510,903	468	2,803,801	17,512	212,186,085	12,575	5.81%
June 30, 2009	953	11,308,027	505	2,147,526	17,075	196,401,589	11,884	5.81%
June 30, 2008	1009	10,833,593	519	1,912,403	16,627	180,815,238	11,231	5.97%
JRS								
June 30, 2017	5	261,004	5	119,595	68	3,554,335	52,372	-3.51%
June 30, 2016	5	319,842	4	71,398	68	3,416,023	54,279	8.33%
June 30, 2015	2	71,326	2	14,415	67	3,040,988	50,105	3.91%
June 30, 2014	3	171,535	1	65,592	67	3,022,512	48,221	2.31%
June 30, 2013	10	251,141	1	19,919	65	2,552,787	47,131	10.29%
June 30, 2012	0	94,034	2	36,651	56	2,344,170	42,733	3.57%
June 30, 2011	5	127,602	2	4,668	58	2,239,603	41,259	5.07%
June 30, 2010	1	129,486	1	4,668	55	2,118,121	39,269	6.06%
June 30, 2009	6	159,326	1	17,466	55	1,971,931	37,027	1.19%
June 30, 2008			1	9,691	50	1,828,680	36,590	5.35%
HPORS								
June 30, 2017	23	673,416	21	171,465	331	11,036,794	33,109	-3.17%
June 30, 2016	13	371,167	11	61,783	329	10,482,414	34,193	4.55%
June 30, 2015	14	366,606	9	57,749	327	9,932,134	32,707	3.31%
June 30, 2014	17	408,119	5	32,946	322	9,344,441	31,658	4.16%
June 30, 2013	12	401,650	7	58,709	310	8,708,925	30,394	15.35%
June 30, 2012	5	197,432	2	18,356	305	8,223,433	26,349	-0.98%
June 30, 2011	12	294,280	5	75,122	302	7,865,745	26,611	7.45%
June 30, 2010	8	264,156	4	102,241	295	7,556,735	24,765	2.95%
June 30, 2009	6	220,859	5	37,537	291	7,127,383	24,057	4.51%
June 30, 2008	9	251,808	3	22,172	290	6,813,578	23,019	4.05%
SRS								
June 30, 2017	39	1,429,635	11	310,474	648	16,700,117	26,583	-1.16%
June 30, 2016	54	1,008,978	11	114,283	620	15,476,437	26,896	3.50%
June 30, 2015	50	791,307	6	60,636	577	14,019,543	25,986	2.12%
June 30, 2014	35	643,063	5	26,764	533	12,732,103	25,446	2.07%
June 30, 2013	38	723,040	4	44,835	503	11,582,729	24,931	15.27%
June 30, 2012	32	599,749	4	20,148	469	10,379,424	21,628	-5.97%
June 30, 2011	30	701,530	4	50,832	441	9,237,286	23,001	9.36%
June 30, 2010	17	379,084	8	82,426	415	8,276,901	21,033	7.93%
June 30, 2009	14	330,201	2	27,745	406	7,858,026	19,487	0.58%
June 30, 2008	16	312,489	6	48,025	394	7,242,828	19,375	6.74%

¹These amounts are based on annual benefit totals which include lump sum death benefit payouts.

²Includes death benefit payments for active members.

³Based on June monthly benefit totals.

⁴For HPORS and MPORS, End of Year does not include DROP.

Due to MPERA's new computer system, beginning with FY2017, the amounts are calculated differently.

The last actuarial valuation was performed as of June 30, 2017.

ACTUARIAL SECTION

Year Ended	Added		Removed		End of Year ⁴	Benefits ²	Average Annual Benefit ³	% Benefit Increase
	No.	Annual Benefits ¹	No.	Annual Benefits ¹				
GWPORS								
June 30, 2017	31	\$ 745,929	5	\$ 135,340	276	\$ 5,809,910	\$ 22,199	-2.77%
June 30, 2016	23	338,386	4	22,118	250	5,068,318	22,832	-2.02%
June 30, 2015	35	419,935	7	53,794	231	4,550,326	23,302	4.66%
June 30, 2014	26	283,359	3	21,306	203	3,979,269	22,265	1.49%
June 30, 2013	22	233,226	5	90,813	180	3,575,042	21,938	17.62%
June 30, 2012	19	235,722	1	22,860	163	3,202,597	18,652	-11.04%
June 30, 2011	12	146,846	3	16,761	145	2,863,434	20,967	4.61%
June 30, 2010	10	112,042	1	10,583	136	2,621,834	20,044	1.24%
June 30, 2009	9	157,614	2	13,612	127	2,520,735	19,799	2.52%
June 30, 2008	10	128,947	1	7,618	120	2,270,902	19,312	0.34%
MPORS								
June 30, 2017	32	1,551,779	9	420,615	791	23,474,602	30,215	-0.47%
June 30, 2016	39	834,722	15	80,036	768	21,960,690	30,357	3.10%
June 30, 2015	43	877,021	15	125,552	744	20,560,131	29,443	2.08%
June 30, 2014	19	462,040	13	109,127	716	19,449,550	28,842	4.50%
June 30, 2013	40	883,350	13	153,027	710	18,462,730	27,601	8.10%
June 30, 2012	17	515,137	10	98,603	683	17,354,933	25,533	-1.02%
June 30, 2011	22	539,164	16	145,734	676	17,013,369	25,797	6.34%
June 30, 2010	34	559,746	10	77,537	670	15,727,576	24,260	2.81%
June 30, 2009	17	456,299	7	44,723	646	15,008,432	23,597	3.90%
June 30, 2008	51	727,211	7	56,531	636	13,706,635	22,711	2.41%
FURS								
June 30, 2017	23	1,614,614	14	488,405	630	22,335,636	36,389	0.95%
June 30, 2016	26	761,390	14	95,141	621	20,896,200	36,047	1.38%
June 30, 2015	27	621,742	13	95,699	609	19,745,267	35,558	6.60%
June 30, 2014	26	705,387	18	101,960	595	18,871,929	33,356	3.87%
June 30, 2013	25	620,602	9	55,278	587	17,670,032	32,112	12.43%
June 30, 2012	21	696,096	2	9,065	571	16,519,146	28,563	-3.33%
June 30, 2011	19	624,623	13	172,927	552	15,605,138	29,546	8.17%
June 30, 2010	17	501,398	13	111,575	546	14,597,875	27,314	4.17%
June 30, 2009	16	510,583	9	97,630	542	13,986,547	26,221	4.77%
June 30, 2008	24	664,186	8	64,052	535	13,353,419	25,026	5.88%
VFCA								
June 30, 2017	51	319,633	38	67,063	1,438	2,858,443	2,012	0.50%
June 30, 2016	92	268,898	38	41,145	1,425	2,623,011	2,002	13.55%
June 30, 2015	78	83,963	39	38,318	1,371	2,368,553	1,763	0.69%
June 30, 2014	77	81,473	30	26,715	1,332	2,280,876	1,751	0.16%
June 30, 2013	75	129,518	32	24,135	1,285	2,819,162	1,748	11.10%
June 30, 2012	87	104,535	28	19,440	1,242	2,046,233	1,574	-4.75%
June 30, 2011	76	84,810	42	32,985	1,183	1,938,060	1,652	1.52%
June 30, 2010	82	89,933	36	33,825	1,149	1,856,833	1,627	0.38%
June 30, 2009	61	67,748	40	29,115	1,103	1,779,708	1,621	0.82%
June 30, 2008	74	75,645	30	26,220	1,082	1,716,773	1,608	1.30%

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Solvency Test

(in thousands)

System	Valuation Date	Aggregate Accrued Liabilities for			Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
		1	2	3		1	2	3
		Active Member Accounts ¹	Retirees and Beneficiaries	Active Members (ER Financed Portion)				
PERS-DBRP	06/30/17	\$ 882,835	\$ 4,423,430	\$ 2,272,120	\$ 5,514,027	100%	100%	9%
	06/30/16	842,772	3,955,400	1,989,751	5,247,685	100	100	23
	06/30/15	841,907	3,687,451	1,940,945	4,926,516	100	100	20
	06/30/14	838,145	3,436,212	1,903,147	4,595,805	100	100	17
	06/30/13	828,657	2,790,430	1,541,864	4,139,921	100	100	34
	06/30/12	837,663	2,958,076	1,865,543	3,816,920	100	100	1
	06/30/11	840,762	2,728,687	1,840,696	3,800,479	100	100	13
	06/30/10	848,756	2,481,534	1,911,529	3,889,890	100	100	29
	06/30/09	828,390	2,272,582	1,691,847	4,002,212	100	100	53
	06/30/08	783,801	2,232,148	1,488,794	4,065,307	100	100	70
JRS	06/30/17	4,372	38,351	15,380	97,066	100	100	353
	06/30/16	4,494	35,673	14,587	91,152	100	100	350
	06/30/15	4,667	33,210	14,024	84,934	100	100	336
	06/30/14	4,623	32,776	13,201	78,463	100	100	311
	06/30/13	4,733	31,709	12,795	70,323	100	100	265
	06/30/12	5,575	24,631	15,985	63,195	100	100	206
	06/30/11	5,115	24,692	13,607	61,274	100	100	231
	06/30/10	5,207	22,279	15,027	61,277	100	100	225
	06/30/09	4,790	21,625	15,433	61,929	100	100	230
	06/30/08	4,431	20,682	14,323	62,040	100	100	258
HPORS	06/30/17	12,288	163,885	43,297	141,236	100	79	0
	06/30/16	12,535	146,267	44,524	133,869	100	83	0
	06/30/15	12,102	133,628	47,252	125,676	100	85	0
	06/30/14	11,507	126,478	45,416	117,226	100	84	0
	06/30/13	11,339	117,914	46,341	105,736	100	80	0
	06/30/12	11,455	110,876	45,493	96,655	100	77	0
	06/30/11	10,795	107,035	37,911	95,274	100	79	0
	06/30/10	10,369	102,450	38,359	97,204	100	85	0
	06/30/09	9,571	97,087	31,157	99,652	100	93	0
	06/30/08	8,796	96,395	29,492	101,500	100	96	0
SRS	06/30/17	51,998	239,648	119,741	332,169	100	100	34
	06/30/16	47,826	213,000	112,321	310,510	100	100	44
	06/30/15	46,500	193,359	109,054	288,269	100	100	44
	06/30/14	45,595	176,538	103,944	264,945	100	100	41
	06/30/13	43,007	164,339	96,838	235,310	100	100	29
	06/30/12	41,694	149,254	93,612	211,535	100	100	22
	06/30/11	40,737	135,189	90,579	203,689	100	100	31
	06/30/10	39,841	117,422	89,470	200,739	100	100	49
	06/30/09	36,225	106,352	81,316	200,690	100	100	71
	06/30/08	31,220	102,967	70,362	199,453	100	100	93

¹Active Member Accounts include regular and additional contributions with interest, and excludes all accounts of inactive members.

The last actuarial valuation was performed as of June 30, 2017.

ACTUARIAL SECTION

System	Valuation Date	Aggregate Accrued Liabilities for			Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
		1	2	3		1	2	3
		Active Member Accounts ¹	Retirees and Beneficiaries	Active Members (ER Financed Portion)				
GWPORS	06/30/17	\$ 39,205	\$ 77,897	\$ 100,540	\$ 176,311	100%	100%	59%
	06/30/16	36,111	65,912	88,984	160,555	100	100	66
	06/30/15	34,396	58,648	79,116	145,314	100	100	66
	06/30/14	32,779	50,062	71,753	129,429	100	100	65
	06/30/13	31,918	43,498	64,569	112,100	100	100	57
	06/30/12	29,975	39,856	59,095	97,691	100	100	47
	06/30/11	28,468	35,166	56,247	90,437	100	100	48
	06/30/10	26,592	32,383	54,880	85,151	100	100	48
	06/30/09	23,800	29,536	38,820	81,177	100	100	72
06/30/08	20,574	29,647	33,228	77,511	100	100	82	
MPORS	06/30/17	42,364	346,374	173,832	386,259	100	99	0
	06/30/16	38,543	308,635	171,768	356,985	100	100	6
	06/30/15	37,193	297,235	162,758	328,025	100	98	0
	06/30/14	36,950	276,306	161,052	298,722	100	95	0
	06/30/13	34,778	267,540	147,725	262,678	100	85	0
	06/30/12	34,687	248,260	144,310	234,025	100	80	0
	06/30/11	32,906	239,176	129,298	221,669	100	79	0
	06/30/10	30,986	229,057	120,350	217,545	100	81	0
	06/30/09	28,693	212,169	104,399	214,345	100	88	0
06/30/08	27,165	207,233	93,158	212,312	100	89	0	
FURS	06/30/17	44,351	331,701	146,236	397,633	100	100	15
	06/30/16	43,046	292,423	131,203	365,259	100	100	23
	06/30/15	41,278	274,505	126,051	333,629	100	100	14
	06/30/14	38,805	260,538	119,670	300,949	100	100	1
	06/30/13	36,441	248,723	111,606	263,483	100	91	0
	06/30/12	34,790	235,553	106,868	233,121	100	84	0
	06/30/11	33,089	219,842	102,257	219,959	100	85	0
	06/30/10	31,422	207,715	96,326	213,755	100	88	0
	06/30/09	28,561	194,949	82,725	209,775	100	93	0
06/30/08	25,482	187,999	73,737	206,127	100	96	0	
VFCA	06/30/17		24,509	21,363	36,955	N/A	100	58
	06/30/16		22,884	21,126	35,302	N/A	100	59
	06/30/15		22,161	22,157	33,405	N/A	100	51
	06/30/14		18,888	19,088	31,281	N/A	100	65
	06/30/13		18,612	19,218	28,294	N/A	100	50
	06/30/12		17,465	18,681	26,531	N/A	100	49
	06/30/11		16,483	18,712	26,183	N/A	100	52
	06/30/10		15,846	18,665	26,575	N/A	100	57
	06/30/09		14,498	19,050	27,239	N/A	100	67
06/30/08		20,129	12,606	27,544	N/A	100	59	

Active member accounts are not applicable. Members are unpaid volunteers.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Solvency Test

(in thousands)¹

System	Valuation Date ²	Aggregate Accrued Liabilities for				Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
		1	2	3	1		2	3	
		Active Member Accounts	Disabled Members	Active Members (ER Financed Portion)	Active Members				
PERS-DCRP	06/30/2017	N/A	\$ 215	\$ 3,752	\$ 3,457	100%	100%	86%	
DISABILITY OPEB	06/30/2016	N/A	401	3,190	3,118	100	100	85	
	06/30/2015	N/A	405	2,830	2,781	100	100	84	
	06/30/2013	N/A	294	2,421	2,184	100	100	78	

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

²The actuarial valuation for the PERS-DCRP Disability OPEB is performed on an annual basis. There were two years between the first two valuations due to the timing of the first valuation. The most recent actuarial valuation is as of June 30, 2017, with the next valuation to be performed for fiscal year ending June 30, 2018.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Funding Progress for PERS- OPEB DCRP Disability OPEB¹

(in thousands)

System	Actuarial Valuation Date ²	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio %	Covered Payroll	UAAL as a Percentage of Covered Payroll
PERS-DCRP							
DISABILITY OPEB	06/30/2017	\$ 3,457	\$3,967	\$510	87.14%	\$129,158	0.39%
	06/30/2016	3,118	3,591	473	86.83	114,883	0.41
	06/30/2015	2,781	3,235	454	85.97	113,750	0.40
	06/30/2013	2,184	2,715	531	80.44	90,128	0.59

¹This schedule is intended to show 10 years of information. Additional years will be displayed as they become available.

²The actuarial valuation for the PERS-DCRP Disability OPEB is performed on an annual basis. There were two years between the first two valuations due to the timing of the first valuation. The most recent actuarial valuation being as of June 30, 2017, with the next valuation to be completed for fiscal year ending June 30, 2018.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Funding Progress

(in thousands)

System	Actuarial Valuation Date	Actuarial Value of Assets ¹ (a)	Actuarial Accrued Liability (AAL) -Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio % (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
PERS-DBRP	06/30/17	\$ 5,514,027	\$ 7,578,385	\$ 2,064,358	72.76%	\$ 1,232,067	167.55%
	06/30/16	5,247,685	6,787,923	1,540,238	77.31	1,185,646	129.91
	06/30/15	4,926,516	6,470,303	1,543,787	76.14	1,154,867	133.68
	06/30/14	4,595,805	6,177,505	1,581,700	74.40	1,129,109	140.08
	06/30/13	4,139,921	5,160,951	1,021,030	80.22	1,104,000	92.48
	06/30/12	3,816,920	5,661,281	1,844,361	67.42	1,081,288	170.57
	06/30/11	3,800,479	5,410,144	1,609,665	70.25	1,071,376	150.24
	06/30/10	3,889,890	5,241,819	1,351,929	74.21	1,083,780	124.74
	06/30/09	4,002,212	4,792,819	790,607	83.50	1,043,215	75.79
06/30/08	4,065,307	4,504,743	439,436	90.25	995,113	44.16	
JRS	06/30/17	97,066	58,104	(38,962)	167.06	6,974	(558.68)
	06/30/16	91,152	54,754	(36,398)	166.48	6,920	(525.99)
	06/30/15	84,934	51,901	(33,033)	163.65	6,525	(506.26)
	06/30/14	78,463	50,600	(27,863)	155.07	6,355	(438.47)
	06/30/13	70,323	49,236	(21,087)	142.82	6,276	(336.00)
	06/30/12	63,195	46,190	(17,005)	136.81	6,193	(274.60)
	06/30/11	61,274	43,414	(17,860)	141.13	5,645	(316.38)
	06/30/10	61,277	42,513	(18,765)	144.13	5,687	(329.95)
	06/30/09	61,929	41,848	(20,081)	147.98	5,110	(392.99)
06/30/08	62,040	39,435	(22,605)	157.32	5,096	(443.58)	
HPORS	06/30/17	141,236	219,470	78,234	64.35	14,779	529.36
	06/30/16	133,869	203,326	69,457	65.84	15,276	454.68
	06/30/15	125,676	192,983	67,307	65.12	14,549	462.62
	06/30/14	117,226	183,400	66,174	63.92	14,149	467.69
	06/30/13	105,736	175,594	69,858	60.22	13,484	518.08
	06/30/12	96,655	167,824	71,169	57.59	13,618	522.62
	06/30/11	95,274	155,742	60,468	61.17	12,472	484.83
	06/30/10	97,204	151,177	53,973	64.30	13,036	414.03
	06/30/09	99,652	137,815	38,163	72.31	11,425	334.03
06/30/08	101,500	134,683	33,183	75.36	10,866	305.38	
SRS	06/30/17	332,169	411,387	79,218	80.74	74,581	106.22
	06/30/16	310,510	373,146	62,636	83.21	70,593	88.73
	06/30/15	288,269	348,912	60,643	82.62	68,046	89.12
	06/30/14	264,945	326,077	61,132	81.25	64,673	94.53
	06/30/13	235,310	304,185	68,875	77.36	61,467	112.05
	06/30/12	211,535	284,559	73,024	74.34	59,583	122.56
	06/30/11	203,689	266,506	62,817	76.43	57,041	110.12
	06/30/10	200,739	246,734	45,995	81.36	54,681	84.11
	06/30/09	200,690	223,893	23,203	89.64	51,457	45.09
06/30/08	199,453	204,549	5,096	97.51	47,196	10.80	

Analysis of the dollar amounts of plan net assets, actuarial accrued liability, and unfunded actuarial accrued liability in isolation can be misleading. Expressing plan net assets as a percentage of the actuarial accrued liability provides one indication of the plan's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the plan is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the plan.

¹Refer to the "Notes to the Required Supplementary Information" for the Actuarial Asset Valuation Method (Page 104).

ACTUARIAL SECTION

System	Actuarial Valuation Date	Actuarial Value of Assets ¹ (a)	Actuarial Accrued Liability (AAL) -Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio % (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
GWPORS	06/30/17	\$ 176,311	\$ 217,642	\$ 41,331	81.01%	\$ 49,381	83.70%
	06/30/16	160,555	191,007	30,452	84.06	47,108	64.64
	06/30/15	145,314	172,160	26,846	84.41	44,885	59.81
	06/30/14	129,429	154,595	25,166	83.72	41,637	60.44
	06/30/13	112,100	139,985	27,885	80.08	39,471	70.65
	06/30/12	97,691	128,927	31,236	75.77	38,317	81.52
	06/30/11	90,437	119,881	29,444	75.44	38,306	76.87
	06/30/10	85,151	113,855	28,704	74.79	39,436	72.79
	06/30/09	81,177	92,155	10,978	88.09	36,023	30.48
	06/30/08	77,511	83,449	5,938	92.88	32,365	18.35
MPORS	06/30/17	386,259	562,570	176,311	68.66	48,604	362.75
	06/30/16	356,985	518,946	161,961	68.79	47,234	342.90
	06/30/15	328,025	497,186	169,161	65.98	45,736	369.87
	06/30/14	298,722	474,308	175,586	62.98	44,427	395.23
	06/30/13	262,678	450,043	187,365	58.37	42,796	437.81
	06/30/12	234,025	427,257	193,232	54.77	41,745	462.89
	06/30/11	221,669	401,381	179,712	55.23	39,470	455.30
	06/30/10	217,545	380,393	162,848	57.19	37,220	437.52
	06/30/09	214,345	345,261	130,916	62.08	34,687	377.42
	06/30/08	212,312	327,556	115,244	64.82	32,181	358.11
FURS	06/30/17	397,633	522,288	124,655	76.13	45,208	275.74
	06/30/16	365,259	466,671	101,412	78.27	43,119	235.19
	06/30/15	333,629	441,834	108,205	75.51	41,627	259.94
	06/30/14	300,949	419,013	118,064	71.82	39,892	295.96
	06/30/13	263,483	396,769	133,286	66.41	37,963	351.10
	06/30/12	233,121	377,211	144,090	61.80	36,177	398.30
	06/30/11	219,959	355,188	135,229	61.93	34,852	388.01
	06/30/10	213,755	335,463	121,708	63.72	33,339	365.06
	06/30/09	209,775	306,236	96,460	68.50	30,160	319.83
	06/30/08	206,127	287,218	81,091	71.77	29,158	278.11
VFCA	06/30/17	36,955	45,871	8,917	80.56	N/A	N/A
	06/30/16	35,302	44,010	8,708	80.21	N/A	N/A
	06/30/15	33,405	44,318	10,913	75.38	N/A	N/A
	06/30/14	31,281	37,975	6,694	82.37	N/A	N/A
	06/30/13	28,294	37,830	9,536	74.79	N/A	N/A
	06/30/12	26,531	36,146	9,615	73.40	N/A	N/A
	06/30/11	26,183	35,195	9,012	74.39	N/A	N/A
	06/30/10	26,576	34,512	7,936	77.01	N/A	N/A
	06/30/09	27,226	33,548	6,322	81.16	N/A	N/A
	06/30/08	27,544	32,735	5,191	84.14	N/A	N/A

Covered payroll is not applicable to VFCA because members are unpaid volunteers.

Trends in the unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the plan's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the plan.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Summary of Actuarial (Gain)/Loss by Source

(in thousands)

	<u>PERS DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Investment (Gain) or Loss	\$ (17,159.0)	\$ (428.9)	\$ (663.8)	\$ (1,492.4)
Liability (Gain) or Loss				
Salary (Gain) or Loss	48,881.5	(496.9)	(2,547.8)	(2,042.7)
Retirement (Gain) or Loss	4,805.1	(386.8)	5,111.7	2,365.5
Disability (Gain) or Loss	1,275.5	50.6	(479.8)	88.2
Death In-Service (Gain) or Loss	(657.2)	(47.6)	29.4	(81.9)
Withdrawal (Gain) or Loss	66,282.2	(30.6)	470.4	(388.5)
Death after Retirement (Gain) or Loss	(4,326.2)	(1,188.4)	(730.7)	(35.0)
New Participant / Data Adjustment (Gain) or Loss	25,663.4	(141.4)	(1,156.8)	3,978.2
Other (Gain) or Loss	<u>11,735.8</u>	<u>100.0</u>	<u>120.6</u>	<u>(1,395.8)</u>
Total Actuarial (Gain) or Loss	\$ 136,501.1	\$ (2,570.0)	\$ 153.2	\$ 995.6
Changes in Actuarial Assumptions	365,868.8	3,575.2	7,880.6	14,306.0
Changes in Benefits				(1,332.9)
Total (Gain) or Loss				
Including Change in Assumptions / Plan	<u>\$ 502,369.9</u>	<u>\$ 1,005.2</u>	<u>\$ 8,033.8</u>	<u>\$ 13,968.7</u>
	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Investment (Gain) or Loss	\$ (645.3)	\$ (922.1)	\$ (909.7)	\$ (48.3)
Liability (Gain) or Loss				
Salary (Gain) or Loss	2,355.0	8,577.4	4,505.7	
Retirement (Gain) or Loss	(597.5)	(12,923.2)	409.0	(188.1)
Disability (Gain) or Loss	324.6	(226.2)	(558.2)	9.3
Death In-Service (Gain) or Loss	(16.8)	(2,027.9)	346.7	29.4
Withdrawal (Gain) or Loss	1,481.4	1,304.6	843.1	(108.5)
Death after Retirement (Gain) or Loss	(491.0)	(42.8)	(2,920.4)	(690.1)
New Participant / Data Adjustment (Gain) or Loss	2,445.1	4,515.1	10,423.2	79.3
Other (Gain) or Loss	<u>496.5</u>	<u>1,308.5</u>	<u>244.0</u>	<u>249.5</u>
Total Actuarial (Gain) or Loss	\$ 5,352.0	\$ (436.6)	\$ 12,383.4	\$ (667.5)
Changes in Actuarial Assumptions	5,308.2	16,473.3	17,702.1	2,124.4
Total (Gain) or Loss				
Including Change in Assumptions / Plan	<u>\$ 10,660.2</u>	<u>\$ 16,036.7</u>	<u>\$ 30,085.5</u>	<u>\$ 1,456.9</u>

The last actuarial valuation was performed as of June 30, 2017.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Summary of Actuarial (Gain)/Loss by Source

(in thousands)

	<u>PERS-DCRP Disability OPEB</u>
Investment (Gain) or Loss	\$114.5
Liability (Gain) or Losses:	
Salary (Gain) or Loss	92.9
Retirement (Gain) or Loss	(5.5)
Disability (Gain) or Loss	(251.5)
Death In-Service (Gain) or Loss	4.6
Withdrawal (Gain) or Loss	2.5
Death after Retirement (Gain) or Loss	(160.4)
New Participant /Data Adjustment (Gain) or Loss	67.2
Other (Gain) or Loss	<u>78.1</u>
Total Actuarial (Gain) or Loss	\$ (57.6)
Plan Changes	73.7
Total (Gain) or Loss	
Including Changes in Assumptions / Plan	<u>\$ 16.1</u>

The last actuarial valuation was performed as of June 30, 2017.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Summary of Defined Benefit Retirement Plans' Provisions as of June 30, 2017

Provisions and terms common to all PERB's defined benefit retirement plans, except for the Volunteer Firefighters' Compensation Act (VFCA).

Service credit	<ul style="list-style-type: none"> • Service credit is used to determine the amount of a member's retirement benefit. • One month of service credit is earned for each month where the member is paid for 160 hours. This includes certain transferred and purchased service.
Membership service	<ul style="list-style-type: none"> • Membership service is used to determine eligibility for vesting, retirement or other benefits. • One month of membership service is earned for any month member contributions are made, regardless of the number of hours worked. • Eligible members in all systems may purchase service that counts toward membership service. • Additionally, eligible active and inactive Sheriffs' Retirement System (SRS) members may purchase 1 for 5 (additional) service that will count as membership service.
Contributions	<ul style="list-style-type: none"> • Member contributions are made through an "employer pick-up" arrangement which results in deferral of taxes on the contributions.
Compensation	<ul style="list-style-type: none"> • Compensation generally means all remuneration paid, excluding certain allowances, benefits, and lump sum payments. Compensation is specifically defined in law and differs amongst the systems. • Bonuses paid on or after July 1, 2013 to any member will not be treated as compensation for retirement purposes. No member or employer contributions will be paid on bonuses.
Withdrawal of employee contributions	<ul style="list-style-type: none"> • A member is eligible for a withdrawal of their contributions when they terminate service and are either not eligible for or have not taken a retirement benefit. • The member receives the accumulated member contributions, which consists of member contributions and regular interest. • Upon receipt of a refund of accumulated contributions a member's vested right to a monthly benefit is forfeited.
Member contributions interest credited (regular interest)	<ul style="list-style-type: none"> • Interest is credited to member accounts at the rates determined by the Board. • The current interest rate credited to member accounts is 0.25%.

Provisions and terms common to all Plans (continued)

Changes since last valuation

Working Retiree Limitations - for HPORS, GWPORS, FURS and MPORS

Applies to retirement system members who return **on or after** July 1, 2017 to covered employment in the system from which they retired.

- Members who return for **less than 480 hours** in a **calendar** year:
 - may not become an active member in the system; **and**
 - are subject to a \$1 reduction in their retirement benefit for each \$3 earned in excess of \$5,000 in the calendar year.
- Members who return for **480 or more hours** in a **calendar** year;
 - must become an active member of the system;
 - will stop receiving a retirement benefit from the system; **and**
 - will be eligible for a second retirement benefit if they earn 5 or more years of service credit through their second employment.
- Employee, employer and state contributions apply as follows:
 - Employer contributions and state contributions (if any) must be paid on all working retirees;
 - Employee contributions must be paid on working retirees who return to covered employment for **480 or more hours** in a **calendar** year.
- NOTE: These limits currently apply to SRS, and PERS has its own limits.

Second Retirement Benefit - for HPORS, SRS, GWPORS, FURS, and MPORS

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 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 member's rehire date; **and**

ACTUARIAL SECTION

Provisions and terms common to all Plans (continued)

Second Retirement Benefit (continued)

- 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.

Refunds

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

Interest credited to member accounts

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

Lump-sum payouts

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

This page intentionally left blank

ACTUARIAL SECTION

Public Employees' Retirement System-DBRP

Type of Plan	<ul style="list-style-type: none"> • Multiple-employer cost sharing
Membership eligibility	<ul style="list-style-type: none"> • Employees of the State and local governments that have contracted for PERS coverage. • Certain employees of the university system and school districts, not covered by a separate retirement system governed by Title 19 of Montana Code Annotated.
Member contributions	<ul style="list-style-type: none"> • 7.9% of member's compensation. • Temporary 1% increase for all members effective July 1, 2011. • Reduced to 6.9% when amortization period drops below 25 years and remains below 25 years following the termination of the temporary 1% increase and the additional employer contribution rate.
Employer contributions	<ul style="list-style-type: none"> • 8.47% of each member's compensation for state and university. Reduced when amortization period drops below 25 years and remains below 25 years following the termination of the additional employer contribution rate and the member's temporary 1% increase. • 8.37% of each member's compensation for local governments • 8.1% of each member's compensation for school districts • Contribution going into the PERS Defined Benefit Plan is reduced by 0.04% of compensation paid into the Educational Fund. • Employers who hire PERS retirees who work less than 960 hours in the calendar year in a PERS-covered position, but do not become active members, contribute the employer's contribution rate on the working retiree's compensation.
State contributions	<ul style="list-style-type: none"> • 0.1% of compensation from the State for local governments • 0.37% of compensation from State for School Districts • Contributions are also made to the system from the Coal Tax fund.
Compensation period used in benefit calculation	<ul style="list-style-type: none"> • HAC = Highest Average Compensation • Hired prior to July 1, 2011: HAC is average of the highest 36 consecutive months (or shorter period of total service) of compensation paid by member. • Hired on or after July 1, 2011: HAC is average of the highest 60 consecutive months (or shorter period of total service) of compensation paid to member. • Hired on or after July 1, 2013: 110% annual cap on compensation considered as part of a member's HAC.

ACTUARIAL SECTION

Service retirement eligibility	<p>Members hired prior to July 1, 2011:</p> <ul style="list-style-type: none"> • Age 60, 5 years membership service • Age 65, regardless of membership service • Any age, 30 years of membership service <p>Members hired on or after July 1, 2011:</p> <ul style="list-style-type: none"> • Age 65, 5 years of membership service • Age 70, regardless of service
Service retirement benefit formula	<p>Members hired prior to July 1, 2011:</p> <ul style="list-style-type: none"> • Less than 25 years of membership service: 1.785% of HAC x years of service credit • 25 years or more of membership service: 2% of HAC x years of service credit • OR, if greater than either of the above: the actuarial equivalent of 2 times the member's regular contributions and interest plus the actuarial equivalent of any additional contributions and interest. <p>Members hired on or after July 1, 2011:</p> <ul style="list-style-type: none"> • Less than 10 years of membership service: 1.5% of HAC x years of service credit • Between 10 and 30 years of membership service: 1.785% of HAC x years of service credit • 30 years or more of membership service: 2% of HAC x years of service credit • OR, if greater than any of the above: the actuarial equivalent of 2 times the member's regular contributions and interest plus the actuarial equivalent of any additional contributions and interest.
Second retirement benefit	<p>Members who retire before January 1, 2016, return to PERS-covered employment, and accumulate less than 2 years of additional service credit receive:</p> <ul style="list-style-type: none"> • A refund of the member's contributions plus regular interest; • No service credit for second employment; • The same benefit amount starting the month following termination; and • The member's Guaranteed Annual Benefit Adjustment (GABA) increasing again in January immediately following the member's second retirement.

ACTUARIAL SECTION

PERS-DBRP (continued)

<p>Second retirement benefit continued</p>	<p>Members who retire before January 1, 2016 and return to PERS-covered employment for at least 2 years of additional service credit receive:</p> <ul style="list-style-type: none"> • A re-calculated retirement benefit based on provisions in effect after member's initial retirement; and • GABA on member's re-calculated benefit starting in January after receiving the re-calculated benefit for 12 months. <p>Members who retire on or after January 1, 2016, return to PERS service, and accumulate less than 5 years of additional service credit receive:</p> <ul style="list-style-type: none"> • A refund of a member's contributions plus regular interest; • No service credit for second employment; • The same benefit amount starting the month following termination; and • The member's GABA increasing again in January immediately following the member's second retirement. <p>Members who retire on or after January 1, 2016, return to PERS service, and accumulate 5 or more years of additional service credit receive:</p> <ul style="list-style-type: none"> • The same retirement benefit paid immediately prior to member's return to service; • A second retirement benefit for member's second period of service based on laws in effect upon the member's rehire date; and • The member's GABA on both benefits starting in January after receiving the original and new benefit for 12 months.
<p>Early retirement eligibility</p>	<p>Members hired prior to July 1, 2011:</p> <ul style="list-style-type: none"> • Age 50 with 5 years of membership service; or • Any age under age 60 with 25 years of membership service <p>Members hired on or after July 1, 2011:</p> <ul style="list-style-type: none"> • Age 55 with 5 years of membership service.
<p>Early retirement benefit formula</p>	<p>Members hired prior to July 1, 2011 and</p> <ul style="list-style-type: none"> • who retire prior to October 1, 2011 <p>The actuarial equivalent of the accrued portion of the service retirement benefit that would have been payable to the member commencing at age 60 or upon completion of 30 years of membership service. The service retirement benefit is reduced by a factor resulting from multiplying 0.5% (for first five years from service retirement eligibility) and 0.3% (for six to 10 years from service retirement</p>

<p>Early retirement benefit formula continued</p>	<p>eligibility) by the number of months by which the retirement date precedes the date at which the member would have attained age 60 or completed 30 years of membership service.</p> <ul style="list-style-type: none"> • who retire on or after October 1, 2011 <p>The actuarial equivalent of the accrued portion of the service retirement benefit that would have been payable to the member commencing at age 60 or upon completion of 30 years of membership service. The service retirement benefit must be reduced using actuarially equivalent factors based on the most recent valuation.</p> <p>Members hired on or after July 1, 2011:</p> <ul style="list-style-type: none"> • The actuarial equivalent of the accrued portion of the service retirement benefit that would have been payable to the member commencing at age 65. The service retirement benefit must be reduced using actuarially equivalent factors based on the most recent valuation.
<p>Disability eligibility and benefit formula</p>	<ul style="list-style-type: none"> • 5 years of membership service <p>If hired on or before February 24, 1991 and did not make a contrary election, the greater of:</p> <ul style="list-style-type: none"> • (90% of 1.785% of HAC) x service credit, or • 25% of HAC <p>If hired after February 24, 1991 and prior to July 1, 2011, or hired on or before February 24, 1991 and so elected:</p> <ul style="list-style-type: none"> • Less than 25 years of membership service: 1.785% of HAC x service credit, or • At least 25 years of membership service: 2% of HAC x service credit <p>If hired on or after July 1, 2011:</p> <ul style="list-style-type: none"> • Less than 10 years of membership: 1.5% of HAC x years of service credit • Between 10 and 30 years of membership service: 1.785% of HAC x years of service credit • 30 years or more of membership service: 2% of HAC x years of service credit
<p>Survivor's benefit eligibility</p>	<p>Member's status at time of death:</p> <ul style="list-style-type: none"> • active; • receiving disability benefit for less than six months; • continuously disabled without receiving a disability benefit; <p>or</p> <ul style="list-style-type: none"> • inactive

ACTUARIAL SECTION

PERS-DBRP (continued)

<p>Death payment benefit formula</p>	<ul style="list-style-type: none"> • Accumulated contributions + (monthly compensation x lesser of years of service credit or 6) + interest until benefit paid. • However, a survivor of an inactive member who was inactive for more than 6 months will receive only accumulated contributions and interest from the date of death until payment. • A survivor may elect to receive the payment as a non-increasing annuity that is the actuarial equivalent of the death payment amount.
<p>Survivor benefit formula</p>	<p>Members hired prior to July 1, 2011:</p> <ul style="list-style-type: none"> • The survivorship benefit payable to a vested member's survivor is: <ul style="list-style-type: none"> ○ the actuarial equivalent of the member's accrued retirement benefit at the time of death; or, • If the member dies prior to age 50 or 25 years of membership service: <ul style="list-style-type: none"> ○ the actuarial equivalent of the accrued portion of the early retirement benefit that would have been paid to the member at age 50. <p>Members hired on or after July 1, 2011:</p> <ul style="list-style-type: none"> • The survivorship benefit payable to an active vested member's survivor is: <ul style="list-style-type: none"> ○ the actuarial equivalent of the member's accrued retirement benefit at the time of death; or • If the member dies prior to age 55: <ul style="list-style-type: none"> ○ the actuarial equivalent of the accrued portion of the early retirement benefit that would have been paid to the member at age 55.
<p>Vesting eligibility and benefit</p>	<ul style="list-style-type: none"> • 5 years of membership service • Accrued normal retirement benefit, payable when eligible for retirement. • In lieu of a pension, a member may receive a refund of accumulated contributions. • Upon receipt of a refund of accumulated contributions, a member's vested right to a monthly benefit is forfeited.

Retirement benefits - Form of payment	<p>Option 1, the normal form of payment is a single life annuity with a refund of any remaining account balance to a designated beneficiary.</p> <p>Optional Benefits:</p> <ul style="list-style-type: none"> • Option 2, a life annuity and joint 100% survivor benefit, • Option 3, a life annuity and joint 50% survivor benefit, and • Option 4, a life annuity with a period certain. <p>If a retiring member selects Option 2 or 3 and the contingent annuitant predeceases or is divorced from the member, the retiree may, within 18 months of the death or divorce, choose to revert to the higher Option 1 benefit available at retirement or the retiree may select a different contingent annuitant and/or a different option.</p>
Post retirement benefit increases	<p>For retired members hired before July 1, 2013 who have been retired at least 12 months, a Guaranteed Annual Benefit Adjustment (GABA) will be made January 1 of each year equal to:</p> <ul style="list-style-type: none"> • 3% for members hired before July 1, 2007, and • 1.5% for members hired on or after July 1, 2007 and prior to July 1, 2013. <p>For retired members who were hired on or after July 1, 2013 and who have been retired at least 12 months, a Guaranteed Annual Benefit Adjustment (GABA) will be made January 1 of each year equal to:</p> <ul style="list-style-type: none"> • A maximum of 1.5% for each year PERS is funded at or above 90%, subject to a 0.1% reduction for each 2% PERS is funded below 90%; or • 0% whenever the amortization period for PERS is 40 years or more.
Changes since last valuation	<p>Working Retiree Limitations</p> <p>Effective July 1, 2017, if a PERS retiree returns as an independent contractor to what would otherwise be PERS-covered employment, the general contractor overhead costs are excluded from PERS working retiree limitations.</p>

ACTUARIAL SECTION

PERS-DCRP Disability OPEB

Type of Plan	<ul style="list-style-type: none"> Multiple-employer cost sharing OPEB
Membership eligibility	<ul style="list-style-type: none"> Employees of the State and local governments that have contracted for PERS coverage. Certain employees of the university system and school districts, not covered by a separate retirement system governed by Title 19 of Montana Code Annotated. Employees must have elected to be a member of the defined contribution retirement plan.
Member contributions	<ul style="list-style-type: none"> None
Employer contributions	<ul style="list-style-type: none"> 0.30% of each eligible member's compensation, for those employers participating in the PERS-DCRP
Compensation period used in benefit calculation	<ul style="list-style-type: none"> HAC = Highest Average Compensation Hired prior to July 1, 2011: HAC is average of the highest 36 consecutive months (or shorter period of total service) of compensation paid by member. Hired on or after July 1, 2011: HAC is average of the highest 60 consecutive months (or shorter period of total service) of compensation paid to member. Hired on or after July 1, 2013: 110% annual cap on compensation considered as part of a member's HAC
Disability eligibility and benefit	<ul style="list-style-type: none"> 5 years membership service <p>For members hired on or before June 30, 2011, or hired on or before February 24, 1991 and so elected:</p> <ul style="list-style-type: none"> Less than 25 years of membership service: 1.785% of HAC multiplied by service credit, or At least 25 years of membership service: 2% of HAC multiplied by service credit; and Benefit is payable to the later of age 65 or for five years. <p>For members hired on or after July 1, 2011:</p> <ul style="list-style-type: none"> Between 5 and 10 years of membership service: 1.5% of HAC x years of service credit; or Between 10 and 30 years of membership service: 1.785% of HAC x years of service credit; or 30 years of membership service or more: 2% of HAC x years of service credit; and Benefit is payable to age 65 for disabilities occurring prior to age 65, or no more than five years for disabilities occurring after age 65.

ACTUARIAL SECTION

Disability eligibility and benefit continued	Members cannot receive distributions from their individual defined contribution account while receiving payments from the PERS-DCRP Disability OPEB. Participants may choose to receive a distribution from their individual account instead of applying for and receiving a disability benefit.
Survivor's benefit	<ul style="list-style-type: none"> • Disability benefits cease after death of a member, and their beneficiary is entitled to death benefits only as provided from the member's vested defined contribution account balance.
Form of payment	<ul style="list-style-type: none"> • Normal form of payment is an annuity • No other forms of payment are available
Post retirement benefit increases	<ul style="list-style-type: none"> • None
Changes since last valuation	PERS members hired after July 1, 2011 have a normal retirement age of 65. PERS DC members hired after July 1, 2011 who became disabled were previously only eligible for a disability benefit until age 65. Effective July 1, 2017, these individuals will be eligible for a disability benefit until they reach age 70, thus ensuring the same 5 year time period available to PERS DC disabled members hired prior to July 1, 2011 who have a normal retirement age of 60 and are eligible for a disability benefit until age 65.

ACTUARIAL SECTION

Judges' Retirement System

Type of plan	<ul style="list-style-type: none"> • Single-employer defined benefit
Membership eligibility	<ul style="list-style-type: none"> • Judges of district courts • Justices of supreme court • Chief water judge • Associate water judge (effective July 1, 2011)
Member contributions	<ul style="list-style-type: none"> • 7% of member's compensation
Employer contributions	<ul style="list-style-type: none"> • 25.81% of each member's compensation
Compensation period used in benefit calculation	<ul style="list-style-type: none"> • Current salary or HAC = Highest Average Compensation • Hired prior to July 1, 1997, and did not elect GABA, benefits are calculated using current salary of the office from which the member retired. • Hired on or after July 1, 1997, or hired prior to July 1, 1997 and elected GABA, benefits are calculated using HAC, the average of the highest 36 consecutive months (or shorter period of total service) of compensation paid to the member. • Hired on or after July 1, 2013: 110% annual cap on compensation considered as part of a member's HAC.
Service retirement eligibility and benefit	<ul style="list-style-type: none"> • Age 60 with 5 years of membership service • First 15 years of service credit: 3⅓% per year of current salary or HAC, and • Over 15 years of service credit: 1.785% per year of current salary or HAC
Disability eligibility and benefit	<p>Non-duty disability:</p> <ul style="list-style-type: none"> • 5 years membership service • Regular disability benefit: Actuarial equivalent of the normal retirement benefit available at the time of disability. <p>Duty-related disability:</p> <ul style="list-style-type: none"> • Any amount of membership service • Duty-related disability benefit: Greater of 50% of current salary or 50% of HAC
Survivor's eligibility and benefit	<p>Duty-related death:</p> <ul style="list-style-type: none"> • Active or retired member • Member's service retirement benefit on the date of the death. <p>Non-duty-related death:</p> <ul style="list-style-type: none"> • Vested member • Refund of the member's accumulated contributions, or • Actuarial equivalent of the member's service retirement benefit on date of death.

ACTUARIAL SECTION

Survivor's eligibility and benefit continued	<ul style="list-style-type: none"> • A beneficiary may elect to receive the present value of the benefit as a single lump sum. • For retired members without a contingent annuitant, a payment will be made to the member's designated beneficiary equal to the accumulated contributions reduced by any retirement benefits already paid.
Vesting eligibility and benefit	<ul style="list-style-type: none"> • 5 years of membership service • Accrued normal retirement benefit, payable when eligible for retirement. • In lieu of a pension, a member may receive a refund of accumulated contributions. • Upon receipt of a refund of accumulated contributions, a member's vested right to a monthly benefit is forfeited.
Retirement benefits - Form of payment	<p>Option 1, the normal form of payment is a single life annuity with a refund of any remaining accumulated contributions (account balance) to a designated beneficiary.</p> <p>Optional Benefits:</p> <ul style="list-style-type: none"> • Option 2, a life annuity and joint 100% survivor benefit, • Option 3, a life annuity and joint 50% survivor benefit, and • Option 4, a life annuity with a period certain. <p>If a retiring member selects Option 2 or 3 and the contingent annuitant predeceases or is divorced from the member, the retiree may, within 18 months of the death or divorce, choose to revert to the higher Option 1 benefit available at retirement or the retiree may select a different contingent annuitant and/or a different option.</p>
Post retirement benefit increases	<ul style="list-style-type: none"> • For retired members who have been retired for at least 12 months and who were either hired after June 30, 1997 or hired prior to July 1, 1997 and elected GABA, a GABA will be made January 1 of each year equal to 3%. • For retired members who were hired prior to July 1, 1997 and did not elect GABA, the current salary of an active member in the same position is used to recalculate the monthly benefit.
Changes since last valuation	<ul style="list-style-type: none"> • None

ACTUARIAL SECTION

Highway Patrol Officers' Retirement System

Type of plan	<ul style="list-style-type: none"> • Single-employer defined benefit
Membership eligibility	<ul style="list-style-type: none"> • All members of the Montana highway patrol including supervisors and assistant supervisors
Member contributions	<ul style="list-style-type: none"> • 13% of member's compensation, not covered by GABA • 13.05% of member's compensation, covered by GABA • Effective July 1, 2014, member contributions increase 1% annually through the fiscal year ending 2017.
Employer contributions	<ul style="list-style-type: none"> • 28.15% of member's compensation
State contributions	<ul style="list-style-type: none"> • 10.18% of each member's compensation paid from the General Fund
Compensation period used in benefit calculation	<ul style="list-style-type: none"> • HAC = Highest Average Compensation • HAC is average of the highest 36 consecutive months (or shorter period of total service) of compensation paid to member. • Hired on or after July 1, 2013: 110% annual cap on compensation considered as part of a member's HAC.
Service retirement eligibility and benefit	<ul style="list-style-type: none"> • 20 years of membership service • 2.6% of HAC x years of service credit
Early retirement eligibility and benefit	<ul style="list-style-type: none"> • Hired prior to July 1, 2013: Any age with 5 years of membership service; if discontinued from service other than for cause. • Hired on or after July 1, 2013: Any age with 10 years of membership service; if discontinued from service other than for cause. • Normal retirement benefit calculated using HAC and service credit at early retirement, and reduced to the actuarial equivalent of a service retirement benefit based on a retirement age of 60.
Disability eligibility and benefit	<p>Duty-related disability:</p> <ul style="list-style-type: none"> • Any active member • Less than 20 years of membership service: 50% of HAC, or • 20 years or more of membership service: 2.6% of HAC x years of service credit <p>Regular disability:</p> <ul style="list-style-type: none"> • Any vested member • The actuarial equivalent of the normal retirement benefit based on retirement age of 60.

ACTUARIAL SECTION

Survivor's eligibility and benefit	<p>Duty-related deaths:</p> <ul style="list-style-type: none"> • Active member • A monthly survivor benefit to the surviving spouse or dependent child: 50% of HAC of the member. <p>Non-duty-related death:</p> <ul style="list-style-type: none"> • Active or inactive member • Member's spouse will receive (or, if there is no surviving spouse or after the surviving spouse dies, each dependent child for as long as they remain dependent children) will equally receive a benefit: The actuarial equivalent of the early retirement benefit. • A beneficiary may elect to receive the present value of the benefit as a single lump sum. • For retired members without a surviving spouse or dependent child, the member's designated beneficiary will receive a payment equal to the retired member's accumulated contributions reduced by any retirement benefits already paid.
Vesting eligibility and benefit	<ul style="list-style-type: none"> • Hired prior to July 1, 2013: 5 years of membership service • Hired on or after July 1, 2013: 10 years of membership service. • Accrued normal retirement benefit, payable when eligible for retirement. • In lieu of a pension, a member may receive a refund of accumulated contributions. • Upon receipt of a refund of accumulated contributions, a member's vested right to a monthly benefit is forfeited.
Retirement benefits - Form of payment	<ul style="list-style-type: none"> • The retirement benefit is paid for the retired member's life. • Upon the death of the retired member, the benefit is paid to the surviving spouse. • If there is no surviving spouse, or after the death of a surviving spouse, benefits are paid to the dependent children, if any, for as long as they remain dependent children.
Post retirement benefit increases	<ul style="list-style-type: none"> • For retired members who either became active members on or after July 1, 1997 and before July 1, 2013, or who were hired before July 1, 1997 and elected to be covered under GABA, and who have been retired at least 12 months, a GABA will be paid each year in January equal to 3%.

ACTUARIAL SECTION

Highway Patrol Officers' Retirement System (continued)

Post retirement benefit increases continued	<ul style="list-style-type: none"> For retired members who were hired prior to July 1, 1997 and did not elect GABA, the minimum monthly benefit provided is equal to 2% x service credit x the current base compensation of a probationary highway patrol officer. Such benefit may not exceed 60% of the current base compensation of a probationary highway patrol officer and the annual increase may not exceed 5% of the current benefit. For retired members who became active members on or after July 1, 2013, and who have been retired at least 36 months, a GABA will be paid each year in January equal to 1.5%. For non-GABA members who retired prior to July 1, 1991 and meet eligibility requirements, a supplemental lump sum payment will be made each year based on the increase in the Consumer Price Index.
Changes since last valuation	Effective July 1, 2017 (Reference <i>Changes since last valuation</i> on pages 179 and 180): <ul style="list-style-type: none"> Working retiree limitations Second retirement benefit

HPORS Deferred Retirement Option Plan (DROP)

Effective October 1, 2015, eligible members of the Highway Patrol Officers' Retirement System (HPORS) have the opportunity to participate in the DROP. The DROP allows active HPORS members to begin accumulating their retirement benefit, without terminating employment, for up to 60 months. If a member chooses to join the DROP, their monthly retirement benefit and their employee contributions will go into their individual DROP account.

Eligibility	<ul style="list-style-type: none"> Active members of HPORS with at least 20 years of membership service.
Period	<ul style="list-style-type: none"> Minimum of one month up to a maximum of five years. The member will not earn additional membership service or service credit.
Member contributions	<ul style="list-style-type: none"> While a member is working, the member's contributions go into the DROP Participant's DROP Account.
Member contributions interest credited	<ul style="list-style-type: none"> A member's DROP account will earn an interest rate equal to the actuarial assumed rate of return. Currently the rate of return is 7.75%. Effective July 1, 2017, rate of return is 7.65%.
Employer contributions	<ul style="list-style-type: none"> While a member is working, the member's employer and the State will pay the regular contributions to HPORS.

ACTUARIAL SECTION

Terminate employment	<ul style="list-style-type: none"> When the member terminates employment at the end of the DROP Period the member will begin receiving the HPORS monthly retirement benefit. At this time, members will receive the DROP Benefit as a lump sum payment or a direct rollover to another eligible retirement plan (as allowed by the IRS). If the member does not designate a distribution method within 60 days after termination of employment, the DROP Benefit will be paid in a taxable lump sum. If a member's HPORS-covered employment is terminated during the DROP Period, the DROP Benefit will be distributed to the member and payment of the monthly service retirement benefit will begin.
Disability	<ul style="list-style-type: none"> If the member becomes disabled during the DROP Period, the member will not be eligible for HPORS disability benefits. If the member terminates service, the service retirement benefit will be paid to the member rather than to the monthly DROP Account. The member will also be eligible to receive the DROP Benefit.
Survivor Benefit	<ul style="list-style-type: none"> If a member dies before the end of the DROP Period, the member's surviving spouse or dependent children are entitled to the member's DROP Benefit and the benefit they would have received had the member retired. If the member does not have a surviving spouse or dependent children, the member's designated beneficiary receives the balance of the member's retirement account and a lump-sum payment of the member's DROP Benefit.
Benefit	<ul style="list-style-type: none"> A member may continue to work after the DROP Period ends and remain vested in HPORS. The member will not receive the service retirement benefit or the DROP Benefit during the time the member continues working. The balance of the DROP Account will continue to earn interest. Upon termination of employment, the member will receive the initial HPORS monthly retirement benefit; an additional benefit based on the member's service credit and highest average compensation earned after DROP participation; and the DROP Benefit.
Post retirement benefit increases	<ul style="list-style-type: none"> Members do not receive the Guaranteed Annual Benefit Adjustment (GABA) on the accrued DROP retirement benefit. GABA starts January 1 immediately following retirement for initial and subsequent retirement benefits.
Changes since last valuation	<ul style="list-style-type: none"> None

ACTUARIAL SECTION

Sheriffs' Retirement System

Type of plan	<ul style="list-style-type: none"> Multiple-employer cost sharing
Membership eligibility	<ul style="list-style-type: none"> Sheriffs Investigators (effective July 1, 1993) Detention officers (effective July 1, 2005)
Member contributions	<ul style="list-style-type: none"> 9.245% of member's compensation
Employer contributions	<ul style="list-style-type: none"> 10.115% of each member's compensation Rate increased 0.29% from 9.535% to 9.825% on July 1, 2007 and then to present rate 10.115% on July 1, 2009. This 0.58% increase in contributions as of 2009 will terminate if an actuarial valuation shows that the period required to amortize the system's unfunded liabilities is less than 25 years, and the termination of those increases would not cause the amortization to increase beyond 25 years. Beginning July 1, 2013, employers of retirees who return to work in a position working less than 480 hours contribute 10.115% of the working retiree's compensation.
Compensation period used in benefit calculation	<ul style="list-style-type: none"> HAC = Highest Average Compensation Hired prior to July 1, 2011: HAC is average of the highest 36 consecutive months (or shorter period of total service) of compensation paid to member. Hired on or after July 1, 2011: HAC is average of the highest 60 consecutive months (or shorter period of total service) of compensation paid to member. Hired on or after July 1, 2013: 110% annual cap on compensation considered as part of a member's HAC.
Service retirement eligibility and benefit formula	<ul style="list-style-type: none"> 20 years of membership service 2.5% of HAC x years of service credit
Early retirement eligibility and benefit	<ul style="list-style-type: none"> Age 50 with 5 years of membership service Normal retirement benefit calculated using HAC and service credit at early retirement, and reduced to the actuarial equivalent commencing at the earliest of age 60 or the attainment of 20 years of service credit.
Disability retirement eligibility and benefit formula	<p>Non-duty-related disability:</p> <ul style="list-style-type: none"> Active or inactive vested member 5 years membership service The actuarial equivalent of the accrued normal retirement benefit available at time of disability.

<p>Disability retirement eligibility and benefit formula continued</p>	<p>Duty-related disability:</p> <ul style="list-style-type: none"> • Vested or non-vested active member • Any membership service • Less than 20 years of membership service: 50% of HAC, or • 20 years or more of membership service: 2.5% of HAC x years of service credit
<p>Survivor's eligibility and benefit formula</p>	<p>Duty-related death:</p> <ul style="list-style-type: none"> • Vested or non-vested active member • Lump-sum payment of the member's accumulated contributions; or • A monthly survivor benefit to the designated beneficiary equal to the greater of: <ul style="list-style-type: none"> ○ 50% of HAC; or ○ 2.5% of HAC for each year of service credit if over 20 years. <p>Non-duty-related death:</p> <ul style="list-style-type: none"> • Active or Inactive member • Lump-sum payment of the member's accumulated contributions; or • A monthly survivor benefit equal to 2.5% of HAC for each year of service credit actuarially reduced from age 60 or from the date when 20 years of membership service would have been completed, whichever provides the greater benefit. • A beneficiary may elect to receive the present value of the benefit as a single lump sum. • For retired members without a contingent annuitant, a payment will be made to the designated beneficiary equal to the accumulated contributions reduced by any retirement benefits already paid.
<p>Vesting eligibility and benefit</p>	<ul style="list-style-type: none"> • 5 years of membership service • Accrued normal retirement benefit, payable when eligible for retirement. • In lieu of a pension, a member may receive a refund of accumulated contributions. • Upon receipt of a refund of accumulated contributions, a member's vested right to a monthly benefit is forfeited.

ACTUARIAL SECTION

Sheriffs' Retirement System (continued)

<p>Retirement benefits - Form of payment</p>	<p>Option 1, the normal form of payment is a single life annuity with a refund of any remaining accumulated contributions (account balance) to a designated beneficiary.</p> <p>Optional Benefits:</p> <ul style="list-style-type: none"> • Option 2, a life annuity and joint 100% survivor benefit, • Option 3, a life annuity and joint 50% survivor benefit, and • Option 4, a life annuity with a period certain. <p>If a retiring member selects Option 2 or 3 and the contingent annuitant predeceases or is divorced from the member, the retiree may, with 18 months of the death or divorce, choose to revert to the higher Option 1 benefit available at retirement or the retiree may select a different contingent annuitant and/or a different option.</p>
<p>Post retirement benefit increases</p>	<p>For retired members who have been retired at least 12 months, a Guaranteed Annual Benefit Adjustment (GABA) will be made each year equal to:</p> <ul style="list-style-type: none"> • 3% for members hired before July 1, 2007, and • 1.5% for members hired on or after July 1, 2007
<p>Changes since last valuation</p>	<p>Effective July 1, 2017, increase in SRS employee and employer contributions:</p> <ul style="list-style-type: none"> • SRS employee contributions increase 1.25%, from 9.245% to 10.495% of the member's compensation. • SRS employer additional contributions increase 3%, from 0.58% to 3.58%, for a total employer contribution rate of 13.115%. • SRS employee contributions will return to 9.245% and SRS employer contributions will return to 9.535% when reducing the contribution and terminating the additional employer contributions will not cause the amortization period to exceed 25 years. <p>Effective July 1, 2017, Second Retirement Benefit. (Reference <i>Changes since last valuation</i> on pages 179 and 180).</p>

This page intentionally left blank

ACTUARIAL SECTION

Game Wardens' and Peace Officers' Retirement System

Type of plan	<ul style="list-style-type: none"> Multiple-employer cost sharing
Membership eligibility	<ul style="list-style-type: none"> Game wardens Warden supervisor State peace officers
Member contributions	<ul style="list-style-type: none"> 10.56% of member's compensation
Employer contributions	<ul style="list-style-type: none"> 9.0% of each member's compensation
Compensation period used in benefit calculation	<ul style="list-style-type: none"> HAC = Highest Average Compensation Hired prior to July 1, 2011: HAC is average of the highest 36 consecutive months (or shorter period of total service) of compensation paid to member. Hired on or after July 1, 2011: HAC is average of the highest 60 consecutive months (or shorter period of total service) of compensation paid to member. Hired on or after July 1, 2013: 110% annual cap on compensation considered as part of a member's HAC.
Service retirement eligibility and benefit formula	<ul style="list-style-type: none"> Age 50 with 20 years of membership service 2.5% of HAC x years of service credit
Early retirement eligibility and benefit	<ul style="list-style-type: none"> Age 55 with 5 years of membership service A reduced retirement benefit calculated using the HAC and service credit at early retirement.
Disability retirement eligibility and benefit formula	<p>Duty-related disability:</p> <ul style="list-style-type: none"> Vested active member 5 years of membership service Less than 20 years of membership service: 50% of HAC, or 20 years or more of membership service: 2.5% of HAC x years of service credit <p>Regular disability:</p> <ul style="list-style-type: none"> Vested member The actuarial equivalent of the accrued normal retirement benefit at the time of disability.
Survivor's eligibility and benefit formula	<p>Duty-related deaths: (active member), a monthly survivor benefit to the designated beneficiary equal to:</p> <ul style="list-style-type: none"> 25 years or less of membership service: 50% of HAC, or More than 25 years of membership service: 2.5% of HAC x years of service credit.

Survivor's eligibility and benefit formula continued	<p>Non-duty-related deaths:</p> <ul style="list-style-type: none"> • Active or inactive member • Lump-sum refund of the member's accumulated contributions; or • Actuarial equivalent of the service benefit. <ul style="list-style-type: none"> • A beneficiary may elect to receive the present value of the benefit as a single lump sum.
Vested eligibility and benefit	<ul style="list-style-type: none"> • 5 years of membership service • Accrued normal retirement benefit, payable when eligible for retirement. • In lieu of a pension, a member may receive a refund of accumulated contributions. • Upon receipt of a refund of accumulated contributions, a member's vested right to a monthly benefit is forfeited.
Retirement benefits - Form of payment	<p>Option 1, the normal form of payment is a single life annuity with a refund of any remaining accumulated contributions (account balance) to a designated beneficiary.</p> <p>Optional Benefits:</p> <ul style="list-style-type: none"> • Option 2, a life annuity and joint 100% survivor benefit, • Option 3, a life annuity and joint 50 % survivor benefit, and • Option 4, a life annuity with a period certain. <p>If a retiring member selects Option 2 or 3 and the contingent annuitant predeceases or is divorced from the member, the retiree may, within 18 months of the death or divorce, choose to revert to the higher Option 1 benefit available at retirement or the retiree may select a different contingent annuitant and/or a different option.</p>
Post retirement benefit increases	<p>For retired members who have been retired at least 12 months, a Guaranteed Annual Benefit Adjustment (GABA) will be made each year in January equal to:</p> <ul style="list-style-type: none"> • 3% for members hired before July 1, 2007, and • 1.5% for members hired on or after July 1, 2007
Changes since last valuation	<p>Effective July 1, 2017:</p> <ul style="list-style-type: none"> • Working retiree limitations (Reference <i>Changes since last valuation</i> on pages 179 and 180). • Second retirement benefit (Reference <i>Changes since last valuation</i> on pages 179 and 180). • Beneficiaries of GWPORS members who die prior to retirement are eligible for either a lump-sum benefit or a monthly survivor benefit. The monthly survivor benefit may be paid out as an option 1, 2, 3 or 4, at the survivor's discretion. Previously, statute provided for lump-sum payments only.

ACTUARIAL SECTION

Municipal Police Officers' Retirement System

Type of plan	<ul style="list-style-type: none"> Multiple-employer cost sharing
Membership eligibility	<ul style="list-style-type: none"> Police officers of first- and second-class cities, and Police officers of other cities with the state that adopt the plan, other than those cities which maintain a separate local police fund
Member contributions	<p>Members not electing GABA:</p> <ul style="list-style-type: none"> Hired after June 30, 1975 but on or before June 30, 1979: 7.0% of member's compensation Hired after June 30, 1979 but before July 1, 1997: 8.5% of member's compensation Hired on or after July 1, 1997: 9.0% of member's compensation <p>Members electing GABA:</p> <ul style="list-style-type: none"> 9.0% of member's compensation
Employer contributions	<ul style="list-style-type: none"> 14.41% of each member's compensation
State contributions	<ul style="list-style-type: none"> 29.37% of each member's compensation
Compensation period used in benefit calculation	<ul style="list-style-type: none"> FAC = Final Average Compensation FAC is the average over the last 36 months (or shorter period of total service) of compensation paid to the member. Hired on or after July 1, 2013: 110% annual cap on compensation considered as part of a member's FAC.
Service retirement eligibility and benefit formula	<ul style="list-style-type: none"> Age 50 with 5 years of membership service, or Any age with 20 years of membership service 2.5% of FAC x years of service credit
Second retirement eligibility and benefit formula	<ul style="list-style-type: none"> Re-employed in a MPORS position and at least age 50 <p>Re-calculated using criteria below:</p> <ul style="list-style-type: none"> Less than 20 years of membership service: <ol style="list-style-type: none"> Initial retirement benefit will cease; The retiree becomes a vested active MPORS member; The member must repay all initial benefits received plus interest at the actuarially assumed rate of return; The second retirement will be based on total MPORS service; and The member will be treated as a new retiree who after having been retired at least 12 months, will receive a 3% GABA each year in January. This applies only to members who were GABA members initially.

ACTUARIAL SECTION

Second retirement eligibility and benefit formula continued	<ul style="list-style-type: none"> • More than 20 years of membership service: <ol style="list-style-type: none"> a. The initial retirement benefit will cease; b. The retiree becomes a vested active MPORS member; c. At second retirement the initial benefit resumes and a new benefit will be calculated on new service credit and FAC after re-employment; and d. The retiree will receive GABA on their first benefit in January immediately following second retirement but waits 12 months for GABA on the second retirement benefit. If not initially retired 12 months, the retiree will wait 12 months for GABA on both parts of benefit. This applies only to members who were GABA members initially.
Disability retirement eligibility and benefit formula	<ul style="list-style-type: none"> • Any active member • Before completing 20 years of membership service: 50% of FAC • After completing 20 years or more of membership service: 2.5% of FAC for each year of service credit
Survivor's eligibility and benefit formula	<ul style="list-style-type: none"> • Any active member • Before completing 20 years of membership service: 50% of member's FAC • After completing 20 years or more of membership service: 2.5% of member's FAC for each year of service credit • Benefits are paid to the surviving spouse (or equally to dependent children if there is no surviving spouse or after a surviving spouse dies, for as long as they remain dependent children). • In the absence of a spouse or child, the accumulated contributions minus any benefits already paid will be paid to the member's designated beneficiary.
Vesting eligibility and benefit	<ul style="list-style-type: none"> • 5 years of membership service • Accrued normal retirement benefit, payable when eligible for retirement. • In lieu of a pension, a member may receive a refund of accumulated contributions. • Upon receipt of a refund of accumulated contributions, a member's vested right to a monthly benefit is forfeited.
Retirement benefits - Form of payment	<ul style="list-style-type: none"> • The normal form of payment is a life annuity, with 100% continuation after death to a surviving spouse. • If there is no surviving spouse, or after the death of a surviving spouse, benefits are paid to the dependent children, if any, for as long as they remain dependent children.

ACTUARIAL SECTION

Municipal Police Officers' Retirement System (continued)

Post retirement benefit increases	<ul style="list-style-type: none"> For retired members who became active members on or after July 1, 1997, or those who elected to be covered under GABA and who have been retired at least 12 months, a GABA will be made each year in January equal to 3%. For retired members who were hired prior to July 1, 1997 and who did not elect GABA, the minimum benefit adjustment provided is equal to 50% of the current base compensation of a newly confirmed police officer of the employer that last employed the member as a police officer.
Changes since last valuation	<p>Effective July 1, 2017 (Reference <i>Changes since last valuation</i> on pages 179 and 180):</p> <ul style="list-style-type: none"> Working retiree limitations Second retirement benefit

MPORS Deferred Retirement Option Plan (DROP)

Eligibility	<ul style="list-style-type: none"> 20 years of membership service
DROP period	<ul style="list-style-type: none"> Maximum of five years. Member may not receive membership service or service credit during the DROP Period.
Contributions	<ul style="list-style-type: none"> State, employer and member contributions continue during the DROP Period and are made to the retirement system.
Disability	<ul style="list-style-type: none"> If a member becomes disabled during the DROP Period, the member will not be eligible for MPORS disability benefits. If the member must terminate service, the member's service retirement benefit will be paid to the member rather than to the member's monthly DROP Account. The member will also be eligible to receive the DROP Account.
Survivor benefit	<ul style="list-style-type: none"> If a member dies before the end of the DROP Period, the surviving spouse or dependent children are entitled to receive a lump-sum payment equal to the member's DROP Benefit and a survivorship benefit equal to the benefit the member would have received had the member retired rather than elected to participate in the DROP. If the member does not have a surviving spouse or dependent children, then the member's designated beneficiary receives the balance of the member's retirement account and a lump-sum payment of the member's DROP Benefit.

Survivor benefit continued	<ul style="list-style-type: none"> • The DROP Benefit paid must include interest credited to the participant’s account as follows: <ul style="list-style-type: none"> (a) through June 30, 2009, interest must be credited every fiscal year end at a rate reflecting the retirement system’s annual investment earnings for the applicable fiscal year. (b) after June 30, 2009, interest must be credited every fiscal year end at the actuarially assumed rate of return. Proportionate interest must be credited for distributions taking place at other than a fiscal year end.
DROP benefit	<ul style="list-style-type: none"> • Member receives DROP accruals equal to the retirement benefit calculated at DROP commencement and added each month during the DROP Period, including any post retirement adjustments (GABA), plus interest reflecting the retirement system’s annual investment earnings. • Effective July 1, 2009, the interest rate credited to DROP Accounts was changed to the actuarial assumed rate of 8%. • As a result of the experience study performed during fiscal year 2010, the interest rate credited to DROP Accounts was changed to the actuarial assumed rate of 7.75%. • As a result of the experience study performed during fiscal year 2017, the interest rate credited to DROP Accounts was changed to the actuarial assumed rate of 7.65%.
Changes in DROP since last valuation	<p>Effective July 1, 2017, eligibility to participate in the DROP is determined on years of membership service, not age. A MPORS member must have 20 years of membership service to participate in the DROP even if they have reached age 50.</p>

ACTUARIAL SECTION

Firefighters' Unified Retirement System

Type of plan	<ul style="list-style-type: none"> Multiple-employer cost sharing
Membership eligibility	<ul style="list-style-type: none"> Firefighters of first- and second-class cities Firefighters of other cities that adopt the plan Firefighters of rural fire district departments that adopt the plan Firefighters hired by the Montana Air National Guard (MANG) on or after October 1, 2001
Member contributions	<ul style="list-style-type: none"> Members hired before 7/1/1997 and not electing GABA: 9.5% of member's compensation Members hired on or after 7/1/1997 or electing GABA: 10.7% of member's compensation
Employer contributions	<ul style="list-style-type: none"> 14.36% of each member's compensation 14.36% of each working retiree's compensation
State contributions	<ul style="list-style-type: none"> 32.61% of each member's compensation 32.61% of each working retiree's compensation
Compensation period used in benefit calculation	<ul style="list-style-type: none"> HAC = Highest Average Compensation HAC is average of the highest 36 consecutive months (or shorter period of total service) of compensation paid to member. Part-time firefighter: 15% of regular compensation of a newly confirmed full-time firefighter. Hired on or after July 1, 2013: 110% annual cap on compensation considered as part of a member's HAC
Service retirement eligibility and benefit formula	<p>Member hired on or after July 1, 1981, or a member who has elected to be covered by GABA:</p> <ul style="list-style-type: none"> 20 years of membership service 2.5% of HAC x years of service credit <p>Member hired prior to July 1, 1981, and who had not elected to be covered by GABA, the greater of above, or:</p> <p>If membership service is less than 20 years:</p> <ul style="list-style-type: none"> 2% of highest monthly compensation (HMC) x years of membership service and <p>If membership service is greater or equal to 20 years:</p> <ul style="list-style-type: none"> 50% of HMC + 2% of HMC x years of membership service in excess of 20
Early retirement eligibility and benefit	<ul style="list-style-type: none"> Age 50 with 5 years of membership service Normal retirement benefit calculated using HAC and service credit at early retirement.

ACTUARIAL SECTION

Disability retirement eligibility and benefit formula	<ul style="list-style-type: none"> • Any active member • The greater of: <ol style="list-style-type: none"> a. 50% of HAC, or b. 2.5% of HAC x years of service credit
Survivor's eligibility and benefit formula	<ul style="list-style-type: none"> • Any active or inactive member • For deaths of active members with less than 20 years of membership service, a monthly survivor benefit to the surviving spouse (or equally to dependent children if there is no surviving spouse or after a surviving spouse dies, for as long as they remain dependent children) equal to 50% of HAC. • For active or inactive members with more than 20 years of membership service, a benefit equal to the accrued retirement benefit at the date of death.
Vesting eligibility and benefit	<ul style="list-style-type: none"> • 5 years of membership service • Accrued normal retirement benefit, payable when eligible for retirement. • In lieu of a pension, a member may receive a refund of accumulated contributions. • Upon receipt of a refund of accumulated contributions, a member's vested right to a monthly benefit is forfeited.
Retirement benefits - Form of payment	<ul style="list-style-type: none"> • The retirement benefit is paid for the retired member's life. • Upon the death of the retired member, the benefit is paid to the surviving spouse. • If there is no surviving spouse, or after the death of a surviving spouse, benefits are paid to the dependent children, if any, for as long as they remain dependent children.
Post retirement benefit increases	<ul style="list-style-type: none"> • For retired members who became active members on or after July 1, 1997 and those who elected to be covered under GABA and who have been retired at least 12 months, a GABA will be paid each year in January equal to 3%. • For retired members who were hired prior to July 1, 1997 and who did not elect GABA, the minimum benefit adjustment is equal to 50% of the current base compensation of a newly confirmed active firefighter of the employer that last employed the member as a firefighter.
Changes since last valuation	<p>Effective July 1, 2017:</p> <ul style="list-style-type: none"> • Working retiree limitations (Reference <i>Changes since last valuation</i> on page 179) • Second retirement benefit (Reference <i>Changes since last valuation</i> on pages 179 and 180) • Part- paid firefighters become eligible to participate in FURS once they have earned \$300 in a fiscal year. Previously, statute was unclear on whether the limit applied to a calendar year or a fiscal year.

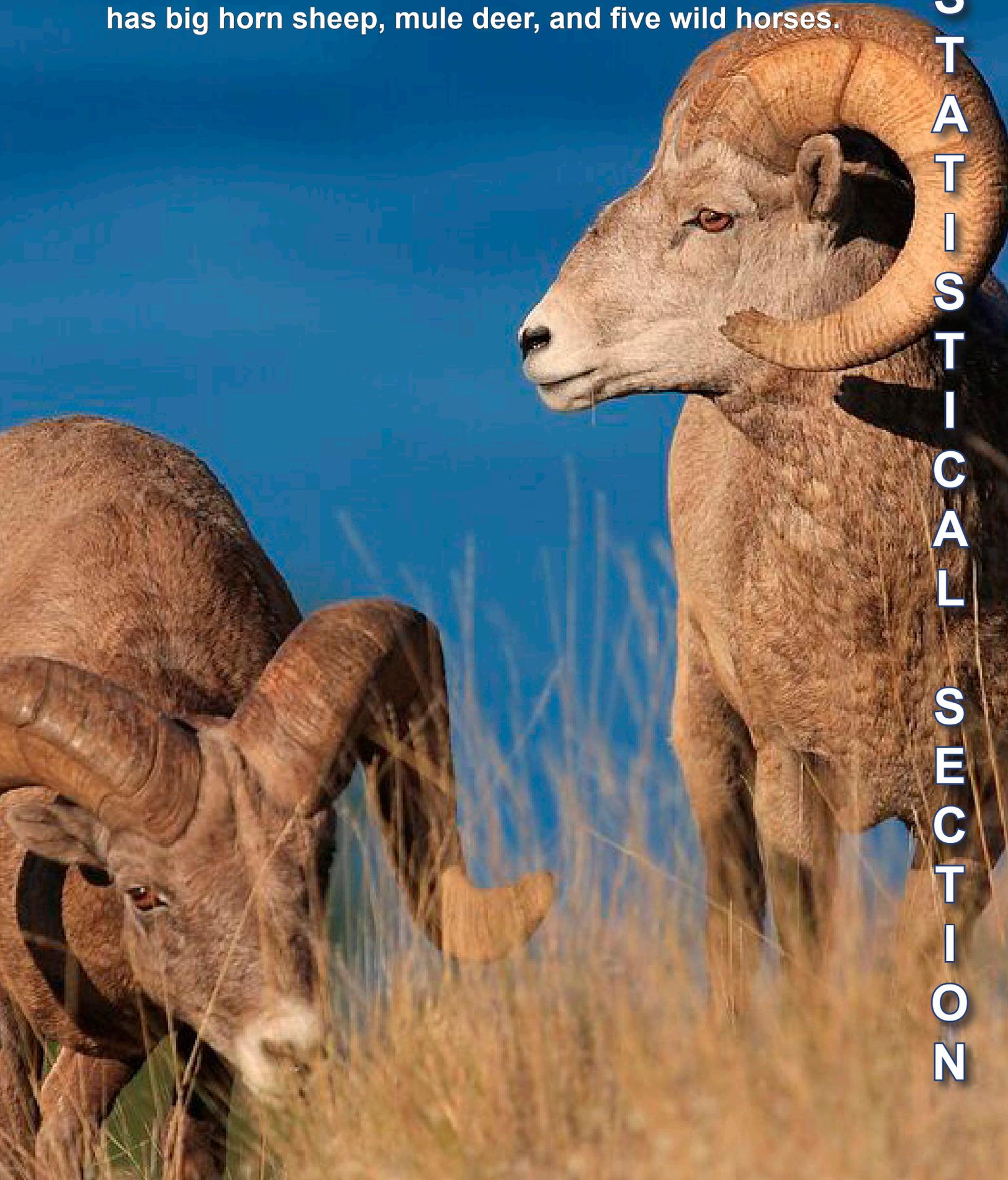
ACTUARIAL SECTION

Volunteer Firefighters' Compensation Act

Type of plan	<ul style="list-style-type: none"> Multiple-employer cost-sharing
Membership eligibility	<ul style="list-style-type: none"> Unpaid volunteer firefighters serving with qualified volunteer fire companies in unincorporated areas throughout the state.
Member contributions	<ul style="list-style-type: none"> No member contributions
State contributions	<ul style="list-style-type: none"> 5% of certain fire insurance premium taxes collected and passed through the general fund
Credit for service	<p>To receive a year of credit for service, a volunteer firefighter must:</p> <ul style="list-style-type: none"> serve with a single fire company for an entire fiscal year, and receive a minimum of 30 hours of training. Fractional years are not credited.
Normal retirement eligibility and benefit formula	<ul style="list-style-type: none"> Age 55 with 20 years of credit for service, or Age 60 with 10 years of credit for service \$8.75 per month x year of credit for service up to 20 years \$7.50 per month x year of credit for service after 20 years For VFCA members retiring prior to July 1, 2011, maximum credited service is 30 years VFCA members retiring on or after July 1, 2011, will receive \$7.50 per month for each additional year of credited service after 30 years in each year that the trust is actuarially sound and the amortization period is 20 years or less; otherwise benefits for the year will only be paid on credited service up to 30 years.
Duty-related disability retirement eligibility and benefit formula	<ul style="list-style-type: none"> Any current member on a fire company's roster The greater of: <ol style="list-style-type: none"> \$87.50 per month, or (\$8.75 per month x year of credit for service up to 20 years) + (\$7.50 per month x year of credit for service after 20 years up to 30 years of credit for service)
Survivor's eligibility and benefit formula	<ul style="list-style-type: none"> 10 years of credit for service or a retired member A monthly survivor benefit to the surviving spouse (or equally to dependent children if there is no surviving spouse or after a surviving spouse dies, for as long as they remain dependent children) equal to the full benefit otherwise payable to the member. Survivor benefits terminate when benefits have been paid for a total of 40 months, including any benefits paid to the retired member prior to death.
Changes since last valuation	<ul style="list-style-type: none"> None

Only accessible by boat, Wild Horse Island is the largest island in a fresh water lake west of Minnesota. The park has big horn sheep, mule deer, and five wild horses.

S
T
A
T
I
S
T
I
C
A
L
S
E
C
T
I
O
N



SUMMARY OF STATISTICAL DATA

The pension funds are accounted for under the accrual basis of accounting. Information is provided for the last ten years ending June 30, 2017 for the following five objectives: financial trends, revenue capacity, debt capacity, demographic and economic trends, and operations.

Financial trends are presented on pages 216 to 227. The schedules contain trend information to help the reader understand how the plans' financial performance and well-being have changed over time. Net assets and liabilities are presented on pages 216 to 223. The change in net assets is presented in chart format and includes graphs for the PERS-DBRP that highlight areas of interest. Actuarial liabilities are presented on pages 225 to 227 in graph format for all of the defined benefit retirement plans. The existence of unfunded actuarial liabilities is not necessarily an indication of financial problems but the trends are important and must be monitored and controlled.

Revenue capacity is presented on pages 228 to 239. These schedules contain information to help the reader assess the plans' revenue sources, fair values by investment type, and the contribution rate history since inception.

The schedules showing the History of Membership in the Retirement Plans are presented on pages 240 to 243.

Debt capacity is presented on pages 244 to 255. These schedules present information to help the reader assess the plans' current levels of outstanding debt and the plans' ability to issue additional debt in the future. Debt capacity is represented with benefit expenses and distributions and is followed by schedules

of retired members, based on the type of benefit received.

Demographic and Economic information is presented on pages 256 to 269. These schedules offer demographic and economic indicators to help the reader understand the environment within which the plans' financial activities take place. On pages 268 and 269, the average monthly benefit is provided for each plan.

Operating information is presented on pages 270 to 279. These schedules contain pension plan data to help the reader understand how the information in the financial report relates to the pension plans the PERB administers. This information includes a schedule of employers participating in each of the plans.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Changes in Fiduciary Net Position, Last Ten Fiscal Years

(In thousands)

Fiscal Year	2017	2016	2015	2014	2013	2012
PERS-DBRP						
Additions						
Member Contributions ¹	\$ 100,768	\$ 97,343	\$ 95,424	\$ 92,160	\$ 80,889	\$ 79,332
Employer Contributions ²	103,902	102,810	100,625	129,921	81,836	80,049
State Contributions	896	957	919	886	532	536
Investment Income ³	591,539	101,213	225,111	732,483	505,052	91,355
Other ⁴	27,861	29,843	33,547			
<i>Total Additions to Net Position</i>	824,966	332,166	455,626	955,450	668,309	251,272
Deductions						
Benefits	366,355	344,104	319,502	296,183	274,021	252,762
Refunds	12,252	10,379	11,688	10,070	11,254	11,991
Administrative Expenses ⁵	5,225	4,261	3,980	3,781	3,843	3,386
Other ⁴	1,621	1,501	2,211	1,488	1,594	1,028
<i>Total Deductions to Net Position</i>	385,453	360,245	337,381	311,522	290,712	269,167
<i>Change in Net Position</i>	\$ 439,513	\$ (28,079)	\$ 118,245	\$ 643,928	\$ 377,597	\$ (17,895)
PERS-DCRP DISABILITY OPEB⁶						
Additions						
Employer Contributions	392	368	343	311	288	273
Investment Income ³	333	11	4	3	5	5
<i>Total Additions to Net Position</i>	725	379	347	314	293	278
Deductions						
Benefits	54	42	34	29	29	27
Administrative Expenses			1			
<i>Total Deductions to Net Position</i>	54	42	35	29	29	27
<i>Change in Net Position</i>	\$ 671	\$ 337	\$ 312	\$ 285	\$ 264	\$ 251
JRS						
Additions						
Member Contributions ¹	\$ 488	\$ 729	\$ 534	\$ 481	\$ 742	\$ 447
Employer Contributions	1,800	1,807	1,684	1,652	1,621	1,598
Investment Income ³	10,370	1,779	3,842	12,425	8,409	1,517
<i>Total Additions to Net Position</i>	12,658	4,315	6,060	14,558	10,772	3,562
Deductions						
Benefits	3,554	3,416	3,041	3,023	2,553	2,344
Refunds						
Administrative Expenses ⁵	255	200	138	100	185	118
Other ⁴						
<i>Total Deductions to Net Position</i>	3,809	3,616	3,179	3,123	2,738	2,462
<i>Change in Net Position</i>	\$ 8,849	\$ 699	\$ 2,881	\$ 11,435	\$ 8,034	\$ 1,100

Contributions were made in accordance with statutory requirements.

¹Includes Interest Reserve Buybacks.

²Includes Membership Fees, Retirement Incentive, Miscellaneous Revenue, and Education Contributions.

³Includes Common Stock Dividends.

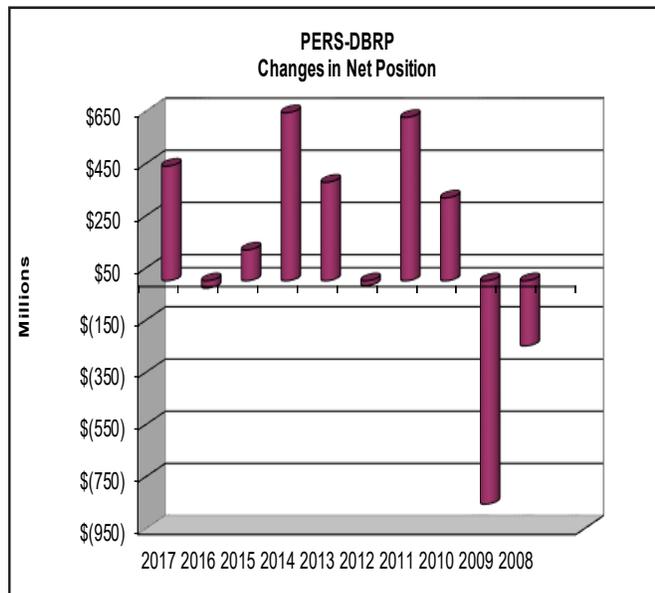
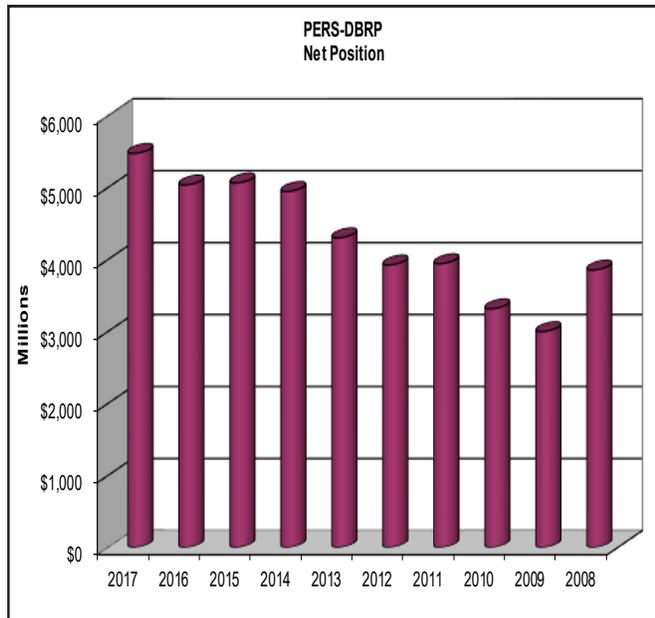
⁴Includes Transfers to the DC, MUS-RP, Prior Year Adjustments, Refunds to Other Plans, and Coal Tax Transfers.

⁵Includes OPEB Expenses

⁶Effective FY2014, the DCRP-Disability, included in the PERS-DCRP, was changed to PERS-DCRP Disability OPEB and reported as a Defined Benefit Plan.

STATISTICAL SECTION

2011	2010	2009	2008
\$ 77,875	\$ 78,671	\$ 76,003	\$ 72,874
79,173	80,326	75,949	72,270
546	537	357	378
715,398	387,861	(796,242)	(197,030)
872,992	547,395	(643,933)	(51,508)
231,223	212,186	196,402	180,815
11,539	10,967	10,821	12,123
3,327	3,257	2,948	2,832
794	3,438	1,713	1,987
246,883	229,848	211,884	197,757
\$ 626,109	\$ 317,547	\$ (855,817)	\$ (249,265)
262	265	245	212
5	4	16	32
267	269	261	244
19	14	7	
19	14	7	
\$ 248	\$ 255	\$ 254	\$ 244
\$ 504	\$ 595	\$ 584	\$385
1,477	1,468	1,347	1,315
11,392	6,013	(12,103)	(2,991)
13,373	8,076	(10,172)	(1,291)
2,240	2,118	1,972	1,829
39	10	17	9
	24		
2,279	2,152	1,989	1,838
\$ 11,094	\$ 5,924	\$ (12,161)	\$ (3,129)



STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Changes in Fiduciary Net Position, Last Ten Fiscal Years

(In thousands)

Fiscal Year	2017	2016	2015	2014	2013	2012
HPORS						
Additions						
Member Contributions ¹	\$ 1,950	\$ 1,917	\$ 1,624	\$ 1,458	\$ 1,337	\$ 1,299
Employer Contributions ²	5,782	5,916	5,578	5,474	4,903	4,966
State Contributions ³	263	243	262	262	274	269
Investment Income ⁴	15,101	2,605	5,738	18,684	12,826	2,321
<i>Total Additions to Net Position</i>	23,096	10,681	13,202	25,878	19,340	8,855
Deductions						
Benefits	11,037	10,482	9,932	9,344	8,709	8,223
Refunds	245	94	69	84	51	65
Administrative Expenses ⁵	248	199	146	109	181	122
Other ⁶				15		3
<i>Total Deductions to Net Position</i>	11,530	10,775	10,147	9,552	8,941	8,413
<i>Change in Net Position</i>	\$ 11,566	\$ (94)	\$ 3,055	\$ 16,326	\$ 10,399	\$ 442
SRS						
Additions						
Member Contributions ¹	\$ 7,189	\$ 6,982	\$ 6,623	\$ 6,447	\$ 5,838	\$ 5,694
Employer Contributions ²	7,562	7,317	6,902	6,690	6,273	6,028
Investment Income ⁴	35,516	6,064	13,042	41,802	28,154	5,109
<i>Total Additions to Net Position</i>	50,267	20,363	26,567	54,939	40,265	16,831
Deductions						
Benefits	16,700	15,476	14,019	12,732	11,583	10,379
Refunds	1,383	1,029	1,217	1,185	1,159	1,248
Administrative Expenses ⁵	388	326	250	203	287	207
Other ⁶	33	75	44	27	25	23
<i>Total Deductions to Net Position</i>	18,504	16,906	15,530	14,147	13,054	11,857
<i>Change in Net Position</i>	\$ 31,763	\$ 3,457	\$ 11,037	\$ 40,792	\$ 27,211	\$ 4,974
GWPORS						
Additions						
Member Contributions ¹	\$ 5,278	\$ 5,036	\$ 4,924	\$ 4,462	\$ 4,210	\$ 4,148
Employer Contributions	4,464	4,278	4,088	3,762	3,576	3,470
Investment Income ³	18,592	3,167	6,435	20,075	13,106	2,388
<i>Total Additions to Net Position</i>	28,334	12,481	15,447	28,299	20,892	10,006
Deductions						
Benefits	5,810	5,068	4,550	3,979	3,575	3,203
Refunds	1,036	1,066	802	1,187	841	1,227
Administrative Expenses ⁵	329	272	203	161	247	173
Other ⁶		28		63	23	15
<i>Total Deductions to Net Position</i>	7,175	6,434	5,555	5,390	4,686	4,618
<i>Change in Net Position</i>	\$ 21,159	\$ 6,047	\$ 9,892	\$ 22,909	\$ 16,206	\$ 5,388

Contributions were made in accordance with statutory requirements.

¹ Includes Interest Reserve Buybacks.

² Includes Retirement Incentive and Miscellaneous Revenue.

³ Includes Percent of Salary.

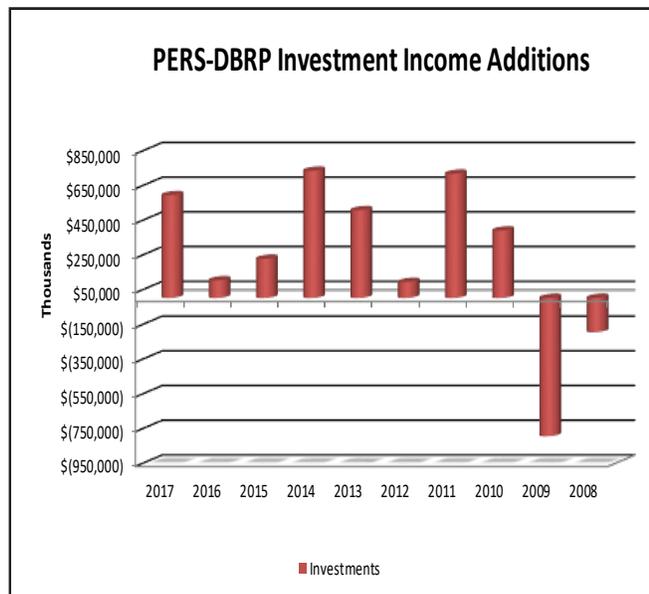
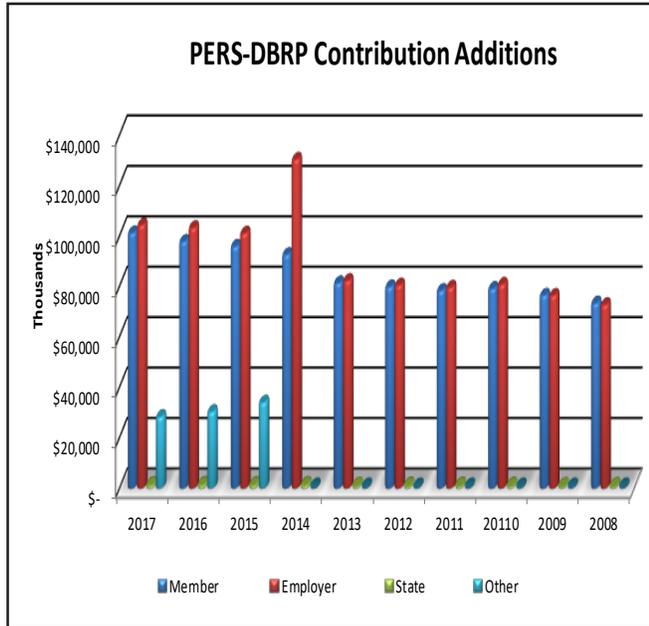
⁴ Includes Common Stock Dividends.

⁵ Includes OPEB Expenses.

⁶ Includes Refunds to Other Plans and Prior Year Adjustments.

STATISTICAL SECTION

2011	2010	2009	2008
\$ 1,270	\$ 1,262	\$ 1,035	\$ 1,082
4,543	4,763	4,151	3,949
278	287	285	290
17,912	9,714	(19,978)	(4,929)
24,003	16,026	(14,507)	392
<hr/>			
7,866	7,557	7,127	6,814
121	56	26	61
56	35	49	27
	37	17	14
8,043	7,685	7,219	6,916
\$ 15,960	\$ 8,341	\$ (21,726)	\$ (6,524)
<hr/>			
\$ 5,831	\$ 5,336	\$ 5,207	\$ 4,815
6,014	5,637	5,193	4,834
37,539	19,470	(38,824)	(9,598)
49,384	30,443	(28,424)	51
<hr/>			
9,237	8,277	7,858	7,243
968	766	968	722
121	97	115	80
	116	29	11
10,326	9,256	8,970	8,056
\$ 39,058	\$ 21,187	\$ (37,394)	\$ (8,005)
<hr/>			
\$ 4,198	\$ 4,340	\$ 3,912	\$ 3,613
3,523	3,612	3,292	2,979
16,335	7,924	(15,133)	(3,653)
24,056	15,876	(7,929)	2,939
<hr/>			
2,863	2,622	2,521	2,271
993	879	840	643
88	61	79	52
	59		30
3,944	3,621	3,440	2,996
\$ 20,112	\$ 12,255	\$ (11,369)	\$ (57)



STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Changes in Fiduciary Net Position, Last Ten Fiscal Years

(In thousands)

Fiscal Year	2017	2016	2015	2014	2013	2012
MPORS						
Additions						
Member Contributions ¹	\$ 4,465	\$ 4,384	\$ 4,292	\$ 4,133	\$ 4,029	\$ 6,055
Employer Contributions	7,091	6,928	6,630	6,459	6,280	3,791
State Contributions ²	13,961	13,751	13,433	13,049	12,573	12,274
Investment Income ³	39,781	7,113	14,471	45,244	30,037	5,717
<i>Total Additions to Net Position</i>	65,298	32,176	38,826	68,885	52,919	27,837
Deductions						
Benefits	23,475	21,961	20,560	19,450	18,463	17,355
Refunds	1,043	1,240	2,179	1,018	1,833	707
Administrative Expenses ⁴	340	276	214	166	245	178
Other ⁵		129	5	60	5	3
<i>Total Deductions to Net Position</i>	24,858	23,606	22,958	20,694	20,546	18,243
<i>Change in Net Position</i>	\$ 40,440	\$ 8,570	\$ 15,868	\$ 48,191	\$ 32,373	\$ 9,594
FURS						
Additions						
Member Contributions ¹	\$ 4,925	\$ 4,752	\$ 4,710	\$ 4,698	\$ 4,253	\$ 4,123
Employer Contributions	6,501	6,163	6,100	5,767	5,499	5,281
State Contributions ²	14,438	13,970	13,573	13,007	12,358	11,797
Investment Income ³	40,844	7,312	14,640	45,478	30,035	5,726
<i>Total Additions to Net Position</i>	66,708	32,197	39,023	68,950	52,145	26,927
Deductions						
Benefits	22,336	20,896	19,745	18,872	17,670	16,519
Refunds	168	46	2	166	73	119
Administrative Expenses ⁴	321	262	192	153	229	163
Other ⁵				14		
<i>Total Deductions to Net Position</i>	22,825	21,204	19,939	19,205	17,972	16,801
<i>Change in Net Position</i>	\$ 43,883	\$ 10,993	\$ 19,084	\$ 49,745	\$ 34,173	\$ 10,126
VFCA						
Additions						
State Contributions	\$ 2,065	\$ 2,036	\$ 1,914	\$ 1,818	\$ 1,711	\$ 1,635
Investment Income ³	3,837	622	1,480	4,817	3,383	592
<i>Total Additions to Net Position</i>	5,902	2,658	3,394	6,635	5,094	2,227
Deductions						
Benefits	2,858	2,623	2,369	2,281	2,819	2,046
Insurance Payments	6	12	11	14	15	13
Administrative Expenses ⁴	290	244	182	135	206	144
Other ⁵						
<i>Total Deductions to Net Position</i>	3,154	2,879	2,562	2,430	3,040	2,203
<i>Change in Net Position</i>	\$ 2,748	\$ (221)	\$ 832	\$ 4,205	\$ 2,054	\$ 24

Contributions were made in accordance with statutory requirements.

¹ Includes Interest Reserve Buybacks.

² Includes Percent of Salary.

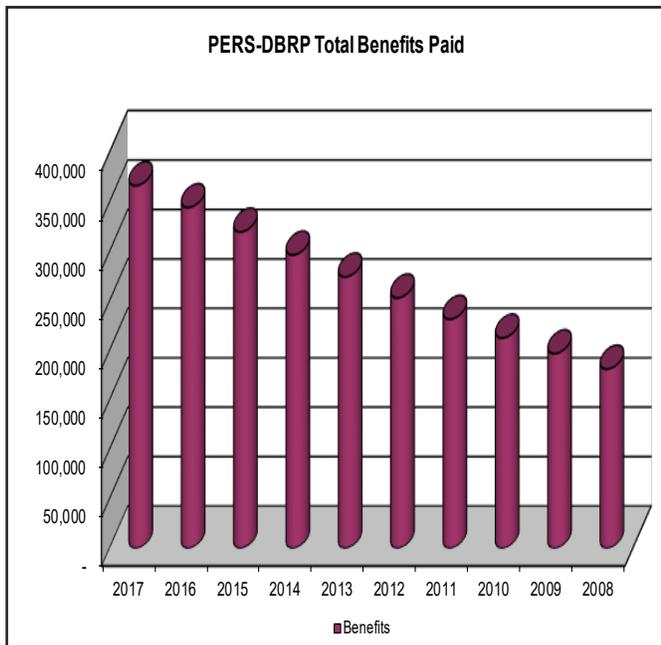
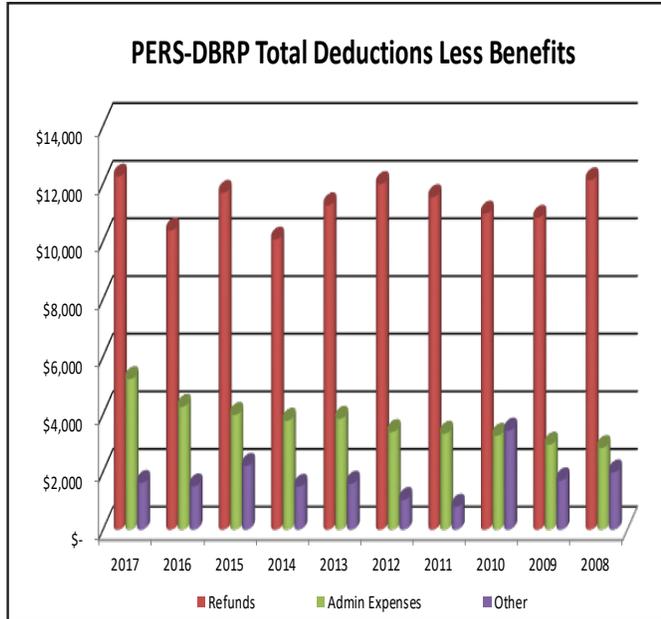
³ Includes Common Stock Dividends.

⁴ Includes OPEB Expenses.

⁵ Includes Refunds to Other Plans and Prior Year Adjustments.

STATISTICAL SECTION

2011	2010	2009	2008
\$ 3,580	\$ 4,141	\$ 3,186	\$ 2,974
5,670	6,860	5,056	5,156
11,594	10,932	10,186	9,452
39,175	19,972	(40,908)	(10,262)
60,019	41,905	(22,480)	7,320
<hr/>			
17,013	15,728	15,008	13,707
1,000	849	794	4,290
106	80	98	78
	149	62	4
18,119	16,806	15,962	18,079
\$ 41,900	\$ 25,099	\$ (38,442)	\$ (10,759)
<hr/>			
\$ 3,748	\$ 4,419	\$ 3,701	\$ 3,152
5,009	5,129	4,531	4,467
11,365	10,872	9,832	9,568
38,751	19,606	(39,421)	(9,733)
58,873	40,026	(21,357)	7,454
<hr/>			
15,605	14,598	13,987	13,353
128	86	69	116
92	72	98	57
	85		
15,825	14,841	14,154	13,526
\$ 43,048	\$ 25,185	\$ (35,511)	\$ (6,072)
<hr/>			
\$ 1,596	\$ 1,575	\$ 1,580	\$ 1,562
4,793	2,566	(5,304)	(1,275)
6,389	4,141	(3,724)	287
<hr/>			
1,938	1,857	1,780	1,717
15	17	17	14
81	58	59	46
	9		
2,034	1,941	1,856	1,777
\$ 4,355	\$ 2,200	\$ (5,580)	\$ (1,490)



STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Changes in Fiduciary Net Position, Last Ten Fiscal Years

(In thousands)

Fiscal Year	2017	2016	2015	2014	2013	2012
PERS-DCRP						
Additions						
Member Contributions	\$ 11,828	\$ 9,970	\$ 9,369	\$ 8,534	\$ 6,943	\$ 6,318
Employer Contributions	10,752	6,494	4,887	4,410	4,374	4,137
Investment Income ¹	22,368	1,428	6,316	18,367	11,684	2,352
Other ²	465	1,035	422	292	451	616
<i>Total Additions to Net Position</i>	45,413	18,927	20,994	31,603	23,452	13,423
Deductions						
Refunds	7,038	5,299	6,103	4,738	4,379	4,000
Administrative Expenses ³	836	671	586	558	585	493
Other ⁴	225	164	198	174	162	313
<i>Total Deductions to Net Position</i>	8,099	6,134	6,887	5,470	5,126	4,806
<i>Change in Net Position</i>	\$ 37,314	\$ 12,793	\$ 14,107	\$ 26,133	\$ 18,326	\$ 8,617
DEFERRED COMPENSATION PLAN						
Additions						
Member Contributions	\$ 23,770	\$ 21,916	\$ 20,379	\$ 24,255	\$ 20,297	\$ 19,381
Employer Contributions	77	63	103	81	79	65
Investment Income ⁵	35,889	7,308	11,243	35,165	21,219	13,913
Other ⁶	587	195	263	191	257	628
<i>Total Additions to Net Position</i>	60,323	29,482	31,988	59,692	41,852	33,987
Deductions						
Refunds	27,329	20,193	24,219	24,250	19,644	15,637
Administrative Expenses ³	621	521	451	406	445	357
Other ⁷	846	427	457	458	581	1,186
<i>Total Deductions to Net Position</i>	28,796	21,141	25,127	25,114	20,670	17,180
<i>Change in Net Position</i>	\$ 31,527	\$ 8,341	\$ 6,861	\$ 34,578	\$ 21,182	\$ 16,807

¹ Fees paid to Transamerica, PIMCO, Voya, Prudential and State Street are included in the net investment sum.

² Includes Miscellaneous Revenues and Forfeitures remitted to MPERA to pay administrative costs.

³ Includes OPEB Expenses.

⁴ Fees paid to Empower for services provided.

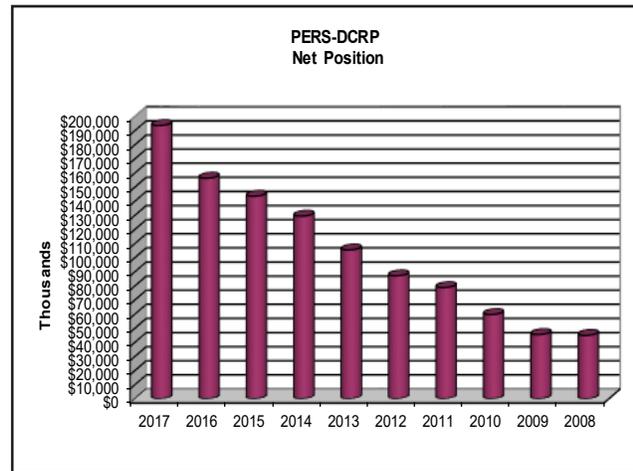
⁵ Fees paid to Transamerica, PIMCO, Voya, Prudential and State Street are included in the net investment sum.

⁶ Miscellaneous Revenue remitted to MPERA to pay administrative costs.

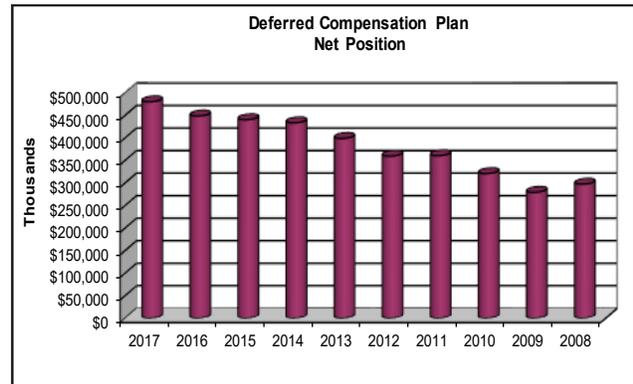
⁷ Fees paid to Empower for services provided.

STATISTICAL SECTION

2011	2010	2009	2008
\$ 6,100	\$ 6,140	\$ 5,723	\$ 5,118
3,965	4,029	3,730	3,255
12,698	6,122	(6,801)	(2,987)
698	487	468	554
23,461	16,778	3,120	5,940
3,637	1,947	1,903	2,519
426	416	411	246
299	250	222	223
4,362	2,613	2,536	2,988
\$ 19,099	\$ 14,165	\$ 584	\$ 2,952



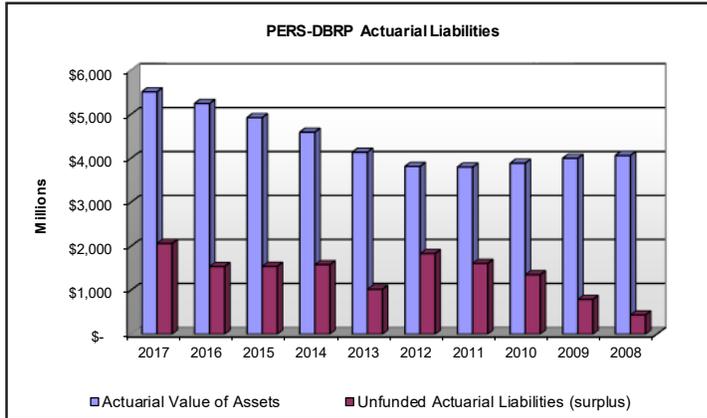
\$ 19,072	\$ 18,607	\$ 19,661	\$ 19,107
64	61	65	70
36,906	37,203	(26,444)	3,287
424	330	335	416
56,466	56,201	(6,383)	22,880
15,416	13,398	11,024	13,302
288	277	318	241
1,007	991	865	817
16,711	14,666	12,207	14,360
\$ 39,755	\$ 41,535	\$ (18,590)	\$ 8,520



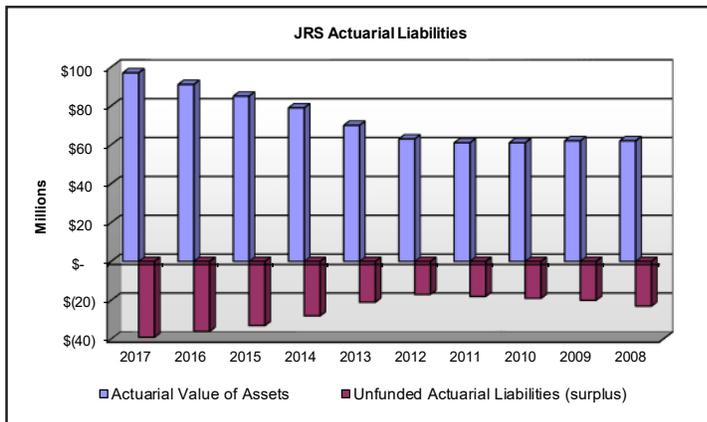
STATISTICAL SECTION

This page intentionally left blank

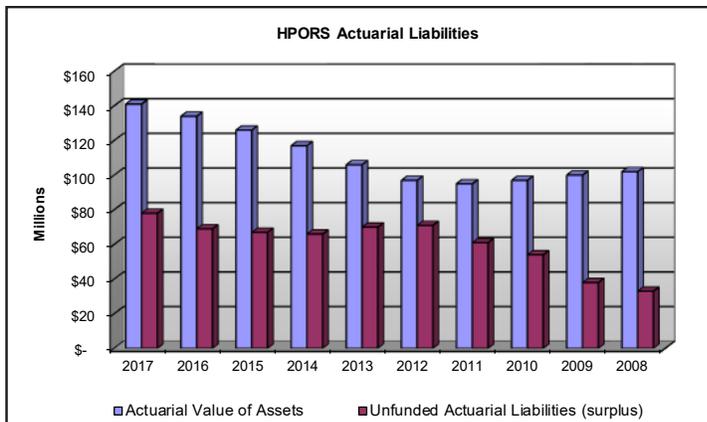
Public Employees' Retirement Board
A Component Unit of the State of Montana
History of Actuarial Liabilities
 (in millions)



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2017	\$ 5,514	\$ 2,064
2016	5,248	1,540
2015	4,927	1,544
2014	4,596	1,582
2013	4,140	1,021
2012	3,817	1,833
2011	3,801	1,610
2010	3,890	1,352
2009	4,002	791
2008	4,065	439



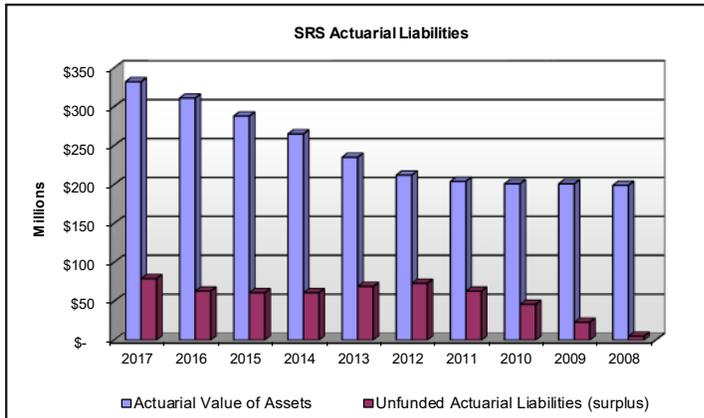
Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2017	\$ 97	\$ (39)
2016	91	(36)
2015	85	(33)
2014	79	(28)
2013	70	(21)
2012	63	(17)
2011	61	(18)
2010	61	(19)
2009	62	(20)
2008	62	(23)



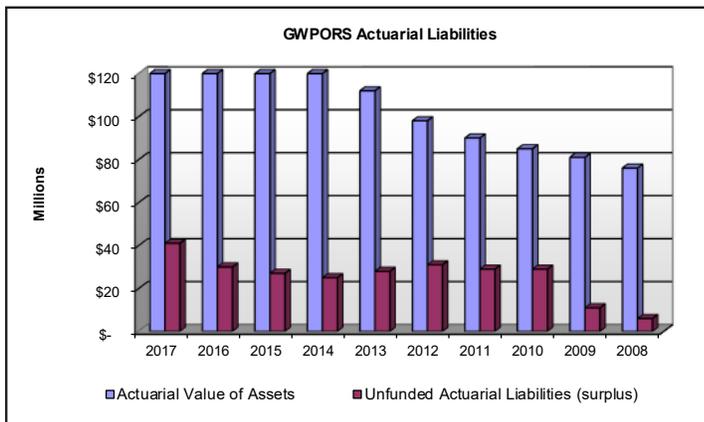
Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2017	\$ 141	\$ 78
2016	134	69
2015	126	67
2014	117	66
2013	106	70
2012	97	71
2011	95	61
2010	97	54
2009	100	38
2008	102	33

STATISTICAL SECTION

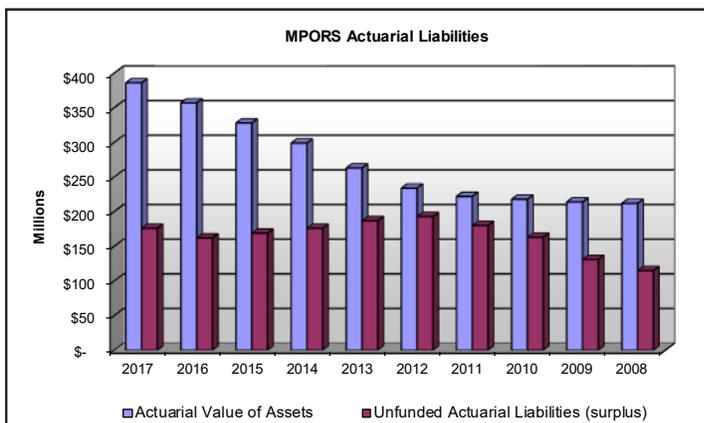
Public Employees' Retirement Board A Component Unit of the State of Montana History of Actuarial Liabilities (cont.) (in millions)



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2017	\$ 332	\$ 79
2016	311	63
2015	288	61
2014	265	61
2013	235	69
2012	212	73
2011	204	63
2010	201	46
2009	201	23
2008	199	5



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2017	\$ 176	\$ 41
2016	161	30
2015	145	27
2014	129	25
2013	112	28
2012	98	31
2011	90	29
2010	85	29
2009	81	11
2008	76	6



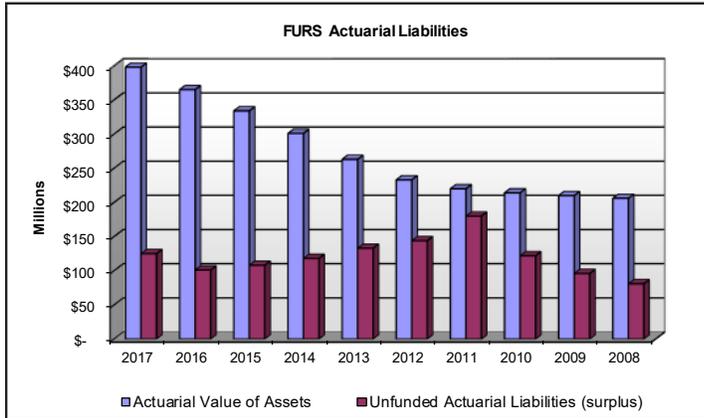
Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2017	\$ 386	\$ 176
2016	357	162
2015	328	169
2014	299	176
2013	263	187
2012	234	193
2011	222	180
2010	218	163
2009	214	131
2008	212	115

Public Employees' Retirement Board

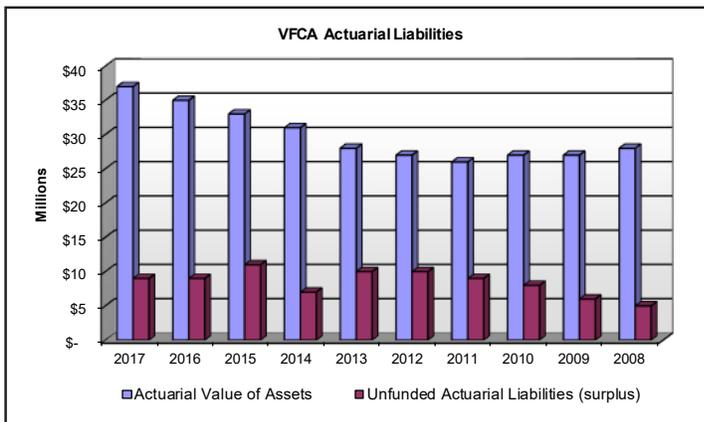
A Component Unit of the State of Montana

History of Actuarial Liabilities (cont.)

(in millions)



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2017	\$398	\$125
2016	\$365	\$101
2015	\$334	\$108
2014	\$301	\$118
2013	\$263	\$133
2012	\$233	\$144
2011	\$220	\$180
2010	\$214	\$122
2009	\$210	\$96
2008	\$206	\$81



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2017	\$ 37	\$ 9
2016	35	9
2015	33	11
2014	31	7
2013	28	10
2012	27	10
2011	26	9
2010	27	8
2009	27	6
2008	28	5

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Fair Values by Type of Investment, Last Ten Fiscal Years

(in thousands)

System	2017	2016	2015	2014	2013	2012
PERS-DBRP¹						
CAPP Investment Pool ²	\$ 5,326,238					
<i>Fixed Income:</i>						
Retirement Funds Bond Pool (RFBP)		\$ 1,184,758	\$ 1,127,097	\$ 1,069,517	\$ 950,298	\$ 974,139
Montana Mortgages						
Short Term Investment Pool (STIP)	130,510	142,167	89,180	103,602	54,005	33,708
<i>Equities:</i>						
Montana Domestic Equity Pool (MDEP)		1,893,160	2,004,038	1,933,145	1,643,009	1,455,188
Montana International Equity Pool (MTIP)		774,561	837,968	877,318	712,587	621,887
Montana Private Equity Pool (MPEP)		559,719	539,912	517,873	536,542	512,315
<i>Alternative Investments:</i>						
Real Estate Investments (REI)						
Montana Real Estate Pool (MTRP)		463,582	445,360	426,528	393,155	315,093
Structured Investment Vehicles (SIV)			766	1,179	710	547
Total	\$ 5,456,748	\$ 5,017,947	\$ 5,044,321	\$ 4,929,162	\$ 4,290,306	\$ 3,912,877
PERS-DCRP DISABILITY OPEB³						
<i>Fixed Income:</i>						
Short Term Investment Pool (STIP)	\$ 287	\$ 265	\$ 2,738	\$ 2,427		
<i>Alternative Investments:</i>						
Structured Investment Vehicles (SIV)			24	27		
Pooled Investments at Cost	3,462	2,834				
Total	\$ 3,749	\$ 3,099	\$ 2,762	\$ 2,454		
JRS						
CAPP Investment Pool ²	\$ 93,939					
<i>Fixed Income:</i>						
Retirement Funds Bond Pool (RFBP)		\$ 20,613	\$ 19,324	\$ 18,164	\$ 16,034	\$ 16,031
Short Term Investment Pool (STIP)	2,233	2,502	1,770	1,940	1,085	848
<i>Equities:</i>						
Montana Domestic Equity Pool (MDEP)		32,938	34,351	32,822	27,759	23,933
Montana International Equity Pool (MTIP)		13,477	14,358	14,901	12,036	10,224
Montana Private Equity Pool (MPEP)		9,738	9,255	8,796	9,064	8,428
<i>Alternative Investments:</i>						
Montana Real Estate Pool (MTRP)		8,066	7,640	7,251	6,641	5,168
Structured Investment Vehicles (SIV)			15	22	14	14
Total	\$ 96,172	\$ 87,334	\$ 86,713	\$ 83,896	\$ 72,633	\$ 64,646

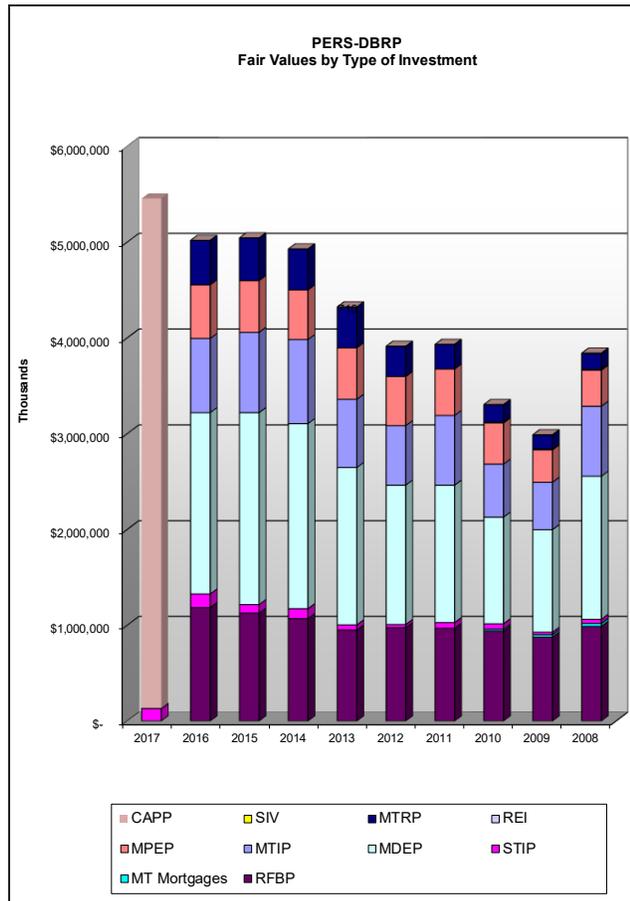
¹Does not include the Defined Benefit Education.

²Effective FY2017, the structure of plan investments was made more efficient by creating and utilizing a Consolidated Asset Pension Pool (CAPP) for all Defined Benefit Plans.

³Effective FY2014, the DCRP-Disability, included in the PERS-DCRP, was changed to PERS-DCRP Disability OPEB and reported as a separate Defined Benefit Plan.

STATISTICAL SECTION

2011	2010	2009	2008
\$969,119	\$939,430	\$876,390	\$988,124
	19,185	24,055	31,837
59,256	56,727	27,140	41,820
1,434,773	1,114,072	1,070,435	1,494,306
727,765	552,712	494,790	730,360
484,324	430,729	338,517	376,615
	8,963	8,937	8,931
256,368	178,787	145,478	164,667
1,023	3,640	2,619	4,306
\$3,932,628	\$3,304,245	\$2,988,361	\$3,840,966



\$15,497	\$15,034	\$14,019	\$15,581
1,312	1,392	913	967
23,098	17,608	16,507	22,790
11,733	8,732	7,551	10,973
7,788	6,725	5,224	5,733
4,046	2,820	2,247	2,515
23	89	83	99
\$63,497	\$52,400	\$46,544	\$58,658

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Fair Values by Type of Investment, Last Ten Fiscal Years (cont.)

(in thousands)

System	2017	2016	2015	2014	2013	2012
HPORS						
CAPP Investment Pool ¹	\$ 136,350					
<i>Fixed Income:</i>						
Retirement Funds Bond Pool (RFBP)		\$ 30,235	\$ 28,714	\$ 27,240	\$ 24,239	\$ 24,653
Short Term Investment Pool (STIP)	3,025	3,972	2,012	2,585	1,355	847
<i>Equities:</i>						
Montana Domestic Equity Pool (MDEP)		48,312	51,060	49,217	41,883	36,840
Montana International Equity Pool (MTIP)		19,766	21,346	22,336	18,165	15,732
Montana Private Equity Pool (MPEP)		14,284	13,757	13,184	13,673	12,958
<i>Alternative Investments:</i>						
Montana Real Estate Pool (MTRP)		11,830	11,349	10,862	10,031	7,963
Structured Investment Vehicles (SIV)			17	29	18	14
Total	\$ 139,375	\$ 128,399	\$ 128,255	\$ 125,453	\$ 109,364	\$ 99,007
SRS						
CAPP Investment Pool ¹	\$ 321,984					
<i>Fixed Income:</i>						
Retirement Funds Bond Pool (RFBP)		\$ 70,501	\$ 65,674	\$ 61,417	\$ 53,724	\$ 53,636
Short Term Investment Pool (STIP)	8,276	8,097	6,236	6,984	3,986	2,715
<i>Equities:</i>						
Montana Domestic Equity Pool (MDEP)		112,653	116,812	110,982	92,868	80,065
Montana International Equity Pool (MTIP)		46,091	48,818	50,346	40,321	34,234
Montana Private Equity Pool (MPEP)		33,307	31,447	29,720	30,325	28,179
<i>Alternative Investments:</i>						
Montana Real Estate Pool (MTRP)		27,586	25,966	24,475	22,245	17,308
Structured Investment Vehicles (SIV)			54	77	52	44
Total	\$ 330,260	\$ 298,235	\$ 295,007	\$ 284,001	\$ 243,521	\$ 216,181
GWPORS						
CAPP Investment Pool ¹	\$ 171,204					
<i>Fixed Income:</i>						
Retirement Funds Bond Pool (RFBP)		\$ 36,325	\$ 32,954	\$ 29,848	\$ 25,466	\$ 24,510
Short Term Investment Pool (STIP)	3,940	4,716	3,132	3,546	1,896	1,476
<i>Equities:</i>						
Montana Domestic Equity Pool (MDEP)		58,041	58,608	53,925	44,058	36,685
Montana International Equity Pool (MTIP)		23,748	24,481	24,482	19,106	15,697
Montana Private Equity Pool (MPEP)		17,161	15,792	14,481	14,411	12,940
<i>Alternative Investments:</i>						
Montana Real Estate Pool (MTRP)		14,213	13,014	11,906	10,600	8,036
Structured Investment Vehicles (SIV)			27	39	25	24
Total	\$ 175,144	\$ 154,204	\$ 148,008	\$ 138,227	\$ 115,562	\$ 99,368

¹Effective FY2017, the structure of plan investments was made more efficient by creating and utilizing a Consolidated Asset Pension Plan (CAPP) for all Defined Benefit Plans.

STATISTICAL SECTION

2011	2010	2009	2008
\$ 24,318	\$ 24,091	\$ 22,471	\$ 25,614
1,521	1,461	774	1,014
35,969	27,848	26,680	37,406
18,258	13,815	12,387	18,307
12,136	10,751	8,419	9,429
6,313	4,466	3,613	4,127
26	94	70	104
<u>\$ 98,541</u>	<u>\$ 82,526</u>	<u>\$ 74,414</u>	<u>\$ 96,001</u>

\$ 51,323	\$ 49,172	\$ 45,693	\$ 50,063
4,719	4,473	2,370	3,300
76,580	58,159	53,630	73,074
38,871	28,703	24,673	35,060
25,806	22,037	17,060	18,271
13,434	9,259	7,311	8,054
82	287	215	340
<u>\$ 210,815</u>	<u>\$ 172,090</u>	<u>\$ 150,952</u>	<u>\$ 188,162</u>

\$ 22,834	\$ 20,691	\$ 18,518	\$ 19,243
2,257	2,548	1,514	1,761
34,017	24,643	21,722	28,272
17,252	12,513	10,000	13,545
11,524	9,262	6,949	7,008
6,003	3,954	2,981	3,115
39	164	137	181
<u>\$ 93,926</u>	<u>\$ 73,775</u>	<u>\$ 61,821</u>	<u>\$ 73,125</u>

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Fair Values by Type of Investment, Last Ten Fiscal Years (cont.)

(in thousands)

System	2017	2016	2015	2014	2013	2012
MPORS						
CAPP Investment Pool ¹	\$ 360,476					
<i>Fixed Income:</i>						
Retirement Funds Bond Pool (RFBP)		\$ 77,621	\$ 71,807	\$ 66,377	\$ 57,237	\$ 56,431
Short Term Investment Pool (STIP)	9,147	9,642	5,189	6,007	2,819	1,472
<i>Equities:</i>						
Montana Domestic Equity Pool (MDEP)		124,032	127,640	119,961	98,916	84,109
Montana International Equity Pool (MTIP)		50,746	53,385	54,440	42,936	35,975
Montana Private Equity Pool (MPEP)		36,671	34,373	32,111	32,305	29,657
<i>Alternative Investments:</i>						
Montana Real Estate Pool (MTRP)		30,372	28,401	26,516	23,681	18,220
Structured Investment Vehicles (SIV)			45	67	37	24
Total	\$ 369,623	\$ 329,084	\$ 320,840	\$ 305,479	\$ 257,931	\$ 225,888
FURS						
CAPP Investment Pool	\$ 371,014					
<i>Fixed Income:</i>						
Retirement Funds Bond Pool (RFBP)		\$ 79,532	\$ 72,899	\$ 66,856	\$ 57,369	\$ 56,219
Short Term Investment Pool (STIP)	9,430	9,563	5,972	6,327	3,077	1,632
<i>Equities:</i>						
Montana Domestic Equity Pool (MDEP)		127,086	129,543	120,837	99,213	83,940
Montana International Equity Pool (MTIP)		51,996	54,178	54,855	43,017	35,869
Montana Private Equity Pool (MPEP)		37,573	34,900	32,332	32,423	29,561
<i>Alternative Investments:</i>						
Montana Real Estate Pool (MTRP)		31,120	28,829	26,667	23,771	18,175
Structured Investment Vehicles (SIV)			51	70	40	26
Total	\$ 380,444	\$ 336,870	\$ 326,372	\$ 307,944	\$ 258,910	\$ 225,422
VFCA						
CAPP Investment Pool ¹	\$ 35,427					
<i>Fixed Income:</i>						
Retirement Funds Bond Pool (RFBP)		\$ 7,520	\$ 7,181	\$ 6,834	\$ 6,092	\$ 6,373
Short Term Investment Pool (STIP)	954	2,679	2,350	2,322	1,949	1,704
<i>Equities:</i>						
Montana Domestic Equity Pool (MDEP)		12,017	12,759	12,354	10,544	9,516
Montana International Equity Pool (MTIP)		4,917	5,339	5,603	4,559	4,066
Montana Private Equity Pool (MPEP)		3,553	3,439	3,297	3,436	3,348
<i>Alternative Investments:</i>						
Montana Real Estate Pool (MTRP)		2,943	2,840	2,726	2,491	2,057
Structured Investment Vehicles (SIV)			20	26	26	28
Total	\$ 36,381	\$ 33,629	\$ 33,928	\$ 33,162	\$ 29,097	\$ 27,092

¹Effective FY2017, the structure of plan investments was made more efficient by creating and utilizing a Consolidated Asset Pension Pool (CAPP) for all defined Benefit Plans.

STATISTICAL SECTION

2011	2010	2009	2008
\$ 53,729	\$ 51,742	\$ 45,995	\$ 51,238
2,593	2,305	920	85
79,542	59,532	54,681	75,279
40,334	29,350	25,207	36,707
26,844	23,192	17,242	18,999
13,981	9,547	7,437	8,274
45	148	83	9
\$ 217,068	\$ 175,816	\$ 151,565	\$ 190,591

\$ 53,467	\$ 50,657	\$ 45,160	\$ 49,419
2,766	2,649	1,268	1,573
78,947	58,543	53,532	72,476
40,044	29,067	24,862	34,970
26,635	22,703	16,890	18,175
13,869	9,403	7,260	7,962
48	170	115	162
\$ 215,776	\$ 173,192	\$ 149,087	\$ 184,737

\$ 6,415	\$ 6,379	\$ 5,742	\$ 6,609
1,655	1,385	1,571	1,404
9,376	7,245	6,836	9,645
4,753	3,567	3,140	4,731
3,145	2,806	2,115	2,411
1,637	1,124	898	1,047
29	89	142	145
\$ 27,010	\$ 22,595	\$ 20,444	\$ 25,992

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Fair Values by Type of Investment, Last Ten Fiscal Years (cont.)

(in thousands)

System	2017	2016	2015	2014	2013	2012
PERS-DCRP¹						
<i>Fixed Income:</i>						
Short Term Investment Pool (STIP) ²	\$ 1,054	\$ 697	\$ 1,064	\$ 1,206	\$ 3,742	\$ 3,512
<i>Alternative Investments:</i>						
Defined Contributions Fixed Annuity	14,155	12,750	10,197	10,015	10,573	9,500
Defined Contributions Variable Annuity	177,998	141,300	131,649	117,713	90,794	73,769
Structured Investment Vehicles (SIV)			9	13	49	57
Total	\$ 193,207	\$ 154,747	\$ 142,919	\$ 128,947	\$ 105,158	\$ 86,838
DEFERRED COMPENSATION PLAN						
<i>Fixed Income:</i>						
Short Term Investment Pool (STIP) ²	\$ 29	\$ 189	\$ 659	\$ 944	\$ 1,301	\$ 1,405
<i>Alternative Investments:</i>						
Deferred Comp Fixed Annuity	238,058	238,995	232,527	235,981	246,331	246,315
Deferred Comp Variable Annuity	241,505	209,135	206,925	196,453	151,259	129,922
Deferred Comp Life Insurance	12	12	12	12	12	12
Structured Investment Vehicles (SIV)			6	11	17	23
Total	\$ 479,604	\$ 448,331	\$ 440,129	\$ 433,401	\$ 398,920	\$ 377,677

¹ Effective FY2014, the DCRP-Disability, included in the PERS-DCRP, was changed to PERS-DCRP Disability OPEB and reported as a separate Defined Benefit Plan.

² Effective FY2014, STIP was included as an investment option for the DCRP and Deferred Compensation plans.

STATISTICAL SECTION

	2011	2010	2009	2008
\$	3,308 \$	2,774 \$	2,464 \$	2,015
	7,971	6,725	4,820	3,128
	67,271	49,946	38,198	39,622
	56	167	205	188
\$	78,606 \$	59,612 \$	45,687 \$	44,953
\$	953 \$	808 \$	763 \$	697
	224,800	213,414	189,421	181,740
	135,180	106,893	89,388	115,151
	12	12	12	12
	16	49	63	65
\$	360,961 \$	321,176 \$	279,648 \$	297,665

STATISTICAL SECTION

This page intentionally left blank

Public Employees' Retirement Board

A Component Unit of the State of Montana
Schedule of Contribution Rate History

PERS-DBRP

Fiscal Year	State & Universities		Local Government		School Districts		
	Member	Employer	Employer	State	Employer	State	
	Hired <07/01/11		Hired ≥07/01/11				
2017	7.900%	7.900%	8.470%	8.370%	0.100%	8.100%	0.370%
2016	7.900%	7.900%	8.370%	8.270%	0.100%	8.000%	0.370%
2015	7.900%	7.900%	8.270%	8.170%	0.100%	7.900%	0.370%
2014	7.900%	7.900%	8.170%	8.070%	0.100%	7.800%	0.370%
2012-2013	6.900%	7.900%	7.170%	7.070%	0.100%	6.800%	0.370%
2010-2011	6.900%		7.170%	7.070%	0.100%	6.800%	0.370%
2008-2009	6.900%		7.035%	6.935%	0.100%	6.800%	0.235%
2000-2007	6.900%		6.900%	6.800%	0.100%	6.800%	0.100%
1998-1999	6.800%		6.800%	6.700%	0.100%	6.700%	0.100%
1994-1997	6.700%		6.700%	6.700%		6.700%	
1993	6.550%		6.550%	6.550%		6.550%	
1992	6.417%		6.417%	6.417%		6.417%	
1991	6.300%		6.417%	6.417%		6.417%	
1990	6.150%		6.417%	6.417%		6.417%	
1984-1989	6.000%		6.417%	6.417%		6.417%	
1982-1983	6.000%		6.320%	6.320%		6.320%	
1979-1981	6.000%		6.200%	6.200%		6.200%	
1978	6.000%		5.950%	5.950%		5.950%	
1977	6.000%		5.550%	5.550%		5.550%	
1976	6.000%		5.200%	5.200%		5.200%	
1974-1975	5.750%		4.900%	4.900%		4.900%	
1972-1973	5.750%		4.600%	4.600%		4.600%	
1970-1971	5.750%		4.300%	4.300%		4.300%	
1968-1969	5.750%		3.800%	3.800%		3.800%	
1947-1967 *	2.5%-9.6%		3.300%	3.300%		3.300%	
1945-1947 *	2.5%-9.6%		3.000%	3.000%		3.000%	

*1945 - 1967 Member Contributions were based on age and gender.

JRS

Fiscal Year	Member	Employer
1998-2017	7.000%	25.810%
1993-1997	7.000%	6.000%
1968-1992	6.000%	6.000%

Prior to 1998 the employer contributed 6% and additional contributions were received based on a portion of the District Court filing fees. In 1998 the filing fees were eliminated and the employer rate was increased to 25.81%.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Contribution Rate History (cont.)

HPORS

Fiscal Year	Member			
	Non-GABA	GABA	Employer	State
2017	13.000%	13.050%	28.150%	10.180%
2016	12.000%	12.050%	28.150%	10.180%
2015	11.000%	11.050%	28.150%	10.180%
2014	10.000%	10.050%	28.150%	10.180%
1998-2013	9.000%	9.050%	26.150%	10.180%
1992-1997	9.000%		26.100%	10.180%
1991	7.590%		26.100%	10.180%
1986-1990	7.590%		16.570%	10.180%
1982-1985	6.500%		16.570%	
1976-1981	6.500%		16.000%	
1975	6.500%		15.000%	
1971-1974	5.000%		8.000%	

SRS

Fiscal Year	Member	Employer
2010-2017	9.245%	10.115%
2008-2009	9.245%	9.825%
1998-2007	9.245%	9.535%
1997	7.865%	8.535%
1996	7.865%	8.535%
1986-1995	7.000%	7.670%
1982-1985	7.000%	7.620%
1975-1981	7.000%	7.550%

GWPORS

Fiscal Year	Member	Employer
2003-2017	10.560%	9.000%
1998-2002	8.500%	9.000%
1996-1997	7.900%	8.150%
1986-1995	7.900%	7.150%
1982-1985	7.000%	7.150%
1964-1981	7.000%	7.000%

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Contribution Rate History (cont.)

MPORS

Fiscal Year	Member				Employer	State
	Hired <7/1/75	Hired >6/30/75	Hired >6/30/79	Hired >6/30/97 GABA		
2000-2017	5.800%	7.000%	8.500%	9.000%	14.410%	29.370%
1998-1999	7.800%	9.000%	10.500%	11.000%	14.410%	29.370%
1997	7.800%	9.000%	10.500%		14.360%	29.370%
1994-1996	7.800%	9.000%	10.500%		14.360%	15.660%
1993	7.800%	9.000%	10.500%		13.920%	15.660%
1992	6.000%	7.200%	8.700%		13.920%	15.660%
1986-1991	6.000%	6.000%	7.500%		13.020%	15.060%
1982-1985	6.000%	6.000%	7.500%		14.040%	14.040%
1980-1981	6.000%	6.000%	7.500%		14.000%	14.000%
1978-1979	6.000%	6.000%			12.000%	12.000%
1976-1977	6.000%	6.000%			11.000%	12.000%
1974-1975	6.000%				11.000%	12.000%

FURS

Fiscal Year	Member			State
	Non-GABA	GABA	Employer	
1998-2017	9.500%	10.700%	14.360%	32.610%
1997	7.800%		14.360%	32.610%
1996	7.800%		14.360%	24.210%
1995	6.000%		13.020%	24.210%
1992-1994	6.000%		13.020%	23.270%
1986-1991	6.000%		13.020%	22.980%
1984-1985	6.000%		18.000%	18.000%
1983	6.000%		15.000%	15.000%
1981-1982	6.000%		12.000%	12.000%

PERS-DCRP

Fiscal Year	State & University			Local Government		School Districts	
	Member		Employer	Employer	State	Employer	State
	Hired <07/01/11	Hired ≥07/01/11					
2017	7.900%	7.900%	8.470%	8.370%	0.100%	8.100%	0.370%
2016	7.900%	7.900%	8.370%	8.270%	0.100%	8.000%	0.370%
2015	7.900%	7.900%	8.270%	8.170%	0.100%	7.900%	0.370%
2014	7.900%	7.900%	8.170%	8.070%	0.100%	7.800%	0.370%
2012-2013	6.900%	7.900%	7.170%	7.070%	0.100%	6.800%	0.370%
2010-2011	6.900%		7.170%	7.070%	0.100%	6.800%	0.370%
2008-2009	6.900%		7.035%	6.935%	0.100%	6.800%	0.235%
2003-2007	6.900%		6.900%	6.800%	0.100%	6.800%	0.100%

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

History of Membership in Retirement Plans, Last Ten Fiscal Years

System	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
PERS-DBRP										
Active	29,395	28,390	28,237	28,229	28,401	28,548	28,659	28,834	28,983	28,293
Retirees/Beneficiaries	21,805	21,333	20,681	20,081	19,451	18,738	18,123	17,512	17,075	16,627
Term-Non-Vested	16,659	10,031	8,839	7,666	6,712	6,164	5,787	5,402	5,670	6,268
Term-Vested	3,677	3,062	2,925	2,825	2,686	2,560	2,535	2,471	2,476	2,579
Total	71,536	62,816	60,682	58,801	57,250	56,010	55,104	54,219	54,204	53,767

The Term-Non-Vested count for fiscal year 2017 includes dormant accounts that were previously not counted.

JRS										
Active	56	55	55	55	54	54	54	51	51	51
Retirees/Beneficiaries	68	68	67	67	65	56	58	55	55	50
Term-Non-Vested	1									
Term-Vested	2	2	2	1				1	1	5
Total	127	125	124	123	119	110	112	107	107	106

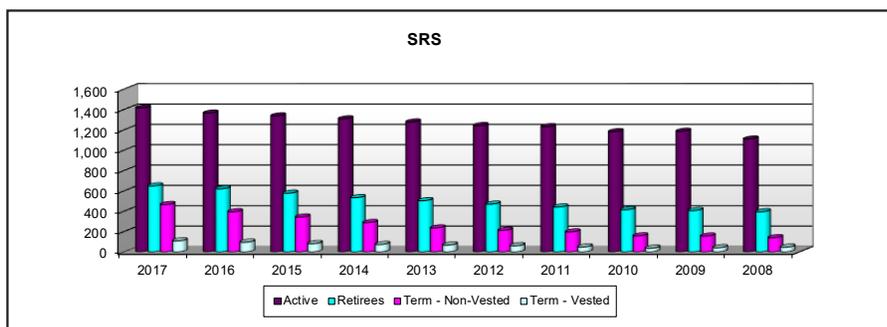
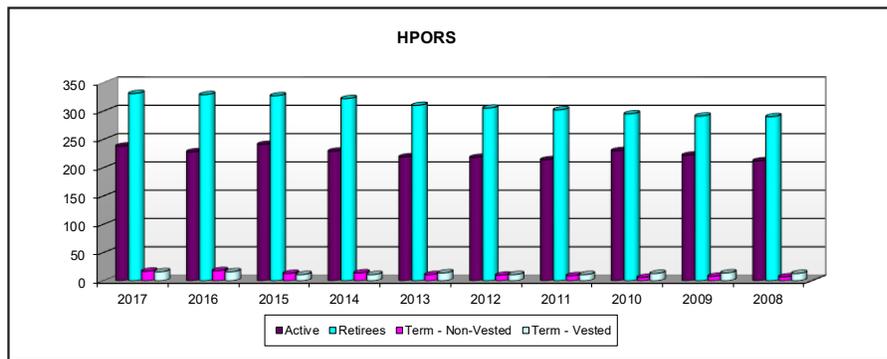
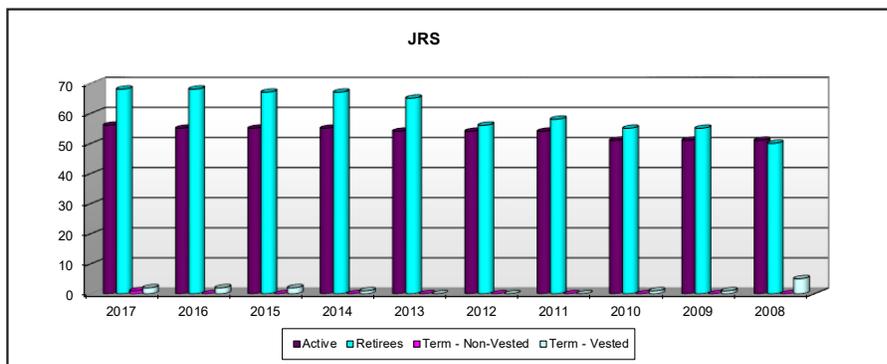
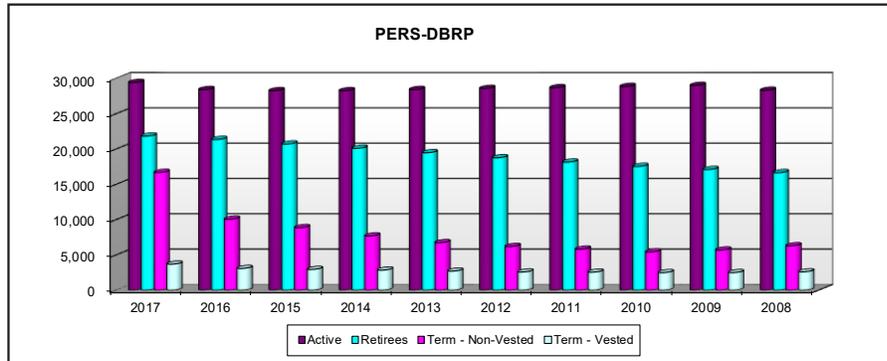
HPORS										
Active	238	228	241	229	219	218	214	230	222	212
Retirees/Beneficiaries	331	329	327	322	310	305	302	295	291	290
Term-Non-Vested	17	18	13	14	11	10	9	6	8	7
Term-Vested	16	16	11	11	14	11	11	13	14	13
Total	602	591	592	576	554	544	536	544	535	522

SRS										
Active	1,415	1,364	1,336	1,307	1,276	1,241	1,230	1,181	1,185	1,109
Retirees/Beneficiaries	648	620	577	533	503	469	441	415	406	394
Term-Non-Vested	465	394	342	288	235	212	196	157	155	139
Term-Vested	108	95	81	73	67	60	48	36	41	46
Total	2,636	2,473	2,336	2,201	2,081	1,982	1,915	1,789	1,787	1,688

Public Employees' Retirement Board

A Component Unit of the State of Montana

History of Membership in Retirement Plans, Last Ten Fiscal Years



STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

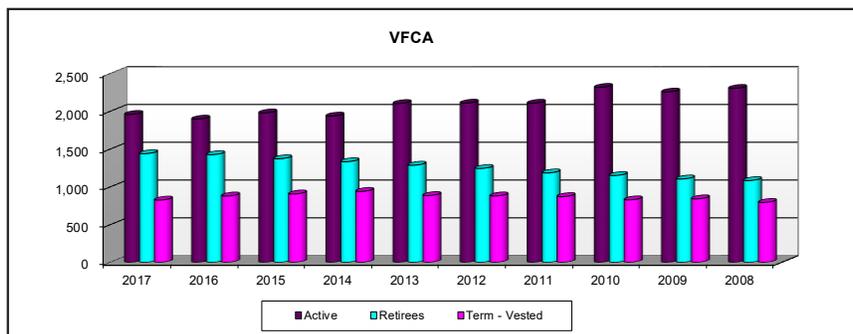
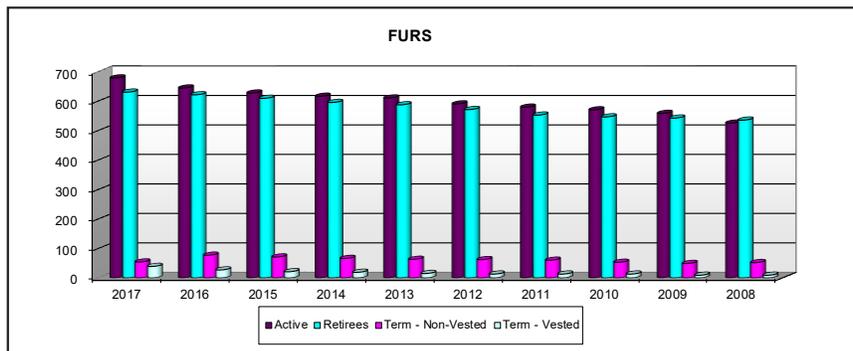
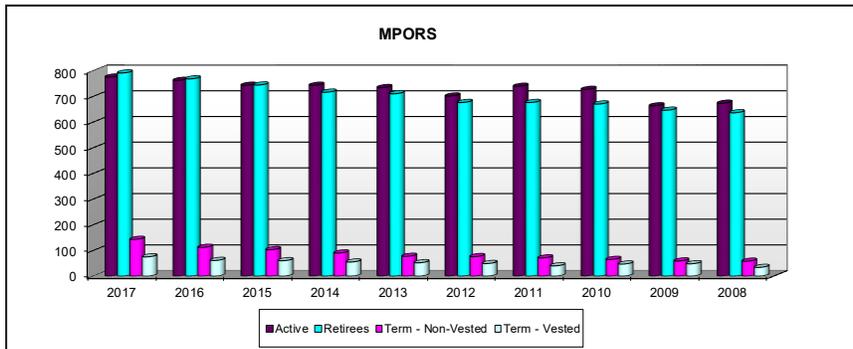
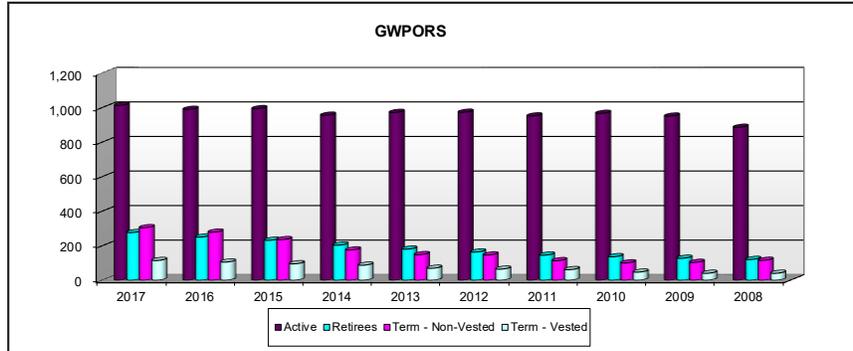
History of Membership in Retirement Plans, Last Ten Fiscal Years (cont.)

System	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
GWPORS										
Active	1,012	989	993	955	971	972	951	966	950	885
Retirees/Beneficiaries	276	250	231	203	180	163	145	136	127	120
Term-Non-Vested	304	278	235	175	148	146	113	100	103	115
Term-Vested	114	105	95	87	69	64	61	47	40	40
Total	1,706	1,622	1,554	1,420	1,368	1,345	1,270	1,249	1,220	1,160
MPORS										
Active	775	762	743	743	734	701	739	727	663	673
Retirees/Beneficiaries	791	768	744	716	710	676	676	670	646	636
Term-Non-Vested	143	112	103	90	77	76	71	65	59	58
Term-Vested	75	61	60	55	52	49	40	47	48	34
Total	1,784	1,703	1,650	1,604	1,573	1,502	1,526	1,509	1,416	1,401
FURS										
Active	678	644	627	616	610	590	579	570	558	525
Retirees/Beneficiaries	630	621	609	595	587	571	552	546	542	535
Term-Non-Vested	54	77	71	66	63	62	60	53	49	52
Term-Vested	39	27	21	19	15	13	13	13	9	9
Total	1,401	1,369	1,328	1,296	1,275	1,236	1,204	1,182	1,158	1,121
VFCA										
Active	1,957	1,895	1,977	1,935	2,101	2,106	2,105	2,315	2,253	2,301
Retirees/Beneficiaries	1,438	1,425	1,371	1,332	1,285	1,242	1,183	1,149	1,103	1,082
Term-Vested	824	878	905	939	884	879	870	827	840	793
Total	4,219	4,198	4,253	4,206	4,270	4,227	4,158	4,291	4,196	4,176

Public Employees' Retirement Board

A Component Unit of the State of Montana

History of Membership in Retirement Plans, Last Ten Fiscal Years



STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Benefit Expenses and Refunds by Type, Last Ten Years

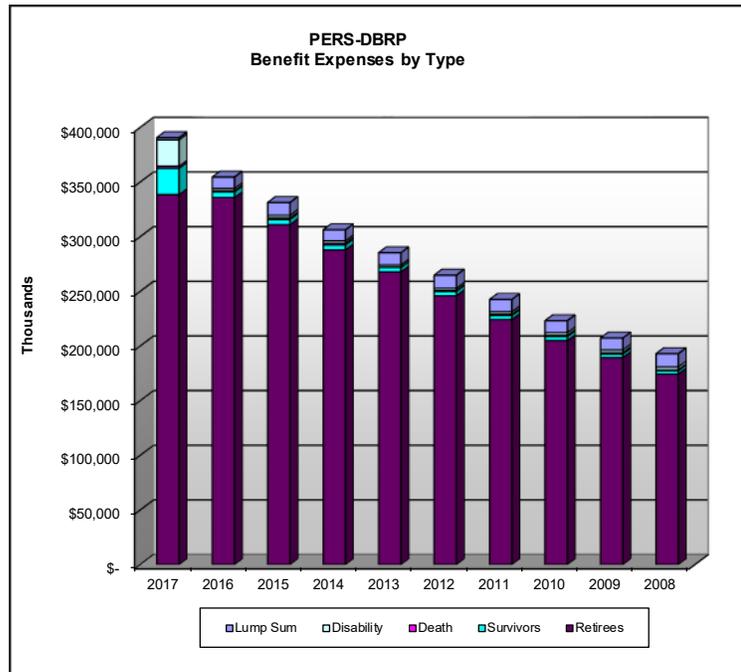
(in thousands)

System	2017	2016	2015	2014	2013	2012	2011
PERS-DBRP							
<i>Benefit Expenses</i>							
Retirees	\$ 338,438	\$ 335,806	\$ 311,019	\$ 287,895	\$ 267,690	\$ 245,959	\$ 224,108
Survivors ¹	24,082	5,119	4,717	4,512	4,240	3,968	3,748
Disability	1,873	2,045	2,301	2,048	1,922	2,065	2,253
<i>Refunds</i>							
Death	1,962	1,134	1,465	1,728	169	770	1,114
Lump Sum	12,252	10,379	11,688	10,070	11,254	11,991	11,302
Total	\$ 378,607	\$ 354,483	\$ 331,190	\$ 306,253	\$ 285,275	\$ 264,753	\$ 242,525
Number of Lump Sum	1,269	1,717	1,661	1,809	2,237	2,307	1,998
JRS							
<i>Benefit Expenses</i>							
Retirees	\$ 2,645	\$ 3,278	\$ 2,928	\$ 2,911	\$ 2,478	\$ 2,291	\$ 2,190
Survivors ¹	849	26	113	112	75	53	50
Disability	60	109					
<i>Refunds</i>							
Death		3					
Lump Sum							
Total	\$ 3,554	\$ 3,416	\$ 3,041	\$ 3,023	\$ 2,553	\$ 2,344	\$ 2,240
Number of Lump Sum							
HPORS							
<i>Benefit Expenses</i>							
Retirees	\$ 9,473	\$ 10,053	\$ 9,498	\$ 8,894	\$ 8,270	\$ 7,794	\$ 7,462
Survivors ¹	1,386	245	238	238	248	239	233
Disability	177	181	196	212	191	188	162
<i>Refunds</i>							
Death		3				2	9
Lump Sum	245	94	69	84	51	65	121
Total	\$ 11,281	\$ 10,576	\$ 10,001	\$ 9,428	\$ 8,760	\$ 8,288	\$ 7,987
Number of Lump Sum	9	4	4	5	5	8	5
SRS							
<i>Benefit Expenses</i>							
Retirees	\$ 14,861	\$ 14,123	\$ 12,560	\$ 11,482	\$ 10,430	\$ 9,356	\$ 8,273
Survivors ¹	1,071	532	471	403	392	347	292
Disability	744	792	988	802	761	676	665
<i>Refunds</i>							
Death	24	29	1	45			7
Lump Sum	1,383	1,029	1,217	1,185	1,159	1,248	938
Total	\$ 18,083	\$ 16,505	\$ 15,237	\$ 13,917	\$ 12,742	\$ 11,627	\$ 10,175
Number of Lump Sum	98	110	115	107	137	144	102

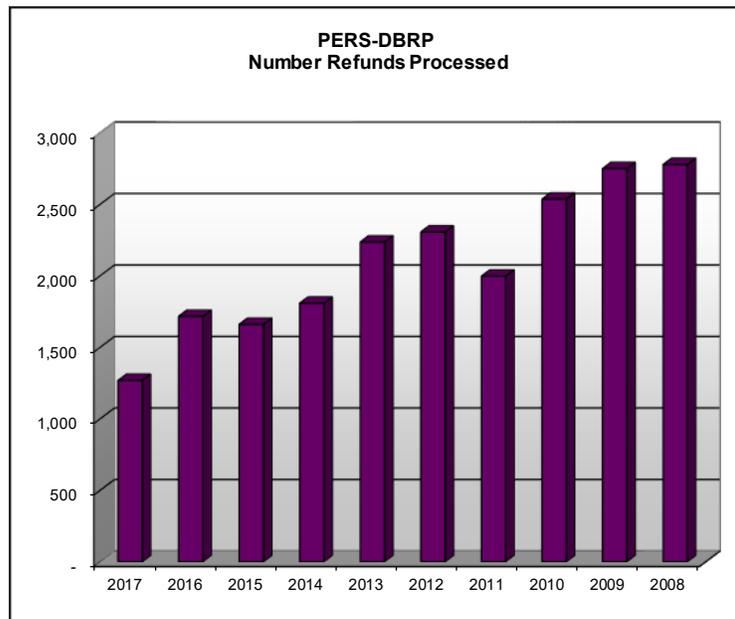
¹The amount of survivors increased in fiscal year 2017 due to the way the newly implemented computer system categorizes survivors.

STATISTICAL SECTION

2010	2009	2008
\$ 204,885	\$ 189,360	\$ 174,357
3,692	3,244	3,043
2,481	2,521	2,583
1,128	1,277	832
10,967	10,821	12,124
\$ 223,153	\$ 207,223	\$ 192,939
2,537	2,751	2,779
<hr/>		
\$ 2,069	\$ 1,926	\$ 1,486
49	46	335
		8
<hr/>		
\$ 2,118	\$ 1,972	\$ 1,829



\$ 7,198	\$ 6,821	\$ 6,505
216	191	176
143	115	132
58	26	61
\$ 7,615	\$ 7,153	\$ 6,874
4	1	5
<hr/>		
\$ 7,291	\$ 6,878	\$ 6,435
293	272	215
693	670	593
	38	
766	968	722
\$ 9,043	\$ 8,826	\$ 7,965
125	141	146



STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Benefit Expenses and Refunds by Type, Last Ten Years (cont.)

(in thousands)

System	2017	2016	2015	2014	2013	2012	2011
GWPORS							
Benefit Expenses							
Retirees	\$ 5,233	\$ 4,910	\$ 4,412	\$ 3,789	\$ 3,497	\$ 3,106	\$ 2,801
Survivors ¹	487	86	88	61	59	80	54
Disability	66	71	50	60	19	7	2
Refunds							
Death	24	1		69		10	6
Lump Sum	1,036	1,066	801	1,187	841	1,227	991
Total	\$ 6,846	\$ 6,134	\$ 5,351	\$ 5,166	\$ 4,416	\$ 4,430	\$ 3,854
Number of Lump Sum	64	97	103	110	122	130	114
MPORS							
Benefit Expenses							
Retirees	\$ 20,628	\$ 20,548	\$ 19,294	\$ 18,245	\$ 17,269	\$ 16,195	\$ 15,835
Survivors ¹	1,720	747	696	675	656	654	629
Disability	850	663	568	530	538	504	546
Refunds							
Death	4	3	2			1	3
DROP	273	819	1,446	469	1,177	352	449
Lump Sum	1,043	421	733	549	656	355	498
Total	\$ 24,518	\$ 23,201	\$ 22,739	\$ 20,468	\$ 20,296	\$ 18,061	\$ 17,960
Number of Lump Sum	17	29	37	36	44	37	36
Number of DROP	2	5	10	5	7	4	5
FURS							
Benefit Expenses							
Retirees	\$ 18,470	\$ 20,189	\$ 18,986	\$ 18,106	\$ 16,965	\$ 15,884	\$ 12,554
Survivors ¹	3,651	478	484	490	478	466	479
Disability	211	224	271	252	227	169	2,560
Refunds							
Death	4	5	4	24			12
Lump Sum	168	46	2	166	73	119	128
Total	\$ 22,504	\$ 20,942	\$ 19,747	\$ 19,038	\$ 17,743	\$ 16,638	\$ 15,733
Number of Lump Sum	8	8	8	9	6	13	6
VFCA							
Benefit Expenses							
Retirees	\$ 2,858	\$ 2,623	\$ 2,369	\$ 2,281	\$ 2,819	\$ 2,046	\$ 1,938
Survivors							
Disability							
Total	\$ 2,858	\$ 2,623	\$ 2,369	\$ 2,281	\$ 2,819	\$ 2,046	\$ 1,938

¹The amount of the survivors increased in fiscal year 2017 due to the way the newly implemented computer system categorizes survivors.

STATISTICAL SECTION

2010	2009	2008
\$ 2,566	\$ 2,427	\$ 2,208
49	41	33
3		9
4	53	21
879	840	643
\$ 3,501	\$ 3,361	\$ 2,914
143	110	113

\$ 14,652	\$ 13,960	\$ 12,827
613	560	547
462	340	333
407	148	3,777
442	794	513
\$ 16,576	\$ 15,802	\$ 17,997
39	42	34
5	5	20

\$ 14,031	\$ 13,428	\$ 12,788
427	433	442
140	126	124
86	70	116
\$ 14,684	\$ 14,057	\$ 13,470
8	13	16

\$ 1,848	\$ 1,779	\$ 1,710
9	1	7
\$ 1,857	\$ 1,780	\$ 1,717

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Distributions Processed, Last Ten Fiscal Years

(in thousands)

System	2017	2016	2015	2014	2013	2012	2011
PERS-DCRP							
Number of Retirements	32	27	20	26	35	4	8
Number of Deaths	8	11	5	8	5	1	
Number of Full Refunds	167	246	164	147	179	158	182
Amount Refunded	\$ 5,554	\$ 4,368	\$ 5,215	\$ 3,616	\$ 3,759	\$ 3,077	\$ 3,226
Number of Partial Refunds	45	52	46	57	60	35	75
Amount Refunded	\$ 1,251	\$ 931	\$ 698	\$ 967	\$ 436	\$ 323	\$ 393
Number of Forfeitures	114	115	91	72	75	98	124
Amount of Contributions Forfeited ¹	\$ 397	\$ 383	\$ 333	\$ 252	\$ 398	\$ 415	\$ 417

¹Members terminating with less than 5 years of membership service forfeit their employer contributions.

STATISTICAL SECTION

	<u>2010</u>	<u>2009</u>	<u>2008</u>
	35	3	6
	2	1	1
	116	145	106
\$	1,438	\$1,744	\$2,254
	13	3	10
\$	198	\$128	\$243
	94	121	134
\$	318	\$266	\$215

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2017

	Amount of Monthly Benefit	# of Retired Members	Type of Retirement		
			Regular	Disability	Survivor
PERS-DBRP	\$1-250	1,821	1,777	2	42
	\$251-500	3,381	3,298	31	52
	\$501-750	2,968	2,882	37	49
	\$751-1,000	2,289	2,234	21	34
	\$1,001-1,250	1,920	1,875	26	19
	\$1,251-1,500	1,448	1,419	12	17
	\$1,501-1,750	1,270	1,242	20	8
	\$1,751-2,000	1,099	1,083	5	11
	Over \$2,000	5,609	5,569	7	33
	Total	21,805	21,379	161	265

	Amount of Monthly Benefit	# of Retired Members	Type of Retirement		
			Regular	Disability	Survivor
PERS-DCRP Disability OPEB	\$1-250				
	\$251-500	1		1	
	\$501-750	1		1	
	\$751-1,000				
	\$1,001-1,250	1		1	
	\$1,251-1,500				
	\$1,501-1,750				
	\$1,751-2,000				
	Over \$2,000				
	Total	3		3	

	Amount of Monthly Benefit	# of Retired Members	Type of Retirement		
			Regular	Disability	Survivor
JRS	\$1-250				
	\$251-500				
	\$501-750	1	1		
	\$751-1,000				
	\$1,001-1,250	1			1
	\$1,251-1,500	5	5		
	\$1,501-1,750	3	3		
	\$1,751-2,000				
	Over \$2,000	58	55	1	2
	Total	68	64	1	3

¹Option Selected:

- 1 - Beneficiary receives lump sum of member's unused contributions
- 2 - Beneficiary receives 100 percent of member's reduced monthly benefit
- 3 - Beneficiary receives 50 percent of member's reduced monthly benefit
- 4 10 yrs - Guaranteed for the life of member or a minimum of 10 years after member's retirement
- 4 20 yrs - Guaranteed for the life of member or a minimum of 20 years after member's retirement
- Statutory - A surviving spouse or dependent child of a member of HPORS, MPORS, or FURS receiving benefits upon the death of the member
- Non-Increasing Annuity - An optional death benefit, payable for life to a PERS beneficiary who elects to receive a death payment as defined in §19-3-1202, MCA in lieu of a survivor benefit available under §19-3-1204, MCA

²For the purposes of this schedule Survivor is anyone receiving a monthly benefit that is not the original member.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2017

	Option Selected ¹							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
PERS-DBRP									
	1,317	326	64	22	70		22	1,806	15
	2,357	696	130	51	140		7	3,375	6
	1,989	641	155	58	123		2	2,966	2
	1,480	540	147	39	83			2,289	
	1,220	436	161	45	58			1,920	
	918	337	127	25	41			1,447	1
	769	330	115	30	26			1,270	
	630	311	117	19	22			1,099	
	3,128	1,435	744	133	169			5,609	
	13,808	5,052	1,760	422	732		31	21,781	24
<hr/>									
	Option Selected ¹								
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity	GABA ³	NON-GABA
PERS-DCRP									
Disability OPEB									
	1								1
	1								1
	1								1
	<hr/>								
	3								3
<hr/>									
	Option Selected ¹								
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity	GABA	NON-GABA
JRS									
		1							1
							1		1
	2	3						1	4
		2	1					2	1
	19	30	6		3			30	28
	21	36	7		3		1	33	35

³ GABA is not an option for PERS DCRP-Disability OPEB retired members

GABA - Members covered under the Guaranteed Annual Benefit Adjustment

NON-GABA - Members not covered under the Guaranteed Annual Benefit Adjustment

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2017

HPORS	Amount of Monthly Benefit	# of Retired Members	Type of Retirement		
			Regular	Disability	Survivor ²
	\$1-250	1			1
	\$251-500	7	7		
	\$501-750	6	3		3
	\$751-1,000	8	8		
	\$1,001-1,250	4	2		2
	\$1,251-1,500	9	9		
	\$1,501-1,750	10	10		
	\$1,751-2,000	16	15		1
	Over \$2,000	270	255	6	9
	Total	331	309	6	16

SRS	Amount of Monthly Benefit	# of Retired Members	Type of Retirement		
			Regular	Disability	Survivor ²
	\$1-250	20	16		4
	\$251-500	43	41	1	1
	\$501-750	47	44	1	2
	\$751-1,000	27	27		
	\$1,001-1,250	37	36		1
	\$1,251-1,500	36	34	1	1
	\$1,501-1,750	43	40	2	1
	\$1,751-2,000	43	34	5	4
	Over \$2,000	352	328	19	5
	Total	648	600	29	19

GWPORS	Amount of Monthly Benefit	# of Retired Members	Type of Retirement		
			Regular	Disability	Survivor ²
	\$1-250	2	2		
	\$251-500	22	20	1	1
	\$501-750	31	29		2
	\$751-1,000	29	26		3
	\$1,001-1,250	31	30		1
	\$1,251-1,500	26	23	1	2
	\$1,501-1,750	22	22		
	\$1,751-2,000	19	18	1	
	Over \$2,000	94	94		
	Total	276	264	3	9

¹Option Selected:

- 1 - Beneficiary receives lump sum of member's unused contributions
 - 2 - Beneficiary receives 100 percent of member's reduced monthly benefit
 - 3 - Beneficiary receives 50 percent of member's reduced monthly benefit
 - 4 10 yrs - Guaranteed for the life of member or a minimum of 10 years after member's retirement
 - 4 20 yrs - Guaranteed for the life of member or a minimum of 20 years after member's retirement
- Statutory - A surviving spouse or dependent child of a member of HPORS, MPORS, or FURS receiving benefits upon the death of the member
- Non-Increasing Annuity - An optional death benefit, payable for life to a PERS beneficiary who elects to receive a death payment as defined in §19-3-1202, MCA in lieu of a survivor benefit available under §19-3-1204, MCA

²For the purposes of this schedule Survivor is anyone receiving a monthly benefit that is not the original member.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2017

	Option Selected ¹							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
HPORS									
						1		1	
						7		3	4
						6		5	1
						8		5	3
						4		2	2
						9		6	3
						10		3	7
						16		10	6
						270		213	57
						331		248	83

	Option Selected ¹							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
SRS									
	12	6	2					20	
	14	21	5		3			43	
	24	17	3		3			47	
	13	11	2		1			27	
	18	14	3	1	1			37	
	15	17	2	1	1			36	
	19	19	3		2			43	
	20	17	3	2	1			43	
	184	103	37	14	14			352	
	319	225	60	18	26			648	

	Option Selected ¹							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
GWPORS									
	2							2	
	9	9	1	1	2			22	
	19	8	2		2			31	
	19	5	3		2			29	
	14	6	9	1	1			31	
	14	8	4					26	
	13	6	3					22	
	8	10	1					19	
	41	33	12	1	7			94	
	139	85	35	3	14			276	

GABA - Members covered under the Guaranteed Annual Benefit Adjustment

NON-GABA - Members not covered under the Guaranteed Annual Benefit Adjustment

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2017

	Amount of Monthly Benefit	# of Retired Members ²	Type of Retirement		
			Regular	Disability	Survivor ⁴
MPORS					
	\$1-250	19	19		
	\$251-500	13	13		
	\$501-750	19	19		
	\$751-1,000	17	16		1
	\$1,001-1,250	10	10		
	\$1,251-1,500	11	11		
	\$1,501-1,750	35	34		1
	\$1,751-2,000	86	74	1	13
	Over \$2,000	581	531	29	19
	Total	791	727	30	34
FURS					
	\$1-250	10	9		1
	\$251-500	40	39		1
	\$501-750	5	5		
	\$751-1,000	6	6		
	\$1,001-1,250	8	8		
	\$1,251-1,500	7	7		
	\$1,501-1,750	25	23		2
	\$1,751-2,000	38	36		2
	Over \$2,000	491	465	6	20
	Total	630	598	6	26
VFCA					
	\$1-250	1,420	1,417	1	2
	\$251-500	18	18		
	\$501-750				
	\$751-1,000				
	\$1,001-1,250				
	\$1,251-1,500				
	\$1,501-1,750				
	\$1,751-2,000				
	Over \$2,000				
	Total	1,438	1,435	1	2

¹Option Selected (excluding the VFCA):

- 1 - Beneficiary receives lump sum of member's unused contributions
- 2 - Beneficiary receives 100 percent of member's reduced monthly benefit
- 3 - Beneficiary receives 50 percent of member's reduced monthly benefit
- 4 10 yrs - Guaranteed for the life of member or a minimum of 10 years after member's retirement
- 4 20 yrs - Guaranteed for the life of member or a minimum of 20 years after member's retirement
- Statutory - A surviving spouse or dependent child of a member of HPORS, MPORS, or FURS receiving benefits upon the death of the member
- Non-Increasing Annuity - An optional death benefit, payable for life to a PERS beneficiary who elects to receive a death payment as defined in §19-3-1202, MCA in lieu of a survivor benefit available under §19-3-1204, MCA

²MPORS does not include DROP members.

³Option Selected VFCA:

- 1 - Member receiving monthly benefit
- 2 and Non-Increasing Annuity - Benefit paid to survivor equal to member's full or partial benefit. Benefit is limited to 40 months including any pension paid to member before death.

⁴For the purposes of this schedule Survivor is anyone receiving a monthly benefit that is not the original member.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2017

	Option Selected ¹							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
MPORS						18	1	18	1
						13		13	
						19		18	1
						17		17	
						10		10	
						11		11	
						35		30	5
						86		83	3
						581		535	46
						790		735	56
<hr/>									
	Option Selected ¹							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
FURS						10		6	4
						40		36	4
						5		5	
						6		6	
						8		7	1
						7		6	1
						25		25	
						38		37	1
						491		466	25
						630		594	36
<hr/>									
	Option Selected ³							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
VFCA						1,420			1,420
						18			18
						1,438			1,438

GABA - Members covered under the Guaranteed Annual Benefit Adjustment

NON-GABA - Members not covered under the Guaranteed Annual Benefit Adjustment

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Active Members by Age and Gender

As of June 30, 2017

System	Ages	Male	Female	Total	System	Ages	Male	Female	Total
PERS-DBRP	Under 20	42	59	101	GWPORS	Under 20	1		1
	20 - 29	1,198	1,576	2,774		20 - 29	136	39	175
	30 - 39	2,290	2,985	5,275		30 - 39	205	70	275
	40 - 49	2,564	3,469	6,033		40 - 49	214	59	273
	50 - 59	3,743	4,989	8,732		50 - 59	179	45	224
	60 - 69	2,261	2,742	5,003		60 - 69	42	16	58
	70 & Older	248	218	466		70 & Older	2		2
	¹ Unknown			1,011		¹ Unknown			4
Total	12,346	16,038	29,395	Total	779	229	1,012		
JRS	Under 20				MPORS ²	Under 20	1		1
	20 - 29					20 - 29	95	17	112
	30 - 39	1		1		30 - 39	222	15	237
	40 - 49	6	2	8		40 - 49	158	14	172
	50 - 59	12	11	23		50 - 59	60	3	63
	60 - 69	19	2	21		60 - 69	10		10
	70 & Older	2	1	3		70 & Older			
	¹ Unknown					¹ Unknown			129
Total	40	16	56	Total	546	49	724		
HPORS ³	Under 20				FURS	Under 20			
	20 - 29	34	5	39		20 - 29	77	3	80
	30 - 39	74	8	82		30 - 39	209	14	223
	40 - 49	68	2	70		40 - 49	185	2	187
	50 - 59	31	3	34		50 - 59	55	1	56
	60 - 69	3		3		60 - 69	16		16
	70 & Older					70 & Older			
	¹ Unknown					Unknown			116
Total	210	18	228	Total	542	20	678		
SRS	Under 20	5	4	9	PERS-DCRP	Under 20	2		2
	20 - 29	267	59	326		20 - 29	74	103	177
	30 - 39	327	73	400		30 - 39	257	376	633
	40 - 49	310	46	356		40 - 49	321	371	692
	50 - 59	197	43	240		50 - 59	308	353	661
	60 - 69	64	3	67		60 - 69	128	163	291
	70 & Older	2	1	3		70 & Older	18	6	24
	¹ Unknown			14		¹ Unknown			61
Total	1,172	229	1,415	Total	1,108	1,372	2,541		

¹ Membership data not received as of June 30, 2017.

² MPORS does not include DROP.

³ HPORS does not include DROP.

VFCA not included because membership data not required on members until retirement.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Retired Members by Age and Gender

As of June 30, 2017

System	Ages	Male	Female	Unknown	Total	System	Ages	Male	Female	Unknown	Total
PERS-DBRP	Under 20	1	1		2	GWPORS	Under 20				
	20 - 29	5	13		18		20 - 29	1	2		3
	30 - 39	29	32		61		30 - 39				
	40 - 49	45	52	1	98		40 - 49	2	1		3
	50 - 59	503	624	5	1,132		50 - 59	49	11		60
	60 - 69	3,880	4,746	23	8,649		60 - 69	102	28		130
	70 & Older	4,830	7,010	5	11,845		70 & Older	60	20		80
	Total	9,293	12,478	34	21,805		Total	214	62		276
JRS	Under 20					MPORS¹	Under 20	2	1		3
	20 - 29						20 - 29	1			1
	30 - 39						30 - 39	3	1		4
	40 - 49						40 - 49	36	18	2	56
	50 - 59		2		2		50 - 59	148	30	7	185
	60 - 69	14	8		22		60 - 69	219	45	4	268
	70 & Older	28	16		44		70 & Older	170	103	1	274
	Total	42	26		68		Total	579	198	14	791
HPORS	Under 20	1			1	FURS	Under 20				
	20 - 29						20 - 29				
	30 - 39		2		2		30 - 39	2	1		3
	40 - 49	19	6		25		40 - 49	17	7		24
	50 - 59	50	15	1	66		50 - 59	96	21	5	122
	60 - 69	54	13		67		60 - 69	181	25		206
	70 & Older	120	50		170		70 & Older	173	102		275
	Total	244	86	1	331		Total	469	156	5	630
SRS	Under 20	1			1	VFCA	Under 20				
	20 - 29		1		1		20 - 29				
	30 - 39		2		2		30 - 39				
	40 - 49	32	8	2	42		40 - 49				
	50 - 59	123	24	1	148		50 - 59	89	4	4	97
	60 - 69	256	36		292		60 - 69	558	41	5	604
	70 & Older	125	36	1	162		70 & Older	691	46		737
	Total	537	107	4	648		Total	1,338	91	9	1,438

¹ HPORS and MPORS does not include DROP.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years

PERS - Defined Benefit Retirement Plan

Retirement Effective Dates	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	\$ 179	\$ 1,114	\$ 2,369	\$ 3,072	\$ 4,202	\$ 5,486	\$ 6,063
Average HAC ¹	1,720	8,278	11,695	11,189	12,490	11,301	9,894
Number of retired members	30	161	163	153	141	174	221
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	1,554	834	1,497	2,071	3,083	4,642	3,168
Average HAC ¹	8,831	6,528	6,297	6,509	7,594	8,688	4,786
Number of retired members	35	168	169	180	148	181	266
Period 7/1/2014 - 6/30/2015							
Average monthly benefit	1,930	982	1,334	1,688	1,507	1,972	3,078
Average HAC ¹	1,806	2,320	2,553	2,775	3,066	3,098	3,948
Number of retired members	27	159	189	164	180	196	262
Period 7/1/2013 - 6/30/2014							
Average monthly benefit	3,243	1,233	1,888	2,001	2,247	2,533	3,010
Average HAC ¹	2,004	2,799	3,016	3,326	3,548	4,092	4,849
Number of retired members	45	214	201	186	188	192	199
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	2,508	1,315	1,782	1,950	1,582	2,174	3,229
Average HAC ¹	2,225	2,880	3,137	3,418	3,518	3,972	4,728
Number of retired members	48	183	221	169	186	173	263
Period 7/1/2011 - 6/30/2012							
Average monthly benefit	2,024	2,492	808	1,713	2,193	3,627	3,508
Average HAC ¹	1,634	2,746	2,831	3,232	3,319	4,157	4,543
Number of retired members	51	208	213	170	172	183	241
Period 7/1/2010 - 6/30/2011							
Average monthly benefit	2,529	1,322	1,260	1,238	2,501	2,843	3,125
Average HAC ¹	2,055	2,790	2,962	3,060	3,376	3,862	4,473
Number of retired members	43	170	181	163	148	179	293
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	1,941	1,702	2,512	3,309	2,423	2,306	3,637
Average HAC ¹	2,125	2,480	2,670	4,341	3,373	4,010	4,528
Number of retired members	49	163	150	149	114	137	163
Period 7/1/2008 - 6/30/2009							
Average monthly benefit	4,803	1,082	1,642	2,313	2,136	2,309	3,216
Average HAC ¹	2,164	2,614	2,921	3,052	3,324	3,860	4,377
Number of retired members	23	138	159	147	100	168	210
Period 7/1/2007 - 6/30/2008							
Average monthly benefit	534	478	931	1,026	2,160	2,310	3,062
Average HAC ¹	2,049	2,159	2,517	2,948	2,895	3,425	4,017
Number of retired members	21	162	169	161	125	180	196

¹HAC = Highest Average Compensation during any consecutive 36 months or 60 months dependent upon date member was hired.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Retirement Effective Dates	DC Disability OPEB						
	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit					\$ 2,206		
Average HAC ¹					5,446		
Number of retired members					1		
Period 7/1/2015 - 6/30/2016							
Average monthly benefit		\$ 1,243					
Average HAC ¹			5,581				
Number of retired members			1				
Period 7/1/2014 - 6/30/2015							
Average monthly benefit	\$ 577						
Average HAC ¹		4,019					
Number of retired members		2					
Period 7/1/2013 - 6/30/2014							
Average monthly benefit							
Average HAC ¹							
Number of retired members							
Period 7/1/2012 - 6/30/2013							
Average monthly benefit							
Average HAC ¹							
Number of retired members							
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		356	553				
Average HAC ¹		3,564	2,714				
Number of retired members		1	1				
Period 7/1/2010 - 6/30/2011							
Average monthly benefit							
Average HAC ¹							
Number of retired members							
Period 7/1/2009 - 6/30/2010							
Average monthly benefit			746				
Average HAC ¹			3,455				
Number of retired members			1				
Period 7/1/2008 - 6/30/2009							
Average monthly benefit				800			
Average HAC ¹				2,506			
Number of retired members				1			
Period 7/1/2007 - 6/30/2008							
Average monthly benefit							
Average HAC ¹							
Number of retired members							

¹HAC = Highest Average Compensation during any consecutive 36 months or 60 months dependent upon date member was hired.
 The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.
 The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Retirement Effective Dates	Judges' Retirement System						
	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit		\$ 2,015		\$ 4,913	\$ 11,721		
Average HAC ¹		10,112		10,465	19,815		
Number of retired members		1		2	2		
Period 7/1/2015 - 6/30/2016							
Average monthly benefit		1,587		9,917		\$ 5,319	\$ 6,417
Average HAC ¹		9,870		20,501		10,511	10,511
Number of retired members		1		2		1	1
Period 7/1/2014 - 6/30/2015							
Average monthly benefit					5,600		
Average HAC ¹					9,800		
Number of retired members					2		
Period 7/1/2013 - 6/30/2014							
Average monthly benefit				2,792	4,899	5,088	
Average HAC ¹				0	9,800	9,800	
Number of retired members				1	1	1	
Period 7/1/2012 - 6/30/2013							
Average monthly benefit			\$2,893	4,877	6,474	6,018	
Average HAC ¹			9,427	9,703	9,494	9,494	
Number of retired members			3	3	1	3	
Period 7/1/2011 - 6/30/2012							
Average monthly benefit							
Average HAC ¹							
Number of retired members							
Period 7/1/2010 - 6/30/2011							
Average monthly benefit		2,331	3,069	5,290		6,231	
Average HAC ¹		8,906	7,842	9,201		8,906	
Number of retired members		1	1	2		1	
Period 7/1/2009 - 6/30/2010							
Average monthly benefit					5,601		
Average HAC ¹					9,797		
Number of retired members					1		
Period 7/1/2008 - 6/30/2009							
Average monthly benefit		1,449	3,404	5,074	4,982		
Average HAC ¹		8,270	8,270	8,296	8,158		
Number of retired members		1	1	2	1		
Period 7/1/2007 - 6/30/2008							
Average monthly benefit			4,989				
Average HAC ¹			8,849				
Number of retired members			1				

¹HAC = Highest Average Compensation during any consecutive 36 months.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Highway Patrol Officers' Retirement System

Retirement Effective Dates	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit		\$ 3,471	\$ 3,623	\$ 4,071			
Average HAC ¹		10,667	6,007	5,838			
Number of retired members		2	2	2			
Period 7/1/2015 - 6/30/2016							
Average monthly benefit					6,364	\$ 4,310	
Average HAC ¹					11,841	6,079	
Number of retired members					8	2	
Period 7/1/2014 - 6/30/2015							
Average monthly benefit	\$ 1,581	1,113	2,810	3,475	4,315		
Average HAC ¹	5,049		5,412	2,852	6,227		
Number of retired members	2	1	1	4	2		
Period 7/1/2013 - 6/30/2014							
Average monthly benefit			479	2,348	3,330	5,043	
Average HAC ¹			3,557	4,559	5,859	6,641	
Number of retired members			1	1	9	2	
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	\$ 2,021				3,241	3,351	
Average HAC ¹	3,925				5,702	7,273	
Number of retired members	1				7	3	
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		711			3,108	4,119	
Average HAC ¹		4,714			5,440	5,383	
Number of retired members		1			1	2	
Period 7/1/2010 - 6/30/2011							
Average monthly benefit			1,799	2,676	3,220		
Average HAC ¹			4,354	4,815	5,355		
Number of retired members			2	3	3		
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	490	201		2,688	2,615	3,769	
Average HAC ¹	3,731	4,039		4,638	4,494	4,952	
Number of retired members	1	4		2	3	1	
Period 7/1/2008 - 6/30/2009							
Average monthly benefit	2,055	1,880		2,464		2,920	
Average HAC ¹	3,511	3,511		4,263		6,231	
Number of retired members	3	3		1		3	
Period 7/1/2007 - 6/30/2008							
Average monthly benefit	2,126	760		12,802	2,285	3,625	
Average HAC ¹	3,415	3,450		3,974	4,451	4,517	
Number of retired members	1	1		1	5	1	

¹HAC = Highest Average Compensation during any consecutive 36 months.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Sheriffs' Retirement System

Retirement Effective Dates	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	\$ 345	\$ 551	\$ 3,575	\$ 1,715	\$ 2,713	\$ 3,341	\$ 5,001
Average HAC ¹	3,310	3,776	9,625	4,103	5,444	5,569	6,705
Number of retired members	1	5	7	7	9	2	3
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	2,387	2,464	2,669	5,274	3,000	2,905	4,146
Average HAC ¹	5,026	7,058	7,936	8,886	5,538	4,905	5,596
Number of retired members	3	6	6	11	12	3	2
Period 7/1/2014 - 6/30/2015							
Average monthly benefit	2,050	501	869	2,228	3,224	3,088	2,942
Average HAC ¹	4,100	2,864	2,793	5,059	4,817	5,042	3,913
Number of retired members	1	10	7	9	8	7	3
Period 7/1/2013 - 6/30/2014							
Average monthly benefit	684	507	957	2,261	2,847	2,426	3,786
Average HAC ¹	1,712	3,339	3,627	5,393	5,673	5,549	6,893
Number of retired members	3	8	4	5	6	4	3
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	1,652	618	1,520	1,828	2,945	3,545	5,683
Average HAC ¹	3,559	4,147	4,944	4,423	5,466	4,932	6,428
Number of retired members	1	5	13	5	12	2	1
Period 7/1/2011 - 6/30/2012							
Average monthly benefit	3,764	6,837	1,864	2,762	2,627	3,650	4,214
Average HAC ¹	3,367	3,121	4,944	5,493	4,680	4,873	6,286
Number of retired members	3	6	4	2	9	2	7
Period 7/1/2010 - 6/30/2011							
Average monthly benefit	604	681	1,608	2,888	2,589	4,107	5,814
Average HAC ¹	6,500	4,199	3,890	5,466	4,778	5,912	6,842
Number of retired members	1	4	3	5	12	4	6
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	2,008	1,450	895	1,810	3,363	3,739	4,135
Average HAC ¹	3,464	4,282	3,652	4,674	5,600	4,946	5,878
Number of retired members	1	2	4	2	4	3	1
Period 7/1/2008 - 6/30/2009							
Average monthly benefit	1,326	561		1,882	2,848	4,338	5,571
Average HAC ¹	2,579	3,405		3,745	4,718	6,003	6,204
Number of retired members	1	3		2	2	2	1
Period 7/1/2007 - 6/30/2008							
Average monthly benefit	1,008	1,454	1,192	3,215	2,436	2,743	6,100
Average HAC ¹	2,121	3,403	2,650	5,228	4,265	4,061	5,503
Number of retired members	2	4	2	1	5	3	1

¹HAC = Highest Average Compensation during any consecutive 36 months or 60 months dependent upon date member was hired.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Game Wardens' and Peace Officers' Retirement System

Retirement Effective Dates	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	\$ 715	\$ 1,106	\$ 1,726	\$ 2,238		\$ 4,105	
Average HAC ¹	3,738	3,822	4,373	4,368		4,918	
Number of retired members	6	6	7	3		3	
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	\$ 208	2,422	1,143	3,336	2,316	\$ 4,129	6,179
Average HAC ¹	1,684	6,650		8,009	4,839	6,493	8,269
Number of retired members	1	8	2	9	3	1	1
Period 7/1/2014 - 6/30/2015							
Average monthly benefit		607	1,213	1,876	2,106	2,671	3,494
Average HAC ¹		2,792	3,588	3,738	4,100		4,848
Number of retired members		7	10	5	5	1	2
Period 7/1/2013 - 6/30/2014							
Average monthly benefit		745	1,151	1,642	2,564	2,109	
Average HAC ¹		3,470	3,809	4,266	4,490	3,695	
Number of retired members		6	6	10	4	1	
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	2,507	5,232	1,118	1,259	3,630	\$4,007	
Average HAC ¹	2,695	2,595	3,316	3,820	6,679	5,795	
Number of retired members	4	6	4	7	1	1	
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		643	1,233	1,999			4,003
Average HAC ¹		3,164	3,938	4,027			4,693
Number of retired members		6	6	1			3
Period 7/1/2010 - 6/30/2011							
Average monthly benefit	4,914	625	916	1,337		3,428	3,830
Average HAC ¹	3,063	3,257	3,904	3,368		4,427	4,205
Number of retired members	1	4	6	1		1	1
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	5,706	595	1,286				4,140
Average HAC ¹	2,507	3,039	3,888				4,192
Number of retired members	1	3	6				1
Period 7/1/2008 - 6/30/2009							
Average monthly benefit	1,700	632		1,713			3,676
Average HAC ¹	2,925	3,091		3,670			3,904
Number of retired members	3	3		1			3
Period 7/1/2007 - 6/30/2008							
Average monthly benefit		675	958	1,633	2,018	3,233	3,838
Average HAC ¹		3,234	3,044		3,537	3,768	4,300
Number of retired members		6	2	1	1	1	1

¹HAC = Highest Average Compensation during any consecutive 36 months or 60 months dependent upon when member was hired.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Municipal Police Officers' Retirement System

Retirement Effective Dates	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	\$ 280	\$ 3,262	\$ 3,447	\$ 2,240	\$ 3,129	\$ 3,363	
Average FAC ¹	6,317	8,418	8,323	4,159	5,691	5,614	
Number of retired members	3	6	5	4	7	1	
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	5,456	3,364	4,183	2,889	3,440	3,298	\$ 1,483
Average FAC ¹	10,369	7,777	8,040	4,281	4,772	6,297	3,800
Number of retired members	4	4	4	3	8	3	1
Period 7/1/2014 - 6/30/2015							
Average monthly benefit	379	1,319	1,098	2,590	2,903	4,100	5,062
Average FAC ¹	6,224	3,399	3,707	4,269	4,028	5,486	6,452
Number of retired members	4	4	5	4	13	3	3
Period 7/1/2013 - 6/30/2014							
Average monthly benefit		730	1,801	2,850	3,282	4,264	
Average FAC ¹		3,028	4,826	5,699	5,839	6,655	
Number of retired members		1	3	1	8	1	
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	541	1,202	571	2,309	3,057	3,384	
Average FAC ¹	6,801	4,075	2,093	4,664	5,261	5,516	
Number of retired members	5	3	1	6	17	6	
Period 7/1/2011 - 6/30/2012							
Average monthly benefit	124	1,191	1,247	2,466	3,058		5,701
Average FAC ¹	5,411	4,023	4,289	4,648	5,117		6,411
Number of retired members	2	3	1	1	7		2
Period 7/1/2010 - 6/30/2011							
Average monthly benefit	273	2,315	1,810	2,601	2,942	4,498	
Average FAC ¹	5,617	4,113	4,862	4,884	4,831	5,893	
Number of retired members	3	1	1	4	8	1	
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	1,016	1,334	2,365	2,541	2,218	3,078	6,121
Average FAC ¹	3,905	3,325	4,618	4,541	4,224		6,594
Number of retired members	4	5	4	4	9	1	1
Period 7/1/2008 - 6/30/2009							
Average monthly benefit		2,434		2,111	1,951	4,356	5,332
Average FAC ¹		4,199		4,574	4,030	5,120	5,383
Number of retired members		1		5	8	1	2
Period 7/1/2007 - 6/30/2008							
Average monthly benefit	108	1,746	1,339	2,881	2,644	3,717	4,986
Average FAC ¹	5,911	3,341	3,736	4,816	4,235	4,589	4,507
Number of retired members	10	3	2	3	13	14	2

¹FAC = Final Average Compensation during the last 36 months.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average FAC may be blank due to system not requiring this information to be updated when a member retires.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Firefighters' Unified Retirement System

Retirement Effective Dates	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	\$ 212	\$ 3,671		\$ 2,065	\$ 4,040	\$ 4,995	\$ 5,422
Average HAC ¹		11,118		4,481	7,470	7,435	6,634
Number of retired members	1	3		3	2	5	8
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	2,240			2,904	6,969	4,741	5,863
Average HAC ¹	4,156			4,628	12,003	6,881	7,202
Number of retired members	2			3	9	4	4
Period 7/1/2014 - 6/30/2015							
Average monthly benefit		1,375	\$ 1,634	1,209	1,936	4,621	5,623
Average HAC ¹		1,763	4,444	2,713	5,475	5,367	5,217
Number of retired members		2	1	2	8	4	4
Period 7/1/2013 - 6/30/2014							
Average monthly benefit		1,423	1,819	2,493	3,335	4,176	5,716
Average HAC ¹		5,161	5,865	6,698	5,902	5,931	6,580
Number of retired members		2	1	5	4	2	3
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	1,472	647	1,441		1,219	4,747	6,167
Average HAC ¹	2,859	3,637	4,549		2,175	6,656	6,686
Number of retired members	1	2	2		5	6	5
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		1,304	3,122		2,942	4,077	480
Average HAC ¹		5,946	5,885		5,616	6,638	6,837
Number of retired members		2	1		7	6	5
Period 7/1/2010 - 6/30/2011							
Average monthly benefit		280		2,334	4,127	3,785	4,107
Average HAC ¹		1,506		4,814	5,945	5,075	4,481
Number of retired members		1		1	1	9	5
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	2,074		2,891	260	2,869	3,918	4,282
Average HAC ¹	3,686		4,987	448	4,496	5,146	5,433
Number of retired members	2		1	2	3	4	5
Period 7/1/2008 - 6/30/2009							
Average monthly benefit		1,158		2,083	4,078	3,324	4,989
Average HAC ¹		3,989		3,593	5,928	3,897	4,876
Number of retired members		5		1	5	2	2
Period 7/1/2007 - 6/30/2008							
Average monthly benefit			2,459	1,785	2,529	3,925	5,037
Average HAC ¹			3,453	2,902	4,248	4,736	4,945
Number of retired members			1	1	8	4	9

¹HAC = Highest Average Compensation during any consecutive 36 months.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Volunteer Firefighters' Compensation Act

Retirement Effective Dates	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	\$ 88	\$ 119	\$ 164	\$ 192	\$ 230	\$ 250	
Average HAC ¹							
Number of retired members		4	13	16	16	6	2
Period 7/1/2015 - 6/30/2016							
Average monthly benefit			101	143	382	225	255
Average HAC ¹							
Number of retired members			31	11	31	7	7
Period 7/1/2014 - 6/30/2015							
Average monthly benefit		75	94	703	172	220	249
Average HAC ¹							
Number of retired members		10	19	21	17	6	4
Period 7/1/2013 - 6/30/2014							
Average monthly benefit		75	94	140	169	210	238
Average HAC ¹							
Number of retired members		9	19	20	15	9	4
Period 7/1/2012 - 6/30/2013							
Average monthly benefit		75	98	143	173	207	253
Average HAC ¹							
Number of retired members		9	22	21	10	10	3
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		75	106	136	169	211	239
Average HAC ¹							
Number of retired members		4	11	28	30	7	5
Period 7/1/2010 - 6/30/2011							
Average monthly benefit		75	96	145	172	211	
Average HAC ¹							
Number of retired members		5	14	24	14	18	
Period 7/1/2009 - 6/30/2010							
Average monthly benefit		76	100	424	168	946	
Average HAC ¹							
Number of retired members		8	21	19	24	12	
Period 7/1/2008 - 6/30/2009							
Average monthly benefit		75	102	145	166	219	
Average HAC ¹							
Number of retired members		1	13	23	16	8	
Period 7/1/2007 - 6/30/2008							
Average monthly benefit		75	94	402	167	213	225
Average HAC ¹							
Number of retired members		3	14	23	23	6	3

¹HAC = Highest Average Compensation is not applicable to the VFCA. Members are unpaid volunteers and do not contribute to the fund.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

This page intentionally left blank

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Average Monthly Benefit Payments, All Retirees

For the Fiscal Year Ended 2017

System	Years of Service	Recipient's Age									Average
		< 45	45-49	50-54	55-59	60-64	65-69	70-74	75-79	Over 80	
PERS-DBRP	0-4	\$ 199	\$ 269	\$ 847	\$ 748	\$ 645	\$ 356	\$ 290	\$ 292	\$ 254	\$ 444
	5-9	501	387	355	348	362	381	379	354	325	362
	10-14	567	657	631	577	650	703	670	610	544	635
	15-19	691	944	671	819	985	1,030	993	925	834	945
	20-24	1,082	1,181	1,264	1,188	1,423	1,427	1,407	1,255	1,141	1,322
	25-29	899	1,832	2,149	2,255	2,404	2,223	2,065	1,857	1,635	2,094
	30-34		2,057	3,127	3,067	3,203	3,063	2,850	2,455	2,088	2,851
	35-39				3,553	3,812	3,780	3,600	2,934	2,625	3,455
	40-UP			3,197	5,759	3,782	4,325	4,003	4,302	3,296	3,995
	Average	\$ 597	\$ 895	\$ 1,498	\$ 1,754	\$ 1,750	\$ 1,607	\$ 1,437	\$ 1,252	\$ 1,030	\$ 1,420
JRS	0-4					\$ 5,229					\$ 5,229
	5-9					2,750	\$ 1,296	\$ 2,408	\$ 2,536		2,066
	10-14						4,154	4,464	3,384	\$ 3,903	4,047
	15-19				\$ 4,995	5,330	3,975	3,369	4,970	5,185	4,254
	20-24						6,221	5,270			5,841
	25-29						6,739	5,889	5,753	5,874	6,016
	30-34						6,610	6,683	7,346	7,304	6,986
	35-39										
	40-UP										
	Average				\$ 4,995	\$ 4,436	\$ 4,374	\$ 4,478	\$ 4,656	\$ 4,636	\$ 4,515
HPORS	0-4	\$ 1,637	\$ 2,145	\$ 1,756		\$ 1,900					\$ 1,731
	5-9	474	2,162	2,489	\$ 1,417		\$ 2,160	\$ 1,551		\$ 1,755	1,552
	10-14	589	2,464	1,550	2,137	1,824	776	294	\$ 1,030	352	1,196
	15-19		2,064	2,654	2,198	2,109			1,638	870	2,020
	20-24	2,438	3,555	3,257	3,005	2,626	2,593	2,143	1,958	2,046	2,596
	25-29			4,091	4,335	4,079	3,660	3,093	2,957	2,180	3,262
	30-34					4,002	4,398	4,290	3,803	2,858	3,798
	35-39							5,775	5,354	3,360	4,560
	40-UP									4,618	4,618
	Average	\$ 1,562	\$ 3,063	\$ 3,126	\$ 2,946	\$ 2,816	\$ 3,146	\$ 2,915	\$ 2,692	\$ 2,368	\$ 2,551
SRS	0-4	\$ 1,174	\$ 3,082	\$ 2,023	\$ 1,221	\$ 1,376	\$ 718	\$ 1,096			\$ 1,370
	5-9	1,096	2,174	719	988	646	751	911	\$ 660	\$ 735	842
	10-14	2,588	2,527	867	1,069	1,317	1,478	1,150	1,194	1,029	1,308
	15-19	2,277	1,969	2,128	1,935	2,098	1,903	1,678	1,555	1,202	1,913
	20-24		2,958	2,739	2,768	2,707	2,768	2,304	2,264	1,152	2,655
	25-29		2,668	3,455	3,492	4,129	3,674	3,599	2,922	1,709	3,382
	30-34			5,013	5,048	5,673	4,799	3,185	4,274	2,328	4,662
	35-39					4,501	6,177	5,187	3,473		4,654
	40-UP										
	Average	\$ 1,804	\$ 2,623	\$ 2,118	\$ 2,289	\$ 2,416	\$ 2,465	\$ 2,121	\$ 2,151	\$ 1,313	\$ 2,104

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Average Monthly Benefit Payments, All Retirees

For the Fiscal Year Ended 2017

System	Years of Service	Recipient's Age									Average
		< 45	45-49	50-54	55-59	60-64	65-69	70-74	75-79	Over 80	
GWPORS	0-4				\$ 358	\$ 338	\$ 495				\$ 405
	5-9	\$ 1,397	\$ 460	\$ 1,004	624	716	753	\$ 616	\$ 535		712
	10-14				1,145	1,325	1,239	1,143		\$ 1,774	1,240
	15-19	720	1,888	1,688	1,688	1,770	1,970	1,530	1,349	844	1,730
	20-24			2,091	2,474	2,729	2,136	2,059	1,922	1,850	2,216
	25-29			3,093	3,840	3,987	2,531	2,747	2,222	1,713	2,661
	30-34				3,840	4,044	5,187	3,503	1,297	2,998	3,498
	35-39				5,214	4,555	3,456		3,630	3,678	4,231
	40-UP						4,852				4,852
	Average	\$ 1,058	\$ 1,174	\$ 1,972	\$ 1,832	\$ 1,911	\$ 1,496	\$ 1,903	\$ 1,818	\$ 2,600	\$ 1,718
MPORS	0-4	\$ 2,166	\$ 1,958	\$ 2,216	\$ 2,219	\$ 1,472	\$ 478	\$ 1,598	\$ 1,201		\$ 1,762
	5-9	2,208	2,333	1,445	1,064	1,228	1,400	1,413	2,048	\$ 2,072	1,691
	10-14	2,150	2,789	1,421	1,950	1,942	1,774	1,987	1,736	2,108	1,914
	15-19	2,676	2,694	2,425	2,404	2,406	2,281	2,283	1,992	2,272	2,388
	20-24	3,178	2,985	2,941	2,986	2,748	2,690	2,461	2,254	2,173	2,634
	25-29			4,043	3,158	4,419	4,328	4,464	2,946	2,986	3,895
	30-34				5,272	3,462	5,190	5,877	4,339	3,086	4,622
	35-39						5,130			3,037	4,084
	40-UP										
	Average	\$ 2,281	\$ 2,714	\$ 2,423	\$ 2,660	\$ 2,683	\$ 2,773	\$ 2,715	\$ 2,271	\$ 2,316	\$ 2,321
FURS	0-4	\$ 2,032		\$ 255	\$ 1,014	\$ 2,076		\$ 2,178			\$ 1,734
	5-9	2,356		2,413	923	1,036	\$ 1,030	1,305	\$ 2,318		1,418
	10-14	2,295	\$ 1,823	2,642	1,774	1,937	1,907	987	2,200	\$ 2,092	1,920
	15-19	2,050	2,300	3,154	1,935	2,154	2,227	1,691	1,019	2,029	2,063
	20-24	2,785	3,167	2,742	2,925	2,690	2,540	2,125	1,985	1,948	2,442
	25-29		2,092	3,821	4,253	4,200	3,452	3,741	2,756	1,873	3,457
	30-34			5,087	5,160	5,500	5,425	4,976	4,597	2,310	5,034
	35-39					6,713	6,875	6,107	5,079	3,913	5,615
	40-UP								265	263	264
	Average	\$ 2,292	\$ 2,616	\$ 3,238	\$ 3,128	\$ 3,627	\$ 3,626	\$ 3,206	\$ 2,741	\$ 2,117	\$ 2,913
VFCA	0-4						\$ 88		\$ 166		\$ 127
	5-9									\$ 105	105
	10-14					\$ 104	101	\$ 101	99	100	101
	15-19				\$ 162	145	145	146	147	144	145
	20-24				185	184	184	183	182	183	183
	25-29				221	227	221	229	223	224	224
	30-34				256	253	251	252	250	250	253
	35-39				288	288	250	250	250	250	265
	40-UP										
	Average				\$ 205	\$ 177	\$ 165	\$ 159	\$ 160	\$ 157	\$ 166

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Principal Participating Employers

Current Year and Nine Years Ago

	As of June 30, 2017			As of June 30, 2008		
	Covered Employees ¹	Rank	Percentage of Total System	Covered Employees ¹	Rank	Percentage of Total System
Participating Government						
PERS - DBRP						
STATE OF MONTANA ²	10,774	1	36.91	10,744	1	37.84
UNIVERSITY OF MONTANA	1,279	2	4.38	1,199	2	4.22
MONTANA STATE UNIVERSITY - BOZEMAN	1,075	3	3.68	1,023	3	3.60
MISSOULA COUNTY	672	4	2.30	582	4	2.05
CITY OF BILLINGS	579	5	1.98	560	5	1.97
FLATHEAD COUNTY	425	6	1.46	380	7	1.34
SCHOOL DISTRICT 2 - BILLINGS	401	7	1.37	366	8	1.29
GREAT FALLS PUBLIC SCHOOLS	369	8	1.26	415	6	1.46
CITY OF GREAT FALLS	361	9	1.24	340	10	1.20
CASCADE COUNTY	359	10	1.23	355	9	1.25
"All other" *	12,894		44.19	12,427		43.78
Total (505 Employers)	29,188		100.00	28,391		100.00

* In 2017, "all other" consisted of:		
Type	Number	Employees
Cities & Towns	94	2,189
Counties	51	3,998
Other Agencies	113	1,584
School Districts	234	4,775
Universities	3	348
Total	495	12,894

¹ Employee counts are based on June payrolls. Differences in employee counts in this schedule as compared to other CAFR schedules are due to members with multiple employers, June 30th refunded members, and members with dual retirement system elections.

² For the purposes of this schedule the "State of Montana" is considered one employer. There are a total of 34 State of Montana agencies reporting to PERS-DBRP.

A ten year analysis may not be available for all employers, due to the employer not being a participating employer at the time.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Principal Participating Employers (cont.)

Current Year and Nine Years Ago

<u>Participating Government</u>	<u>As of June 30, 2017</u>			<u>As of June 30, 2008</u>		
	<u>Covered Employees¹</u>	<u>Rank</u>	<u>Percentage of Total System</u>	<u>Covered Employees¹</u>	<u>Rank</u>	<u>Percentage of Total System</u>
<u>JRS</u>						
STATE OF MONTANA ²	56	1	100.00	51	1	100.00
TOTAL (1 EMPLOYER)	56		100.00	51		100.00
<u>HPORS</u>						
STATE OF MONTANA ²	237	1	100.00	213	1	100.00
TOTAL (1 EMPLOYER)	237		100.00	213		100.00
<u>SRS</u>						
MISSOULA COUNTY	151	1	10.84	113	1	10.13
YELLOWSTONE COUNTY	118	2	8.47	98	2	8.78
CASCADE COUNTY	109	3	7.82	83	3	7.44
GALLATIN COUNTY	107	4	7.68	72	5	6.45
FLATHEAD COUNTY	98	5	7.04	82	4	7.35
LEWIS & CLARK COUNTY	66	6	4.74	53	6	4.75
STATE OF MONTANA ²	55	7	3.95	46	7	4.12
RAVALLI COUNTY	47	8	3.37	44	8	3.94
DAWSON COUNTY	43	9	3.09	36	9	3.23
LAKE COUNTY	42	10	3.02	33	10	2.96
In 2017 "All other" consists of 47 Counties	557		39.98	456		40.85
TOTAL (57 EMPLOYERS)	1,393		100.00	1,116		100.00
<u>GWPORS</u>						
STATE OF MONTANA ²	954	1	95.50	859	1	96.95
MONTANA STATE UNIVERSITY - BOZEMAN	23	2	2.30	10	3	1.13
UNIVERSITY OF MONTANA	15	3	1.50	13	2	1.47
MONTANA STATE UNIVERSITY - BILLINGS	7	4	0.70	4	4	0.45
TOTAL (4 EMPLOYERS)	999		100.00	886		100.00

¹ Employee counts are based on June payrolls. Differences in employee counts in this schedule as compared to other CAFR schedules are due to members with multiple employers, June 30th refunded members and members with dual retirement system elections.

² For the purposes of this schedule the "State of Montana" is considered one employer. For JRS, HPORS and SRS there is only one State of Montana agency. There are four State of Montana agencies reporting under GWPORS.

A ten-year analysis may not be available for all employers, due to the employer not being a participating employer at the time.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Principal Participating Employers (cont.)

Current Year and Nine Years Ago

	As of June 30, 2017			As of June 30, 2008		
	Covered Employees ¹	Rank	Percentage of Total System	Covered Employees ¹	Rank	Percentage of Total System
MPORS						
CITY OF BILLINGS	145	1	18.88	130	1	19.01
CITY OF MISSOULA	104	2	13.54	102	2	14.91
CITY OF GREAT FALLS	87	3	11.33	83	3	12.13
CITY OF BOZEMAN	59	4	7.68	50	5	7.31
CITY OF HELENA	48	5	6.25	53	4	7.75
BUTTE SILVER BOW	47	6	6.12	43	6	6.29
CITY OF KALISPELL	39	7	5.08	38	7	5.56
CITY OF HAVRE	19	8	2.47	16	11	2.34
ANACONDA-DEER LODGE COUNTY	18	9	2.34	23	8	3.36
CITY OF WHITEFISH	18	10	2.34	17	10	2.49
CITY OF MILES CITY	15	11	1.95	17	9	2.49
All Others	169		22.02	112		16.36
TOTAL (33 EMPLOYERS)	768		100.00	684		100.00

FURS

CITY OF BILLINGS	119	1	18.17	113	1	21.36
CITY OF MISSOULA	89	2	13.59	87	2	16.45
CITY OF GREAT FALLS	68	3	10.38	65	3	12.29
CITY OF BOZEMAN	46	4	7.02	34	6	6.43
MISSOULA RURAL FIRE DISTRICT	41	5	6.26	22	8	4.16
BUTTE SILVER BOW	34	6	5.19	33	7	6.24
CITY OF HELENA	34	7	5.19	35	4	6.62
CITY OF KALISPELL	30	8	4.58	35	5	6.62
STATE OF MONTANA ²	21	9	3.21			
CENTRAL VALLEY FIRE DISTRICT	20	10	3.05			
CITY OF HAVRE	16	13	2.44	17	9	3.21
CITY OF LIVINGSTON	13	16	1.98	15	10	2.84
All Others	124		18.94	73		13.78
TOTAL (31 EMPLOYERS)	655		100.00	529		100.00

VFCA

Participating employers is not applicable to VFCA because members are unpaid volunteers. In 2017, there were 225 VFCA qualified volunteer fire departments.

¹ Employee counts are based on June payrolls. Differences in employee counts in this schedule as compared to other CAFR schedules are due to members with multiple employers, June 30th refunded members and members with dual retirement system elections.

² For the purposes of this schedule the "State of Montana" is considered one employer. For FURS there is only one State of Montana agency. A ten-year analysis may not be available for all employers, due to the employer not being a participating employer at the time.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Principal Participating Employers (cont.)

Current Year and Nine Years Ago

Participating Government	As of June 30, 2017			As of June 30, 2008		
	Covered Employees ¹	Rank	Percentage of Total System	Covered Employees ¹	Rank	Percentage of Total System
PERS-DC						
STATE OF MONTANA ²	1,246	1	49.13	723	1	45.38
YELLOWSTONE CITY-COUNTY HEALTH DEPT	90	2	3.55	29	4	1.82
UNIVERSITY OF MONTANA	73	3	2.88	28	5	1.76
MISSOULA COUNTY	68	4	2.68	36	3	2.26
CITY OF BILLINGS	58	5	2.29	50	2	3.14
MONTANA STATE UNIVERSITY - BOZEMAN	51	6	2.01	23	10	1.44
CITY OF MISSOULA	34	7	1.34	26	6	1.63
GALLATIN COUNTY	31	8	1.22	25	7	1.57
BUTTE SILVER BOW	27	9	1.06			
YELLOWSTONE COUNTY	27	10	1.06	25	8	1.57
FLATHEAD COUNTY	19	12	0.75	24	9	1.51
All Others	812		32.03	604		37.92
TOTAL (268 EMPLOYERS)	2,536		100.00	1,593		100.00

* In 2017, "all other" consisted of:

Type	Number	Employees
Cities & Towns	52	176
Counties	48	244
Other Agencies	45	110
School Dist	109	272
Universities	3	10
Total	257	812

Deferred Compensation Plan

STATE OF MONTANA ²	4,775	1	87.41	4,495	1	91.63
UNIVERSITY OF MONTANA	115	2	2.11	129	2	2.64
CITY OF HELENA	111	3	2.03			
LEWIS & CLARK COUNTY	98	4	1.79	66	4	1.36
MONTANA STATE UNIVERSITY - BOZEMAN	69	5	1.26	108	3	2.21
FALLON COUNTY	35	6	0.64			
GREAT FALLS TRANSIT	34	7	0.62	44	5	0.91
SANDERS COUNTY	26	8	0.48			
SCHOOL DISTRICT 6 - WIBAUX	17	9	0.31			
SCHOOL DISTRICT 2 - BILLINGS	15	10	0.27	3	12	0.01
MONTANA STATE UNIVERSITY - BILLINGS	14	11	0.26	22	6	0.45
BIG SKY CO WATER & SEWER DIST #363	8	16	0.15	5	10	0.1
MONTANA STATE UNIVERSITY - NORTHERN	7	18	0.13	15	7	0.31
CARTER COUNTY	5	22	0.09	6	8	0.12
GREAT FALLS COLLEGE MSU	5	22	0.09	8	9	0.16
All Others	129		2.36	5		0.10
TOTAL (46 EMPLOYERS)	5,463		100.00	4,906		100.00

* In 2017, "all other" consisted of:

Type	Number	Employees
Cities & Towns	9	47
Counties		
Other Agencies	11	35
School Dist	11	47
Universities		
Total	31	129

¹ Employee counts are based on June payrolls. Differences in employee counts in this schedule as compared to other CAFR schedules are due to members with multiple employers, June 30th refunded members and members with dual retirement system elections.

² For the purposes of this schedule the "State of Montana" is considered one employer. There are a total of 32 State of Montana agencies reporting to PERS-DCRP.

A ten-year analysis may not be available for all employers, due to the employer not being a participating employer at the time.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Participating Employers

As of June 30, 2017

*P - Defined Benefit PERS	*J - Judges	*G - Game Wardens	*H - Highway Patrol	*S - Sheriffs	*M - Police	*F - Firefighters
				*DC - Defined Contribution PERS	*D - 457	

State Agencies (34)						
Board of Crime Control	P					DC
Board of Public Education	P					DC
Commissioner of Higher Education	P					DC
Commissioner of Political Practices	P					
Consumer Council	P					DC
Dept of Administration	P					DC
Dept of Agriculture	P					DC
Dept of Commerce	P					DC
Dept of Corrections	P	G				DC
Dept of Environmental Quality	P					DC
Dept of Fish, Wildlife & Parks	P	G				DC
Dept of Justice	P		H	S		DC
Dept of Labor & Industry	P					DC
Dept of Livestock	P	G				DC
Dept of Military Affairs	P				F	DC
Dept of Natural Resources & Conservation	P					DC
Dept of Public Health & Human Services	P					DC
Dept of Revenue	P					DC
Dept of Transportation	P			G		DC
Governor's Office	P					DC
Legislative Council	P					DC
Montana Arts Council	P					
Montana Historical Society	P					DC
Montana State Fund	P					DC
Montana State Library	P					DC
Office of Public Defender	P					DC
Office of Public Instruction	P					DC
Public Employee Retirement Administration	P					DC
Public Service Commission	P					DC
School for the Deaf & Blind	P					DC
Secretary of State	P					DC
State Auditor's Office	P					DC
Supreme Court	P	J				DC
Teachers' Retirement System	P					DC
*State of Montana						D

Counties (55)						
Anaconda-Deer Lodge	P	S	M	F		DC
Beaverhead	P	S				DC
Big Horn	P	S				DC
Blaine	P	S				DC
Broadwater	P	S				DC
Carbon	P	S				DC
Carter	P	S				DC D
Cascade	P	S				DC
Chouteau	P	S				
Custer	P	S				DC
Daniels	P	S				DC
Dawson	P	S				DC
Fallon	P	S				DC D
Fergus	P	S				DC
Flathead	P	S				DC
Gallatin	P	S				DC
Garfield	P	S				DC
Glacier	P	S				DC
Golden Valley	P	S				
Granite	P	S				DC
Hill	P	S				DC
Jefferson	P	S				DC
Judith Basin	P	S				
Lake	P	S				DC
Lewis & Clark	P	S				DC D
Liberty	P	S				DC
Lincoln	P	S				DC
Madison	P	S				DC
McCone	P	S				DC
Meagher	P	S				
Mineral	P	S				DC
Missoula	P	S				DC
Musselshell	P	S				DC
Park	P	S				DC
Petroleum	P	S				DC
Phillips	P	S				DC
Pondera	P	S				DC
Powder River	P	S				DC
Powell	P	S				DC
Prairie	P	S				DC
Ravalli	P	S				DC
Richland	P	S				DC
Roosevelt	P	S				DC
Rosebud	P	S				DC
Sanders	P	S				DC D
Sheridan	P	S				DC
Stillwater	P	S				DC
Sweet Grass	P	S				DC
Teton	P	S				DC
Toole	P	S				DC
Treasure	P	S				DC
Valley	P	S				DC
Wheatland	P	S				DC
Wibaux	P	S				
Yellowstone	P	S				DC

STATISTICAL SECTION

Schedule of Participating Employers (continued)

*P - Defined Benefit PERS	*J - Judges	*G - Game Wardens	*H - Highway Patrol	*S - Sheriffs	*M - Police	*F - Firefighters
			*DC - Defined Contribution PERS	*D - 457		

Cities & Towns (98)						
Alberton	P				DC	
Baker	P		M		DC	
Belgrade	P		M		DC	
Belt	P					
Big Sandy	P					
Big Timber	P				DC	
Billings	P		M	F	DC	
Boulder	P					
Bozeman	P		M	F	DC	
Bridger	P				DC	
Broadus	P					
Butte-Silver Bow	P	S	M	F	DC	
Cascade	P					
Chester	P				DC	
Chinook	P				DC	
Choteau	P				DC	
Circle	P				DC	
Colstrip	P				DC	D
Columbia Falls	P		M	F	DC	
Columbus	P		M		DC	
Conrad	P				DC	
Culbertson	P					
Cut Bank	P		M		DC	
Deer Lodge	P				DC	
Denton	P				DC	
Dillon	P		M		DC	
Drummond	P					
East Helena	P		M		DC	
Ekalaka	P					
Ennis	P				DC	
Eureka	P				DC	
Fairfield	P				DC	
Fairview	P				DC	D
Forsyth	P				DC	
Fort Benton	P					
Fort Peck	P					
Froid	P				DC	
Geraldine	P					
Glasgow	P		M		DC	
Glendive	P		M	F	DC	
Grass Range	P					
Great Falls	P		M	F	DC	
Hamilton	P		M		DC	
Hardin	P				DC	D
Harlem	P					
Harlowton	P				DC	
Havre	P		M	F	DC	
Helena	P		M	F	DC	D
Hot Springs	P				DC	
Hysham	P					
Kalispell	P		M	F	DC	
Laurel	P		M		DC	
Lewistown	P		M	F	DC	
Libby	P		M		DC	
Lima	P					
Livingston	P		M	F	DC	
Malta	P					
Manhattan	P					
Medicine Lake	P					
Melstone	P					
Miles City	P		M	F	DC	
Missoula	P		M	F	DC	
Moore	P					
Nashua	P					
Phillipsburg	P					
Plains	P	M				
Plentywood	P					
Polson	P	M			DC	D
Poplar	P				DC	D
Red Lodge	P	M			DC	
Richey	P					
Ronan	P				DC	
Roundup	P					
Ryegate	P					
Saco	P					
Scobey	P	M			DC	
Shelby	P				DC	
Sheridan	P					D
Sidney	P				DC	D
St Ignatius	P					
Stanford	P					
Stevensville	P				DC	
Sunburst	P					
Superior	P					
Terry	P					
Thompson Falls	P	M			DC	D
Three Forks	P					
Townsend	P					
Troy	P	M				D
Twin Bridges	P					
Valier	P					
Westby	P					
West Yellowstone	P	M			DC	
White Sulphur Springs	P					
Whitefish	P	M	F		DC	
Wibaux	P					
Winnett	P					
Wolf Point	P	M			DC	

STATISTICAL SECTION

Schedule of Participating Employers (continued)

*P - Defined Benefit PERS	*J - Judges	*G - Game Wardens	*H - Highway Patrol	*S - Sheriffs	*M - Police	*F - Firefighters
			*DC - Defined Contribution PERS	*D - 457		

Colleges & Universities (5)						
Montana State University - Billings	P	G	DC	D		
Montana State University - Bozeman	P	G	DC	D		
Montana State University College of Technology - Great Falls	P		DC	D		
Montana State University - Northern	P		DC	D		
University of Montana - Missoula	P	G	DC	D		
High Schools (5)						
Beaverhead County	P		DC			
Jefferson County	P					
Powder River County	P		DC			
Powell County	P		DC			
Sweet Grass County	P		DC			
School Districts (231)						
SD 1, Big Timber	P		DC			
SD 1, Butte	P		DC			
SD 1, Choteau	P					
SD 1, Circle	P		DC			
SD 1, Clancy	P		DC			
SD 1, Corvallis	P		DC			
SD 1, Deer Lodge	P					
SD 1, Fort Benton	P					
SD 1, Glasgow	P		DC			
SD 1, Glendive	P		DC			
SD 1, Heart Butte	P		DC			
SD 1, Helena	P		DC	D		
SD 1, Kalispell	P					
SD 1, Lewistown	P		DC			
SD 1, Miles City	P					
SD 1, Missoula	P		DC			
SD 1, Phillipsburg	P					
SD 1, Plains	P		DC			
SD 1, Red Lodge	P					
SD 1, Scobey	P		DC			
SD 1, Troy	P					
SD 1 & 7 Hysham	P					
SD 1 & 7, Townsend	P		DC			
SD 2, Alberton	P		DC			
SD 2, Alder	P					
SD 2, Billings	P		DC	D		
SD 2, Bridger	P					
SD 2, Deer Park	P		DC			
SD 2, Dodson	P					
SD 2, Dupuyer	P					
SD 2, Frazer	P					
SD 2, Lavina K-12	P					
SD 2, Stevensville	P		DC			
SD 2, Sunburst	P		DC			
SD 2, Thompson Falls	P					
SD 2 & 3, Pryor	P					
SD 2 & 11, Big Sandy	P		DC			
SD 2 & 27, Lodge Grass	P					
SD 3, Belfry	P		DC			
SD 3, Billings	P					
SD 3, Cascade	P		DC			
SD 3, Fairmont Egan	P					
SD 3, Hamilton	P		DC			
SD 3, Manhattan	P					
SD 3, Ramsey	P					
SD 3, Superior	P		DC			
SD 3, Westby	P		DC			
SD 3, Wolf Point	P		DC	D		
SD 3 & 13, Fairview	P		DC			
SD 4, Canyon Creek	P					
SD 4, Forsyth	P					D
SD 4, Hellgate	P		DC			
SD 4, Libby	P					
SD 4, Livingston	P				DC	
SD 4, Swan River	P					
SD 4 & 28, Highwood	P				DC	
SD 4 & 47, Whitehall	P					
SD 5, Basin	P					
SD 5, Kalispell	P				DC	
SD 5, Melrose	P					
SD 5, Park City	P				DC	
SD 5, Sand Coulee	P				DC	
SD 5, Sheridan	P				DC	
SD 5, Sidney	P					
SD 5, Terry	P				DC	
SD 6, Columbia Falls	P				DC	
SD 6, Columbus	P				DC	
SD 6, Lame Deer	P				DC	
SD 6, Ryegate	P				DC	D
SD 6, Trout Creek	P					
SD 6, Wibaux	P					D
SD 6 & 1, St Regis	P				DC	
SD 7, Boulder	P					
SD 7, Bozeman	P				DC	
SD 7, Charlo	P					
SD 7, Gardiner	P					
SD 7, Grant	P					
SD 7, Hinsdale	P				DC	
SD 7, Joliet	P					D
SD 7, Lolo	P				DC	
SD 7, Medicine Lake	P					D
SD 7, Twin Bridges	P					
SD 7, Victor	P					
SD 7 & 2, Savage	P					
SD 7 & 70, Laurel	P				DC	
SD 8, Arlee	P				DC	
SD 8, Elder Grove	P				DC	
SD 8, West Glacier	P					
SD 8, White Sulphur Springs	P					
SD 9, Browning	P				DC	
SD 9, Darby	P					
SD 9, Dixon	P					
SD 9, East Helena	P				DC	D
SD 9, Opheim	P					
SD 9, Poplar	P				DC	D
SD 9 & 9, Reed Point	P					
SD 10, Anaconda	P				DC	
SD 10, Cayuse	P					
SD 10, Chinook	P					
SD 10, Conrad	P					
SD 10, Dillon	P					
SD 10, Noxon	P					
SD 11, Brorson	P					
SD 11, Ovando	P					
SD 11, Potomac	P					
SD 11, Wise River	P					
SD 11 & 2, Drummond	P					
SD 12, Baker	P					D
SD 12, Harlem	P				DC	
SD 12, Havre	P					
SD 12, Lima	P				DC	
SD 12, Rosebud	P					
SD 12, Saco	P				DC	
SD 12, Stanford	P					
SD 12 & 12, Molt	P					
SD J12-5, Shields Valley	P					
SD 13, Box Elder	P					

STATISTICAL SECTION

Schedule of Participating Employers (continued)

*P - Defined Benefit PERS *J - Judges *G - Game Wardens *H - Highway Patrol *S - Sheriffs *M - Police *F - Firefighters
*DC - Defined Contribution PERS *D - 457

School Districts (continued)				
SD 13, Eureka	P		DC	
SD 13, Fishtail	P			
SD 13, Lone Rock	P		DC	
SD 13, Nashua	P			
SD 14, Bonner	P		DC	
SD 14, Fortine	P			
SD 14, Hot Springs	P			
SD 14, Malta	P			
SD 14, Shelby	P			
SD 15, Custer	P		DC	
SD 15, Cut Bank	P		DC	
SD 15, Ekalaka	P		DC	
SD 15, Kalispell	P		DC	
SD 15 & 6, Florence-Carlton	P			
SD 15 & 17, Willow Creek	P			
SD 16, Harlowton	P			
SD 17, Culbertson	P			
SD 17, Morin	P			
SD 17H, Hardin	P		DC	
SD 18, Valier	P			
SD 18, Woodman	P			
SD 19, Colstrip	P		DC	
SD 20, Garrison	P			
SD 20, Kila	P			
SD 20, Plentywood	P		DC	
SD 20, Whitewater	P			
SD 21, Broadview	P			
SD 21, Fairfield	P			
SD 21, Galata	P		DC	
SD 23, Billings	P			
SD 23, Harrison	P			
SD 23, Lustre	P			
SD 23, Missoula	P		DC	
SD 23, Polson	P		DC	
SD 23, Roberts	P		DC	
SD 24, Three Forks	P		DC	
SD 24, Worden	P		DC	
SD 25, Hobson	P		DC	
SD 26, Lockwood	P		DC	
SD 26, Reichle	P			
SD 27, Elliston	P		DC	
SD 27, Grass Range	P			
SD 27, Monforton	P			
SD 27, Montana City	P			
SD 28, St. Ignatius	P			
SD 28C, Dutton	P			
SD 29, Belt	P			
SD 29, Somers	P			
SD 29, Wyola	P			
SD 30, Power	P			
SD 30, Ronan	P		DC	
SD 30 & 6, Fromberg	P		DC	
SD 32, Clinton	P		DC	
SD 32, Rapelje	P		DC	
SD 32J, Ashland	P		DC	
SD 33, Gold Creek	P			
SD 33, Swan Valley Elem	P			
SD 34, Seeley Lake	P			
SD 35, Gallatin Gateway	P			
SD 37, Shepherd	P		DC	
SD 38, Big Fork	P		DC	
SD 38, Lincoln	P		DC	
SD 40, Frenchtown	P		DC	
SD 41, Anderson	P		DC	
SD 41, Pioneer	P			
SD 43, Lamotte		P		DC
SD 43, Turner		P		
SD 44, Belgrade		P		DC
SD 44, Geraldine		P		DC D
SD 44, Moore		P		
SD 44, Whitefish		P		
SD 45, Augusta		P		
SD 45, Golden Ridge		P		DC
SD 45, Wolf Point		P		DC
SD 48-1J & 48-2J, Chester		P		DC
SD 50, East Glacier		P		DC
SD 50, Evergreen		P		DC
SD 50, Hays		P		DC
SD 52, Absarokee		P		DC
SD 52, Ennis		P		DC
SD 52, Independent		P		DC
SD 55, Brockton		P		
SD 55, Plevna		P		DC
SD 55, Roundup		P		DC
SD 55F, Sun River Valley		P		
SD 57, Havre		P		DC
SD 58, Geyser		P		
SD 58, Whitefish		P		
SD 58, Yellowstone		P		
SD 64, Bainville		P		DC
SD 64J, Melstone		P		
SD 65, Froid		P		
SD 69, West Yellowstone		P		
SD 72, Big Sky		P		
SD 73, Swan Lake		P		
SD 74, Roy		P		
SD 74, Vaughn		P		DC
SD 75, Amsterdam		P		DC
SD 75, Arrowhead		P		
SD 75, Greenfield		P		DC
SD 78J & 2, Richey		P		
SD 84, Denton		P		
SD 85, Ulm		P		DC
SD 86 & 4, Lambert		P		
SD 87, Rocky Boy		P		
SD 89, Smith Valley		P		DC
SD 99, North Star Schools		P		
SD 104, Spring Creek		P		
SD 115, Winifred		P		
SD 159, Winnett		P		
Great Falls Public Schools		P		DC
Jordan Public Schools		P		
Judith Gap Schools		P		DC
Havre Public Schools		P		DC D

STATISTICAL SECTION

Schedule of Participating Employers (continued)

*P - Defined Benefit PERS *J - Judges *G - Game Wardens *H - Highway Patrol *S - Sheriffs *M - Police *F - Firefighters *DC - Defined Contribution PERS *D - 457									
Other Agencies (118)									
Anaconda Housing Authority	P					Judith Basin Conservation District	P		
Arlee-Lake County Water & Sewer	P					Lakeside County Water & Sewer	P		D
Bear Paw Cooperative	P					Lakeview Cemetery District	P		
Bert Mooney Airport Authority	P		DC			Larchmont Golf Course	P		
Big Country Educational Cooperative	P					Lewis & Clark Conservation District	P		
Big Fork County Water & Sewer	P					Lewis & Clark Library	P		DC
Big Horn Cemetery District #1	P					Liberty County Conservation District	P		
Big Sky County Water & Sewer District #363	P		DC	D		Lincoln Conservation District	P		
Big Sky Resort Area District				D		Lincoln County Rural Fire District	P		
Big Sky Economic Development Authority	P		DC			Lockwood Rural Fire District #8	P		
Big Sky Special Education Cooperative	P					Lockwood Water & Sewer District	P		DC
Billings Housing Authority	P		DC	D		Madison Conservation District	P		
Bitterroot Conservation District	P					Malta Cemetery District	P		
Bitterroot Public Library	P		DC			Malta Irrigation District	P		
Bitterroot Valley Special Education Cooperative	P		DC	D		Miles Community College	P		DC
Buffalo Rapids Irrigation District #1	P					Milk River Joint Board Control	P		
Buffalo Rapids Irrigation District #2	P					Missoula Area Special Education Cooperative	P		
Butte Housing Authority	P					Missoula County Airport	P		DC
Cascade County Conservation District	P					Missoula Rural Fire District	P		DC
Center for Mental Health	P					North Central Learning Special Education Cooperative	P		
Central Montana Learning Resource Ctr	P		DC			North Lake County Public Library	P		DC
Central Valley Fire District	P					North Valley Public Library	P		D
Chouteau County Conservation District	P					Northern Montana Joint Refuse Disposal District	P		DC D
Colstrip Park & Recreation Districts				D		Northwest Montana Education Cooperative	P		
Corvallis County Sewer District	P					Pablo-Lake County Water District	P		
Crown Hill Cemetery District	P					Park County Rural Fire District #1	P		
Daly Ditches Irrigation District	P		DC			Park County Special Education Cooperative	P		
Dawson County Urban Transportation District	P					Petroleum County Conservation District	P		
Dawson Community College	P		DC	D		Phillips Conservation District			DC
Deer Lodge County Head Start Program	P					Pondera County Canal & Reservoir	P		DC
Drummond School & Community Library District	P					Pondera County Cemetery District 2	P		
Dry Prairie Rural Water District	P					Port of Montana — Port Authority	P		
Dry Redwood Regional Water Authority	P					Prairie County Hospital District	P		DC
Eastern Yellowstone County Special Education Cooperative	P					Prairie View Special Services Coop			DC
Fallon Medical Complex	P					Prickley Pear Special Services Cooperative	P		DC
Fergus County Conservation District	P					Rae Water & Sewer District	P		
Flathead County Special Education Cooperative	P		DC			Red Lodge Rural Fire District 7	P		DC
Flathead Conservation District	P		DC	D		Richland County Housing Authority	P		DC
Flathead Emergency Communications Center	P		DC			Ronan Library District	P		
Flathead Municipal Airport Authority	P		DC			Roundup Community Library	P		
Flathead Valley Community College	P		DC			Sanders Special Education Cooperative	P		
Fort Shaw Irrigation District	P					Seeley Lake Missoula County Water District	P		DC
Frenchtown Rural Fire District	P					Seeley Lake Rural Fire District	P		
Gallatin Airport Authority	P		DC	D		Sheridan-Daniels Special Education Cooperative			DC
Gallatin Canyon Consolidated Rural Fire District	P		DC			Sidney-Richland Airport Authority	P		
Gallatin Conservation District	P					Teton County Conservation District	P		
Gallatin-Madison Special Education Cooperative	P					Thompson Falls Public Library	P		DC
Gardiner-Park County Water District	P					Upper Musselshell Conservation District	P		
Glasgow Housing Authority	P					Valley County Conservation District	P		
Glasgow Irrigation District	P		DC			Victor Water & Sewer	P		
Granite County Hospital & Nursing Home	P		DC			Whitefish Housing Authority	P		DC
Granite Conservation District	P					Yellowstone City-County Health Dept	P		DC
Great Divide Education Services	P					Yellowstone-West Carbon Special Education Cooperative	P		
Great Falls International Airport	P		DC			Rural Fire Districts (11)			
Great Falls Transit				D		Big Mountain Fire District			F
Greenfields Irrigation District	P		DC			Central Valley Fire District			F
Hebgen Basin Rural Fire	P					Columbus Rural Fire District #3			F
Helena Housing Authority	P		DC	D		Frenchtown Rural Fire District			F
Helena Regional Airport Authority	P		DC			Gallatin Canyon Consolidated Rural Fire			F
Helena Valley Irrigation District	P					Hebgen Basin Rural Fire District			F
Hill County Public Cemetery District	P					Hyalite Rural Fire District			F
Hinsdale Water and Sewer District	P					Lockwood Rural Fire District #8			F
Human Resources Council District XI	P		DC			Missoula Rural Fire District			F
Human Resources Council District XII	P		DC			Red Lodge Rural Fire District 7			F
Hyalite Rural Fire District			DC			Seeley Lake Rural Fire District			F

STATISTICAL SECTION

Volunteer Fire Departments (225)		
Absarokee Volunteer Fire Dept	Fisher River Valley Volunteer Fire Dept	Phillips County Volunteer Fire Dept
Absarokee-Nye Volunteer Fire Dept	Floral Park Volunteer Fire Dept	Plains /Paradise Rural Volunteer Fire Dept
Alder Volunteer Fire Dept	Florence Volunteer Fire Dept	Plentywood Rural Volunteer Fire Dept
Amsterdam Rural Volunteer Fire Dept	Fort Benton Rural Volunteer Fire Dept	Plevna Volunteer Fire Dept
Arlee Volunteer Fire Dept	Fort Ellis Rural Volunteer Fire Company	Polson Rural Fire Company
Ashland Volunteer Fire Dept	Fort Shaw Rural Volunteer Fire Dept	Power Rural Volunteer Fire Dept
Augusta Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 1	Racetrack Volunteer Fire Dept
Avon Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 2	Racetrack Valley Fire District
Bad Rock Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 3	Rae Volunteer Fire Company
Baker Rural Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 4	Red Lodge Rural Volunteer Fire Dept, Company 1
Basin Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 5	Red Lodge Luther Company 2
Baxendale Volunteer Fire Dept	Gallatin Gateway Rural Volunteer Fire Dept	Roberts Rural Fire District #6
Bear Paw Volunteer Fire Dept	Gallatin River Ranch Rural Fire District	Rocker Volunteer Fire Dept
Belfry Volunteer Fire Dept	Garrison Volunteer Fire Dept	Rollins Volunteer Fire Dept
Belt Rural Volunteer Fire Dept	Gateway Hose Volunteer Fire Company	Ronan Volunteer Fire Dept, Station 1
Big Arm Volunteer Fire Company	Geraldine Volunteer Fire Dept	Ronan Volunteer Fire Dept, Station 2 (Pablo)
Big Butte Volunteer Fire Dept	Georgetown Lake Fire Service Area	Rudyard Volunteer Fire Dept
Bigfork Volunteer Fire Dept, Company A	Gore Hill Volunteer Fire Dept	St Ignatius Rural Volunteer Fire Dept
Bigfork Volunteer Fire Dept, Company B	Grant Volunteer Fire Company	St Labre Volunteer Fire Dept
Big Sandy Volunteer Fire Dept	Grasshopper Valley Volunteer Fire Company	St Marie Rural Volunteer Fire Dept
Birdseye Volunteer Fire Dept	Greenough/Potomac Volunteer Fire Dept	St Regis Volunteer Fire Dept
Black Eagle Volunteer Fire Dept	Harrison Volunteer Fire Dept	Sand Coulee Volunteer Fire Dept
Blaine County Rural Fire District, Chinook	Hawk Creek Rural Volunteer Fire Dept	Seeley Lake Volunteer Fire Dept
Blaine County Rural Fire District, Harlem	Heath Rural Fire District	Shepherd Volunteer Fire Dept
Blaine County Rural Fire District, Hogeland	Helmville Volunteer Fire Dept	Sheridan Volunteer Fire Dept
Blankenship Rural Volunteer Fire Dept	Heron Rural Fire District	Simms Volunteer Fire Dept
Blue Creek Volunteer Fire Dept	Highwood Volunteer Fire Dept	Smith Valley Volunteer Fire Dept
Boulevard Volunteer Fire Dept	Hilger Rural Fire District	Somers Volunteer Fire Dept
Brady Volunteer Fire Dept	Hobson Rural Volunteer Fire Dept	Somers Volunteer Fire Dept, Lakeside Company
Bridger Canyon Volunteer Fire Dept	Home Atherton Volunteer Fire Dept	Sourdough Rural Volunteer Fire Company
Broadwater County Rural Fire District, Duck Creek	Hot Springs Rural Fire District	South Kalispell Volunteer Fire Dept
Broadwater County Rural Fire District, Radersburg	Irvine Flats Fire Company	South Toole County Volunteer Fire Dept
Broadwater County Rural Fire District, Toston	Jefferson City-Community Volunteer Fire Dept	Stevensville, Burnt Fork Company
Broadwater County Rural Fire District, Townsend	Jefferson Valley Volunteer Fire Dept	Stevensville, Etna Company
Broadwater County Rural Fire District, Winston	Joliet Volunteer Fire Dept.	Stevensville, Sunset Company
Bull Lake Volunteer Fire Dept	Knees Volunteer Fire Dept	Stevensville, Westside Company
Canyon Creek Fire District	Lewis & Clark County Rural Volunteer Fire Dept	Superior Volunteer Fire Dept
Cascade Rural Volunteer Fire Dept	Libby Rural Volunteer Fire Dept	Swan Lake Volunteer Fire Dept
Carter Volunteer Fire Dept	Libby Rural Volunteer Fire Dept, Company 2	Swan Valley Volunteer Fire Company
Centerville Volunteer Fire Dept	Lima Rural Volunteer Fire Dept	Sweet Grass Volunteer Fire Dept, Company A
Central Valley Fire Dept, Company A	Little Basin Creek Volunteer Fire Dept	Sweet Grass, Volunteer Fire Dept, Company B
Central Valley Fire Dept, Company B	Lockwood Rural Fire District #8	Terra Verde Heights Volunteer Fire Dept
Central Valley Fire Dept, Company C	Lost Creek/Antelope Gulch Volunteer Fire Dept	Trego-Fortine-Stryker (TFS) Volunteer Fire Dept
Charlo-Moise Volunteer Fire Dept	Madison Valley Rural Volunteer Fire Dept	Thompson Falls Rural Volunteer Fire Dept
Chouteau Rural Volunteer Fire Dept	Manchester Volunteer Fire Dept	Three Forks Rural Volunteer Fire Dept
Clancy Volunteer Fire Dept	Manhattan Rural Volunteer Fire Dept	Three Mile Volunteer Fire Dept - Stevensville
Clarks Fork Rural Volunteer Fire Dept	Marion Volunteer Fire Dept	Treasure County Rural Volunteer Dept
Clinton Volunteer Fire Dept	Martin City Volunteer Fire Dept	Tri-Lakes Volunteer Fire Dept, Company A
Columbia Falls Rural Volunteer Fire Dept	Marysville Volunteer Fire Dept	Tri-Lakes Volunteer Fire Dept, Company B
Columbus Rural Volunteer Fire Dept	McCormick Rural Volunteer Fire Dept	Trout Creek Rural Volunteer Fire Dept
Conrad Rural Volunteer Fire Dept	Medicine Lake Volunteer Fire Dept	Troy Rural Volunteer Fire Dept
Cooke City-Silver Gate Volunteer Fire Dept	Melrose Volunteer Fire Dept	Turner Volunteer Fire Dept
Coram-West Glacier Volunteer Fire Dept	Missoula Volunteer Fire Dept, Pumper Company 1	Twin Bridges Volunteer Fire Company
Corvallis Rural Fire District	Missoula Volunteer Fire Dept, Pumper Company 2	Ulm Volunteer Fire Dept
Craig Volunteer Fire Dept	Missoula Volunteer Fire Dept, Pumper Company 3	Upper Yak Fire Service
Creston Volunteer Fire Dept, Company #1	Missoula Volunteer Fire Dept, Tanker Company 1	Valier Volunteer Fire Dept
Creston Volunteer Fire Dept, Company #2 Lake Blaine	Missoula Volunteer Fire Dept, Tanker Company 2	Valley County Long Run Volunteer Fire Dept
Culbertson Volunteer Fire Dept	Missoula Volunteer Fire Dept, Tanker Company 3	Vaughn Rural Volunteer Fire Dept
Darby Volunteer Fire Dept	Molt Volunteer Fire Dept	Victor Rural Volunteer Fire Dept
Dean Creek Volunteer Fire Dept	Monarch Volunteer Fire Dept	West Fork Rural Fire District
Dearborn Volunteer Fire Dept	Montana City Volunteer Fire Dept, Company 1	West Glendive Volunteer Fire Dept
Denton Volunteer Fire Dept	Montana City Volunteer Fire Dept, Company 2	West Helena Valley Volunteer Fire Dept
Dillon Rural Volunteer Fire Dept, Company A	Montecahlo Volunteer Fire District	West Valley Anaconda Volunteer Fire Dept
Dillon Rural Volunteer Fire Dept, Company B	Musselshell County Rural Volunteer Fire Dept	West Valley Kalispell Volunteer Fire Dept
Dixon Rural Volunteer Fire Dept	North Toole County Volunteer Fire Dept	Wheatland County Volunteer Fire Dept
Dutton Rural Volunteer Fire Dept	Noxon Rural Fire District	Wibaux Volunteer Fire Dept
East Missoula Rural Volunteer Fire Dept	Olney Rural Volunteer Fire Dept	Willow Creek Rural Volunteer Fire Dept
East Valley Volunteer Fire Dept	Opportunity Volunteer Fire Dept	Wilsall Fire Department
Eastgate Volunteer Fire Dept	Ovando Volunteer Fire Dept	Winifred Rural Volunteer Fire Dept
Elk Park Volunteer Fire Dept	Painted Rocks Fire & Rescue Volunteer Fire Company	Wisdom Rural Volunteer Fire Dept
Elliston Volunteer Fire Dept	Paradise Valley Fire Service	Wise River Volunteer Fire Company
Eureka Rural Volunteer Fire Dept	Park City Rural Volunteer Fire Dept #2	Wolf Creek Volunteer Fire Dept
Evergreen Volunteer Fire Dept	Park County Fire Volunteer Dept	Wolf Point Rural Volunteer Fire Dept
Fairfield Rural Volunteer Fire Dept	Park County Rural Volunteer Fire Dept #1	Worden Fire Dept - Company 1
Ferndale Volunteer Fire Dept	Pendroy Rural Volunteer Fire Dept	York Fire Service Area

STATISTICAL SECTION

This page intentionally left blank



This is a publication of the
MONTANA PUBLIC EMPLOYEE
RETIREMENT ADMINISTRATION

100 North Park Avenue, Suite 200
PO Box 200131
Helena, MT 59620-0131
Website: <http://mpera.mt.gov>
email: mpera@mt.gov

All pictures were supplied and used with permission from Montana Fish, Wildlife and Parks. Cover photo from Bannack State Park features the best preserved ghost town in Montana. It was the site of Montana's first major gold discovery in 1862 and Montana's first capital. There are over 50 buildings lining Main Street.

75 copies of this public document were published at an estimated cost of \$20.55 per copy, for a total cost of \$1,541.25 which includes \$1,541.25 for printing and \$0.00 for distribution.