



Pension Trust Fund of the State of Wyoming

**ANNUAL COMPREHENSIVE FINANCIAL REPORT**  
For the Fiscal Year Ended December 31, 2022



*Partnering to Build Financial Security For Members and their Families*



## **VISION STATEMENT**

Partnering to build financial security for members and their families

## **MISSION STATEMENT**

Provide expert administration and responsible investment of Wyoming's public retirement and supplemental savings programs

## **VALUES**

- Integrity
- Accountability
- Commitment
- Excellence

## **PHILOSOPHY**

The Wyoming Retirement System Board and the Wyoming Retirement System staff are committed to:

- Carrying out all statutorily mandated and other responsibilities in a timely, courteous, professional and ethical manner.
- Safeguarding the financial integrity of the System through prudent management.
- Providing adequate member benefits for all plans within the parameters of actuarial funding.

# **Wyoming Retirement System**

Pension Trust Fund of the State of Wyoming

## **Annual Comprehensive Financial Report For the Fiscal Year Ended December 31, 2022**

2515 Warren Avenue Suite 450  
Cheyenne, Wyoming 82002  
(307) 777-7691  
[retirement.wyo.gov](http://retirement.wyo.gov)

David Swindell, Executive Director  
Andrea Odell, Finance Manager

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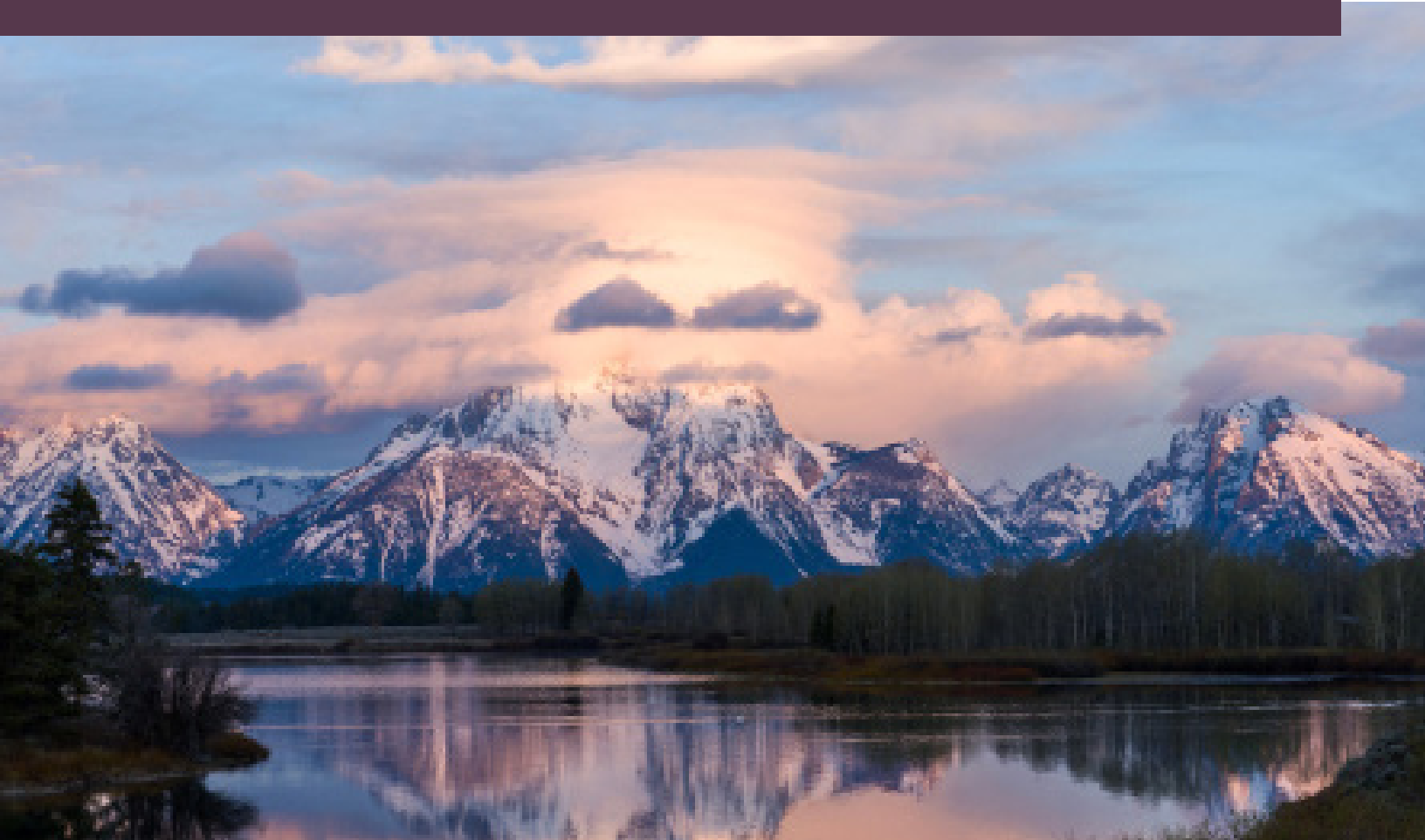
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Annual Comprehensive Financial Report 2022

# INTRODUCTORY SECTION



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# Wyoming Retirement System

*Partnering to Build Financial Security for Members and their Families*

June 20, 2023

Wyoming Retirement Board  
2515 Warren Avenue, Suite 450  
Cheyenne, Wyoming 82002

Dear Board Members:

We are pleased to present the Annual Comprehensive Financial Report (Annual Report) of the Wyoming Retirement System (WRS) for the year ended December 31, 2022. The financial reporting entities of the WRS include the Public Employee Pension Plan; State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan; Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan; Paid Fire A and B Pension Plans; Judicial Pension Plan; Law Enforcement Pension Plan; Air Guard Firefighter Pension Plan and the 457 Deferred Compensation Plan.

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the WRS Management. 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 net position of each plan and the combined changes in the net position of the WRS for the year ended December 31, 2022. All disclosures necessary to enable the reader to gain an understanding of the WRS's financial activities have been included.

The Wyoming Retirement System and Wyoming Deferred Compensation Program were established by legislation and authorized as indicated in the notes to the financial statements. The purpose of the Wyoming Retirement System is to provide administration of eight defined benefit retirement plans and act as Plan Sponsor to the Wyoming Deferred Compensation Program.

The financial statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis as agreed upon by the Governmental Accounting Standards Board (GASB). Financial information presented throughout this Annual Report is consistent with the financial statements.

## **Financial Information**

The Wyoming Retirement System's transactions are reported on the accrual basis of accounting. Contributions are recognized as revenue when due pursuant to formal commitments as well as statutory and contractual requirements. Expenses are recognized when the corresponding liabilities are incurred.

WRS Management is responsible for establishing and maintaining the system of internal controls. This system of internal controls provides management with reasonable, but not absolute, assurance regarding the safeguarding of assets against loss or unauthorized disposition and the reliability of the financial records from which the financial reports are prepared. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived; and (2) the valuation of costs and benefits requires estimates and judgments by management. Discussion and analysis of net position and related additions and deductions is presented in the Management's Discussion and Analysis (MD&A) in the Financial Section of this report.

# Letter of Transmittal

## Plan Financial Condition

The funding objective of the WRS pension funds is to meet long-term benefit requirements through contributions, which remain relatively level as a percent of member payroll over time, and through investment earnings. Historical information concerning funding progress is presented as a schedule in the Actuarial section of the Annual Report.

## Net Pension Liability

The Wyoming Retirement System completes an actuarial evaluation annually to calculate the funded status of each of the eight defined benefit plans administered by the system. The 2022 Evaluation was performed by Gabriel Roeder Smith & Company (GRS). They performed two evaluations for each plan. The actuarial funding reports provide information useful for making long-term funding and contribution decisions. The GASB 67/68 reports provide information for accounting purposes. As of January 1, 2023, the Actuarial Funded Ratio for eight plans administered by WRS was as follows:

Pension Plan	Actuarial Funding Ratio	GASB 67 Accounting Ratio
Public Employee	77.25%	75.47%
State Patrol, Game & Fish Warden and Criminal Investigator	80.58%	79.78%
Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue	82.90%	80.04%
Paid Fire A	89.74%	77.49%
Paid Fire B	96.91%	94.92%
Judicial	99.12%	90.81%
Law Enforcement	84.27%	70.30%
Air Guard Firefighter	82.41%	80.88%

A Schedule of Funding Progress is included within the Actuarial Section. The net pension liability of each plan is reviewed annually. The statutes governing the Wyoming Retirement System's plan requires that the unfunded liabilities be financed systematically over future years.

## Investments

The defined benefit plan assets of the WRS are held at Northern Trust, which acts as custodian of all investments, except for those assets held by the treasurer of the State of Wyoming and the 457 Plan. Northern Trust also administers a securities lending program on behalf of the WRS. Daily, Northern Trust provides WRS with detailed accounting reports, which include all trades, receipt of income and accrual information. On December 31, 2022, the net position for all eight defined benefit plans totaled \$9.86 billion, which represents a 9.64% decrease from the \$10.92 billion held on December 31, 2021.

Management retains a professional investment consultant who reports quarterly the investment returns by manager and provides recommendations regarding the managers' and portfolio holdings. The investment consultant, Meketa Investment Group, Inc. (Meketa), provides the Board with a measure of how well each of the investment managers perform relative to their benchmarks and peers. WRS's internal investment team includes a Chief Investment Officer, three Senior Investment Officers, one Investment Officer, one Senior Investment Analyst, one Investment Analyst, one Investment Accountant and one Investment Intern. Investment activities are monitored by both internal and external auditors for compliance with WRS's Investment Policy Statement (IPS).

An integral part of any investment policy is strategic asset allocation. This asset mix is designed to maximize investment returns while minimizing risk through optimum portfolio diversification. The Board's approved target allocation is outlined in Note 3 to the Basic Financial Statements. The annual return of funds for calendar year 2022 was -6.99%, net of fees.

The Financial Section and Investment Section contain more detailed analysis and information.



## Professional Services

Professional consultants are retained to perform services essential to the efficient operation of the WRS. State statutes require an annual audit be performed either by the State Audit Department or by an independent auditor. The accounting firm of Eide Bailly, performed the annual audit. The auditor's report on the basic financial statements is included in the Financial Section of this report.

The actuarial valuations provide a means by which to measure at a point in time for each retirement plan's assets, as well as liabilities and the impact on those liabilities proposed plan modifications may have. Reports from the WRS's actuary, Gabriel Roeder Smith & Company (GRS) are included in this report.

## Operations and Activities

Providing excellent customer service and issuing member payments were top priorities in 2022. Operations issued member refund payments three times per month while using one week per month to concentrate on processing new retirement benefits. In addition, WRS embarked on a campaign to locate members who left employment years ago and kept funds on deposit with WRS. This effort resulted in more refunds of non-vested accounts. WRS continued to communicate with our new and existing members on the importance of beneficiary designation. WRS also implemented a new system allowing for the acceptance of electronic payments from our employers.

Pension operations continued to provide a high level of service to members and posted the following statistical indicators:

- Processed 1,536 new retirement applications
- Processed 2,534 refund applications
- Incoming and outgoing member phone calls totaled 48,876 calls
- Processed 416,017 retirement benefit payments
- Deposited \$487.7 million dollars in employee, employer and other contributions
- Issued \$749.9 million dollars in retirement benefits to approximately 35,013 pensioners across eight retirement plans

## Awards and Acknowledgments

The WRS submitted its 2021 report to the Government Finance Officers Association (GFOA) to be considered for a Certificate of Achievement for Excellence in Financial Reporting. We are pleased to announce that the WRS was notified of its selection for the certificate of achievement for its annual comprehensive financial report for the fiscal year ended December 31, 2021. This was the twenty-ninth (29th) consecutive year that WRS has achieved this prestigious award. The Certificate of Achievement for Excellence in Financial Reporting is the highest form of recognition in the area of public employee retirement system accounting and financial reporting.

We express our thanks and appreciation to all stakeholders including our members, affiliated employers and to the various employee organizations and associations for their continued cooperation and support.

We also wish to express our special thanks and appreciation to WRS staff, members of the pension plans, the WRS Board of Trustees, Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Board of Trustees, our consultants and other associates whose diligence and commitment have contributed significantly to another year of accomplishment for the WRS.

Finally, we wish to thank the Governor and the Legislature for their commitment to the financial integrity of Wyoming's public employee retirement systems. The foresight and support exhibited consistently by the Governor and members of the Legislature are both critically important and commendable.

Sincerely,



Andrea Odell  
Finance Manager



David Swindell  
Executive Director

# Board Chair's Letter



## Wyoming Retirement System

*Partnering to Build Financial Security for Members and their Families*



*Tom Chapman*  
*WRS Board Chair*

June 20, 2023

Dear Members, Benefit Recipients, and Employers,

On behalf of the Board of Trustees, I am delighted to present the Annual Comprehensive Financial Report (ACFR) of the Wyoming Retirement System (WRS) for the fiscal year that concluded on December 31, 2022. This report offers an in-depth overview of the financial and actuarial status of your retirement system. The Financial Section of the report adheres to generally accepted accounting principles and includes audited financial statements by WRS's independent auditors. I want to assure you that your pension system is currently stronger than ever.

Allow me to address some of the other important objectives of WRS, which are crucial to the successful operation of the system.

**Board Composition:** Over the past year, we bid farewell to trustee Mike Ceballos, expressing our gratitude for his numerous contributions to WRS. On the other hand, we welcomed new trustee Jim Ruby, who serves as the director of the state's environmental quality council and represents state employees on the Board. We extend our thanks to all the board members for their voluntary service, leadership, and altruism.

**Pension Contribution:** The ACFR demonstrates that WRS disbursed pension benefits amounting to over \$780 million in 2022, averaging approximately \$65 million per month. While our retirees are spread across the globe, 78% of these payments are made to individuals residing in Wyoming zip codes. The pension payroll is substantial and often exceeds that of some major employers, making it an invaluable asset to the taxpayer. Notably, only 30% of the benefits paid originate from contributions made by the employee or employer, while the remaining 70% is funded by investment earnings.

**Investments:** The investment markets experienced a decline in 2022 due to rapidly rising interest rates, persistent COVID-19 and supply chain impacts, and global political tensions, including the war in Ukraine. As a result, WRS incurred a loss of -6.9% for the year. However, our investment team surpassed their strategic benchmark by 2.1% and ranked in the top quartile among peer funds. Comparatively, the median peer fund experienced a loss of -10.3% as opposed to our -6.9%.

While short-term investment returns are worth considering, it is more valuable to focus on longer periods. Over the past five years, WRS's investment returns have consistently ranked in the top quartile. This remarkable achievement, despite market volatility, can be attributed to our stable and professional staff. By outperforming both our benchmarks and peers in both positive and negative markets, WRS has thrived.

**Legislation:** The legislative session of 2023, which took place after our reporting period ended on December 31, 2022, but before the publication of this report, resulted in relatively minor adjustments to the Law Enforcement and Warden/Patrol pension plans concerning death benefits and membership. Additionally, the legislature allocated a one-time \$9 million contribution to the Volunteer plan to compensate for the revenue loss incurred in resolving last year's funding problem with the Fire A plan (which is now on a stable path). Lastly, the legislature authorized increases in base pay for our investment team professionals. We acknowledge and appreciate the Legislature's continuous involvement and support.

The Board remains committed to advocating for a Cost of Living Allowance (COLA). While the suspension of COLA was necessary in the aftermath of the financial crisis, the continued absence of a COLA places increasing hardships on many retirees. Governor Gordon proposed funding a COLA in the recent legislative session, but unfortunately, the recommendation did not gain sufficient traction in the legislature. We continue to collaborate with constituents to explore potential options for the Legislature to consider.

**Actuarial:** During the past year, no significant changes were made to our actuarial planning assumptions. The assumed rate of future investment returns remains at 6.8%. In 2022, all eight plans experienced investment losses. The funding ratio for the large Public Employee Plan (or the “Big Plan”) remained unchanged at 77.0%. The accounting standards used in this report consider market value for investment returns. On a market value basis, the funded ratio for the Big Plan decreased from 86.0% last year to 75.5% this year. The funding ratios for most of the other plans remained stable on an actuarial basis but decreased on a market value basis. WRS’s actuarial returns are smoothed over five years, which mitigates volatility compared to market value reporting. Despite the loss of our cushion due to the market decline this year, all the plans still had market values greater than their actuarial smoothed values. We remain confident in the 6.8% assumption in the long run.

**Oversight:** Providing exceptional customer service remains our highest priority at the Wyoming Retirement System. We continue to enhance our pension administration system, RAIN, by refining and improving its functionalities. To bolster security, we introduced multi-factor authentication, and we are implementing further enhancements to position our system as a leader in the industry.

The collaborative efforts of the Governor, Legislature, Board of Trustees, and our dedicated staff have resulted in one of the strongest public pension systems in the country. While we take pride in our collective accomplishments, we acknowledge that there is always room for improvement.

If you have any questions or suggestions regarding this report or any other aspect of WRS, please do not hesitate to contact us at the Wyoming Retirement System, located in our new office at 2515 Warren Avenue, Suite 450, Cheyenne, Wyoming 82002, or call us at (307) 777-7691. You can also visit our website at [retirement.wyo.gov](http://retirement.wyo.gov).

Sincerely,



Tom Chapman  
Chair of the Board of Trustees  
Wyoming Retirement System

# Wyoming Retirement System Board

The responsibility for the administration and operation of the Wyoming Retirement System, including all pension plans (except the Volunteer Firefighter & EMT Plan) and the Deferred Compensation (457) Plan is vested in the Wyoming Retirement Board. The Board is composed of eleven members, ten appointed by the Governor and the eleventh being the State Treasurer. The representation consists of the following:

- The State Treasurer
- A retired recipient of the Retirement System
- Two public employees
- Two public employees of the public school system, the University of Wyoming or Community College System
- Five qualified electors from Wyoming known for their public spirit and business or professional ability and at least two of whom have professional expertise in investments and finance



Tom Chapman (Board Chair)  
*Jackson, WY*  
At Large  
First Appointed: 2010  
Current Term Expires: 2027



Eric Nelson (Vice Chair)  
*Casper, WY*  
Public Employees (City/County)  
First Appointed: 2015  
Current Term Expires: 2029



Vicci Colgan  
*Cheyenne, WY*  
Retiree  
First Appointed: 2015  
Current Term Expires: 2027



Jim Ruby  
*Cheyenne, WY*  
Public Employees (State)  
First Appointed: 2022  
Current Term Expires: 2029



Robert Leibrich  
*Sheridan, WY*  
At Large  
First Appointed: 2021  
Current Term Expires: 2027



Tim Sullivan  
*Laramie, WY*  
At Large  
First Appointed: 2013  
Current Term Expires: 2025



John Lummis  
*Jackson, WY*  
At Large  
First Appointed: 2021  
Current Term Expires: 2027



Jeremy Smith  
*Ranchester, WY*  
School Employees  
First Appointed: 2022  
Current Term Expires: 2025



Paul O'Brien  
*Jackson, WY*  
At Large  
First Appointed: 2020  
Current Term Expires: 2029



Dr. Leslie Travers  
*Casper, WY*  
Higher Education  
First Appointed: 2021  
Current Term Expires: 2029



Curt Meier  
(Board Member - State Treasurer)  
*Cheyenne/La Grange, WY*  
Elected Official

## Volunteer Firefighter, EMT and Search & Rescue Pension Board

The Volunteer Firefighter, Emergency Medical Technicians (EMT) and Search & Rescue Pension Plan is controlled by a separate board and administered by the Executive Director of the Wyoming Retirement System. The Board consists of six volunteer firefighters, one volunteer EMT and one volunteer Search & Rescue volunteer, who shall be appointed by the Governor for staggered terms of three years. Each member is a volunteer firefighter, EMT or Search & Rescue volunteer with a minimum of five years as a member of a volunteer fire, EMT department or volunteer Search & Rescue service in the State of Wyoming.



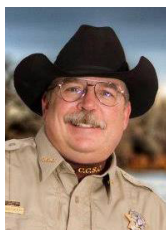
Gene Diedtrich (Chairman)  
*Newcastle, WY*

Represents Fire  
First Appointed: 1987  
Current Term Expires: 2023



Lanny Applegate (Vice Chair)  
*Cheyenne, WY*

Represents Fire  
First Appointed: 2000  
Current Term Expires: 2024



Clint Becker  
*Douglas, WY*

Represents Search & Rescue  
First Appointed: 2019  
Current Term Expires: 2025



Dennis McDonald  
*Afton, WY*

Represents Fire  
First Appointed: 2022  
Current Term Expires: 2023



Tracy Brown  
*Lingle, WY*

Represents Fire  
First Appointed: 2010  
Current Term Expires: 2024



Jerry Munger  
*Wheatland, WY*

Represents Fire  
First Appointed: 2000  
Current Term Expires: 2025



Kim Lee  
*Riverton, WY*

Represents Fire  
First Appointed: 2000  
Current Term Expires: 2025

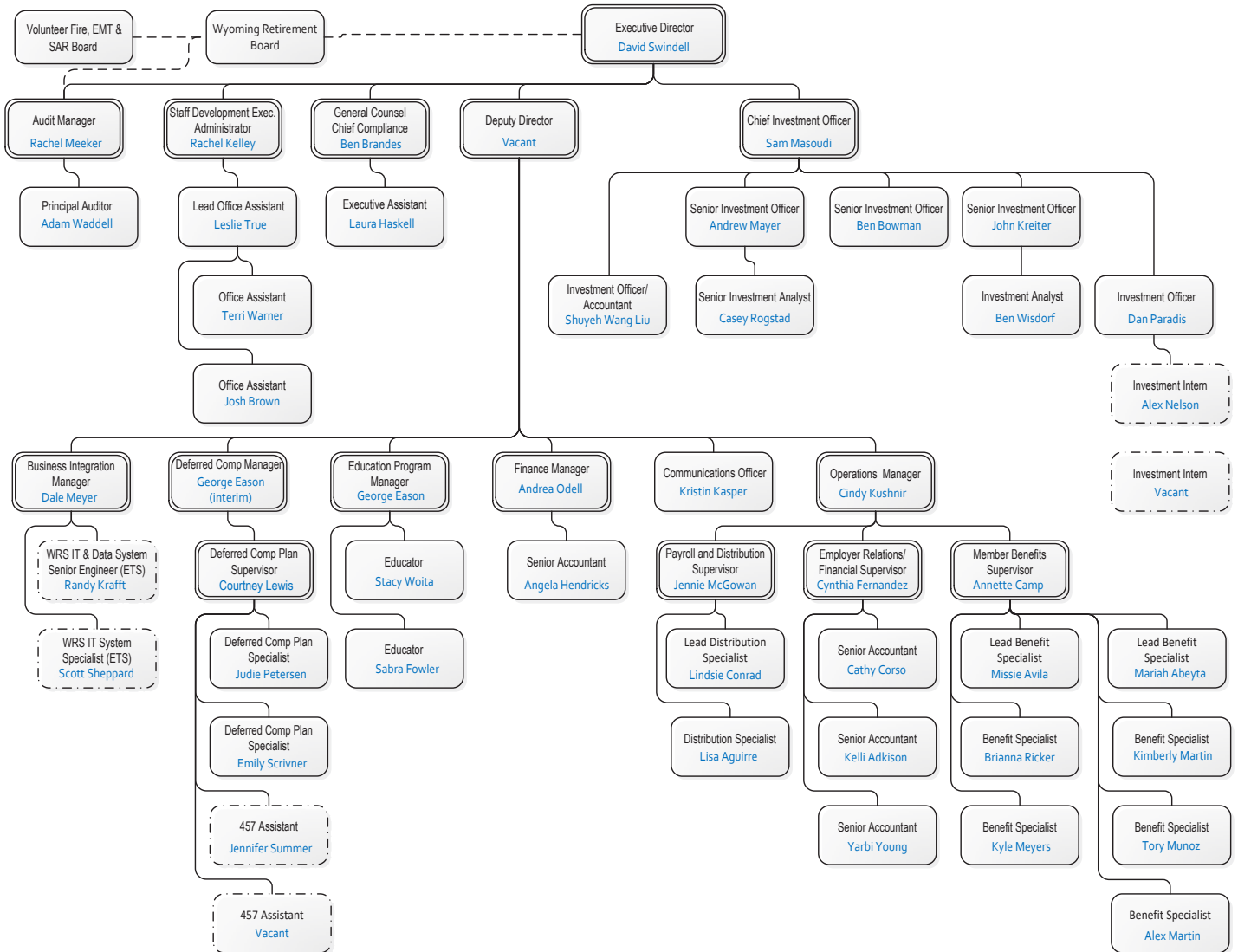


Eric Quinney  
*Evanston, WY*

Represents EMT  
First Appointed: 2014  
Current Term Expires: 2024

# Board Changes and Organizational Chart

## Organizational Chart:



## Investment Managers:

A complete listing of the investment professionals providing services for the Wyoming Retirement System is available in the Investment Section starting on page 83 and detailed by asset class. A schedule of fees is located on page 100.

**Actuary:**

Gabriel Roeder Smith & Company (GRS)  
Irving, TX

**Auditor:**

Eide Bailly, LLP  
Boise, ID

**Master Custodian:**

The Northern Trust Company  
Chicago, IL

**Investment Consultant:**

Meketa Investment Group  
Boston, MA

**Alternative Investment Consultant:**

Albourne America  
San Francisco, CA

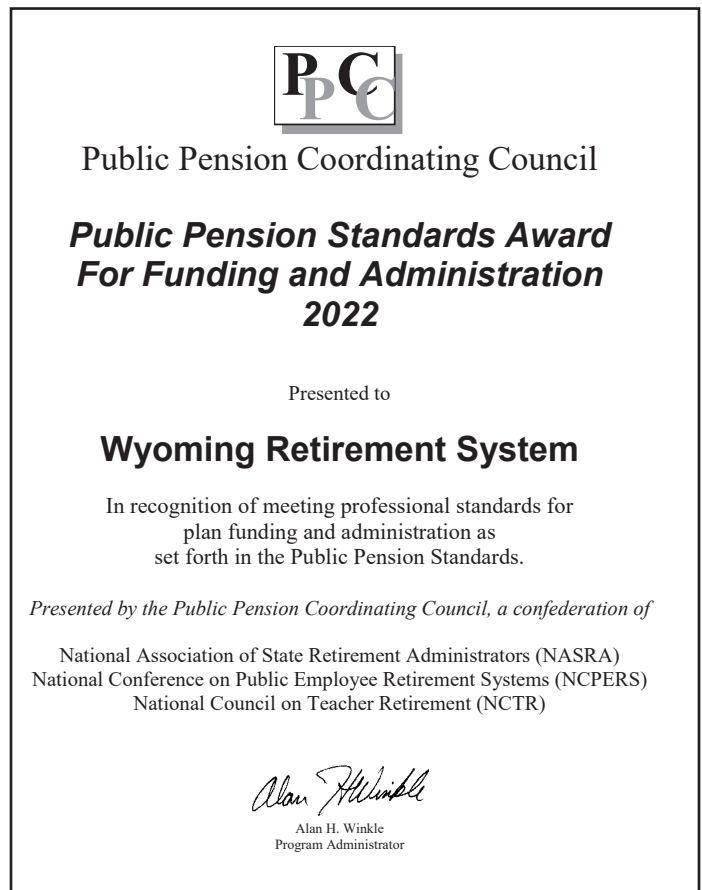
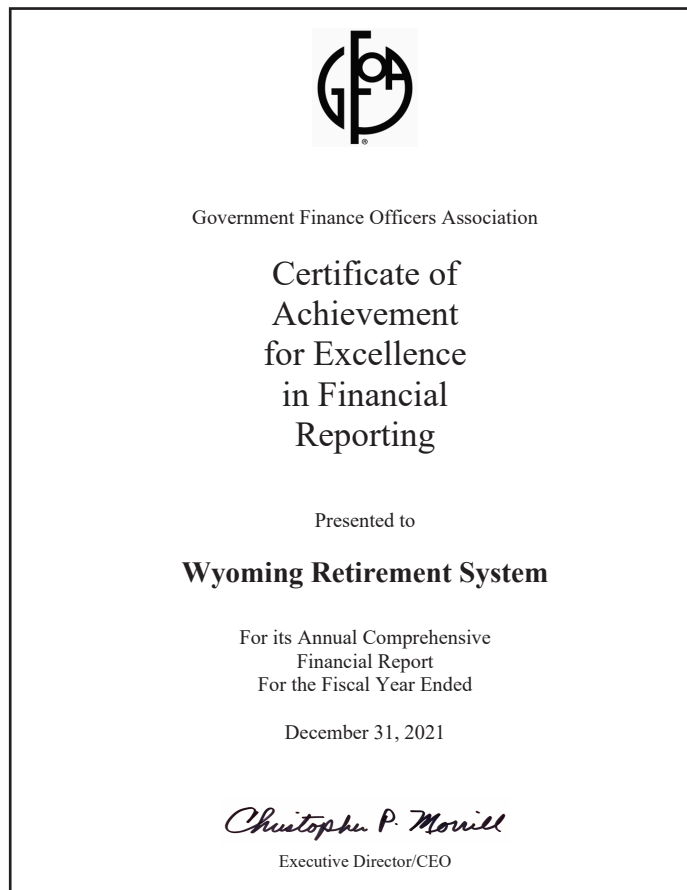
**Deferred Compensation Plan Investment and Performance Consultant:**

RVK, Inc.  
Portland, OR

**Deferred Compensation Plan Record Keeper:**

Empower Retirement  
Greenwood Village, CO

**Professional Awards**



# Plan Overview

The Wyoming Retirement System administers eight defined benefit pension plans and one 457 deferred compensation plan:

Pension Plan	Contributions	Vesting Service	Eligibility for Full Retirement	Multiplier	Highest Avg Salary
Public Employee Tier 1 (First contribution before 9/1/2012)	18.62% of salary: Employee = 9.25% Employer = 9.37%	48 months	<ul style="list-style-type: none"> <li>Age 60 with 4 yrs service, or</li> <li>Upon meeting requirements of the "Rule of 85" (age + years of service equal or exceed 85)</li> </ul>	2.125% for first 15 yrs of service, plus 2.25% for remaining yrs	36 continuous months
Public Employee Tier 2 (First contribution on or after 9/1/2012)			<ul style="list-style-type: none"> <li>Age 65 with 4 yrs service, or</li> <li>Upon meeting requirements of the "Rule of 85" (age + years of service equal or exceed 85)</li> </ul>	2% for all yrs of service	60 continuous months
The employer contribution for Park Rangers in Public Employee Plan Tier 1 or 2 is 1% greater than the amount shown.					
State Patrol, Warden and Criminal Investigator	29.44% of salary: Employee = 14.56% Employer = 14.88%	72 months	<ul style="list-style-type: none"> <li>Age 50 with 6 yrs service</li> </ul>	2.5% for all yrs of service 75% ceiling	36 continuous months
Law Enforcement	17.20% of salary: Employee = 8.60% Employer = 8.60%	48 months	<ul style="list-style-type: none"> <li>Age 60 with 4 yrs service, or</li> <li>Any age with 20 yrs service</li> </ul>	2.5% for all yrs of service 75% ceiling	60 continuous months
Judicial	23.72% of salary: Employee = 9.22% Employer = 14.5%	48 months	<ul style="list-style-type: none"> <li>Age 60 with at least 20 yrs service, or</li> <li>Age 65 with 4 yrs service, or</li> <li>Age 70 with continuous service</li> </ul>	4% for first 5 yrs of service + 3% for yrs 6-15 + 2% for yrs 16-20 + 1% for yrs 21 or more	36 continuous months
Paid Fire A	None	120 months	<ul style="list-style-type: none"> <li>20th anniversary of date of employment</li> </ul>	75% of Firefighter 1st Class's salary for first 20 yrs + 1.5% of salary for 21+ yrs	n/a
Paid Fire B	27.245% of salary: Employee = 11.245% Employer = 16.00%	48 months	<ul style="list-style-type: none"> <li>Age 50 with 4 yrs service</li> </ul>	2.8% for first 25 yrs of service. 70% ceiling	36 continuous months
Volunteer Firefighter, EMT and Search & Rescue	Vol. Firefighter and EMT = \$18.75 per month Search & Rescue = \$37.50 per month	60 months	<ul style="list-style-type: none"> <li>Age 60 with 5 yrs service</li> </ul>	\$16/mo per year of service for the first 10 years of service, plus \$19/mo per year of service over 10 yrs	n/a
Air Guard Firefighter	23.77% of salary: Employee = 16.65% Employer = 7.12%	48 months	<ul style="list-style-type: none"> <li>Age 60 with 4 yrs service, or</li> <li>Age 50 with 25 yrs service, or</li> <li>At least age 55 &amp; meeting requirements of "Rule of 75" (age + years of service equal or exceed 75)</li> </ul>	2.5% for all yrs of service	36 continuous months

Further plan details are available in the Notes to the Financial Statements in this report. Plan details, a history of contribution rates and major changes to plans, and governing statutes, rules and policies that apply to WRS retirement plans are also available at [retirement.wyo.gov](http://retirement.wyo.gov).

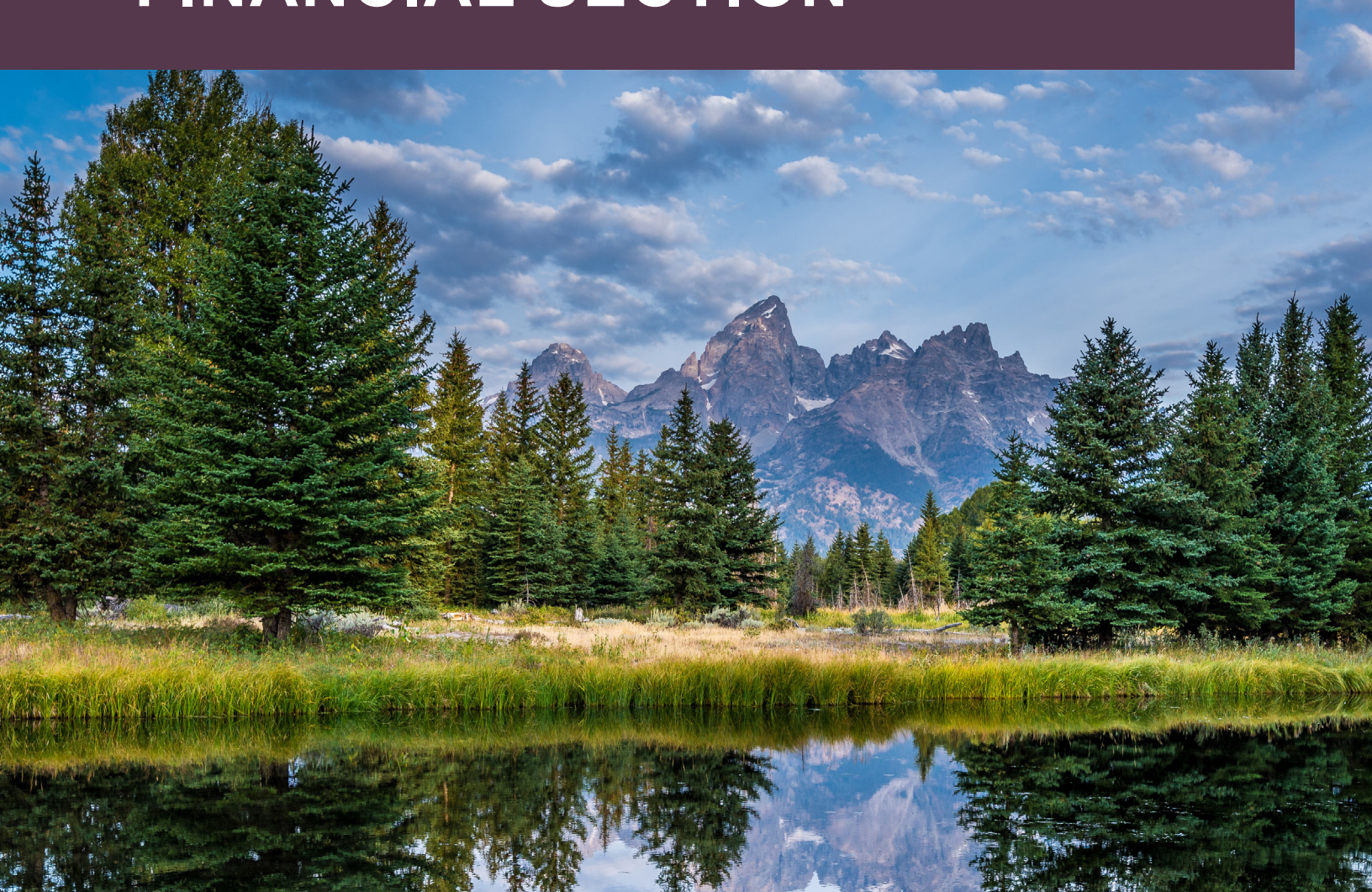
- Wyoming Retirement Act:  
Wyo. Stat. § 9-3-401 -  
Wyo. Stat. § 9-3-432
- Uniform Management of Public Employees Retirement Act:  
Wyo. Stat. § 9-3-433 -  
Wyo. Stat. § 9-3-454
- Deferred Compensation Program:  
Wyo. Stat. § 9-3-501  
Wyo. Stat. § 9-3-509
- State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement:  
Wyo. Stat. § 9-3-601 -  
Wyo. Stat. § 9-3-620
- Judicial Retirement:  
Wyo. Stat. § 9-3-701 - Wyo. Stat. § 9-3-713
- Firemen Pensions and Death Benefits (Plan A): Wyo. Stat. § 15-5-201 -  
Wyo. Stat. § 15-5-210
- Firemen's Pension Account Reform Act of 1981 (Plan B): Wyo. Stat. § 15-5-401 -  
Wyo. Stat. § 15-5-422
- Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan: Wyo. Stat. § 35-9-616 - 35-9-628
- Policemen Pensions and Death Benefits:  
Wyo. Stat. § 15-5-301 -  
Wyo. Stat. § 15-5-314
- Higher Education Retirement:  
Wyo. Stat. § 21-19-101 -  
Wyo. Stat. § 21-19-106
- Public Meetings Act  
Wyo. Stat. § 16-4-401 -  
Wyo. Stat. § 16-4-408
- Wyoming Retirement Board Rules
- Volunteer Firefighter, Emergency Medical Technician and Search & Rescue Pension Account Board Rules
- Wyoming Retirement System Board Policy Manual
- Deferred Compensation 457(b) Plan Document





Annual Comprehensive Financial Report 2022

# FINANCIAL SECTION



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## Independent Auditor's Report

To the Board of Trustees  
Wyoming Retirement System  
Cheyenne, Wyoming

### Report on the Audit of the Financial Statements

#### *Opinion*

We have audited the financial statements of the Wyoming Retirement System (WRS), which comprise the statement of fiduciary net position as of December 31, 2022, and the related statement of changes in fiduciary net position, for the year then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective fiduciary net position of the WRS, as of December 31, 2022, and the respective changes in fiduciary net position, for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### *Basis for Opinion*

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

#### *Emphasis of Matters*

As discussed in Note 3, the financial statements include investments valued at \$3,102,284,296 (31.45% of net position) as of December 31, 2022, whose carrying values have been estimated by management in the absence of readily determinable fair values. Management's estimates are based on information provided by the fund managers or the general partners. Our opinion is not modified with respect to this matter.

### Responsibilities of Management for the Financial Statements

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

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# Independent Auditor's Report

## Auditor's Responsibilities for the Audit of the Financial Statements

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

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

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

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

## Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of changes in net pension liability and the related ratios – multiyear, schedule of investment returns, and schedule of contributions multiyear (collectively the required supplementary information) as listed in the table of contents be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of 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 GAAS, 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 that collectively comprise the WRS's basic financial statements. The other supplementary information is presented for purposes

of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

## ***Other Information***

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

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

## ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated June 20, 2023, on our consideration of the WRS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of WRS's 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 WRS's internal control over financial reporting and compliance.



Boise, Idaho  
June 20, 2023

# Management's Discussion and Analysis

## Management's Discussion and Analysis

This section presents management's discussion and analysis of the Wyoming Retirement System's (WRS) financial status and performance for the year ended December 31, 2022.

WRS is responsible for administering retirement benefits for eight defined benefit pension plans and one defined contribution plan. The eight defined benefit plans are the Public Employee Pension Plan, State Patrol, Game & Fish Warden and Criminal Investigator Pension Plan, Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan, Paid Fire A Pension Plan, Paid Fire B Pension Plan, Judicial Pension Plan, Law Enforcement Pension Plan and the Air Guard Firefighter Pension Plan. The defined contribution plan is also known as the Wyoming Deferred Compensation Program (457 Plan).

## Overview of the Financial Statements

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

1. Basic Financial Statements including Statement of Fiduciary Net Position - Pension (and Other Employee Benefit) Funds, Statement of Changes in Fiduciary Net Position - Pension (And Other Employee Benefit) Funds, and Notes to the Basic Financial Statements
2. Required Supplementary Information
3. Other Supplementary Information

Collectively, this information presents the combined net position restricted for pension benefits for each of the funds administered by WRS and the 457 Plan sponsored by WRS as of December 31, 2022. This financial information also summarizes the combined changes in net position restricted for pension and defined contribution benefits for the year then ended. The information in each of these components is briefly summarized as follows:

1. **Basic Financial Statements.** For the calendar year ended December 31, 2022, basic financial statements are presented for the retirement funds administered and sponsored by WRS. Pension Trust funds are used to account for resources held for the benefit of parties outside WRS. These Pension Trust funds are comprised of eight defined benefit systems and one 457 Plan.
  - The Statement of Fiduciary Net Position – Pension (and Other Employee Benefit) Funds is presented for the pension and defined contribution funds at December 31, 2022. This financial statement reflects the resources available to pay benefits to members, including retirees and beneficiaries.
  - The Statement of Changes in Fiduciary Net Position – Pension (and Other Employee Benefit) Funds is presented for the pension and the defined contribution funds for the year ended December 31, 2022. This financial statement reflects the changes in the resources available to pay benefits to members, including retirees and beneficiaries for the calendar year 2022.
  - Notes to the Basic Financial Statements. The Notes to the Basic Financial Statements provide additional information that is essential to a full understanding of the data provided in the basic financial statements.
2. **Required Supplementary Information.** The required supplementary information consists of schedules concerning the net pension liability and changes therein, schedule of investment returns and actuarially determined contribution requirements.
3. **Other Supplementary Information.** This section includes the Schedule of Administrative Expenses and Investment Advisory Fees for all of the retirement plans, and for the 457 Plan, the Combining Schedule of Participant and Administrative Net Position, and the Combining Schedule of Changes in Participant and Administrative Net Position.

# Management's Discussion and Analysis

## Financial Analysis of Defined Benefit Plans

Investments of the WRS Defined Benefit Plans are combined in a commingled investment pool. Each plan owns an equity position in the pool and receives proportionate investment income from the pool in accordance with respective ownership percentages. Each plan's allocated share of each investment type in the pool is shown in the Statement of Fiduciary Net Position for the individual plan. Investment gains or losses are reported in the Statement of Changes in Fiduciary Net Position for each retirement plan. The rate of return on investment is therefore approximately the same for each plan.

## System's Total Investment Assets

At December 31, 2022, WRS held total investment assets of \$9.8 billion. The combined investment portfolio experienced a return of -6.99% (net of fees) compared with the WRS Benchmark of -9.12%. The benchmark represents what would have occurred if WRS had invested in the following asset classes with the corresponding weights derived from the Board's approved strategic asset allocation.

Investment results over time compared with WRS benchmarks are presented in the Investment Section of this Annual Comprehensive Financial Report (ACFR). The figures listed in the table on page 20 are the net exposures in each asset class after accounting for the notional exposure differences through the Russell Overlay account. Physical exposures could be quite different depending on the level of notional exposure held within the overlay account.

## Tactical Cash

On December 31, 2022, WRS held \$144 million in Cash, which was a decrease from the \$394 million in Tactical Cash at the end of December 31, 2021. The change in cash is a function of tactical asset allocation and timing decisions made by WRS staff at year end and is utilized within the Overlay Program to manage portfolio level asset class exposures.

## Equities

On December 31, 2022, WRS held \$4.6 billion in Total Equity, compared to the \$5.1 billion held the prior year end. Total equities consists of marketable securities across Domestic, International Developed, and Emerging Market equity securities, as well as Private Equity. Total Equity had a return of -11.18% for the year 2022 compared to -16.13% for the benchmark.

As of December 31, 2022, the Total Equity blended benchmarks consists of 40.8% Russell 3000 Total Return Index, 22.3% MSCI EAFE IMI, Net Dividend (65% hedged to USD), 11.7% MSCI EM IMI Net Dividend, and 25.2% Cambridge Associates Global All Private Equity (quarter lagged).

## Fixed Income Securities

On December 31, 2022, WRS held \$1.6 billion in Total Fixed Income securities, which was lower than the \$2.3 billion in Fixed Income securities held at December 31, 2021. Total Fixed Income includes securities such as U.S. Treasury Bonds and Notes, Mortgage-Backed Securities, Corporate Bonds and Private Debt. In total, Fixed Income had a return of -8.85% for the year 2022 compared to the customized benchmark's return of -9.90%.

As of December 31, 2022, the blended benchmark for Total Fixed Income consists of 25.0% Bloomberg U.S. Aggregate, 25.0% Bloomberg U.S. Government, 10.0% Bloomberg U.S. Treasury Inflation Notes, 15.0% that is a 50/50 blend of Credit Suisse Leveraged Loan index and Bloomberg U.S. High Yield index, and 25.0% Cambridge Associates Vintage Year Blend (quarter lagged).

## Marketable Alternatives

On December 31, 2022, WRS held \$1.8 billion within the Marketable Alternatives asset class, which was lower than the \$1.9 billion in Marketable Alternatives held at December 31, 2021. This asset class returned -6.91% for the year, compared to a return of -7.50% for the benchmark, which consists of the 37.5% HFRI Equity Hedge Long/Short Directional Index and 62.5% HFRI Fund of Funds Composite Index.

## Private Real Assets

On December 31, 2022, WRS held \$1.4 billion in managers considered to employ Private Real Asset strategies, an increase from \$1.1 billion on December 31, 2021. Private Real Assets include such categories as real estate, infrastructure, and natural resources. In total, the Private Real Asset class returned 10.37% for the year, compared to a vintage year blended benchmark return of 9.40%.

# Management's Discussion and Analysis

## Investment allocation at Fair Value as of December 31, 2021 and 2022:

Asset Allocation By Sector	2021		2022	
	Physical Securities	With Overlay	Physical Securities	With Overlay
<b>Tactical Cash</b>	4.72%	3.65%	3.94%	1.46%
<b>Gold</b>	n/a	n/a	2.55%	2.55%
<b>Fixed Income</b>	18.49%	20.86%	16.37%	16.66%
<b>Equity</b>	48.63%	47.34%	45.57%	46.91%
<b>Marketable Alternatives</b>	17.62%	17.62%	18.41%	18.41%
<b>Private Real Assets (formally "Private Markets")</b>	10.54%	10.53%	13.15%	14.00%

Note: Positions with overlay are included to provide a more realistic disclosure of exposures

### Security Lending

WRS earns additional investment income by lending investment securities to brokers. Northern Trust, WRS's custodian bank, does this on a pooled basis. The brokers provide collateral to the custodian bank and generally use the borrowed securities to cover short sales and failed trades. The custodian bank invests the cash collateral received from the brokers in order to earn interest. On December 31, 2022, the plans had \$470.1 million on loan secured by \$482.0 million in collateral. In addition, the securities collateralized by cash, securities valued at \$55.9 million were on loan collateralized by non-cash collateral in the amount of \$57.7 million. For the year 2022, net securities lending income for all plans totaled over \$1.0 million as compared to the year 2021, it totaled just under \$1.0 million.

### Actuarial Valuation and Funding Progress

An actuarial valuation of each WRS defined benefit plan is performed annually. The funded status of each plan is shown in the Schedules of Funding Progress, which is located in the Actuarial section of this report. It is important to note that in November 2021 and also in February 2022, the Board changed the assumptions used by the actuary to value the plans. The new assumptions are reflected in these valuation results. In general, the new assumptions reflect an update to the mortality tables, adjustments to the demographic and salary scale, as well as a lower long-term investment return. Funding ratios according to GASB 67 standards range from a high of 94.92% to a low of 70.30%. The Schedules of Funding Progress show the January 1, 2023 funding ratios compared with the ratios at January 1 of the prior 10 years. The section also shows the amount by which actuarial assets fell short of actuarial liabilities. At January 1, 2023, the actuarial value of liabilities exceeded the actuarial value of assets by \$2.8 billion.

For all plans except the Paid Fire A Pension Plan, beginning July 1, 2012 all future COLA's must be granted by the State Legislature. In addition, the board cannot recommend the COLA unless the plan is considered actuarially sound and the unfunded liability must not drop below 100% after the award of the COLA. Per 2022 legislation (Senate Enrolled Act 6), the Paid Fire A Pension Plan no longer awards any increases to benefits after April 1, 2022.

The increase in the funding ratios for the Paid Fire A Pension Plan resulted from additional contributions to the Plan. The passage of legislation effective in April 2022 (Senate Enrolled Act 6), resulted in two one-time contributions, an employer contribution in the amount of \$20 million and a contribution from the State of Wyoming's general fund in the amount of \$55 million. In addition, 40% of the fire insurance premium tax collected was transferred to the Plan and will continue to be transferred to the Plan until there are no remaining members receiving benefits. In April 2022, the Paid Fire A Plan assets were returned to the existing investment pool of the defined benefit plans. From January 2021 to March 2022, the Paid Fire A Plan assets were invested in a more conservative fixed income strategy. The expected rate of return on assets for the Paid Fire A Pension Plan was increased from 1.00% to 6.80%.



# Management's Discussion and Analysis - Analysis of Individual Plans

## Public Employee Pension Plan

The Public Employee Pension Plan provides retirement benefits to covered State of Wyoming, local government and public education employees. Employee and employer contributions and earnings on investments fund benefits of the Plan.

The Plan's net position restricted for pensions on December 31, 2022 totaled \$8.4 billion, a decrease of \$983.3 million from 2021. Additions to the Plan's net position include employee and employer contributions while investment losses resulted in a deletion (decrease) to the net position. For the calendar year 2022, employee and employer contributions totaled \$349.8 million, an increase from 2021 of approximately \$15.0 million. Statutorily required Plan contributions equaled 18.62% of the participant's salary. The increase in contributions resulted mainly from participant salary increases. The Plan recognized a net investment loss of \$644.4 million for the year 2022 compared to a net investment gain of \$1.4 billion a year earlier. The loss was driven by market volatility caused by several factors such as supply chain issues, high inflation and increasing interest rates.

Deductions from the Plan net position restricted for pensions resulted from retirement and beneficiary benefits, administrative expenses and refunds to members terminating service. For 2022, benefits totaled \$660.9 million, an increase of \$28.1 million from a year earlier. The increase in benefits is due to the number of members and beneficiaries who received benefits being greater than the number of members who passed away. For 2022, the costs of administering the Plan's benefits totaled \$8.0 million, an increase from \$7.7 million a year earlier. Refunds resulted from employees leaving public service and requesting their contributions plus interest into the system be returned. Refunds to members terminating service totaled \$24.9 million in 2022, an increase from \$19.0 million a year ago.

An actuarial valuation of the Plan's assets and net pension liability is performed annually. At the date of the most recent actuarial valuation, January 1, 2023, the fiduciary net position as a percentage of total pension liability decreased from 86.03% on January 1, 2022 to 75.47% on January 1, 2023. The net pension liability as a percentage of covered payroll increased from 83.78% to 151.36% as of January 1, 2022 and 2023, respectively. The net pension liability was \$2.73 billion as of January 1, 2023 compared to \$1.52 billion as of January 1, 2022. This is an increase from the prior year.

Public Employee Pension Plan			Public Employee Pension Plan		
Net Position			Change in Net Position		
December 31, (Dollars in Thousands)			December 31, (Dollars in Thousands)		
Assets:	2022	2021	Additions:	2022	2021
Cash & Receivables	\$902,631	\$1,266,400	Employee Contributions	\$173,778	\$166,332
Investments: Fair Value	8,053,094	8,918,872	Employer Contributions	175,980	168,461
Securities Lending Collateral	400,965	500,119	Investment Income (Loss)	(644,373)	1,414,900
Capital Assets/Net Depr.	2,908	2,344	Other Income	5,652	5,751
<b>Total Assets</b>	<b>9,359,598</b>	<b>10,687,735</b>	<b>Total Additions (Deletions)</b>	<b>(288,963)</b>	<b>1,755,444</b>
<b>Liabilities:</b>			<b>Deductions:</b>		
Securities Lending Payable	400,965	500,119	Benefits	660,862	632,777
Benefits & Refunds Payable	1,721	702	Refunds	24,876	19,019
Securities Purchased	12,280	32,834	Administrative Expenses	8,031	7,725
Other Payables	538,041	764,213	Depreciation Expense	544	298
<b>Total Liabilities</b>	<b>953,007</b>	<b>1,297,868</b>	<b>Total Deductions</b>	<b>694,313</b>	<b>659,819</b>
<b>Total Net Position</b>	<b>\$8,406,591</b>	<b>\$9,389,867</b>	Change in Net Position	(983,276)	1,095,625
			Total Beginning Net Position	9,389,867	8,294,242
			<b>Total Ending Net Position</b>	<b>\$8,406,591</b>	<b>\$9,389,867</b>

# Management's Discussion and Analysis - Analysis of Individual Plans

## State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan

The Wyoming State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan provides retirement benefits to covered sworn officers of the Wyoming State Highway Patrol, law enforcement officers employed by the Wyoming State Game & Fish Department and sworn peace officers of the Division of Criminal Investigation. Employee and employer contributions and earnings on investments fund benefits of the Plan.

The Plan's net position restricted for pensions at December 31, 2022 totaled \$171.3 million, a decrease of \$18.7 million from 2021. Additions to the Plan net position restricted for pensions include employee and employer contributions while investment losses resulted in a deletion (decrease) to the net position. For the calendar year 2022, employee and employer contributions totaled \$7.1 million, an increase from 2021 contributions at \$7.0 million. The Plan recognized a net investment loss of \$13.0 million for the year 2022 compared to a net investment gain of \$28.4 million a year earlier. The loss was driven by market volatility caused by several factors such as supply chain issues, high inflation and increasing interest rates.

Deductions from the Plan net position restricted for pensions resulted primarily from retirement and beneficiary benefits, administrative expenses and refunds to members terminating service. For 2022, benefits totaled \$12.6 million, an increase from \$11.7 million in the prior year. For 2022, the costs of administering the Plan's benefits totaled \$174,222 compared to \$161,144 a year ago. Refunds resulted from employees leaving public service and requesting their contributions plus interest into the system be returned. Refunds to members terminating service totaled \$769,080 in 2022, an increase from \$108,604 a year ago.

An actuarial valuation of the Plan's assets and net pension liability is performed annually. At the date of the most recent actuarial valuation, January 1, 2023, the fiduciary net position as a percentage of total pension liability decreased from 90.66% on January 1, 2022 to 79.78% on January 1, 2023. The net pension liability as a percentage of covered payroll increased from 80.92% to 184.87% as of January 1, 2022 and 2023, respectively. The net pension liability was \$43.4 million as of January 1, 2023 compared to \$19.6 million as of January 1, 2022. This is an increase from the prior year.

State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan		
Net Position		
December 31, (Dollars in Thousands)		
Assets:	2022	2021
Cash & Receivables	\$19,056	\$26,143
Investments: Fair Value	163,413	179,958
Securities Lending Collateral	8,136	10,091
Capital Assets/Net Depr.	53	42
<b>Total Assets</b>	<b>190,658</b>	<b>216,234</b>
<b>Liabilities:</b>		
Securities Lending Payable	8,136	10,091
Benefits & Refunds Payable	-	1
Securities Purchased	249	663
Other Payables	10,930	15,433
<b>Total Liabilities</b>	<b>19,315</b>	<b>26,188</b>
<b>Total Net Position</b>	<b>\$171,343</b>	<b>\$190,046</b>

State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan		
Change in Net Position		
December 31, (Dollars in Thousands)		
Additions:	2022	2021
Employee Contributions	\$3,515	\$3,486
Employer Contributions	3,592	3,563
Investment Income (Loss)	(13,022)	28,405
Other Income	739	400
<b>Total Additions (Deletions)</b>	<b>(5,176)</b>	<b>35,854</b>
<b>Deductions:</b>		
Benefits	12,573	11,744
Refunds	769	109
Administrative Expenses	174	161
Depreciation Expense	11	6
<b>Total Deductions</b>	<b>13,527</b>	<b>12,020</b>
Change in Net Position	(18,703)	23,834
Total Beginning Net Position	190,046	166,212
<b>Total Ending Net Position</b>	<b>\$171,343</b>	<b>\$190,046</b>

# Management's Discussion and Analysis - Analysis of Individual Plans

## Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan

On July 1, 2015, the Volunteer Firefighter and Emergency Medical Technician (EMT) Pension Plans were consolidated into the Volunteer Firefighter & EMT Pension Plan which provides retirement benefits to volunteer firefighters and emergency medical technicians electing to participate in the Plan. On July 1, 2019, Search and Rescue (SAR) Volunteers were added to the plan. Benefits of the Plan are funded by employee contributions, fire insurance premium tax collections, and earnings on investments.

The Plan net position restricted for pensions at December 31, 2022 totaled \$98.5 million, a decrease of \$10.2 million from 2021. For the calendar year 2022, employee contributions totaled \$548,347, a decrease of \$8,205 from 2021. The volunteer firefighter and EMT contribution is \$18.75 per month and the search and rescuer contribution is \$37.50 per month. The tax collected on fire insurance premiums totaled \$3.9 million in 2022 compared to \$4.7 million received in 2021. The decrease in the premiums received resulted from legislation passed in 2022. The legislation reduced the amount of tax premium transferred to the Plan from 100% to 60% effective April 1, 2022. The Plan recognized a net investment loss of \$7.2 million for the year 2022 compared to a net investment gain of \$15.7 million a year earlier. The loss was driven by market volatility caused by several factors such as supply chain issues, high inflation and increasing interest rates.

Deductions from the Plan net position restricted for pensions resulted primarily from retirement and beneficiary benefits, administrative expenses and refunds to employees terminating service. For 2022, benefits totaled \$7.3 million, an increase from \$7.0 million a year earlier. The increase in benefits resulted from more retirees receiving benefits in 2022 than in 2021. For 2022, the cost of administering the Plan's benefits totaled \$107,648 compared to \$95,155 a year earlier. Refunds resulted from employees leaving public service and requesting their contributions plus interest into the system be returned. Refunds to members terminating service totaled \$57,233 in 2022, an increase from \$31,778 a year ago.

An actuarial valuation of the Plan's assets and net pension liability is performed annually. At the date of the most recent actuarial valuation, January 1, 2023, the fiduciary net position as a percentage of total pension liability decreased from 89.62% on January 1, 2022 to 80.04% on January 1, 2023. The net pension liability was \$24.6 million as of January 1, 2023 compared to \$12.6 million as of January 1, 2022. This is an increase from the prior year.

Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan		
Net Position		
December 31, (Dollars in Thousands)		
Assets:	2022	2021
Cash & Receivables	\$12,322	\$17,522
Investments: Fair Value	92,443	100,097
Securities Lending Collateral	4,603	5,613
Capital Assets/Net Depr.	32	26
<b>Total Assets</b>	<b>109,400</b>	<b>123,258</b>
Liabilities:		
Securities Lending Payable	4,603	5,613
Benefits & Refunds Payable	17	6
Securities Purchased	141	368
Other Payables	6,184	8,584
<b>Total Liabilities</b>	<b>10,945</b>	<b>14,571</b>
<b>Total Net Position</b>	<b>\$98,455</b>	<b>\$108,687</b>

Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan		
Change in Net Position		
December 31, (Dollars in Thousands)		
Additions:	2022	2021
Employee Contributions	\$548	\$557
Investment Income (Loss)	(7,203)	15,709
Other Income	3,877	4,687
<b>Total Additions (Deletions)</b>	<b>(2,778)</b>	<b>20,953</b>
Deductions:		
Benefits	7,282	7,028
Refunds	57	32
Administrative Expenses	108	95
Depreciation Expense	7	3
<b>Total Deductions</b>	<b>7,454</b>	<b>7,158</b>
Change in Net Position	(10,232)	13,795
Total Beginning Net Position	108,687	94,892
<b>Total Ending Net Position</b>	<b>\$98,455</b>	<b>\$108,687</b>

# Management's Discussion and Analysis - Analysis of Individual Plans

## Paid Fire A Pension Plan

The Paid Fire A Pension Plan provides retirement benefits to paid firefighters who were employed prior to July 1, 1981. This Plan is a closed plan and the Board suspended contributions in April 1997. The Plan was funded solely by earnings on investments. To protect the decreasing Plan assets from a severe market decline, beginning in January 2021, the Plan was solely invested in a fixed income strategy. With the passage of legislation effective in April 2022 (Senate Enrolled Act 6), the Plan received two one-time contributions, an employer contribution in the amount of \$20 million and a contribution from the State of Wyoming's general fund in the amount of \$55 million. In addition, 40% of the fire insurance premium tax collected was transferred to the Plan and will continue to be transferred to the Plan until there are no remaining members receiving benefits. These changes prompted the Plan's assets to be reinvested with the existing investment pool of the defined benefit plans in April 2022.

The Plan net position restricted for pensions on December 31, 2022 totaled \$127.3 million, an increase of \$53.9 million from 2021. Additions to the Plan net position restricted for pensions included the one-time contributions discussed above. Investment losses resulted in a deletion (decrease) to the net position. The Plan recognized a net investment loss of \$6.9 million for the year 2022 compared to a net investment loss of \$370,957 a year earlier. The loss was driven by market volatility caused by several factors such as supply chain issues, high inflation and increasing interest rates.

Deductions from the Plan net position restricted for pensions resulted primarily from retirement and beneficiary benefits as well as administrative expenses. For 2022, benefits totaled \$15.8 million, a decrease from \$16.2 in 2021. The benefits decrease as those receiving benefits pass away. For 2022, the costs of administering the Plan's benefits totaled \$56,600 compared to \$105,199 a year ago. There were no refunds paid for 2022 or 2021.

An actuarial valuation of the Plan's assets and net pension liability is performed annually. At the date of the most recent actuarial valuation, January 1, 2023, the fiduciary net position as a percentage of total pension liability increased from 42.90% on January 1, 2022 to 77.49% on January 1, 2023. The net pension liability was \$37.0 million as of January 1, 2023 compared to \$97.8 million as of January 1, 2022. This is a decrease from the prior year.

Paid Fire A Pension Plan		
Net Position		
December 31, (Dollars in Thousands)		
Assets:	2022	2021
Cash & Receivables	\$15,014	\$654
Investments: Fair Value	120,436	72,740
Securities Lending Collateral	5,996	-
Capital Assets/Net Depr.	74	70
<b>Total Assets</b>	<b>141,520</b>	<b>73,464</b>
Liabilities:		
Securities Lending Payable	5,996	-
Securities Purchased	184	-
Other Payables	8,038	20
<b>Total Liabilities</b>	<b>14,218</b>	<b>20</b>
<b>Total Net Position</b>	<b>\$127,302</b>	<b>\$73,444</b>

Paid Fire A Pension Plan		
Change in Net Position		
December 31, (Dollars in Thousands)		
Additions:	2022	2021
Employer Contributions	\$20,000	\$ -
Investment Income (Loss)	(6,933)	(371)
Other Income	56,679	-
<b>Total Additions (Deletions)</b>	<b>69,746</b>	<b>(371)</b>
Deductions:		
Benefits	15,827	16,160
Administrative Expenses	57	105
Depreciation Expense	4	3
<b>Total Deductions</b>	<b>15,888</b>	<b>16,268</b>
Change in Net Position	53,858	(16,639)
Total Beginning Net Position	73,444	90,083
<b>Total Ending Net Position</b>	<b>\$127,302</b>	<b>\$73,444</b>

# Management's Discussion and Analysis - Analysis of Individual Plans

## Paid Fire B Pension Plan

The Paid Fire B Pension Plan provides retirement benefits to paid firefighters who were employed on or after July 1, 1981. Benefits of the Plan are funded by employee and employer contributions and investment income.

The Plan net position restricted for pensions on December 31, 2022 totaled \$204.9 million, a decrease of \$13.8 million from 2021. Additions to the Plan net position restricted for pensions include employee and employer contributions while investment losses resulted in a deletion (decrease) to the net position. For the calendar year 2022, employee and employer contributions totaled \$8.8 million, an increase from \$7.8 million in 2021. Contributions to the Plan increased on July 1, 2022 as the Plan statutorily required 27.245% of the participant's salary to be contributed to the Plan. Through June 30, 2022, the Plan statutorily required 25.745% of the participant's salary to be contributed to the Plan. The Plan recognized a net investment loss of \$14.9 million for the year 2022 compared to a net investment gain of \$32.0 million a year earlier. The loss was driven by market volatility caused by several factors such as supply chain issues, high inflation and increasing interest rates.

Deductions from the Plan net position restricted for pensions resulted primarily from retirement and beneficiary benefits, administrative expenses and refunds to employees terminating service. For 2022, benefits totaled \$7.6 million, an increase from \$6.9 million a year earlier. For 2022, the costs of administering the Plan's benefits totaled \$191,754 compared to \$176,943 a year ago. Refunds resulted from employees leaving public service and requesting their contributions into the system be returned. Refunds to members terminating service totaled \$140,596 in 2022, an increase from \$70,926 a year ago.

An actuarial valuation of the Plan's assets and net pension liability is performed annually. At the date of the most recent actuarial valuation, January 1, 2023, the fiduciary net position as a percentage of total pension liability decreased from 107.43% on January 1, 2022 to 94.92% on January 1, 2023. The net pension liability as a percentage of covered payroll increased from -50.48% to 35.10% as of January 1, 2022 and 2023, respectively. The net pension liability was \$11.0 million as of January 1, 2023 compared to a net pension asset of \$15.1 million as of January 1, 2022. This is an increase in the net pension liability from the prior year.

Paid Fire B Pension Plan			Paid Fire B Pension Plan		
Net Position			Change in Net Position		
December 31, (Dollars in Thousands)			December 31, (Dollars in Thousands)		
<b>Assets:</b>	<b>2022</b>	<b>2021</b>	<b>Additions:</b>	<b>2022</b>	<b>2021</b>
Cash & Receivables	\$25,172	\$31,723	Employee Contributions	\$3,672	\$3,262
Investments: Fair Value	192,891	205,324	Employer Contributions	5,170	4,508
Securities Lending Collateral	9,604	11,513	Investment Income (Loss)	(14,871)	31,993
Capital Assets/Net Depr.	44	31	Other Income	128	-
<b>Total Assets</b>	<b>227,711</b>	<b>248,591</b>	<b>Total Additions (Deletions)</b>	<b>(5,901)</b>	<b>39,763</b>
<b>Liabilities:</b>			<b>Deductions:</b>		
Securities Lending Payable	9,604	11,513	Benefits	7,560	6,903
Benefits & Refunds Payable	7	4	Refunds	140	71
Securities Purchased	294	756	Administrative Expenses	192	177
Other Payables	12,902	17,608	Depreciation Expense	13	7
<b>Total Liabilities</b>	<b>22,807</b>	<b>29,881</b>	<b>Total Deductions</b>	<b>7,905</b>	<b>7,158</b>
<b>Total Net Position</b>	<b>\$204,904</b>	<b>\$218,710</b>	Change in Net Position	(13,806)	32,605
			Total Beginning Net Position	218,710	186,105
			<b>Total Ending Net Position</b>	<b>\$204,904</b>	<b>\$218,710</b>

# Management's Discussion and Analysis - Analysis of Individual Plans

## Judicial Pension Plan

The Wyoming Judicial Pension Plan provides retirement benefits to any Justice of the Supreme Court, District Judge or County Court Judge appointed to any of these offices on or after July 1, 1999, with no prior service as a Justice of the Supreme Court or District Judge at the time of the appointment. Benefits of the plan are funded by employee and employer contributions and earnings on investments.

The Plan net position restricted for pensions on December 31, 2022 totaled \$40.4 million, a decrease of \$3.4 million from 2021. Additions to the Plan net position restricted for pensions include employee and employer contributions while investment losses resulted in a deletion (decrease) to the net position. For the calendar year 2022, employee and employer contributions totaled over \$1.9 million, an increase from 2021 of \$32,241. The Plan recognized a net investment loss of \$3.0 million for the year ending 2022 compared to a net investment gain of \$6.4 million a year earlier. The loss was driven by market volatility caused by several factors such as supply chain issues, high inflation and increasing interest rates.

Deductions from the Plan net position restricted for pensions resulted primarily from retirement and beneficiary benefits and administrative expenses. For 2022, benefits totaled approximately \$2.4 million, an increase from \$1.9 million in 2021. For 2022, the costs of administering the Plan's benefits totaled \$37,872 compared to \$35,804 a year ago. There were no refunds to members terminating service in 2022 or 2021.

An actuarial valuation of the Plan's assets and net pension liability is performed annually. At the date of the most recent actuarial valuation, January 1, 2023, the fiduciary net position as a percentage of total pension liability decreased from 107.47% on January 1, 2022 to 90.81% on January 1, 2023. The net pension liability as a percentage of covered payroll increased from -38.61% to 49.87% as of January 1, 2022 and 2023, respectively. The net pension liability was \$4.1 million as of January 1, 2023 compared to a net pension asset of \$3.0 million as of January 1, 2022. This is an increase in the net pension liability from the prior year.

Judicial Pension Plan		
Net Position		
December 31, (Dollars in Thousands)		
Assets:	2022	2021
Cash & Receivables	\$4,772	\$6,475
Investments: Fair Value	38,208	40,981
Securities Lending Collateral	1,902	2,298
Capital Assets/Net Depr.	7	4
<b>Total Assets</b>	<b>44,889</b>	<b>49,758</b>
Liabilities:		
Securities Lending Payable	1,902	2,298
Securities Purchased	58	151
Other Payables	2,556	3,514
<b>Total Liabilities</b>	<b>4,516</b>	<b>5,963</b>
<b>Total Net Position</b>	<b>\$40,373</b>	<b>\$43,795</b>

Judicial Pension Plan		
Change in Net Position		
December 31, (Dollars in Thousands)		
Additions:	2022	2021
Employee Contributions	\$758	\$745
Employer Contributions	1,191	1,172
Investment Income (Loss)	(2,971)	6,389
<b>Total Additions (Deletions)</b>	<b>(1,022)</b>	<b>8,306</b>
Deductions:		
Benefits	2,360	1,944
Administrative Expenses	38	36
Depreciation Expense	2	1
<b>Total Deductions</b>	<b>2,400</b>	<b>1,981</b>
Change in Net Position	(3,422)	6,325
Total Beginning Net Position	43,795	37,470
<b>Total Ending Net Position</b>	<b>\$40,373</b>	<b>\$43,795</b>

# Management's Discussion and Analysis - Analysis of Individual Plans

## Law Enforcement Pension Plan

The Wyoming Law Enforcement Pension Plan became effective July 1, 2002 and provides retirement benefits to any member who is a county sheriff, deputy county sheriff, and municipal police officer, duly authorized investigators of the Wyoming livestock board, Wyoming correctional officer, Wyoming law enforcement academy instructor, UW campus police officer, detention officer or dispatcher of law enforcement agencies. Benefits of the Plan are funded by employee and employer contributions and investment income.

The Plan net position restricted for pensions on December 31, 2022 totaled \$806.2 million, a decrease of \$76.1 million from 2021. Additions to the Plan net position restricted for pensions include employee and employer contributions while investment losses resulted in a deletion (decrease) to the net position. For the calendar year 2022, employee and employer contributions totaled \$29.1 million, an increase from \$28.3 million in 2021. The Plan recognized a net investment loss of \$60.6 million for the year 2022 compared to a net investment gain of \$131.6 million in 2021. The loss was driven by market volatility caused by several factors such as supply chain issues, high inflation and increasing interest rates.

Deductions from the Plan net position restricted for pensions resulted primarily from retirement and beneficiary benefits, administrative expenses and refunds to employees terminating service. For 2022, benefits totaled \$42.7 million, an increase from \$40.2 million a year earlier. For 2022, the costs of administering the Plan's benefits totaled \$813,046 compared to \$753,782 during 2021. Refunds resulted from employees leaving public service and requesting their contributions plus interest into the system be returned. Refunds to members terminating service totaled almost \$3.8 million in 2022, an increase from \$3.1 million during 2021.

An actuarial valuation of the Plan's assets and net pension liability is performed annually. At the date of the most recent actuarial valuation, January 1, 2023, the fiduciary net position as a percentage of total pension liability decreased from 75.62% on January 1, 2022 to 70.30% on January 1, 2023. The net pension liability as a percentage of covered payroll increased from 171.27% to 211.06% as of January 1, 2022 and 2023, respectively. The net pension liability was \$340.7 million as of January 1, 2023 compared to \$284.5 million as of January 1, 2022. This is an increase from the prior year.

Law Enforcement Pension Plan			Law Enforcement Pension Plan		
Net Position			Change in Net Position		
December 31, (Dollars in Thousands)			December 31, (Dollars in Thousands)		
<b>Assets:</b>	<b>2022</b>	<b>2021</b>	<b>Additions:</b>	<b>2022</b>	<b>2021</b>
Cash & Receivables	\$87,388	\$119,492	Employee Contributions	\$14,548	\$14,160
Investments: Fair Value	771,673	837,731	Employer Contributions	14,549	14,114
Securities Lending Collateral	38,422	46,975	Investment Income (Loss)	(60,636)	131,615
Capital Assets/Net Depr.	190	137	Other Income	2,797	1,540
<b>Total Assets</b>	<b>897,673</b>	<b>1,004,335</b>	<b>Total Additions (Deletions)</b>	<b>(28,742)</b>	<b>161,429</b>
<b>Liabilities:</b>			<b>Deductions:</b>		
Securities Lending Payable	38,422	46,975	Benefits	42,739	40,189
Benefits & Refunds Payable	221	81	Refunds	3,790	3,118
Securities Purchased	1,177	3,084	Administrative Expenses	813	754
Other Payables	51,636	71,843	Depreciation Expense	51	27
<b>Total Liabilities</b>	<b>91,456</b>	<b>121,983</b>	<b>Total Deductions</b>	<b>47,393</b>	<b>44,088</b>
<b>Total Net Position</b>	<b>\$806,217</b>	<b>\$882,352</b>	Change in Net Position	(76,135)	117,341
			Total Beginning Net Position	882,352	765,011
			<b>Total Ending Net Position</b>	<b>\$806,217</b>	<b>\$882,352</b>

# Management's Discussion and Analysis - Analysis of Individual Plans

## Air Guard Firefighter Pension Plan

The Air Guard Firefighter Pension Plan provides retirement benefits to covered Air Guard Firefighters. Benefits are funded by employee and employer contributions and earnings on investments. The Air Guard Firefighter Pension Plan was separated from the Public Employee Pension Plan on January 1, 2011.

The Plan's net position restricted for pensions on December 31, 2022 was \$9.6 million, a decrease of \$1.0 million from 2021. Additions to the Plan net position restricted for pensions include employee and employer contributions while investment losses resulted in a deletion (decrease) to the net position. For the calendar year 2022, employee and employer contributions totaled \$561,977, an increase compared to 2021 contributions at \$520,666. The Plan recognized a net investment loss of \$708,418 for the year 2022 compared to a net investment gain of \$1.6 million in 2021. The loss was driven by market volatility caused by several factors such as supply chain issues, high inflation and increasing interest rates.

Deductions from the Plan's net position restricted for pensions primarily included retirement and beneficiary benefits, administrative expenses and refunds to employees terminating service. For 2022, benefits totaled \$681,226, an increase from \$644,223 for the prior year. For 2022, the costs of administering the Plan's benefits totaled \$10,439 compared to \$12,936 during 2021. Refunds resulted from employees leaving public service and requesting their contributions plus interest into the system be returned. Refunds to members terminating service totaled \$194,630 in 2022 compared to \$178,314 a year earlier.

An actuarial valuation of the Plan's assets and net pension liability is performed annually. At the date of the most recent actuarial valuation, January 1, 2023, the fiduciary net position as a percentage of total pension liability decreased from 97.27% on January 1, 2022 to 80.88% on January 1, 2023. The net pension liability as a percentage of covered payroll increased from 13.81% to 105.71% as of January 1, 2022 and 2023, respectively. The net pension liability was \$2.3 million as of January 1, 2023 compared to \$297,918 as of January 1, 2022. This is an increase from the prior year.

Air Guard Firefighter Pension Plan		
Net Position		
December 31, (Dollars in Thousands)		
Assets:	2022	2021
Cash & Receivables	\$1,293	\$1,624
Investments: Fair Value	8,909	9,887
Securities Lending Collateral	443	554
Capital Assets/Net Depr.	2	1
<b>Total Assets</b>	<b>10,647</b>	<b>12,066</b>
Liabilities:		
Securities Lending Payable	443	554
Securities Purchased	14	36
Other Payables	596	849
<b>Total Liabilities</b>	<b>1,053</b>	<b>1,439</b>
<b>Total Net Position</b>	<b>\$9,594</b>	<b>\$10,627</b>

Air Guard Firefighter Pension Plan		
Change in Net Position		
December 31, (Dollars in Thousands)		
Additions:	2022	2021
Employee Contributions	\$394	\$365
Employer Contributions	168	156
Investment Income (Loss)	(708)	1,567
<b>Total Additions (Deletions)</b>	<b>(146)</b>	<b>2,088</b>
Deductions:		
Benefits	681	644
Refunds	195	178
Administrative Expenses	10	13
Depreciation Expense	1	1
<b>Total Deductions</b>	<b>887</b>	<b>836</b>
Change in Net Position	(1,033)	1,252
Total Beginning Net Position	10,627	9,375
<b>Total Ending Net Position</b>	<b>\$9,594</b>	<b>\$10,627</b>



# Management's Discussion and Analysis - Analysis of Total Defined Benefit Pension Plans

## Total Defined Benefit Pension Plans

The Total Defined Benefit Pension Plans shown below reflects the 2022 and 2021 Net Position and Change in Net Position including the percentage change.

<b>Total Defined Benefit Pension Plans</b>				
<b>Net Position</b>				
<b>December 31, (Dollars in Thousands)</b>				
<b>Assets:</b>	<b>2022</b>	<b>2021</b>	<b>Change</b>	<b>% Change</b>
Cash & Receivables	\$1,067,648	\$1,470,033	\$(402,385)	-27.4%
Investments: Fair Value	9,441,067	10,365,590	(924,523)	-8.9%
Securities Lending Collateral	470,071	577,163	(107,092)	-18.6%
Capital Assets/Net Depr.	3,310	2,655	655	24.7%
<b>Total Assets</b>	<b>10,982,096</b>	<b>12,415,441</b>	<b>(1,433,345)</b>	<b>-11.5%</b>
<b>Liabilities:</b>				
Securities Lending Payable	470,071	577,163	(107,092)	-18.6%
Benefits & Refunds Payable	1,967	794	1,173	147.7%
Securities Purchased	14,397	37,893	(23,496)	-62.0%
Other Payables	630,883	882,064	(251,181)	-28.5%
<b>Total Liabilities</b>	<b>1,117,318</b>	<b>1,497,914</b>	<b>(380,596)</b>	<b>-25.4%</b>
<b>Total Net Position</b>	<b>\$9,864,778</b>	<b>\$10,917,527</b>	<b>\$(1,052,749)</b>	<b>-9.6%</b>
<b>Total Defined Benefit Pension Plans</b>				
<b>Change in Net Position</b>				
<b>December 31, (Dollars in Thousands)</b>				
<b>Additions:</b>	<b>2022</b>	<b>2021</b>	<b>Change</b>	<b>% Change</b>
Employee Contributions	\$197,213	\$188,907	\$8,306	4.4%
Employer Contributions	220,650	191,974	28,676	14.9%
Investment Income (Loss)	(750,717)	1,630,207	(2,380,924)	-146.1%
Other Income	69,872	12,378	57,494	464.5%
<b>Total Additions (Deletions)</b>	<b>(262,982)</b>	<b>2,023,466</b>	<b>(2,286,448)</b>	<b>-113.0%</b>
<b>Deductions:</b>				
Benefits	749,884	717,389	32,495	4.5%
Refunds	29,827	22,527	7,300	32.4%
Administrative Expenses	9,423	9,066	357	3.9%
Depreciation Expense	633	346	287	82.9%
<b>Total Deductions</b>	<b>789,767</b>	<b>749,328</b>	<b>40,439</b>	<b>5.4%</b>
Change in Net Position	(1,052,749)	1,274,138	(2,326,887)	-182.6%
Total Beginning Net Position	10,917,527	9,643,389	1,274,138	13.2%
<b>Total Ending Net Position</b>	<b>\$9,864,778</b>	<b>\$10,917,527</b>	<b>\$(1,052,749)</b>	<b>-9.6%</b>

# Management's Discussion and Analysis - Subsequent Events

## Disclosure of Subsequent Events

### New Lease and Lease Termination for Capital Assets

Effective March 6, 2023, the Wyoming Retirement System signed a new building lease commencing on May 1, 2023. As a result, the existing building lease will terminate on June 30, 2023. See Note 9. Capital Assets for the building lease commitments as of December 31, 2022.

### Legislative Changes

Subsequent to the December 31, 2022 measurement date for this financial report, the Wyoming Legislature convened for their scheduled 2023 session. During this session the Legislature passed several bills modestly impacting the Wyoming Retirement System (WRS).

House Bill 0118 (House Enrolled Act 60), effective on July 1, 2023, will provide an additional \$9 million to the Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan from the State of Wyoming's general fund. It also will restore the annual amount of fire insurance premium tax from 60% to 100% once the Paid Fire A Pension Plan has no remaining members receiving benefits.

House Bill 0024 (House Enrolled Act 11), effective on July 1, 2023, increases base salaries for seven investment positions at WRS, amends the maximum percentage of performance compensation available to senior analysts and analysts from twenty-five percent (25%) to thirty-five percent (35%) and provides for relocation reimbursement for employees hired to fill investment positions.

House Bill 0011 (House Enrolled Act 72) is effective immediately and authorizes full-time state park rangers to participate in the Law Enforcement Pension Plan.

Senate File 0018 (Senate Enrolled Act 22) is effective immediately and makes pre-retirement duty-related death benefits similar between the State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan and Law Enforcement Pension Plan.

House Bill 0045 (House Enrolled Act 5), effective on July 1, 2023, amends the State Patrol, Game & Fish Warden and Criminal Investigator Retirement Pension Plan to allow an employer to rehire a member who has retired without suspending the retired member's pension benefit. This act also repeals the mandatory retirement age of sixty-five (65) for members of the Plan.

# Management's Discussion and Analysis - Analysis of Deferred Compensation Plan

## Deferred Compensation Plan

The Deferred Compensation (457) Plan is established under Section 457 of the Internal Revenue Code. This Plan provides supplemental retirement benefits for Plan participants. The Plan is funded by participant contributions, investment earnings and, in some cases, employer contributions. Participants direct their own investments among a menu of investment options determined by the Board.

The Plan's net position restricted for Plan participants at December 31, 2022 amounted to \$895.5 million compared to almost \$1.1 billion a year earlier. Changes to the Plan net position restricted for Plan participants include contributions and investment losses. The Plan experienced a total decrease in net position of \$161.6 million for the year 2022 compared to a net increase of \$131.7 million for 2021. For the year 2022, employee contributions received totaled almost \$54.7 million compared to \$54.2 million in 2021. Deductions from the Plan's net position are distributions to participants and administrative expenses. A participant may request a distribution upon severance of employment, retirement, or an unforeseeable emergency as defined by the IRS Code. For 2022, distributions totaled \$60.7 million compared to \$48.0 million in distributions paid out in 2021.

Deferred Compensation Plan				
Net Position				
December 31, (Dollars in Thousands)				
Assets:	2022	2021	Change	% Change
Cash & Receivables	\$12,450	\$19,169	\$(6,719)	-35.1%
Investments: Fair Value	883,149	1,037,954	(154,805)	-14.9%
<b>Total Assets</b>	<b>895,599</b>	<b>1,057,123</b>	<b>(161,524)</b>	<b>-15.3%</b>
Liabilities:				
Other Payables	92	6	86	1433.3%
<b>Total Liabilities</b>	<b>92</b>	<b>6</b>	<b>86</b>	<b>1433.3%</b>
<b>Total Net Position</b>	<b>\$895,507</b>	<b>\$1,057,117</b>	<b>\$(161,610)</b>	<b>-15.3%</b>

Deferred Compensation Plan				
Change in Net Position				
December 31, (Dollars in Thousands)				
Additions:	2022	2021	Change	% Change
Contributions	\$54,689	\$54,168	\$521	1.0%
Investment Income (Loss)	(154,859)	126,305	(281,164)	-222.6%
<b>Total Additions</b>	<b>(100,170)</b>	<b>180,473</b>	<b>(280,643)</b>	<b>-155.5%</b>
Deductions:				
Benefits	60,722	48,000	12,722	26.5%
Administrative Expenses	718	745	(27)	-3.6%
<b>Total Deductions</b>	<b>61,440</b>	<b>48,745</b>	<b>12,695</b>	<b>26.0%</b>
Change in Net Position	(161,610)	131,728	(293,338)	-222.7%
Total Beginning Net Position	1,057,117	925,389	131,728	14.2%
<b>Total Ending Net Position</b>	<b>\$895,507</b>	<b>\$1,057,117</b>	<b>\$(161,610)</b>	<b>-15.3%</b>

The cost of the Plan is paid for primarily with administrative fees. In years when there is a surplus of participant fees, it is held in trust by WRS for future Plan expenses in periods of down markets. In 2022, an administrative fee holiday was implemented and administrative fees were suspended beginning in January 2022 for a period of one year. WRS also receives a minimal amount of rebates from investment companies, which are returned to participants invested in the fund associated with the rebate.

In addition to administrative fees, participants also pay fund operating expenses to the fund managers depending on the funds selected. These expenses are deducted daily before share prices are valued. The Plan's record keeper maintains an individual account for each participant to which deferrals and other changes in value are credited.

Direct administrative expense amounted to \$717,639 compared to \$744,775 in the prior year. In addition to direct administrative expense, WRS incurs indirect administrative expenses for record keeping and portfolio management which have the effect of reducing what would otherwise be administrative revenue. Revenue reductions for indirect administrative activity totaled \$740,865 in 2022, compared to \$730,111 in 2021.

# Basic Financial Statements

## WYOMING RETIREMENT SYSTEM

### STATEMENT OF FIDUCIARY NET POSITION - PENSION (AND OTHER EMPLOYEE BENEFIT) FUNDS

December 31, 2022

	Public Employee Pension Plan	State Patrol Game & Fish Warden and Criminal Investigator Pension Plan	Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan	Paid Fire A Pension Plan
<b>Assets</b>				
Cash and cash equivalents:				
Cash with State Treasurer	\$20,484,902	\$1,554,816	\$1,185,435	\$878,316
Domestic liquidity - outside banks	330,341,090	6,703,263	3,792,046	5,378,275
	350,825,992	8,258,079	4,977,481	6,256,591
Receivables:				
Insurance premium tax	-	-	1,200,000	800,000
Employee contributions	9,729,645	156	36,025	-
Employer contributions	9,866,366	167	-	-
Securities sold	3,692,320	74,924	42,385	55,219
Accrued interest and dividends	15,465,035	315,075	179,308	231,882
Currency contract receivable	512,813,037	10,405,975	5,886,660	7,669,263
Other	238,094	1,855	-	-
Rebate and fee income receivable	-	-	-	-
	551,804,497	10,798,152	7,344,378	8,756,364
Investments, at fair value:				
Fixed Income	1,372,561,220	27,851,939	15,755,841	20,527,038
Equities	4,034,329,499	81,864,400	46,310,687	60,334,531
Private Markets	1,102,860,685	22,379,191	12,659,907	16,493,591
Marketable Alternatives	1,543,342,963	31,317,433	17,716,270	23,081,127
Security lending collateral	400,964,588	8,136,352	4,602,734	5,996,538
Investment contracts	-	-	-	-
Self Directed Brokerage Investments	-	-	-	-
	8,454,058,955	171,549,315	97,045,439	126,432,825
Capital assets, at cost, net of accumulated depreciation	2,908,009	53,322	32,247	74,280
<b>Total Assets:</b>	<b>9,359,597,453</b>	<b>190,658,868</b>	<b>109,399,545</b>	<b>141,520,060</b>
<b>Liabilities</b>				
Payables:				
Benefits and refunds payable	1,721,235	-	17,537	-
Securities purchased	12,279,564	249,176	140,959	183,644
Administrative and consulting fees payable	11,697,269	249,877	141,753	166,446
Currency contract payable	526,344,201	10,680,549	6,041,986	7,871,626
Securities lending collateral	400,964,588	8,136,352	4,602,734	5,996,538
<b>Total Liabilities:</b>	<b>953,006,857</b>	<b>19,315,954</b>	<b>10,944,969</b>	<b>14,218,254</b>
<b>Net position restricted for pensions:</b>	<b>\$8,406,590,596</b>	<b>\$171,342,914</b>	<b>\$98,454,576</b>	<b>\$127,301,806</b>

See Notes to Financial Statements for additional information.

# Basic Financial Statements

## WYOMING RETIREMENT SYSTEM (continued)

### STATEMENT OF FIDUCIARY NET POSITION - PENSION (AND OTHER EMPLOYEE BENEFIT) FUNDS

December 31, 2022

Paid Fire B Pension Plan	Judicial Pension Plan	Law Enforcement Pension Plan	Air Guard Firefighter Pension Plan	Total	Defined Contribution Plan 457 Plan	Total Pension Trust Plans
\$3,898,360	\$679,549	\$2,810,307	\$338,566	\$31,830,251	\$733,633	\$32,563,884
7,912,489	1,567,319	31,654,369	365,444	387,714,295	9,403,782	397,118,077
11,810,849	2,246,868	34,464,676	704,010	419,544,546	10,137,415	429,681,961
-	-	-	-	2,000,000	-	2,000,000
253,592	-	956,914	-	10,976,332	352,208	11,328,540
360,825	-	959,151	-	11,186,509	-	11,186,509
88,440	17,519	353,810	4,085	4,328,702	-	4,328,702
375,003	74,069	1,482,236	17,442	18,140,050	-	18,140,050
12,283,112	2,433,064	49,139,387	567,309	601,197,807	-	601,197,807
-	-	31,641	-	271,590	-	271,590
-	-	-	-	-	1,960,582	1,960,582
13,360,972	2,524,652	52,923,139	588,836	648,100,990	2,312,790	650,413,780
32,876,161	6,512,177	131,523,212	1,518,423	1,609,126,011	325,537,860	1,934,663,871
96,631,948	19,141,054	386,582,372	4,463,056	4,729,657,547	536,569,250	5,266,226,797
26,416,181	5,232,571	105,679,643	1,220,061	1,292,941,830	16,154,549	1,309,096,379
36,966,796	7,322,458	147,888,064	1,707,354	1,809,342,465	-	1,809,342,465
9,604,072	1,902,394	38,421,711	443,575	470,071,964	-	470,071,964
-	-	-	-	-	6,191	6,191
-	-	-	-	-	4,880,988	4,880,988
202,495,158	40,110,654	810,095,002	9,352,469	9,911,139,817	883,148,838	10,794,288,655
43,967	7,234	189,692	1,630	3,310,381	-	3,310,381
227,710,946	44,889,408	897,672,509	10,646,945	10,982,095,734	895,599,043	11,877,694,777
6,618	-	221,158	-	1,966,548	-	1,966,548
294,125	58,261	1,176,667	13,585	14,395,981	-	14,395,981
294,456	58,238	1,199,759	13,648	13,821,446	92,107	13,913,553
12,607,217	2,497,263	50,435,987	582,279	617,061,108	-	617,061,108
9,604,072	1,902,394	38,421,711	443,575	470,071,964	-	470,071,964
22,806,488	4,516,156	91,455,282	1,053,087	1,117,317,047	92,107	1,117,409,154
<b>\$204,904,458</b>	<b>\$40,373,252</b>	<b>\$806,217,227</b>	<b>\$9,593,858</b>	<b>\$9,864,778,687</b>	<b>\$895,506,936</b>	<b>\$10,760,285,623</b>

# Basic Financial Statements

## WYOMING RETIREMENT SYSTEM

### STATEMENT OF CHANGES IN FIDUCIARY NET POSITION - PENSION (AND OTHER EMPLOYEE BENEFIT) FUNDS

Year Ended December 31, 2022

	Public Employee Pension Plan	State Patrol, Game & Fish Warden and Criminal Investigator Pension Plan	Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan	Paid Fire A Pension Plan
<b>Additions (Deletions)</b>				
Contributions:				
Employee	\$173,778,027	\$3,514,564	\$548,347	\$-
Employer	175,980,064	3,591,807	-	20,000,000
Other	5,651,540	739,378	3,876,549	56,679,037
	355,409,631	7,845,749	4,424,896	76,679,037
<b>Investment Income (Loss)</b>				
From Investing Activities:				
Net appreciation (depreciation) in fair value of investments	(764,156,970)	(15,458,094)	(8,573,110)	(8,267,251)
Interest and dividends	167,373,373	3,401,929	1,910,598	2,025,153
<b>Total investing activity</b>	<b>(596,783,597)</b>	<b>(12,056,165)</b>	<b>(6,662,512)</b>	<b>(6,242,098)</b>
<b>Investing activity expenses</b>				
Investment advisor or contractor fees	(48,468,131)	(983,457)	(550,992)	(701,456)
Net income (loss) from investing activities	(645,251,728)	(13,039,622)	(7,213,504)	(6,943,554)
Securities lending activities:				
Securities lending gross income	7,339,891	148,871	83,461	107,480
Securities lending expenses:				
Broker rebates	(6,305,989)	(127,920)	(71,780)	(95,341)
Agent fees	(154,811)	(3,137)	(1,749)	(1,818)
<b>Total securities lending expenses</b>	<b>(6,460,800)</b>	<b>(131,057)</b>	<b>(73,529)</b>	<b>(97,159)</b>
Net income from securities lending activities:	879,091	17,814	9,932	10,321
<b>Total investment income (loss)</b>	<b>(644,372,637)</b>	<b>(13,021,808)</b>	<b>(7,203,572)</b>	<b>(6,933,233)</b>
<b>Total additions (deletions)</b>	<b>(288,963,006)</b>	<b>(5,176,059)</b>	<b>(2,778,676)</b>	<b>69,745,804</b>
<b>Deductions</b>				
Benefits paid / Distributions	660,862,406	12,572,407	7,282,386	15,826,693
Refunds	24,875,791	769,080	57,233	-
Administrative expenses	7,969,357	162,394	92,191	56,591
Administrative expenses: Fund Specific	61,171	11,828	15,457	9
Depreciation expense	544,320	11,017	6,300	4,257
<b>Total deductions</b>	<b>694,313,045</b>	<b>13,526,726</b>	<b>7,453,567</b>	<b>15,887,550</b>
<b>Net increase (decrease) in Net Position</b>	<b>(983,276,051)</b>	<b>(18,702,785)</b>	<b>(10,232,243)</b>	<b>53,858,254</b>
<b>Net position restricted for pensions:</b>				
Beginning of year	9,389,866,647	190,045,699	108,686,819	73,443,552
<b>End of year</b>	<b>\$8,406,590,596</b>	<b>\$171,342,914</b>	<b>\$98,454,576</b>	<b>\$127,301,806</b>

See Notes to Financial Statements for additional information.

# Basic Financial Statements

## WYOMING RETIREMENT SYSTEM (continued)

### STATEMENT OF CHANGES IN FIDUCIARY NET POSITION - PENSION (AND OTHER EMPLOYEE BENEFIT) FUNDS

Year Ended December 31, 2022

Paid Fire B Pension Plan	Judicial Pension Plan	Law Enforcement Pension Plan	Air Guard Firefighter Pension Plan	Total	Defined Contribution Plan 457 Plan	Total Pension Trust Plans
\$3,672,260	\$757,596	\$14,548,477	\$393,638	\$197,212,909	\$54,688,506	\$251,901,415
5,170,239	1,191,444	14,548,971	168,330	220,650,855	-	220,650,855
128,148	59	2,797,122	9	69,871,842	-	69,871,842
8,970,647	1,949,099	31,894,570	561,977	487,735,606	54,688,506	542,424,112
(17,707,315)	(3,535,810)	(71,982,505)	(844,104)	(890,525,159)	(156,903,262)	(1,047,428,421)
3,963,648	789,181	15,883,203	188,368	195,535,453	2,785,198	198,320,651
(13,743,667)	(2,746,629)	(56,099,302)	(655,736)	(694,989,706)	(154,118,064)	(849,107,770)
(1,148,157)	(228,433)	(4,619,981)	(53,654)	(56,754,261)	(740,865)	(57,495,126)
(14,891,824)	(2,975,062)	(60,719,283)	(709,390)	(751,743,967)	(154,858,929)	(906,602,896)
174,026	34,600	699,821	8,121	8,596,271	-	8,596,271
(149,753)	(29,764)	(601,758)	(6,978)	(7,389,283)	-	(7,389,283)
(3,635)	(724)	(14,683)	(171)	(180,728)	-	(180,728)
(153,388)	(30,488)	(616,441)	(7,149)	(7,570,011)	-	(7,570,011)
20,638	4,112	83,380	972	1,026,260	-	1,026,260
(14,871,186)	(2,970,950)	(60,635,903)	(708,418)	(750,717,707)	(154,858,929)	(905,576,636)
(5,900,539)	(1,021,851)	(28,741,333)	(146,441)	(262,982,101)	(100,170,423)	(363,152,524)
7,559,981	2,359,700	42,739,295	681,226	749,884,094	60,722,388	810,606,482
140,596	-	3,790,198	194,630	29,827,528	-	29,827,528
189,711	37,823	756,762	9,071	9,273,900	717,639	9,991,539
2,043	49	56,284	1,368	148,209	-	148,209
12,678	2,539	51,149	616	632,876	-	632,876
7,905,009	2,400,111	47,393,688	886,911	789,766,607	61,440,027	851,206,634
(13,805,548)	(3,421,962)	(76,135,021)	(1,033,352)	(1,052,748,708)	(161,610,450)	(1,214,359,158)
218,710,006	43,795,214	882,352,248	10,627,210	10,917,527,395	1,057,117,386	11,974,644,781
<b>\$204,904,458</b>	<b>\$40,373,252</b>	<b>\$806,217,227</b>	<b>\$9,593,858</b>	<b>\$9,864,778,687</b>	<b>\$895,506,936</b>	<b>\$10,760,285,623</b>

# Notes to the Basic Financial Statements

## Note 1. Reporting Entity and Summary of Significant Accounting Policies

### Reporting Entity

The Wyoming Retirement System (WRS) is a Pension Trust Fund of the State of Wyoming charged by State Statutes to provide retirement benefits for retired and disabled public employees. The decision that WRS is a Pension Trust Fund of the State of Wyoming was made by applying the criteria set forth in accounting principles generally accepted in the United States of America (GAAP). The basic criterion for this decision is that the State of Wyoming and its elected officials are accountable for WRS. The State's financial accountability was primarily determined by the fact that the Governor appoints the voting majority of the WRS board members and can thus impose the will of the State on WRS.

Although WRS is a Pension Trust Fund of the State of Wyoming, it serves as the nucleus for the reporting entity under the provisions of Government Accounting Standards Board (GASB) Statement No. 14 for its separately issued financial statements. Using this premise, WRS is not financially accountable for any other organizations and thus, includes only the financial activity of the various plans of WRS.

### Basis of Accounting

The accompanying financial statements are prepared using the accrual basis of accounting and include the accounts of eight defined benefit pension plans and one defined contribution plan, all of which are administered by the System:

- Public Employee Pension Plan
- State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan
- Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan
- Paid Fire A Pension Plan
- Paid Fire B Pension Plan
- Judicial Pension Plan
- Law Enforcement Pension Plan
- Air Guard Firefighter Pension Plan
- Deferred Compensation Plan (457 Plan)

The financial activities of these pension plans are included in the fiduciary funds of the Wyoming On-Line Financial System as established by the Wyoming Funds Consolidation Act and are defined as pension (and other employee benefit) trust funds by accounting principles generally accepted in the United States of America.

Each pension plan maintains separate accounts and all actuarial determinations are made using separate fund-based information. All plans own a percentage of the combined investment fund. Although the assets of the pension plans are commingled for investment purposes, each pension plan's assets may be used only for the payment of benefits to the members of that plan in accordance with the terms of the plan.

Employee and employer contributions are recognized as revenue in the period in which employee services are performed. Benefits, refunds, and contribution returns are recognized when due and payable in accordance with the terms of the plan.

Refunds represent withdrawals of participant contributions by participants in the form of a total or partial rollover or direct distribution from the plan. Return of contributions consists of the withdrawal of both participant and employer contributions returned to the employer as allowed in limited circumstances by state statute.



# Notes to the Basic Financial Statements

## Method Used to Value Investments

Investments are reported at fair value. The fair value of the investments, other than those described below, was determined by the latest bid price or by the closing exchange price at the statement of net position date. The fair value of investments that are organized as limited partnerships and have no readily ascertainable fair values (such as private equity, real estate, and real assets) has been determined by management based on the individual investment's capital account balance, reported at fair value by each respective general partner, at the closest available reporting period. The fair value is then adjusted for subsequent contributions, distributions, management fees, and changes in values of foreign currency.

## Capital Assets

Capital assets including buildings, equipment, software and leases are reported in the financial statements (Statement of Net Position). Capital assets are stated at cost.

The Wyoming Retirement System capitalized all building, equipment, and other capital assets that have a value or cost equal to or greater than the capitalization threshold for its asset type at the date of acquisition and has a useful life that extends beyond a single reporting period. The Wyoming Retirement System's capital assets are depreciated (or for right-to-use assets resulting from leasing arrangements, amortized) over their useful lives using the straight-line method. Capital asset thresholds and estimated useful lives are as follows:

Capital Assets		
Asset Type	Estimated Life	Capitalization Threshold
Buildings	5-40 years	\$50,000
Leasehold Improvements	5-25 years	50,000
Land	n/a	Capitalize all
Equipment	3-17 years	15,000
Intangible-Purchased Software	3-15 years	50,000
Intangible-Internally Generated Software	3-15 years	2,000,000
Right-to-Use Assets	2-15 years	1,000,000*

\*WRS capitalizes leases with aggregate payments over the life of the contract in excess of \$1,000,000.

## Implementation of GASB Statement No. 87

As of January 1, 2022, the Wyoming Retirement System implemented GASB Statement No. 87, *Leases*. This standard establishes a single model for lease accounting based on the principle that leases are financings of the right to use an underlying asset. The standard requires recognition of certain right to use leased assets and liabilities for leases that previously were expensed. As a result of this implementation, WRS recognized a right to use asset of \$1,288,478 and a lease liability of \$1,288,478 as of January 1, 2022. These adjustments had no effect on beginning net position. The additional disclosures required by GASB Statement No. 87 are included in Note 9. Capital Assets.

## Administrative Expenses

Administrative expenses of WRS are paid proportionately based on total proportionate share of the total fiduciary net position per prior month.

# Notes to the Basic Financial Statements

## Note 2. Description of the Retirement Plans

WRS is the administrator of a multiple employer, cost sharing public employee retirement system (PERS) and its designated purpose is to provide retirement allowances and other benefits to members. The authority for establishing and amending the benefits and contribution rates rests with the Legislature of the State of Wyoming. The obligation to collect and remit the contribution rests with the employers of each plan. Administrative costs are deducted from the plan assets of each plan. The costs of administering the plan are financed by both the investment income and contributions. WRS is also the administrator of a deferred compensation (457(b)) plan.

At December 31, 2022, WRS's Employer membership consisted of the following:

Number of Employers by Type	
State Agencies	85
Public Schools	52
Universities & Community Colleges	9
Counties	23
Municipalities	87
Other	254
Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue	118
Paid Firefighter	16
<b>Total:</b>	<b>644</b>

Employers may participate in more than one plan as indicated in the table below. The Paid Fire A Pension Plan is a closed plan and as such does not have any participating employers.

Employer Participation by Plan	Public Employee Pension Plan	State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan	Volunteer Firefighter, EMT, Search & Rescue Pension Plan	Paid Fire A Pension Plan	Paid Fire B Pension Plan	Judicial Pension Plan	Law Enforcement Pension Plan	Air Guard Firefighter Pension Plan	Deferred Compensation 457(b) Plan
State Agencies	X	X				X	X	X	X
Public Schools	X								X
Universities & Community Colleges	X						X		X
Counties	X						X		X
Municipalities	X						X		X
Other	X								X
Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue			X						X
Paid Firefighter					X				X

# Notes to the Basic Financial Statements

Following are descriptions of the members of each of the cost sharing multiple employer public employee retirement system pension plans administered by WRS:

	Public Employee Pension Plan	State Patrol, Game & Fish Warden and Criminal Investigator Pension Plan	Volunteer Firefighter, EMT, and Search & Rescue Pension Plan	Paid Fire A Pension Plan	Paid Fire B Pension Plan	Judicial Pension Plan	Law Enforcement Pension Plan	Air Guard Firefighter Pension Plan	Total
Current Employees:									
Vested	22,660	171	1,483	-	293	34	1,735	17	26,393
Non-vested	12,052	101	841	-	95	21	789	21	13,920
Total Current Employees:	34,712	272	2,324	-	388	55	2,524	38	40,313
Inactive employees entitled to benefits but not yet receiving them									
	8,383	36	520	-	57	5	495	5	9,501
Total active or vested	43,095	308	2,844	-	445	60	3,019	43	49,814
Inactive nonvested non retired/non vested members									
	18,934	78	1,878	1	38	-	1,226	11	22,166
Total Active/Inactive Members	62,029	386	4,722	1	483	60	4,245	54	71,980
Retirees and beneficiaries of deceased retirees currently receiving benefits									
	30,855	378	1,678	251	189	35	1,607	20	35,013
<b>Total all members</b>	<b>92,884</b>	<b>764</b>	<b>6,400</b>	<b>252</b>	<b>672</b>	<b>95</b>	<b>5,852</b>	<b>74</b>	<b>106,993</b>

## Public Employee Pension Plan

The Public Employee Pension Plan is a cost sharing multiple employer defined benefit, contributory retirement plan covering substantially all employees of the State and of the Public School Systems of Wyoming. The Plan also covers employees of those political subdivisions and other statutorily allowed entities, which have elected to participate in the Plan.

Starting on July 1, 2021, the Plan statutorily required 18.62% of the participant's salary to be contributed to the Plan. Contributions consist of 9.25% of the participant's salary as employee contributions and 9.37% as employer contributions. The amount of contributions designated as employee contributions represent the portion of total contributions that a participant retains ownership of and can elect to receive as a refund upon termination of employment. Employers can elect to cover all or a portion of the employee's contribution at their discretion. Through legislation passed during the 2014 legislative session, two tiers of benefits were established for participants of this plan.

- Tier 1, the Plan allows for normal retirement after four years of service and attainment of age 60. Early retirement is allowed provided the employee has completed four years of service and attained age 50 or 25 years of service but will result in a reduction of benefits based on the length of time remaining to age 60.
- Tier 2, the Plan allows for normal retirement after four years of service and attainment of age 65. Early retirement is allowed provided the employee has completed four years of service and attained age 55, or 25 years of service but will result in a reduction of benefits based on the length of time remaining to age 65.

All employees may also retire upon normal retirement when the sum of the member's age and service is at least 85.

The Public Employee Plan provides retirement, disability and death benefits according to predetermined formulas and allows retirees to select one of seven optional methods for receiving benefits, including two joint and survivor forms of benefits: a 100% joint and survivor annuity, and a 50% joint and survivor annuity. The benefit amounts under these options are determined on an actuarially equivalent basis. The State Legislature must grant any cost of living adjustment provided to retirees. In addition, a cost of living adjustment will not be approved by the legislature unless the plan is 100% funded after the COLA is awarded.

# Notes to the Basic Financial Statements

## **Public Employee Pension Plan (continued)**

Employees terminating prior to normal retirement can elect to withdraw all employee contributions and accumulated interest through date of termination or, if they are vested, they may elect to remain in the Plan and be eligible for unreduced retirement benefits at age 60 (Tier 1 employee) or 65 (Tier 2 employee).

## **State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan**

The Wyoming State Patrol, Game & Fish Warden and Criminal Investigator Pension Plan is a cost sharing multiple employer defined benefit, contributory retirement plan covering sworn officers of the Wyoming State Highway Patrol and law enforcement officers employed by the Wyoming State Game & Fish Department and sworn peace officers of the Division of Criminal Investigation.

The Plan statutorily requires participants to contribute 14.56% of their salary to the Plan and the State is required to contribute 14.88% of each participant's salary for a total contribution of 29.44%.

The Plan allows for normal retirement at age 50. The Plan provides retirement, disability and death benefits according to predetermined formulas. Terminating employees are entitled to a refund of employee contributions and accumulated interest. If they are vested, they may elect to remain in the Plan and be eligible for retirement benefits at age 50. The cost of living adjustment provided to retirees is determined by the Board and must be approved by the State Legislature. In addition, a cost of living adjustment will not be approved by the legislature unless the plan is 100% funded after the COLA is awarded.

The maximum service pension is 75% of the three-year highest average salary. The minimum years of service requirement for a monthly benefit is six years.

## **Volunteer Firefighter, Emergency Medical Technician (EMT), and Search & Rescue Pension Plan**

The Volunteer Firefighter, EMT, and Search & Rescue Pension Plan is a cost sharing multiple employer defined benefit, contributory retirement plan covering volunteer firefighters, emergency medical technicians (EMTs), and search and rescuers who elect to participate in the Plan. The volunteer firefighter and EMT contribution is \$18.75 per month and the search and rescuer contribution is \$37.50 per month. Any contributions to the Plan may be fully or partially paid by political subdivisions on behalf of participants, if approved by the governing board.

For the first quarter of 2022, the State paid into the Plan 100% of the annual tax collected on fire insurance premiums. Per legislation effective on April 1, 2022, the State paid 60% of the annual tax collected on fire insurance premiums into the Plan for the second, third, and fourth quarters of 2022.

The Plan provides retirement and death benefits according to predetermined amounts primarily determined by entry age and years of service of the participant. Participants may withdraw from the Plan at any time and receive refunds of participant contributions and accumulated interest. The Volunteer Firefighter and EMT plan was created on July 1, 2015, combining the assets and liabilities of two predecessor plans (Volunteer Firefighter Plan and Volunteer EMT Plan). On July 1, 2019, Search and Rescue Volunteers were added to the plan.

## **Paid Fire A Pension Plan**

The Paid Fire A Pension Plan is a cost sharing multiple employer defined benefit, contributory retirement plan covering paid firefighters who were employed prior to July 1, 1981 and who elected to participate.

The Plan statutorily required participants to contribute 8% of their salary to a maximum not to exceed the salary of a Firefighter First Class. Employers were required to contribute 21% of the salary. Effective April 1, 1997, required contributions were suspended as the Plan was determined to be actuarially over-funded. Due to increased benefits and the lack of contributions, the Paid Fire A Pension Plan assets steadily decreased. In January 2021, the Wyoming Retirement System Board decided to invest the assets in a more conservative fixed income strategy. The decreasing Plan assets prompted the 2022 State of Wyoming legislature to pass a bill (Senate Enrolled Act 6) providing additional funding to the Plan. This bill created a new Fire A legislative reserve account which received two one-time contributions, an employer contribution in the amount of \$20 million and a contribution from the State of Wyoming's general fund in the amount of \$55 million. In addition, starting in the second quarter of 2022, 40% of the annual fire insurance premium tax was transferred to the Fire A legislative reserve account and will continue to be transferred until there are no remaining members receiving benefits. The bill also removed the 3% annual benefit increase (COLA) after April 1, 2022 and benefits to surviving spouses will only be paid for marriages occurring before April 1, 2022. These changes prompted the Plan's assets to be reinvested with the existing investment pool of the defined benefit plans in April 2022.

## **Paid Fire A Pension Plan (continued)**

The figures shown in this report for the Paid Fire A Pension Plan include the original Paid Fire A Pension Plan account combined with the newly created Fire A legislative reserve account. The Fire A legislative reserve account will only be used to pay for Fire A pension plan benefits once the funds in the original Paid Fire A Pension Plan account are exhausted. Any remaining funds in the Fire A legislative reserve account will revert to the general fund when there are no longer any obligations.

The Plan statutorily provides retirement, disability and death benefits according to a percentage of a firefighter first class salary. Participants may withdraw from the Plan at any time and receive refunds of participant contributions without interest.

## **Paid Fire B Pension Plan**

The Paid Fire B Pension Plan is a cost sharing multiple employer defined benefit, contributory retirement plan covering paid firefighters who were employed after July 1, 1981.

Starting on July 1, 2022, the Plan statutorily required participants to contribute 11.245% of their salary to the Plan and the employer is required to contribute 16% of each participant's salary. From July 1, 2021 to June 30, 2022, the Plan statutorily required participants to contribute 10.745% of their salary to the Plan and the employer was required to contribute 15% of each participant's salary.

The Plan provides retirement, disability and death benefits according to predetermined formulas. The State Legislature grants any cost of living adjustment provided to retirees. In addition, a cost of living adjustment will not be approved by the legislature unless the plan is 100% funded after the COLA is awarded. Participants may withdraw from the Plan at any time and receive refunds of participant contributions without interest.

## **Wyoming Judicial Pension Plan**

The Wyoming Judicial Pension Plan is a single employer defined benefit, contributory plan covering any Justice of the Supreme Court, District Judge or County Court Judge appointed to any of these offices on or after July 1, 1998, and with no prior service as a justice of the Supreme Court or district judge at the time of the appointment. The Plan also covers any justice or judge who elects to participate.

The Plan statutorily requires participants to contribute 9.22% of their salary to the Plan and the employer is required to contribute 14.5% of each participant's salary. The Plan statutorily provides retirement and death benefits according to predetermined amounts primarily determined by age and years of service of the participant. Any cost of living adjustment provided to retirees is determined by the Board and must be approved by the State Legislature. In addition, a cost of living adjustment will not be approved by the legislature unless the plan is 100% funded after the COLA is awarded. Participants may withdraw from the Plan at any time and receive refunds of participant contributions and accumulated interest.

## **Law Enforcement Pension Plan**

The Wyoming Law Enforcement Pension Plan is a cost sharing multiple employer defined benefit, contributory plan covering any county sheriff, deputy county sheriff, municipal police officer, Wyoming correctional officer, Wyoming law enforcement academy instructor, University of Wyoming campus police officer, detention officer or dispatcher for law enforcement agencies and certain investigators of the Wyoming Livestock Board, Wyoming Gaming Commission and Wyoming Board of Outfitters.

The Plan statutorily requires participants to contribute 8.6% of their salary to the Plan and the employer is required to contribute 8.6% of each participant's salary.

The Plan statutorily provides retirement, disability and death benefits according to predetermined amounts determined by salary, age and years of service of the participant. The State Legislature must grant any cost of living adjustment provided to retirees. In addition, a cost of living adjustment will not be approved by the legislature unless the plan is 100% funded after the COLA is awarded. Participants may withdraw from the Plan at any time and receive refunds of participant contributions and accumulated interest.

# Notes to the Basic Financial Statements

## **Air Guard Firefighter Pension Plan**

The Air Guard Pension Plan is a single employer defined benefit, contributory retirement plan covering the Air Guard Firefighters.

The Air Guard Firefighter Pension Plan statutorily required 23.77% of the participant's salary to be contributed to the Plan. Contributions consist of 16.65% of the participant's salary as employee contributions and 7.12% as employer contributions. The amount of contributions designated as employee contributions represent the portion of total contributions that a participant retains ownership of and can elect to receive as a refund upon termination of employment. The State Legislature must grant any cost of living adjustment provided to retirees. In addition, a cost of living adjustment will not be approved by the legislature unless the plan is 100% funded after the COLA is awarded. Employers can elect to cover all or a portion of the employee's contribution at their discretion.

## **Wyoming Deferred Compensation Plan**

The Plan administered by WRS is an IRS Section 457 Deferred Compensation Plan. This Plan is intended as a supplemental plan to the defined benefit retirement benefits of WRS for employees of public employers, which have adopted the Plan. Non-state employers may offer competing 457 plans offered through vendors, however in some cases, the 457 Deferred Compensation Plan is the only plan offered by the employer. Contributions may be made into the Plan, subject to Plan and Internal Revenue Code limitations, by employees of participating employers sponsoring the Plan. There were 28,470 open accounts and 16,535 accounts receiving contributions in the Plan from 296 different employers.

Upon qualifying for distributions, benefits are paid out in lump sums, or as periodic benefit payments, at the option of the participant based on individual account balances and Plan provisions. The Plan's account balances are fully vested to the participants at the time of deposit.

Investments in the Plan are individually directed by Plan participants among Board approved investment options of varying degrees of risk and earnings potential. Participants may transfer their funds between these options daily. Investments of the Plan are valued daily.

In addition to employee contributions, the 457 Plan also accepts employer contributions on behalf of their employees, provided such contribution when added to the employees' deferred contribution does not exceed the maximum deferral permitted by the IRS.

# Notes to the Basic Financial Statements

## Note 3. Cash, Cash Equivalents and Investments

WRS's Board has been authorized by the Wyoming Legislature, pursuant to State Statutes including W.S. 9-3-408 (b), to act on behalf of the plan membership in investing and managing monies in the retirement account. In doing so, per the language in W.S. 9-3-408 (b), it "shall exercise the judgment and care that a prudent investor would, in light of the purposes, terms, distribution requirements and all other circumstances surrounding the monies in the retirement account, including risk and return objectives established by the Board which are reasonably suitable to the purpose of the Wyoming Retirement System." The Board shall evaluate and select target asset classes to enhance returns or reduce risk in the total portfolio and has delegated to staff the responsibility to select strategic asset classes and investment managers. The WRS Governance Policy was amended based on new guideline adopted by the Board effective May 18, 2022 to combine the asset class categories of Absolute Return, Enhanced Fixed Income and Global Tactical Allocation and rename it, Diversifying, and to rename the Opportunistic and Directional category Long/Short Equity and Opportunistic.

The following table shows the System's defined benefit plan investments by type as of December 31, 2022:

Target Asset Class	Target	Max	Min	2022	With Overlay	Physical Securities
<b>Tactical Cash</b>	0.50%	3.00%	0.00%	1.46%	\$143,958,550	\$387,714,295
<b>Gold</b>	1.50%	4.00%	0.00%	2.55%	250,959,367	250,959,367
<b>Total Fixed Income</b>	20.00%			16.66%	1,637,741,714	1,609,126,011
<b>Marketable Fixed Income</b>	15.00%	20.00%	10.00%	12.18%		
Corporate Bonds/Credit					573,663,589	573,663,589
Emerging Markets Debt					4,182,204	4,182,204
Mortgages/ABS					14,179,608	14,179,608
TIPS					-	-
Treasury/Agencies/Governments					605,432,787	576,817,084
<b>Private Debt</b>	5.00%	8.00%	2.00%	4.48%	440,283,526	440,283,526
<b>Total Equity</b>	51.50%			46.91%	4,611,083,496	4,478,698,179
<b>Marketable Equity</b>	38.50%	43.50%	33.50%	34.72%		
Domestic					2,085,585,006	1,932,463,927
Emerging Markets					579,143,536	552,616,126
International Developed					748,058,725	795,321,897
<b>Private Equity</b>	13.00%	18.00%	8.00%	12.19%	1,198,296,229	1,198,296,229
<b>Marketable Alternatives</b>	16.00%	21.00%	11.00%	18.41%	1,809,342,467	1,809,342,467
Diversifying					972,204,630	972,204,630
Long/Short Equity, Opportunistic					837,137,837	837,137,837
<b>Private Real Assets</b>	10.50%	15.00%	7.50%	14.00%	1,375,696,554	1,292,941,829
Other Real Assets					1,069,339,771	986,585,046
Real Estate					306,356,783	306,356,783
<b>Total Investments</b>					9,828,782,148	9,828,782,148
<b>Net Receivables/Payables</b>					(8,512,982)	(8,512,982)
<b>Total Assets</b>					\$9,820,269,166	\$9,820,269,166

Note: Numbers may not total exactly due to rounding

# Notes to the Basic Financial Statements

## Overlay Program

WRS employs a manager to provide an overlay program to ensure the system's major asset classes remain within a certain percentage of their targeted weights. Market movements can lead to significant implicit tilts within the portfolio. For example, a sharp decline in equities will many times be accompanied by stability within fixed income. Consequently, the equity position will decrease as a percentage of assets while fixed income will increase. This causes an "implicit" tilt towards fixed income. The overlay program brings these implicit tilts back within an acceptable band and is a cost effective way to rebalance assets.

	Financial Report	Overlay Program	Combined	% Asset Under Management	% Category
<b>Tactical Cash</b>					
<b>Total Tactical Cash</b>	<b>\$387,714,295</b>	<b>\$(243,755,745)</b>	<b>\$143,958,550</b>	<b>1.46%</b>	<b>100.00%</b>
Gold	250,959,367		250,959,367	2.55%	100.00%
<b>Fixed Income</b>					
<b>Marketable Fixed Income</b>					
Corporate Bonds/Credit	573,663,589		573,663,589	5.84%	35.03%
Emerging Markets Debt	4,182,204		4,182,204	0.04%	0.26%
Mortgages/ABS	14,179,608		14,179,608	0.14%	0.87%
TIPS	-		-	0.00%	0.00%
Treasury/Agencies/Governments	576,817,084	28,615,703	605,432,787	6.16%	36.97%
<b>Total Marketable Fixed Income</b>	<b>1,168,842,485</b>	<b>28,615,703</b>	<b>1,197,458,188</b>	<b>12.18%</b>	<b>73.12%</b>
<b>Private Debt</b>					
<b>Total Private Debt</b>	<b>440,283,526</b>		<b>440,283,526</b>	<b>4.48%</b>	<b>26.88%</b>
<b>Total Fixed Income</b>	<b>1,609,126,011</b>		<b>1,637,741,714</b>	<b>16.66%</b>	<b>100.00%</b>
<b>Equity</b>					
<b>Marketable Equity</b>					
Domestic	1,932,463,926	153,121,080	2,085,585,006	21.22%	45.23%
Emerging Markets	552,616,126	26,527,410	579,143,536	5.89%	12.56%
International Developed	795,321,897	(47,263,173)	748,058,725	7.61%	16.22%
<b>Total Marketable Equity</b>	<b>3,280,401,950</b>	<b>132,385,317</b>	<b>3,412,787,267</b>	<b>34.72%</b>	<b>74.01%</b>
<b>Private Equity</b>					
<b>Total Private Equity</b>	<b>1,198,296,229</b>		<b>1,198,296,229</b>	<b>12.19%</b>	<b>25.99%</b>
<b>Total Equity</b>	<b>4,478,698,179</b>		<b>4,611,083,496</b>	<b>46.91%</b>	<b>100.00%</b>
<b>Marketable Alternatives</b>					
Diversifying	972,204,630		972,204,630	9.89%	53.73%
Long/Short Equity, Opportunistic	837,137,837		837,137,837	8.52%	46.27%
<b>Total Marketable Alternatives</b>	<b>1,809,342,467</b>		<b>1,809,342,467</b>	<b>18.41%</b>	<b>100.00%</b>
<b>Private Real Assets</b>					
Other Real Assets	986,585,047	82,754,725	1,069,339,771	10.88%	77.73%
Real Estate	306,356,783		306,356,783	3.12%	22.27%
<b>Total Private Real Assets</b>	<b>1,292,941,829</b>	<b>82,754,725</b>	<b>1,375,696,554</b>	<b>14.00%</b>	<b>100.00%</b>
<b>Total Securities &amp; Cash</b>	<b>9,828,782,148</b>	<b>-</b>	<b>9,828,782,148</b>	<b>100.00%</b>	<b>100.00%</b>
<b>Net Receivables/Payables</b>					
<b>Total Net Receivables/Payables</b>	<b>(8,512,982)</b>	<b>-</b>	<b>(8,512,982)</b>		
<b>Total Assets</b>	<b>\$9,820,269,166</b>	<b>\$-</b>	<b>\$9,820,269,166</b>		



# Notes to the Basic Financial Statements

## **Custodian Credit Risk**

Custodian credit risk for deposits of the defined benefit plans is the risk that in the event of a bank failure, the Systems' and Plans' deposits may not be returned to them. Deposits subject to this risk are those other than the \$31.8 million of deposits held by the State Treasurer. These deposits totaling \$387.7 million are held by the System's primary custodian and are collateralized by commercial paper, repurchase agreements and money market mutual funds held by the primary custodian or its agents in accounts in the name of the Wyoming Retirement System.

Deposits are presented in the basic financial statements at cost plus accrued interest which is also the fair value. At December 31, 2022, the carrying amount of all deposits and the corresponding bank balance totaled approximately \$419.5 million.

Investment securities within the defined benefit plans are exposed to custodian credit risk if the securities are uninsured, are not registered in the name of the System and are held by either the counterparty or the counterparty's trust department or agent, but not in the System's name. Consistent with the System's investment policy, all investments are held by the System's primary custodian and registered in the System's name except for approximately \$5.50 billion held in commingled vehicles outside of Northern Trust's custody.

The System does not have a formal deposit or investment policy for custodian credit risk.

## **Concentration of Credit Risk**

The System expects the domestic investment managers to maintain diversified portfolios by sector and by issuer using the following guidelines in accordance with the System's investment policies.

The policy of the Board is to discourage equity investment managers from holding positions in a single issue whose fair value exceeds 5% of the portfolio. However, exceptions can be made if this percentage of the overall portfolio is exceeded as a consequence of long held positions whose value has grown due to their strong returns. At December 31, 2022, the System did not have any securities that breached this threshold. The board does not have any formal policy relating to any specific investment related risk.

For the exposure limitations of the System, the maximum allocation to a single active strategy at a manager/firm/general partner, shall not exceed 10 percent of the total fair value of the Fund. The maximum allocation to a single manager/firm/general partner, including passive strategy exposure, in aggregate, shall not exceed 25 percent of the total fair value of the Fund. Maximum exposure to a manager/firm in active strategies is 15 percent.

The Board authorizes the use of derivative instruments to control portfolio risk, implement asset allocation changes in a cost effective manner and reduce transaction costs or taxes. When appropriate, investment managers may be given permission to use derivative instruments for hedging, including cross hedging of currency exposures, creation of market exposures, and management of country and asset allocation exposure. Investment managers are prohibited from using derivative instruments or synthetic securities that expose WRS to potentially high price volatility or are either speculative or leveraged, or whose marketability may be severely limited.

The purpose of real estate investments is to provide counter cyclical returns, current income and inflation protection. Funds considered will be comprised primarily of highly leased properties with reasonable income components. The real estate portfolio, in aggregate, shall be diversified by property type, property size, geographic region, and economic sector exposure. Leverage shall be used sparingly.

## Notes to the Basic Financial Statements

Rating	Amount
AAA	\$629,117,068
AA	108,109,789
A	14,732,100
BBB	40,358,722
BB	36,886,296
B	51,600,025
Below B	20,351,903
N/A	587,279,133
<b>Total</b>	<b>\$1,488,435,036</b>

### Credit risk – Debt Securities

Fixed income investment grade credits carry an equivalent of a Standard & Poor's rating of BBB or better. Managers of accounts holding publicly traded Non-Government debt should select and manage them to assure an appropriate balance in maturity, quality, marketability and adequate diversification with respect to industry and issues.

High yield investments are defined by the System as those debt securities, which carry a Standard & Poor's quality rating of BB or lower. Fund managers who manage these investments should structure a well-diversified portfolio with respect to rating, maturity, duration, yield, industry and issuer with the intent of minimizing the risk of losses in any single security.

The distribution of quality rating of debt securities in the System's investment portfolio at fair value as of December 31, 2022 is shown to the left.

### Interest Rate Risk

The System is also exposed to investment fair value loss arising from increased interest rates. Duration is a measure of the sensitivity of a debt security's value to rate changes. It is calculated using the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price. More specifically, it is the approximate percentage change in value for a 1% change in rates. The System's investment policy guidelines require that the investment grade debt securities portfolio be maintained with weighted-average portfolio duration within two years of the benchmark duration. No specific investment guidelines exist for other debt securities subject to interest rate risk not included in the investment grade portfolio.

At December 31, 2022 the following table shows investments by investment type, amount and the effective weighted duration:

Category	\$ Amount	% Amount	Contribution to Duration
Asset-Backed Securities	\$256,151,343	22.44%	0.0384
Bank Loans	13,986,113	1.23%	-0.0010
Commercial Mortgage-Backed	2,931,400	0.26%	0.0004
Corporate Bonds	158,356,453	13.87%	0.7172
Corporate Convertible Bonds	402,185	0.04%	0.0002
Funds - Fixed Income ETF	59,796,616	5.24%	0.0000
Government Agencies	74,625,264	6.54%	0.3630
Government Bonds	380,046,587	33.30%	2.4151
Government Mortgage-Backed Securities	98,256,510	8.60%	0.9564
Municipal/Provincial Bonds	1,571,358	0.14%	0.0077
Non-Government Backed C.M.O.s	339,386	0.03%	0.0113
Short Term Bills and Notes	94,815,076	8.31%	0.0360
<b>Total</b>	<b>\$1,141,278,291</b>	<b>100.00%</b>	<b>4.5448</b>

# Notes to the Basic Financial Statements

## **Deferred Compensation (457) Plan Cash and Investments**

The cash and investments held within the 457 Plan are comprised of the aggregate holdings of the participants' accounts that are invested in different mutual fund type investment options and cash held on deposit with the State collected from participants as fees for the purposes of plan administration. Plan participants determine the holdings of their individual participant accounts; therefore, the exposure of each participant to the investment risks discussed above is determined by that individual's risk tolerance. Additionally, the risks of the investment portfolios associated with each of the investment options are determined by the mutual fund manager and may vary depending on their risk tolerances and performance objectives.

## **Limited Partnerships**

The system has invested in limited partnerships. As of December 31, 2022 the fair value of these investments was \$4,019,817,402. The limited partnerships invest in a variety of investments.

## **Securities Lending**

Under the authority of the governing statutes and in accordance with policies set by the Board of Trustees, the System lends its securities to broker-dealers with a simultaneous agreement to return the collateral for the securities in the future. The System's custodian is authorized to lend available securities to authorized broker-dealers subject to the receipt of acceptable collateral. The System lends securities such as common stock, U.S. Treasury and corporate bonds and receives collateral in the form of either cash or other securities similar to the type on loan. Borrowers are required to provide collateral amounts of 102% of the fair value of loaned U.S. securities plus accrued interest and 105% of the fair value of loaned non-U.S. securities plus accrued interest. The System cannot pledge or sell collateral securities received unless a borrower defaults. Securities held as collateral at year-end are not subject to the preceding disclosures of custodian credit risk as they are held in a collateral investment pool. At year-end, the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System. Contracts with the lending agents require them to indemnify the System if the borrowers fail to return the securities (and if the collateral is inadequate to replace the securities lent) or fail to pay the System for income distributions by the securities' issuers while the securities are on loan. Net securities lending income during the year ended December 31, 2022 was \$1,026,260.

Cash and U.S. Government securities were provided as collateral for the securities lent. At December 31, 2022, the carrying amount and fair value of the securities on loan was \$470,071,964. The underlying collateral for these securities had a fair value of \$482,002,340. The Fair Value of Loaned Securities Collateralized by Non-Cash Collateral was \$55,935,285 and Fair Value of Non Cash Collateral was \$57,677,508 of the total collateral. Because these securities cannot be sold or pledged unless the borrower defaults, this collateral and related liability is not presented on the statement of net position. The remaining collateral represents cash collateral that is invested and is classified according custodian credit risk. It is included as an asset on the statement of net position with an offsetting liability for the return of collateral.

## Notes to the Basic Financial Statements

### Foreign Currency Risk

The System also expects its International Security Investment Managers to maintain diversified portfolios by currency denomination; however, no formal policy limits have been established. At December 31, 2022, the System's exposure to foreign currency risk for its short-term and equity securities is as follows:

Exposures by Currency as of December 31, 2022				
Currency	Cash	Investments	Derivatives & Payables/ Receivables	Total
Argentine peso	\$1,523	\$-	\$-	\$1,523
Australian dollar	265,515	31,566,636	(22,310,058)	9,522,093
British pound sterling	(392,173)	102,258,962	(59,326,521)	42,540,268
Canadian dollar	235	473	13,631	14,339
Chilean peso	14,564	-	-	14,564
Danish krone	25,209	10,478,530	704,284	11,208,023
Euro	1,661,054	202,701,711	(150,372,974)	53,989,790
Hong Kong dollar	(243,563)	21,348,063	(10,162,501)	10,941,999
Indonesian rupiah	-	7,591,891	-	7,591,891
Japanese yen	2,479,654	223,045,812	(122,677,258)	102,848,207
New Israeli shekel	13,587	4,460,516	(2,190,875)	2,283,228
New Zealand dollar	10,662	4,564,278	26	4,574,966
Norwegian krone	21,588	5,383,914	149	5,405,651
Singapore dollar	8,754	10,874,869	(4,729,379)	6,154,244
Swedish krona	(209,518)	10,351,005	(12,027,818)	(1,886,332)
Swiss franc	459,190	47,384,874	(26,003,165)	21,840,899
<b>Total</b>	<b>\$4,116,281</b>	<b>\$682,011,534</b>	<b>\$(409,082,459)</b>	<b>\$277,045,353</b>

Note: Numbers may not total due to rounding.

# Notes to the Basic Financial Statements

## Derivative Instruments

The System permits the use of derivative instruments by its international equity and external fixed income managers. Examples of derivative instruments permitted, but not limited to, are foreign exchange contracts, financial futures, forwards, options, swaps and swaptions. All derivative instruments utilized are considered "Investment derivative instruments" as defined in GASB 53 Accounting and Financial Reporting for Derivative Instruments. The fair value balances and notional amounts of derivative instruments outstanding at December 31, 2022, classified by instrument in fair value are as follows:

<b>The Wyoming Retirement System Derivative Instruments - Summary Disclosure</b>					
As of 31 December 2022					
Category	Sub-Category	Currency	Bought/Sold	Fair Value	Notional Value
Futures	Equity Contracts			\$ -	\$136,262,871
	Interest Rate Contracts			-	(15,371,373)
Rights/Warrants	Equity Contracts			257,216	-
Swaps	Exchange Cleared Swaps			569,588	-
	Swaps			(2,389,215)	-
Forwards	Foreign Exchange Contracts	Australian dollar	Bought	116,292	8,209,529
	Foreign Exchange Contracts	Australian dollar	Sold	(869,882)	(30,601,574)
	Foreign Exchange Contracts	British pound sterling	Bought	46,284	16,843,022
	Foreign Exchange Contracts	British pound sterling	Sold	(2,714,867)	(76,488,058)
	Foreign Exchange Contracts	Euro	Bought	212,044	34,235,780
	Foreign Exchange Contracts	Euro	Sold	(3,944,131)	(187,954,349)
	Foreign Exchange Contracts	Hong Kong dollar	Bought	2,322	4,259,524
	Foreign Exchange Contracts	Hong Kong dollar	Sold	(21,706)	(14,654,529)
	Foreign Exchange Contracts	Japanese yen	Bought	34,512	22,810,489
	Foreign Exchange Contracts	Japanese yen	Sold	(6,552,915)	(145,884,800)
	Foreign Exchange Contracts	New Israeli shekel	Sold	34,995	(2,193,278)
	Foreign Exchange Contracts	Singapore dollar	Sold	(296,416)	(4,729,379)
	Foreign Exchange Contracts	Swedish krona	Bought	13,757	3,279,537
	Foreign Exchange Contracts	Swedish krona	Sold	(476,790)	(15,377,485)
	Foreign Exchange Contracts	Swiss franc	Bought	56,724	11,263,841
	Foreign Exchange Contracts	Swiss franc	Sold	(1,503,502)	(38,751,122)
Foreign Exchange Contracts	United States dollar	Bought	-	500,289,361	
Foreign Exchange Contracts	United States dollar	Sold	-	(100,419,784)	
<b>Total</b>				<b>\$(17,425,690)</b>	<b>\$105,028,223</b>

Note: Numbers may not total due to rounding.

# Notes to the Basic Financial Statements

## Derivative Instrument Risks

Credit, interest rate and foreign currency risks affecting derivative instruments and other applicable investments are addressed in previous sections of Note 3. These risks, applicable to other fixed income and foreign investments, are not substantially different from the same risks affecting applicable derivative instruments.

In addition to the principal risks noted above, Forward Foreign Currencies, Credit Default Swaps and Interest Rate Swaps are also subject to counterparty risk. In general, counterparty risk is the risk of loss of an amount expected to be delivered under an agreement in the event of the default or bankruptcy of the counterparty. Generally, counterparty risk is controlled through dealing with a number of different counterparties reasonably deemed to be creditworthy by the investment manager.

## Derivative Instrument – Contingency

Derivative instruments often contain credit-risk-related contingent features that could result in an immediate payment to the counterparty. For example, a material adverse change clause could provide the counterparty with the right to early terminate the derivative instrument agreement. Alternatively, it could provide a basis for renegotiating the agreement if specific events occur, such as a downgrade of the entity's credit rating below investment grade. These provisions may include an obligation to post additional collateral in instances where the credit-risk contingent feature is triggered or the counterparty is provided the right to terminate the agreement early.

Contingent features that could result in an immediate payment from the counterparty include the event of a downgrade of the counterparty below a specified rating, commonly A-/A3. Additionally, the counterparty can request immediate payment in the event assets under management of the portfolio falls by more than 30% in a year or 15% in a month. It is important to note that these contingent features are not compulsory, rather they are voluntary.

# Notes to the Basic Financial Statements

## Note 4. Fair Value Reporting (GASB 72)

### Investment valuation

The Wyoming Retirement System categorizes the fair value measurements of its investments based on the hierarchy established by generally accepted accounting principles. The fair value hierarchy, which has three levels, is based on the valuation inputs used to measure an asset's fair value: Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. In addition, The Wyoming Retirement System has an internal valuation process, which is available upon request.

Investments' fair value measurements are as follows at December 31, 2022 (in millions).

Investments	Fair Value Measurements			
	As of 31 December 2022	Total Fair Value	Level 1 Inputs	Level 2 Inputs
<b>Fixed Income</b>				
Corporate Bonds/Credit	\$457.88	\$59.80	\$396.44	\$1.64
Emerging Markets Debt	4.18	-	4.18	-
Mortgages/ABS	14.18	-	14.18	-
Treasury/Agencies/Governments	576.82	-	576.82	-
<b>Total Fixed Income</b>	<b>1,053.05</b>	<b>59.80</b>	<b>991.62</b>	<b>1.64</b>
<b>Equity</b>				
Domestic	1,873.99	1,873.99	-	-
Emerging Markets	20.19	20.19	-	-
International Developed	600.92	600.83	-	0.09
<b>Total Equity</b>	<b>2,495.10</b>	<b>2,495.02</b>	<b>-</b>	<b>0.09</b>
<b>Marketable Alternatives</b>				
Diversifying	84.40	84.40	-	-
Long/Short Equity, Opportunistic	131.83	131.83	-	-
<b>Total Marketable Alternatives</b>	<b>216.23</b>	<b>216.23</b>	<b>-</b>	<b>-</b>
<b>Private Markets</b>				
Real Estate	129.57	129.57	-	-
<b>Total Private Markets</b>	<b>129.57</b>	<b>129.57</b>	<b>-</b>	<b>-</b>
<b>Derivatives</b>				
FX	(15.86)	-	(15.86)	-
Rights/Warrants	0.26	0.08	0.17	-
Swaps	(1.82)	-	(1.82)	-
<b>Total Derivatives</b>	<b>(17.43)</b>	<b>0.08</b>	<b>(17.51)</b>	<b>-</b>
<b>Total</b>	<b>\$3,876.53</b>	<b>\$2,900.70</b>	<b>\$974.11</b>	<b>\$1.73</b>

Note: Numbers may not total 100.0% due to rounding.

# Notes to the Basic Financial Statements

## Investments

Investments, including derivative instruments that are not hedging derivative instruments, are measured at fair value on a recurring basis. Recurring fair value measurements are those that Governmental Accounting Standards Board (GASB) Statements require or permit in the statement of net position at the end of each reporting period. Fair value measurements are categorized based on the valuation inputs used to measure an asset's fair value: Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs

Debt and equity securities, including marketable alternatives, categorized as Level 1 are valued based on prices quoted in active markets for those securities. Debt securities categorized as Level 2 are valued using a matrix pricing technique that values securities based on their relationship to benchmark quoted prices. Collateralized debt obligations categorized as Level 3 are valued using consensus pricing. Investment derivative instruments categorized as Level 2 are valued using market approaches that consider, as applicable, benchmark interest rates or foreign exchange rates.

Private markets real estate investments categorized as level 1 relate to real estate investment trust funds that are valued based on prices quoted in active markets.

Long/Short Equity, Opportunistic: This sub-asset class provides exposure to investment opportunities that will not typically be targeted by traditional managers. These funds will typically have a higher risk/return profile than more heavily hedged funds such as market neutral funds. Fund strategies in this subclass may include: Long/Short (net exposure > 50%), Multistrategy, Distressed Equity, Activist Equity and Convertible Arbitrage.

Diversifying: This sub-asset class provides diversification to the total portfolio and strives to reduce total fund volatility. This area will include investments in a group of skill-based managers using a variety of strategies such as: Global Macro, Long/Short Equity (net exposure < 50%), Managed Futures, Event Driven Risk Arbitrage, Market Neutral and Dedicated Short Bias. Please see Appendix IV in the IPS for detailed descriptions of the strategies. At any given point in time, the number of managers and types of investments and strategies being utilized may include the entire universe of available investment options.



## Notes to the Basic Financial Statements

### Investments in Entities that Calculate Net Asset Value Per Share

The fair values of investments in certain equity, fixed income, marketable alternatives and private market funds are based on the investments' net asset value (NAV) per share (or its equivalent) provided by the investee. The fair values of investments in certain private equity funds have been determined using recent observable transaction information for similar investments and nonbinding bids received from potential buyers of the investments. Such fair value measurements are as follows at December 31, 2022 (in millions):

Investments	Total NAV-Driven
As of 31 December 2022	Value in Millions
<b>Fixed Income</b>	
Corporate Bonds/Credit	\$115
Private Debt	440
<b>Total Fixed Income</b>	<b>556</b>
<b>Equity</b>	
Domestic	149
Emerging Markets	532
International Developed	325
Private Equity	1,198
<b>Total Equity</b>	<b>2,204</b>
<b>Marketable Alternatives</b>	
Absolute Return	608
Enhanced Fixed Income	129
GAA	151
Opportunistic/Directional	705
<b>Total Marketable Alternatives</b>	<b>1,593</b>
<b>Private Markets</b>	
Other Real Assets	989
Real Estate	177
<b>Total Private Markets</b>	<b>1,166</b>
<b>Total</b>	<b>\$5,519</b>

Note: Numbers may not total due to rounding.

## Notes to the Basic Financial Statements

NAV - Redemption Frequency & Redemption Schedule		
Equities	Redemption Frequency/ Fund Term	Notice Period
Abbott (WRS Opportunities Fund I, II and III)	15 Years	N/A
Acadian EM Small Cap	Daily	30 Days
Adams Street III	10 Years	N/A
Adams Street V	10 Years	N/A
Burgundy	Daily	Day Prior
Cantillon	Daily	Day Prior
Cevian European	3 Years (On Anniversary)	90 Days
Earnest	Daily	Day Prior
Foundry 2022	10 Years	N/A
Grove Street (Cloudveil Capital)	12 Years	N/A
Harding Loevner	Daily	7 Days
Highclere	Monthly	10 Business Days
Hillhouse Focused Growth Fund V	10 Years	N/A
Hillhouse Fund V	10 Years	N/A
Hillhouse Healthcare Fund	10 Years	N/A
Neuberger Berman	Daily	Day Prior
Nikko	Daily	Day Prior
Polunin	Monthly	7 Days
Sanderson	Monthly	10 Business Days
State Street EM	Daily	2 Days
ValueAct	5 Years (On Anniversary)	90 Days
Victory	Daily	Day Prior
Wellington EM	Weekly	10 Business Days
Fixed Income		
AGL CLO	5 Years	N/A
AGL Meadowlark	8 Years	N/A
Alliance Bernstein	Daily	3 Days
Altum	3 Years (On Anniversary)	90 Days
Beach Point	Daily	10 Days
Benefit Street Partners	3 Years	N/A
Benefit Street Partners SSF II	6 Years	N/A
Brandywine	Daily	10 Days
Carl Marks Strategic Opportunities Fund II	2 Years	90 days
Carl Marks Strategic Opportunities Fund III	6 Years	N/A
Centerbridge Partners	Quarterly	90 days
Dimensional	Daily	Day Prior
DoubleLine	Daily	Day Prior
Kayne Anderson Mezzanine	10 Years	N/A
Kennedy Lewis Capital Partners	6 Years	N/A

## Notes to the Basic Financial Statements

<b>NAV - Redemption Frequency &amp; Redemption Schedule</b>		
<b>Fixed Income (continued)</b>	<b>Redemption Frequency/ Fund Term</b>	<b>Notice Period</b>
KLCP III	6 Years	N/A
KSL	10 Years	N/A
Oaktree Real Estate Debt	6 Years	N/A
Pathlight	5 Years	N/A
PIMCO - CLO	Daily	Day Prior
Silver Rock	5 Years	N/A
TCI Real Estate Fund III	7 Years	N/A
Tennenbaum Ops Fund VI	10 Years	N/A
Tennenbaum Sr. Loan Fund III	10 Years	N/A
<b>Marketable Alternatives</b>		
AQR	Monthly	15 Days
Bridgewater Pure Alpha	Monthly	5 Business Days
Diameter	N/A	N/A
Dorsal	Quarterly	45 Days
Dorsal Special Opportunities Fund	Quarterly	45 Days
GMO GAAR	Monthly	14 Days
GMO SGM	Monthly	3 Days
GMO Equity Dislocation Fund	Monthly	14 Days
Hillhouse HHLR (Gaoling) Fund	Semi-annual	60 Days
Janchor Pan-Asian U.S. Feeder Fund	Monthly	60 Days
Janchor Partners, Opportunities. U.S.	N/A	N/A
LFL	Daily	30 Days
Naya	3 Years (On Anniversary)	65 Days
PAG China Dislocation Fund	N/A	N/A
Pershing Square	Daily	Daily
TCI Fund	Quarterly	120 Days
Wind River	Quarterly	95 Days
<b>Private Real Assets</b>		
Alinda Fund II	10 Years	N/A
Blackstone REP VIII	10 Years	N/A
CenterSquare US RE	Daily	30 days
Hamilton Lane (Moran funds I, II and III)	10 Years	N/A
KAREP III	8 Years	N/A
MS Prime Property Fund	Quarterly	90 days
Orion Fund I	7 Years	N/A
Ridgewood Energy Oil & Gas Fund II	10 Years	N/A
Ridgewood Energy Oil & Gas Fund III	10 Years	N/A

## Notes to the Basic Financial Statements

### Note 5. Contributions Required and Contributions Made – Defined Benefit (Pension) Plans

Funding policies for most plans provide for monthly employer and employee contributions at statutorily determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate assets to pay benefits when due. The Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan is based upon a fixed monthly member contribution of \$18.75 or \$37.50 per month plus an appropriation of a portion of state fire insurance premium taxes.

Actuarial valuations are prepared annually for all systems. In the event, based upon the results of the actuarial valuation, present statutory contribution requirements are insufficient to accumulate assets to pay benefits when due, the Wyoming Retirement Board, Volunteer Firefighter, EMT, and Search & Rescue Board, after approval by the Legislature, would revise statutory contribution requirements to maintain the actuarial integrity of the applicable System. For the year ended December 31, 2022, contributions were made in accordance with statutorily determined contribution requirements.

### Note 6. Commitments

At December 31, 2022, WRS was committed to the future purchase of investments at an aggregate cost of \$1,557,500,125. As of December 31, 2022, WRS has funded \$3,987,558,736 in commitments, cumulatively.

Sub Asset Class	Unfunded Commitments
Other Real Assets	\$648,677,303
Private Debt	279,944,598
Private Equity	566,134,761
Real Estate	6,393,037
Directional/Opportunistic	9,720,395
Enhanced Fixed Income	46,630,030
<b>Total</b>	<b>\$1,557,500,125</b>

### Note 7. Master Trust

The System has entered into a master trust agreement with Northern Trust. In accordance with the terms of the agreement, in addition to holding System investments in custodian accounts, Northern Trust, as trustee, is authorized at the direction of the System or its investment managers to receive proceeds from investment sales and dividend and interest payments, to disburse funds for purchase of investments, to retire obligations upon maturity or redemption and to execute in the System's name whatever certification is necessary for other investment transactions.

### Note 8. Risk Management and Contingencies

The nature of the System's operations makes it susceptible to lawsuits, legal actions, and other judgments. The System mitigates its risk of material loss from these situations through participation in the State of Wyoming self-insurance program. Wyoming Statute 1-41-103 created the State self-insurance fund to handle liability insurance claims brought against the State. The range of losses financed includes general liability, automobile liability, policy liability, medical malpractice liability and civil rights. The System had no significant changes in coverage from the prior year.

The State generally does not maintain reserves; losses are covered by a combination of appropriations from the State's general fund in the year in which the payment occurs and by assessing State agencies a pro rata share of anticipated claims expenditures for the fiscal year. The Department of Administration and Information estimates a liability for claims against the State as a whole including incurred but not reported claims (IBNR's) but does not make the estimate for each individual department of the State including the System. Consequently, no liability for these claims is reflected in the financial statements of the System. Management believes that any claims that may exist would be immaterial to the System.

At various times, claims and lawsuits are pending against the System. The System is of the opinion that the liability, if any, arising from such claims will not have a materially adverse effect on its financial statements.

## Notes to the Basic Financial Statements

### Note 9. Capital Assets

The following is a summary of changes in capital assets:

	Leasehold Improvements	Intangible-Internally Generated Software	Equipment	Right-to-Use Assets	Total Capital Assets
<b>Cost</b>					
Balances December 31, 2021	\$106,205	\$5,086,740	\$37,162	\$-	\$5,230,107
Adoption as of January 1, 2022	-	-	-	1,288,478	1,288,478
Disposals	-	-	-	-	-
Balances December 31, 2022	106,205	5,086,740	37,162	1,288,478	6,518,585
<b>Accumulated Depreciation and Amortization</b>					
Balances December 31, 2021	106,205	2,458,593	10,530	-	2,575,328
Depreciation and Amortization Expense	-	339,116	7,432	286,328	632,876
Balances December 31, 2022	106,205	2,797,709	17,962	286,328	3,208,204
<b>Net Capital Assets December 31, 2022</b>	<b>\$-</b>	<b>\$2,289,031</b>	<b>\$19,200</b>	<b>\$1,002,150</b>	<b>\$3,310,381</b>

The leases for WRS consist of leased office space. The capitalized value of the lease asset and lease liability was calculated based on the future lease payments, discounted to present value. Accounting standards require the determination of a discount rate based on incremental borrowing costs. WRS used the applicable federal rate published by the Internal Revenue Service to determine a discount rate for the purpose of present valuing a lease asset and lease liability. WRS used a 1.43% discount rate to calculate the present value of the lease liability recognized during the fiscal year ended December 31, 2022. The difference between the liability booked to record the present value of these future payment obligations, and the actual lease payments, is reported as interest expense.

As of December 31, 2022, the recording of the liability resulted in a future minimum lease commitment, as follows:

Year Ended December 31	Principal	Interest	Total
2023	\$277,912	\$13,047	\$290,959
2024	287,757	9020	296,777
2025	297,862	4852	302,714
2026	152,039	816	152,855

Note: Effective March 6, 2023, the Wyoming Retirement System signed a new building lease commencing on May 1, 2023. As a result, the existing building lease will terminate on June 30, 2023.

# Notes to the Basic Financial Statements

## Note 10. Net Pension Liability

Actuarial valuation of the ongoing Systems involved estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include the single discount rate, schedule of contributions, changes in net pension liability, net pension liability multiyear, contributions multiyear, investment returns multiyear and schedule of agency contributions and percentage. The schedule of Employers Net Pension Liability presents multi-year trend information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the total pension liability. These schedules are presented in the Required Supplementary information section. The Total Pension Liability as of December 31, 2022, is based on the results of an actuarial valuation date of January 1, 2022, and rolled-forward using generally accepted actuarial procedures.

The net pension liability (i.e., the retirement system's total pension liability determined in accordance with GASB 67 less the fiduciary net position) as of December 31, 2022, is as shown below.

Pension Plan	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Plan Fiduciary Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
Public Employee	\$11,139,404,858	\$8,406,590,596	\$2,732,814,262	75.47%	\$1,805,532,589	151.36%
State Patrol, Game & Fish Warden and Criminal Investigator	214,778,109	171,342,914	43,435,195	79.78%	23,495,253	184.87%
Volunteer Firefighter, EMT, and Search & Rescue	123,010,569	98,454,576	24,555,993	80.04%	n/a	n/a
Paid Fire A	164,280,390	127,301,806	36,978,584	77.49%	n/a	n/a
Paid Fire B	215,874,502	204,904,458	10,970,044	94.92%	31,251,620	35.10%
Judicial	44,459,652	40,373,252	4,086,400	90.81%	8,194,423	49.87%
Law Enforcement	1,146,871,863	806,217,227	340,654,636	70.30%	161,405,371	211.06%
Air Guard Firefighter	11,861,849	9,593,858	2,267,991	80.88%	2,145,431	105.71%
n/a - not applicable						

# Notes to the Basic Financial Statements

The table on this page is presented to show the actuarial methods and assumptions.

Assumptions and Methods	Public Employee Pension Plan	State Patrol Game & Fish Warden and Criminal Investigators Pension Plan	Volunteer Firefighter, EMT, and Search & Rescue Pension Plan	Paid Fire A Pension Plan	Paid Fire B Pension Plan	Judicial Pension Plan	Law Enforcement Pension Plan	Air Guard Firefighter Pension Plan
Valuation Date	1/1/2022	1/1/2022	1/1/2022	1/1/2022	1/1/2022	1/1/2022	1/1/2022	1/1/2022
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Level Percentage of Payroll Closed	Level Percentage of Payroll Closed	Level Dollar Closed	Level Dollar Open	Level Percentage of Payroll Closed	Level Percentage of Payroll Closed	Level Percentage of Payroll Closed	Level Percentage of Payroll Closed
Remaining Amortization Period (Years)	25	26	26	10	24	12	23	24
Asset Valuation Method	5 Year smoothed market	5 Year smoothed market	5 Year smoothed market	5 Year smoothed market	5 Year smoothed market	5 Year smoothed market	5 Year smoothed market	5 Year smoothed market
<b>Actual Assumptions:</b>								
Investment Rate of Return	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%
Projected Salary Increases includes inflation	2.50% to 6.50%	2.50% to 8.50%	n/a	4.50%	4.50% to 7.50%	3.75%	5.25% to 9.25%	4.75% to 8.75%
Assumed Inflation Rate	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%
Mortality	*	**	*	***	**	*	**	*

Note: Significant assumptions are based on an experience study that covered a five-year period ending December 31, 2020.

\* Mortality:

Pre-Retirement Mortality:

Pub-2010 General Employee Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Post-Retirement Mortality:

Pub-2010 General Healthy Annuitant Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 103%

Disabled Mortality:

Pub-2010 General Disabled Retiree Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Note: Significant assumptions are based on an experience study that covered a five-year period ending December 31, 2020.

\*\* Mortality:

Pre-Retirement Mortality:

Pub-2010 Safety Employee Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Post-Retirement Mortality:

Pub-2010 Safety Healthy Annuitant Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Disabled Mortality:

Pub-2010 Safety Disabled Retiree Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

\*\*\* Mortality:

Pre-Retirement Mortality:

RP-2014 Employee Mortality Table, fully generational, projected with Scale MP-2017

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Post-Retirement Mortality:

RP-2014 Healthy Annuitant Mortality Table, fully generational, projected with Scale MP-2017

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 88%

Disabled Mortality:

RP-2014 Disabled Mortality Table, amount weighted, fully generational, projected with Scale MP-2017

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

# Notes to the Basic Financial Statements

## Discount Rate

The Discount Rate for all plans with the exception of the Judicial and Law Enforcement Pension Plans was 6.80%. The Discount Rate for the Judicial Pension Plan was 6.34%. The Discount Rate for the Law Enforcement Pension Plan was 5.53%. The Long-Term Expected Rate of Return used to measure the total pension liability for all plans was 6.80%. The projection of cash flows used to determine the discount rate assumed contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates under Wyoming State Statutes. Based on those assumptions, the Systems' fiduciary net position was projected to be available to make all the projected future benefit payments of current plan members. Therefore, the long term expected rate of return on pension plan investments was applied to all periods of projected benefit payment to determine the total pension liability.

Pension Plan	Single Discount Rate	Long-Term Expected Rate of Return	Long-Term Municipal Bond Rate*	Last year ending December 31 in the 2022 to 2121 projection period for which projected benefit payments are fully funded
Public Employee	6.80%	6.80%	4.05%	2121
State Patrol, Game & Fish Warden and Criminal Investigator	6.80%	6.80%	4.05%	2121
Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue	6.80%	6.80%	4.05%	2121
Paid Fire A	6.80%	6.80%	4.05%	2121
Paid Fire B	6.80%	6.80%	4.05%	2121
Judicial	6.34%	6.80%	4.05%	2057
Law Enforcement	5.53%	6.80%	4.05%	2051
Air Guard Firefighter	6.80%	6.80%	4.05%	2121

\*Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 31, 2022. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.

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

Pension Plan	Current Single Discount Rate		
	1% Decrease	Assumption	1% Increase
Pension Plan	5.80%	6.80%	7.80%
Public Employee	\$4,035,385,591	\$2,732,814,262	\$1,653,336,062
State Patrol, Game & Fish Warden and Criminal Investigator	70,115,683	43,435,195	21,372,297
Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue	39,272,689	24,555,993	12,347,028
Paid Fire A	51,132,963	36,978,584	24,768,446
Paid Fire B	40,572,706	10,970,044	(13,586,742)
Air Guard Firefighter	3,776,882	2,267,991	1,058,591
	1% Decrease	Assumption	1% Increase
Pension Plan	5.34%	6.34%	7.34%
Judicial	8,673,175	4,086,400	141,855
	1% Decrease	Assumption	1% Increase
Pension Plan	4.53%	5.53%	6.53%
Law Enforcement	512,704,650	340,654,636	202,362,202



## Notes to the Basic Financial Statements

The following table represents the investment return for the year ended December 31, 2022. The plans assumed a long-term investment rate of return of 6.80%. The long-term rate of return is determined through a 4.55% net real rate of return and an inflation rate of 2.25%. The following table represents a comparison of the annual money-weighted rate of return, net of investment expenses compared to the expected net real rate of return.

Pension Plan	Annual Money-Weighted Rate of Return, (net of investment expenses) for the Fiscal Year Ended December 31, 2022	Expected Rate of Return (net of investment expenses)
Public Employee	-6.99%	6.80%
State Patrol, Game & Fish Warden and Criminal Investigator	-6.99%	6.80%
Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue	-6.99%	6.80%
Paid Fire A	-6.99%	6.80%
Paid Fire B	-6.99%	6.80%
Judicial	-6.99%	6.80%
Law Enforcement	-6.99%	6.80%
Air Guard Firefighter	-6.99%	6.80%

The assumed asset allocation of the plan's portfolio, the long term expected rate of return for each asset class and the expected rate of return is presented arithmetically and geometrically below over a 20-year period.

# Notes to the Basic Financial Statements

## Schedule of Investment Returns

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate arithmetic expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These real rates of return are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. For each major asset class that is included in the current pension plans target asset allocation as amended and effective on July 1, 2022 and return estimates of January 1, 2022, these best estimates are summarized in the following table.

Schedule of Investment Returns	Target Allocation	Arithmetic Real Return	Arithmetic Nominal Return	Geometric Real Return	Geometric Nominal Return
Tactical Cash	0.50%	0.32%	2.90%	0.30%	2.89%
Gold	1.50%	0.72%	3.30%	2.34%	4.93%
Fixed Income	20.00%	4.05%	6.63%	3.59%	6.17%
Core Plus	5.00%	2.17%	4.76%	2.12%	4.70%
US Government	5.00%	1.14%	3.73%	1.12%	3.70%
TIPS	2.00%	2.10%	4.69%	1.92%	4.50%
Opportunistic Credit	3.00%	5.06%	7.64%	4.57%	7.15%
Private Debt	5.00%	9.00%	11.59%	7.62%	10.20%
Equity	51.50%	9.00%	11.59%	7.09%	9.68%
US Equity	21.00%	7.52%	10.10%	6.12%	8.70%
Developed International	11.50%	8.76%	11.34%	7.22%	9.80%
Emerging Markets	6.00%	9.62%	12.21%	7.42%	10.00%
Private Equity	13.00%	11.33%	13.92%	8.42%	11.00%
Marketable Alternatives	16.00%	6.02%	8.61%	5.14%	7.73%
Private Real Assets	10.50%	7.67%	10.26%	6.05%	8.63%
Private Natural Resources	2.5-7.5%	9.57%	12.16%	7.22%	9.80%
Private Infrastructure	2.5-7.5%	6.02%	8.61%	5.22%	7.80%
Real Estate	2.5-7.5%	7.42%	10.01%	5.72%	8.30%
<b>Total</b>	<b>100.00%</b>	<b>7.23%</b>	<b>9.81%</b>	<b>5.86%</b>	<b>8.45%</b>

The assumed asset allocation of the plan's portfolio, the long-term expected rate of return for each asset class and the expected rate of return is presented arithmetically and geometrically above over a 20-year time frame.

The figures in the above table were supplied by Meketa Investment Group, the investment consulting firm for the Wyoming Retirement System.

## **Note 11. Disclosure of Subsequent Event**

Effective March 6, 2023, the Wyoming Retirement System signed a new building lease commencing on May 1, 2023. As a result, the existing building lease will terminate on June 30, 2023. See Note 9. Capital Assets for the building lease commitments as of December 31, 2022.

# Required Supplementary Information - Changes In Net Pension Liability

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - Multiyear

### Public Employee Pension Plan

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>									
Service Cost	\$210,661,646	\$214,075,814	\$198,288,435	\$194,455,298	\$195,575,014	\$201,824,345	\$219,893,113	\$217,488,957	\$213,059,299
Interest on the Total Pension Liability	724,623,380	709,100,401	699,015,173	676,902,286	658,459,157	641,429,003	664,368,366	638,943,600	614,848,444
Benefit Changes	-	-	-	-	-	-	-	-	-
Difference between Expected and Actual Experience	(24,730,118)	2,186,282	55,560,847	(7,044,256)	(49,213,548)	(56,701,091)	(43,790,701)	(66,191,620)	-
Assumption Changes	-	173,419,980	-	-	-	290,801,601	-	-	-
Benefit Payments	(660,862,406)	(632,776,958)	(606,335,323)	(579,179,480)	(547,913,244)	(516,837,260)	(483,482,106)	(450,589,769)	(418,274,815)
Refunds	(24,875,791)	(19,019,015)	(19,412,612)	(21,308,205)	(18,114,423)	(18,654,997)	(18,127,974)	(19,365,045)	(17,821,799)
Net Change in Total Pension Liability	224,816,711	446,986,504	327,116,520	263,825,643	238,792,956	541,861,601	338,860,698	320,286,123	391,811,129
Total Pension Liability - Beginning	10,914,588,147	10,467,601,643	10,140,485,123	9,876,659,480	9,637,866,524	9,096,004,923	8,757,144,225	8,436,858,102	8,045,046,973
Total Pension Liability - Ending (a)	11,139,404,858	10,914,588,147	10,467,601,643	10,140,485,123	9,876,659,480	9,637,866,524	9,096,004,923	8,757,144,225	8,436,858,102
<b>Plan Fiduciary Net Position</b>									
Employer Contributions	\$178,277,910	\$170,676,891	\$165,984,825	\$157,385,096	\$147,632,510	\$148,746,669	\$151,488,715	\$144,622,373	\$127,929,930
Employee Contributions	177,131,721	169,867,368	165,086,190	157,610,787	151,130,515	149,752,251	152,422,538	153,529,134	137,144,565
Pension Plan Net Investment Income (Loss)	(644,372,637)	1,414,900,342	805,893,355	1,251,518,669	(252,571,153)	923,878,089	454,712,993	(67,155,642)	318,184,952
Benefit Payments	(660,862,406)	(632,776,958)	(606,335,323)	(579,179,480)	(547,913,244)	(516,837,260)	(483,482,106)	(450,589,769)	(418,274,815)
Refunds	(24,875,791)	(19,019,015)	(19,412,612)	(21,308,205)	(18,114,423)	(18,654,997)	(18,127,974)	(19,365,045)	(17,821,799)
Pension Plan Administrative Expense	(8,030,528)	(7,725,813)	(7,238,487)	(6,527,091)	(7,033,951)	(6,551,109)	(5,993,529)	(5,097,818)	(5,182,863)
Other	(544,320)	(298,065)	(294,893)	(309,531)	(287,669)	(312,336)	(312,336)	(312,704)	5,539,339
Net Change in Plan Fiduciary Net Position	(983,276,051)	1,095,624,750	503,683,055	959,190,245	(527,157,415)	680,021,307	250,708,301	(244,369,471)	147,519,309
Plan Fiduciary Net Position - Beginning	9,389,866,647	8,294,241,897	7,790,558,842	6,831,368,597	7,358,526,012	6,678,504,705	6,427,796,404	6,672,165,875	6,524,646,566
Plan Fiduciary Net Position - Ending (b)	8,406,590,596	9,389,866,647	8,294,241,897	7,790,558,842	6,831,368,597	7,358,526,012	6,678,504,705	6,427,796,404	6,672,165,875
Net Pension Liability - Ending (a) - (b)	\$2,732,814,262	\$1,524,721,500	\$2,173,359,746	\$2,349,926,281	\$3,045,290,883	\$2,279,340,512	\$2,417,500,218	\$2,329,347,821	\$1,764,692,227
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>									
	75.47%	86.03%	79.24%	76.83%	69.17%	76.35%	73.42%	73.40%	79.08%
<b>Covered Payroll</b>									
	\$1,805,532,589	\$1,819,927,957	\$1,780,467,331	\$1,738,212,750	\$1,741,354,609	\$1,776,377,586	\$1,782,905,215	\$1,744,073,882	\$1,709,412,443
<b>Projected Valuation Payroll</b>									
	\$1,850,670,904	\$1,865,426,156	\$1,824,979,015	\$1,781,668,069	\$1,784,888,475	\$1,820,787,026	\$1,858,678,687	\$1,818,197,022	\$1,782,062,471
<b>Net Pension Liability as a Percentage of Covered Payroll</b>									
	151.36%	83.78%	122.07%	135.19%	174.88%	128.31%	135.59%	133.56%	103.23%

Note: Information not available prior to 2014

# Required Supplementary Information - Changes In Net Pension Liability

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - Multiyear

### State Patrol, Game & Fish, Warden & Criminal Investigator Pension Plan

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>									
Service Cost	\$5,072,114	\$5,202,574	\$4,800,841	\$4,614,951	\$5,078,748	\$4,764,423	\$7,631,559	\$7,511,738	\$5,276,236
Interest on the Total Pension Liability	13,942,597	13,562,409	13,412,219	12,833,018	12,084,646	12,129,167	12,213,078	11,513,094	11,490,234
Benefit Changes	-	-	-	-	-	-	-	-	-
Difference between Expected and Actual Experience	(524,759)	(2,876,961)	2,116,116	1,453,141	(2,017,522)	(4,722,830)	62,315	(1,821,706)	-
Assumption Changes	-	4,055,904	-	(15,224,856)	13,137,489	(22,946,444)	(5,188,326)	32,535,213	-
Benefit Payments	(12,572,407)	(11,744,509)	(11,270,238)	(10,843,842)	(10,260,821)	(9,795,108)	(9,396,540)	(8,926,088)	(8,364,762)
Refunds	(769,080)	(108,604)	(367,992)	(288,795)	(351,230)	(509,361)	(323,328)	(120,906)	(368,093)
Net Change in Total Pension Liability	5,148,465	8,090,813	8,690,946	(7,456,383)	17,671,310	(21,080,153)	4,998,758	40,691,345	8,033,615
Total Pension Liability - Beginning	209,629,644	201,538,831	192,847,885	200,304,268	182,632,958	203,713,111	198,714,353	158,023,008	149,989,393
Total Pension Liability - Ending (a)	214,778,109	209,629,644	201,538,831	192,847,885	200,304,268	182,632,958	203,713,111	198,714,353	158,023,008
<b>Plan Fiduciary Net Position</b>									
Employer Contributions	\$3,615,480	\$3,590,133	\$3,664,996	\$3,639,164	\$3,529,976	\$3,552,582	\$3,574,065	\$3,355,688	\$3,006,277
Employee Contributions	4,230,269	3,859,144	3,932,180	4,196,524	3,796,060	3,485,756	3,678,081	3,524,286	3,150,559
Pension Plan Net Investment Income (Loss)	(13,021,808)	28,404,943	16,114,071	24,466,565	(4,908,329)	17,623,232	8,622,074	(1,199,475)	5,900,708
Benefit Payments	(12,572,407)	(11,744,509)	(11,270,238)	(10,843,842)	(10,260,821)	(9,795,108)	(9,396,540)	(8,926,088)	(8,364,762)
Refunds	(769,080)	(108,604)	(367,992)	(288,795)	(351,230)	(509,361)	(323,328)	(120,906)	(368,093)
Pension Plan Administrative Expense	(174,222)	(161,144)	(149,733)	(138,770)	(139,377)	(128,991)	(114,832)	(95,918)	(96,479)
Other	(11,017)	(5,973)	(5,841)	(6,039)	(5,536)	(5,897)	(5,897)	(5,850)	229,589
Net Change in Plan Fiduciary Net Position	(18,702,785)	23,833,990	11,917,443	21,024,807	(8,339,257)	14,222,213	6,033,623	(3,468,263)	3,457,799
Plan Fiduciary Net Position - Beginning	190,045,699	166,211,709	154,294,266	133,269,459	141,608,716	127,386,503	121,352,880	124,821,143	121,363,344
Plan Fiduciary Net Position - Ending (b)	171,342,914	190,045,699	166,211,709	154,294,266	133,269,459	141,608,716	127,386,503	121,352,880	124,821,143
Net Pension Liability - Ending (a) - (b)	\$43,435,195	\$19,583,945	\$35,327,122	\$38,553,619	\$67,034,809	\$41,024,242	\$76,326,608	\$77,361,473	\$33,201,865
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>									
	79.78%	90.66%	82.47%	80.01%	66.53%	77.54%	62.53%	61.07%	78.99%
<b>Covered Payroll</b>									
	\$23,495,253	\$24,201,407	\$24,074,484	\$23,118,850	\$23,063,176	\$23,641,495	\$23,636,482	\$22,196,930	\$21,817,686
<b>Projected Valuation Payroll</b>									
	\$24,082,634	\$24,806,442	\$24,676,346	\$23,696,821	\$23,639,756	\$24,646,258	\$24,641,033	\$23,140,300	\$22,744,938
<b>Net Pension Liability as a Percentage of Covered Payroll</b>									
	184.87%	80.92%	146.74%	166.76%	290.66%	173.53%	322.92%	348.52%	152.18%

Note: Information not available prior to 2014

# Required Supplementary Information - Changes In Net Pension Liability

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - Multiyear

### Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015
<b>Total Pension Liability</b>								
Service Cost	\$1,792,369	\$1,805,233	\$1,501,573	\$1,432,649	\$1,426,154	\$1,412,440	\$1,285,552	\$1,253,883
Interest on the Total Pension Liability	8,011,636	7,891,422	7,885,554	7,685,536	7,474,042	7,372,254	7,761,646	7,520,888
Benefit Changes	-	-	-	-	-	-	-	21,809,884
Difference between Expected and Actual Experience	(725,126)	151,112	361,487	441,209	(1,397,503)	(3,538,907)	(479,308)	(211,035)
Assumption Changes	-	646,349	-	-	-	5,273,789	-	(472,252)
Benefit Payments	(7,282,386)	(7,027,915)	(6,757,505)	(6,466,593)	(6,101,659)	(5,780,647)	(5,506,699)	(4,832,911)
Refunds	(57,233)	(31,778)	(53,161)	(40,182)	(44,163)	(33,242)	(35,162)	(34,719)
Net Change in Total Pension Liability	1,739,260	3,434,423	2,937,948	3,052,619	1,356,871	4,705,687	3,026,029	25,033,738
Total Pension Liability - Beginning	121,271,309	117,836,886	114,898,938	111,846,318	110,489,447	105,783,760	102,757,731	77,723,993
Total Pension Liability - Ending (a)	123,010,569	121,271,309	117,836,886	114,898,938	111,846,318	110,489,447	105,783,760	102,757,731
<b>Plan Fiduciary Net Position</b>								
Fire Insurance Premium Tax and Employer Contributions	\$3,866,570	\$4,670,469	\$5,509,382	\$3,118,824	\$2,959,943	\$3,290,994	\$3,198,930	\$2,238,612
Employee Contributions	558,326	573,113	520,788	437,255	434,522	425,592	459,363	417,406
Pension Plan Net Investment Income (Loss)	(7,203,572)	15,709,526	8,848,756	13,701,406	(2,782,682)	10,035,753	4,939,925	(675,297)
Benefit Payments	(7,282,386)	(7,027,915)	(6,757,505)	(6,466,593)	(6,101,659)	(5,780,647)	(5,506,699)	(4,832,911)
Refunds	(57,233)	(31,778)	(53,161)	(40,182)	(44,163)	(33,242)	(35,162)	(34,719)
Pension Plan Administrative Expense	(107,648)	(95,155)	(86,519)	(89,451)	(91,195)	(88,835)	(80,904)	(73,412)
Other*	(6,300)	(3,410)	(3,290)	(3,455)	(3,201)	(3,453)	(3,453)	(3,470)
Net Change in Plan Fiduciary Net Position	(10,232,243)	13,794,850	7,978,451	10,657,804	(5,628,435)	7,846,162	2,972,000	(2,963,791)
Plan Fiduciary Net Position - Beginning	108,686,819	94,891,969	86,913,518	76,255,713	81,884,148	74,037,986	71,065,986	74,029,777
Plan Fiduciary Net Position - Ending (b)	98,454,576	108,686,819	94,891,969	86,913,518	76,255,713	81,884,148	74,037,986	71,065,986
Net Pension Liability - Ending (a) - (b)	\$24,555,993	\$12,584,490	\$22,944,917	\$27,985,420	\$35,590,605	\$28,605,299	\$31,745,774	\$31,691,745
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>								
	80.04%	89.62%	80.53%	75.64%	68.18%	74.11%	69.99%	69.16%
<b>Covered Payroll</b>	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2
<b>Net Pension Liability as a Percentage of Covered Payroll</b>	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2	N/A See Note 2

\*Other includes other funding sources and depreciation expenses.

Note: Information not available prior to 2015

Note 2: This plan is for volunteers and payroll is not applicable.

# Required Supplementary Information - Changes In Net Pension Liability

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - Multiyear

### Paid Fire A Pension Plan

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>									
Service Cost	\$-	\$54,935	\$65,959	\$40,886	\$61,278	\$122,812	\$147,314	\$162,541	\$188,951
Interest on the Total Pension Liability	10,971,932	11,422,459	8,068,467	10,996,219	12,801,237	12,582,433	12,906,407	12,910,372	13,337,846
Benefit Changes	-	(52,317,927)	-	-	-	-	-	-	-
Difference between Expected and Actual Experience	(2,079,617)	(271,077)	(378,431)	(3,107,578)	(1,673,790)	1,188,594	(1,825,288)	(2,479,196)	-
Assumption Changes	-	(185,384,651)	63,922,039	42,477,504	(11,600,861)	41,599,453	(5,166,271)	9,056,601	99,327,064
Benefit Payments	(15,826,693)	(16,160,140)	(16,341,689)	(16,093,422)	(15,788,064)	(15,410,878)	(15,075,912)	(14,824,715)	(14,581,980)
Refunds	-	-	-	-	-	-	-	-	-
Net Change in Total Pension Liability	(6,934,378)	(242,656,401)	55,336,345	34,313,609	(16,200,200)	40,082,414	(9,013,750)	4,825,603	98,271,881
Total Pension Liability - Beginning	171,214,768	413,871,169	358,534,824	324,221,215	340,421,415	300,339,001	309,352,751	304,527,148	206,255,267
Total Pension Liability - Ending (a)	164,280,390	171,214,768	413,871,169	358,534,824	324,221,215	340,421,415	300,339,001	309,352,751	304,527,148
<b>Plan Fiduciary Net Position</b>									
Employer and Other Contributions and Fire Insurance Premium Tax	\$76,679,037	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Employee Contributions	-	-	-	-	-	-	-	-	-
Pension Plan Net Investment Income (Loss)	(6,933,233)	(370,823)	8,557,543	16,923,518	(3,580,279)	15,351,989	8,160,117	(1,107,007)	7,064,066
Benefit Payments	(15,826,693)	(16,160,140)	(16,341,689)	(16,093,422)	(15,788,064)	(15,410,878)	(15,075,912)	(14,824,715)	(14,581,980)
Refunds	-	-	-	-	-	-	-	-	-
Pension Plan Administrative Expense	(56,600)	(105,199)	(88,626)	(87,238)	(98,669)	(108,773)	(110,274)	(102,903)	(113,705)
Other	(4,257)	(3,237)	(3,708)	(4,405)	(4,562)	(6,020)	(6,019)	(6,559)	(1,701)
Net Change in Plan Fiduciary Net Position	53,858,254	(16,639,399)	(7,876,480)	738,453	(19,471,574)	(173,682)	(7,032,088)	(16,041,184)	(7,633,320)
Plan Fiduciary Net Position - Beginning	73,443,552	90,082,951	97,959,431	97,220,978	116,692,552	116,866,234	123,898,322	139,939,506	147,572,826
Plan Fiduciary Net Position - Ending (b)	127,301,806	73,443,552	90,082,951	97,959,431	97,220,978	116,692,552	116,866,234	123,898,322	139,939,506
Net Pension Liability - Ending (a) - (b)	\$36,978,584	\$97,771,216	\$323,788,218	\$260,575,393	\$227,000,237	\$223,728,863	\$183,472,767	\$185,454,429	\$164,587,642
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>									
	77.49%	42.90%	21.77%	27.32%	29.99%	34.28%	38.91%	40.05%	45.95%
<b>Covered Payroll</b>									
	\$-	\$65,621	\$65,621	\$65,621	\$134,155	\$195,221	\$195,221	\$179,486	\$198,404
<b>Projected Valuation Payroll</b>									
	\$-	\$65,621	\$65,621	\$65,621	\$134,155	\$195,221	\$195,221	\$179,486	\$198,404
<b>Net Pension Liability as a Percentage of Covered Payroll</b>									
	N/A	148,993.79%	493,421.65%	397,091.47%	169,207.64%	114,602.87%	93,982.30%	103,325.47%	82,955.64%

Note: Information not available prior to 2014

# Required Supplementary Information - Changes In Net Pension Liability

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - Multiyear

### Paid Fire B Pension Plan

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>									
Service Cost	\$7,471,374	\$7,168,972	\$6,738,176	\$6,563,232	\$6,259,734	\$8,912,364	\$7,422,919	\$7,421,040	\$5,367,034
Interest on the Total Pension Liability	13,752,235	12,955,679	12,013,695	11,411,054	10,593,553	9,917,806	9,744,190	8,937,063	8,194,197
Benefit Changes	-	-	-	-	-	-	-	-	-
Difference between Expected and Actual Experience	(1,228,034)	(310,679)	(3,243,112)	419,684	(6,466,191)	(2,190,045)	(93,703)	120,064	-
Assumption Changes	-	6,964,448	-	-	(29,804,719)	16,738,920	(1,498,059)	20,165,038	-
Benefit Payments	(7,559,981)	(6,902,972)	(6,383,271)	(5,921,008)	(5,474,014)	(5,054,595)	(4,343,944)	(3,712,240)	(3,090,522)
Refunds	(140,596)	(70,926)	(85,314)	(35,091)	(64,091)	(120,137)	(71,599)	(75,062)	(62,762)
Net Change in Total Pension Liability	12,294,998	19,804,522	9,040,174	12,437,871	(24,955,728)	28,204,313	11,159,804	32,855,903	10,407,947
Total Pension Liability - Beginning	203,579,504	183,774,982	174,734,808	162,296,937	187,252,665	159,048,352	147,888,548	115,032,645	104,624,698
Total Pension Liability - Ending (a)	215,874,502	203,579,504	183,774,982	174,734,808	162,296,937	187,252,665	159,048,352	147,888,548	115,032,645
<b>Plan Fiduciary Net Position</b>									
Employer Contributions	\$5,171,246	\$4,508,405	\$4,034,135	\$3,516,198	\$3,356,547	\$3,230,196	\$3,370,961	\$3,273,668	\$3,184,045
Employee Contributions	3,799,401	3,261,693	3,053,576	2,787,467	2,821,872	2,773,651	2,858,418	2,924,752	2,414,435
Pension Plan Net Investment Income (Loss)	(14,871,186)	31,992,426	18,023,704	26,111,099	(5,197,809)	17,838,337	8,477,077	(1,158,548)	5,303,618
Benefit Payments	(7,559,981)	(6,902,972)	(6,383,271)	(5,921,008)	(5,474,014)	(5,054,595)	(4,343,944)	(3,712,240)	(3,090,522)
Refunds	(140,596)	(70,926)	(85,314)	(35,091)	(64,091)	(120,137)	(71,599)	(75,062)	(62,762)
Pension Plan Administrative Expense	(191,754)	(176,943)	(158,826)	(138,634)	(140,922)	(130,931)	(112,132)	(90,438)	(87,431)
Other	(12,678)	(6,688)	(6,345)	(6,402)	(5,708)	(5,700)	(5,700)	(5,444)	264,234
Net Change in Plan Fiduciary Net Position	(13,805,548)	32,604,995	18,477,659	26,313,629	(4,704,125)	18,530,821	10,173,081	1,156,688	7,925,617
Plan Fiduciary Net Position - Beginning	218,710,006	186,105,011	167,627,352	141,313,723	146,017,848	127,487,027	117,313,946	116,157,258	108,231,641
Plan Fiduciary Net Position - Ending (b)	204,904,458	218,710,006	186,105,011	167,627,352	141,313,723	146,017,848	127,487,027	117,313,946	116,157,258
Net Pension Liability (Asset) - Ending (a) - (b)	\$10,970,044	\$(15,130,502)	\$(2,330,029)	\$7,107,456	\$20,983,214	\$41,234,817	\$31,561,325	\$30,574,602	\$(1,124,613)
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>									
	94.92%	107.43%	101.27%	95.93%	87.07%	77.98%	80.16%	79.33%	100.98%
<b>Covered Payroll</b>									
	\$31,251,620	\$29,973,443	\$28,557,976	\$28,028,382	\$26,811,084	\$28,209,686	\$26,390,481	\$25,986,443	\$24,552,559
<b>Projected Valuation Payroll</b>									
	\$32,032,911	\$30,722,779	\$29,271,925	\$28,729,092	\$28,168,395	\$29,408,598	\$27,512,076	\$27,090,867	\$25,596,043
<b>Net Pension Liability as a Percentage of Covered Payroll</b>									
	35.10%	-50.48%	-8.16%	25.36%	78.26%	146.17%	119.59%	117.66%	-4.58%

Note: Information not available prior to 2014



# Required Supplementary Information - Changes In Net Pension Liability

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - Multiyear

### Judicial Pension Plan

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>									
Service Cost	\$2,110,197	\$2,006,844	\$1,713,172	\$1,529,896	\$1,509,964	\$1,470,668	\$1,263,270	\$1,263,278	\$1,186,595
Interest on the Total Pension Liability	2,717,927	2,592,567	2,393,270	2,168,200	2,037,989	1,880,909	1,793,779	1,659,184	1,539,910
Benefit Changes	-	-	-	-	-	-	-	-	-
Difference between Expected and Actual Experience	(658,488)	(147,370)	1,225,009	(112,158)	183,937	(620,955)	(229,282)	(372,108)	-
Assumption Changes	1,899,013	1,743,269	-	-	-	2,258,668	-	-	-
Benefit Payments	(2,359,700)	(1,943,586)	(1,878,084)	(1,720,417)	(1,454,953)	(1,166,423)	(981,321)	(931,621)	(775,805)
Refunds	-	-	-	-	-	-	-	-	-
Net Change in Total Pension Liability	3,708,949	4,251,724	3,453,367	1,865,521	2,276,937	3,822,867	1,846,446	1,618,733	1,950,700
Total Pension Liability - Beginning	40,750,703	36,498,979	33,045,612	31,180,091	28,903,154	25,080,287	23,233,841	21,615,108	19,664,408
Total Pension Liability - Ending (a)	44,459,652	40,750,703	36,498,979	33,045,612	31,180,091	28,903,154	25,080,287	23,233,841	21,615,108
<b>Plan Fiduciary Net Position</b>									
Employer Contributions	\$1,191,503	\$1,171,758	\$1,135,182	\$1,060,477	\$960,478	\$949,300	\$925,971	\$920,867	\$916,598
Employee Contributions	757,596	745,064	721,821	1,028,339	610,818	603,602	588,791	585,545	582,831
Pension Plan Net Investment Income (Loss)	(2,970,950)	6,389,711	3,612,443	5,224,148	(1,038,644)	3,549,526	1,679,033	(228,304)	1,038,134
Benefit Payments	(2,359,700)	(1,943,586)	(1,878,084)	(1,720,417)	(1,454,953)	(1,166,423)	(981,321)	(931,621)	(775,805)
Refunds	-	-	-	-	-	-	-	-	-
Pension Plan Administrative Expense	(37,872)	(35,804)	(32,231)	(27,764)	(28,405)	(25,315)	(22,090)	(17,833)	(17,117)
Other	(2,539)	(1,347)	(1,284)	(1,284)	(1,146)	(2,313)	(1,128)	(1,072)	(244)
Net Change in Plan Fiduciary Net Position	(3,421,962)	6,325,796	3,557,847	5,563,499	(951,852)	3,908,377	2,189,256	327,582	1,744,397
Plan Fiduciary Net Position - Beginning	43,795,214	37,469,418	33,911,571	28,348,072	29,299,924	25,391,547	23,202,291	22,874,709	21,130,312
Plan Fiduciary Net Position - Ending (b)	40,373,252	43,795,214	37,469,418	33,911,571	28,348,072	29,299,924	25,391,547	23,202,291	22,874,709
Net Pension Liability (Asset) - Ending (a) - (b)	\$4,086,400	\$(3,044,511)	\$(970,439)	\$(865,959)	\$2,832,019	\$(396,770)	\$(311,260)	\$31,550	\$(1,259,601)
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>									
	90.81%	107.47%	102.66%	102.62%	90.92%	101.37%	101.24%	99.86%	105.83%
<b>Covered Payroll</b>									
	\$8,194,423	\$7,886,295	\$7,410,536	\$6,602,303	\$6,558,029	\$6,386,001	\$6,384,628	\$6,363,028	\$5,989,181
<b>Projected Valuation Payroll</b>									
	\$8,501,713	\$8,182,031	\$7,706,958	\$6,866,395	\$6,820,351	\$6,641,441	\$6,624,052	\$6,601,641	\$6,213,775
<b>Net Pension Liability as a Percentage of Covered Payroll</b>									
	49.87%	-38.61%	-13.10%	-13.12%	43.18%	-6.21%	-4.88%	0.50%	-21.03%

Note: Information not available prior to 2014

# Required Supplementary Information - Changes In Net Pension Liability

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - Multiyear

### Law Enforcement Pension Plan

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>									
Service Cost	\$39,080,968	\$40,282,611	\$23,499,547	\$22,866,557	\$26,657,347	\$23,241,982	\$23,339,214	\$22,790,835	\$22,432,708
Interest on the Total Pension Liability	59,391,957	57,437,879	55,065,772	51,970,908	47,238,165	47,200,725	45,945,359	43,444,727	40,636,242
Benefit Changes	-	-	-	-	-	-	-	-	-
Difference between Expected and Actual Experience	(14,432,899)	7,679,619	7,869,329	19,861,777	(7,328,715)	(6,691,047)	(3,501,453)	1,710,375	-
Assumption Changes	(57,529,503)	271,664,329	-	(111,460,988)	94,255,216	51,421,521	-	-	-
Benefit Payments	(42,739,295)	(40,189,329)	(37,604,942)	(34,850,971)	(32,013,552)	(29,621,411)	(27,873,802)	(25,459,574)	(23,209,837)
Refunds	(3,790,198)	(3,117,493)	(2,781,885)	(2,425,983)	(3,970,912)	(4,041,082)	(3,491,089)	(4,659,711)	(4,110,605)
Net Change in Total Pension Liability	(20,018,970)	333,757,616	46,047,821	(54,038,700)	124,837,549	81,510,688	34,418,229	37,826,652	35,748,508
Total Pension Liability - Beginning	1,166,890,833	833,133,217	787,085,396	841,124,096	716,286,547	634,775,859	600,357,630	562,530,978	526,782,470
Total Pension Liability - Ending (a)	1,146,871,863	1,166,890,833	833,133,217	787,085,396	841,124,096	716,286,547	634,775,859	600,357,630	562,530,978
<b>Plan Fiduciary Net Position</b>									
Employer Contributions	\$14,990,494	\$14,567,813	\$14,893,512	\$14,270,844	\$13,781,011	\$13,614,406	\$13,730,305	\$12,706,883	\$13,308,281
Employee Contributions	16,904,076	15,246,586	15,860,478	14,671,686	13,846,377	13,691,494	14,442,190	15,397,475	13,314,132
Pension Plan Net Investment Income (Loss)	(60,635,903)	131,614,933	74,478,955	110,793,173	(22,169,139)	77,946,645	37,782,650	(5,371,824)	24,853,352
Benefit Payments	(42,739,295)	(40,189,329)	(37,604,942)	(34,850,971)	(32,013,552)	(29,621,411)	(27,873,802)	(25,459,574)	(23,209,837)
Refunds	(3,790,198)	(3,117,493)	(2,781,885)	(2,425,983)	(3,970,912)	(4,041,082)	(3,491,089)	(4,659,711)	(4,110,605)
Pension Plan Administrative Expense	(813,046)	(753,782)	(695,251)	(596,769)	(639,428)	(580,221)	(518,486)	(417,893)	(408,470)
Other	(51,149)	(27,492)	(26,530)	(27,143)	(24,638)	(51,644)	(25,522)	(24,983)	797,291
Net Change in Plan Fiduciary Net Position	(76,135,021)	117,341,236	64,124,337	101,834,837	(31,190,281)	70,958,187	34,046,246	(7,829,627)	24,544,144
Plan Fiduciary Net Position - Beginning	882,352,248	765,011,012	700,886,675	599,051,838	630,242,119	559,283,932	525,237,686	533,067,313	508,523,169
Plan Fiduciary Net Position - Ending (b)	806,217,227	882,352,248	765,011,012	700,886,675	599,051,838	630,242,119	559,283,932	525,237,686	533,067,313
Net Pension Liability - Ending (a) - (b)	\$340,654,636	\$284,538,585	\$68,122,205	\$86,198,721	\$242,072,258	\$86,044,428	\$75,491,927	\$75,119,944	\$29,463,665
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>									
	70.30%	75.62%	91.82%	89.05%	71.22%	87.99%	88.11%	87.49%	94.76%
<b>Covered Payroll</b>									
	\$161,405,371	\$166,131,243	\$160,739,444	\$155,851,473	\$151,898,695	\$153,547,078	\$154,779,198	\$150,399,739	\$147,790,833
<b>Projected Valuation Payroll</b>									
	\$165,440,506	\$170,284,524	\$164,757,930	\$159,747,760	\$155,696,162	\$160,072,828	\$161,357,314	\$156,791,728	\$154,071,943
<b>Net Pension Liability as a Percentage of Covered Payroll</b>									
	211.06%	171.27%	42.38%	55.31%	159.36%	56.04%	48.77%	49.95%	19.94%

Note: Information not available prior to 2014

## Required Supplementary Information - Changes In Net Pension Liability

### SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - Multiyear

#### Air Guard Firefighter Pension Plan

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>									
Service Cost	\$341,554	\$344,841	\$312,751	\$317,202	\$294,146	\$272,169	\$337,474	\$331,123	\$276,305
Interest on the Total Pension Liability	772,538	711,065	667,446	624,153	599,634	563,514	554,448	517,889	455,677
Benefit Changes	-	-	-	-	-	-	-	-	-
Difference between Expected and Actual Experience	698,485	193,673	186,135	1,751	161,615	272,060	65,370	201,096	-
Assumption Changes	-	391,181	-	-	-	311,427	-	-	-
Benefit Payments	(681,226)	(644,223)	(500,565)	(442,888)	(385,232)	(351,120)	(290,609)	(168,220)	(119,541)
Refunds	(194,630)	(178,314)	-	(69,971)	(213,647)	(39,723)	(411,989)	(20,849)	(6,886)
Net Change in Total Pension Liability	936,721	818,223	665,767	430,247	456,516	1,028,327	254,694	861,039	605,555
Total Pension Liability - Beginning	10,925,128	10,106,905	9,441,138	9,010,891	8,554,376	7,526,049	7,271,355	6,410,316	5,804,761
Total Pension Liability - Ending (a)	11,861,849	10,925,128	10,106,905	9,441,138	9,010,891	8,554,376	7,526,049	7,271,355	6,410,316
<b>Plan Fiduciary Net Position</b>									
Employer Contributions	\$168,339	\$155,959	\$141,013	\$158,176	\$159,583	\$156,263	\$136,768	\$158,319	\$142,437
Employee Contributions	393,638	364,707	329,758	369,907	445,101	367,485	376,685	405,026	335,763
Pension Plan Net Investment Income (Loss)	(708,418)	1,567,665	897,557	1,300,461	(253,859)	902,109	431,043	(55,411)	260,772
Benefit Payments	(681,226)	(644,223)	(500,565)	(442,888)	(385,232)	(351,120)	(290,609)	(168,220)	(119,541)
Refunds	(194,630)	(178,314)	-	(69,971)	(213,647)	(39,723)	(411,989)	(20,849)	(6,886)
Pension Plan Administrative Expense	(10,439)	(12,936)	(8,048)	(6,972)	(7,141)	(6,431)	(5,731)	(4,637)	(4,312)
Other	(616)	(337)	(322)	(327)	(292)	(602)	(301)	(276)	1,085
Net Change in Plan Fiduciary Net Position	(1,033,352)	1,252,521	859,393	1,308,386	(255,487)	1,027,981	235,866	313,952	609,318
Plan Fiduciary Net Position - Beginning	10,627,210	9,374,689	8,515,296	7,206,910	7,462,397	6,434,416	6,198,550	5,884,598	5,275,280
Plan Fiduciary Net Position - Ending (b)	9,593,858	10,627,210	9,374,689	8,515,296	7,206,910	7,462,397	6,434,416	6,198,550	5,884,598
Net Pension Liability - Ending (a) - (b)	\$2,267,991	\$297,918	\$732,216	\$925,842	\$1,803,981	\$1,091,979	\$1,091,633	\$1,072,805	\$525,718
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>									
	80.88%	97.27%	92.76%	90.19%	79.98%	87.23%	85.50%	85.25%	91.80%
<b>Covered Payroll</b>									
	\$2,145,431	\$2,157,801	\$2,316,140	\$2,341,404	\$2,154,544	\$1,975,631	\$2,151,997	\$2,124,296	\$1,731,731
<b>Projected Valuation Payroll</b>									
	\$2,199,066	\$2,211,746	\$2,374,043	\$2,399,940	\$2,208,407	\$2,059,595	\$2,243,456	\$2,214,578	\$1,805,329
<b>Net Pension Liability as a Percentage of Covered Payroll</b>									
	105.71%	13.81%	31.61%	39.54%	83.73%	55.27%	50.73%	50.50%	30.36%

Note: Information not available prior to 2014

## Required Supplementary Information - Investment Returns, Contributions

### Required Supplementary Information – Investment Returns, Contributions

WRS's success in achieving the 6.80% assumed investment return objective is evaluated on an ongoing basis over reasonably long periods of time (5 to 7 years). The reason for the long-term focus on the return objective is to preclude the temptation towards overreaction to short-term market events that have little to no bearing on long-term asset/liability management. The Board must reconcile its need to evaluate investment policy implementation decisions over shorter periods while maintaining longer-term focus on managing and measuring the portfolio's overall performance relative to the long-term return objective.

Asset Class	Target Allocation	Long-Term Expected Geometric Real Rate of Return	Long-Term Expected Arithmetic Real Rate of Return
Tactical Cash	0.50%	0.30%	0.32%
Gold	1.50%	2.34%	0.72%
Fixed Income	20.00%	3.59%	4.05%
Equity	51.50%	7.09%	9.00%
Marketable Alternatives	16.00%	5.14%	6.02%
Private Real Assets	10.50%	6.05%	7.67%
<b>Total</b>	<b>100.00%</b>	<b>5.86%</b>	<b>7.23%</b>

Schedule of Investment Returns									
Last 10 Fiscal (Calendar) Years									
	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual Money-Weighted Rate of Return, Net of Investment Expenses	-6.99%	17.19%	11.03%	18.72%	-3.52%	14.20%	7.53%	-0.44%	4.74%

\*This schedule intends to show ten years worth of data

### Changes in Actuarial Assumptions and Methods

The assumptions used in the actuarial valuation were adopted at the November 17, 2021 and the February 17, 2022 meetings and were first utilized with the actuarial valuation report for the year beginning January 1, 2021. The new assumptions are reflected in these valuation results. In general, the new assumptions reflect an update to the mortality tables, adjustments to the demographic and salary scale, as well as a lower long-term investment return. The expected rate of return on assets for all plans, except the Fire A pension plan, was decreased from 7.00% to 6.80%. With the decision to reinvest the assets of the Fire A pension plan in the commingled investment pool of the defined benefit plans as of April 1, 2022, the expected rate of return on assets was increased from 1.00% to 6.80%. Other than the changes mentioned above, there have been no actuarial assumption changes or methods since the prior valuation for all plans.

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# Required Supplementary Information - Schedule of Contributions

## SCHEDULE OF CONTRIBUTIONS MULTIYEAR

### LAST 10 FISCAL YEARS

FY Ending December 31,

	Actuarially Determined Contribution	Actual Contribution*	Contribution Deficiency (Excess)	Covered Payroll**	Actual Contribution as a % of Covered Payroll
<b>Public Employee Pension Plan</b>					
2014	\$183,086,430	\$129,627,747	\$53,458,683	\$1,709,412,443	7.58%
2015	168,411,742	144,622,373	23,789,369	1,744,073,882	8.29%
2016	174,211,753	151,488,715	22,723,038	1,782,905,215	8.50%
2017	167,125,230	148,746,669	18,378,561	1,776,377,586	8.37%
2018	191,677,662	147,632,510	44,045,152	1,741,354,609	8.48%
2019	207,518,684	157,385,096	50,133,588	1,738,212,750	9.05%
2020	219,815,919	165,984,825	53,831,094	1,780,467,331	9.32%
2021	212,378,768	170,676,891	41,701,877	1,819,927,957	9.38%
2022	210,236,215	178,277,910	31,958,305	1,805,532,589	9.87%
<b>State Patrol, Game &amp; Fish, Warden &amp; Criminal Investigator Pension Plan</b>					
2014	\$4,037,681	\$3,077,515	\$960,166	\$21,817,686	14.11%
2015	3,784,380	3,355,688	428,692	22,196,930	15.12%
2016	4,097,473	3,574,065	523,408	23,636,482	15.12%
2017	4,041,445	3,552,582	488,863	23,641,495	15.03%
2018	3,607,303	3,529,976	77,327	23,063,176	15.31%
2019	3,997,559	3,639,164	358,395	23,118,850	15.74%
2020	4,345,242	3,664,996	680,246	24,074,484	15.22%
2021	4,026,853	3,590,133	436,720	24,201,407	14.83%
2022	4,191,149	3,615,480	575,669	23,495,253	15.39%
<b>Volunteer Firefighter, Emergency Medical Technician, and Search &amp; Rescue Pension Plan</b>					
2015	\$1,139,454	\$2,238,612	\$(1,099,158)	N/A	N/A
2016	3,128,272	3,198,930	(70,658)	N/A	N/A
2017	2,923,585	3,290,994	(367,409)	N/A	N/A
2018	3,275,465	2,959,943	315,522	N/A	N/A
2019	3,543,372	3,118,824	424,548	N/A	N/A
2020	3,669,138	5,509,382	(1,840,244)	N/A	N/A
2021	3,318,686	4,670,469	(1,351,783)	N/A	N/A
2022	3,130,017	3,866,570	(736,553)	N/A	N/A
<b>Paid Fire A Pension Plan</b>					
2014	\$9,458,093	\$-	\$9,458,093	\$198,404	0.00%
2015	9,714,697	-	9,714,697	179,486	0.00%
2016	10,663,740	-	10,663,740	195,221	0.00%
2017	11,734,389	-	11,734,389	195,221	0.00%
2018	15,597,369	-	15,597,369	134,155	0.00%
2019	16,974,397	-	16,974,397	65,621	0.00%
2020	18,379,604	-	18,379,604	65,621	0.00%
2021	41,595,929	-	41,595,929	65,621	0.00%
2022	13,498,555	76,679,037	(63,180,482)	-	N/A

\* Includes other funding sources but excludes member redeposits and member service purchase contributions.

In addition, the actual contribution equals the contractually required contribution.

\*\* Covered Payroll is the amount in force as of the valuation date and likely differs from the actual payroll paid during the year.

Note: Information is not available before 2014.

# Required Supplementary Information - Schedule of Contributions

<b>SCHEDULE OF CONTRIBUTIONS MULTIYEAR</b>						
<b>LAST 10 FISCAL YEARS</b>						
<b>FY Ending December 31,</b>						
	<b>Actuarially Determined Contribution</b>	<b>Actual Contribution*</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Payroll**</b>	<b>Actual Contribution as a % of Covered Payroll</b>	
<b>Paid Fire B Pension Plan</b>						
2014	\$3,273,329	\$3,184,045	\$89,284	\$24,552,559	12.97%	
2015	3,275,448	3,273,668	1,780	25,986,443	12.60%	
2016	3,420,716	3,370,961	49,755	26,390,481	12.77%	
2017	3,496,053	3,230,196	265,857	28,209,686	11.45%	
2018	4,221,146	3,356,547	864,599	26,811,084	12.52%	
2019	4,760,014	3,516,198	1,243,816	28,028,382	12.55%	
2020	4,694,424	4,034,134	660,290	28,557,976	14.13%	
2021	4,547,521	4,508,405	39,116	29,973,443	15.04%	
2022	4,535,192	5,171,246	(636,054)	31,251,620	16.55%	
<b>Judicial Pension Plan</b>						
2014	\$596,723	\$916,598	\$(319,875)	\$5,989,181	15.30%	
2015	589,177	920,867	(331,690)	6,363,028	14.47%	
2016	579,926	925,971	(346,045)	6,384,628	14.50%	
2017	543,468	949,263	(405,795)	6,386,001	14.86%	
2018	909,557	960,478	(50,921)	6,558,029	14.65%	
2019	986,724	1,060,477	(73,753)	6,602,303	16.06%	
2020	1,176,110	1,135,182	40,928	7,410,536	15.32%	
2021	1,197,434	1,171,758	25,676	7,886,295	14.86%	
2022	1,440,301	1,191,503	248,798	8,194,423	14.54%	
<b>Law Enforcement Pension Plan</b>						
2014	\$11,812,078	\$13,308,281	\$(1,496,203)	\$147,790,833	9.00%	
2015	11,708,248	12,706,883	(998,635)	150,399,739	8.45%	
2016	12,063,684	13,730,305	(1,666,621)	154,779,198	8.87%	
2017	11,623,441	13,614,406	(1,990,965)	153,547,078	8.87%	
2018	14,493,422	13,781,011	712,411	151,898,695	9.07%	
2019	16,754,321	14,270,844	2,483,477	155,851,473	9.16%	
2020	18,231,644	14,893,512	3,338,132	160,739,444	9.27%	
2021	18,309,732	14,567,813	3,741,919	166,131,243	8.77%	
2022	23,603,760	14,990,494	8,613,266	161,405,371	9.29%	
<b>Air Guard Firefighter Pension Plan</b>						
2014	\$13,694	\$143,582	\$(129,888)	\$1,731,731	8.29%	
2015	3,987	158,319	(154,332)	2,124,296	7.45%	
2016	7,634	136,768	(129,134)	2,151,997	6.36%	
2017	6,011	156,263	(150,252)	1,975,631	7.91%	
2018	11,590	159,583	(147,993)	2,154,544	7.41%	
2019	4,344	158,176	(153,832)	2,341,404	6.76%	
2020	15,348	141,013	(125,665)	2,316,140	6.09%	
2021	19,558	155,959	(136,401)	2,157,801	7.23%	
2022	126,605	168,339	(41,734)	2,145,431	7.85%	

\* Includes other funding sources but excludes member redeposits and member service purchase contributions.

In addition, the actual contribution equals the contractually required contribution.

\*\* Covered Payroll is the amount in force as of the valuation date and likely differs from the actual payroll paid during the year.

Note: Information is not available before 2014.

## Other Supplementary Information - Administrative & Investment Expense

### OTHER SUPPLEMENTARY INFORMATION

### SCHEDULE OF ADMINISTRATIVE AND INVESTMENT EXPENSES

Year Ending December 31, 2022

	Defined Benefit Plans	457 Plan	Total
<b>Personnel Services:</b>			
Staff & Board Salaries	\$4,165,863	\$271,120	\$4,436,983
Employer Paid Benefits	1,523,938	123,637	1,647,575
<b>Total Personnel Services</b>	<b>5,689,801</b>	<b>394,757</b>	<b>6,084,558</b>
<b>Miscellaneous:</b>			
Utilities	7,770	1,206	8,976
Postage and Shipping	31,905	3,820	35,725
Dues and Licenses	265,320	7,116	272,436
Advertising-Promotional	10,612	4,764	15,376
Travel	86,139	24,642	110,781
Board Travel	49,628	3,815	53,443
Office Supplies	83,710	13,141	96,851
Real Property Rental	4,456	384	4,840
Equipment Rental	6,023	571	6,594
Bank and Court Fees	6,171	2	6,173
External Maintenance Contracts	122,307	4,859	127,166
<b>Total Miscellaneous</b>	<b>674,041</b>	<b>64,320</b>	<b>738,361</b>
<b>Communication:</b>			
Data Services	400,471	-	400,471
Telecommunications	52,611	7,779	60,390
<b>Total Communication</b>	<b>453,082</b>	<b>7,779</b>	<b>460,861</b>



## Other Supplementary Information - Administrative & Investment Expense

OTHER SUPPLEMENTARY INFORMATION (continued)			
SCHEDULE OF ADMINISTRATIVE AND INVESTMENT EXPENSES			
Year Ending December 31, 2022			
	Defined Benefit Plans	457 Plan	Total
Professional Services:			
Advisory Services	67,481	-	67,481
Auditing Services	80,073	6,027	86,100
Actuarial Services	288,037	-	288,037
Information Services	16,927	1,635	18,562
Disability Claims Services	67,040	-	67,040
Investment Consulting Services	285,000	121,800	406,800
IT Project Services	1,050,730	3,533	1,054,263
Legal Services	89,704	-	89,704
Printing Services	14,244	5,459	19,703
Food Services	13,274	1,313	14,587
Temporary Employment Services	-	30,108	30,108
Other Contracted Services	24,661	884	25,545
Lease Interest Expense	15,976	-	15,976
Space Rental	-	21,471	21,471
State of Wyoming - Cost Allocation	592,038	58,553	650,591
<b>Total Professional Services</b>	<b>2,605,185</b>	<b>250,783</b>	<b>2,855,968</b>
<b>Total Administration Expenses</b>	<b>9,422,109</b>	<b>717,639</b>	<b>10,139,748</b>
<b>Total Depreciation Expense</b>	<b>632,876</b>	<b>-</b>	<b>632,876</b>
Investment Fees:*			
Investment Advisor Fees	1,674,780	-	1,674,780
Custodial Service Fees	1,165,525	-	1,165,525
Record Keeping Fees	-	740,865	740,865
Security Lending Agent Fees	7,570,011	-	7,570,011
<b>Total Investment Fees</b>	<b>10,410,316</b>	<b>740,865</b>	<b>11,151,181</b>
<b>Total Administrative Expenses &amp; Investment Fees</b>	<b>\$20,465,301</b>	<b>\$1,458,504</b>	<b>\$21,923,805</b>

\* Investment Manager Fees are not included in this schedule. See Schedule of Fees located within the Investment Section on page 100.

## Other Supplementary Information - Deferred Compensation Net Position

### OTHER SUPPLEMENTARY INFORMATION

### DEFINED CONTRIBUTION PLAN

### COMBINING SCHEDULE OF PARTICIPANT AND ADMINISTRATIVE NET POSITION

December 31, 2022

	Administrative Account	Plan Participant Balances	Total
<b>Assets</b>			
Cash and Short-Term Investments:			
Cash with State Treasurer	\$733,633	\$-	\$733,633
Domestic Liquidity - Outside Banks	1,317,653	8,086,129	9,403,782
	2,051,286	8,086,129	10,137,415
<b>Receivables</b>			
Employee Contributions	-	352,208	352,208
Rebate and Fee Income Receivable	1,960,582	-	1,960,582
	1,960,582	352,208	2,312,790
<b>Investments, at Fair Value</b>			
Fixed Income	-	325,537,860	325,537,860
Equities	-	536,569,249	536,569,249
Alternatives	-	16,154,550	16,154,550
Investment Contracts	-	6,191	6,191
Self Directed Brokerage Investments	-	4,880,988	4,880,988
	-	883,148,838	883,148,838
<b>Total Assets</b>	<b>4,011,868</b>	<b>891,587,175</b>	<b>895,599,043</b>
<b>Liabilities</b>			
Administrative & Consulting Fees Payable	92,107	-	92,107
<b>Total Liabilities</b>	<b>92,107</b>	<b>-</b>	<b>92,107</b>
<b>Net Position Restricted for Benefits</b>	<b>\$3,919,761</b>	<b>\$891,587,175</b>	<b>\$895,506,936</b>

## Other Supplementary Information - Deferred Compensation Change in Net Position

OTHER SUPPLEMENTARY INFORMATION (Continued)			
DEFINED CONTRIBUTION PLAN			
COMBINING SCHEDULE OF CHANGES IN PARTICIPANT AND ADMINISTRATIVE NET POSITION			
Year Ended December 31, 2022			
	Administrative Account	Plan Participant Balances	Total
<b>Additions</b>			
Member Contributions	\$-	\$54,688,506	\$54,688,506
Investment Income (Loss):			
Net Appreciation (Depreciation) in Fair Value of Investments	-	(156,903,262)	(156,903,262)
Interest and Dividends	114,825	2,670,373	2,785,198
<b>Total Investment Income (Loss)</b>	<b>114,825</b>	<b>(99,544,383)</b>	<b>(99,429,558)</b>
<b>Deductions</b>			
Benefits Paid/Distributions	-	60,722,388	60,722,388
Administrative Expenses	717,639	-	717,639
Record Keeping	740,865	-	740,865
<b>Total Expenditures</b>	<b>1,458,504</b>	<b>60,722,388</b>	<b>62,180,892</b>
<b>Net Increase (Decrease)</b>	<b>(1,343,679)</b>	<b>(160,266,771)</b>	<b>(161,610,450)</b>
<b>Net Position Restricted for Benefits</b>			
Beginning of Year	5,263,440	1,051,853,946	1,057,117,386
<b>End of Year</b>	<b>\$3,919,761</b>	<b>\$891,587,175</b>	<b>\$895,506,936</b>

# Independent Auditor's Report on Internal Control and Compliance



## Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

To the Board of Trustees  
Wyoming Retirement System  
Cheyenne, Wyoming

We have audited, 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, the financial statements of the Wyoming Retirement System (WRS), a fiduciary fund of the state of Wyoming as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise WRS's basic financial statements, and have issued our report thereon dated June 20, 2023.

### Report on Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered WRS's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of WRS's internal control. Accordingly, we do not express an opinion on the effectiveness of WRS's internal control.

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

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

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# Independent Auditor's Report on Internal Control and Compliance

## Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether WRS's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

## Purpose of this Report

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



Boise, Idaho  
June 20, 2023

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Annual Comprehensive Financial Report 2022

# INVESTMENT SECTION



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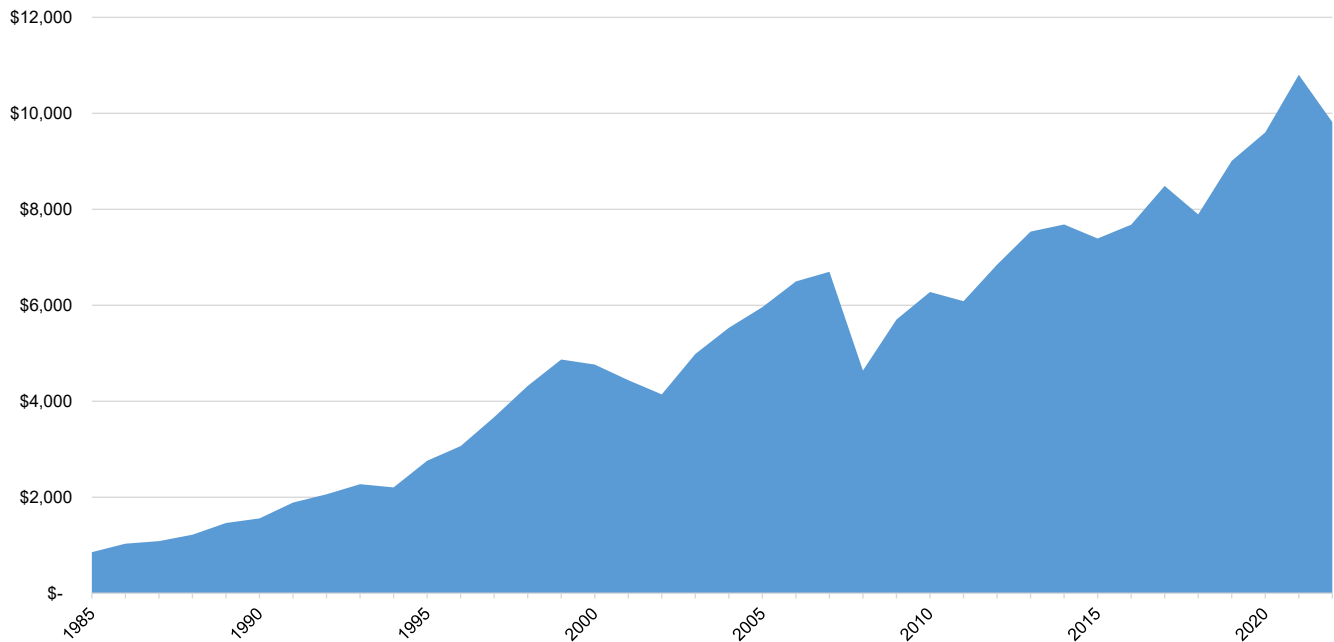


## Total Plan Investments

The following section has been compiled by staff using reports supplied by Northern Trust, Meketa Investment Group, and internally generated documents for investment activities through December 31, 2022. The investment activity is a time-weighted rate of return methodology based upon fair value.

Total Plan investments as of December 31, 2022 were \$9,820,269,166, down \$986 million for the calendar year.

Assets in Millions



2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
\$4,988	\$5,535	\$5,962	\$6,500	\$6,700	\$4,643	\$5,707	\$6,278	\$6,088	\$6,849
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
\$7,537	\$7,686	\$7,395	\$7,683	\$8,491	\$7,894	\$9,009	\$9,604	\$10,806	\$9,820

## Investment Performance

The WRS investment portfolio generated a one-year return for the year ended December 31, 2022 of -6.99% (net of fees). This compares to a return of -9.12% for the blended benchmark (described in the Management Discussion and Analysis section) and -17.25 % for a 60% MSCI ACWI/40% Barclays Multiverse Index. The WRS portfolio ranked in the 12th percentile for 2022 as measured against its peer group. WRS's assumed investment rate of return has been 6.8% since January 1, 2022.

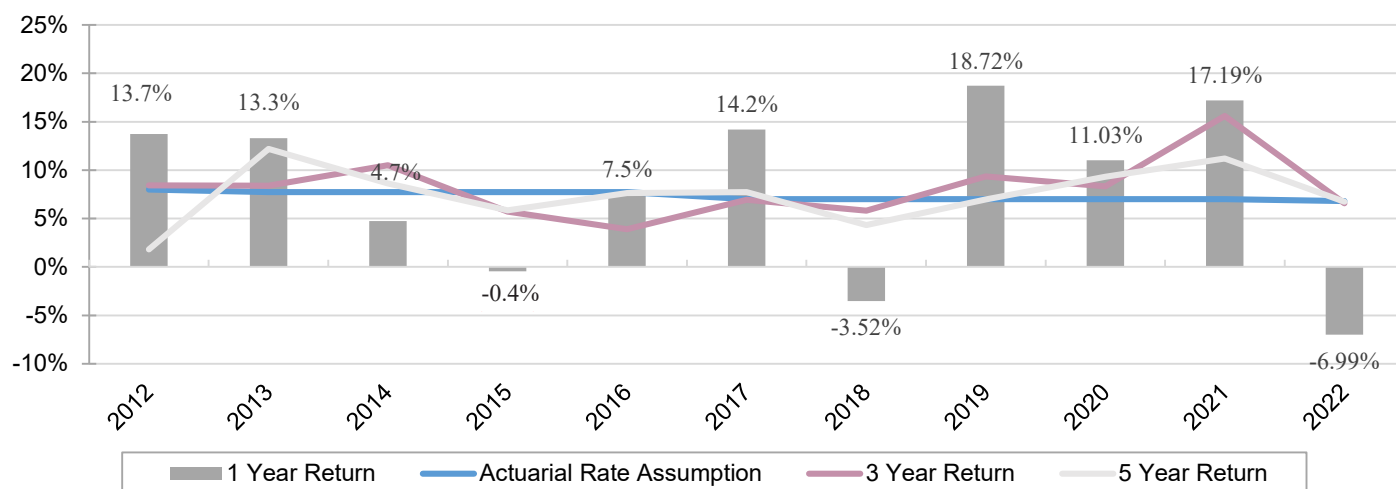
For the three-year period ending December 31, 2022, the portfolio generated an annualized net return of 6.57%. Over that same period, the investment return of the benchmark was 4.93% and the peer group median return was 4.51%.

For the five-year period ending December 31, 2022, WRS generated an annualized return of 6.75%, compared to a benchmark return of 5.13% and a peer group median return of 5.39%.

## Total Return - Net of Fees

Asset allocation represents the selection of a course of action for the investment portfolio based on an estimate of future returns and risks associated with investment objectives.

### Total Return - Net of Fees



Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Actuarial Rate Assumption	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
1 Year Return	20.41%	11.00%	7.71%	12.09%	6.94%	-30.30%	23.10%	13.43%	-1.17%	13.73%
3 Year Return	1.12%	6.47%	12.91%	10.25%	8.89%	-5.82%	-2.83%	-0.90%	11.33%	8.43%
5 Year Return	2.4%	2.5%	4.3%	7.8%	11.5%	-0.0%	2.1%	3.1%	0.6%	1.8%

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Actuarial Rate Assumption	7.75%	7.75%	7.75%	7.75%	7.00%	7.00%	7.00%	7.00%	7.00%	6.80%
1 Year Return	13.30%	4.74%	-0.44%	7.53%	14.20%	-3.52%	18.72%	11.03%	17.19%	-6.99%
3 Year Return	8.39%	10.51%	5.72%	3.89%	6.93%	5.81%	9.36%	8.34%	15.60%	6.57%
5 Year Return	12.2%	8.6%	5.8%	7.6%	7.7%	4.3%	7.0%	9.32%	11.22%	6.75%

## Strategic Asset Allocation

The asset allocation of the WRS investment portfolio begins with the Strategic Asset Allocation decisions made by the Wyoming Retirement Board of Trustees (Board). The Board analyzes, selects, and reviews the Strategic Allocation annually. Although establishing the Strategic Allocation is a continuous process, at least once per year – normally early in the calendar – the Board reviews asset class return and volatility assumptions with the goal of adjusting expectations for both the upcoming 12-month period and a longer-term 5- to 7-year view. The Strategic Asset Allocation reflects the Board’s view of the asset classes that will position the portfolio to best meet the Board’s long-term return objectives within a reasonable degree of risk.

The Board's Strategic Asset Allocation decisions are considered one of the primary drivers – perhaps the single most important driver – of portfolio investment performance. There is a preponderance of evidence suggesting that a portfolio's investment policy, or long-term asset allocation, is the primary determinant of return variability over time. The Strategic Allocation is designed to provide the portfolio with a broadly diversified mix of assets that together creates return streams and risk patterns consistent with the Board's unique risk tolerance and investment objectives. In determining the optimum mix of assets, the Board considers several variables, including:

- The expected rate of return for each asset class;
- The expected risk (standard deviation) of each asset class;
- The correlation between the various rates of return of the asset classes;
- The underlying factors considered to be the primary drivers of asset class performance; and
- The investment objectives and risk constraints of the portfolio.

In addition, the Board considers WRS's ability to practically implement meaningful investment dollars in an asset class in a cost-effective manner. The Board assigns relevant benchmarks to each asset class, thereby creating an atmosphere in which staff can implement Tactical Asset Allocation decisions regarding active and passive implementation. The custom benchmarks for the Board's Strategic Asset Allocation decisions, effective 5/18/2022, are as follows:

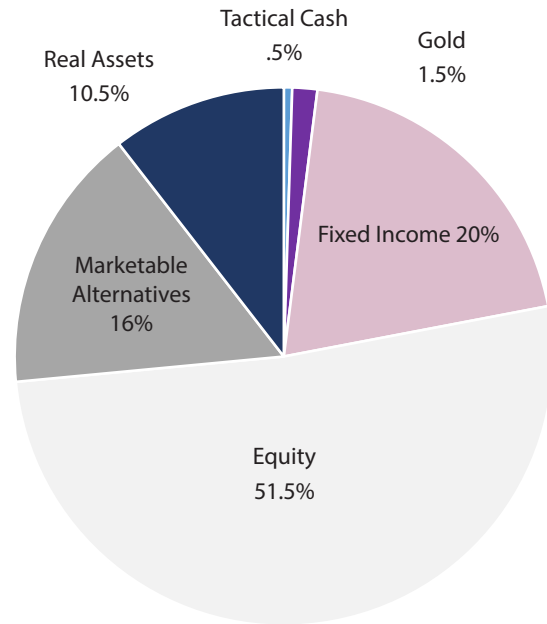
Investment Asset Class	Strategic Asset Allocation Weight	Custom Benchmarks	Weights	Blended composition
<b>Tactical Cash</b>	0.5%	Custom Total Tactical Cash		Barclays Short Treasury
<b>Gold</b>	1.5%			IShares Gold Trust ETF (IAUM)
<b>Fixed Income</b>	20.0%	Custom Total Fixed Income Benchmark	25.0%	Bloomberg U.S. Aggregate Index
			25.0%	Bloomberg U.S. Government Index
			10.0%	Bloomberg U.S. Treasury Inflation Notes: 1 - 10 Year Index
			15.0%	50% Credit Suisse Leveraged Loan/ 50% Bloomberg U.S. High Yield
			25.0%	Cambridge Associates Vintage Year Blend (QTR Lag)
<b>Equity</b>	51.5%	Total Return of Custom Blended Equity Index	40.8%	Russell 3000 Total Return Index
			22.3%	MSCI EAFE IMI, Net Dividend (65% Hedged to USD)
			11.7%	MSCI EM IMI, Net
			25.2%	Cambridge Associates Global All Private Equity (QTR Lag)
<b>Marketable Alternatives</b>	16.0%	Custom Total Marketable Alternatives Benchmark	37.5%	HFRI Equity Hedge Long/Short Directional Index
			62.5%	HFRI Fund of Funds Composite Index
<b>Real Assets</b>	10.5%	Vintage Year Blended Benchmark		
<b>Total Investment Assets</b>	100%	Target Asset Allocation Return		

# Asset Allocation

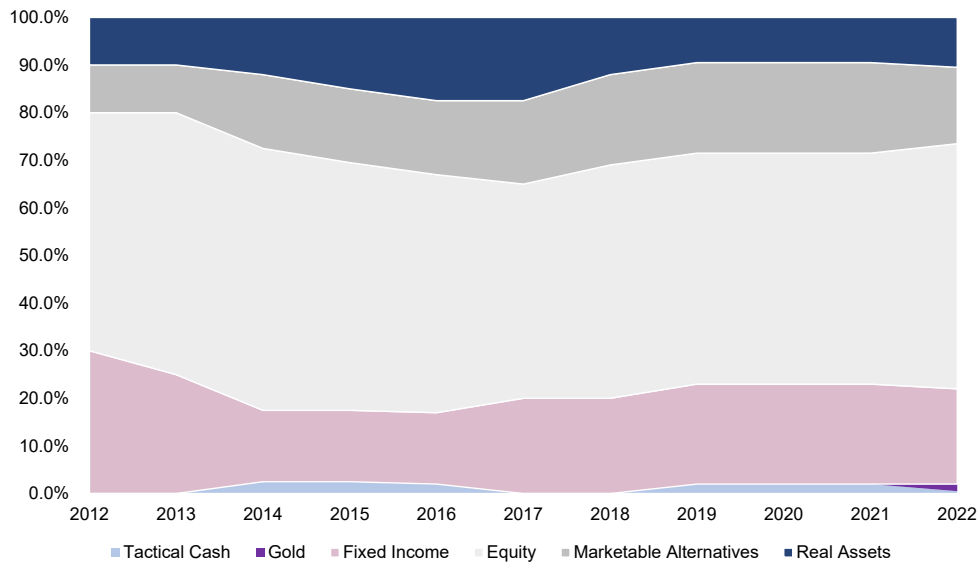
## Asset Allocation

Asset allocation is neither simple nor static. It exists in an evolving marketplace. But, to a significant degree, the decisions made by the Board dictate the amount of risk assumed by the portfolio and the associated investment return expected over the long-term. The Board must understand the basis for its decisions to invest in certain asset classes and disinvest from others. Systematic approaches to asset allocation can be useful, but in the final analysis, asset allocation decisions reflect the institutional beliefs of the Board. The Board must understand that asset allocation decisions are long-term in nature and therefore give WRS the ability to hold a higher level of risk bearing assets. By assuming more risk, it is expected that long-term returns will be considerably higher than if the focus is strictly on short-term capital preservation. Generating higher long-term returns enables WRS to reduce the amount of money needed from participant contributions to properly fund the system. The accompanying pie chart illustrates the Strategic Asset Allocation of the WRS investment portfolio through December 31, 2022.

Strategic Asset Allocation Weight



Strategic Asset Allocation



Strategic Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Tactical Cash	0.0%	2.5%	2.5%	2.0%	0.0%	0.0%	2.0%	2.0%	2.0%	0.5%
Gold										1.5%
Fixed Income	25.0%	15.0%	15.0%	15.0%	20.0%	20.0%	21.0%	21.0%	21.0%	20.0%
Equity	55.0%	55.0%	52.0%	50.0%	45.0%	49.0%	48.5%	48.5%	48.5%	51.5%
Marketable Alternatives	10.0%	15.5%	15.5%	15.5%	17.5%	19.0%	19.0%	19.0%	19.0%	16.0%
Real Assets	10.0%	12.0%	15.0%	17.5%	17.5%	12.0%	9.5%	9.5%	9.5%	10.5%

\*Note: Numbers may not total 100% due to rounding.

## Tactical Asset Allocation

Short-term decisions determine the most efficient way to implement portfolio investments within the construct of the long-term Strategic Asset Allocation determined by the Board. The Tactical Allocation is necessary given that we are unable to immediately allocate to private markets to meet our long-term strategic goals. Private markets rely on capital being drawn over multiple years, which makes it impractical to reach out long-term goals immediately. It forces us to have realistic short-term targets as we build towards our long-term goals.

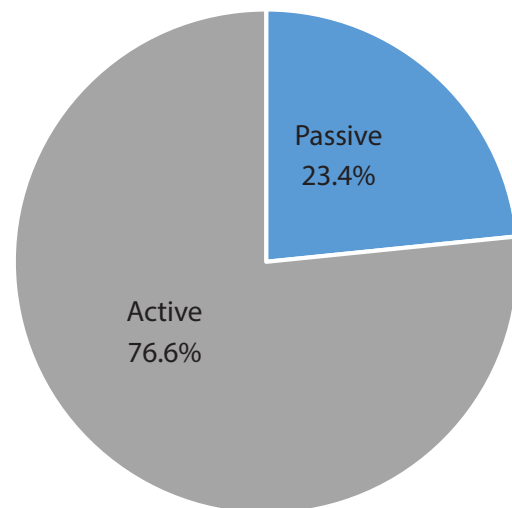
The Board has delegated to WRS staff the authority for making tactical, short-term asset allocation decisions on behalf of the portfolio within broad ranges approved by the Board. The Board has established these ranges to maintain appropriate risk controls. The delegation includes the authority for staff to hire and fire investment managers and to adjust the portfolio for the purpose of taking advantage of market opportunities as they emerge. In compliance with the Board's Investment Policy Statement (IPS), the Chief Investment Officer makes Tactical Allocation decisions away from the long-term Strategic Allocation in consultation with the external investment consultant (Meketa) and upon approval of the Executive Director. These decisions involve two distinct steps:

**Tactical Decisions** – decisions made to alter an asset allocation of the portfolio away from the passive benchmark of the long-term Strategic Asset Allocation class adopted by the Board within pre-approved ranges. For example, if staff had a favorable view on Fixed Income, staff may decide to overweight the targeted 20% of assets, which would by default underweight one of the other asset classes.

**Implementation Decisions** – decisions involving active vs. passive management and, in the case of active management, the selection of specific managers whose performance is then measured relative to appropriate benchmarks. For example, staff may elect to implement Fixed Income investments through active management instead of passive management. Staff is authorized to then select the appropriate active manager(s). WRS has traditionally relied heavily on active management. The pie chart to the right highlights WRS's exposure to active and passive management within the portfolio through December 31, 2022.

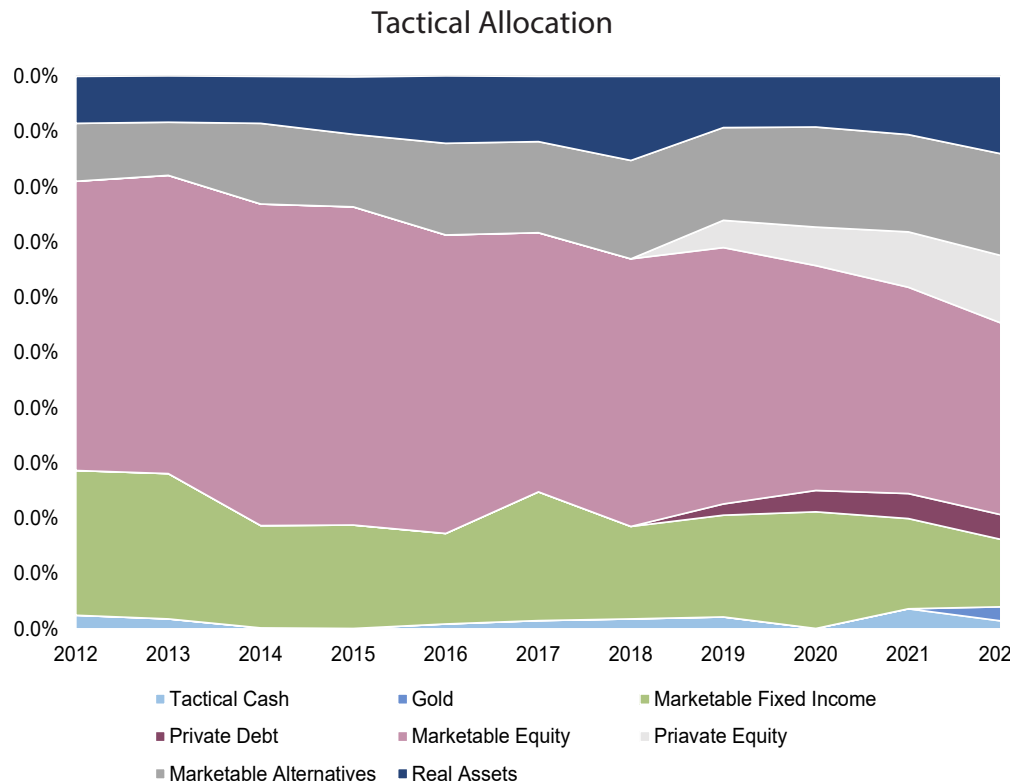
**Tactical Allocation decisions** are sub-asset class allocation choices made by the Chief Investment Officer with the approval of the Executive Director to deviate from the Strategic Allocation weight. The value added by staff decisions to overweight or underweight these sub-asset classes is measured by the difference between the relative returns of the benchmarks for the Strategic Allocation and the Tactical Allocation. Tactical Allocation returns that exceed the returns associated with the Strategic Allocation reflect value added through tactical decisions. Tactical Allocation returns less than the Strategic Allocation returns reflect losses to the portfolio's performance based upon tactical decisions. Tactical decisions should be measured over all periods of time, with majority weight placed on outcomes that have occurred over a full market cycle (5 to 7 years).

Active vs Passive Management



# Asset Allocation

Tactical Allocations as of December 31, 2022, are included in the graph below



Note: Prior to 2019, Private Debt and Private Equity were included with Real Assets and named Private Markets.

Actual Asset Class Exposure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Tactical Cash	1.8%	0.2%	0.1%	0.9%	1.5%	1.8%	2.2%	0.1%	3.6%	1.5%
Gold										2.6%
Marketable Fixed Income	26.3%	18.5%	18.7%	16.4%	23.3%	16.8%	18.4%	21.1%	16.3%	12.2%
Private Debt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	3.9%	4.5%	4.5%
Marketable Equity	54.0%	58.2%	57.6%	54.0%	46.9%	48.4%	46.4%	40.7%	37.3%	34.7%
Private Equity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	6.9%	10.0%	12.2%
Marketable Alternatives	9.6%	14.6%	13.1%	16.6%	16.5%	17.8%	16.8%	18.1%	17.6%	18.4%
Real Assets	8.4%	8.5%	10.4%	12.2%	11.8%	15.2%	9.3%	9.2%	10.5%	14.0%

## Implementation Decisions / Manager Selection

Implementation Decisions are investment manager selection choices made by the Chief Investment Officer with the approval of the Executive Director. The value added through these manager selection decisions is measured by the difference between the actual manager portfolio returns and the strategic benchmark return for the asset class. This difference captures the value added through manager selection decisions. Portfolio returns that exceed the benchmarks associated with the Strategic Asset Allocation reflect value added through manager selection decisions. Actual portfolio returns that under perform the Strategic Asset Allocation benchmarks reflect losses to the portfolio's performance based upon implementation decisions. Implementation decisions should be measured over all periods of time, with a majority weight placed on outcomes that have occurred over a full market cycle (5 to 7 years).

The Board receives performance data and other information on a quarterly basis to help ensure adequate monitoring of the portfolio's overall performance objectives.

## APPENDIX I – Strategic Asset Allocation

Adopted December 4, 2009, Revised: April 22, 2011; May 25, 2012; February 22, 2013; February 28, 2014; May 22, 2014; February 25, 2015; February 25, 2016; February 16, 2017; February 15, 2018; September 10, 2018; February 7, 2019; May 16, 2019; May 19, 2020, May 19, 2021, May 18, 2022

Asset Class	Target Asset Allocation Weight (%)	Target Asset Allocation Range 1,2 (%)	Asset Class Benchmark Index
<b>Tactical Cash</b>	<b>0.5</b>	<b>0.0 – 3.0</b>	<b>Barclays Short Treasury</b>
<b>Gold</b>	<b>1.5</b>	<b>0.0 – 4.0</b>	<b>IShares Gold Trust ETF (IAUM)</b>
<b>Total Fixed Income</b>	<b>20.0</b>		<b>Blended Benchmark</b>
Marketable Fixed Income	15.0	10.0 – 22.5	Blended Benchmark
Core Plus	5.0	2.0 - 8.0	Bloomberg U.S. Aggregate Index
US Government Debt	5.0	4.0 - 11.0	Bloomberg U.S. Government Index
US TIPS	2.0	0.0 – 4.0	Bloomberg U.S. Treasury Inflation Notes: 1 - 10 Year Index
Opportunistic Credit	3.0	1.0 – 5.0	50% Credit Suisse Leveraged Loan/ 50% Bloomberg U.S. High Yield
Private Debt	5.0	2.0 – 8.0	Cambridge Associates Vintage Year Blend (QTR Lag)
<b>Total Equity</b>	<b>51.5</b>		<b>Blended Benchmark</b>
Marketable Equity	38.5	31.5 – 45.5	Blended Benchmark
Domestic Equity	21.0	16.0 - 27.0	Russell 3000 Total Return Index
International Developed Equity	11.5	6.0 - 17.0	MSCI EAFE IMI, Net Dividend (65% Hedged to USD)
Emerging Markets Equity	6.0	2.0 - 10.0	MSCI EM IMI, Net
Private Equity	13.0	8.0 – 18.0	Cambridge Associates Global All Private Equity (QTR Lag)
<b>Marketable Alternatives</b>	<b>16.0</b>	<b>8.0 – 24.0</b>	<b>Blended Benchmark</b>
Long/Short Equity, Opportunistic	6.0	2.0 - 10.0	HFRI Equity Hedge Long/Short Directional Index
Diversifying	10.0	5.0 – 15.0	HFRI Fund of Funds Composite Index
<b>Private Real Assets</b>	<b>10.5</b>	<b>7.5 – 15.0</b>	<b>Cambridge Associates Vintage Year Blend (QTR Lag)</b>
Natural Resources		2.5 – 7.5	Cambridge Associates Vintage Year Blend (QTR Lag)
Infrastructure		2.5 – 7.5	MSCI World Infrastructure (QTR Lag)
Real Estate		2.5 – 7.5	NCREIF ODCE

1 All ranges for Private Markets are long-term ranges.

2 Range based on a percentage of total assets.

3 Private Market benchmarks include best-fit, non-Cambridge Associates benchmarks for funds that do not have applicable Cambridge Associates benchmarks.

Return Objective: 6.80% net of expenses

# Investment Policy Summary

## Investment Policy Summary

The Board adopted a revised Investment Policy Statement (IPS) on February 15, 2018 that amended the policy originally approved December 4, 2009. The IPS defines the desired investment outcomes of the portfolio. The Board's responsibilities under the IPS are as follows:

Develop a Return Objective designed to:

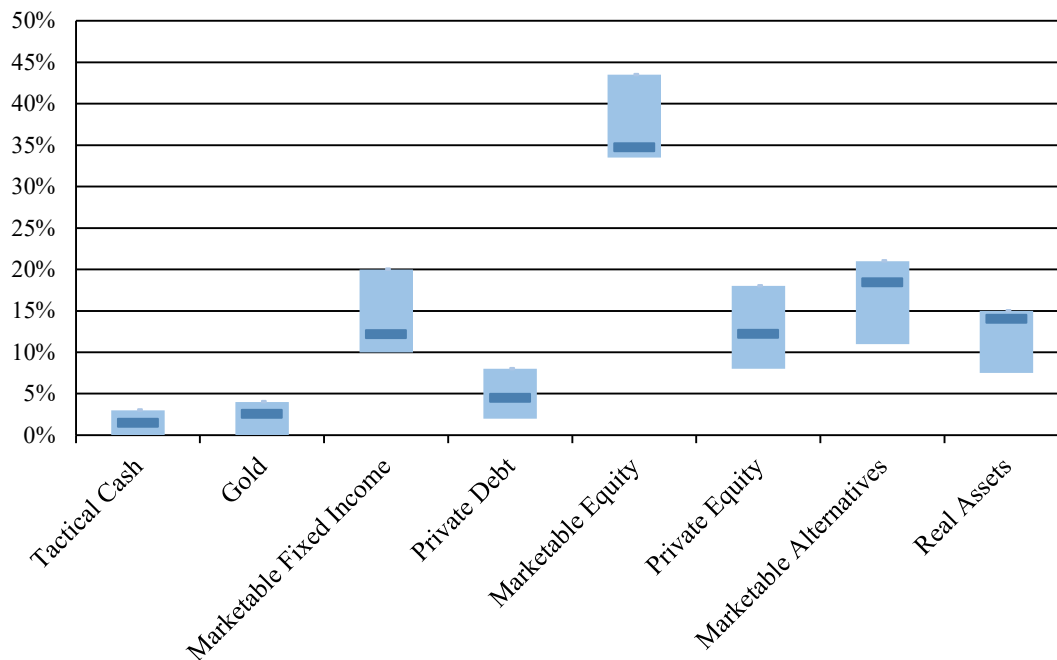
1. Keep contribution rates reasonably level over long periods of time, subject to and recognizing that changes made to the law, actuarial assumptions and benefit levels will impact contribution rates; and
2. Adequately fund aggregate liabilities of the system.

Establish a Strategic Asset Allocation that is expected to meet the Return Objective while minimizing the potential impact that volatility in the portfolio will have on the contribution rate.

The statutory requirements for WRS's investments are outlined in W. S. 9-3-408.

W. S. 9-3-408(b) states in part "... In investing and managing the monies in the retirement account, the board, or its designee, shall exercise the judgment and care that a prudent investor would, in light of the purposes, terms, distribution requirements and all other circumstances surrounding the monies in the retirement account, including risk and return objectives established by the board ...."

### Current Exposures Relative to Min/Max Allowable



The Board's investment policies are outlined in detail in Note 3 to the Basic Financial Statements section of this ACFR. WRS's success in achieving the 6.8% assumed investment return objective is evaluated on an ongoing basis over reasonably long periods of time (5 to 7 years). The reason for the long-term focus on the return objective is to preclude the temptation towards overreaction to short-term market events that have little to no bearing on long-term asset/liability management. The Board must reconcile its need to evaluate investment policy implementation decisions over shorter time frames while maintaining longer-term focus on managing and measuring the portfolio's overall performance relative to the long-term return objective.

To address this issue, the Board evaluates performance relative to Strategic Asset Allocation and Tactical Asset Allocation benchmarks which help to evaluate the Board's broad Strategic Asset Allocation decisions and the staff's Tactical Asset Allocation and implementation decisions.



Actual Asset Class Exposure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Tactical Cash	1.80%	0.20%	0.10%	0.90%	1.50%	1.80%	2.20%	0.10%	3.60%	1.50%
Gold	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.60%
Marketable Fixed Income	26.30%	18.50%	18.70%	16.40%	23.30%	16.80%	18.40%	21.10%	16.30%	12.20%
Private Debt	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	3.90%	4.50%	4.50%
Marketable Equity	54.00%	58.20%	57.60%	54.00%	46.90%	48.40%	46.40%	40.70%	37.30%	34.70%
Private Equity	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	6.90%	10.00%	12.20%
Marketable Alternatives	9.60%	14.60%	13.10%	16.60%	16.50%	17.80%	16.80%	18.10%	17.60%	18.40%
Real Assets	8.40%	8.50%	10.40%	12.20%	11.80%	15.20%	9.30%	9.20%	10.50%	14.00%

## Cash

The Board has provided a target of 0.5% for this asset class with a strategic range of 0.0% to 3.0%, recognizing a cash allocation for liquidity purposes can provide needed flexibility during times of market stress. Investments in this category will be focused primarily on preservation of capital with a secondary focus on yield.

As of December 31, 2022, the Cash allocation was \$143,958,550, or 1.46% of the total portfolio after accounting for the overlay program. Cash includes Short Term Investment Funds (STIF).

## Fixed Income with Private Debt

Effective May 16, 2019, the WRS Governance Policy was amended to include Private Debt in the Fixed Income Category. The Board has provided a target of 15.0% for Marketable Fixed Income with a strategic range of 10.0%-20.0%. The Private Debt sub-asset class has a target of 5% and with a strategic range of 2.0% - 8.0%. The blended benchmark for marketable fixed income consists of 25.0% Bloomberg U.S. Aggregate Index, 25.0% Bloomberg U.S. Government Index, 10.0% Bloomberg U.S. Treasury Inflation Notes with 1-10 Year Index, and 15.0% is a 50/50 blend of Bloomberg U.S. High Yield Index and Credit Suisse Leveraged Loan Index. Private Debt benchmark is Cambridge Associates Vintage Year Blend (Qtr Lag). Private Debt strategies can include Sr. lending, Mezzanine Finance, Distressed debt, and Real Estate debt among others.

The top 10 holdings within the Marketable Fixed Income portfolio as of December 31, 2022, are illustrated in the table below:

Top Marketable Fixed Income Portfolios					
Holdings	Rate	Due	Percent of WRS Marketable Fixed Income Portfolio	Fair Value	
UNITED STATES TREAS BDS	2.785%	05/15/2052	1.53%	17,881,462.50	
UNITED STATES TREAS NTS FLTG RT		04/30/2024	1.36%	15,879,367.20	
UNITED STATES TREAS NTS	0.086%	10/31/2023	1.26%	14,762,078.33	
UNITED STATES TREAS BDS 00203	5.000%	05/15/2037	1.01%	11,799,938.33	
US TREASURY N/B	1.250%	08/15/2031	0.97%	11,390,859.34	
FNMA POOL #MA4626	4.000%	06/01/2052	0.93%	10,898,302.85	
FHLMC MTN	6.520%	07/15/2032	0.93%	10,820,203.23	
UNITED STATES TREAS BDS DTD	4.000%	11/15/2052	0.86%	10,103,125.00	
FNMA TRANCHE 00689	1.875%	09/24/2026	0.80%	9,378,245.77	
US TREASURY N/B	1.500%	02/15/2030	0.75%	8,758,144.48	

Note: Please contact the Wyoming Retirement System for a complete list of portfolio holdings.

## Asset Class Summaries

As of December 31, 2022, the Marketable Fixed Income allocation was \$1,197,458,188, or 12.18% of the total portfolio, after accounting for the overlay program. WRS had contracts with 8 external investment managers. In addition, WRS employs Russell Investments as an overlay manager. Brandywine Manager was hired and Western Asset Management Company Manager was terminated during calendar 2022 in Marketable Fixed Income.

The Top Organizations Marketable Fixed Income		
Organization	Style	Percent of WRS Marketable Fixed Income Portfolio
ALLIANCE CORE PLUS FIXED	Core Plus	9.29%
ALTUM CREDIT	Credit	9.86%
BEACH POINT CREDIT	Opportunistic Credit	10.44%
BRANDYWINE U.S. FIXED INCO	Core Plus	9.85%
DIMENSIONAL US GOV'T	U.S. Government Debt	12.67%
DOUBLELINE US GOV'T	U.S. Government Debt	6.94%
HIGH YIELD ETF	Opportunistic Credit	5.12%
PIMCO-CLO	Corporate Bonds	21.14%
RUSSELL OVERLAY	Overlay	0.21%
SSGA US GOV. BOND	U.S. Government Debt	14.49%
WESTERN ASSET MANAGEMENT	Core Plus	0.00%

WRS has 11 external managers who manage 16 portfolio strategies for its allocations to Private Debt. As of December 31, 2022, Private Debt strategies allocation was \$440,283,526, or 4.48% of the total portfolio. Benefit Street Partners had an additional portfolio named as Special Situation Fund II in the Private Debt Funds during the year. No new manager was hired to manage the Private Debt portfolio in 2022.

Private Debts		
Organization	Style	Percent of WRS Private Debt Portfolio
MEADOWLARK FUND, L.P.	Private Debt	27.95%
KENNEDY LEWIS CAPTL PRTS	Private Debt	11.35%
SILVER ROCK ONSHORE TAF	Private Debt	11.19%
PATHLIGHT CAP FUND II LP	Private Debt	9.57%
CARL MARKS ST OPPS III LP	Private Debt	9.48%
AGL CLO DISLOCATION FND	Private Debt	8.20%
KSL-COF II-SL	Private Debt	6.15%
TENNENBAUM SR LOAN III-SL	Private Debt	5.36%
BENEFIT STREET PTRS DISL	Private Debt	2.70%
KLCP DOMESTIC FD III LP	Private Debt	2.36%
BENEFIT ST PTRS SSF II	Private Debt	1.84%
TCI REP III	Private Debt	1.35%
CENTERBRIDGE CREDIT PT-SL	Private Debt	1.13%
CARL MARKS STRATEGIC O-SL	Private Debt	1.04%
TENNENBAUM DEBT OPP FD-SL	Private Debt	0.28%
KAYNE ANDERSON MEZZANI-SL	Private Debt	0.04%

## Equity with Private Equity

Effective May 16, 2019, the WRS Governance Policy was amended to include Private Equity in the Equity Category. The Board has provided a target of 38.5% for the total Marketable Equity asset class with a strategic range of 33.5% to 43.5%. The WRS Equity asset class is, in aggregate, benchmarked against a blend of indices that reflect strategic regional weightings and the strategic allocation to Private Equity. The Private Equity sub asset class has a target of 13.0% and a strategic range of 8.0% - 18.0 %. It previously was accounted for in the Private Market Asset class but was moved to the Equity asset class based on new guidelines adopted by the Board effective 05/16/2019. The Equity blended benchmark consists of 40.8% Russell 3000 Total Return Index, 22.3 % MSCI EAFE IMI, Net Dividend (65% Hedged to USD), 11.7% MSCI EM IMI, Net Dividend, and 25.2% Cambridge Associates Global All Private Equity (Qtr Lag). Private Equity are investments in buyout and venture equity not traded in public markets. The Board has given staff the flexibility to invest in all sectors and geographies.

The top 10 holdings within the Marketable Equity portfolio as of December 31, 2022, are illustrated in the table below:

Holdings	Percent of WRS Marketable Equity Portfolio	Fair Value
APPLE INC COM STK	1.37%	48,669,829.05
MICROSOFT CORP COM	1.11%	39,591,404.16
ALPHABET INC CAPITAL STOCK USD0.001 CL A	0.81%	28,999,466.49
AGILENT TECHNOLOGIES INC COM	0.74%	26,527,410.00
UNITEDHEALTH GROUP INC COM	0.66%	23,585,097.90
VISA INC COM CL A STK	0.55%	19,670,362.56
S&P GLOBAL INC COM	0.36%	12,754,515.20
AMAZON COM INC COM	0.30%	10,693,200.00
BROADCOM INC COM	0.29%	10,245,498.12
ANALOG DEVICES INC COM	0.27%	9,479,621.76

Note: Please contact the Wyoming Retirement System for a complete list of portfolio holdings.

## Asset Class Summaries

As of December 31, 2022, the Marketable Equity allocation was \$3,412,787,267, or 34.72% of the total portfolio, after accounting for the overlay program. WRS has contracts with 13 external investment managers who manage 19 portfolio strategies. The existing manager, Burgundy, closed the portfolio in the Domestic Equity asset and then had two portfolios named as Europe and Pacific in the International Equity asset during the year. The two new managers, Earnest and Neuberger Berman, were hired in 2022.

Marketable Equity		
Organization	Style	Percent of WRS Marketable Equity Portfolio
BURGUNDY EUROPE	Developed Market	2.17%
BURGUNDY PACIFIC	Developed Market	2.11%
NEUBERGER BERMAN US SCI	US Equity	2.60%
AB-EAFE 100% USDHEDGED	Developed Market	1.12%
AB-INTERNATIONALDVLPD MARK	Developed Market	3.67%
AB-MSCI US LARGE CAP	US Equity	7.76%
AB-US QUALITY TILT	US Equity	9.04%
ALLIANCE BERNSTEIN MSCI US	US Equity	14.75%
CANTILLON-EQUITY	Developed Market	7.71%
CEVIAN CAP II-SL	Developed Market	6.30%
EARNEST SMID CAP VALUE	US Equity	4.02%
HARDING LOEVNER EM	Emerging Market	3.69%
HIGHCLERE	Developed Market	3.67%
NIKKO INTL EQUITY	Developed Market	1.97%
POLUNIN EMERGING MARKE	Emerging Market	4.27%
RS SMALL CAP GROWTH	US Equity	1.49%
SSGA - MSCI EM	Developed Market	3.11%
VALUEACT CAPITAL	US Equity	5.01%
WELLINGTON EMSCSE	Emerging Market	3.84%

Within Private Equity, WRS committed to one new strategy from a current manager in 2022, Adams Street Co-Investment Fund V. WRS also committed to a venture manager, Foundry, in 2022 as well but no capital had been called by year end. The fair value of the Private Equity assets as of December 31, 2022 was \$1,198,296,229, or 12.19% of the portfolio. Adams Street Co-Investment Fund V is a broad private equity mandate.

Private Equity		
Organization	Style	Percent of WRS Private Equity Portfolio
GROVE STREET CLOUDVEIL	Private Equity	25.75%
HILLHOUSE CAPITAL HEALTH	Private Equity	0.64%
HILLHOUSE FUND V LP	Private Equity	0.97%
HILLHOUSE FC GRW FD V LP	Private Equity	1.62%
ABBOTT II	Private Equity	27.46%
ADAMS ST CO-INV FUND V	Private Equity	0.17%
ABBOTT III	Private Equity	3.90%
ABBOTT PRIVATE EQUITY	Private Equity	36.87%
ADAMS STREET CO-INVEST	Private Equity	2.62%

## Marketable Alternatives

The Board has provided a target of 16.0% for this asset class with a strategic range of 11.0% to 21.0%. The WRS Marketable Alternatives asset class is, in aggregate, benchmarked against HFRI FoF Index.

As of December 31, 2022, the Marketable Alternatives allocation was \$1,809,342,467, or 18.41% of the total portfolio. In the calendar year 2022, WRS invests in 2 internal and 12 external mandates. Those managers are responsible for 18 unique portfolios.

One manager, PAG, was hired to manage the PAG China Credit Dislocation Fund during the year. The style for PAG is Distressed Debt. WRS also invested in a new strategy with GMO, a current manager, in 2022. The strategy is named Equity Dislocation and is run with an Absolute Return approach.

Marketable Alternatives		
Organization	Style	Percent of WRS Marketable Alternatives Portfolio
URANIUM	Absolute Return	4.71%
ACADIAN EM SC	Emerging Market	0.00%
AQR GLOBAL RISK PREMIU	Global Asset Allocation	5.11%
BRIDGEWATER-PURE ALPH	Absolute Return	14.97%
DIAMETER DISLOCATION FND	Distressed Debt	4.31%
DORSAL CAPITAL PARTNERS	Absolute Return	5.95%
DORSAL-DSOF	Absolute Return	1.34%
GMO EQUITY DISLOCATION	Absolute Return	6.01%
GMO GAAR	Global Asset Allocation	3.31%
GMO SYSTEMATIC GM	Absolute Return	5.64%
HILLHOUSE-GAOLING FUND	Equity L/S	3.39%
JANCHOR MASTER FUND	Equity L/S	4.60%
JANCHOR PARTNERS OPP. US	Equity L/S	3.92%
LFL ADVISERS-MKT ALT	Equity L/S	2.56%
NAYA FUND	Equity L/S	6.84%
PAG CHINA DISLOCATION FUND	Distressed Debt	1.91%
PERSHING SQUARE	Equity L/S	4.80%
TCI-CHILDREN'S INV FUND	Equity L/S	9.79%
WIND RIVER FUND	Equity L/S	10.83%

# Asset Class Summaries

## Private Real Assets

The Board has provided a target of 10.5% for this asset class with a strategic range of 7.5% to 15.0%. The Private Debt and Private Equity were moved from Private Markets to Fixed Income and Equity class, respectively, based on the new guideline adopted by the Board effective 05/16/2019. This leaves only Natural Resources, Infrastructure and Real Estate in the Private Real Asset class.

The subcategories are listed below:

Real Estate— Private real estate funds (not publicly traded); can be core, value-add or opportunistic.

Other Real Assets— Private funds where pricing and value is derived from holding Real assets other than real estate. Some holdings in this category would include metals and mining funds, energy funds, or infrastructure investments.

The WRS Private Markets asset class is, in aggregate, benchmarked against a blend of vintage year funds matching our internal holdings.

As of December 31, 2022, the allocation to Private Real Assets was \$1,375,696,554 or 14.00% of the total portfolio. WRS had contracts with 6 external investment managers who manage 9 portfolios. No managers were initially funded or terminated in 2022.

Organization	Style	Percent of WRS Real Assets Portfolio
WRS-BLACKSTONE BREP VIII	Real Estate	1.88%
WRS-CENTERSQUARE REIT FUND	Real Estate	10.02%
WRS-KAYNE ANDRSON KAREP III	Real Estate	0.06%
WRS-MORAN II	Real Assets	27.45%
WRS-MORAN REAL ASSET FD III	Real Assets	9.93%
WRS-MORAN REAL ASSET FUN	Real Assets	32.65%
WRS-MS PRIME PROPERTY	Real Estate	11.74%
WRS-ORION NATURAL RESOURCE	Nature Resources	1.49%
WRS-RIDGEWOOD ENERGY FUND III	Nature Resources	2.24%
WRS-RIDGEWOOD ENERGY FUND II	Nature Resources	2.73%

## Gold

Effective May 18, 2022, the WRS Governance Policy was amended to include Gold Category. The Board has provided a target of 1.5% for Gold with a strategic range of 0.0%-4.0%. As of December 31, 2022, the Gold allocation was \$250,959,366.84, or 2.55% of the total portfolio. This position is passive in nature and WRS chose to implement through an ETF. For this reason, the benchmark for Gold is itself, the IShare Gold Trust ETF (IAUM).

## Overlay

WRS employs Russell Investments to provide an overlay program to ensure the portfolio's major asset classes remain within a certain percentage of their targeted weights. Market movements can lead to significant implicit tilts within the portfolio. For example, a sharp decline in equities will many times be accompanied by stability within fixed income. Consequently, the equity position will decrease as a percentage of assets while fixed income will increase. This causes an "implicit" tilt towards fixed income. The overlay program brings these implicit tilts back within an acceptable band.

# Asset Class Summaries

## Schedule of Investment Portfolios by Asset Class

As of December 31, 2022

Asset Class	Fair Value (in USD)	Percentage of Investments at Fair Value
<b>Tactical Cash</b>		
Cash & Cash Equivalents	\$387,714,295	3.94%
Russell Overlay Program	(243,755,745)	-2.48%
<b>Total Tactical Cash</b>	<b>143,958,550</b>	<b>1.46%</b>
<b>Gold</b>	<b>250,959,367</b>	<b>2.55%</b>
<b>FIXED INCOME</b>		
Corporate Bonds/Credit	573,663,589	5.84%
Emerging Markets Debt	4,182,204	0.04%
Mortgages/ABS	14,179,608	0.14%
Private Debt	440,283,526	4.48%
Treasury/Agencies/Governments	576,817,084	5.87%
Russell Overlay Program	28,615,703	0.29%
<b>Total Fixed Income</b>	<b>1,637,741,714</b>	<b>16.66%</b>
<b>EQUITY</b>		
Domestic	1,932,463,926	19.66%
Emerging Markets	552,616,126	5.62%
International Developed	795,321,897	8.09%
Private Equity	1,198,296,229	12.19%
Russell Overlay (MSCI US)	153,121,080	1.56%
Russell Overlay (MSCI EM)	26,527,410	0.27%
Russell Overlay (MSCI World ex-US)	(47,263,173)	-0.48%
<b>Total Equity</b>	<b>4,611,083,496</b>	<b>46.91%</b>
<b>Marketable Alternatives</b>		
Diversifying	972,204,630	9.89%
Long/Short Equity, Opportunistic	837,137,837	8.52%
<b>Total Marketable Alternatives</b>	<b>1,809,342,467</b>	<b>18.41%</b>
<b>Private Real Assets</b>		
Other Real Assets	986,585,047	10.04%
Real Estate	306,356,783	3.12%
BCOM Swap	82,754,725	0.84%
<b>Total Private Real Assets</b>	<b>1,375,696,554</b>	<b>14.00%</b>
<b>Total Securities &amp; Cash</b>	<b>9,828,782,148</b>	<b>100.00%</b>

\*Due to rounding, numbers may not total exactly.

# Schedule of Fees

## Schedule of Investment Fees

Total of Defined Benefit Pension Plans				
Investment Managers	Assets Under Management	Total Management Fees	Basis Points	
Cash	\$387,714,295	\$ -	-	
Gold	250,959,367	-	-	
Fixed Income	1,609,126,011	8,358,836	52	
Equity	4,478,698,179	17,311,098	39	
Marketable Alternatives	1,809,342,467	18,764,799	104	
Private Markets	1,292,941,829	6,053,605	47	
Total Net Receivables/Payables	(8,512,982)	N/A	N/A	
<b>Total Investment Fees</b>	<b>9,820,269,166</b>	<b>50,488,338</b>	<b>51</b>	
Other Investment Service Fees				
Overlay Program Fees	384,392		N/A	
Security Lending Fees	7,570,011		N/A	
Custodian Services	1,165,525		N/A	
Investment Consultant Fees	1,592,258		N/A	
<b>Total Other Service Fees</b>	<b>10,712,186</b>		<b>N/A</b>	

Note 1: Incentive fees, estimated at \$13,498,381.21 for the year, are not included in the above table.

Note 2: Incentive fees are mostly based on an accrual. Many funds don't crystallize fees every year and are subject to "claw backs" so these are just estimates on the current year accrual. They are variable in nature based on performance so in years which returns are high, it's expected these fees will be large.

Note 3: Due to rounding, numbers may not total exactly.

Schedule of Administrative and Investment Fees						
Fiscal Year	2022	2021	2020	2019	2018	2017
Administrative and Depreciation Expense	\$10,054,985	\$9,413,325	\$8,799,934	\$7,971,274	\$8,511,839	\$8,008,568
Investment Fees	10,410,316	2,932,254	4,942,085	13,992,118	12,375,829	6,379,843
Manager Fees	50,488,338	54,464,359	47,991,177	50,218,069	52,745,561	47,559,030
Total Expenses & Fees	70,953,639	66,809,938	61,733,196	72,181,461	73,633,229	61,947,441
Fair Value of Assets	9,820,269,166	10,806,493,791	9,604,086,411	9,009,222,485	7,893,605,593	8,490,710,733
<b>Total Expenses &amp; Fees as a Percentage of Fair Value of Assets</b>	<b>0.72%</b>	<b>0.62%</b>	<b>0.64%</b>	<b>0.80%</b>	<b>0.93%</b>	<b>0.73%</b>



## Schedule of Investment Returns

The following tables compare the actual, based on market value return, for investment categories to the corresponding benchmark time weighted returns.

	2022	3 Year	5 Year	10 Year
<b>Fixed Income Returns</b>				
Total Marketable Fixed Income Portfolio (Net of fees)	-11.09%	-0.79%	1.18%	2.17%
Custom Marketable Fixed Income Benchmark*	-11.10%	-1.66%	0.66%	1.58%
Total Private Debt Portfolio (Net of fees)	-1.04%	9.52%	7.08%	9.28%
Cambridge Associates Vintage Year Blended Private Debt Benchmark	-1.62%	7.43%	7.22%	n/a
<b>Equity Returns</b>				
Total Marketable Equity Portfolio (Net of fees)	-16.46%	4.28%	5.25%	7.68%
Custom Marketable Equity Benchmark*	-15.90%	4.24%	5.28%	8.08%
Total Private Equity Portfolio (Net of fees)	7.80%	27.48%	22.61%	n/a
Cambridge Associates Global All PE	-3.84%	17.77%	15.35%	n/a
<b>Marketable Alternatives Returns</b>				
Total MA Portfolio (Net of fees)	-6.91%	5.30%	6.47%	n/a
Blended Marketable Alternatives Benchmark	-7.50%	-4.77%	3.79%	n/a
<b>Private Market Returns</b>				
Total Real Estate Portfolio (Net of fees)	10.37%	11.97%	10.12%	9.20%
Vintage Year Blend Benchmark	9.40%	10.10%	8.72%	9.46%
<b>TOTAL PORTFOLIO Returns</b>				
Total Portfolio (Net of fees)	-6.99%	6.57%	6.75%	7.24%
Strategic Blended Benchmark*	-9.12%	4.93%	5.13%	6.47%
<b>Total Gold Returns</b>				
Gold	n/a	n/a	n/a	n/a
iShare Gold Trust Micro	n/a	n/a	n/a	n/a

\*See WRS Investment Policy Statement Appendix 1 for benchmark composition.

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Annual Comprehensive Financial Report 2022

# ACTUARIAL SECTION



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May 5, 2023

Board of Trustees  
**State of Wyoming Retirement System**  
 6101 Yellowstone Road  
 Suite 500  
 Cheyenne, WY 82002

**Subject: Wyoming Retirement System – Actuarial Valuation Certification**

Dear Board of Trustees:

The Governmental Accounting Standards Board (GASB) has issued statement No. 67 which sets forth the requirements for plan reporting for each of the Wyoming Retirement System's Retirement Plans. For reporting purposes, the valuation date used is one year prior to the measurement date of December 31, 2022, and roll-forward procedures are used to update the actuarial liabilities and costs from the valuation date to the measurement date.

For purposes of reporting the financial information under GASB 68, the dates of the valuations are:

Retirement Plan	GASB 67 Actuarial Valuation Date
State of Wyoming Retirement System	January 1, 2022
Wyoming Law Enforcement Retirement Fund	January 1, 2022
Wyoming Paid Fire A Retirement Fund Plan	January 1, 2022
Wyoming Paid Fire B Retirement Fund Plan	January 1, 2022
Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund	January 1, 2022
Wyoming Judicial Retirement System	January 1, 2022
Wyoming Air Guard Firefighter Retirement System	January 1, 2022
Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Fund	January 1, 2022

Wyoming Retirement System  
May 5, 2023

Roll-forward procedures were then applied to each set of valuation results in order to provide the actuarial information as of the December 31, 2022 measurement date. Assets for the GASB 67 calculations were based on the fair value of assets as of the measurement date. Separate actuarial valuations are performed for each of the plans as the assets of each plan are only available to pay the benefits for that plan. Actuarial assumptions and methods for each plan are set by the Board of Trustees, based upon recommendations made by the plan's actuary. The current actuarial assumptions and methods were adopted by the Board effective November 17, 2021 and February 17, 2022 based on an experience study performed as of December 31, 2020.

The following schedules in this section were prepared by GRS:

- Schedule of Active Member Valuation Data
- Schedule of Retirees & Beneficiaries Added to & Removed from Rolls
- Solvency Test
- Gains & Losses in Accrued Liabilities during the Year Ended 12/31/2022
- Schedule of Funding Progress

## **Financing Objectives of the WRS Plans**

GASB reporting is separate and distinct from the financing of the plans. The basic financing objective in determining the funding requirements of the Wyoming Retirement System is to establish contribution requirements which will remain approximately level with any unfunded actuarial accrued liability paid off over a finite number of years. For plans whose benefits are based on each employee's compensation, these contribution requirements are expressed as a level percent of covered payroll. Otherwise, these contribution requirements are expressed as a level dollar amount.

Progress toward this financing objective is measured by actuarial valuations which determine the present financial position and test the adequacy of established contribution rates. The actuarial valuations are performed annually for all plans. The most recent funding valuations were performed as of January 1, 2023.

Differences between assumptions and actual experience since the prior valuation are identified as actuarial gains and losses. These gains and losses impact the unfunded actuarial accrued liability and future funding requirements determined in subsequent valuations.

Member data for retired, active and inactive members was supplied as of January 1, 2022 by the System's staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. Asset and financial information as of December 31, 2022, was supplied to us by the Wyoming Retirement System. The staff of the Wyoming Retirement System prepared the other supporting schedules in this section and the trend tables in the financial section based on information supplied in our reports.



Wyoming Retirement System  
May 5, 2023

The reports were prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. Furthermore, the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice.

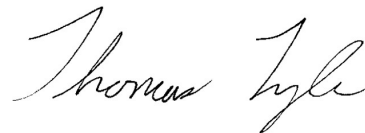
The undersigned are independent actuaries and consultants.

Thomas Lyle and Dana Woolfrey are Enrolled Actuaries and Paul Wood, Thomas Lyle, and Dana Woolfrey are Members of the American Academy of Actuaries and all three meet their Qualification Standards. All signing actuaries are experienced in performing valuations for large public retirement systems.

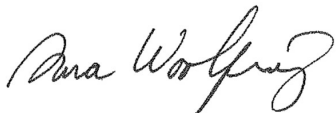
Respectfully submitted,  
**Gabriel, Roeder, Smith & Company**



Paul Wood, ASA, FCA, MAAA  
Senior Consultant



Thomas Lyle, FSA, FCA, EA, MAAA  
Consultant



Dana Woolfrey, FSA, FCA, EA, MAAA  
Senior Consultant



# Actuarial Assumptions and Methods - Public Employee Plan

## Exhibit I

### State of Wyoming Retirement System – Public Employee Plan

#### Actuarial Assumptions and Methods

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The following methods and assumptions were used in preparing the January 1, 2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percentage of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability. Amortization bases are established each year and amortized based on the Board's policy. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 30-year period with each subsequent amortization base created as a result of year to year experience changes over individual 20 year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.



# Actuarial Assumptions and Methods - Public Employee Plan

## Exhibit I

### State of Wyoming Retirement System – Public Employee Plan Actuarial Assumptions and Methods

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#### 3. Actuarial Value of Assets

The actuarial value of assets is based on the fair value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the fair value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of investment expenses. An adjustment is made if the actuarial value is not within 20% of the Fair Value. For any year following a year in which the 20% of fair value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

##### a. Investment return

6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses.

##### b. Salary increase rate

Service	Rate	Service	Rate
1	6.50%	14	3.25%
2	6.50%	15	3.00%
3	6.50%	16	3.00%
4	6.00%	17	2.75%
5	5.25%	18	2.75%
6	4.75%	19	2.75%
7	4.25%	20	2.75%
8	4.00%	21	2.50%
9	4.00%	22	2.50%
10	3.50%	23	2.50%
11	3.50%	24	2.50%
12	3.50%	25	2.50%
13	3.50%	25+	2.50%

##### c. Payroll growth rate

In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 2.50% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

##### d. Cost-of-Living adjustment

No cost-of-living adjustment is assumed since the policy for providing the benefit requires Board approval to make the recommendation to the Joint Appropriations Committee and the funded level of the plan shows a cost-of-living requirement would not be permitted.

# Actuarial Assumptions and Methods - Public Employee Plan

## Exhibit I

### State of Wyoming Retirement System – Public Employee Plan Actuarial Assumptions and Methods

#### 5. Demographic Assumptions

##### a. Mortality

Healthy Pre-Retirement Mortality:

Pub-2010 General Active Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Healthy Post-Retirement Mortality:

Pub-2010 General Healthy Annuitant Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 103%

Disabled Mortality

Pub-2010 General Disabled Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2023 using the MP-2020 Ultimate Scale					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.35%	0.20%
25	0.02%	0.01%	0.02%	0.01%	0.23%	0.14%
30	0.03%	0.01%	0.03%	0.01%	0.30%	0.22%
35	0.04%	0.02%	0.04%	0.02%	0.38%	0.34%
40	0.06%	0.03%	0.06%	0.03%	0.54%	0.53%
45	0.08%	0.05%	0.09%	0.06%	0.84%	0.83%
50	0.12%	0.07%	0.25%	0.19%	1.35%	1.24%
55	0.18%	0.10%	0.36%	0.25%	1.77%	1.46%
60	0.27%	0.16%	0.52%	0.33%	2.10%	1.64%
65	0.39%	0.25%	0.77%	0.53%	2.56%	1.90%
70	0.60%	0.42%	1.30%	0.93%	3.32%	2.43%
75			2.29%	1.66%	4.46%	3.44%
80			4.13%	3.00%	6.36%	5.20%
85			7.67%	5.70%	9.65%	8.33%
90			13.51%	10.90%	14.97%	12.59%
95			21.73%	18.41%	22.42%	18.32%
100			31.36%	27.89%	31.36%	27.08%

# Actuarial Assumptions and Methods - Public Employee Plan

## Exhibit I

### State of Wyoming Retirement System – Public Employee Plan

#### Actuarial Assumptions and Methods

#### b. Disability, Withdrawal, and Retirement

Age	Disability	
	Male	Female
20	0.01%	0.01%
25	0.01%	0.01%
30	0.01%	0.01%
35	0.01%	0.01%
40	0.01%	0.01%
45	0.02%	0.02%
50	0.12%	0.05%
55	0.24%	0.12%
60	0.24%	0.24%

Service	Withdrawal	
	Male	Female
1	13.00%	14.00%
2	13.00%	14.00%
3	13.00%	14.00%
4	13.00%	14.00%
5	13.00%	13.00%
6	11.00%	11.00%
7	10.00%	10.00%
8	9.00%	9.00%
9	8.00%	8.00%
10	8.00%	8.00%
11	8.00%	8.00%
12	8.00%	7.00%
13	7.00%	7.00%
14	6.00%	7.00%
15	6.00%	6.00%
16	5.00%	6.00%
17	5.00%	6.00%
18	4.00%	6.00%
19	3.00%	6.00%
20+	3.00%	6.00%

Age	Retirement	
	Unreduced	Reduced
<50	15.00%	0.20%
50	15.00%	0.20%
51	15.00%	0.20%
52	15.00%	0.30%
53	15.00%	0.50%
54	15.00%	0.50%
55	17.00%	1.00%
56	17.00%	1.00%
57	17.00%	1.00%
58	17.00%	1.50%
59	17.00%	2.00%
60	13.00%	2.50%
61	13.00%	2.50%
62	18.00%	2.50%
63	15.00%	2.50%
64	15.00%	2.50%
65	30.00%	
66	35.00%	
67	28.00%	
68	25.00%	
69	25.00%	
70	25.00%	
71	20.00%	
72	20.00%	
73	20.00%	
74	15.00%	
75	15.00%	
76	15.00%	
77	15.00%	
78	15.00%	
79	15.00%	
80+	100.00%	

# Actuarial Assumptions and Methods - Public Employee Plan

## Exhibit I

### State of Wyoming Retirement System – Public Employee Plan

#### Actuarial Assumptions and Methods

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##### 6. Other Assumptions

- a. Percent married: 85% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit. It is assumed that the active members will elect the maximum value of the refund or deferred benefit when they terminate.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 60 (65 for Tier 2).
- f. No benefit amount data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.
- g. There will be no recoveries once disabled. We assume all disabled members are totally disabled.
- h. No surviving spouse will remarry.
- i. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 2.50% to the valuation date.
- j. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- k. Decrement timing: Decrements of all types are assumed to occur mid-year.
- l. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- m. Decrement relativity: Decrement rates are converted to probabilities in order to account for multiple decrements.
- n. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- o. Benefit Service: All members are assumed to accrue one year of service each year. Exact fractional service is used to determine the amount of benefit payable.

# Actuarial Assumptions and Methods - Public Employee Plan

## Exhibit I

### State of Wyoming Retirement System – Public Employee Plan Changes in Plan Provisions, Actuarial Assumptions and Methods

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#### Changes in Plan Provisions

There have been no changes to the plan provisions since the prior valuation.

#### Changes in Actuarial Assumptions and Methods

There have been no changes to the assumptions or methods since the prior valuation.

# Actuarial Assumptions and Methods - Law Enforcement

## Exhibit II

### Wyoming Law Enforcement Retirement Fund Actuarial Assumptions and Methods

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The following methods and assumptions were used in preparing the January 1, 2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percentage of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability. Amortization bases are established each year and amortized based on the Board's policy. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 30 year period with each subsequent amortization base created as a result of year to year experience changes over individual 20 year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.

3. Actuarial Value of Assets

The actuarial value of assets is based on the fair value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined

# Actuarial Assumptions and Methods - Law Enforcement

## Exhibit II

### Wyoming Law Enforcement Retirement Fund

#### Actuarial Assumptions and Methods

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using the assumed investment return rate and the fair value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Fair Value. For any year following a year in which the 20% of fair value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

##### a. Investment return

6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses.

##### b. Salary increase rate

Age	Rate
20	7.00%
25	6.50%
30	5.00%
35	4.25%
40	4.25%
45	4.00%
50	3.50%
55	3.25%
60	3.00%

##### c. Payroll growth rate

In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 2.50% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

##### d. Cost-of-Living adjustment

No cost-of-living adjustment is assumed since the policy for providing the benefit requires Board approval to make the recommendation to the Joint Appropriations Committee and the funded level of the plan shows a cost-of-living requirement would not be permitted.

# Actuarial Assumptions and Methods - Law Enforcement

## Exhibit II

### Wyoming Law Enforcement Retirement Fund

#### Actuarial Assumptions and Methods

#### 5. Demographic Assumptions

##### a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

Pub-2010 Safety Healthy Active Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Healthy Post-Retirement Mortality:

Pub-2010 Safety Healthy Annuitant Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Disabled Mortality:

Pub-2010 Safety Disabled Retiree Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2023 using the MP-2020 Ultimate Scale					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.10%	0.04%
25	0.03%	0.02%	0.03%	0.02%	0.09%	0.05%
30	0.03%	0.02%	0.03%	0.02%	0.10%	0.07%
35	0.04%	0.03%	0.04%	0.03%	0.12%	0.10%
40	0.05%	0.04%	0.05%	0.04%	0.15%	0.14%
45	0.07%	0.06%	0.10%	0.07%	0.20%	0.19%
50	0.10%	0.08%	0.16%	0.12%	0.30%	0.25%
55	0.15%	0.10%	0.26%	0.22%	0.40%	0.39%
60	0.22%	0.14%	0.43%	0.37%	0.62%	0.59%
65	0.35%	0.19%	0.74%	0.65%	1.00%	0.89%
70	0.65%	0.39%	1.33%	1.13%	1.62%	1.37%
75			2.43%	1.97%	2.78%	2.10%
80			4.42%	3.43%	4.85%	3.43%
85			8.15%	6.11%	8.22%	6.11%
90			14.61%	10.88%	14.61%	10.88%
95			22.64%	17.99%	22.64%	17.99%
100			31.36%	27.08%	31.36%	27.08%

30% of active deaths are assumed to be duty-related



# Actuarial Assumptions and Methods - Law Enforcement

## Exhibit II

### Wyoming Law Enforcement Retirement Fund

#### Actuarial Assumptions and Methods

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#### b. Disability and Withdrawal

Age	Disability	
	Non-Duty	Duty
20	0.03%	0.02%
25	0.03%	0.02%
30	0.03%	0.02%
35	0.04%	0.02%
40	0.09%	0.05%
45	0.19%	0.12%
50	0.33%	0.20%
55	0.57%	0.34%
60	1.11%	0.67%
65	1.53%	0.92%
70	1.53%	0.92%
75	1.53%	0.92%

30% of active disabilities are assumed to be duty-related

Service	Withdrawal	
	Male	Female
1	12.00%	18.00%
2-4	12.00%	16.00%
5	12.00%	14.00%
6	10.00%	14.00%
7	10.00%	12.00%
8	9.00%	11.00%
9	7.00%	8.00%
10-11	6.00%	8.00%
12	5.00%	7.00%
13	4.00%	6.00%
14	4.00%	5.00%
15	3.00%	4.00%
16	3.00%	3.00%
17-18	2.00%	2.00%
19-20	1.00%	1.00%
21+	0.00%	0.00%

#### c. Retirement Rates

Age	Normal	Early
50	25.00%	2.00%
51-56	18.00%	2.00%
57-60	20.00%	2.00%
61-62	17.00%	
63-64	20.00%	
65-69	50.00%	
70+	100.00%	

15% is assumed for members with at least 20 years of service before age 50

# Actuarial Assumptions and Methods - Law Enforcement

## Exhibit II

### Wyoming Law Enforcement Retirement Fund Actuarial Assumptions and Methods

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#### 6. Other Assumptions

- a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: It is assumed that 45% of active members who terminate with a vested deferred benefit will elect to have their contributions refunded.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 60.
- f. No benefit amount data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.
- g. There will be no recoveries once disabled.
- h. No children are assumed for purposes of valuing the ordinary death benefit.
- i. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 2.50% to the valuation date.
- j. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- k. Decrement timing: Decrements of all types are assumed to occur mid-year.
- l. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- m. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- n. Benefit Service: All members are assumed to accrue one year of service each year.

# Actuarial Assumptions and Methods - Law Enforcement

## Exhibit II

### Wyoming Law Enforcement Retirement Fund

#### Changes in Plan Provisions, Actuarial Assumptions and Methods

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##### Changes in Plan Provisions

Death benefits for active members were revised pursuant to Enrolled Act No. 22.

##### Changes in Actuarial Assumptions and Methods

There have been no changes to the assumptions or methods since the prior valuation.

# Actuarial Assumptions and Methods - Paid Fire A Pension Plan

## Exhibit III

### Wyoming Paid Fire A Retirement Fund Plan

#### Actuarial Assumptions and Methods

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The following methods and assumptions were used in preparing the January 1, 2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percentage of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 10 years from the valuation date, as a level dollar amount.

# Actuarial Assumptions and Methods - Paid Fire A Pension Plan

## Exhibit III

### Wyoming Paid Fire A Retirement Fund Plan Actuarial Assumptions and Methods

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#### 3. Actuarial Value of Assets

The actuarial value of assets is based on the value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the assumed investment return rate and the fair value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Fair Value. For any year following a year in which the 20% of fair value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

##### a. Investment return

6.80% per year, compounded annually. This rate represents the assumed return, net of investment expenses.

##### b. Salary increase rate

4.50% per year

##### c. Payroll growth rate

In the amortization of the unfunded actuarial accrued liability, payroll is not assumed to increase. The assumed payroll growth in a closed plan is 0%.

#### 5. Demographic Assumptions

##### a. Mortality

###### Healthy Post-Retirement Mortality:

Pub-2010 Safety Active Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

###### Disabled Mortality

Pub-2010 Safety Disabled Retiree Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

# Actuarial Assumptions and Methods - Paid Fire A Pension Plan

## Exhibit III

### Wyoming Paid Fire A Retirement Fund Plan

#### Actuarial Assumptions and Methods

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2023 using the Scale MP-2020 Ultimate Scale					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.10%	0.04%
25	0.03%	0.02%	0.03%	0.02%	0.09%	0.05%
30	0.03%	0.02%	0.03%	0.02%	0.10%	0.07%
35	0.04%	0.03%	0.04%	0.03%	0.12%	0.10%
40	0.05%	0.04%	0.05%	0.04%	0.15%	0.14%
45	0.07%	0.06%	0.10%	0.07%	0.20%	0.19%
50	0.10%	0.08%	0.16%	0.12%	0.30%	0.25%
55	0.15%	0.10%	0.26%	0.22%	0.40%	0.39%
60	0.22%	0.14%	0.43%	0.37%	0.62%	0.59%
65	0.35%	0.19%	0.74%	0.65%	1.00%	0.89%
70	0.65%	0.39%	1.33%	1.13%	1.62%	1.37%
75			2.43%	1.97%	2.78%	2.10%
80			4.42%	3.43%	4.85%	3.43%
85			8.15%	6.11%	8.22%	6.11%
90			14.61%	10.88%	14.61%	10.88%
95			22.64%	17.99%	22.64%	17.99%
100			31.36%	27.08%	31.36%	27.08%

#### b. Disability and Withdrawal

Age	Disability	Withdrawal
20	0.03%	12.00%
25	0.03%	8.00%
30	0.03%	5.00%
35	0.19%	3.00%
40	0.42%	1.00%
45	0.65%	1.00%
50	0.82%	1.00%
55	1.81%	0.50%
60	2.00%	0.50%

#### c. Retirement Rates

Age	Rate	Age	Rate
50	20%	57	25%
51	25%	58	25%
52	25%	59	25%
53	25%	60	100%
54	25%	61	100%
55	25%	62	100%
56	25%		

# Actuarial Assumptions and Methods - Paid Fire A Pension Plan

## Exhibit III

### Wyoming Paid Fire A Retirement Fund Plan Actuarial Assumptions and Methods

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#### 6. Other Assumptions

- a. Percent married: For members who have not provided beneficiary information, 100% of are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is 20 years after hire date.
- f. No benefit amount data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.
- g. There will be no recoveries once disabled.
- h. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 2.50% to the valuation date.
- i. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- j. Decrement timing: Decrements of all types are assumed to occur mid-year.
- k. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- l. Benefit Service: All members are assumed to accrue one year of service each year.

# Actuarial Assumptions and Methods - Paid Fire A Pension Plan

## Exhibit III

### Wyoming Paid Fire A Retirement Fund Plan

#### Changes in Plan Provisions, Actuarial Assumptions and Methods

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##### Changes in Plan Provisions

There have been no changes to the plan provisions since the prior valuation.

##### Changes in Actuarial Assumptions and Methods

The mortality assumptions have been updated to reflect the experience study that was conducted on behalf of all WRS' plans covering the five-year period ending December 31, 2020.



# Actuarial Assumptions and Methods - Paid Fire B Pension Plan

## Exhibit IV

### Wyoming Paid Fire B Retirement Fund Plan

#### Actuarial Assumptions and Methods

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The following methods and assumptions were used in preparing the January 1, 2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percentage of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL) or the surplus amount.

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability. Amortization bases are established each year and amortized based on the Board's policy. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 30 year period with each subsequent amortization base created as a result of year to year experience changes over individual 20 year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.

3. Actuarial Value of Assets

The actuarial value of assets is based on the fair value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the fair value of assets

# Actuarial Assumptions and Methods - Paid Fire B Pension Plan

## Exhibit IV

### Wyoming Paid Fire B Retirement Fund Plan

#### Actuarial Assumptions and Methods

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(adjusted for receipts and disbursements during the year). The returns are computed net of investment expenses. An adjustment is made if the actuarial value is not within 20% of the Fair Value. For any year following a year in which the 20% of fair value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

##### a. Investment return

6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses.

##### b. Salary increase rate

Age	Rate
< 20	7.50%
20-25	7.50%
25-29	7.00%
30-35	5.50%
35 +	4.50%

##### c. Payroll growth rate

In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 2.50% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

##### d. Cost-of-Living adjustment

No cost-of-living adjustment is assumed since the policy for providing the benefit requires Board approval to make the recommendation to the Joint Appropriations Committee and the funded level of the plan shows a cost-of-living requirement would not be permitted.

#### 5. Demographic Assumptions

##### a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

Pub-2010 Safety Healthy Active Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Healthy Post-Retirement Mortality:

Pub-2010 Safety Healthy Annuitant Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

# Actuarial Assumptions and Methods - Paid Fire B Pension Plan

## Exhibit IV

### Wyoming Paid Fire B Retirement Fund Plan

#### Actuarial Assumptions and Methods

#### Disabled Mortality

Pub-2010 Safety Disabled Retiree Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2023 using the Scale MP-2020 Ultimate Scale					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.10%	0.04%
25	0.03%	0.02%	0.03%	0.02%	0.09%	0.05%
30	0.03%	0.02%	0.03%	0.02%	0.10%	0.07%
35	0.04%	0.03%	0.04%	0.03%	0.12%	0.10%
40	0.05%	0.04%	0.05%	0.04%	0.15%	0.14%
45	0.07%	0.06%	0.10%	0.07%	0.20%	0.19%
50	0.10%	0.08%	0.16%	0.12%	0.30%	0.25%
55	0.15%	0.10%	0.26%	0.22%	0.40%	0.39%
60	0.22%	0.14%	0.43%	0.37%	0.62%	0.59%
65	0.35%	0.19%	0.74%	0.65%	1.00%	0.89%
70	0.65%	0.39%	1.33%	1.13%	1.62%	1.37%
75			2.43%	1.97%	2.78%	2.10%
80			4.42%	3.43%	4.85%	3.43%
85			8.15%	6.11%	8.22%	6.11%
90			14.61%	10.88%	14.61%	10.88%
95			22.64%	17.99%	22.64%	17.99%
100			31.36%	27.08%	31.36%	27.08%

100% of active deaths and disabilities are assumed to be duty-related.

#### b. Disability and Withdrawal

Age	Disability	Withdrawal
20	0.02%	10.00%
25	0.02%	6.00%
30	0.02%	4.00%
35	0.15%	2.50%
40	0.34%	2.00%
45	0.52%	1.50%
50	0.66%	1.50%
55	1.45%	0.50%
60	1.60%	0.50%

# Actuarial Assumptions and Methods - Paid Fire B Pension Plan

## Exhibit IV

### Wyoming Paid Fire B Retirement Fund Plan

#### Actuarial Assumptions and Methods

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c. Retirement Rates

Age	Rate
50	25.00%
51	10.00%
52	10.00%
53	10.00%
54	10.00%
55	25.00%
56	25.00%
57	25.00%
58	15.00%
59	15.00%
60	25.00%
61	50.00%
62	100.00%

# Actuarial Assumptions and Methods - Paid Fire B Pension Plan

## Exhibit IV

### Wyoming Paid Fire B Retirement Fund Plan

#### Actuarial Assumptions and Methods

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#### 6. Other Assumptions

- a. Percent married: 100.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 50.
- f. No benefit amount data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.
- g. There will be no recoveries once disabled. We assume all disabled members are totally disabled.
- h. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 2.50% to the valuation date.
- i. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- j. Decrement timing: Decrements of all types are assumed to occur mid-year.
- k. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- l. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- m. Benefit Service: All members are assumed to accrue one year of service each year.

# Actuarial Assumptions and Methods - Paid Fire B Pension Plan

## Exhibit IV

### Wyoming Paid Fire B Retirement Fund Plan

#### Changes in Plan Provisions, Actuarial Assumptions and Methods

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##### Changes in Plan Provisions

There have been no changes to the benefit provisions since the prior valuation.

##### Changes in Actuarial Assumptions and Methods

There have been no changes to the assumptions or methods since the prior valuation.

# Actuarial Assumptions and Methods - Warden, Patrol, DCI Plan

## Exhibit V

### Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund

#### Actuarial Assumptions and Methods

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The following methods and assumptions were used in preparing the January 1, 2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percentage of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability. Amortization bases are established each year and amortized based on the Board's policy. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 30 year period with each subsequent amortization base created as a result of year to year experience changes over individual 20 year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.

# Actuarial Assumptions and Methods - Warden, Patrol, DCI Plan

## Exhibit V

### Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund

#### Actuarial Assumptions and Methods

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#### 3. Actuarial Value of Assets

The actuarial value of assets is based on the fair value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the assumed investment return rate and the fair value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Fair Value. For any year following a year in which the 20% of fair value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

##### a. Investment return

6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses.

##### b. Salary increase rate

Age	Rate
20	8.50%
25	8.00%
30	5.75%
35	4.00%
40	3.00%
45	3.00%
50	3.00%
55	2.50%
60	2.50%

##### c. Payroll growth rate

In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 2.50% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

##### d. Cost-of-Living adjustment

No cost-of-living adjustment is assumed since the policy for providing the benefit requires Board approval to make the recommendation to the Joint Appropriations Committee and the funded level of the plan shows a cost-of-living requirement would not be permitted.



# Actuarial Assumptions and Methods - Warden, Patrol, DCI Plan

## Exhibit V

### Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund

#### Actuarial Assumptions and Methods

#### 5. Demographic Assumptions

##### a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

Pub-2010 Safety Healthy Active Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Healthy Post-Retirement Mortality:

Pub-2010 Safety Healthy Annuitant Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Disabled Mortality:

Pub-2010 Safety Disabled Retiree Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2023 using the MP-2020 Ultimate Scale					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.10%	0.04%
25	0.03%	0.02%	0.03%	0.02%	0.09%	0.05%
30	0.03%	0.02%	0.03%	0.02%	0.10%	0.07%
35	0.04%	0.03%	0.04%	0.03%	0.12%	0.10%
40	0.05%	0.04%	0.05%	0.04%	0.15%	0.14%
45	0.07%	0.06%	0.10%	0.07%	0.20%	0.19%
50	0.10%	0.08%	0.16%	0.12%	0.30%	0.25%
55	0.15%	0.10%	0.26%	0.22%	0.40%	0.39%
60	0.22%	0.14%	0.43%	0.37%	0.62%	0.59%
65	0.35%	0.19%	0.74%	0.65%	1.00%	0.89%
70	0.65%	0.39%	1.33%	1.13%	1.62%	1.37%
75			2.43%	1.97%	2.78%	2.10%
80			4.42%	3.43%	4.85%	3.43%
85			8.15%	6.11%	8.22%	6.11%
90			14.61%	10.88%	14.61%	10.88%
95			22.64%	17.99%	22.64%	17.99%
100			31.36%	27.08%	31.36%	27.08%

100% of active deaths are assumed to be duty-related

# Actuarial Assumptions and Methods - Warden, Patrol, DCI Plan

## Exhibit V

### Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund

#### Actuarial Assumptions and Methods

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b. Disability and Withdrawal

Age	Disability	Withdrawal
20	0.10%	4.50%
25	0.10%	4.50%
30	0.23%	4.50%
35	0.39%	4.50%
40	0.57%	3.00%
45	0.73%	3.00%
50	0.75%	1.00%
55	0.75%	1.00%
60	0.75%	1.00%

100% of active disabilities are assumed to be duty-related

c. Retirement Rates

Age	Rate
50	15.00%
51	5.00%
52	5.00%
53	5.00%
54	10.00%
55	10.00%
56	10.00%
57	15.00%
58	15.00%
59	15.00%
60	35.00%
61	40.00%
62	100.00%

# Actuarial Assumptions and Methods - Warden, Patrol, DCI Plan

## Exhibit V

### Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund

#### Actuarial Assumptions and Methods

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##### 6. Other Assumptions

- a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 50.
- f. No benefit amount data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.
- g. There will be no recoveries once disabled.
- h. Administrative expenses: Average of actual expenses for the prior two years, with each year projected at 2.50% to the valuation date.
- i. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- j. Decrement timing: Decrements of all types are assumed to occur mid-year.
- k. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- l. Incidence of contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- m. Benefit service: All members are assumed to accrue one year of service each year.

# Actuarial Assumptions and Methods - Warden, Patrol, DCI Plan

## Exhibit V

### Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund

#### Changes in Plan Provisions, Actuarial Assumptions and Methods

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##### Changes in Plan Provisions

Death benefits for active members were revised pursuant to Enrolled Act No. 22.

##### Changes in Actuarial Assumptions and Methods

There have been no changes to the assumptions or methods since the prior valuation.

# Actuarial Assumptions and Methods - Judicial Plan

## Exhibit VI

### Wyoming Judicial Retirement System

#### Actuarial Assumptions and Methods

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The following methods and assumptions were used in preparing the January 1, 2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percent of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also expected. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 15 years from the valuation date. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 15 year period with each subsequent amortization base created as a result of year to year experience changes over individual 15 year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.

3. Actuarial Value of Assets

The actuarial value of assets is based on the fair value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the

# Actuarial Assumptions and Methods - Judicial Plan

## Exhibit VI

### Wyoming Judicial Retirement System Actuarial Assumptions and Methods

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assumed investment return rate and the fair value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Fair Value. For any year following a year in which the 20% of fair value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

##### a. Investment return

6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses.

##### b. Salary increase rate

3.75% per annum

##### c. Payroll growth rate

In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.75% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

##### d. Cost-of-Living adjustment

No cost-of-living adjustment is assumed since the policy for providing the benefit requires Board approval to make the recommendation to the Joint Appropriations Committee and the funded level of the plan shows a cost-of-living requirement would not be permitted.

#### 5. Demographic Assumptions

##### a. Mortality

###### Healthy Pre-Retirement Mortality:

Pub-2010 General Active Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

###### Healthy Post-Retirement Mortality:

Pub-2010 General Healthy Annuitant Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 103%

###### Disabled Mortality

Pub-2010 General Disabled Retiree Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

# Actuarial Assumptions and Methods - Judicial Plan

## Exhibit VI

### Wyoming Judicial Retirement System Actuarial Assumptions and Methods

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2023 using the MP-2020 Ultimate Scale					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.35%	0.20%
25	0.02%	0.01%	0.02%	0.01%	0.23%	0.14%
30	0.03%	0.01%	0.03%	0.01%	0.30%	0.22%
35	0.04%	0.02%	0.04%	0.02%	0.38%	0.34%
40	0.06%	0.03%	0.06%	0.03%	0.54%	0.53%
45	0.08%	0.05%	0.09%	0.06%	0.84%	0.83%
50	0.12%	0.07%	0.25%	0.19%	1.35%	1.24%
55	0.18%	0.10%	0.36%	0.25%	1.77%	1.46%
60	0.27%	0.16%	0.52%	0.33%	2.10%	1.64%
65	0.39%	0.25%	0.77%	0.53%	2.56%	1.90%
70	0.60%	0.42%	1.30%	0.93%	3.32%	2.43%
75			2.29%	1.66%	4.46%	3.44%
80			4.13%	3.00%	6.36%	5.20%
85			7.67%	5.70%	9.65%	8.33%
90			13.51%	10.90%	14.97%	12.59%
95			21.73%	18.41%	22.42%	18.32%
100			31.36%	27.89%	31.36%	27.08%

#### b. Disability

Age	Disability	
	Male	Female
20	0.01%	0.01%
25	0.01%	0.01%
30	0.01%	0.01%
35	0.01%	0.01%
40	0.01%	0.01%
45	0.01%	0.01%
50	0.03%	0.03%
55	0.05%	0.05%
60	0.07%	0.07%

#### c. Withdrawal

No terminations are assumed to occur during the year.

# Actuarial Assumptions and Methods - Judicial Plan

**Exhibit VI**  
**Wyoming Judicial Retirement System**  
**Actuarial Assumptions and Methods**

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d. Retirement Rates

Age	Rate	Age	Rate
55	2%	64	2%
56	2%	65	25%
57	2%	66	15%
58	2%	67	15%
59	2%	68	15%
60	2%	69	15%
61	2%	70	100%
62	2%	71	100%
63	2%	72	100%



# Actuarial Assumptions and Methods - Judicial Plan

## Exhibit VI

### Wyoming Judicial Retirement System

#### Actuarial Assumptions and Methods

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#### 6. Other Assumptions

- a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit. It is assumed that 25% of active members who terminate with a deferred vested benefit will elect to have their contributions refunded.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 65.
- f. No benefit amount data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.
- g. There will be no recoveries once disabled. We assume all disabled members are totally disabled.
- h. No surviving spouse will remarry.
- i. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 2.50% to the valuation date.
- j. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- k. Decrement timing: Decrements of all types are assumed to occur mid-year.
- l. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- m. Decrement relativity: Decrement rates are converted to probabilities in order to account for multiple decrements.
- n. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- o. Benefit Service: All members are assumed to accrue one year of service each year. Exact fractional service is used to determine the amount of benefit payable.

# Actuarial Assumptions and Methods - Judicial Plan

## Exhibit VI

### Wyoming Judicial Retirement System

#### Changes in Plan Provisions, Actuarial Assumptions and Methods

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##### Changes in Plan Provisions

There have been no changes to the plan provisions since the prior valuation.

##### Changes in Actuarial Assumptions and Methods

There have been no changes to the assumptions or methods since the prior valuation.

# Actuarial Assumptions and Methods - Air Guard Firefighter Plan

## Exhibit VII

### Wyoming Air Guard Firefighter Retirement System

#### Actuarial Assumptions and Methods

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The following methods and assumptions were used in preparing the January 1, 2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percent of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability. Amortization bases are established each year and amortized based on the Board's policy. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 30 year period with each subsequent amortization base created as a result of year to year experience changes over individual 20 year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.

3. Actuarial Value of Assets

The actuarial value of assets is based on the fair value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the

# Actuarial Assumptions and Methods - Air Guard Firefighter Plan

## Exhibit VII

### Wyoming Air Guard Firefighter Retirement System

#### Actuarial Assumptions and Methods

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assumed investment return rate and the fair value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Fair Value. For any year following a year in which the 20% of fair value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

##### a. Investment return

6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses.

##### b. Salary increase rate

Service	Rate	Service	Rate
1	6.50%	14	3.25%
2	6.50%	15	3.00%
3	6.50%	16	3.00%
4	6.00%	17	2.75%
5	5.25%	18	2.75%
6	4.75%	19	2.75%
7	4.25%	20	2.75%
8	4.00%	21	2.50%
9	4.00%	22	2.50%
10	3.50%	23	2.50%
11	3.50%	24	2.50%
12	3.50%	25	2.50%
13	3.50%	25+	2.50%

##### c. Payroll growth rate

In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 2.50% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

##### d. Cost-of-Living adjustment

No cost-of-living adjustment is assumed since the policy for providing the benefit requires Board approval to make the recommendation to the Joint Appropriations Committee and the funded level of the plan shows a cost-of-living requirement would not be permitted.

#### 5. Demographic Assumptions

##### a. Mortality

Healthy Pre-Retirement Mortality:

Pub-2010 General Active Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

# Actuarial Assumptions and Methods - Air Guard Firefighter Plan

## Exhibit VII

### Wyoming Air Guard Firefighter Retirement System

#### Actuarial Assumptions and Methods

Healthy Post-Retirement Mortality:

Pub-2010 General Healthy Annuitant Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 103%

Disabled Mortality

Pub-2010 General Disabled Retiree Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2023 using Scale MP-2020					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.35%	0.20%
25	0.02%	0.01%	0.02%	0.01%	0.23%	0.14%
30	0.03%	0.01%	0.03%	0.01%	0.30%	0.22%
35	0.04%	0.02%	0.04%	0.02%	0.38%	0.34%
40	0.06%	0.03%	0.06%	0.03%	0.54%	0.53%
45	0.08%	0.05%	0.09%	0.06%	0.84%	0.83%
50	0.12%	0.07%	0.25%	0.19%	1.35%	1.24%
55	0.18%	0.10%	0.36%	0.25%	1.77%	1.46%
60	0.27%	0.16%	0.52%	0.33%	2.10%	1.64%
65	0.39%	0.25%	0.77%	0.53%	2.56%	1.90%
70	0.60%	0.42%	1.30%	0.93%	3.32%	2.43%
75			2.29%	1.66%	4.46%	3.44%
80			4.13%	3.00%	6.36%	5.20%
85			7.67%	5.70%	9.65%	8.33%
90			13.51%	10.90%	14.97%	12.59%
95			21.73%	18.41%	22.42%	18.32%
100			31.36%	27.89%	31.36%	27.08%

# Actuarial Assumptions and Methods - Air Guard Firefighter Plan

## Exhibit VII

### Wyoming Air Guard Firefighter Retirement System Actuarial Assumptions and Methods

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#### b. Disability and Withdrawal

Age	Disability	
	Male	Female
20	0.01%	0.01%
25	0.01%	0.01%
30	0.01%	0.01%
35	0.01%	0.01%
40	0.01%	0.01%
45	0.03%	0.03%
50	0.08%	0.08%
55	0.20%	0.20%
60	0.20%	0.20%

65% of active disabilities are assumed to be duty-related

Withdrawal		
Service	Male	Female
1	13.00%	14.00%
2	13.00%	14.00%
3	13.00%	14.00%
4	13.00%	14.00%
5	13.00%	13.00%
6	11.00%	11.00%
7	10.00%	10.00%
8	9.00%	9.00%
9	8.00%	8.00%
10	8.00%	8.00%
11	8.00%	8.00%
12	8.00%	7.00%
13	7.00%	7.00%
14	6.00%	7.00%
15	6.00%	6.00%
16	5.00%	6.00%
17	5.00%	6.00%
18	4.00%	6.00%
19	3.00%	6.00%
20+	3.00%	6.00%

# Actuarial Assumptions and Methods - Air Guard Firefighter Plan

## Exhibit VII

### Wyoming Air Guard Firefighter Retirement System

#### Actuarial Assumptions and Methods

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##### c. Retirement Rates

Age	Retirement	
	Unreduced	Reduced
<50	15.0%	0.2%
50	15.0%	0.2%
51	15.0%	0.2%
52	15.0%	0.3%
53	15.0%	0.5%
54	15.0%	0.5%
55	17.0%	1.0%
56	17.0%	1.0%
57	17.0%	1.0%
58	17.0%	1.5%
59	17.0%	2.0%
60	13.0%	2.5%
61	13.0%	2.5%
62	18.0%	2.5%
63	15.0%	2.5%
64	15.0%	2.5%
65	30.0%	2.5%
66	35.0%	2.5%
67	28.0%	2.5%
68	25.0%	2.5%
69	25.0%	2.5%
70	25.0%	2.5%
71	20.0%	2.5%
72	20.0%	2.5%
73	20.0%	2.5%
74	15.0%	2.5%
75	15.0%	2.5%
76	15.0%	2.5%
77	15.0%	2.5%
78	15.0%	2.5%
79	15.0%	2.5%
80+	100.0%	100.0%

# Actuarial Assumptions and Methods - Air Guard Firefighter Plan

## Exhibit VII

### Wyoming Air Guard Firefighter Retirement System Actuarial Assumptions and Methods

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#### 6. Other Assumptions

- a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 60.
- f. No benefit amount data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.
- g. There will be no recoveries once disabled.
- h. Administrative expenses: Assumed to be the average of the actual expenses for the prior two years, with each year projected at 2.50% to the valuation date.
- i. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- j. Decrement timing: Decrements of all types are assumed to occur mid-year.
- k. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- l. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- m. Benefit Service: All members are assumed to accrue one year of service each year. Exact fractional service is used to determine the amount of benefit payable.



# Actuarial Assumptions and Methods - Air Guard Firefighter Plan

## Exhibit VII

### Wyoming Air Guard Firefighter Retirement System

#### Changes in Plan Provisions, Actuarial Assumptions and Methods

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##### Changes in Plan Provisions

There have been no changes to the plan provisions since the prior valuation.

##### Changes in Actuarial Assumptions and Methods

There have been no changes to the assumptions or methods since the prior valuation.

# Actuarial Assumptions and Methods - Vol Fire, EMT and S&R Plan

## Exhibit VIII

### Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Fund

#### Actuarial Assumptions and Methods

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The following methods and assumptions were used in preparing the January 1, 2023 actuarial valuation report.

1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level dollar amount. Under this method, the employer contribution amount is the sum of (i) the employer normal cost amount, and (ii) the amount that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.80%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, and sex. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, or survivor's benefit. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant employer contribution amount which, if applied to each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.
- d. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 30 year period with each subsequent amortization base created as a result of year to year experience changes over individual 20 year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.

3. Actuarial Value of Assets

The actuarial value of assets is based on the fair value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the assumed investment return rate and the fair value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of investment expenses. An adjustment is made if the actuarial value is not within 20% of the Fair Value. For any year following

# Actuarial Assumptions and Methods - Vol Fire, EMT and S&R Plan

## Exhibit VIII

### Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Fund

#### Actuarial Assumptions and Methods

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a year in which the 20% of fair value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

Investment return: 6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses.

#### 5. Demographic Assumptions

##### a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

Pub-2010 General Mortality Table, amount weighted, fully generational, projected with Scale MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Healthy Post-Retirement Mortality:

Pub-2010 General Healthy Annuitant Mortality Table, amount weighted, fully generational, projected with Scale MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 103%

Age	Pre-Retirement		Post-Retirement	
	Projected to 2023 using the MP-2020 Ultimate Scale			
	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%
25	0.02%	0.01%	0.02%	0.01%
30	0.03%	0.01%	0.03%	0.01%
35	0.04%	0.02%	0.04%	0.02%
40	0.06%	0.03%	0.06%	0.03%
45	0.08%	0.05%	0.09%	0.06%
50	0.12%	0.07%	0.25%	0.19%
55	0.18%	0.10%	0.36%	0.25%
60	0.27%	0.16%	0.52%	0.33%
65	0.39%	0.25%	0.77%	0.53%
70	0.60%	0.42%	1.30%	0.93%
75			2.29%	1.66%
80			4.13%	3.00%
85			7.67%	5.70%
90			13.51%	10.90%
95			21.73%	18.41%
100			31.36%	27.89%

# Actuarial Assumptions and Methods - Vol Fire, EMT and S&R Plan

## Exhibit VIII

### Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Fund

#### Actuarial Assumptions and Methods

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b. Withdrawal Rates

Age	Withdrawal	
	Male	Female
20	10.00%	10.00%
25	6.00%	6.00%
30	5.00%	5.00%
35	4.00%	4.00%
40	4.00%	4.00%
45	3.00%	3.00%
50	2.50%	2.50%
55	1.50%	1.50%
60	1.00%	1.00%

c. Retirement Rates

Age	Rates
<60	0.0%
60	55.0%
61	25.0%
62	15.0%
63	15.0%
64	15.0%
65	25.0%
66	30.0%
67	20.0%
68	20.0%
69	20.0%
70	100.0%

# Actuarial Assumptions and Methods - Vol Fire, EMT and S&R Plan

## Exhibit VIII

### Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Fund

#### Actuarial Assumptions and Methods

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##### 6. Other Assumptions

- a. Percent married: 85% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Administrative expenses: Average of actual expenses for the prior two years, with each year projected at 2.50% to the valuation date.
- e. Decrement timing: Decrements of all types are assumed to occur mid-year.
- f. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- g. Incidence of contributions: Contributions are assumed to be received continuously throughout the year.
- h. Benefit service: All members are assumed to accrue one year of service each year.
- i. Premium tax allocation: Provided by staff and based on booked total premium taxes.
- j. Percent of eligible deferred vested members electing a refund: 25% of all future deferred vested members are assumed to leave their contributions in the fund and elect a deferred vested annuity payable commencing at age 60.
- k. No benefit data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.

# Actuarial Assumptions and Methods - Vol Fire, EMT and S&R Plan

## Exhibit VIII

### Wyoming Volunteer Firefighter, EMT, and Search and Rescue Pension Fund Changes in Plan Provisions, Actuarial Assumptions and Methods

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#### **Merger of the Volunteer Plans**

Effective July 1, 2015, the Volunteer Firefighter Pension Fund and the Volunteer Emergency Medical Technician Pension Fund were merged into one plan, the Volunteer Firefighter and Emergency Medical Technician Pension Fund.

#### **Changes in Plan Provisions**

There have been no changes to the plan provisions since the prior valuation.

#### **Changes in Actuarial Assumptions and Methods**

There have been no changes to the assumptions or methods since the prior valuation.

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# Actuarial Summary

## Assets

As shown in the Statement of Fiduciary Net Position (located in the Financial Section) as of December 31, 2022, net position totaled \$9,864,778,687 at fair value; compared to \$10,917,527,395 the prior year. This represents a decrease of -9.64%.

**For the Public Employee Pension Plan**, there is a difference of approximately \$245.0 million between fair and actuarial value of assets. The actuarial value of assets on this basis is \$8,651,600,098, which is \$262 million higher than last year's actuarial value of \$8,389,355,255.

**For the Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Pension Plan**, there is an approximate difference of \$5.2 million between fair and actuarial value of assets. The actuarial value of assets on this basis is \$176,556,047 which is 3.82% higher than last year's value of \$170,067,180.

**For the Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan**, there is an approximate difference of \$3.3 million between fair value and actuarial value of assets. The actuarial value of assets on this basis is \$101,757,644, which is 3.83% higher than last year's value of \$97,999,632.

**For the Paid Fire A Pension Plan**, there is an approximate difference of \$8.8 million between fair value and actuarial value of assets. The actuarial value of assets on this basis is \$136,143,027, which is 91.73% higher than last year's value of \$71,006,860.

**For the Paid Fire B Pension Plan**, there is an approximate difference of \$6.7 million between fair value and actuarial value of assets. The actuarial value of assets on this basis is \$211,609,239, which is 7.75% higher than last year's value of \$196,392,646.

**For the Wyoming Judicial Pension Plan**, there is an approximate difference of \$1.3 million between fair value and actuarial value of assets. The actuarial value of assets on this basis is \$41,717,146, which is 5.98% higher than last year's value of \$39,362,946.

**For the Wyoming Law Enforcement Pension Plan**, there is an approximate difference of \$24.8 million between fair value and actuarial value of assets. The actuarial value of assets on this basis is \$831,035,274, which is 5.25% higher than last year's value of \$789,572,141.

**For the Air Guard Firefighter Pension Plan**, there is an approximate difference of \$0.3 million between fair value and actuarial value of assets. The actuarial value of assets on this basis is \$9,896,389, which is 3.69% higher than last year's value of \$9,544,656.

## Results of Actuarial Valuation

An actuarial cost procedure, known as the individual entry age normal actuarial cost method, for funding all benefits has been utilized. This method is used in situations where a cost is desired which will remain relatively level as a percentage of the participating payroll.

Under the individual entry age normal actuarial method, the total contribution requirement has three components: an annual normal cost, an allowance for administrative expenses, and a payment with respect to the unfunded actuarial accrued liability (UAAL).

The annual normal cost is calculated as the level percentage of pay required over each employee's period of covered employment to fund the total expected benefits. If the average entry age remains stable, the total normal cost rate should remain a level percentage of payrolls.

The normal cost payments are not sufficient to finance the benefit program when there is an unfunded actuarial liability. An unfunded actuarial liability may be created by changes in the benefits, actuarial assumptions, or funding method and by experience, which differs from that projected by the actuarial assumptions. When plan assets exceed the actuarial liability, there is a negative unfunded liability indicating that past changes and experience have been favorable.

The cost of funding (or amortizing) the unfunded actuarial accrued liability (UAAL) was calculated over an open period. This methodology was adopted by the Retirement Board effective January 1, 2008. This amortization is added to the normal cost with administrative expenses to determine the total cost.



## Schedule of Active Member Valuation Data

### Funding Status

It is the responsibility of the WRS Board to develop and maintain funding policy.

One measure of the progress of funding a retirement plan is by funding ratios. The funding ratio represents the percentage of plan assets to plan liabilities, which are both measured as of a point in time. See schedule of funding progress included at the end of this section of the report.

### Funding Basis –Actuarial Accrued Liability

This measure of liabilities is used in calculating pension costs. It uses the Entry Age Normal Actuarial Cost method that spreads costs as a level percentage of payrolls over a participant's working career.

For determining plan costs, a smoothed value of assets (called actuarial value) is used. Hence, for this ratio, the actuarial value of assets is used.

Public Employee Pension Plan						
Valuation Date	Reporting Agencies	Current Employees	Annual Payroll*	Annual Average Salary	% Increase In Average Salary	Average Monthly Salary
1/1/2014	485	36,354	\$1,782,062	\$49,020	0.2%	\$4,085
1/1/2015	478	36,489	\$1,818,197	\$49,829	1.7%	\$4,152
1/1/2016	479	36,577	\$1,858,678	\$50,816	2.0%	\$4,235
1/1/2017	479	35,892	\$1,851,874	\$51,596	1.5%	\$4,300
1/1/2018	476	35,013	\$1,784,888	\$50,978	-1.2%	\$4,248
1/1/2019	477	34,873	\$1,781,668	\$51,090	0.2%	\$4,258
1/1/2020	485	35,206	\$1,824,979	\$51,837	1.5%	\$4,320
1/1/2021	490	35,110	\$1,865,426	\$53,131	2.5%	\$4,428
1/1/2022	489	34,533	\$1,850,671	\$53,591	0.9%	\$4,466
1/1/2023	491	34,712	\$1,925,275	\$55,464	3.5%	\$4,622

\*Annual Payroll in Thousands

Wyoming State Highway Patrol, Game & Fish, and Criminal Investigator Pension Plan						
Valuation Date	Reporting Agencies	Current Employees	Annual Payroll*	Annual Average Salary	% Increase In Average Salary	Average Monthly Salary
1/1/2014	3	303	\$22,745	\$75,066	-1.0%	\$6,256
1/1/2015	3	304	\$23,140	\$76,119	1.4%	\$6,343
1/1/2016	3	317	\$24,641	\$77,732	2.1%	\$6,478
1/1/2017	3	315	\$24,646	\$78,242	0.7%	\$6,520
1/1/2018	3	304	\$23,640	\$77,762	-0.6%	\$6,480
1/1/2019	3	304	\$23,697	\$77,950	0.2%	\$6,496
1/1/2020	3	312	\$24,676	\$79,091	1.5%	\$6,591
1/1/2021	3	315	\$24,806	\$78,751	-0.4%	\$6,563
1/1/2022	3	298	\$24,083	\$80,814	2.6%	\$6,735
1/1/2023	3	272	\$23,367	\$85,907	6.3%	\$7,159

\*Annual Payroll in Thousands

# Schedule of Active Member Valuation Data

Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan						
Valuation Date	Reporting Agencies	Current Employees	Average Contribution*	Average Age	Average Years of Service	
1/1/2016	128	2,379	\$5,370	45	11	
1/1/2017	125	2,320	\$5,468	45	11	
1/1/2018	122	2,318	\$5,545	45	11	
1/1/2019	122	2,347	\$5,543	44	11	
1/1/2020	121	2,417	\$5,604	44	11	
1/1/2021	121	2,391	\$5,660	45	11	
1/1/2022	123	2,366	\$5,754	45	11	
1/1/2023	118	2,324	\$5,951	45	11	

\*Average Contribution in Thousands

Note: The statutes that govern this Pension Plan specifies that contributions are to be a fixed amount per month.

Paid Fire A Pension Plan							
Valuation Date	Reporting Agencies	Current Employees	Annual Payroll*	Annual Average Salary	% Increase In Average Salary	Average Monthly Salary	
1/1/2014	2	3	\$198	\$66,135	-4.8%	\$5,511	
1/1/2015	2	3	\$179	\$59,829	-9.5%	\$4,986	
1/1/2016	2	3	\$195	\$65,074	8.8%	\$5,423	
1/1/2017	2	3	\$195	\$65,074	0.0%	\$5,423	
1/1/2018	2	2	\$134	\$67,077	3.1%	\$5,590	
1/1/2019	2	1	\$66	\$65,621	-2.2%	\$5,468	
1/1/2020	1	1	\$66	\$65,621	0.0%	\$5,468	
1/1/2021	1	1	\$66	\$65,621	0.0%	\$5,468	
1/1/2022	0	0	\$-	\$-	-100.0%	\$-	
1/1/2023	0	0	\$-	\$-	0.0%	\$-	

\*Annual Payroll in Thousands

Paid Fire B Pension Plan							
Valuation Date	Reporting Agencies	Current Employees	Annual Payroll*	Annual Average Salary	% Increase In Average Salary	Average Monthly Salary	
1/1/2014	16	368	\$25,596	\$69,554	2.3%	\$5,796	
1/1/2015	16	369	\$27,091	\$73,417	5.6%	\$6,118	
1/1/2016	16	372	\$27,512	\$73,957	0.7%	\$6,163	
1/1/2017	16	371	\$29,409	\$79,268	7.2%	\$6,606	
1/1/2018	16	363	\$27,481	\$75,706	-4.5%	\$6,309	
1/1/2019	16	365	\$28,729	\$78,710	4.0%	\$6,559	
1/1/2020	16	374	\$29,272	\$78,267	-0.6%	\$6,522	
1/1/2021	16	376	\$30,723	\$81,710	4.4%	\$6,809	
1/1/2022	16	386	\$32,033	\$82,987	1.6%	\$6,916	
1/1/2023	16	388	\$34,301	\$88,405	6.5%	\$7,367	

\*Annual Payroll in Thousands

## Schedule of Active Member Valuation Data

<b>Judicial Pension Plan</b>						
Valuation Date	Reporting Agencies	Current Employees	Annual Payroll*	Annual Average Salary	% Increase In Average Salary	Average Monthly Salary
1/1/2014	1	44	\$6,214	\$141,222	7.0%	\$11,769
1/1/2015	1	46	\$6,602	\$143,514	1.6%	\$11,960
1/1/2016	1	46	\$6,624	\$144,001	0.3%	\$12,000
1/1/2017	1	46	\$6,625	\$144,032	0.0%	\$12,003
1/1/2018	1	47	\$6,820	\$145,114	0.8%	\$12,093
1/1/2019	1	47	\$6,866	\$146,094	0.7%	\$12,175
1/1/2020	1	50	\$7,707	\$154,139	5.5%	\$12,845
1/1/2021	1	51	\$8,202	\$160,819	4.3%	\$13,402
1/1/2022	1	53	\$8,502	\$160,410	-0.3%	\$13,368
1/1/2023	1	55	\$8,750	\$159,083	-0.8%	\$13,257

\*Annual Payroll in Thousands

<b>Law Enforcement Pension Plan</b>						
Valuation Date	Reporting Agencies	Current Employees	Annual Payroll*	Annual Average Salary	% Increase In Average Salary	Average Monthly Salary
1/1/2014	80	2,808	\$154,072	\$54,869	-1.4%	\$4,572
1/1/2015	78	2,755	\$156,792	\$56,912	3.7%	\$4,743
1/1/2016	78	2,761	\$161,357	\$58,442	2.7%	\$4,870
1/1/2017	78	2,719	\$160,073	\$58,872	0.7%	\$4,906
1/1/2018	78	2,661	\$155,696	\$58,510	-0.6%	\$4,876
1/1/2019	81	2,662	\$159,748	\$60,010	2.6%	\$5,001
1/1/2020	81	2,660	\$164,758	\$61,939	3.2%	\$5,162
1/1/2021	81	2,646	\$170,285	\$64,355	3.9%	\$5,363
1/1/2022	78	2,579	\$165,441	\$64,149	-0.3%	\$5,346
1/1/2023	79	2,524	\$171,444	\$67,925	5.9%	\$5,660

\*Annual Payroll in Thousands

<b>Air Guard Firefighter Pension Plan</b>						
Valuation Date	Reporting Agencies	Current Employees	Annual Payroll*	Annual Average Salary	% Increase In Average Salary	Average Monthly Salary
1/1/2014	1	31	\$1,805	\$58,236	-3.3%	\$4,853
1/1/2015	1	38	\$2,215	\$58,278	0.1%	\$4,857
1/1/2016	1	36	\$2,243	\$62,318	6.9%	\$5,193
1/1/2017	1	35	\$2,060	\$58,846	-5.6%	\$4,904
1/1/2018	1	38	\$2,208	\$58,116	-1.2%	\$4,843
1/1/2019	1	41	\$2,400	\$58,535	0.7%	\$4,878
1/1/2020	1	41	\$2,374	\$57,903	-1.1%	\$4,825
1/1/2021	1	38	\$2,212	\$58,204	0.5%	\$4,850
1/1/2022	1	38	\$2,199	\$57,870	-0.6%	\$4,823
1/1/2023	1	38	\$2,297	\$60,447	4.5%	\$5,037

\*Annual Payroll in Thousands

# Schedule of Retirees & Beneficiaries Added to & Removed from Rolls

Public Employee Pension Plan								
Fiscal Year	Added to Rolls		Removed from Rolls		Rolls-End of Year Number	Annual Pension Benefits** (\$)	% Change in Annual Pension Benefit	Average Annual Pension Benefit (\$)
	Number	Annual Pension Benefits* (\$)	Number	Annual Pension Benefits* (\$)				
2013	1,745	\$39,634	(614)	\$(8,228)	22,731	\$399	8.5	\$17,555
2014	1,755	42,076	(726)	(9,207)	23,760	432	8.2	18,178
2015	1,657	38,446	(689)	(9,453)	24,728	461	6.7	18,639
2016	1,768	43,328	(728)	(9,191)	25,768	495	7.4	19,211
2017	1,806	43,470	(766)	(10,396)	26,808	528	6.7	19,700
2018	1,786	41,353	(812)	(10,936)	27,782	559	5.8	20,104
2019	1,773	42,281	(805)	(11,779)	28,750	589	5.5	20,488
2020	1,585	36,819	(928)	(13,759)	29,407	612	3.9	20,815
2021	1,841	45,071	(1,022)	(14,753)	30,226	642	5.0	21,254
2022	1,598	36,477	(969)	(14,835)	30,855	664	3.3	21,522

\* Amounts in Thousands \*\* Amounts in Millions

Wyoming State Highway Patrol, Game & Fish, and Criminal Investigator Pension Plan								
Fiscal Year	Added to Rolls		Removed from Rolls		Rolls-End of Year Number	Annual Pension Benefits (\$)	% Change in Annual Pension Benefit	Average Annual Pension Benefit (\$)
	Number	Annual Pension Benefits (\$)	Number	Annual Pension Benefits* (\$)				
2013	12	\$524,215	(6)	\$(150,013)	290	\$8,065,703	4.9	\$27,813
2014	29	835,107	(11)	(292,130)	308	8,608,680	6.7	27,950
2015	20	714,877	(8)	(176,195)	320	9,147,362	6.3	28,586
2016	15	467,619	(12)	(191,375)	323	9,523,606	4.1	29,485
2017	19	715,125	(12)	(232,044)	330	10,006,686	5.1	30,323
2018	14	493,355	(4)	(54,193)	340	10,445,848	4.4	30,723
2019	18	732,241	(7)	(137,131)	351	11,040,958	5.7	31,456
2020	13	572,957	(10)	(318,889)	354	11,295,026	2.3	31,907
2021	25	923,856	(14)	(326,654)	365	11,892,228	5.3	32,581
2022	20	929,923	(7)	(108,186)	378	12,713,965	6.9	33,635

Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan								
Fiscal Year	Added to Rolls		Removed from Rolls		Rolls-End of Year Number	Annual Pension Benefits (\$)	% Change in Annual Pension Benefit	Average Annual Pension Benefit (\$)
	Number	Annual Pension Benefits (\$)	Number	Annual Pension Benefits (\$)				
2014	106	\$368,168	(35)	\$(114,448)	1,251	\$4,250,343	N/A	\$3,398
2015*	81	1,113,515	(25)	(74,858)	1,307	5,289,000	24.4	4,047
2016*	108	461,121	(40)	(130,252)	1,375	5,619,869	6.3	4,087
2017	99	414,899	(41)	(139,273)	1,433	5,895,495	4.9	4,114
2018	101	459,658	(39)	(123,709)	1,495	6,231,444	5.7	4,168
2019	92	379,616	(32)	(109,286)	1,555	6,501,774	4.3	4,181
2020	107	527,633	(54)	(185,445)	1,608	6,843,962	5.3	4,256
2021	94	416,106	(56)	(190,996)	1,646	7,069,072	3.3	4,295
2022	77	334,587	(45)	(156,421)	1,678	7,247,238	2.5	4,319

\* Added to amounts include increased benefit amounts under the provisions of the new plan.

Note: Information not available before 2014.

# Schedule of Retirees & Beneficiaries Added to & Removed from Rolls

Paid Fire A Pension Plan								
Fiscal Year	Added to Rolls		Removed from Rolls		Rolls-End of Year Number	Annual Pension Benefits (\$)	% Change in Annual Pension Benefit	Average Annual Pension Benefit (\$)
	Number	Annual Pension Benefits (\$)	Number	Annual Pension Benefits (\$)				
2013	10	\$935,977	(13)	\$(635,129)	292	\$14,477,152	2.1	\$49,579
2014	4	578,284	(7)	(351,046)	289	14,704,390	1.6	50,880
2015	7	820,788	(14)	(665,571)	282	14,859,607	1.1	52,694
2016	3	618,031	(3)	(180,254)	282	15,297,384	3.0	54,246
2017	6	737,535	(7)	(376,512)	281	15,658,407	2.4	55,724
2018	4	698,064	(9)	(455,714)	276	15,900,757	1.6	57,611
2019	3	698,898	(6)	(422,589)	273	16,177,066	1.7	59,257
2020	5	758,253	(14)	(840,476)	264	16,094,843	-0.5	60,965
2021	13	1,075,026	(18)	(1,073,712)	259	16,096,157	0.0	62,147
2022	2	122,998	(10)	(640,897)	251	15,578,258	-3.2	62,065

Paid Fire B Pension Plan								
Fiscal Year	Added to Rolls		Removed from Rolls		Rolls-End of Year Number	Annual Pension Benefits (\$)	% Change in Annual Pension Benefit	Average Annual Pension Benefit (\$)
	Number	Annual Pension Benefits (\$)	Number	Annual Pension Benefits (\$)				
2013	7	\$274,075	-	\$-	81	\$2,909,429	10.4	\$35,919
2014	11	481,088	(2)	(71,846)	90	3,318,671	14.1	36,874
2015	11	631,130	(1)	(13,610)	100	3,936,191	18.6	39,362
2016	15	726,211	-	-	115	4,662,401	18.5	40,543
2017	14	587,654	(1)	(12,361)	128	5,237,694	12.3	40,919
2018	12	475,307	(3)	(60,290)	137	5,652,712	7.9	41,261
2019	14	494,827	-	-	151	6,147,539	8.8	40,712
2020	10	521,170	(2)	(71,597)	159	6,597,112	7.3	41,491
2021	13	595,282	(1)	(21,714)	171	7,170,680	8.7	41,934
2022	20	724,588	(2)	(106,366)	189	7,788,902	8.6	41,211

Judicial Pension Plan								
Fiscal Year	Added to Rolls		Removed from Rolls		Rolls-End of Year Number	Annual Pension Benefits (\$)	% Change in Annual Pension Benefit	Average Annual Pension Benefit (\$)
	Number	Annual Pension Benefits (\$)	Number	Annual Pension Benefits (\$)				
2013	2	\$113,010	-	\$-	13	\$723,582	18.5	\$55,660
2014	3	107,248	-	-	16	830,830	14.8	51,927
2015	2	150,491	-	-	18	981,321	18.1	54,518
2016	0	-	-	-	18	981,321	0.0	54,518
2017	4	307,625	-	-	22	1,288,946	31.4	58,588
2018	5	364,563	(1)	(67,372)	26	1,586,136	23.1	61,005
2019	4	279,699	-	-	30	1,865,835	17.6	62,195
2020	4	239,344	(3)	(144,876)	31	1,960,303	5.1	63,236
2021	1	85,754	-	-	32	2,046,057	4.4	63,939
2022	4	362,574	(1)	(55,893)	35	2,352,738	15.0	67,221

## Schedule of Retirees & Beneficiaries Added to & Removed from Rolls

Law Enforcement Pension Plan								
Fiscal Year	Added to Rolls		Removed from Rolls		Rolls-End of Year Number	Annual Pension Benefits (\$)	% Change in Annual Pension Benefit	Average Annual Pension Benefit (\$)
	Number	Annual Pension Benefits (\$)	Number	Annual Pension Benefits (\$)				
2013	77	\$2,048,141	(12)	\$(155,942)	917	\$21,945,092	9.4	\$23,931
2014	98	2,598,158	(14)	(250,849)	1,001	24,292,401	10.7	24,268
2015	83	2,229,651	(14)	(234,679)	1,070	26,287,373	8.2	24,568
2016	91	2,618,016	(14)	(239,572)	1,147	28,665,817	9.1	24,992
2017	83	2,325,313	(28)	(478,242)	1,202	30,512,888	6.4	25,385
2018	89	2,817,707	(17)	(254,449)	1,274	33,076,146	8.4	25,962
2019	111	3,086,125	(22)	(461,992)	1,363	35,700,279	7.9	26,192
2020	106	3,212,958	(27)	(487,974)	1,442	38,425,263	7.6	26,647
2021	114	3,265,415	(34)	(515,154)	1,522	41,175,524	7.2	27,054
2022	114	3,294,318	(29)	(577,522)	1,607	43,892,320	6.6	27,313

Air Guard Firefighter Pension Plan								
Fiscal Year	Added to Rolls		Removed from Rolls		Rolls-End of Year Number	Annual Pension Benefits (\$)	% Change in Annual Pension Benefit	Average Annual Pension Benefit (\$)
	Number	Annual Pension Benefits (\$)	Number	Annual Pension Benefits (\$)				
2013	1	\$46,109	-	\$-	3	\$86,238	114.9	\$28,746
2014	2	66,242	-	-	5	152,480	76.8	30,496
2015	1	40,663	-	-	6	193,143	26.7	32,191
2016	3	138,890	-	-	9	332,033	71.9	36,893
2017	1	32,744	-	-	10	364,776	9.9	36,478
2018	1	27,581	-	-	11	392,357	7.6	35,669
2019	2	71,764	-	-	13	464,121	18.3	35,702
2020	2	74,397	-	-	15	538,518	16.0	35,901
2021	4	139,797	-	-	19	678,315	26.0	35,701
2022	1	4,816	-	-	20	683,131	0.7	34,157

## Solvency Test

Testing the financial solvency of a retirement system can be done in several ways. The funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the system are level in concept and soundly executed, and if the system continues its present operations pattern for the indefinite future, the system will pay all promised benefits when due, the ultimate test of financial soundness.

A short-term solvency test is one means of checking a system's progress under its funding program. In a short-term solvency test, the plan's present assets (cash and investments) are compared with:

1. Active members' contributions on deposit;
2. Liabilities for future benefits to present retired members;
3. Liabilities for service already rendered by active members.

In a system that has been following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired members (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. Generally, if the system has been using level cost financing, the funded portion of liability 3 will increase over time. Liability 3 being fully funded is very rare.

The tables that follow illustrate the progress of funding liability (3) of Wyoming Retirements System's nine plans, and is indicative of each plans' policy to follow the discipline of level contribution rate funding.

Public Employee Pension Plan							
Valuation Date	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members* (Employer Financed Portion)	Valuation Assets*	Portion of Accrued Liabilities Covered by Assets		
					-1	-2	-3
1/1/2014	\$1,333,533	\$4,251,120	\$2,460,394	\$6,244,502	100%	100%	26.8%
1/1/2015	1,394,083	4,600,840	2,375,744	6,609,612	100%	100%	25.9%
1/1/2016	1,472,112	4,897,375	2,343,866	6,814,920	100%	100%	19.0%
1/1/2017	1,491,205	5,255,364	2,292,735	7,063,052	100%	100%	13.8%
1/1/2018	1,504,862	5,994,582	2,089,209	7,314,683	100%	97.0%	0.0%
1/1/2019	1,527,497	6,322,069	2,020,049	7,318,380	100%	92.0%	0.0%
1/1/2020	1,549,304	6,649,767	1,996,975	7,459,696	100%	89.0%	0.0%
1/1/2021	1,601,638	6,887,288	1,980,863	7,827,626	100%	90.0%	0.0%
1/1/2022	1,610,077	7,240,299	2,039,482	8,389,355	100%	94.0%	0.0%
1/1/2023	1,656,534	7,463,955	2,079,164	8,651,600	100%	94.0%	0.0%

\* Amounts in Thousands

Wyoming State Highway Patrol, Game & Fish Warden and Criminal Investigator Pension Plan							
Valuation Date	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members* (Employer Financed Portion)	Valuation Assets*	Portion of Accrued Liabilities Covered by Assets		
					-1	-2	-3
1/1/2014	\$31,224	\$87,447	\$31,318	\$116,151	100%	97.0%	0.0%
1/1/2015	32,458	93,060	30,684	123,681	100%	98.0%	0.0%
1/1/2016	33,664	100,994	29,864	128,598	100%	94.0%	0.0%
1/1/2017	25,855	103,925	29,471	134,609	100%	95.0%	0.0%
1/1/2018	36,388	119,189	25,035	140,712	100%	88.0%	0.0%
1/1/2019	37,280	124,477	24,776	142,735	100%	85.0%	0.0%
1/1/2020	37,807	131,970	25,186	147,896	100%	83.0%	0.0%
1/1/2021	38,487	136,502	23,674	156,997	100%	87.0%	0.0%
1/1/2022	37,913	145,970	25,222	170,067	100%	91.0%	0.0%
1/1/2023	36,908	156,042	26,145	176,556	100%	89.0%	0.0%

\* Amounts in Thousands

# Solvency Test

Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan								
Valuation Date	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members* (Employer Financed Portion)	Valuation Assets*	Portion of Accrued Liabilities Covered by Assets			
					-1	-2	-3	
1/1/2016	\$5,370	\$60,710	\$36,199	\$76,098	100%	100%	27.7%	
1/1/2017	5,468	61,195	35,583	78,177	100%	100%	32.4%	
1/1/2018	5,545	67,352	36,195	81,169	100%	100%	22.9%	
1/1/2019	5,543	71,401	35,344	81,801	100%	100%	13.7%	
1/1/2020	5,604	74,093	35,563	83,528	100%	100%	10.8%	
1/1/2021	5,660	78,099	34,229	90,066	100%	100%	18.4%	
1/1/2022	5,754	81,311	33,481	98,000	100%	100%	32.7%	
1/1/2023	5,951	82,706	34,088	101,758	100%	100%	38.4%	

The Volunteer Firefighter & Emergency Medical Technician Plans were consolidated on July 1, 2015. Search & Rescue Volunteers were added to the plan July 1, 2019.

\* Amounts in Thousands

Paid Fire A Pension Plan								
Valuation Date	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members* (Employer Financed Portion)	Valuation Assets*	Portion of Accrued Liabilities Covered by Assets			
					-1	-2	-3	
1/1/2014	\$96	\$203,199	\$2,960	\$140,917	100%	69.3%	0.0%	
1/1/2015	96	202,385	2,735	138,088	100%	68.2%	0.0%	
1/1/2016	96	201,512	3,081	30,776	100%	64.8%	0.0%	
1/1/2017	79	202,702	3,171	124,435	100%	61.3%	0.0%	
1/1/2018	47	226,793	2,487	117,019	100%	51.6%	0.0%	
1/1/2019	19	225,859	1,223	104,674	100%	46.3%	0.0%	
1/1/2020	19	225,042	1,221	93,559	100%	41.6%	0.0%	
1/1/2021	19	475,736	3,020	84,969	100%	17.9%	0.0%	
1/1/2022	0	169,135	0	71,007	100%	42.0%	0.0%	
1/1/2023	0	151,702	0	136,143	100%	89.7%	0.0%	

\*Amounts in Thousands

Paid Fire B Pension Plan								
Valuation Date	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members* (Employer Financed Portion)	Valuation Assets*	Portion of Accrued Liabilities Covered by Assets			
					-1	-2	-3	
1/1/2014	\$14,398	\$36,923	\$53,304	\$103,693	100%	100%	98.3%	
1/1/2015	16,382	41,354	57,416	115,323	100%	100%	100.3%	
1/1/2016	17,298	50,930	57,713	124,496	100%	100%	97.5%	
1/1/2017	18,890	57,946	58,399	134,451	100%	100%	98.7%	
1/1/2018	20,129	70,763	60,090	144,816	100%	100%	89.7%	
1/1/2019	21,031	77,830	63,856	151,225	100%	100%	82.0%	
1/1/2020	22,429	84,280	64,783	160,882	100%	100%	83.6%	
1/1/2021	24,211	90,097	69,156	175,946	100%	100%	89.1%	
1/1/2022	25,626	101,211	75,515	196,393	100%	100%	92.1%	
1/1/2023	27,495	107,876	82,994	211,609	100%	100%	91.9%	

\* Amounts in Thousands



Wyoming Judicial Pension Plan								
Valuation Date	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members* (Employer Financed Portion)	Valuation Assets*	Portion of Accrued Liabilities Covered by Assets			
					-1	-2	-3	
1/1/2014	\$5,203	\$6,682	\$7,780	\$20,261	100%	100%	100.0%	
1/1/2015	5,800	7,659	7,784	22,728	100%	100%	100.0%	
1/1/2016	6,235	9,046	7,724	24,634	100%	100%	100.0%	
1/1/2017	7,019	8,860	8,581	26,773	100%	100%	100.0%	
1/1/2018	6,833	12,686	9,567	29,063	100%	100%	99.7%	
1/1/2019	6,491	15,689	8,888	30,341	100%	100%	91.8%	
1/1/2020	6,722	18,452	9,096	32,585	100%	100%	81.5%	
1/1/2021	6,768	19,523	10,061	35,464	100%	100%	91.2%	
1/1/2022	7,380	20,108	12,604	39,363	100%	100%	94.2%	
1/1/2023	6,505	24,533	11,051	41,717	100%	100%	96.6%	

\* Amounts in Thousands

Wyoming Law Enforcement Pension Plan								
Valuation Date	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members* (Employer Financed Portion)	Valuation Assets*	Portion of Accrued Liabilities Covered by Assets			
					-1	-2	-3	
1/1/2014	\$121,916	\$260,467	\$144,399	\$486,818	100%	100%	72.3%	
1/1/2015	128,199	286,400	149,643	528,543	100%	100%	76.1%	
1/1/2016	133,912	309,474	153,470	557,126	100%	100%	74.1%	
1/1/2017	137,265	335,397	155,423	590,466	100%	100%	75.8%	
1/1/2018	140,029	389,302	179,627	625,562	100%	100%	53.6%	
1/1/2019	140,664	421,539	187,322	641,342	100%	100%	42.2%	
1/1/2020	142,464	453,526	198,964	671,747	100%	100%	38.1%	
1/1/2021	146,445	485,588	208,780	722,309	100%	100%	43.2%	
1/1/2022	147,981	531,045	253,528	789,572	100%	100%	43.6%	
1/1/2023	149,380	565,766	270,987	831,035	100%	100%	42.8%	

\* Amounts in Thousands

Air Guard Firefighter Pension Plan								
Valuation Date	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members* (Employer Financed Portion)	Valuation Assets*	Portion of Accrued Liabilities Covered by Assets			
					-1	-2	-3	
1/1/2014	\$3,290	\$1,003	\$1,512	\$5,175	100%	100%	58.3%	
1/1/2015	3,551	1,876	1,185	5,929	100%	100%	42.4%	
1/1/2016	3,716	2,494	1,137	6,617	100%	100%	36.7%	
1/1/2017	2,973	4,093	732	6,801	100%	94.0%	0.0%	
1/1/2018	3,141	4,840	735	7,411	100%	88.0%	0.0%	
1/1/2019	3,388	4,980	646	7,711	100%	87.0%	0.0%	
1/1/2020	3,254	5,922	451	8,193	100%	83.0%	0.0%	
1/1/2021	2,719	7,258	324	8,886	100%	85.0%	0.0%	
1/1/2022	2,074	9,248	301	9,545	100%	81.0%	0.0%	
1/1/2023	2,329	9,166	514	9,896	100%	83.0%	0.0%	

\* Amounts in Thousands

# Analysis of Financial Experience

## Summary of Unfunded Actuarial Accrued Liabilities

Unfunded actuarial accrued liabilities (UAAL) are the difference between actuarially calculated liabilities for service already rendered and the assets of the retirement fund. It is natural for unfunded liabilities to exist for the System's nine retirement plans.

The statutes governing the Wyoming Retirement System's plans requires that these liabilities be financed systematically over future years.

Benefits to retirees are "fully funded," that is, assets reserved for benefits currently being paid equal liabilities for those benefits. Liabilities for members are based on service rendered toward their retirement benefits which will be payable in the future. Unfunded actuarial accrued liabilities exist because liabilities for such service by members exceed assets currently on hand for such future benefits.

In an inflationary economy, the value of dollars is decreasing. Looking at just the dollar amounts of unfunded accrued liabilities can be misleading. Unfunded accrued liabilities dollars divided by active employee payroll dollars provide a meaningful index, which helps understanding. The smaller the ratio of unfunded liabilities compared to active member payroll the stronger the system.

Observation of this relative index over a period of years will give an indication of whether the system is becoming financially stronger or weaker.

Gains & Losses in Accrued Liabilities during the Year Ended 12/31/2022				
Resulting from Differences between Assumed Experience & Actual Experience				
Type of Activity	Public Employee Pension Plan	State Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan	Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan	Paid Fire A Pension Plan
<b>Age &amp; Service Retirements</b>	(\$6,285,573)	(\$210,240)	\$341,856	\$-
If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher average pays, there is a loss.				
<b>Disability Retirements</b>	(6,822)	(785,923)	-	-
If disability claims are less than assumed, there is a gain. If there are more disability claims, there is a loss.				
<b>Death-In-Service Benefits</b>	(162,908)	50,549	(3,475)	-
If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.				
<b>Withdrawal From Employment</b>	(2,050,107)	(428,734)	(132,352)	-
If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, there is a loss.				
<b>Rehires and New Hires</b>	(2,107,408)	-	(161,815)	-
New employees entering the plan will create a loss. If less new employees enter the plan than assumed, there is a gain.				
<b>Pay Increases</b>	(49,392,048)	(1,672,800)	-	-
If there are smaller pay increases than assumed, there is a gain. If greater increases, there is a loss.				
<b>Contribution Income*</b>	(27,212,089)	106,368	750,310	65,337,981
If more contributions are received than expected, there is a gain. If less, there is a loss.				
<b>Investment Income</b>	41,379,580	795,254	223,989	(2,516,706)
If there is greater investment income than assumed, there is a gain. If less, there is a loss.				
<b>Death After Retirement</b>	6,332,597	(403,804)	101,010	3,355,316
If retirees live longer than assumed, there is a loss. If not as long, there is a gain.				
<b>Service Purchases</b>	(3,339,639)	(715,705)	(9,979)	-
This loss is offset by the employee contribution to the plan for the service purchase. The net effect of service purchases is zero.				
<b>Other</b>	(3,235,483)	(63,946)	130,967	4,005,037
Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, valuation methods, etc.				
<b>Gain (Loss) During Year From Financial Experience</b>	(\$46,079,900)	(\$3,328,981)	\$1,240,511	\$70,181,628

\*Contribution Income includes the additional employee contributions for service purchases. These additional contributions offset the liability loss due to service purchases.

# Analysis of Financial Experience

Gains & Losses in Accrued Liabilities during the Year Ended 12/31/2022				
Resulting from Differences between Assumed Experience & Actual Experience				
Type of Activity	Paid Fire B Pension Plan	Judicial Pension Plan	Law Enforcement Pension Plan	Air Guard Firefighter Pension Plan
<b>Age &amp; Service Retirements</b>	\$433,134	(\$192,536)	(\$265,825)	(\$2,716)
If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher average pays, there is a loss.				
<b>Disability Retirements</b>	244,761	1,184	(193,099)	1,575
If disability claims are less than assumed, there is a gain. If there are more disability claims, there is a loss.				
<b>Death-In-Service Benefits</b>	(450,199)	1,029	947,665	1,027
If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.				
<b>Withdrawal From Employment</b>	362,627	288,507	577,017	(9,741)
If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, there is a loss.				
<b>Rehires and New Hires</b>	-	(74,565)	(860,206)	(18,863)
New employees entering the plan will create a loss.				
<b>Pay Increases</b>	(3,146,046)	575,139	(7,574,626)	(158,940)
If there are smaller pay increases than assumed, there is a gain. If greater increases, there is a loss.				
<b>Contribution Income*</b>	919,664	(289,540)	(6,223,038)	72,019
If more contributions are received than expected, there is a gain. If less, there is a loss.				
<b>Investment Income</b>	760,619	143,614	3,789,649	37,860
If there is greater investment income than assumed, there is a gain. If less, there is a loss.				
<b>Death After Retirement</b>	358,142	7,821	49,912	15,258
If retirees live longer than assumed, there is a loss. If not as long, there is a gain.				
<b>Service Purchases</b>	(127,141)	-	(2,355,599)	-
This loss is offset by the employee contribution to the plan for the service purchase. The net effect of service purchases is zero.				
<b>Other</b>	(165,841)	(135,312)	(517,685)	24,999
Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, valuation methods, etc.				
<b>Gain (Loss) During Year From Financial Experience</b>	(\$810,280)	\$325,341	(\$12,625,835)	(\$37,522)

\*Contribution Income includes the additional employee contributions for service purchases. These additional contributions offset the liability loss due to service purchases.

# Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio as a Percentage (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) / c)
<b>Public Employee Pension Plan</b>						
January 1, 2014	\$6,244,501,550	\$8,045,046,972	\$1,800,545,422	77.6%	\$1,782,062,471	101.0%
January 1, 2015	6,609,612,342	8,370,666,482	1,761,054,140	79.0%	1,818,197,022	96.9%
January 1, 2016	6,814,919,591	8,713,353,524	1,898,433,933	78.2%	1,858,678,687	102.1%
January 1, 2017	7,063,051,856	9,039,303,831	1,976,251,975	78.1%	1,851,873,634	106.7%
January 1, 2018	7,314,683,343	9,588,652,976	2,273,969,633	76.3%	1,784,888,475	127.4%
January 1, 2019	7,318,379,669	9,869,615,224	2,551,235,555	74.2%	1,781,668,069	143.2%
January 1, 2020	7,459,695,656	10,196,045,970	2,736,350,314	73.2%	1,824,979,015	149.9%
January 1, 2021	7,827,625,526	10,469,787,925	2,642,162,399	74.8%	1,865,426,156	141.6%
January 1, 2022	8,389,355,255	10,889,858,029	2,500,502,774	77.0%	1,850,670,904	135.1%
January 1, 2023	8,651,600,098	11,199,652,249	2,548,052,151	77.2%	1,925,275,481	132.3%
<b>State Patrol, Game &amp; Fish Warden and Criminal Investigator Pension Plan</b>						
January 1, 2014	\$116,151,164	\$149,989,392	\$33,838,229	77.4%	\$22,744,938	148.8%
January 1, 2015	123,680,718	156,201,302	32,520,584	79.2%	23,140,300	140.5%
January 1, 2016	128,597,582	164,522,386	35,924,804	78.2%	24,641,033	145.8%
January 1, 2017	134,609,253	169,251,572	34,642,319	79.5%	24,646,258	140.6%
January 1, 2018	140,712,382	180,615,436	39,903,054	77.9%	23,639,756	168.8%
January 1, 2019	142,734,809	186,532,553	43,797,744	76.5%	23,696,821	184.8%
January 1, 2020	147,895,921	194,964,001	47,068,080	75.9%	24,676,346	190.7%
January 1, 2021	156,996,868	198,661,870	41,665,002	79.0%	24,806,442	168.0%
January 1, 2022	170,067,180	209,104,885	39,037,705	81.3%	24,082,634	162.1%
January 1, 2023	176,556,047	219,095,157	42,539,110	80.6%	23,366,589	182.1%
<b>Volunteer Firefighter, Emergency Medical Technician, and Search &amp; Rescue Pension Plan</b>						
January 1, 2016	\$76,097,619	\$102,278,423	\$26,180,804	74.4%	n/a	n/a
January 1, 2017	78,176,796	102,244,853	24,068,057	76.5%	n/a	n/a
January 1, 2018	81,168,922	109,091,945	27,923,023	74.4%	n/a	n/a
January 1, 2019	81,800,847	112,287,528	30,486,681	72.8%	n/a	n/a
January 1, 2020	83,527,771	115,260,425	31,732,654	72.5%	n/a	n/a
January 1, 2021	90,065,676	117,987,998	27,922,322	76.3%	n/a	n/a
January 1, 2022	97,999,632	120,546,184	22,546,552	81.3%	n/a	n/a
January 1, 2023	101,757,644	122,744,358	20,986,714	82.9%	n/a	n/a

Note: The Volunteer Firefighter and Emergency Medical Technician Pension Plan was consolidated into one plan on July 1, 2015. Search and Rescue Volunteers were added to the plan on July 1, 2019.

n/a - not applicable

## Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio as a Percentage (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) /c)
<b>Paid Fire A Pension Plan</b>						
January 1, 2014	\$140,917,231	\$206,255,267	\$65,338,036	68.3%	\$198,404	32,931.8%
January 1, 2015	138,087,746	205,216,099	67,128,353	67.3%	179,486	37,400.3%
January 1, 2016	130,776,292	204,689,787	73,912,495	63.9%	195,221	37,860.9%
January 1, 2017	124,435,245	205,952,912	81,517,667	60.4%	195,221	41,756.6%
January 1, 2018	117,019,469	229,327,120	112,307,651	51.0%	134,155	83,714.8%
January 1, 2019	104,673,993	227,100,614	122,426,621	46.1%	65,621	186,566.2%
January 1, 2020	93,559,404	226,282,373	132,722,969	41.4%	65,621	202,256.9%
January 1, 2021	84,969,035	478,774,655	393,805,620	17.7%	65,621	600,121.3%
January 1, 2022	71,006,860	169,135,151	98,128,291	42.0%	0	n/a
January 1, 2023	136,143,027	151,702,073	15,559,046	89.7%	0	n/a
<b>Paid Fire B Pension Plan</b>						
January 1, 2014	\$103,693,169	\$104,624,698	\$931,529	99.1%	\$25,596,043	3.6%
January 1, 2015	115,323,104	115,152,708	(170,396)	100.1%	27,090,867	-0.6%
January 1, 2016	124,496,124	125,941,369	1,445,245	98.9%	27,512,076	5.3%
January 1, 2017	134,450,595	135,234,856	784,261	99.4%	29,408,598	2.7%
January 1, 2018	144,816,308	150,981,756	6,165,448	95.9%	27,481,361	22.4%
January 1, 2019	151,224,958	162,716,621	11,491,663	92.9%	28,729,092	40.0%
January 1, 2020	160,882,389	171,491,696	10,609,307	93.8%	29,271,925	36.2%
January 1, 2021	175,946,438	183,464,303	7,517,865	95.9%	30,722,779	24.5%
January 1, 2022	196,392,646	202,351,470	5,958,824	97.1%	32,032,911	18.6%
January 1, 2023	211,609,239	218,365,066	6,755,827	96.9%	34,301,185	19.7%
<b>Judicial Pension Plan</b>						
January 1, 2014	\$20,260,811	\$19,664,408	\$(596,403)	103.0%	\$6,213,775	-9.6%
January 1, 2015	22,728,268	21,243,000	(1,485,268)	107.0%	6,601,641	-22.5%
January 1, 2016	24,633,859	23,004,559	(1,629,300)	107.1%	6,624,052	-24.6%
January 1, 2017	26,773,208	24,459,333	(2,313,875)	109.5%	6,625,476	-34.9%
January 1, 2018	29,062,780	29,087,091	24,311	99.9%	6,820,351	0.4%
January 1, 2019	30,341,215	31,067,933	726,718	97.7%	6,866,395	10.6%
January 1, 2020	32,585,154	34,270,621	1,685,467	95.1%	7,706,958	21.9%
January 1, 2021	35,463,586	36,351,609	888,023	97.6%	8,201,747	10.8%
January 1, 2022	39,362,946	40,092,215	729,269	98.2%	8,501,713	8.6%
January 1, 2023	41,717,146	42,089,372	372,226	99.1%	8,749,585	4.3%

# Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio as a Percentage (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) / c)
<b>Law Enforcement Pension Plan</b>						
January 1, 2014	\$486,817,860	\$526,782,470	\$39,964,610	92.4%	\$154,071,943	25.9%
January 1, 2015	528,542,864	564,241,353	35,698,489	93.7%	156,791,728	22.8%
January 1, 2016	557,125,768	596,856,177	39,730,409	93.3%	161,357,314	24.6%
January 1, 2017	590,466,391	628,084,812	37,618,421	94.0%	160,072,828	23.5%
January 1, 2018	625,562,038	708,957,832	83,395,794	88.2%	155,696,162	53.6%
January 1, 2019	641,342,345	749,524,885	108,182,540	85.6%	159,747,760	67.7%
January 1, 2020	671,746,944	794,954,725	123,207,781	84.5%	164,757,930	74.8%
January 1, 2021	722,308,507	840,812,836	118,504,329	85.9%	170,284,524	69.6%
January 1, 2022	789,572,141	932,553,503	142,981,362	84.7%	165,440,506	86.4%
January 1, 2023	831,035,274	986,133,210	155,097,936	84.3%	171,443,834	90.5%
<b>Air Guard Firefighter Pension Plan</b>						
January 1, 2014	\$5,174,861	\$5,804,761	\$629,900	89.1%	\$1,805,329	34.9%
January 1, 2015	5,929,006	6,611,411	682,405	89.7%	2,214,578	30.8%
January 1, 2016	6,616,954	7,336,724	719,770	90.2%	2,243,456	32.1%
January 1, 2017	6,800,719	7,798,108	997,389	87.2%	2,059,595	48.4%
January 1, 2018	7,411,093	8,715,990	1,304,897	85.0%	2,208,407	59.1%
January 1, 2019	7,710,523	9,012,642	1,302,119	85.6%	2,399,940	54.3%
January 1, 2020	8,193,354	9,627,272	1,433,918	85.1%	2,374,043	60.4%
January 1, 2021	8,885,761	10,300,578	1,414,817	86.3%	2,211,746	64.0%
January 1, 2022	9,544,656	11,623,613	2,078,957	82.1%	2,199,066	94.5%
January 1, 2023	9,896,389	12,009,248	2,112,859	82.4%	2,296,970	92.0%



Annual Comprehensive Financial Report 2022

# STATISTICAL SECTION



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The Statistical Section contains schedules, as described below, which are derived from information in the annual actuarial valuation. These Schedules provide detailed information on both financial and census information on each plan. The Wyoming Retirement System acts as Administrator to eight defined benefit pension plans. The major features of each plan are discussed in the Management Discussion and Analysis Section and Note 2 to the Basic Financial Statements.

### **Changes in Fiduciary Net Position:**

The Changes in Net Position 2013 – 2022 statements are provided to present comparative information on 10 years of historical financial information on each plan for additions and deductions. Significant fluctuations and/or trends for the current year have been discussed in the Management Discussion and Analysis.

### **Schedule of Average Monthly Benefit Payments:**

This schedule outlines the number of retirees and their average benefit by years of service for the last 10 years.

### **Pensions in Force:**

The Pensions in Force schedule for the Public Employee Pension Plan shows the benefit by option selected (male & female), as well as census data for 2022 of the total number of pensions awarded by amount range and option. A synopsis of the pension options available to the retirees is presented at the end of this section.

The Pensions in Force schedule for the other seven plans stratify the number of retirees receiving a pension by their age and the monthly amount of benefit received. Disability census information is also presented as a part of this schedule.

### **Member and Benefit Recipients Statistics:**

This schedule is intended to show by plan both the active members in the plans as of December 31, 2022, and a reconciliation of the number of retirees for the year ended December 31, 2022. It also shows the average monthly benefit of the retirees for the year then ended.

### **Active Membership:**

Information presented in the two Active Membership schedules is for the Public Employee Pension Plan, as this plan represents in excess of 80% of all members in the plans administered by the Wyoming Retirement System. The information provided shows the number of active members stratified by both employer type and age bracket.

### **Affiliated Employers:**

This gives the reader more detailed census information about employers by pension plan as well as the names of the participating employers by pension plan.

# Changes in Fiduciary Net Position

Public Employee Pension Plan										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Additions (Deletions) by Source										
Employee Contributions	\$173,778	\$166,332	\$161,724	\$153,582	\$146,255	\$145,008	\$147,650	\$147,360	\$137,145	\$122,611
Employer Contributions	175,980	168,461	163,848	155,457	145,912	147,037	149,619	142,666	127,930	122,137
Investment Income (Loss)	(644,373)	1,414,900	805,892	1,251,519	(252,571)	923,878	454,713	(67,156)	314,706	780,556
Other Income	5,652	5,751	5,500	5,956	6,596	6,454	6,642	8,126	5,614	6,141
<b>Total</b>	<b>(288,963)</b>	<b>1,755,444</b>	<b>1,136,964</b>	<b>1,566,514</b>	<b>46,192</b>	<b>1,222,377</b>	<b>758,624</b>	<b>230,996</b>	<b>585,395</b>	<b>1,031,445</b>
Deductions by Type										
Benefits										
Age and Service	609,353	583,783	560,525	535,619	506,975	478,022	446,952	415,917	384,463	355,181
Beneficiary	47,949	45,409	42,020	39,765	37,194	35,091	32,796	30,864	29,957	28,387
Disability	3,560	3,585	3,790	3,795	3,744	3,724	3,734	3,809	3,855	3,869
Refunds										
Separation	19,039	13,630	13,801	16,986	14,231	14,983	13,297	14,122	14,295	15,621
Death	5,837	5,389	5,612	4,322	3,883	3,672	4,831	5,243	3,527	1,510
Other Expenses	544	298	295	310	288	313	312	313	75	-
Administrative Expenses	8,031	7,725	7,238	6,527	7,034	6,551	5,993	5,098	5,183	6,514
<b>Total</b>	<b>694,313</b>	<b>659,819</b>	<b>633,281</b>	<b>607,324</b>	<b>573,349</b>	<b>542,356</b>	<b>507,915</b>	<b>475,366</b>	<b>441,355</b>	<b>411,082</b>
<b>Change in Plan Net Position</b>	<b>(983,276)</b>	<b>1,095,625</b>	<b>503,683</b>	<b>959,190</b>	<b>(527,157)</b>	<b>680,021</b>	<b>250,709</b>	<b>(244,370)</b>	<b>144,040</b>	<b>620,363</b>

Note: Amounts in Thousands

Wyoming State Highway Patrol, Game & Fish, and Criminal Investigator Pension Plan										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Additions (Deletions) by Source										
Employee Contributions	\$3,515	\$3,486	\$3,547	\$3,527	\$3,416	\$3,429	\$3,441	\$3,331	\$3,151	\$2,976
Employer Contributions	3,592	3,563	3,665	3,639	3,492	3,503	3,517	3,290	3,006	2,998
Investment Income (Loss)	(13,022)	28,405	16,115	24,467	(4,908)	17,623	8,622	(1,199)	5,836	14,444
Other Income	739	400	385	669	418	107	294	259	231	355
<b>Total</b>	<b>(5,176)</b>	<b>35,854</b>	<b>23,712</b>	<b>32,302</b>	<b>2,418</b>	<b>24,662</b>	<b>15,874</b>	<b>5,681</b>	<b>12,224</b>	<b>20,773</b>
Deductions by Type										
Benefits										
Age and Service	9,976	9,333	8,973	8,661	8,093	7,682	7,475	6,983	6,510	6,232
Beneficiary	1,117	1,132	987	921	950	939	880	901	876	765
Disability	1,480	1,279	1,310	1,262	1,218	1,174	1,042	1,042	979	897
Refunds										
Separation	604	109	368	289	351	509	323	121	368	336
Death	165	-	-	-	-	-	-	-	-	-
Other Expenses	11	6	6	6	6	6	6	6	1	-
Administrative Expenses	174	161	150	138	139	129	115	96	97	107
<b>Total</b>	<b>13,527</b>	<b>12,020</b>	<b>11,794</b>	<b>11,277</b>	<b>10,757</b>	<b>10,439</b>	<b>9,841</b>	<b>9,149</b>	<b>8,831</b>	<b>8,337</b>
<b>Change in Plan Net Position</b>	<b>(18,703)</b>	<b>23,834</b>	<b>11,918</b>	<b>21,025</b>	<b>(8,339)</b>	<b>14,223</b>	<b>6,033</b>	<b>(3,468)</b>	<b>3,393</b>	<b>12,436</b>

Note: Amounts in Thousands

## Changes in Fiduciary Net Position

Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan								
	2022	2021	2020	2019	2018	2017	2016	2015
Additions (Deletions) by Source								
Employee Contributions	\$548	\$557	\$502	\$432	\$422	\$418	\$421	\$398
Employer Contributions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Investment Income (Loss)	(7,203)	15,709	8,849	13,701	(2,783)	10,036	4,940	(675)
Other Income	3,877	4,687	5,528	3,124	2,973	3,298	3,237	2,258
<b>Total</b>	<b>(2,778)</b>	<b>20,953</b>	<b>14,879</b>	<b>17,257</b>	<b>612</b>	<b>13,752</b>	<b>8,598</b>	<b>1,981</b>
Deductions by Type								
Benefits								
Age and Service	6,480	6,247	6,033	5,775	5,439	5,138	4,915	4,288
Beneficiary	802	781	725	692	663	643	592	545
Refunds								
Separation	38	32	42	33	33	27	35	29
Death	19	-	11	7	11	6	-	6
Other Expenses	7	3	3	3	3	3	3	3
Administrative Expenses	108	95	87	89	91	89	81	73
<b>Total</b>	<b>7,454</b>	<b>7,158</b>	<b>6,901</b>	<b>6,599</b>	<b>6,240</b>	<b>5,906</b>	<b>5,626</b>	<b>4,944</b>
<b>Change in Plan Net Position</b>	<b>(10,232)</b>	<b>13,795</b>	<b>7,978</b>	<b>10,658</b>	<b>(5,628)</b>	<b>7,846</b>	<b>2,972</b>	<b>(2,963)</b>

Note: Amounts in Thousands

The Volunteer Firefighter & Emergency Medical Technician Pension Plans were consolidated July 1, 2015, replacing the previous Volunteer Firefighter Pension Plan and the Volunteer Emergency Medical Technician Pension Plan. On July 1, 2019, Search and Rescue Volunteers were added to the plan.

Paid Fire A Pension Plan										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Additions (Deletions) by Source										
Employee Contributions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Employer Contributions	\$20,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Investment Income (Loss)	(6,933)	\$(371)	\$8,559	\$16,923	\$(3,580)	\$15,352	\$8,160	\$(1,107)	\$6,980	\$18,324
Other Income	56,679	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>69,746</b>	<b>(371)</b>	<b>8,559</b>	<b>16,923</b>	<b>(3,580)</b>	<b>15,352</b>	<b>8,160</b>	<b>(1,107)</b>	<b>6,980</b>	<b>18,324</b>
Deductions by Type										
Benefits										
Age and Service	10,997	11,133	11,749	11,643	11,557	11,243	11,120	11,164	11,237	11,200
Beneficiary	4,173	4,310	3,827	3,651	3,455	3,415	3,225	2,951	2,601	2,384
Disability	657	717	766	799	776	753	731	710	744	772
Refunds	-	-	-	-	-	-	-	-	-	-
Other Expenses	4	3	4	5	4	6	6	6	2	-
Administrative Expenses	57	105	89	87	99	109	110	103	113	130
<b>Total</b>	<b>15,888</b>	<b>16,268</b>	<b>16,435</b>	<b>16,185</b>	<b>15,891</b>	<b>15,526</b>	<b>15,192</b>	<b>14,934</b>	<b>14,697</b>	<b>14,486</b>
<b>Change in Plan Net Position</b>	<b>53,858</b>	<b>(16,639)</b>	<b>(7,876)</b>	<b>738</b>	<b>(19,471)</b>	<b>(174)</b>	<b>(7,032)</b>	<b>(16,041)</b>	<b>(7,717)</b>	<b>3,838</b>

Note: Amounts in Thousands

n/a: Paid Fire A Pension Plan contributions were suspended April 1, 1997.

Additional contributions were made to the Paid Fire A Plan in 2022 per legislative action. See the Management's Discussion and Analysis of the Paid Fire A Pension Plan for more information.

# Changes in Fiduciary Net Position

## Paid Fire B Pension Plan

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Additions (Deletions) by Source</b>										
Employee Contributions	\$3,672	\$3,262	\$3,054	\$2,707	\$2,585	\$2,490	\$2,605	\$2,529	\$2,414	\$2,160
Employer Contributions	5,170	4,508	4,034	3,516	3,356	3,225	3,371	3,273	3,184	3,023
Investment Income (Loss)	(14,871)	31,993	18,023	26,111	(5,198)	17,838	8,477	(1,159)	5,248	12,576
Other Income	128	-	-	80	237	289	254	397	266	30
<b>Total</b>	<b>(5,901)</b>	<b>39,763</b>	<b>25,111</b>	<b>32,414</b>	<b>980</b>	<b>23,842</b>	<b>14,707</b>	<b>5,040</b>	<b>11,112</b>	<b>17,789</b>
<b>Deductions by Type</b>										
<b>Benefits</b>										
Age and Service	6,616	6,065	5,545	5,100	4,730	4,311	3,714	3,112	2,477	2,322
Beneficiary	545	439	439	422	345	345	260	260	274	199
Disability	399	399	399	399	399	399	370	340	340	311
<b>Refunds</b>										
Separation	53	71	85	35	64	120	72	75	63	84
Death	87	-	-	-	-	-	-	-	-	-
Other Expenses	13	7	6	6	5	5	6	5	1	-
Administrative Expenses	192	177	159	139	141	131	112	91	87	97
<b>Total</b>	<b>7,905</b>	<b>7,158</b>	<b>6,633</b>	<b>6,101</b>	<b>5,684</b>	<b>5,311</b>	<b>4,534</b>	<b>3,883</b>	<b>3,242</b>	<b>3,013</b>
<b>Change in Plan Net Position</b>	<b>(13,806)</b>	<b>32,605</b>	<b>18,478</b>	<b>26,313</b>	<b>(4,704)</b>	<b>18,531</b>	<b>10,173</b>	<b>1,157</b>	<b>7,870</b>	<b>14,776</b>

Note: Amounts in Thousands

## Judicial Pension Plan

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Additions (Deletions) by Source</b>										
Employee Contributions	\$758	\$745	\$722	\$675	\$611	\$604	\$589	\$585	\$583	\$551
Employer Contributions	1,191	1,172	1,135	1,060	960	949	926	921	917	866
Investment Income (Loss)	(2,971)	6,389	3,612	5,224	(1,039)	3,549	1,679	(228)	1,027	2,432
Other Income	-	-	-	354	-	-	-	-	-	-
<b>Total</b>	<b>(1,022)</b>	<b>8,306</b>	<b>5,469</b>	<b>7,313</b>	<b>532</b>	<b>5,102</b>	<b>3,194</b>	<b>1,278</b>	<b>2,527</b>	<b>3,849</b>
<b>Deductions by Type</b>										
<b>Benefits</b>										
Age and Service	2,219	1,803	1,737	1,597	1,332	1,078	892	843	687	608
Beneficiary	141	141	141	123	123	89	89	89	89	67
<b>Refunds</b>										
Other Expenses	2	1	1	1	1	2	1	1	-	-
Administrative Expenses	38	36	32	28	28	25	22	18	17	17
<b>Total</b>	<b>2,400</b>	<b>1,981</b>	<b>1,911</b>	<b>1,749</b>	<b>1,484</b>	<b>1,194</b>	<b>1,004</b>	<b>951</b>	<b>793</b>	<b>692</b>
<b>Change in Plan Net Position</b>	<b>(3,422)</b>	<b>6,325</b>	<b>3,558</b>	<b>5,564</b>	<b>(952)</b>	<b>3,908</b>	<b>2,190</b>	<b>327</b>	<b>1,734</b>	<b>3,157</b>

Note: Amounts in Thousands

## Changes in Fiduciary Net Position

Law Enforcement Pension Plan										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Additions (Deletions) by Source										
Employee Contributions	\$14,548	\$14,160	\$14,447	\$13,881	\$13,482	\$13,285	\$13,460	\$14,569	\$13,314	\$13,044
Employer Contributions	14,549	14,114	14,490	13,856	13,471	13,320	13,454	12,468	13,308	13,009
Investment Income (Loss)	(60,636)	131,615	74,478	110,793	(22,169)	77,947	37,783	(5,372)	24,588	59,946
Other Income	2,797	1,540	1,818	1,206	674	701	1,258	1,068	803	550
<b>Total</b>	<b>(28,742)</b>	<b>161,429</b>	<b>105,233</b>	<b>139,736</b>	<b>5,458</b>	<b>105,253</b>	<b>65,955</b>	<b>22,733</b>	<b>52,013</b>	<b>86,549</b>
Deductions by Type										
Benefits										
Age and Service	34,247	32,178	30,131	27,898	25,578	23,537	22,157	20,174	18,069	16,930
Beneficiary	3,087	2,892	2,700	2,468	2,186	2,072	1,872	1,547	1,560	1,256
Disability	5,405	5,119	4,774	4,485	4,250	4,013	3,845	3,738	3,581	3,106
Refunds										
Separation	3,253	2,514	2,516	2,038	3,328	3,862	2,964	4,380	3,993	4,417
Death	537	604	266	388	643	179	527	280	117	9
Other Expenses	51	27	27	27	24	52	26	25	6	-
Administrative Expenses	813	754	695	597	639	580	518	418	408	470
<b>Total</b>	<b>47,393</b>	<b>44,088</b>	<b>41,109</b>	<b>37,901</b>	<b>36,648</b>	<b>34,295</b>	<b>31,909</b>	<b>30,562</b>	<b>27,734</b>	<b>26,188</b>
<b>Change in Plan Net Position</b>	<b>(76,135)</b>	<b>117,341</b>	<b>64,124</b>	<b>101,835</b>	<b>(31,190)</b>	<b>70,958</b>	<b>34,046</b>	<b>(7,829)</b>	<b>24,279</b>	<b>60,361</b>

Note: Amounts in Thousands

Air Guard Firefighter Pension Plan										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Additions (Deletions) by Source										
Employee Contributions	\$394	\$365	\$330	\$370	\$373	\$367	\$320	\$370	\$336	\$310
Employer Contributions	168	156	141	158	160	156	137	158	142	133
Investment Income (Loss)	(708)	1,567	898	1,300	(254)	902	431	(55)	258	595
Other Income	-	-	-	-	72	-	57	35	1	-
<b>Total</b>	<b>(146)</b>	<b>2,088</b>	<b>1,369</b>	<b>1,828</b>	<b>351</b>	<b>1,425</b>	<b>945</b>	<b>508</b>	<b>737</b>	<b>1,038</b>
Deductions by Type										
Benefits										
Age and Service	587	550	461	403	345	311	251	128	120	74
Disability	94	94	40	40	40	40	40	40	-	-
Refunds										
Separation	195	178	-	70	214	40	412	21	7	14
Other Expenses	1	1	-	-	-	1	-	-	-	-
Administrative Expenses	10	13	8	7	7	6	6	5	4	5
<b>Total</b>	<b>887</b>	<b>836</b>	<b>509</b>	<b>520</b>	<b>606</b>	<b>398</b>	<b>709</b>	<b>194</b>	<b>131</b>	<b>93</b>
<b>Change in Plan Net Position</b>	<b>(1,033)</b>	<b>1,252</b>	<b>860</b>	<b>1,308</b>	<b>(255)</b>	<b>1,027</b>	<b>236</b>	<b>314</b>	<b>606</b>	<b>945</b>

Note: Amounts in Thousands

## Changes in Fiduciary Net Position

Deferred Compensation Plan 457 (b) Plan										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Additions (Deletions) by Source</b>										
Contributions	\$54,689	\$54,168	\$52,961	\$53,991	\$45,945	\$45,366	\$42,431	\$41,043	\$39,589	\$41,338
Investment Income (Loss)	(154,859)	126,305	105,363	127,756	(27,870)	78,394	36,980	(3,504)	24,077	59,382
Other Income	-	-	-	-	-	(4)	99	177	146	148
<b>Total</b>	<b>(100,170)</b>	<b>180,473</b>	<b>158,324</b>	<b>181,747</b>	<b>18,075</b>	<b>123,756</b>	<b>79,510</b>	<b>37,716</b>	<b>63,812</b>	<b>100,868</b>
<b>Deductions by Type</b>										
Benefits	60,722	48,000	38,417	35,631	39,783	34,399	30,786	33,788	28,231	27,992
Administrative Expenses	718	745	673	849	815	871	802	682	856	848
<b>Total</b>	<b>61,440</b>	<b>48,745</b>	<b>39,090</b>	<b>36,480</b>	<b>40,598</b>	<b>35,270</b>	<b>31,588</b>	<b>34,470</b>	<b>29,087</b>	<b>28,840</b>
<b>Change in Plan Net Position</b>	<b>(161,610)</b>	<b>131,728</b>	<b>119,234</b>	<b>145,267</b>	<b>(22,523)</b>	<b>88,486</b>	<b>47,922</b>	<b>3,246</b>	<b>34,725</b>	<b>72,028</b>

Note: Amounts in Thousands

## Schedule of Monthly Benefit Payments

Public Employee Pension Plan								
	Years of Service							
<b>2022</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	1,129	4,439	4,365	3,997	3,898	4,368	3,746	1,913
Average Benefit	\$284	\$462	\$835	\$1,286	\$1,844	\$2,639	\$3,424	\$4,517
Ave Final Ave Salary	\$53,828							
<b>2021</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	1,078	4,325	4,292	3,897	3,839	4,285	3,729	1,877
Average Benefit	\$270	\$450	\$819	\$1,256	\$1,806	\$2,589	\$3,391	\$4,490
Ave Final Ave Salary	\$57,675							
<b>2020</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	1,047	4,277	4,207	3,841	3,723	4,180	3,621	1,762
Average Benefit	\$238	\$445	\$802	\$1,234	\$1,775	\$2,545	\$3,354	\$4,455
Ave Final Ave Salary	\$53,692							
<b>2019</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	1,156	4,206	4,095	3,728	3,632	4,081	3,534	1,658
Average Benefit	\$446	\$439	\$788	\$1,211	\$1,754	\$2,509	\$3,328	\$4,400
Ave Final Ave Salary	\$52,289							
<b>2018</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	1,053	4,066	3,939	3,666	3,540	3,975	3,462	1,542
Average Benefit	\$230	\$427	\$766	\$1,183	\$1,738	\$2,477	\$3,299	\$4,340
Ave Final Ave Salary	\$51,529							
<b>2017</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	1,046	3,942	3,776	3,571	3,410	3,838	3,365	1,408
Average Benefit	\$224	\$420	\$751	\$1,155	\$1,713	\$2,452	\$3,263	\$4,263
Ave Final Ave Salary	\$52,083							
<b>2016</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	1,037	3,794	3,621	3,459	3,305	3,684	3,232	1,264
Average Benefit	\$217	\$411	\$735	\$1,125	\$1,682	\$2,419	\$3,228	\$4,178
Ave Final Ave Salary	\$51,594							
<b>2015</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	1,023	3,667	3,483	3,366	3,199	3,519	3,054	1,121
Average Benefit	\$225	\$401	\$717	\$1,105	\$1,643	\$2,385	\$3,178	\$4,072
Ave Final Ave Salary	\$52,242							
<b>2014</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	983	3,519	3,362	3,259	3,090	3,384	2,904	1,016
Average Benefit	\$215	\$396	\$704	\$1,085	\$1,603	\$2,347	\$3,120	\$3,970
Ave Final Ave Salary	\$51,374							
<b>2013</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	994	3,385	3,236	3,184	2,974	3,208	2,721	882
Average Benefit	\$271	\$382	\$680	\$1,063	\$1,571	\$2,301	\$3,066	\$3,870
Ave Final Ave Salary	\$51,586							

# Schedule of Monthly Benefit Payments

State Highway Patrol, Game & Fish Warden and Criminal Investigator Pension Plan								
Years of Service								
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
<b>2022</b>								
Number	6	37	39	45	66	57	47	14
Average Benefit	\$1,749	\$1,771	\$2,441	\$2,552	\$3,097	\$3,619	\$4,467	\$4,262
Ave Final Ave Salary	\$89,914							
<b>2021</b>								
Number	6	36	36	40	61	56	45	14
Average Benefit	\$1,749	\$1,625	\$2,405	\$2,442	\$3,043	\$3,572	\$4,405	\$4,262
Ave Final Ave Salary	\$86,808							
<b>2020</b>								
Number	6	35	34	41	55	59	45	14
Average Benefit	\$1,749	\$1,655	\$2,427	\$2,365	\$2,850	\$3,474	\$4,238	\$4,190
Ave Final Ave Salary	\$89,620							
<b>2019</b>								
Number	6	36	31	40	55	59	47	13
Average Benefit	\$1,749	\$1,648	\$2,316	\$2,346	\$2,850	\$3,400	\$4,185	\$4,139
Ave Final Ave Salary	\$86,458							
<b>2018</b>								
Number	6	36	26	36	55	60	43	13
Average Benefit	\$1,749	\$1,648	\$2,307	\$2,284	\$2,694	\$3,383	\$4,056	\$4,139
Ave Final Ave Salary	\$82,786							
<b>2017</b>								
Number	6	36	26	33	52	59	42	13
Average Benefit	\$1,749	\$1,563	\$2,252	\$2,219	\$2,621	\$3,337	\$4,051	\$4,139
Ave Final Ave Salary	\$82,463							
<b>2016</b>								
Number	6	33	26	32	53	56	43	13
Average Benefit	\$1,749	\$1,484	\$2,252	\$2,066	\$2,511	\$3,174	\$3,996	\$4,116
Ave Final Ave Salary	\$85,169							
<b>2015</b>								
Number	6	33	24	29	53	55	43	12
Average Benefit	\$1,749	\$1,476	\$2,344	\$1,919	\$2,440	\$3,149	\$3,851	\$3,997
Ave Final Ave Salary	\$83,862							
<b>2014</b>								
Number	6	28	20	28	56	55	40	12
Average Benefit	\$1,923	\$1,552	\$2,239	\$1,924	\$2,370	\$2,985	\$3,648	\$3,997
Ave Final Ave Salary	\$75,038							
<b>2013</b>								
Number	5	27	15	27	53	56	43	10
Average Benefit	\$1,377	\$1,538	\$2,155	\$1,844	\$2,310	\$2,860	\$3,602	\$4,041
Ave Final Ave Salary	\$74,889							



## Schedule of Monthly Benefit Payments

### Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan

Years of Service								
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
<b>2022</b>								
Number	5	127	220	207	282	276	197	74
Average Benefit	\$193	\$130	\$213	\$304	\$399	\$489	\$573	\$669
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2021</b>								
Number	6	118	218	210	284	274	184	67
Average Benefit	\$204	\$132	\$213	\$304	\$398	\$489	\$570	\$669
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2020</b>								
Number	5	118	222	209	280	262	178	62
Average Benefit	\$193	\$135	\$214	\$303	\$398	\$488	\$569	\$669
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2019</b>								
Number	7	115	223	208	272	255	160	48
Average Benefit	\$251	\$138	\$215	\$303	\$398	\$488	\$568	\$664
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2018</b>								
Number	5	109	217	199	270	246	147	45
Average Benefit	\$193	\$140	\$217	\$305	\$398	\$487	\$567	\$654
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2017</b>								
Number	5	97	212	201	263	231	137	37
Average Benefit	\$217	\$142	\$217	\$305	\$396	\$483	\$563	\$612
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2016</b>								
Number	6	91	211	195	258	216	129	34
Average Benefit	\$219	\$144	\$218	\$305	\$395	\$482	\$562	\$608
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2015</b>								
Number	6	83	214	199	255	200	115	18
Average Benefit	\$219	\$148	\$219	\$305	\$396	\$483	\$565	\$653
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2014</b>								
Number	61	71	199	190	225	168	104	22
Average Benefit	\$288	\$158	\$205	\$257	\$315	\$388	\$462	\$474
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							
<b>2013</b>								
Number	69	67	192	195	216	152	87	12
Average Benefit	\$275	\$161	\$208	\$258	\$316	\$391	\$466	\$547
Ave Final Ave Salary	Benefits In This Plan Not Based on Salary							

Note: Data prior to 2015 is estimated from the consolidation of the predecessor Volunteer Firefighter Pension Plan and Volunteer Emergency Medical Technician Pension Plan

# Schedule of Monthly Benefit Payments

Paid Fire A Pension Plan								
	Years of Service							
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
<b>2022</b>								
Number	-	1	12	8	92	42	17	5
Average Benefit	\$-	\$2,191	\$2,851	\$4,609	\$5,140	\$6,215	\$6,656	\$6,020
Ave Final Ave Salary	n/a							
<b>2021</b>								
Number	-	1	12	8	97	43	17	5
Average Benefit	\$-	\$2,191	\$2,851	\$4,609	\$5,139	\$6,216	\$6,647	\$6,020
Ave Final Ave Salary	n/a							
<b>2020</b>								
Number	-	1	14	9	107	45	17	4
Average Benefit	\$-	\$2,128	\$2,866	\$4,557	\$4,985	\$6,045	\$6,453	\$5,994
Ave Final Ave Salary	n/a							
<b>2019</b>								
Number	-	1	14	9	111	48	20	4
Average Benefit	\$-	\$2,066	\$2,782	\$4,424	\$4,856	\$5,823	\$6,063	\$5,820
Ave Final Ave Salary	n/a							
<b>2018</b>								
Number	-	1	14	9	112	49	21	5
Average Benefit	\$-	\$2,005	\$2,701	\$4,295	\$4,715	\$5,655	\$5,847	\$6,157
Ave Final Ave Salary	n/a							
<b>2017</b>								
Number	-	1	14	9	116	49	20	5
Average Benefit	\$-	\$1,947	\$2,622	\$4,170	\$4,583	\$5,479	\$5,707	\$5,977
Ave Final Ave Salary	n/a							
<b>2016</b>								
Number	-	1	14	9	118	50	21	4
Average Benefit	\$-	\$1,890	\$2,546	\$4,048	\$4,452	\$5,304	\$5,610	\$5,943
Ave Final Ave Salary	n/a							
<b>2015</b>								
Number	-	1	14	9	120	51	21	4
Average Benefit	\$-	\$1,835	\$2,472	\$3,931	\$4,328	\$5,170	\$5,453	\$5,770
Ave Final Ave Salary	\$83,862							
<b>2014</b>								
Number	13	1	16	11	121	49	18	3
Average Benefit	\$4,389	\$1,782	\$2,422	\$3,777	\$4,196	\$5,077	\$5,343	\$5,629
Ave Final Ave Salary	\$75,038							
<b>2013</b>								
Number	13	1	18	11	126	50	18	3
Average Benefit	\$4,261	\$1,730	\$2,244	\$3,667	\$4,083	\$4,914	\$5,188	\$5,465
Ave Final Ave Salary	\$74,889							

## Schedule of Monthly Benefit Payments

Paid Fire B Pension Plan								
	Years of Service							
2022	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	7	14	23	19	37	63	9	-
Average Benefit	\$1,347	\$1,508	\$1,806	\$2,586	\$3,943	\$4,675	\$4,673	\$-
Ave Final Ave Salary	\$85,696							
2021	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	5	11	17	19	36	60	8	-
Average Benefit	\$2,230	\$1,523	\$1,792	\$2,586	\$3,902	\$4,603	\$4,608	\$-
Ave Final Ave Salary	\$86,956							
2020	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	4	9	17	18	31	57	8	-
Average Benefit	\$1,667	\$1,620	\$1,779	\$2,518	\$3,807	\$4,588	\$4,608	\$-
Ave Final Ave Salary	\$90,302							
2019	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	4	9	17	16	28	54	8	-
Average Benefit	\$1,667	\$1,620	\$1,779	\$2,430	\$3,763	\$4,529	\$4,608	\$-
Ave Final Ave Salary	\$73,810							
2018	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	4	8	12	15	25	52	8	-
Average Benefit	\$1,667	\$1,721	\$1,809	\$2,433	\$3,691	\$4,509	\$4,608	\$-
Ave Final Ave Salary	\$84,821							
2017	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	4	7	11	14	22	49	8	-
Average Benefit	\$1,667	\$1,752	\$1,787	\$2,384	\$3,615	\$4,476	\$4,608	\$-
Ave Final Ave Salary	\$87,557							
2016	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	4	5	10	14	22	43	7	-
Average Benefit	\$1,667	\$1,762	\$1,670	\$2,384	\$3,615	\$4,417	\$4,549	\$-
Ave Final Ave Salary	\$83,403							
2015	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	4	5	8	12	15	39	7	-
Average Benefit	\$1,667	\$1,762	\$1,662	\$2,347	\$3,176	\$4,357	\$4,549	\$-
Ave Final Ave Salary	\$91,091							
2014	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	4	5	8	11	12	35	4	-
Average Benefit	\$1,667	\$1,762	\$1,662	\$2,231	\$2,754	\$4,268	\$4,503	\$-
Ave Final Ave Salary	\$83,778							
2013	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
Number	4	4	7	11	12	31	4	-
Average Benefit	\$1,667	\$1,586	\$1,761	\$2,015	\$2,754	\$4,112	\$4,458	\$-
Ave Final Ave Salary	\$75,091							

# Schedule of Monthly Benefit Payments

Judicial Pension Plan								
	Years of Service							
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
<b>2022</b>								
Number	-	1	6	12	10	1	-	-
Average Benefit	\$-	\$3,783	\$4,248	\$6,723	\$6,838	\$5,950	\$-	\$-
Ave Final Ave Salary	\$158,705							
<b>2021</b>								
Number	-	1	5	12	8	1	-	-
Average Benefit	\$-	\$3,783	\$3,759	\$6,472	\$6,567	\$5,950	\$-	\$-
Ave Final Ave Salary	\$141,111							
<b>2020</b>								
Number	-	1	5	12	7	1	-	-
Average Benefit	\$-	\$3,783	\$3,759	\$6,472	\$6,484	\$5,950	\$-	\$-
Ave Final Ave Salary	\$143,164							
<b>2019</b>								
Number	-	1	6	12	6	1	-	-
Average Benefit	\$-	\$3,783	\$3,635	\$6,472	\$6,010	\$5,950	\$-	\$-
Ave Final Ave Salary	\$136,443							
<b>2018</b>								
Number	-	1	5	9	6	1	-	-
Average Benefit	\$-	\$3,783	\$3,643	\$6,438	\$6,010	\$5,950	\$-	\$-
Ave Final Ave Salary	No New Retirees in 2018							
<b>2017</b>								
Number	-	1	5	6	6	1	-	-
Average Benefit	\$-	\$3,783	\$3,850	\$5,826	\$6,010	\$5,950	\$-	\$-
Ave Final Ave Salary	No New Retirees in 2017							
<b>2016</b>								
Number	-	1	4	4	5	1	-	-
Average Benefit	\$-	\$3,783	\$3,633	\$5,391	\$5,706	\$5,950	\$-	\$-
Ave Final Ave Salary	No New Retirees in 2016							
<b>2015</b>								
Number	-	1	4	4	5	1	-	-
Average Benefit	\$-	\$3,783	\$3,633	\$5,391	\$5,706	\$5,950	\$-	\$-
Ave Final Ave Salary	\$155,143							
<b>2014</b>								
Number	-	1	3	3	5	1	-	-
Average Benefit	\$-	\$3,783	\$2,972	\$4,879	\$5,706	\$5,950	\$-	\$-
Ave Final Ave Salary	No New Retirees in 2014							
<b>2013</b>								
Number	-	-	2	3	5	1	-	-
Average Benefit	\$-	\$-	\$2,801	\$4,879	\$5,706	\$5,950	\$-	\$-
Ave Final Ave Salary	\$120,159							

## Schedule of Monthly Benefit Payments

Law Enforcement Pension Plan								
	Years of Service							
<b>2022</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	134	148	189	143	556	176	76	13
Average Benefit	\$1,923	\$953	\$1,717	\$2,021	\$2,596	\$3,333	\$3,942	\$4,521
Ave Final Ave Salary	\$67,481							
<b>2021</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	138	138	176	132	516	173	75	12
Average Benefit	\$1,845	\$959	\$1,728	\$1,973	\$2,551	\$3,350	\$3,879	\$4,348
Ave Final Ave Salary	\$66,120							
<b>2020</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	139	137	166	124	474	167	70	12
Average Benefit	\$1,852	\$936	\$1,689	\$1,948	\$2,519	\$3,346	\$3,816	\$4,134
Ave Final Ave Salary	\$66,415							
<b>2019</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	150	127	149	116	439	159	66	10
Average Benefit	\$1,899	\$916	\$1,690	\$1,919	\$2,484	\$3,260	\$3,699	\$4,001
Ave Final Ave Salary	\$64,946							
<b>2018</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	143	125	138	108	404	153	63	10
Average Benefit	\$1,865	\$915	\$1,713	\$1,881	\$2,438	\$3,225	\$3,718	\$4,001
Ave Final Ave Salary	\$65,865							
<b>2017</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	147	118	132	100	373	143	57	6
Average Benefit	\$1,863	\$890	\$1,674	\$1,853	\$2,404	\$3,150	\$3,774	\$3,787
Ave Final Ave Salary	\$62,802							
<b>2016</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	148	113	115	94	357	135	55	6
Average Benefit	\$1,872	\$905	\$1,651	\$1,827	\$2,378	\$3,051	\$3,785	\$3,787
Ave Final Ave Salary	\$61,349							
<b>2015</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	151	102	107	91	334	122	47	5
Average Benefit	\$1,861	\$902	\$1,630	\$1,819	\$2,352	\$3,013	\$3,750	\$3,878
Ave Final Ave Salary	\$61,426							
<b>2014</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	151	93	101	82	309	111	41	3
Average Benefit	\$1,907	\$944	\$1,634	\$1,780	\$2,319	\$2,953	\$3,707	\$3,777
Ave Final Ave Salary	\$57,765							
<b>2013</b>	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>Over 34</b>
Number	155	83	78	78	281	106	37	3
Average Benefit	\$1,893	\$906	\$1,536	\$1,752	\$2,292	\$2,892	\$3,722	\$3,524
Ave Final Ave Salary	\$58,151							

# Schedule of Monthly Benefit Payments

Air Guard Firefighter Pension Plan								
	Years of Service							
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	Over 34
<b>2022</b>								
Number	-	2	-	4	9	5	-	-
Average Benefit	\$-	*	\$-	\$2,231	\$2,763	\$4,107	\$-	\$-
Ave Final Ave Salary	\$79,114							
<b>2021</b>								
Number	-	1	-	4	9	5	-	-
Average Benefit	\$-	*	\$-	\$2,231	\$2,801	\$4,107	\$-	\$-
Ave Final Ave Salary	\$65,707							
<b>2020</b>								
Number	-	-	-	4	7	4	-	-
Average Benefit	\$-	\$-	\$-	\$2,231	\$2,804	\$4,081	\$-	\$-
Ave Final Ave Salary	\$73,463							
<b>2019</b>								
Number	-	-	-	3	7	3	-	-
Average Benefit	\$-	\$-	\$-	*	\$2,804	*	\$-	\$-
Ave Final Ave Salary	\$64,889							
<b>2018</b>								
Number	-	-	-	3	6	2	-	-
Average Benefit	\$-	\$-	\$-	*	\$2,892	*	\$-	\$-
Ave Final Ave Salary	\$56,838							
<b>2017</b>								
Number	-	-	-	3	5	2	-	-
Average Benefit	\$-	\$-	\$-	*	\$3,010	*	\$-	\$-
Ave Final Ave Salary	\$89,657							
<b>2016</b>								
Number	-	-	-	2	5	2	-	-
Average Benefit	\$-	\$-	\$-	*	\$3,010	*	\$-	\$-
Ave Final Ave Salary	\$75,026							
<b>2015</b>								
Number	-	-	-	2	4	-	-	-
Average Benefit	\$-	\$-	\$-	*	\$2,955	\$-	\$-	\$-
Ave Final Ave Salary	\$62,088							
<b>2014</b>								
Number	-	-	-	2	3	-	-	-
Average Benefit	\$-	\$-	\$-	*	*	\$-	\$-	\$-
Ave Final Ave Salary	\$59,799							
<b>2013</b>								
Number	-	-	-	1	2	-	-	-
Average Benefit	\$-	\$-	\$-	*	*	\$-	\$-	\$-
Ave Final Ave Salary	\$93,530							

\* Average benefit is not shown for cells with less than or equal to three participants

Public Employee Pension Plan			
Pensions In Force as of December 31, 2022			
By Monthly Amount		By Nearest Age	
Under \$ 200	1,554	Under 50	61
\$ 200 - \$ 399	3,140	50 - 54	102
\$ 400 - \$ 599	2,917	55 - 59	719
\$ 600 - \$ 799	2,410	60 - 64	3,568
\$ 800 - \$ 999	2,193	65 - 69	7,010
\$ 1,000 - \$ 1,499	4,309	70 - 74	7,387
\$ 1,500 - \$ 1,999	3,145	75 - 79	5,558
\$ 2,000 - \$ 2,499	2,754	80 - 84	3,505
\$ 2,500 & Over	8,433	85 & Over	2,945
<b>Total</b>	<b>30,855</b>	<b>Total</b>	<b>30,855</b>

Public Employee Pension Plan									
Pensions By Payout Option	Count			Monthly Benefit			Count Elected Self-Funded COLA**		
	Male	Female	Total	Male	Female	Total	1%	2%	3%
Pensioners:									
Option 1	2,284	7,362	9,646	\$4,300,564	\$11,559,499	\$15,860,063	48	41	64
Option 2	4,950	4,125	9,075	\$11,336,707	\$7,324,251	\$18,660,958	49	47	59
Option 2P	1,540	2,192	3,732	\$3,034,099	\$4,141,993	\$7,176,092	21	23	34
Option 3	474	650	1,124	\$1,220,362	\$1,227,750	\$2,448,112	9	5	7
Option 3P	302	634	936	\$756,813	\$1,457,219	\$2,214,032	5	10	8
Option 4a	295	598	893	\$490,618	\$873,131	\$1,363,749	10	5	10
Option 4b	96	161	257	\$159,961	\$229,863	\$389,824	7	9	7
Option 5	567	1,625	2,192	\$942,754	\$2,286,382	\$3,229,136	18	13	23
<b>Total</b>	<b>10,508</b>	<b>17,347</b>	<b>27,855</b>	<b>\$22,241,878</b>	<b>\$29,100,088</b>	<b>\$51,341,966</b>	<b>167</b>	<b>153</b>	<b>212</b>
Beneficiaries	690	2,310	3,000	\$820,318	\$3,175,469	\$3,995,787	-	-	-
<b>Total</b>	<b>11,198</b>	<b>19,657</b>	<b>30,855</b>	<b>\$23,062,196</b>	<b>\$32,275,557</b>	<b>\$55,337,753</b>	<b>167</b>	<b>153</b>	<b>212</b>

\*\*Option totals in the left portion of the table indicate the number of members who elected a self-funded COLA option.

Option 1 - Provides a lifetime benefit as calculated in the formula. Upon the retiree's death, the beneficiary would receive a lump-sum payment of any remaining contributions and interest in the account.

Option 2 - Full joint and survivor benefit. Based on both the life expectancy of the retiree and beneficiary. When the retiree dies, the beneficiary receives the same benefit payment for the remainder of their life.

Option 2P - Full joint and survivor benefit with pop-up provision. Based on both the life expectancy of the retiree and beneficiary. When the retiree dies, the beneficiary receives the same benefit payment for the remainder of their life. If the beneficiary dies first, the benefit pops-up to Option 1.

Option 3 - ½ joint and survivor benefit. Based on both the life expectancy of the retiree and beneficiary. When the retiree dies, the beneficiary receives one-half the monthly benefit payment for the remainder of their life.

Option 3P - ½ joint and survivor benefit. Based on both the life expectancy of the retiree and beneficiary. When the retiree dies, the beneficiary receives one-half the monthly benefit payment for the remainder of their life. If the beneficiary dies first, the benefit pops-up to Option 1.

Option 4a - Ten Year Certain Benefit. Based on the age of the retiree. If the retiree dies before receiving the benefit for 10 years, the beneficiary would receive the allowance for the balance of the 10-year period.

Option 4b - Twenty Year Certain Benefit. Based on the age of the retiree. If the retiree dies before receiving the benefit for 20 years, the beneficiary would receive the allowance for the balance of the 20-year period.

Option 5 - Lifetime benefit with no beneficiary. Payable during the retiree's lifetime with no provision for any beneficiary payment after the retiree's death.

## Pensions in Force

Public Employee Pension Plan									
Pensions Awarded During 2022									
	Option 1	Option 2	Option 2P	Option 3	Option 3P	Option 4a*	Option 4b	Option 5	Total
Under \$200	21	12	6	3	1	1	1	25	70
\$200 - \$399	59	24	11	1	1	1	5	45	147
\$400 - \$599	48	36	10	3	3	8	6	43	157
\$600 - \$799	27	43	9	1	2	1	2	29	114
\$800 - \$999	29	37	14	6	2	1	0	24	113
\$1,000 - \$1,499	61	68	22	4	2	8	6	70	241
\$1,500 - \$1,999	47	39	16	5	5	4	4	43	163
\$2,000 - \$2,499	42	44	19	3	5	3	1	30	147
\$2,500 & Over	101	169	52	18	22	7	4	73	446
<b>Total</b>	<b>435</b>	<b>472</b>	<b>159</b>	<b>44</b>	<b>43</b>	<b>34</b>	<b>29</b>	<b>382</b>	<b>1,598</b>

Options include those who elected a self-funded COLA option

\*Option 4a includes 11 beneficiaries who are receiving a certain only benefit.



# Pensions In Force

State Highway Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan			
Pensions In Force as of December 31, 2022			
By Monthly Amount		By Nearest Age	
Under \$200	1	Under 50	15
\$200 - \$399	3	50 - 54	29
\$400 - \$599	9	55 - 59	50
\$600 - \$799	19	60 - 64	50
\$800 - \$999	11	65 - 69	73
\$1,000 - \$1,499	43	70 - 74	62
\$1,500 - \$1,999	42	75 - 79	44
\$2,000 - \$2,499	46	80 - 84	31
\$2,500 & Over	204	85 & Over	24
<b>Total</b>	<b>378</b>	<b>Total</b>	<b>378</b>

Paid Fire A Pension Plan			
Pensions In Force as of December 31, 2022			
By Monthly Amount		By Nearest Age	
Under \$200	0	Under 50	0
\$200 - \$399	1	50 - 54	0
\$400 - \$599	0	55 - 59	3
\$600 - \$799	0	60 - 64	24
\$800 - \$999	3	65 - 69	64
\$1,000 - \$1,499	3	70 - 74	48
\$1,500 - \$1,999	0	75 - 79	45
\$2,000 - \$2,499	5	80 - 84	36
\$2,500 & Over	239	85 & Over	31
<b>Total</b>	<b>251</b>	<b>Total</b>	<b>251</b>

Judicial Pension Plan			
Pensions In Force as of December 31, 2022			
By Monthly Amount		By Nearest Age	
Under \$200	0	Under 50	0
\$200 - \$399	0	50 - 54	0
\$400 - \$599	0	55 - 59	0
\$600 - \$799	0	60 - 64	0
\$800 - \$999	0	65 - 69	8
\$1,000 - \$1,499	0	70 - 74	16
\$1,500 - \$1,999	2	75 - 79	6
\$2,000 - \$2,499	0	80 - 84	4
\$2,500 & Over	33	85 & Over	1
<b>Total</b>	<b>35</b>	<b>Total</b>	<b>35</b>

Air Guard Firefighter Pension Plan			
Pensions In Force as of December 31, 2022			
By Monthly Amount		By Nearest Age	
Under \$200	0	Under 50	1
\$200 - \$399	0	50 - 54	5
\$400 - \$599	0	55 - 59	2
\$600 - \$799	1	60 - 64	6
\$800 - \$999	0	65 - 69	3
\$1,000 - \$1,499	0	70 - 74	2
\$1,500 - \$1,999	4	75 - 79	1
\$2,000 - \$2,499	2	80 - 84	0
\$2,500 & Over	13	85 & Over	0
<b>Total</b>	<b>20</b>	<b>Total</b>	<b>20</b>

Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan			
Pensions In Force as of December 31, 2022			
By Monthly Amount		By Nearest Age	
Under \$50	2	Under 60	29
\$50 - \$99	28	60 - 64	259
\$100 - \$149	122	65 - 69	417
\$150 - \$199	168	70 - 74	411
\$200 - \$249	201	75 - 79	274
\$250 - \$299	149	80 & Over	288
\$300 - \$349	147		
\$350 - \$399	166		
\$400 & Over	695		
<b>Total</b>	<b>1,678</b>	<b>Total</b>	<b>1,678</b>

Paid Fire B Pension Plan			
Pensions In Force as of December 31, 2022			
By Monthly Amount		By Nearest Age	
Under \$200	0	Under 50	8
\$200 - \$399	0	50 - 54	42
\$400 - \$599	2	55 - 59	31
\$600 - \$799	3	60 - 64	61
\$800 - \$999	5	65 - 69	32
\$1,000 - \$1,499	13	70 - 74	13
\$1,500 - \$1,999	18	75 - 79	2
\$2,000 - \$2,499	23	80 - 84	0
\$2,500 & Over	125	85 & Over	0
<b>Total</b>	<b>189</b>	<b>Total</b>	<b>189</b>

Law Enforcement Pension Plan			
Pensions In Force as of December 31, 2022			
By Monthly Amount		By Nearest Age	
Under \$200	9	Under 50	148
\$200 - \$399	55	50 - 54	160
\$400 - \$599	71	55 - 59	179
\$600 - \$799	61	60 - 64	277
\$800 - \$999	57	65 - 69	343
\$1,000 - \$1,499	159	70 - 74	287
\$1,500 - \$1,999	217	75 - 79	139
\$2,000 - \$2,499	306	80 - 84	53
\$2,500 & Over	672	85 & Over	21
<b>Total</b>	<b>1,607</b>	<b>Total</b>	<b>1,607</b>

# Member and Benefit Recipient Statistics

Member and Benefit Recipient Statistics									
	Public Employee	State Highway Patrol, Game & Fish Warden, and Criminal Investigator	Volunteer Firefighter, Emergency Medical Technician and Search & Rescue	Paid Fire A	Paid Fire B	Judicial Plan	Law Enforcement	Air Guard Firefighter	Total
Active Members – 12/31/2022	34,712	272	2,324	0	388	55	2524	38	40,313
Retirement Benefits:									
Total receiving retirement benefits on December 31, 2021	30,226	365	1,646	259	171	32	1,522	19	34,240
Total added to rolls in 2022	1,598	20	77	2	20	4	114	1	1,836
Total removed from rolls in 2022	969	7	45	10	2	1	29	0	1,063
Total receiving retirement benefits - December 31, 2022	30,855	378	1,678	251	189	35	1,607	20	35,013
Total paid in retirement benefits in 2022 (amounts in millions)	\$664.1	\$12.7	\$7.2	\$15.6	\$7.8	\$2.4	\$43.9	\$0.7	\$754.4
Average monthly benefit	\$1,794	\$2,803	\$360	\$5,172	\$3,434	\$5,602	\$2,276	\$2,846	N/A

# Active Membership

## Public Employee Plan Active Membership by Year

	2022	Total	2021	Total	2020	Total	2019	Total	2018	Total
State	7,087	21%	7,196	21%	7,428	21%	7,516	21%	7,542	22%
University	1,134	3%	1,111	3%	1,060	3%	1,075	3%	1,065	3%
Community Colleges	1,037	3%	1,049	3%	1,109	3%	1,178	3%	1,237	4%
Schools	18,102	52%	17,827	52%	18,083	52%	17,911	52%	18,048	52%
Counties	2,441	7%	2,409	7%	2,460	7%	2,497	7%	2,467	7%
Libraries	367	1%	357	1%	365	1%	387	1%	403	1%
Cities & Towns	2,465	7%	2,435	7%	2,377	7%	2,396	7%	2,418	7%
Weed & Pest	90	0%	90	0%	93	0%	94	0%	103	0%
Irrigation Districts	65	0%	67	0%	62	0%	67	0%	67	0%
Others	1,924	6%	1,992	6%	2,073	6%	2,085	6%	1,523	4%
<b>Totals</b>	<b>34,712</b>	<b>100%</b>	<b>34,533</b>	<b>100%</b>	<b>35,110</b>	<b>100%</b>	<b>35,206</b>	<b>100%</b>	<b>34,873</b>	<b>100%</b>

	2017	Total	2016	Total	2015	Total	2014	Total	2013	Total
State	7,616	22%	7,681	21%	7,762	21%	7,866	21%	7,830	21%
University	1,017	3%	1,074	3%	1,174	3%	1,155	3%	1,113	3%
Community Colleges	1,360	4%	1,321	4%	1,350	4%	1,322	4%	1,334	4%
Schools	17,584	50%	18,369	50%	18,438	50%	18,230	50%	18,023	50%
Counties	2,436	7%	2,491	7%	2,583	7%	2,576	7%	2,518	7%
Libraries	396	1%	403	1%	434	1%	426	1%	446	1%
Cities & Towns	2,412	7%	2,465	7%	2,580	7%	2,525	7%	2,495	7%
Weed & Pest	86	0%	105	0%	117	0%	118	0%	109	0%
Irrigation Districts	64	0%	70	0%	65	0%	68	0%	66	0%
Others	2,042	6%	1,913	7%	2,074	7%	2,203	7%	2,420	7%
<b>Totals</b>	<b>35,013</b>	<b>100%</b>	<b>35,892</b>	<b>100%</b>	<b>36,577</b>	<b>100%</b>	<b>36,489</b>	<b>100%</b>	<b>36,354</b>	<b>100%</b>

## Public Employee Plan Active Membership by Age and Years of Service

Age Last Birthday	Years of Service							Total
	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 Plus	
Less - 20	121	0	0	0	0	0	0	121
20 – 24	1,253	8	0	0	0	0	0	1,261
25 – 29	2,303	341	4	0	0	0	0	2,648
30 – 34	1,960	1,191	235	6	0	0	0	3,392
35 – 39	1,925	1,200	1,013	235	1	0	0	4,374
40 – 44	1,753	1,139	938	817	155	1	0	4,803
45 – 49	1,368	961	825	778	557	101	4	4,594
50 – 54	1,106	830	753	666	602	478	110	4,545
55 – 59	974	656	584	632	563	359	337	4,105
60 – 64	762	530	467	524	428	252	348	3,311
65 - 69	305	222	157	143	97	76	105	1,105
Over 70	171	81	62	46	31	21	41	453
<b>Total</b>	<b>14,001</b>	<b>7,159</b>	<b>5,038</b>	<b>3,847</b>	<b>2,434</b>	<b>1,288</b>	<b>945</b>	<b>34,712</b>

Average Age = 45.8

Average Service = 9.5

# Affiliated Employers - Top Ten Largest Employers

The following schedules compare the top ten largest employers within the Wyoming Retirement System at 12/31/2022 to 12/31/2013.

TEN LARGEST EMPLOYERS					
12/31/2022			12/31/2013		
Public Employee Pension Plan	# of Employees	%	Public Employee Pension Plan	# of Employees	%
State of Wyoming	7,087	20.4%	State of Wyoming	7,830	21.5%
Laramie County School District # 1	2,400	6.9%	Natrona County School District # 1	2,281	6.3%
Natrona County School District # 1	2,193	6.3%	Laramie County School District # 1	2,278	6.3%
Campbell County School District	1,702	4.9%	Campbell County School District	1,713	4.7%
University of Wyoming	1,134	3.3%	University of Wyoming	1,113	3.0%
Sweetwater County School District # 1	820	2.4%	Sweetwater County School District # 1	1,080	3.0%
Albany County Schools	700	2.0%	Albany County School District	766	2.1%
Sheridan County School District # 2	585	1.7%	Sheridan County School District # 2	612	1.7%
Fremont County School District # 25	561	1.6%	Sweetwater County School District # 2	546	1.5%
Uinta County School District # 1	561	1.6%	Uinta County School District # 1	539	1.5%
All Others	16,969	48.9%	All Others	17,596	48.4%
<b>Total</b>	<b>34,712</b>	<b>100.0%</b>	<b>Total</b>	<b>36,354</b>	<b>100.0%</b>

12/31/2022		
State Highway Patrol, Game & Fish Warden, and Criminal Investigator Pension Plan	# of Employees	%
State of Wyoming	272	100.0%
<b>Total</b>	<b>272</b>	<b>100.0%</b>

12/31/2013		
State Highway Patrol, Game & Fish Warden and Criminal Investigator Pension Plan	# of Employees	%
State of Wyoming	303	100.0%
<b>Total</b>	<b>303</b>	<b>100.0%</b>

12/31/2022		
Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan	# of Employees	%
Fremont County Fire Protection District	137	5.9%
Cody Volunteer Fire Dept.	79	3.4%
Sublette County Unified Fire	69	3.0%
Albany County Volunteer Fire Dept.	56	2.4%
Campbell County Volunteer Fire Dept.	52	2.2%
Jackson Hole Volunteer Fire Dept.	51	2.2%
Carbon County Volunteer Fire Dept.	47	2.0%
Riverton Volunteer Fire Dept.	46	2.0%
Sweetwater District 1 Volunteer Fire Dept.	46	2.0%
Powell Volunteer Fire Dept.	45	1.9%
All Others	1696	73.0%
<b>Total</b>	<b>2,324</b>	<b>100.0%</b>

12/31/2015		
Volunteer Firefighter and Emergency Medical Technician Pension Plan	# of Employees	%
Fremont County Fire Protection District	155	6.5%
Campbell County Volunteer Fire Dept.	99	4.2%
Sublette County Unified Fire	72	3.0%
Cody Volunteer Fire Dept.	67	2.8%
Jackson Hole Volunteer Fire	61	2.6%
Sinclair Refinery Volunteer Fire Dept.	57	2.4%
Holly Frontier Refinery Fire Rescue	53	2.2%
Powell Volunteer Fire Dept.	51	2.2%
Lander Volunteer Fire Dept.	50	2.1%
Riverton Volunteer Fire Dept.	50	2.1%
All Others	1,664	69.9%
<b>Total</b>	<b>2,379</b>	<b>100.0%</b>

Note: Volunteer Firefighter, Emergency Medical Technician, and Search & Rescue Pension Plan top ten information is not available before 2015.

# Affiliated Employers - Top Ten Largest Employers

Note: Paid Fire A Pension Plan is a closed plan and as such does not have any contributing employers.

TEN LARGEST EMPLOYERS					
12/31/2022			12/31/2013		
Paid Fire B Pension Plan	# of Employees	%	Paid Fire B Pension Plan	# of Employees	%
City of Cheyenne	90	23.2%	City of Cheyenne	93	25.1%
City of Casper	70	18.0%	City of Casper	76	20.5%
City of Laramie	45	11.6%	City of Laramie	48	12.9%
Campbell County	35	9.0%	City of Rock Springs	33	8.9%
City of Rock Springs	35	9.0%	Campbell County	23	6.2%
Jackson/Teton County	30	7.7%	Natrona County Fire Protection	21	5.7%
Natrona County Fire Protection	20	5.2%	Jackson/Teton County	18	4.8%
City of Sheridan	17	4.4%	City of Sheridan	16	4.3%
City of Rawlins	10	2.6%	City of Rawlins	11	3.0%
Town of Mills	9	2.3%	Town of Mills	10	2.7%
All Others	27	7.0%	All Others	22	5.9%
<b>Total</b>	<b>388</b>	<b>100.0%</b>	<b>Total</b>	<b>371</b>	<b>100.0%</b>

12/31/2022		
Judicial Pension Plan	# of Employees	%
State of Wyoming	55	100.0%
<b>Total</b>	<b>55</b>	<b>100.0%</b>

12/31/2013		
Judicial Pension Plan	# of Employees	%
State of Wyoming	44	100.0%
<b>Total</b>	<b>44</b>	<b>100.0%</b>

12/31/2022		
Law Enforcement Pension Plan	# of Employees	%
State of Wyoming	571	22.6%
Laramie County	130	5.2%
City of Casper	122	4.8%
Campbell County	119	4.7%
City of Cheyenne	108	4.3%
Natrona County	103	4.1%
Fremont County	72	2.9%
City of Gillette	69	2.7%
Sublette County	61	2.4%
Teton County	59	2.3%
All Others	1,110	44.0%
<b>Total</b>	<b>2,524</b>	<b>100.0%</b>

12/31/2013		
Law Enforcement Pension Plan	# of Employees	%
State of Wyoming	777	27.7%
Laramie County	147	5.2%
Campbell County	120	4.3%
Natrona County	118	4.2%
City of Casper	111	4.0%
City of Cheyenne	107	3.8%
Fremont County	83	3.0%
Sweetwater County	70	2.5%
Sublette County	63	2.2%
City of Gillette	61	2.2%
All Others	1,151	41.0%
<b>Total</b>	<b>2,808</b>	<b>100.0%</b>

12/31/2022		
Air Guard Firefighter Pension Plan	# of Employees	%
State of Wyoming	38	100.0%
<b>Total</b>	<b>38</b>	<b>100.0%</b>

12/31/2013		
Air Guard Firefighter Pension Plan	# of Employees	%
State of Wyoming	31	100.0%
<b>Total</b>	<b>31</b>	<b>100.0%</b>

## Affiliated Employers - List of Employers By Plan

### Public Employee Pension Plan

#### Municipalities

Afton  
Alpine  
Baggs  
Bairoil  
Bar Nunn  
Basin  
Bear River  
Big Piney  
Buffalo  
Burns  
Byron  
Casper  
Cheyenne  
Chugwater  
Cody  
Cokeville  
Cowley  
Deaver  
Diamondville  
Dixon  
Douglas  
Dubois  
East Thermopolis  
Edgerton  
Elk Mountain  
Encampment  
Evanston  
Evansville  
Fort Laramie  
Frannie  
Gillette  
Glendo  
Glenrock  
Granger  
Green River  
Greybull  
Guernsey  
Hanna  
Hudson  
Hulett  
Jackson  
Kaycee  
Kemmerer

### Public Employee Pension Plan

#### Municipalities (continued)

LaGrange  
Lander  
Laramie  
Lingle  
Lovell  
Lusk  
Lyman  
Marbleton  
Medicine Bow  
Meeteetse  
Midwest  
Mills  
Moorcroft  
Mountain View  
Newcastle  
Pine Bluffs  
Pine Haven  
Pinedale  
Powell  
Ranchester  
Rawlins  
Riverton  
Rock River  
Rock Springs  
Rolling Hills  
Saratoga  
Sheridan  
Shoshoni  
Sinclair  
Star Valley Ranch  
Sundance  
Ten Sleep  
Thayne  
Thermopolis  
Torrington  
Upton  
Wamsutter  
Wheatland  
Worland  
Yoder  
**Counties**  
Albany  
Big Horn

### Public Employee Pension Plan

#### Counties (continued)

Campbell  
Carbon  
Converse  
Crook  
Fremont  
Goshen  
Hot Springs  
Johnson  
Laramie  
Lincoln  
Natrona  
Park  
Platte  
Sheridan  
Sublette  
Sweetwater  
Teton  
Uinta  
Washakie  
Weston  
**Libraries**  
Albany County  
Big Horn County  
Carbon County  
Converse County  
Crook County  
Fremont County  
Goshen County  
Hot Springs County  
Johnson County  
Laramie County  
Lincoln County  
Natrona County  
Park County  
Platte County  
Sheridan County  
Sublette County  
Sweetwater County  
Teton County  
Uinta County  
Washakie County  
Weston County

## Affiliated Employers - List of Employers By Plan

### Public Employee Pension Plan

#### University & Colleges

Casper Community College  
 Central Wyoming Community College  
 Eastern Wyoming College  
 Gillette Community College District  
 Laramie County Community College  
 Northern Wyoming Community College  
 Northwest College  
 University of Wyoming  
 Western Wyoming Community College

#### Irrigation Districts

Big Horn Canal  
 Cody Canal  
 Deaver  
 Goshen  
 Hanover  
 Heart Mountain  
 Lakeview  
 LaPrele  
 Shoshone  
 Wheatland  
 Willwood

#### Other Employers

Afton/Lincoln County Airport  
 Albany County Fair Board  
 Albany County SAFE Project  
 Ark Regional Services Inc.  
 Baggs Solid Waste  
 Basin Authority Child Support  
 Big Horn County Solid Waste District  
 Big Horn Enterprises  
 Big Horn Regional Joint Powers Board  
 Big Piney Cemetery District  
 Bridger Valley Joint Powers Board  
 Byron Solid Waste  
 Campbell County Cemetery District  
 Campbell County Conservation District  
 Campbell County Public Land DBA Cam-plex

### Public Employee Pension Plan

#### Other Employers (continued)

Campbell County Senior Citizens Association, Inc.  
 Carbon County COVE  
 Carbon County Senior Services, Inc.  
 Casper/Natrona County Airport  
 Central Wyoming Counseling Center  
 Central Wyoming Senior Services  
 Cheyenne Board of Public Utilities  
 Cheyenne Downtown Development Authority  
 Cheyenne Housing Authority  
 Cheyenne Regional Airport  
 Child Development Services Fremont County  
 Child Support Authority 4th Judicial District  
 Child Support Authority 6th Judicial District  
 Children's Advocacy Project  
 Children's Learning Center  
 City of Cheyenne-Laramie County Health Department  
 Clear Creek Conservation District  
 Cody Conservation District  
 Community Action Partnership/Natrona County  
 Converse County Aging Services  
 Converse County Airport  
 Converse County Conservation District  
 Converse County Senior Housing  
 Converse Hope Center  
 Crisis Intervention Services  
 Crisis Prevention and Response Center  
 Crook County Fair  
 Crook County Museum District  
 Crook County Natural Resource District  
 Crown Hill Cemetery District  
 Deaver-Frannie Cemetery District  
 Dubois-Crowheart Conservation District  
 Eastern Laramie County Solid Waste Disposal District  
 Eden Valley Telehealth Services

### Public Employee Pension Plan

#### Other Employers (continued)

Eppson Center For Seniors  
 Evanston Housing Authority  
 Evanston Parks & Recreation  
 Fremont County Fair  
 Fremont County Fire Protection District  
 Fremont County Museum  
 Fremont County Solid Waste  
 Gillette Abuse Refuge Foundation  
 Gillette/Wright/Campbell County Fire Protection Joint Powers Board  
 Glenrock Area Solid Waste Disposal District  
 Glenrock Cemetery District  
 Glenrock Community Recreation District  
 Glenrock Hospital District  
 Goshen County Fair  
 Goshen County Senior Friendship Center  
 Green River Valley Museum  
 Green River/Rock Springs/Sweetwater County Joint Powers Water Board  
 Greybull Recreation District  
 High Country Behavioral Health  
 Hot Springs County Cemetery District  
 Hot Springs County Senior Citizens Center  
 Jackson Hole Airport  
 Jamestown Rio Vista Water Sewer District  
 Jim Gatchell Memorial Museum  
 Johnson County Cemetery District  
 Johnson County Fair Board  
 Johnson County Solid Waste  
 Kemmerer Senior Citizens  
 Kemmerer-Diamondville Water & Wastewater Joint Powers Board  
 Lander Senior Citizens  
 Laramie County Conservation  
 Laramie County Fire Authority  
 Laramie Regional Airport  
 Laramie Rivers Conservation District  
 Lincoln County Fair

# Affiliated Employers - List of Employers By Plan

Public Employee Pension Plan
Other Employers (continued)
Little Snake River Conservation District
Local Government Liability Pool
Magic City Enterprises
Meeteetse Conservation District
Meeteetse Recreation District
Mountain View Cemetery District
Natrona County Conservation District
Natrona County Fair
Natrona County Health Department
Niobrara County Hospital District
North Platte Valley, South Goshen & Lingle/Ft. Laramie Conservation District
Northern Wyoming Mental Health Center
Northwest Rural Water District
Park County Drug Court
Park County Fire Protection District #1
Park County Fire Protection District #2
Park County Museum Board
Pinedale Aquatic Center
Platte County Housing Authority
Platte County Resource District
Popo Agie Conservation District
Powell Recreation District
Rendezvous Pointe
Renew
Riverside Cemetery District
Rock Springs/Sweetwater County Airport Board
SAFV Task Force, Inc. Uinta County
Saratoga-Encampment-Rawlins Conservation District
Self Help Center
Senior Citizens Council
Sheridan County Conservation District
Sheridan County Fair Association
Sheridan Juvenile Justice Commission Joint Powers Board
Sheridan Recreation District
Shoshone Municipal Pipeline

Public Employee Pension Plan
Other Employers (continued)
South Big Horn Conservation District
South Big Horn Senior Citizens, Inc.
South Cheyenne Water & Sewer
South Lincoln Special Cemetery District
Southwest Counseling Services
Southwest Sublette County Pioneers
Star Valley Conservation District
Star Valley Senior Citizen, Inc.
Sublette County Conservation District
Sublette County Rural Health Care
Sublette County SAFV Task Force
Sweetwater Combined Communications Joint Powers Board
Sweetwater County Conservation District
Sweetwater County District Board of Health
Sweetwater County Fair Board
Sweetwater County Fire District #1
Sweetwater County Joint Travel and Tourism Board
Sweetwater County Museum
Sweetwater County Solid Waste District 2
Sweetwater County Transit Authority
Ten Sleep Senior Center
Teton Conservation District
Teton Village Association
Teton Village Water and Sewer District
Thayne Senior Center
Treatment Court of Sweetwater County
Uinta County Conservation District
Upper Green River Cemetery District
Wardwell Water & Sewer District
Washakie County Conservation District
Washakie County Solid Waste District #1
Weston County Children's Center
Weston County Fairgrounds

Public Employee Pension Plan
Other Employers (continued)
Weston County Fire Protection District
Weston County Museum District
Weston County Natural Resource District
White Mountain Water & Sewer District
Wind River Transportation Authority
Worland Fire Protection District #1
Worland Senior Center
Wyoming Association of Risk Management
Wyoming Child & Family Development Inc.
Wyoming Coalition Against Domestic Violence
Wyoming Community Development Authority
Wyoming County Commissioners Association
Wyoming Education Association
Wyoming High School Activities
Wyoming Lottery
Wyoming Public Employees Association
Wyoming School Boards
Wyoming Senior Citizens Inc.
Wyoming State Bar
Yellowstone Regional Airport
Schools
Albany County Schools
Big Horn County School District #1
Big Horn County School District #2
Big Horn County School District #3
Big Horn County School District #4
Campbell County School District #1
Carbon County School District #1
Carbon County School District #2
Converse County School District #1
Converse County School District #2
Crook County Schools
Fremont County School District #1
Fremont County School District #2
Fremont County School District #14
Fremont County School District #21



# Affiliated Employers - List of Employers By Plan

## Public Employee Pension Plan

### Schools (continued)

Fremont County School District #24  
 Fremont County School District #25  
 Fremont County School District #38  
 Fremont/Wind River County School District #6  
 Goshen County School District #1  
 Hot Springs County School District #1  
 Johnson County School District #1  
 Laramie County School District #1  
 Laramie County School District #2  
 Laramie Montessori School  
 Lincoln County School District #1  
 Lincoln County School District #2  
 Natrona County School District #1  
 Niobrara County School District #1  
 Park County School District #1  
 Park County School District #6  
 Park County School District #16  
 Platte County School District #1  
 Platte County School District #2  
 PODER Academy  
 PODER Academy Secondary School  
 Sheridan County School District #1  
 Sheridan County School District #2  
 Sheridan County School District #3  
 Snowy Range Academy  
 Sublette County School District #1  
 Sublette County School District #9  
 Sweetwater County School District #1  
 Sweetwater County School District #2  
 Teton County School District No. 1  
 Uinta County School District #1  
 Uinta County School District #4  
 Uinta County School District #6  
 Washakie County School District #1  
 Washakie County School District #2  
 Weston County School District #1  
 Weston County School District #7

### State of Wyoming

Attorney General's Office  
 Board of Cosmetology

## Public Employee Pension Plan

### State of Wyoming (continued)

Board of CPA's  
 Board of Equalization  
 Board of Livestock  
 Board of Medicine  
 Board of Nursing  
 Board of Outfitters  
 Board of Parole  
 Board of Pharmacy  
 Board of Professional Geologists  
 Board of Professional Teaching Standards  
 Board of Travel and Tourism  
 Business Council  
 Commission on Judicial Conduct and Ethics  
 Community College Commission  
 Department of Administration & Information  
 Department of Agriculture  
 Department of Audit  
 Department of Corrections  
 Department of Education  
 Department of Enterprise Technology Services  
 Department of Environmental Quality  
 Department of Family Services  
 Department of Fire Prevention and Electrical Safety  
 Department of Game & Fish  
 Department of Health  
 Department of Insurance  
 Department of Revenue  
 Department of Transportation  
 Department of Workforce Services  
 District Attorney District #1  
 District Attorney District #7  
 Environmental Quality Council  
 Governor's Mansion  
 Governor's Office  
 Judicial District 1A  
 Judicial District 1B  
 Judicial District 1C  
 Judicial District 1D  
 Judicial District 2A  
 Judicial District 2B

## Public Employee Pension Plan

### State of Wyoming (continued)

Judicial District 3  
 Judicial District 3B  
 Judicial District 3C  
 Judicial District 3D  
 Judicial District 4A  
 Judicial District 4B  
 Judicial District 5A  
 Judicial District 5B  
 Judicial District 6  
 Judicial District 6B  
 Judicial District 6C  
 Judicial District 7A  
 Judicial District 7B  
 Judicial District 7C  
 Judicial District 7D  
 Judicial District 8A  
 Judicial District 8B  
 Judicial District 9A  
 Judicial District 9B  
 Judicial District 9C  
 Legislative Service Office  
 Military Department  
 Miners Hospital Board  
 Office of Administrative Hearings  
 Office of Guardian ad Litem  
 Office of State Lands & Investments  
 Oil & Gas Conservation Commission  
 Pari-Mutuel Commission  
 Public Defenders  
 Public Service Commission  
 Real Estate Commission  
 Retirement System  
 Secretary of State  
 State Auditor  
 State Budget Department  
 State Construction Department  
 State Engineer's Office  
 State Geological Survey  
 State Parks & Cultural Resources  
 State Treasurer  
 Supreme Court  
 Water Development Commission  
 Wildlife & Natural Resources Trust Board

# Affiliated Employers - List of Employers By Plan

## Public Employee Pension Plan

### Weed & Pest

Albany County Weed & Pest

Big Horn County Weed & Pest

Campbell County Weed & Pest

Carbon County Weed & Pest

Converse County Weed & Pest

Crook County Weed & Pest

Fremont County Weed & Pest

Goshen County Weed & Pest

Hot Springs Weed & Pest

Johnson County Weed & Pest

Laramie County Weed & Pest

Lincoln County Weed & Pest

Natrona County Weed & Pest

Control

Niobrara County Weed & Pest

Park County Weed & Pest

Platte County Weed & Pest

Sheridan County Weed & Pest

Sublette County Weed & Pest

Sweetwater County Weed & Pest

Teton County Weed & Pest

Uinta County Weed & Pest

Washakie County Weed & Pest

Weston County Weed & Pest

### Board of Cooperative Educational Services (BOCES)

Carbon County Higher Education  
BOCES

Carbon CSD #2 BOCES

Fremont County BOCES

Northeast Wyoming BOCES

Northwest Wyoming BOCES

Oyster Ridge BOCES

Region V BOCES

Sublette BOCES

Sweetwater BOCES

Uinta BOCES #1

Uinta Co. BOCES #4,#6

Western/Sublette County # 9  
BOCES

## State Patrol, Game & Fish Warden and Criminal Investigator Pension Plan

Attorney General's Office

Department of Game & Fish

Department of Transportation

## Paid Fire A Pension Plan

The Paid Fire A Pension Plan is a closed plan and as such does not have any contributing employers.

## Affiliated Employers - List of Employers By Plan

### **Paid Fire B Pension Plan**

Campbell County  
 Casper/Natrona County Airport  
 City of Casper  
 City of Cheyenne  
 City of Laramie  
 City of Rawlins  
 City of Rock Springs  
 City of Sheridan  
 Evansville Emergency Services  
 Jackson/Teton County Fire Department  
 Johnson County Fire Department  
 Laramie County Fire Authority  
 Natrona County Fire Protection  
 Town of Mills  
 Uinta County Fire Protection  
 Worland Protection District

### **Volunteer Firefighter, EMT, and Search & Rescue Pension Plan**

Afton Volunteer Fire Department  
 Albany County Fire District #1  
 Albany County Volunteer Fire Department  
 Albin Volunteer Fire Department  
 Alpine Volunteer Fire Department  
 Antelope Gap Rural Fire District  
 Bairoil Volunteer Fire Department  
 Bar Nunn Volunteer Fire Department  
 Big Horn #1 Volunteer Fire Department  
 Big Horn County Fire Protection District No. 4  
 Big Horn County Search and Rescue  
 Big Horn County Volunteer Fire - District 5  
 Big Horn County Volunteer Fire Department  
 Buffalo Volunteer Fire Department  
 Campbell County Volunteer Fire Department  
 Carbon County Volunteer Fire Department  
 Casper Mountain Volunteer Fire Department  
 Chugwater Volunteer Fire Department  
 Clark Volunteer Fire Department  
 Cody Volunteer Fire Department  
 Cokeville Volunteer Fire Department/  
 Bear River Fire Protection  
 Converse County Rural Fire Department  
 Converse County Search and Rescue  
 Crook County Volunteer Fire Department  
 Dayton Volunteer Fire Department  
 Douglas Volunteer Fire Department  
 Dubois Volunteer Fire Department  
 Eden-Farson Fire Control District  
 Eden-Farson Volunteer Fire Department  
 Elk Mountain Volunteer Fire Department  
 Encampment Volunteer Fire Department

### **Volunteer Firefighter, EMT, and Search & Rescue Pension Plan (continued)**

Evanston Volunteer Fire Department  
 Evansville Volunteer Fire Department  
 Fort Laramie Volunteer Fire Department  
 Fremont County Fire Protection District  
 Glendo Volunteer Ambulance - EMT  
 Glendo Volunteer Fire Department  
 Glenrock Volunteer Fire Department  
 Granger Volunteer Fire Department  
 Green River Volunteer Fire Department  
 Greybull Volunteer Fire Department  
 Guernsey Rural Fire District  
 Guernsey Volunteer Fire Department  
 Hartville Volunteer Fire Department  
 Hawk Springs Volunteer Fire Department  
 Holly Frontier Refinery Fire Rescue  
 Hot Springs County Search and Rescue  
 Hulett Emergency Medical Services Inc  
 Hulett Volunteer Fire Department  
 Jackson Hole - EMT  
 Jackson Hole Volunteer Fire  
 Jeffrey City Volunteer Fire Department  
 Johnson County Fire Control District #1  
 Johnson County Rural Healthcare District-EMT  
 LaGrange Volunteer Fire Department  
 Lander Volunteer Fire Department  
 Laramie County Fire Authority  
 Laramie County Fire District #1  
 Laramie County Fire District #4  
 Laramie County Fire District #5  
 Laramie County Fire District #6  
 Laramie County Fire District #10  
 Lingle Volunteer Fire Department  
 Little Snake River - EMT  
 Lovell Volunteer Fire Department  
 Lusk Volunteer Fire Department

# Affiliated Employers - List of Employers By Plan

## Volunteer Firefighter, EMT, and Search & Rescue Pension Plan (continued)

Manderson Volunteer Fire Department

Medicine Bow Volunteer Fire Department

Meeteetse Volunteer Fire Department

Moorcroft Volunteer Fire Department

Newcastle Volunteer Fire Department

North Lincoln County Hospital District

Other

Palmer Canyon Fire Department

Pine Haven Ambulance

Pine Haven Volunteer Fire Department

Powder River Fire District

Powell Valley Healthcare - EMT

Powell Volunteer Fire Department

Prairie Center Volunteer Fire Department

Rawlins Volunteer Fire Department

Riverton Volunteer Fire Department

Rock River Volunteer Fire Department

Salt Creek Volunteer Fire Department

Saratoga Volunteer Fire Department

Shell Volunteer Fire Department

Sheridan Area Rural Volunteer Fire Department

Sinclair Refinery Volunteer Fire Department

Sinclair Volunteer Fire Department

South Central EMS

South Lincoln Volunteer Fire Department

Story Volunteer Fire Department

Sublette County Unified Fire

Sundance Volunteer Fire Department

Sweetwater County Volunteer Fire Department

Sweetwater District 1 Volunteer Fire Department

Ten Sleep Ambulance Service - EMT

## Volunteer Firefighter, EMT, and Search & Rescue Pension Plan (continued)

Ten Sleep Volunteer Fire Department

Teton County Volunteer Search and Rescue

Teton Village Volunteer Fire Department

Thayne Volunteer Fire Department

Thermopolis Volunteer Fire Department

Tongue River Volunteer Fire Department

Torrington Ambulance Service - EMT

Torrington Volunteer Fire Department

Town of Pine Bluffs EMS

Uinta County - EMT

Uinta County Search and Rescue

Uinta County Volunteer Fire Department

Upton Volunteer Fire Department

Veteran Volunteer Fire Department

Wamsutter Volunteer Fire Department

Washakie County Search and Rescue

West Park Hospital - EMT

Weston County Volunteer Fire Protection District

Wheatland Volunteer Fire Department

Worland Volunteer Fire Department

Yoder Volunteer Fire Department

## Judicial Pension Plan

Wyoming Judicial Branch

## Affiliated Employers - List of Employers By Plan

### Law Enforcement Pension Plan

Albany County  
 Big Horn County  
 Campbell County  
 Carbon County  
 City of Buffalo  
 City of Casper  
 City of Cheyenne  
 City of Cody  
 City of Douglas  
 City of Evanston  
 City of Gillette  
 City of Green River  
 City of Kemmerer  
 City of Lander  
 City of Laramie  
 City of Newcastle  
 City of Powell  
 City of Rawlins  
 City of Riverton  
 City of Rock Springs  
 City of Sheridan  
 City of Torrington  
 City of Worland  
 Converse County  
 Crook County  
 Fremont County  
 Goshen County  
 Hot Springs County  
 Johnson County  
 Laramie County  
 Lincoln County  
 Natrona County  
 Park County  
 Platte County  
 Sheridan County  
 Sublette County  
 Sweetwater County  
 Sweetwater County Combined  
 Communications Joint Powers Board  
 Teton County  
 Town of Afton  
 Town of Basin  
 Town of Cokeville  
 Town of Diamondville  
 Town of Encampment

### Law Enforcement Pension Plan (continued)

Town of Evansville  
 Town of Fort Laramie  
 Town of Glenrock  
 Town of Greybull  
 Town of Guernsey  
 Town of Hanna  
 Town of Hulett  
 Town of Jackson  
 Town of Lingle  
 Town of Lovell  
 Town of Lusk  
 Town of Lyman  
 Town of Manderson  
 Town of Medicine Bow  
 Town of Midwest  
 Town of Mills  
 Town of Moorcroft  
 Town of Mountain View  
 Town of Pine Bluffs  
 Town of Saratoga  
 Town of Shoshoni  
 Town of Sinclair  
 Town of Thermopolis  
 Town of Upton  
 Town of Wheatland  
 Uinta County  
 University of Wyoming  
 Washakie County  
 Weston County  
 Wyoming Attorney General's Office  
 Wyoming Board of Outfitters  
 Wyoming Department of Corrections  
 Wyoming Department of  
 Transportation  
 Wyoming Gaming Commission  
 Wyoming Livestock Board

### Air Guard Firefighter Pension Plan

Wyoming Military Department



2515 Warren Avenue, Suite 450  
Cheyenne, Wyoming 82002  
(307) 777-7691  
[retirement.wyo.gov](http://retirement.wyo.gov)