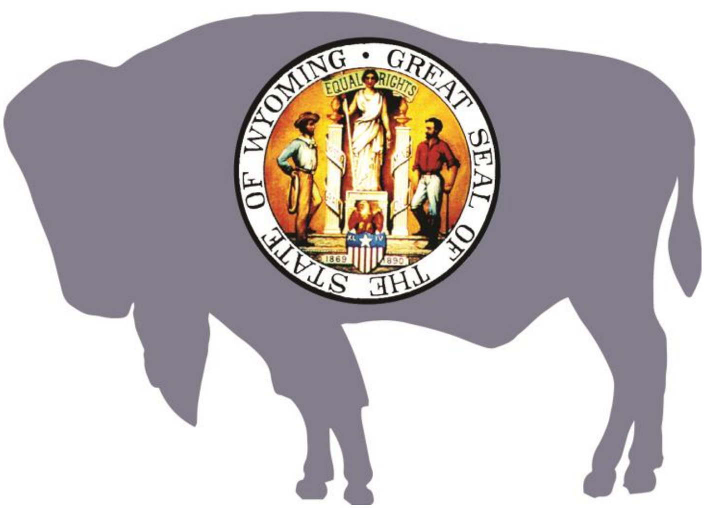
Wyoming
RETIREMENT SYSTEM

PARTNERING TO BUILD FINANCIAL SECURITY FOR MEMBERS AND THEIR FAMILIES

Report to the JAC

June 23, 2015



Wyoming Retirement System

Partnering to Build Financial Security for Members and their Families

Matt Mead
Governor

Ruth Ryerson
Executive Director

June 5, 2015

Senator Tony Ross, Co-Chairman JAC
Representative Steve Harshman, Co-Chairman JAC
VIA EMAIL
c/o Legislative Service Office
213 Capitol Building
Cheyenne, WY 82002

Dear Senator Ross and Representative Harshman:

I am pleased once again to provide you our report primarily intended to serve as an update on our pension plan funding, as well as comply with applicable statutory reporting requirements.

With regard to the funding of our pension plans, the recent valuation reports provide a positive snapshot of the funding status as of January 1, 2015 and the associated projections portray healthy trends. I consider the actuarial information we received this year to be good news, as expected. There are a number of variables which contribute to the positive actuarial results including the projected contribution rate increase and participant assumptions versus actual results. The Plan also benefited from the effects of actuarial smoothing. The Plan realized a 4.9 percent return on investments in 2014. However, the 3-year and 5-year returns as of April 2015 well exceeded the objective at 9.3 percent and 8.5 percent respectively. This was beneficial given the effects of 5-year smoothing and a 7.75 percent return objective. The Plan is still on track to achieve funded status within 30 years, however, the time frame and projected funded status in 30 years both declined as a result of the variance to return objective assumptions. The Board will continue to evaluate the adequacy of contributions and appropriateness of our actuarial assumptions, but is pleased that we do not need to recommend contribution increases or benefit changes at this time. In the case of the Paid Firefighter A Plan, we again call your attention to the known funding problem which will likely need legislative intervention.

Many good achievements have taken place since our last update. We anticipate a clean opinion from the independent auditors who are now completing the annual financial audit. Stability in our investment program and the addition of sharp interns from UW has enhanced our investment capabilities. Once again, the Board was able to reduce the fees participants pay for administration of the 457 Plan. This is in keeping with the Board's philosophy of reducing participant expenses whenever possible. Finally, we are pleased and appreciative of your efforts to support and pass multiple bills in 2015, which strengthen and streamline efficiency or provide clarity to several plans.

On behalf of the Board and myself, I thank you for your interest in WRS and look forward to our upcoming meeting.

Sincerely,

Ruth Ryerson

Ruth Ryerson
Executive Director

Cc: Joint Appropriations Committee Members and Staff

6101 Yellowstone, Suite 500, Cheyenne, WY 82002
307.777.7691 fax 307.777.5995
http://retirement.state.wy.us
pension@wyo.gov

TABLE OF CONTENTS

Purpose of Report

This report is intended to provide the JAC members with a historical overview of WRS, as well as organizational updates, an understanding of recent actuarial valuations of the pension plans, an overview of investment performance and meet the system's annual statutory reporting requirements.

Historical Overview

WRS was created by the legislature in 1953 and has now operated as a centralized administrator for Wyoming's public retirement plans for 62 years. With nearly 100,000 active, inactive and retired members, WRS impacts about one in six people in Wyoming. WRS is viewed as a public trust that both the Board members, who are fiduciaries of the system, and policymakers safeguard.

WRS has experienced many changes over the decades and a chronological listing of them can be found in Appendix A or view a five minute video on the history of WRS at the following link: https://youtu.be/HrAs-KGr2xY. One constant in WRS' history is it has functioned as an executive branch agency. As such, although it has a board of trustees and an independent funding source, the executive and legislative branches control important aspects of WRS such as budget authorization, contribution rates and benefit structure.

Recent Organizational Improvement: A period of significant organizational improvement began in 2007, following publication of two evaluative reports and appointment of four new board members out of an eleven member board. Specifically, LSO released a program evaluation of WRS' Public Employee Pension Plan in 2007 and a more specialized review of WRS (commissioned by the Wyoming State Auditor) was done by Independent Fiduciary Services (IFS) in 2008. These reports are available online at:

LSO Program Evaluation: http://legisweb.state.wy.us/progeval/REPORTS/2007/retirement/toc.htm

Independent Fiduciary Services: http://retirement.state.wy.us/Media.aspx?mediaId=440

Largely as a result of these reports, the Board embarked upon improvements related to the substantial list of recommendations including governance, policy delineation, investments and actuarial policy. The Board and management have implemented nearly all of them. See WRS' summary of the status of these recommendations in Appendix B. Although the appointment of legislative liaisons to WRS began around 1998, WRS' formal assignment to the JAC in 2009 has been very important. This improved the communications between the Board and the legislature. WRS has been on the agenda for nearly all JAC hearings since and, in conjunction, provides written reports accessible on WRS' website for all stakeholders.

Using governance models from peer public pension plans, the Board developed a written policy manual and first adopted it in 2009. The policy manual is now revised as needed and is the foundation for the governance process to which the board adheres. Key policies express board duties, committee charters and those duties delegated to the executive director, chief investment officer (including, but not limited to, investment manager selection and retention) and other executive staff.

WRS' policies are available at http://retirement.state.wy.us/Media.aspx?mediaId=1238.

In our interest to improve risk controls, develop a professional investment program and provide more timely legal support, WRS was able to add staff and increase budget resources. Over the last eight years, WRS sought and received approval of funding for the following staff positions: two internal auditors, a chief investment officer along with three investment staff and general counsel. WRS recently added summer intern and analyst programs for the investment team. The legislature and executive branch partnered with WRS to achieve more budgetary flexibility so investment team compensation would be more competitive with industry averages.

While there has been improvement in the resourcing of WRS, needs remain for pension administration and member services. For example, WRS made unsuccessful requests for an additional retirement educator. Beginning in 2012, WRS was able to expand its member education outreach by using a contractor in this role. However, this arrangement is less effective and more costly than having an additional employee. Along the same lines, WRS operates with "permanent temporary" staff for reception and document imaging which is not as effective as could be. WRS has requested and would still eventually like to add an integrated telephone system to its pension administration system to improve the efficiency of handling member interactions.

Retirement Administration & Investment Network (RAIN): In addition to increased staffing, WRS obtained budgetary approval to begin the process of replacing its information technology platform in 2009. The process for developing the new technology, known as RAIN, took about five years and represents a major milestone for WRS.

WRS went live with RAIN a little over one year ago, providing online, secure account access to members and employers. Members have 24/7 portal access to their account information and can initiate many transactions online, including address updates, bank account changes, beneficiary updates and even applications for retirement. There are ongoing challenges of stabilizing operations in RAIN, contracting for programming support, managing the change process and data security. WRS is working with ETS and our software contractors to navigate these processes.

There have been additional workload requirements for both operations staff and the information technology staff dedicated to WRS. Maintaining functionality of the staging environment, needed to test all changes before they are put into production, has proven to be more difficult than anticipated. In addition, after experiencing extremely slow response times for RAIN users, WRS began hosting RAIN on dedicated servers instead of shared enterprise servers in March. ETS supported this arrangement. It has improved network speed and allowed WRS staff to have better visibility on network operations. At this point, monthly operations have become routine. We are still impacted by various legacy data issues for older accounts (1999 and earlier) that necessitate manual account audits. WRS has now been through one cycle of annual operations (IRS 1099-R tax reporting, annual actuarial report, annual account statements, etc). Each one involved problem solving but all were accomplished.

The next immediate challenge in terms of RAIN is to implement changes resulting from the 2015 legislative session, while we continue to refine operations and the participant experience for both members and employers.

Investment Overview

The overarching investment-related objective of the WRS Board is to develop an effective, sustainable investment organization that can produce outstanding returns as measured by outperforming the portfolio benchmark and a relevant peer set over full market cycles. Realizing this goal will greatly improve the probability that the investment portfolio will produce a return equal to or in excess of the actuarial expected return of 7.75 percent over a long time horizon. While the portfolio has exceeded the actuarial expected return over the past five years, the coming five years are likely to be more challenging.

Building the type of stable, effective investment organization that is necessary to achieve the Board's long-term investment goals is difficult. It depends on establishing appropriate governance and processes and hiring and retaining a talented and dedicated investment staff who are keenly focused on asset allocation, portfolio construction and manager selection. The past seven years have shown a dramatic improvement in these areas and a corresponding improvement in returns. While the overall trend in building the investment program has been very positive there have been setbacks along the way, specifically turnover in the investment staff, with three CIOs over the past six years. See Appendix C for a history of WRS investment staff tenure. Fortunately, the past two years have seen increasing stability in the team in large part due to the financial and organizational support of the Legislature, the Governor and the Board.

Asset Allocation: Every year the Board reviews and approves the Investment Policy Statement (IPS) which includes the target asset allocation for all approved asset classes. The IPS review process incorporates asset allocation recommendations from the executive director, CIO and NEPC, the WRS generalist consultant, and is designed to position the portfolio optimally for the changing investment environment.

A prolonged equity bull market and declining interest rates over the past several years have required making significant changes to the WRS asset allocation. The credit crisis in 2008 and 2009 was global in nature and affected all financial markets. Most central banks including those of the U.S., the European Union and China responded uniformly to the initial disruption by cutting interest rates and in many cases implementing other forms of quantitative easing, such as buying distressed fixed income securities. These programs achieved their desired effect of increasing confidence in the financial system, reducing interest rates across fixed income markets and forcing financial participants into riskier securities such as equities. WRS has benefitted greatly from rising global equity markets, helping the portfolio to outperform the actuarial expected return in past years but also progressively increasing the difficulty of doing so in subsequent years.

Lower expected returns for the next five to seven years have required the Board and the WRS investment staff to develop new approaches to structuring the portfolio to maximize returns. Some of the changes NEPC and the WRS investment team have recommended over the past several years have included increased investments in non-U.S. equity and debt and increased exposure to private investments and hedge funds.

Changes in investment staffing, specifically at the CIO level, have impacted the asset allocation over the past seven years. Across the financial industry CIOs have different investment philosophies and different strategies for implementing those philosophies. Not surprisingly, when new CIOs have been hired at WRS they have changed the portfolio, sometimes dramatically. The process of changing the investment strategy has been very time consuming and distracting as the team has shifted gears to reposition the portfolio. The turnover is investment staff has also made it difficult to assess the viability of any one approach because none of the strategies has been in place for a full market cycle.

Prior to the hiring of an investment staff in 2009, the portfolio was primarily invested using a "60/40" strategy implemented with active managers which means the portfolio was invested in approximately 60 percent public equities and 40 percent fixed income and core real estate with minimal investments in alternatives such as private equity or hedge funds. The first investment team hired in 2009 implemented an approach nicknamed the "Three Layer Cake" strategy for its structure within each asset class of a base layer of passive management, a second layer of active management and a third layer of alternatives. With the support of the Board and NEPC, Mr. Masoudi, the current CIO, has taken a different approach with a default within traditional investments to low-cost passive funds and active management only to the extent it is likely to produce incremental returns at a reasonable cost. Within the alternative space, Mr. Masoudi has worked with the investment team to launch the private equity program which was approved by the Board in 2012 but not yet initiated and has restructured the Marketable Alternatives (primarily hedge funds) portfolio to focus on lower-cost, more transparent, higher returning funds. The Board has consulted with NEPC and believes that this higher allocation to private investments and marketable alternatives will increase the probability of producing higher returns over market cycles but with lower volatility.

The following chart compares the current Strategic Asset Allocation (SAA) set by the Board to comparable levels in early 2008, prior to the first CIO being hired. The portfolio has changed considerably over that time with a lower allocation to fixed income because of low expected returns in that asset class and greater exposure to non-U.S. equity markets reflecting the greater portion of world GDP that is produced in foreign countries. In 2008 Marketable Alternatives were not part of the portfolio and all Private Markets exposure was exclusively in relatively low-returning core real estate and a few unfunded commitments to infrastructure funds.

WRS Board Approved Strategic Asset Allocation

Asset Class	Strategic Asset Allocation Long Term Target Weight (1Q) 2008	2015
Tactical Cash	**2.0%**	**2.5%**
Fixed Income	**28.0%**	**15.0%**
Equity	**59.0%**	**52.0%**
Domestic Equity	42.0%	29.8%
International Developed Equity	14.5%	21.4%
Emerging Markets Equity	2.5%	5.8%
Marketable Alternatives	**0.0%**	**15.5%**
Private Markets	**10.0%** [(1)]	**15.0%**

(1) 2008 Private Markets exposure consists entirely of real estate.

Historical Performance: Performance since the crisis in 2008 has improved as the Board has built out the investment organization. As the table below shows, the performance of the portfolio prior to the financial crisis was poor on an absolute basis and more importantly relative to benchmarks. This substantial underperformance over three-, five- and ten- year periods represented hundreds of millions of dollars of losses relative to the benchmark. While absolute performance is heavily dependent on the overall direction of equity and fixed income markets and short term performance is not as relevant, long term performance relative to benchmarks should be positive if an investment program is performing well.

Prior Performance Without Internal Staff As of March 31, 2009

		Annualized Returns as of 3/31/09		
	One Year	Three Years	Five Years	Ten Years
WRS Total Fund (net)	**-31.1%**	**-9.4%**	**-2.1%**	**0.5%**
Benchmark (Target Asset Allocation)	-26.2%	-6.5%	-0.2%	1.7%
Outperformance (Underperformance)	**(4.9%)**	**(2.9%)**	**(1.9%)**	**(1.2%)**

Source: New England Pension Consultants

Since hiring a dedicated internal investment team, performance has improved substantially. Absolute performance has been very strong, substantially outperforming the actuarial required return due largely to a prolonged bull market in both equities and fixed income. Performance relative to the benchmark over the past three-year and five-year periods has been modestly positive but substantially better than prior to the crisis. Ten-year returns are slightly below benchmark but this period includes approximately four years prior to the financial crisis when there was no investment team. During the most recent trailing one-year period, returns were negatively impacted by overweight positions in non-U.S. equities and fixed income however these positions have started to pay off as shown in the strong YTD performance. While the portfolio has outperformed benchmarks, the Fund underperformed relative to its peer set over the last one, three and five-year periods largely because of the turnover in staffing which resulted in changing investment strategies and an inability to timely execute on all of the investment priorities, coupled with an international tilt in the portfolio which underperforming in all of those time periods. With the stability and leadership of the investment team over the last two years and the composition of the team as we look forward, the Board expects to increase the margin of outperformance in the next market cycle.

Performance with Internal Investment Staff as of April 30, 2015

	YTD	One Year	*Annualized Returns as of 4/30/2015* Three Years	Five Years	Ten Years*
WRS Total Fund (net)	**4.5%**	**7.0%**	**9.3%**	**8.5%**	**6.1%**
Benchmark (Target Asset Allocation)	4.0%	7.6%	9.2%	8.1%	6.3%
Outperformance (Underperformance)	+0.5%	(0.6%)	+0.1%	+0.4%	(0.2%)
Actuarial Required Return**		7.75%	8.0%	8.0%	8.0%

*WRS has had an internal investment team only since March of 2009
** Actuarial Rate of Return was changed as of 3/31/13 from 8.0% to 7.75%

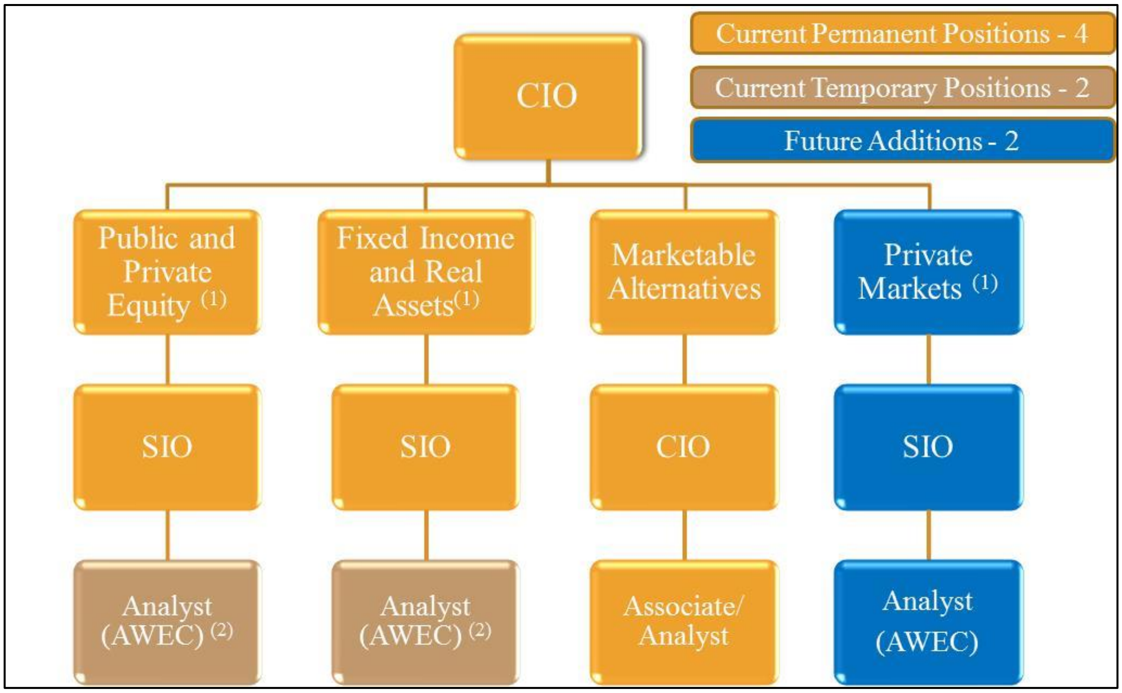
Investment Team Staffing: The WRS Board believes that the future success of the investment program will be heavily dependent on the stability and quality of the investment team. Additional resources allocated to the investment program can potentially produce enormous returns. Small improvements can have big payoffs; on a portfolio of approximately $8 billion a minor 0.1 percent increase in annual performance represents $8.0 million. For example, over the past year the investment team implemented two direct tactical trades (i.e. without outside manager involvement) that have produced approximately $25 million[1] in profit. These trades would not have happened if there was not an experienced investment team in place.

The Board has increased the size of the investment team from the first CIO in early 2009 to four professionals at the beginning of 2015. In late 2014 the Board, in consultation with Governor Mead, approved a five-year strategic plan recommended by the CIO (see Appendix D for highlights of the plan) to develop breadth and depth within the team, so that the fund can better withstand the impact of any turnover, and develop deeper expertise within each asset class. To accomplish this goal the plan recommends increasing the size of the investment team from four professionals to six in the near term and eventually to eight, subject to support from the executive and legislative branches. The larger team will make the WRS investment staff more comparable in size to other similar public pensions. The Board, executive director and CIO believe the larger staff size is critical to addressing the challenges posed by the coming low return environment and the resulting wider variety of investment opportunities available.

In June of this year the investment team made the first two of these staff additions by hiring two new temporary Analysts who are recent UW graduates and Wyoming natives. These two individuals interned with WRS last summer and were actively looking for full-time employment this summer prompting our decision to seek approval through the B-11 process for the coming fiscal year. The Analysts are AWEC employees and will have up to three-year terms as noted in the following description of the Analyst program. The Board will request AWEC funding for these positions for the next budget cycle and hopes the Executive and Legislative branches will support these additions as part of the upcoming biennium budget cycle. Consistent with the Board's long-term strategic plan, it will propose to hire a Senior Investment Officer (SIO) and another Analyst (AWEC) at a later date in order to achieve greater expertise and depth of coverage in our targeted investment areas. Whenever possible, WRS attempts to hire Wyoming natives to reduce turnover and improve the stability of the team. (See Appendix C for bios.)

The Board's proposed long-term staffing plan for the investment team is to have four two-person teams that focus on separate asset classes. Each team will consist of a senior and junior professional as shown in the following chart.

[1] This figure represents the two realized tactical hedge trades executed through the Russell overlay program that were realized in October 2014 and May 2015. Both trades were profitable and related to positions in U.S. Treasuries that were used to change the duration of the fixed income portfolio.



(1) Coverage of Private Equity and Real Assets would transfer to the new staff upon hiring.
(2) AWEC analyst funding currently only through June 2016.

Analyst Program: As noted previously, the investment group is seeking to establish a long-term Analyst program to work with senior team members to improve the overall efficiency and productivity of the investment group. The Analysts will typically have limited or no prior work experience. They will be AWEC hires and not State employees. Analysts will spend three years with the investment group and rotate to a new asset class every year. After three years, Analysts will either find jobs at similar institutions such as pensions, endowments and foundations or alternatively they could attend graduate school. As previously noted, we have hired our first two Analysts through this program. Both were WRS summer interns last year. They were selected after a thorough recruiting process in which we considered more than 50 other candidates for the positions. They were among the best and the brightest of their colleagues at UW in their respective undergraduate and graduate level classes.

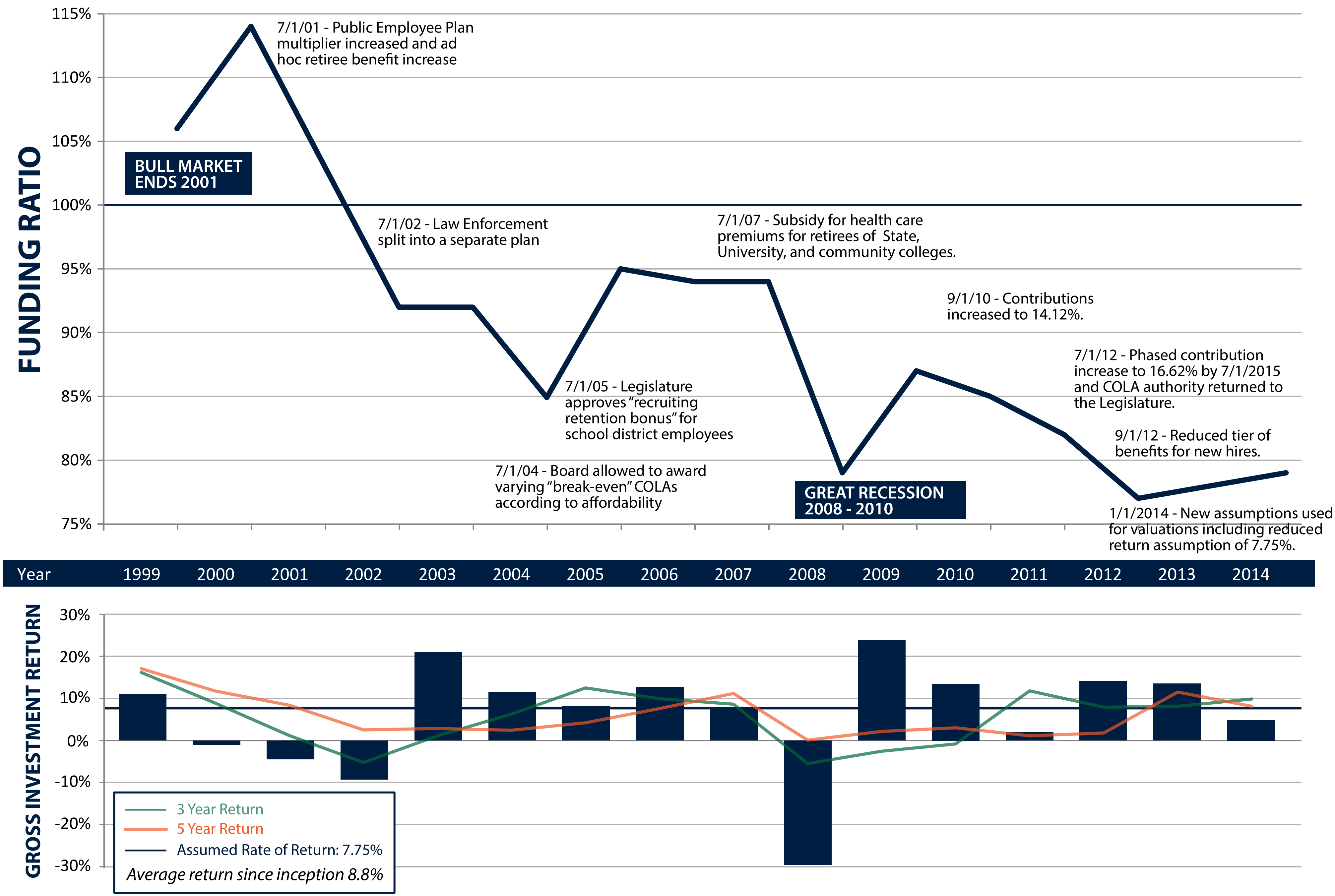
Summer Intern Program: In 2014 we launched an intern program with the goal of finding outstanding students and providing an excellent professional opportunity to them. The summer interns support the senior investment team's due diligence efforts, help to monitor the current portfolio, create financial models and presentations and work on investment research projects. The program primarily targets students from WY higher education institutions. Based on the success of the program last year, we are continuing it this summer and have hired two interns, both of whom are top students at UW.

Pension Plan Funding

Actuarial History of the Public Employee Plan: The following chart portrays a timeline of the funded ratio of the paid Public Employee Pension Plan from 1999 forward along with key historical events. To provide a context for the timeline, the contribution rate for this plan had not been increased since 1981. In 2007, it was becoming apparent a contribution increase for the Public Employee Plan would be needed. With hindsight this might have been known earlier; however, at that time the Board operated without the benefit of actuarial projections on long-term trends due to budget constraints on actuarial consulting services. COLA awards had an impact on the funding status of the Public Employee Plan.

PUBLIC EMPLOYEE PENSION PLAN

Funding Ratio & Key Historical Events



2015 Valuations & Projections: WRS recently received annual valuations showing the funding status of each of the seven pension plans it oversees, along with long-term projections. The valuations provide a snapshot of each plan's assets and liabilities as of 1/1/2015. All plans, except the Plan A Paid Firefighter Pension, have improved funded ratios from last year primarily due to gains on assumptions such as lower salary increases and higher mortality than assumed. The projections provide a forecast of the long-term trends for each plan.

The assets of all the plans are invested according to the same strategy. Investment return for 2014 was 4.9 percent, which is below the actuarially assumed rate of 7.75 percent. However, the actuarial rate of return, which reflects a five-year smoothing of assets, was 8.7 percent. Smoothing is intended to even out market gains and losses and keep the actuarial required contribution stable.

The Public Employee Pension Plan, which is the largest of all WRS plans, shows improved funding. This plan had a funded ratio of 78.96 percent compared to 77.62 percent last year. The unfunded liability for this plan decreased slightly from $1.8 billion to $1.76 billion. Projections show a 107.9 percent funded ratio in the year 2045. Although there is a current contribution rate shortfall in this plan, it is projected to disappear by 2017 (provided all actuarial assumptions are met) due to the proactive measures already put in place and assuming the 7.75percent actuarial rate of return is met in each year.

The smaller plans WRS administers also show improved funding. A summary table follows and the full reports can be found at the links provided in this document. The contribution shortfalls, shown in red on the summary table, for two of the smaller plans are projected to be eliminated over time if all assumptions are met.

Because the contribution rates are set in state law, rather than the result of actuarial analysis, the Board closely monitors them and recommends adjustments when necessary. The Board is not seeking any legislative changes to benefits or contribution levels for any plan at this time. The Board is watching the trends of the Warden, Patrol & DCI Plan, as a contribution increase may be needed depending on the actuarial experience compared to the established assumptions. This plan does not reach full funding in the 30-year amortization period, but does over a 40-year period.

The projections for all plans, with the exception of the Judicial Plan, show lower funded ratios after 30 years than the projections based on last year's valuations. This is primarily due to the lower investment return in 2014. The projections include the contribution increases scheduled for July 1, 2015 for the Public Employee Plan and the Warden, Patrol & DCI Plan.

WRS also administers a pension plan for volunteer firefighters and a pension plan for volunteer emergency medical technicians, currently with separate plans and boards. These two plans are being combined according to recent legislation; however, the actuary provided valuation results for each of these plans with the plan provisions currently in place. This legislation resolves the known lack of a long-term funding source for the Volunteer EMT Plan; employer contributions have been paid from an initial appropriation into a "set-aside account" that had less than three years of funding remaining a of 1/1/2015. Due to the upcoming changes, projections for these two plans were not done. Baseline actuarial information for the new plan will be provided to the JAC next year.

Contribution and Funded Ratio by Plan as of 1/1/2015

Plan	Total Cost as % of payroll	Current Total Statutory Contribution Rate	(Shortfall)/ Surplus	Funding Ratio	30 Year Projected Funded Radio	Year Full Funding Projected
Public Employee*	17.51%	15.87%	-1.64%	78.96%	107.90%	2041
Warden, Patrol, & DCI*	31.23%	28.73%	-2.50%	79.18%	94.00%	2055
Law Enforcement	16.07%	17.20%	1.13%	93.67%	120.00%	2023
Judicial	18.15%	23.72%	5.57%	106.99%	163.40%	2015
Paid Fire B	21.34%	21.25%	-0.10%	100.15%	99.80%	2015
Guard Fire	16.83%	23.77%	6.94%	89.68%	163.00%	2019
Paid Fire A (in $)**	$9,714,697	$0	($9,714,697)	67.29%	0.00%	n/a
Volunteer Fire (in $)***	$1,381,922	$2,316,600	$934,678	94.87%	n/a	n/a
Volunteer EMT (in $)****	$102,982	$23,850	($79,132)	124.93%	n/a	n/a

*Effective July 1, 2014 for the Public Employee Plan, the employee contribution rate increased to 8.25%, and the employer (statutory) rate increased from 7.12% to 7.62% of pay and will increase again to 8.37% of pay effective July 1, 2015. Based on the timing of this contribution increase in 2015, the one-year shortfall would decrease from 1.64% to 1.27% of pay. Effective July 1, 2014 for the Warden, Patrol & DCI Plan, the employee contribution rate increased to 14.56%, and the employer (statutory) rate increased from 12.96% to 13.86% of pay and will increase again to 14.88% effective July 1, 2015. Based on the timing of this increase effective during the upcoming year, the one-year shortfall would decrease from 2.50% to 1.99% of pay.

**State law requires a minimum 3% yearly increase.

***$12.50 monthly from members plus 50% of fire insurance premium tax.

**** Contributions include a transfer of the set-aside account and $12.50 monthly member contributions required by statute. The remainder of the set-aside account, $183,316, will be transferred to the new Volunteer Plan.

Links for 1/1/2015 Valuation Reports & Projections

Public Employee Pension Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1275

Warden, Patrol & DCI Pension Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1276

Law Enforcement Pension Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1277

Judicial Pension Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1278

Plan A Paid Firefighter Pension Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1280

Plan B Paid Firefighter Pension Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1281

Guard Firefighter Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1282

Volunteer Firefighter Pension Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1279

Volunteer EMT Pension Plan: http://retirement.state.wy.us/Media.aspx?mediaId=1283

Appendix E:

One Page Summary of All Plans: http://retirement.state.wy.us/Media.aspx?mediaId=1274

Appendix F:

30 Year Projections: http://retirement.state.wy.us/Media.aspx?mediaId=1284

New Governmental Accounting Standards Board Requirements: WRS is in the process of complying with the new requirements of the Government Accounting Standards Board (GASB) pertaining to changes in the accounting rules for governmental pension plans. These requirements are specifically known as GASB 67 and 68 and they entail providing additional information for employers to incorporate into their financial statements. In the fall, WRS plans to host informational webinars for participating employers as some will be using this information for the first time. See Appendix G for a more detailed explanation.

According to GASB, the new standards are designed to improve financial reporting performed by government plans. However, WRS believes the best way to ascertain the funding status of the plans it administers is with the actuarial funding valuation reports that have been provided to the legislature and stakeholders for many years.

Although the new accounting rules require employers to include a proportionate share of any unfunded pension liability on their financial statements, it is nothing the employer needs to pay. The liability will decrease over time with normal contribution rates. All of WRS's plans are projected to obtain 100 percent funding within 30 years, except the Warden, Patrol & DCI Plan which takes 40 years and Plan A Paid Firefighter which has a known funding problem.

Fire A is the one plan administered by WRS whose GASB net pension obligation had to be calculated using a lower, blended discount rate. With any plan projected to run out of money, the 7.75% actuarial rate can be used until assets are exhausted, and then a lower long term municipal bond rate (currently 3.65%) must be used to discount the remaining liabilities. This resulted in a blended discount rate of 4.468%. The unfunded liability of the plan for funding purposes (using the 7.75% actuarial rate) is $67.1 million, whereas the net pension obligation for financial disclosure purposes (using the 4.468% blended rate) is $164.6 million.

The following numbers for the City of Cheyenne illustrate the impact on the cities' financial statements: Cheyenne's Fire A pension payroll is approximately 30% of the total Fire A pension payroll. Their unfunded liability for funding purposes (30% of $67 million) is approximately $20.2 million. Their net pension obligation for financial disclosure purposes however (30% of $164.6 million), is approximately $49.7 million. This fiscal year is the first year that GASB is requiring employers to include pension liabilities directly in their financial statements.

Plan A Paid Firefighter Pension: WRS has been raising the lack of adequate funding for the Plan A Paid Firefighter Pension since the JAC was assigned as WRS' home committee in 2009. This plan is projected to run out of assets in 2029, which is prior to when all benefit obligations would be met. Additionally, the actuary has indicated that the 3 percent annual Cost of Living Adjustment (COLA) required by state law is not affordable without additional funding for the Plan.

Prefunding future benefits is a way to reduce the amount of contributions ultimately needed. The unfunded liability of the plan is $67 million. If the plan assets were to be exhausted, table 23 of the valuation report for this plan shows it would take between $17.5 million and $13.4 million each year (decreasing annually as annuitants pass away) to pay for benefits with direct appropriations. WRS will provide any analysis requested by the JAC to support decision making.

Summary of Past COLA Criteria: COLA awards had an impact on the funding status of the Public Employee Plan. A 1996 LSO program evaluation provides background on the method for COLAs and the 2007 program evaluation also discusses COLA methodology. Prior to 1991, the legislature approved specific bills for ad hoc COLA awards to retirees. At that point, varying statutory provisions allowed the Board to grant COLAs (without specific legislative action) provided they were linked to inflation and deemed to be actuarially affordable. COLA awards varying between 1 percent and 3 percent were awarded every year from 1991 to 2008.

The Board did not approve COLAs in 2009, due to funding concerns, and a legislative hold on COLA awards occurred in 2010. The Board's authority to grant COLAs was statutorily returned to the legislature in 2012. The same legislation also set more stringent funding requirements for COLA awards, as well as other benefit increases.

Review of Statutory COLA Criteria: In keeping with W.S. 9-3-454, for a COLA to be granted from pension plan funds the funded ratio of the plan must remain 100 percent plus a margin after the COLA. In addition, the actuary must deem the award affordable. The Board may then recommend a COLA from internal funds to the legislature. The final determination for any COLA award would be made through legislation except in the case of the Paid Firefighter A Plan.

In the same manner as with contribution requirements, the Board annually evaluates the affordability of COLAs in light of the requirements of state law. The actuary found no plan met Wyoming's requirement of full funding, including a margin for future adverse experience, needed to fund a COLA. While some of the smaller plans, such as the Judicial Plan, may be positioned to fund a COLA in the nearer term, the Public Employee Plan is not expected to be able to fund a COLA until around 2044. Hence, if a COLA is desired and as long as all related legal requirements are met, a legislative appropriation would be needed to provide COLAs for any plan.

Retirees, particularly those retired the longest, experience erosion of their purchasing power. With the exception of the retirees of the Plan A Paid Firefighter Pension, WRS retirees have not received a COLA since 2008. The COLAs previously awarded by WRS, and still being paid, partially offset this reduction in purchasing power.

WRS has had an increase in contacts from retired members advocating for COLA awards. As in prior years, WRS has a tool available to cost any COLA scenarios that may be of interest to the JAC. By targeting COLAs to specific populations and benefit or salary limits, the cost can be aligned with available legislative funds and desired legislative goals. The tool can also allocate a specific dollar amount for COLAs.

Implementation of 2015 Legislation

There were five pieces of retirement-related legislation that passed in the 2015 session, four of which were sponsored by the JAC. WRS provided a summary of these changes in its recent member newsletter. WRS is on track to implement these changes as of the respective effective dates for each bill.

Statutory Cleanup HB 67/HEA 7: This legislation updates and improves the Wyoming Retirement Act regard archaic language, clarifies interest charged for late payments is always compound interest and ensures the System does not take a loss when an individual member reinstates or "redeposits" service.

> Implementation Status: WRS' actuary has been tasked with updating the redeposit calculator. WRS staff is working with the vendor hired for RAIN programming on the required system modifications. WRS sent a letter to all members currently eligible for redeposits about the upcoming changes in the redeposit calculation. WRS issued a special newsletter to participating employers providing information about the clarifications to interest for late payments.

Volunteer Fire & EMT Combination HB 72/HEA 13: This legislation combines two separate plans for volunteer firefighters and volunteer emergency medical technicians into one plan named the Volunteer Firefighter and EMT Pension Account. This legislation was sponsored by the JAC at the request of the two boards having oversight of the volunteer plans. The benefit structure of the new plan will be different than the old plans.

> Implementation Status: WRS is working with the vendor hired to do RAIN programming on the required system modifications. A new volunteer plan will be created in RAIN. This will involve programming and testing. All retirees and survivors will be migrated to the new plan after the June 22 payroll, where we will adjust benefits to the new levels and grandfather anyone whose benefit would be lower. Active and inactive members will then be migrated to the new plan. After the membership of both plans has been migrated, the old volunteer fire and volunteer EMT plans will be deactivated effective July 1.

Military Service Purchase HB 77/HEA 61: This legislation allows members who are honorably discharged from the military to purchase up to 8 years of service. One year of service credit may be purchased for each year of military service. This legislation gives veterans the ability to purchase 3 years of service more than non-veterans and to make multiple purchases. Non-veteran members are limited to a one-time purchase of up to five years of service.

> Implementation Status: WRS intends to use a manual workaround until programming changes can be done. This will be done based on the availability of programming time and pending other priorities.

State Park Rangers SF 58/SEA 55: This bill was sponsored by the JAC at the request of the Department of State Parks & Cultural Resources, which provides duty-connected disability and pre-retirement death benefits, similar to other law enforcement officers, to the state park rangers.

> Implementation Status: This legislation was effective upon signature, and has already been implemented by WRS. The Public Employee Plan received the $15,000 appropriation for the immediate increase in the value of member benefits due to this enhancement. The Department of State Parks & Cultural Resources obtained election forms from the employees serving as state park rangers and provided them to WRS. WRS established a method to receive and track the additional 1 percent contributions on a monthly basis. However, additional programming to RAIN will be needed to incorporate the additional contributions into the individual account data for these members. This will be done based on the availability of programming time and pending other priorities.

Automatic Enrollment SF 60/SEA 8: This bill was sponsored by the JAC in response to the Board's request. It establishes automatic enrollment into the Deferred Compensation 457 Plan for employees hired on or after July 1, 2015 by the executive, legislative and judicial branch employees and allows other employers to elect automatic enrollment for their employees.

Eligible new hires will receive notification of automatic enrollment along with related information, and will have a minimum of 30 days to opt-out before contributions would start. The 30 day notification period will be followed by 90 days during which employees could withdraw contributions if they had not opted out; this is known as a permissible withdrawal. If a permissible withdrawal is elected, the $20 employer match is forfeited. Unless employees make different choices, they will be enrolled at three percent of pre-tax pay invested in the stable value fund for the first 90 days during which a withdrawal would be allowed and then the investment would be shifted to the Target Date Fund that aligns with an anticipated retirement age of 65. An employee may change his or her investment or future contribution at any time.

> Implementation Status: Implementation has required a joint effort between WRS staff, the external recordkeeper for the 457 Plan, State Auditor's Office and the Department of Administration & Information. A working group from these agencies has been meeting as necessary to develop the business processes for automatic enrollment.
>
> There are three main changes to address in order to automatically enroll employees of Wyoming's executive, legislative and judicial branches of government 1) separate tracking of the $20 employer match 2) allow for contributions to be based on a percentage of pay and 3) expand the monthly data exchange to include the judicial branches. Progress in all three of these areas has been accomplished and notifications will be sent to employees hired as of July 1, 2015.
>
> The State Auditor's Office is concerned about the potential workload associated with manually reversing the $20 match in the event of forfeitures. Presently, there is not a way to automate reversals in the payroll system. It is anticipated there will be minimal forfeitures; however, the volume will be unknown until automatic enrollment has been in process for at least three months. The working group will be watching this to determine if different methods or resources are needed for the ongoing process of automatic enrollment.

Concluding Remarks

An ongoing higher standard for all those involved in the leadership of WRS has been accomplished. WRS continues to reach for organizational improvements in the diverse aspects of its mission: providing expert administration and responsible investment of Wyoming's public retirement and supplemental savings programs.

Public pension plans have faced challenges. According to the National Association of State Retirement Administrators more than 45 states have made significant changes to their retirement plans since 2009. This includes increasing contributions, reducing benefits or --as in Wyoming -- both to safeguard the long-term viability of the plan.

Realizing actuarial assumptions is critical to maintaining sound funding. The Board remains diligent in this and follows its policy of studying all assumptions and benefit levels at least every five years. This is known as an "experience study" and it has resulted in the Board initiating and making prudent changes for the long-term. The most impactful of all assumptions is the return objective, which the Board reduced from 8.0 percent to 7.75 percent after the last experience study.

WRS will provide any additional information the JAC may request.

WYOMING RETIREMENT SYSTEM - Historical System Changes

As of 5/1/2015

07/01/43	Retirement System began as Wyoming Teachers Retirement System.
04/01/49	State Employee's Retirement Association established.
04/01/53	State Employees and Teachers Retirement Systems merged.
04/01/53	University of Wyoming joined.
04/01/53	Optional refund of contributions to members.
04/01/53	No redeposit of refunded contributions.
02/15/61	Variable allowance increase for those who retired prior to 4/1/53. DOE 7
02/01/65	City and Counties allowed to join.
03/01/67	Four year vesting requirement.
04/01/67	Single option expanded to five options.
04/01/67	25% Increase - Maximum $25 - system wide.
04/01/67	**Volunteer Fire Pension Plan begins.** Members could choose either $5 or $10 plan. Full retirement age 65.
03/01/69	TIAA/CREF split effective.
04/01/71	Unisex actuarial option tables adopted.
07/01/71	Retirement age reduced from 65 to 50.
04/01/73	40% increase system wide and equalization of benefits (M/F).
07/01/73	**Highway Patrol and Game and Fish Warden retirement plan effective.**
07/01/75	20% Increase - system wide.
07/01/75	2% formula for service after 7/1/75 is effective.
07/01/76	Opportunity given to switch from TIAA/CREF to WRS.
05/27/77	Volunteer Fire Plan - Full retirement age lowered to age 60; 20% increase in retirement benefits.
01/01/78	Salary ceiling eliminated.
07/01/78	$1.00 per month per year of service for those retired prior to 7/1/75. DOE 8
03/01/79	**Employers were allowed to pay all or a portion of a member’s contributions.**
3/1/79-2/26/81	**Non refundable agency contributions if termed prior to 2/26/81**.
07/01/80	**State agencies paid portion of member’s contribution.**
01/01/81	Employer matching amount raised to 5.68%.
03/01/81	Rehired Retirees' must make choice of contributing or continuing benefits.
07/01/81	**Cities and Counties allowed to Buy Back employees service.**
07/01/81	**Began administration of the Paid Fireman's Pension Plan. New firefighters "B" only.**
07/01/81	No "Money Purchase" calculation if employed on or after this date.
07/01/81	$1.00 per month per year of pre-7/1/75 service for those retired prior to 7/1/80. Those retired prior to 7/1/75 added to DOE 8; those after - DOE 9.
01/01/82	Another opportunity to switch from TIAA/CREF to WRS.
07/01/82	$2.00 per month per year of pre-7/1/75 service for those who retired prior to 7/1/69 and $1.00 per month for those who retired prior to 7/1/80. Added to existing raises in DOE 8 and DOE 9.
05/01/83	**Prior Service Credit Purchase of public service within 4 years of employment.**

07/01/83	**Taxed deferment of retirement contributions.**
07/01/84	1.5% formula for years of service prior to 7/1/75.
07/01/84	Increase for those who retired prior to 7/1/84 of 5% each year retired up to a maximum of 60% at a rate of 1/3 of the increase each year ’84, ’85, ’86. DOE 11.
07/01/84	Criminal Investigators joined the Warden and Patrol System.
02/28/85	New members of the Warden, Patrol, and Criminal Investigators to retire at age 55.
04/01/85	System allowed to invest in Equities.
07/01/85	**Highway department pays 100% of Contributions.**
07/01/85	Options two and three available for disability benefits.
07/01/85	New higher education employees must be total WRS or TIAA/CREF.
07/01/85	Increase for those with over 20 years of service who retired between 6/30/80 and 6/30/84. It involved a complicated adjustment for pre-75 service to compensate for the 1/5% formula. DOE 10.
07/01/85	Warden, Patrol, DCI Plan - $3.00 per month per year of service for those retired prior to 7/1/78; $2.00 per month per year of service w/retirement dates between 7/1/78 and 6/30/80; $1.00 per month per year of service w/retirement dates between 7/1/80 and 6/30/85.
01/01/86	Benefits calculation and estimates computerized.
01/01/87	10% penalty for early withdrawal of taxable contributions and interest.
04/01/87	State's initial early retirement program (4/1-9/30) Age 55, 15 years of service.
10/01/87	Requirement for spouse's signature on application.
04/01/88	State's second early retirement program (4/1-9/30) Age 55, 15 years of service.
07/01/88	$2.00 per month per year of service increase for all members who retired prior to 7/1/80 and the same for those who retired between 6/30/80 and 7/1/84 with less than 20 years of service. DOE 12.
04/01/89	**Law enforcement personnel required to pay additional 3.2% for enhanced benefits.**
07/01/89	Volunteer Fireman’s Pension Plan-$5 plan increased to $10. New members automatically in $10 plan.
07/01/89	$2.00 per month per year of service for all members who retired prior to 7/1/89. DOE 13
07/01/89	Warden, Patrol, DCI Plan - $4.00 per month per year of service for those retired prior to 7/1/78; $2.00 per month per year of service w/retirement dates between 7/1/78 and 6/30/80; $1.00 per month per year of service w/retirement dates between 7/1/80 and 6/30/85; $1.00 per month per year of service w/retirement dates between 7/1/85 and 6/30/87.
07/01/90	2% formula for years of service prior to 7/1/75.
07/01/90	Early age reduction factors reduced to 5% per year.
07/01/91	**State agencies paid 100% of member’s contributions.**
07/01/91	After two years of retirement, retirees receive 1% cost-of-living-adjustment (COLA)
07/01/91	$2.00 per month per year of service for all members who retired prior to 7/1/90. DOE 5
07/01/91	Warden, Patrol, DCI Plan - $4.00 per month per year of service for those retired prior to 7/1/78; $2.00 per month per year of service w/retirement dates between 7/1/78 and 6/30/80; $1.00 per month per year of service w/retirement dates between 7/1/80 and 6/30/85.
07/01/92	Rule of 85 adopted.
10/01/92	“Pop-up” Options offered.
12/16/92	Salary (cash remuneration) definition adopted. No unused sick or vacation leave accepted.
05/01/93	Rules regarding Military Service Credit Purchase adopted.
05/01/93	Rules regarding Qualified Domestic Relations Order (QDRO) adopted.
07/01/93	Volunteer Fireman’s Pension Plan - $10 plan increased to $12.50. New members in $12.50 plan.
07/01/93	Vesting in the Warden and Patrol plan went from 4 years to 6 years.
01/01/94	Remaining TIAA/CREF members must choose either WRS or TIAA/CREF.

07/01/94	After two years of retirement, Warden and Patrol retirees receive 1% COLA
07/01/94	$2.00 per month per year of service for all members who retired prior to 7/1/80. DOE 6.
01/01/95	Member's may receive service credit for *earned* sick and annual leave if used as terminal leave at end of working career.
01/01/95	Direct deposit of benefit checks for new retirees.
04/01/95	Active members have until 4/1/02 to redeposit withdrawn contributions. New members will be credited for redeposit two years after re-employment date.
04/01/95	State offered third early retirement program (4/1-6/30) Age 52/18 years of service; 53/17; 54/16; 55/15; or no age requirements with 28 years of service.
04/01/95	The Alternate Payee's percentage of a member's account may be paid out immediately in a lump sum according to the terms of the QDRO.
03/01/96	Spouse's signature required on lump sum refunds and Change of Beneficiary forms.
03/15/96	On Warden and Patrol plan, multiplier increased from 2% to 2.25% for years of service, not to exceed 75% of final average salary.
07/01/96	Capital Police given opportunity to switch from Regular System to Warden and Patrol Plan. Service and contributions to be transferred, with full retirement at age 55. If hired after 7/1/96, automatically in Warden and Patrol Plan.
02/18/97	Prudent Investor Rule adopted.
04/01/97	Plan "A" Firemen's Pension Fund benefit increased to 55% of maximum salary of fireman first class (MSFFC). Multiplier for service after twenty years increased to 1.5%, with no ceiling. Benefits for survivors and beneficiaries increased from one-third of the MSFFC, to two-thirds of retiree's benefit.
04/01/97	Plan "A" Firemen's Pension Fund fully funded, suspending contributions to the plan.
07/01/97	Retirees in the Warden, Patrol, DCI Plan who retired before April 1, 1996 to have their benefit increased by $5.00 for each year of service in the Plan.
07/01/97	Rule of 75 adopted for law enforcement officers of the Wyoming Retirement System. Additional contributions increased to 3.73%.
07/01/97	15% increase in the volunteer firemen's retirement benefit.
07/01/97	COLA for retirees increased to 1.5% annually.
07/01/98	Retirement age reduced from 55 to 50 for members of Warden, Patrol, DCI Retirement System. Members of this plan now have the same retirement options offered in WRS.
07/01/98	COLA for retirees increased to 2% annually.
07/01/98	Vesting period reduced from 10 to 4 years on Plan "B" Firemen's Pension Fund; retirement age reduced from 55 to 50; COLA increased from 4% to 5%; members have same retirement options offered in WRS.
07/01/98	At-will, full-time brand inspection contract employees may participate in WRS. Member pays both employee and employer contributions.
07/01/98	**New Judicial Retirement plan effective.** Mandatory for judges appointed after 7/1/98. Existing judges have option of continuing in existing plan or switching to new plan by 12/31/99.
07/01/98	All at-will, contract employees of State may participate in WRS. Member pays both employee and employer contributions.
07/01/99	COLA for WRS retirees increased to 2.5% annually.
07/01/99	COLA for Warden, Patrol, DCI retirees increased to 1.5% annually.
01/01/00	New computer program implemented.
07/01/00	Plan "A" Firemen's Pension Fund benefit increased to 57.5% of maximum salary of fireman first class.
07/01/00	Plan "B" Firemen's Pension Fund, multiplier increased to 2.5% of final average salary (FAS) for first 25 years. Multiplier for service after 25 years remains at 1% of FAS per year, not to exceed 70%.
09/26/00	Emergency rule effective for rehired retirees.

02/16/01	Rehired retirees cannot work as a continuous full-time employee for 6 months following retirement if they elect to continue receiving a retirement benefit.
02/16/01	Dual membership in the Paid Firemen's Pension Fund and the Volunteer Firemen's Pension Fund is prohibited if member is serving in both capacities with the same department.
07/01/01	After two years of retirement, retirees of the Volunteer Firemen's Pension Fund receive 2% COLA.
07/01/01	15% increase in the volunteer firemen's retirement benefit.
07/01/01	COLA for retirees in "big" system increased to 3% annually.
07/01/01	Public Employee Plan. Multiplier increased to 2.125% for first 15 years of service; 2.25% for every year after 15 years.
07/01/01	$3.00 per year of service for all members of the Public Employee Plan who retired prior to 7/1/01.
07/01/01	Plan A Firemen's Pension Fund benefit increased to 75% of maximum salary of fireman first class. Survivor benefit increased to 100% of benefit payable.
07/01/01	Warden, Patrol, DCI Plan - multiplier increased to 2.5%. Final Average Salary changed to Highest Average Salary. COLA for retirees increased to 2.25%.
07/01/01	Members of the Warden, Patrol, DCI Plan may redeposit previously withdrawn funds and purchase qualified public service (PSCP).
07/01/01	Amendments to the WRS: electronic reporting of contributions by employers, contribution remittance deadlines, 8% interest if agency fails to meet such deadlines.
07/01/01	Time limit on purchasing a PSCP is removed; PSCP does not have to be made with personal funds.
07/01/01	Deadline for redepositing previously withdrawn funds extended to 4/1/04.
07/01/01	**Air guard firefighters retirement benefits went into effect: multiplier 2.5%, full benefits at age 50 with 25 years of service or Rule of 75. Contribute 9.65%, in addition to 5.57%.**
07/01/01	Administrative responsibility for Deferred Compensation Program transferred to WRS.
02/19/02	Based on the AG's opinion, the Board clarified that a member of the Vol Fire Plan must have contributions from date of entry to retirement age in order to draw a monthly benefit.
04/01/02	WYDOT dispatchers were allowed to move from the Public Pension Plan to the original Law Enforcement Plan. In July 1, 2002, they were allowed to move into the new Law Enforcement Plan. Service from before 4/1/02 did not transfer into the Law Enforcement Plan.
07/01/02	Overtime pay is now included in the definition of compensation on the Plan B Paid Firemen's Pension Fund.
07/01/02	Legislation passed which provides a $20 match for state employees contributing to Deferred Comp, and UW and community college employees contributing to either Deferred Comp or a 403(b) plan.
07/01/02	**New law enforcement plan passed.** Consolidates law enforcement personnel from three different plans into one system. Member pays contributions of 8.6%; Agency matches with 8.6%; 4 years to be vested; Highest Average Salary is the average of member's highest 5 continuous years of salary.
070/1/03	State of Wyoming to pay up to two years of member's contributions for qualified military service. (Does not have to be a State government employee.) [Funds ran out May 2006]
07/01/03	Judges appointed to the bench prior to 7/1/98 have the option of rescinding their election to participate in WRS's Judicial Retirement plan.
07/01/03	Investigators employed by the Wyoming State Board of Outfitters and Professional Guides moved to the Law Enforcement Plan.
07/01/04	COLA language was changed, allowing the Board to determine the amount of the COLA to be paid.
07/01/04	Members of the Law Enforcement Plan must have 10 years of service before applying for a NON-DUTY related disability.
07/01/04	Disability benefits in the Warden, Patrol, DCI Plan are the same for both partial and total disability.
07/01/04	Retirees of the Paid Fire A Plan will no longer receive raises based on the salary of a fireman first class. COLAs will be paid on July 1 to retirees who retired on or before 7/1/04. If retired after 7/1/04, COLA will be paid on one year anniversary date. COLA is between 3% and 5%, as determined by the Board.

02/25/05	Rehired Retiree law expanded. Any retiree who returns to work for a participating employer, *in any capacity*, must follow law.
03/25/05	Rules regarding Diminimis accounts adopted.
07/01/05	State probation and parole officers moved into the Law Enforcement Plan.
07/01/05	City of Cheyenne 911 dispatchers are now eligible to participate in the Law Enforcement Plan. Service prior to 7/1/05 not transferred to the new plan.
07/01/05	Duty-related disability payments exempt from limitations imposed on earnings.
07/01/05	Disability benefits in the Warden, Patrol, DCI Plan now 62.5% for duty-related; 50% for non duty-related.
07/01/05	Employer contributions for the Judicial Plan increased to 8.78%.
07/01/05	Benefits for Volunteer Firefighters increased by 3%.
07/01/05	In 2005 only, Legislature approved "recruiting/retention bonus" for school district employees, overriding cash remuneration.
07/01/06	Prior Service Credit Purchase law changed. Active, vested members of any plan except Vol Fire and Plan A Paid Fire can now purchase up to 5 years of actual service if they had same amount of service outside WRS.
07/01/06	Plan B Paid Fire Plan COLA is now compounded. COLA language allows the Board to determine the amount of the COLA to be paid, not to exceed 3%.
07/01/06	Uniform Management of Public Employee Retirement Systems Act (MPERS) passed. It cleared up conflicts between previous statutes and current statutes.
09/01/06	Beginning with the 2006 contract year, school district employees received a big spike in salaries.
02/16/07	Additional funding allocated to pay for up to two years of member's contributions for qualified military service. (Does not have to be a State government employee.)
07/01/07	Maximum COLA allowed in the Vol Fire Plan increased to 3%. Amount paid to be determined by the Board.
07/01/07	Change in Prior Service Credit Purchase law. Members can buy "air-time" without it being linked to previous service outside WRS.
07/01/07	Law enforcement members have until 6/30/08 to "buyback" service based on employment with a non-participating law enforcement agency prior to 7/1/02.
07/01/07	Definition of duty-related disability for Law Enforcement and Warden, Patrol, DCI Plans.
07/01/07	Rehired retiree law updated. Members must have a 30-day break in service, then if rehired in same plan, agency has to pay rehired retiree fee equal to amount of both a member and employer contribution. Only retirees of the Public Employee Plan, Law Enforcement Plan, and Air Guard Firefighter Plan eligible; no provisions allowing rehired retirees in other plans.
07/01/07	Health care premiums for one year for retirees of the State, University, and community colleges; $11.50 per year of service if not Medicare eligible, $5.75 per year of service if Medicare eligible. WRS to provide MOS info to Group Insurance.
03/11/08	All retirement applications must include *Return to Work after Retirement* form
03/12/08	Personal liability for members of the Wyoming Retirement Board and Vol Fire Pension Board is limited to instances of willful misconduct
03/13/08	Rehired retiree law updated. Agency must pay rehired retiree fee only for retirees returning to work in a full-time vacant position
07/1/08	**Emergency Medical Technicians Plan effective**
07/1/08	Changes to the Judicial Plan. Employer contributions increased to 14.5%; full retirement at age 65 with 4 years of service, or if less than 4 years of service, must be at least age 70. Early retirement if at least 55 with 4 years of service. Reduction is 5% per year for each year under age 65. Ceiling on benefits repealed.
07/1/08	Plan B Paid Fire. Multiplier increased to 2.8% for each year of service; ceiling is still 70% of FAS. Member contributions increased to 8.5%
07/1/08	County memorial hospitals and special hospital districts must elect by January 1, 2009 whether to participate in the Public Employee Plan, but must discontinue any other retirement plan first
01/01/09	Updated actuarial factors for Public Employee, Law Enforcement, and Warden, Patrol, DCI Plans

02/26/09	WRS authorized to obtain background checks for employees and job applicants
03/02/09	Hospitals may elect to participate in the Public Employee Plan at any time; there is no longer a specific window of opportunity.
03/02/09	First Responder Retirement Contributions: authorizes the Adjutant General to pay employer and employee contributions to WRS (or other public or private retirement plans), limited to $5,000 per person per year
03/11/09	$250,000 allocated to WRS to pay up to two years of qualified military service until June 30, 2018. After June 30, 2010, each agency must include in their 2011-2012 budgets the estimated cost required to pay up to two years of qualified military service for eligible employees.
07/01/10	HB0088 was passed to clean-up outdated and problematic statutes in order to meet the requirements of the Internal Revenue Code to maintain qualified plan status.
09/01/10	Contributions increased in the regular, Public Employee Plan. Employee contributions increased to 7.0% (of which State employees are required to pay 1.43%) and Employer contributions increased to 7.12% for a total of 14.12% in contributions.
09/01/10	Contributions for Guard Firefighters increased. Employee contributions increased to 16.65% and Employer contributions increased to 7.12% for a total of 23.77%.
03/23/12	The Board retains the authority to implement Cost of Living Adjustments (COLA) for Paid Fire A retirees, but COLAs for all other plans must be authorized by the Legislature. No COLA will be considered until the retirement plan has achieved an actuarially funded ratio of 100% AND meets the additional criteria as set forth in SF0059.
03/23/12	Mandatory education program for all members as of July 1, 2012 and all members enrolling after July 1, 2012. Must provide information regarding retirement benefits, costs expected to be incurred in retirement, and income amounts anticipated to be necessary to maintain member's pre-retirement standard of living.
07/01/12	Contribution rate increase for the Warden, Patrol, DCI Plan. Employee contributions increased to 12.64% (of which the employee is required to pay 1.62%) and Employer contributions increased to 12.96% for a total increase of 3.25%.
09/01/12	**New tier of benefits for members initially employed in the Public Employee Plan on or after September 1, 2012.** Contribution rate and vesting requirements remain the same. Benefit will be based on the average of the member's highest 5 continuous years of salary. Benefit multiplier will be 2% of highest average salary for all years of service. Full retirement benefits at age 65 or the Rule of 85; reduced benefits as early as age 55. Member can retire before age 55 with 25 years of service, but benefit will be reduced accordingly based on member's age.
07/17/12	Received favorable IRS Determination Letter for the Law Enforcement Plan.
11/29/12	Received favorable IRS Determination Letter for the Public Employee Plan.
06/01/13	Free investment guidance and fee-based investment advisory services available to members of Deferred Comp.
09/01/13	Employee contribution rate increase for the Public Employee Plan; did not include Guard Firefighters. Rate increased from 7.0% to 7.5%. From September 2013 through August 2016, the State paid .25% of the increase for its employees. In September 2016, state employees started paying the full .5%. Local government employers may elect to pick up any amount of the employee contribution they choose.
09/01/13	Employee contribution rate increase for the Warden, Patrol, DCI Plan. Rate increased from 12.64% to 13.54%. From September 2013 through August 2016, the State paid .45% of the increase for its employees. In September 2016, employees started paying the full .9%.
09/01/13	Employee contribution rate increase for the Paid Fire B Plan. Rate increased from 8.5% to 8.725%.
07/01/14	Employee contribution rate increase for the Public Employee Plan from 7.5% to 8.25%. Employer contribution rate increase from 7.12% to 7.62%. Rate increases do not include Guard Firefighters.
07/01/14	Employee contribution rate increase for the Warden, Patrol, DCI Plan from 13.54% to 14.56%. Employer contribution rate increase from 12.96% to 13.86%.
07/01/14	Employee contribution rate increase for Paid Fire B Plan from 8.725% to 9.245%.
03/05/15	State park rangers will receive the same disability and pre-retirement death benefits as law enforcement officers if injury/death was duty-connected and the ranger was acting in a law enforcement officer capacity. Employer will pay an additional 1% in contributions for park rangers.
04/07/15	Chapter 12 of the Wyoming Retirement Board rules regarding rehired retirees was updated.

07/01/15 **Volunteer Firefighter and EMT Pension Account (Plan) was created.** Consolidates all active and retired members of the Volunteer Firemen's and Volunteer EMT Pension Plans into one plan. Retirement benefits for retired members of the old Vol Fire and EMT Plans were recalculated based on the benefit structure of the new plan, and if higher, were increased otherwise remained the same as in old plan. Member pays $15.00 in monthly contributions.

07/01/15 Cost to redeposit previously withdrawn funds in the Public Employee, Law Enforcement, and Guard Firefighter Plans will be the actuarial equivalent of the benefits to be derived from the redeposit.

07/01/15 Military veterans who were honorably discharged may purchase additional service once vested. Total service purchase for a military veteran cannot exceed 8 years.

07/01/15 Automatic enrollment into the Deferred Comp plan for employees of the executive, legislative, and judicial branches hired on or after July 1. Unless employee opts out, 3% of pre-tax pay will be withheld and invested in stable value fund for first 90 days, then moved to the target date fund that aligns with retirement age of 65.

COLA's by Year

	WRS	VF	Plan A	Plan B	W&P	Judges	LE	(6) EMT
1991	(1) 1.00%		(2)	(3) 4.00%				
1992	1.00%		(2)	4.00%				
1993	1.00%		(2)	3.75%				
1994	1.00%		(2)	3.33%	1.00%			
1995	1.00%		(2)	3.33%	1.00%			
1996	1.00%		(2)	4.00%	1.00%			
1997	1.50%		(2)	4.00%	1.00%			
1998	2.00%		(2)	2.80%	1.00%			
1999	2.50%		(2)	2.80%	1.50%			
2000	2.50%		(2)	2.80%	1.50%			
2001	3.00%	2.00%	(2)	4.30%	2.25%	3.00%		
2002	3.00%	2.00%	(2)	4.30%	2.25%	3.00 %	2.00%	
2003	3.00%	2.00%	(2)	2.80%	2.25%	3.00%	2.00%	
2004	2.16%	2.00%	3.00%	2.90%	2.25%	3.00%	2.00%	
2005	1.40%	2.00%	3.00%	4.90%	2.00%	2.75%	2.00%	
2006	1.05%	2.00%	3.00%	4.50%	1.85%	2.58%	2.00%	
2007	1.00%	3.00%	3.00%	3.00%	1.38%	2.82%	2.00%	
2008	1.03%	3.00%	3.00%	3.00%	1.49%	2.79%	2.00%	
2009	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	
2010	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	
2011	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	
2012	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	
2013	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Maximum COLA	3.00%	(5) 3.00%	(4) 3.00%	3.00%	2.25%	3.00%	2.00%	2.00%

(1) For retirees retired on or after 7/1/89

(2) Before 2004, COLA based on increases to Fireman First Class Salary, by City

(3) Plan B paid a 4% uncompounded COLA from 7/1/81 through 1992

(4) If market value is greater than 115% of the actuarial value of liabilities, the board may increase the benefit by the amount affordable, but in no case greater than 5%.

(5) Maximum COLA for Vol Fire increased to 3% on July 1, 2007

(6) EMT Plan began 7/1/08; earliest a COLA would be paid is 7/1/13

COMPARISON OF RETIREMENT PLANS

PROVISION	PUBLIC EMPLOYEES PENSION PLAN	AIR GUARD FIREFIGHTERS PLAN
Statutory Reference	W. S. 9-3-401 through 9-3-432	W. S. 9-3-401 through 9-3-432
Administrative Responsibility	Eleven-member Board (Same as Game Warden Highway Patrol Criminal Investigators, Paid Firemen A & B, Law Enforcement, Judicial and Air Guard Firefighters).	Eleven-member Board (Same as Public Employees, Paid Firemen A & B, Judicial, Game Warden Highway Patrol Criminal Investigators and Law Enforcement).
Membership	All public employees including State, University and Community Colleges, School District, City and County employees and any other political sub-division requesting membership.	Employees of the Wyoming Air National Guard fire department crash and rescue unit employed on a full-time basis for firefighting and rescue operations within the department.
Funding	Employee Contributions = 8.25% Employer Contributions = <u>7.62%</u> Total = 15.87%	Employee Contributions = 16.65% Employer Contributions = <u>7.12%</u> Total = 23.77%
Vesting	4 years of service constituted by 48 months of service.	4 years of service constituted by 48 months of service.
Refund	Member's contribution with interest presently 5.5%.	Member's contribution with interest presently 5.5%.
Pre-Retirement Death Benefit	<u>Non-Vested</u>: Double the member's account balance. <u>Vested</u>: Same as non-vested or beneficiary can choose monthly allowance using the deceased's salary, years of service and age of beneficiary.	<u>Non-Vested</u>: Double the member's account balance. <u>Vested</u>: Same as non-vested or beneficiary can choose monthly allowance using the deceased's salary, years of service and age of beneficiary.
Service Retirement Tier 1	Full retirement at age 60 or qualifies for Rule of 85 – Early retirement at age 50, or 25 years of service. Formula 2.125% times the number of years of service times 3 years highest average salary for the first fifteen years, and 2.25% times the number of years of service times 3 year highest average salary over fifteen years.	Full retirement at age 60 or qualifies for Rule of 75, or is at least age 50 with 25 years of service. Early retirement at age 50 with less than 25 years of service, or under age 50 with 25 years of service. Formula basis – 2.5% times number of years of service times 3 year highest average salary
Service Retirement Tier 2	Full retirement at age 65 or qualifies for Rule of 85 - Early retirement at age 55, or 25 years of service. Formula 2% times number of years of service times 5 year highest average salary.	N/A
Post-Retirement Death Benefits	Depends upon option selected at retirement.	Depends on option selected at retirement.
Disability Benefit	**Tier 1:** Must have at least 10 years of service and be less than age 60. Calculate service retirement as if employee were age 60. **Tier 2:** Must have at least 10 years of service and be less than age 65. Calculate service retirement as if employee were age 65.	**In the scope of employment:** Total and partial equal 65% of salary: **Out of the Scope of employment:** Total and partial equal 65% of salary and have 10 years of service.
Redeposit	After 2 years re-employed and before 7 years after re-employed – repay withdrawn funds with interest.	After 2 years re-employed and before 7 years after re-employed - repay withdrawn funds with interest.
Survivor	Designated in writing on registration document or retirement application. Can also be changed on the beneficiary change form.	Designated in writing on registration document or retirement application. Can also be changed on the beneficiary change form.
Other Provisions	Social security benefits in addition to above benefits.	Social security benefits in addition to above benefits.

COMPARISON OF RETIREMENT PLANS

PROVISION	VOLUNTEER FIREMEN PLAN	STATE PATROL, GAME AND FISH WARDEN, & CRIMINAL INVESTIGATOR PENSION PLAN
Statutory Reference	W. S. 35-9-601 through 35-9-615	W. S. 9-3-601 through 9-3-620
Administrative Responsibility	Six-member Board.	Eleven-member Board (Same as Public Employees, Paid Firemen A & B, Judicial, Law Enforcement and the Air Guard Firefighters).
Membership	Open to any volunteer fireman who is carried on the rolls of a regularly constituted volunteer fire department.	Sworn law officers of the Highway Patrol; Special agents employed by Division of Criminal Investigation; Law Enforcement officers of the Game & Fish Department and Capitol Police.
Funding	$12.50 per month by the employee. State contributes 50% of fire premium tax on fire insurance policies written within the State of Wyoming.	Employee Contributions = 14.56% Employer Contributions = 13.86% Total = 28.42%
Vesting	Upon retirement age. Based on table of benefits.	6 years of service constituted by 72 months of service.
Refund	Total contributions with interest; presently 3.0%.	Member's contribution with interest presently 5.5%.
Pre-Retirement Death Benefit	Single Member - Greater of $5,000 or amount in members' account; Married Member - Surviving spouse's benefit or children's benefit under table of benefits whichever is applicable.	Non-Duty Related: 2% times number years of service times Final Actual Salary (FAS) limited to 50% of final actual salary to spouse, and 5% for each minor child limited to 60% total payable to spouse and children. Duty Related: 50% of final actual salary to spouse plus 5% for each minor child payable to spouse, limited to 100% of FAS.
Service Retirement	Determined by table of benefits – Entry age into plan.	Formula basis – 2.5% times number of years of service times 3 year highest average salary. Limited to 75% of highest average salary. Full retirement at age 50.
Post-Retirement Death Benefits	Same as Pre-Retirement Death Benefits.	Depends on option selected at retirement.
Disability Benefit	None available	Non-Duty Related: Total and partial equal 50% of Highest Average Salary (HAS) and need 10 years of service. Duty-Related: Total and partial equal 62.5% of HAS
Redeposit	None available, but service can be purchased at an actuarial determined amount.	After 2 years re-employed and before 7 years after re-employed - repay withdrawn funds with interest.
Survivor	Surviving spouse.	Surviving spouse or designated beneficiary.
Other Provisions	If a member before 2-5-93, can continue paying contributions if 60 months have been paid in; if a member on or after 2-5-93, a member must have paid into the system for 120 months.	Social security benefits in addition to above benefits.

COMPARISON OF RETIREMENT PLANS

PROVISION	PAID FIREMEN PLAN A	PAID FIREMEN PLAN B
Statutory Reference	W. S. 15-5-201 through 15-5-210	W. S. 15-5-401 through 15-5-422
Administrative Responsibility	Eleven-member Board (Same as Public Employees, Paid Firemen B, Game Warden, Highway Patrol Criminal Investigators, Judicial, Law Enforcement and Air Guard Firefighters)	Eleven-member Board (Same as Public Employees, Paid Firemen A, Game Warden, Highway Patrol Criminal Investigators, Judicial, Law Enforcement and Air Guard Firefighters)
Membership	Any employee devoting his entire time of employment to the care, operation and requirements of a regularly constituted fire department, hired before July 1, 1981	Any employee devoting his entire time of employment to the care, operation and requirements of a regularly constituted fire department, hired on or after July 1, 1981
Funding	Employee's contribution and employer's contribution were suspended April 1, 1997	Employee's Contribution = 9.245% Employer's Contribution = 12.00% Total = 21.245%
Vesting	10 years of service	4 years of service constituted by 48 months of service.
Refund	Member's contribution with no interest, subject to a 1/2% bookkeeping cost	Member's contribution with no interest – if non-vested must request within 5 years after termination
Pre-Retirement Death Benefit	100% of the service retirement to the surviving spouse.	Greater of 50% of final average compensation or pension based on credited service accrued to the date of the member's death.
Service Retirement	75% of monthly salary of fireman first class who has completed 20 years of service, plus 1.5% per year after 20 years of service.	2.8% times 3 year final average compensation for first 25 years of service.
Post-Retirement Death Benefits	100% of the service retirement to the surviving spouse.	Depends on option selected at retirement.
Disability Benefit	75% of fireman first class salary.	Greater of 50% of final average compensation or service benefit accrued at date of disability.
Redeposit	None available.	Must work 2 years and repay contributions with interest
Survivor	Surviving Spouse.	Surviving Spouse.
Other Provisions	3% compounded COLA with a 5% COLA max after 12 months of retirement. No social security coverage	No social security coverage

COMPARISON OF RETIREMENT PLANS

PROVISION	WYOMING LAW ENFORCEMENT PLAN	WYOMING JUDICIAL PLAN
Statutory Reference	W. S. 9-3-401 through 9-3-432	W. S. 9-3-701 through 9-3-713
Administrative Responsibility	Eleven-member Board (Same as Public Employees, Game Warden, Highway Patrol Criminal Investigators, Paid Firemen A & B, Judicial and Air Guard Firefighters)	Eleven-member Board (Same as Public Employees, Game Warden, Highway Patrol Criminal Investigators, Paid Firemen A & B, Law Enforcement and Air Guard Firefighters)
Membership	County Sheriffs; deputy county sheriffs, municipal police officers; duty authorized investigator of the Wyoming livestock board; investigators employed by the Wyoming State Board of Outfitters and Professional Guides; Wyoming correctional officers, probation and parole agent employed by the Wyoming Department of Corrections; Wyoming law enforcement academy instructors; UW campus police; detention officer and dispatcher for law enforcement agencies.	Any justice of the Supreme Court, district judge or county court judge appointed on or after July 1, 1998 and any judge or justice electing membership prior to January 1, 2000.
Funding	Employee Contribution = 8.6% Employer Contribution = 8.6% Total = 17.2%	Employee Contribution = 9.22% Employer Contribution = 14.5% Total = 23.72%
Vesting	4 years of service constituted by 48 months of service.	4 years of service constituted by 48 months of service, or less than 4 years of service if continuous service to age 70.
Refund	Member's contribution with interest presently 5.5%	Member's contribution with interest presently 5.5%
Pre-Retirement Death Benefit	In scope of service – 62.5% of salary plus 6% per child under age 18 payable to spouse not to exceed 100% of salary. Out of scope of service – 50% of salary plus 6% per child under age 18 payable to spouse not to exceed 100% of salary.	Non-Vested: Lump Sum Double the member's account balance. Vested: Same as non-vested or can choose monthly allowance using the deceased's salary, years of service and age of beneficiary.
Service Retirement	Age 60 with 4 years of service or at least 20 years of service regardless of age Formula – 2.5% times the number of years of service times 5 year highest average salary with a maximum to 75%	4% per year for the first 5 years plus 3% per year for the next 10 years plus 2% per year for the next 5 years plus 1% per year over 20 years Total percentage times 3 year highest average salary Full retirement age 60 with at least 20 years of service, age 65 with 4 years of service. Age 70 with continuous service.
Post-Retirement Death Benefits	Depends on option selected at retirement.	Employee's survivor receives 50% of the allowance the member was receiving.
Disability Benefit	Duty Connected – 62.5% of salary. Non-Duty Connected – 50% of salary and have 10 years of service.	Must have at least 10 years of service – 100% of service retirement as if eligible for normal benefit. Partial disability is 50% of service disability.
Redeposit	After 2 years and before 7 years of reemployment, redeposit withdrawn funds and the actuarial equivalent of the difference in benefit provided under the old law plan and the new law enforcement plan.	After 2 years re-employed and before 7 years after re-employed – repay withdrawn funds with interest.
Survivor	Surviving Spouse or designated beneficiary if not married.	Designated in writing on registration document or retirement application. Can also be changed on the beneficiary change form.
Other Provisions	Social security benefits in addition to above benefits. Except for six first-class cities	Social security benefits in addition to above benefits

COMPARISON OF RETIREMENT PLANS

PROVISION	VOLUNTEER EMT PLAN
Statutory Reference	W. S. 35-29-101 through 35-29-112
Administrative Responsibility	Six-member Board
Membership	Open to any volunteer EMT who performs EMT services as an attendant with a state licensed ambulance service.
Funding	$12.50 per month by the employee.
Vesting	Upon retirement age based on table of benefits.
Refund	Total contributions with 2.0% interest if a participating member for 60 months.
Pre-Retirement Death Benefit	Married Member - Surviving spouse's benefit is 50% of calculated normal retirement benefit. Non Married Member – Children's benefit is 25% of calculated normal retirement benefit.
Service Retirement	$15.00 per year of service for the first 10 years & $18.00 per year of service over 10 years.
Post-Retirement Death Benefits	Same as Pre-Retirement Death Benefits.
Disability Benefit	None available
Redeposit	None available, but service can be purchased at an actuarial determined amount.
Survivor	Surviving Spouse
Other Provisions	No social security coverage

Appendix B

Wyoming Retirement System

Summary of Recommendations and Implementation Progress

Re: IFS/Wyoming SAO Limited Scope Operational Review

October 31, 2008

Green Text: Recommendation has been addressed and implemented
Red Text: Recommendation has not been fully addressed or implemented

Task Area A: Investment Decision Making - Governance

1	The impact of multiple departures from the Board at or about the same time could pose significant governance risk and have a deleterious effect on the Board's operations. We recommend that the Board, in conjunction with legal counsel, take affirmative steps, which may include legislation, to clarify the six year term of office. We also recommend that the Board review the way in which board terms are currently staggered and determine whether a less disruptive but effective process can be implemented.
	The Board has taken steps to build board member succession planning into the Board's overall strategic plan for the purpose of ensuring quality replacements for departing members, thereby mitigating the potential impact of several new appointments at a single time. Board Members serve six year terms pursuant to statute. Terms are staggered with two cycles in which 4 terms expire and one cycle in which 2 terms expire (4-4-2) and are as staggered as possible under current law. To be more staggered would likely require a statutory change. The Board has not yet considered whether a new process could or should be implemented.

2	To ensure that the Board is in compliance with law, we recommend that the Board request a formal letter from the Governor (or his designee) to the Board identifying the member who has been designated by the Governor to serve as the "professional [with] expertise in investments and finance."
	The Governor does appoint a member of the board to serve as a professional with expertise in investments and finance.

3	We recommend that the Board create a charter for the Board that (1) recites the powers and duties of the Board, including the applicable fiduciary standard; (2) defines the role of the Board with respect to the administration of the System and interaction with the Executive Director, key staff, and the Board's service providers; and (3) memorializes the roles and responsibilities of the members, including such things as attendance at meetings and participation on Board committees. The Board charter should include a requirement (1) that the Board will annually conduct a Board self-evaluation; (2) that the Board members will be encouraged to participate in an annual board member self-evaluation process; and (3) that the Board will conduct an annual review of the performance of the Executive Director.
	The Board has adopted a comprehensive Governance Policy Manual; the board does annually conduct a self-evaluation; and the board does conduct an annual performance review of the Executive Director.

4	We recommend that the Board develop written procedures for the annual Board self-evaluation and for the annual board member self-evaluations.
	The Board has developed written procedures for the noted annual evaluations.

5	We recommend that the Board develop a new Performance Evaluation Plan to be used by the Board to review the performance of the Executive Director. We recommend that a performance evaluation take place each year. The Performance Evaluation Plan should include the evaluation criteria that the Board will use in reviewing the Executive Director's performance and a timeline for conducting the performance review.
	The Board has developed a performance evaluation plan that is contained in the Governance Policy Manual.

6	We recommend that the Board compile all of the System's resolutions (or motions) and date, number and file them in a single location for easy reference and access by the Board and staff.
	The Board does take and publish minutes from each Board meeting and Committee meeting and archives them on the Board's website. However, a comprehensive organization of all resolutions and motions still needs to be developed.

7	We recommend that the Board create charters for the positions of Chair and Vice Chair of the Board, delineating the responsibilities of each respective officer. For the Chair, responsibilities should include, for example, authority to make appointments to Board committees and the Chair's role in the development and review of Board meeting agendas, minutes and related board documentation. The circumstances under which the Vice Chair assumes the position of Chair and any other duties of the Vice Chair should be included in the Vice Chair charter.
	Responsibilities and authorities of the chair and vice-chair are articulated in the Board's Governance Policy Manual.

8	We recommend that the Executive Director assign appropriate staff, which in some cases may be the Executive Director, to each of the Board's committees to support the committee in implementing the Board's mandate. To the extent any policy issues discussed in a committee meeting have an impact on the System's day-to-day operations and resources, the Executive Director (or his staff) should be in a position to discuss the implications of those decisions from the staff's perspective.
	The Executive Director serves on each Board Committee and assigns other staff to each committee to support the board in implementing its mandate.

9	We recommend that the Executive Director work with the Board Chair to determine an appropriate "lead time" for receipt of board materials prior to a board meeting. At a minimum, Board members should receive their board packages one week prior to a board meeting.
	Appropriate procedures have been implemented through the use of a Board Administrator to schedule Board meetings and provide Board materials to members.

10	We recommend that the Board request that the Attorney General's Office review the MPERS statute and the Wyoming Retirement Act for consistency and prepare an omnibus "clean up" bill to the Legislature to amend the statute accordingly.
	There has not been an omnibus "clean-up" bill that would directly address the inconsistencies between MPERS and the Wyoming Retirement Act to date, however, multiple "clean-up" bills have been passed to address various aspects of each.

11	We recommend that the Board seek legislative authority to strengthen its independence and autonomy from the State. Specifically, we recommend that the Board seek authority to add each of the following explicit powers: the power and duty to establish and approve the System’s budget; the power and duty to hire and fire staff and set their compensation; and the power and duty to hire and fire service providers. If full autonomy is not possible, we recommend that the System seek an immediate increase in its budget to enable the System to operate with at an appropriate staffing and resource level. We also recommend that any proposed legislation continue to include requirements for the Board to adhere to strict reporting and disclosure obligations to the Governor and the Legislature.
	The Board does not have autonomy over the Retirement System's administrative budget. MPERS was adopted into Wyoming law, with the removal of 3 key components: budgetary autonomy, personnel authority, and procurement authority. The Wyoming Retirement Act requires that employee compensation is subject to confirmation and approval by the Personnel Division of the State. All service contracts require approval from the State Attorney General's Office and A&I. The System prepares its administrative budget to account for its biennial budgetary needs but those budget requests are subject to legislative approval and adjustment. This directly impacts the Board's fiduciary and statutory responsibilities for the administration and operation of the Retirement System, which is vested solely and exclusively in the Board.

12	We recommend that the System seek a specific exemption from the provisions of law that preclude appointment of legal counsel by anyone other than the Attorney General and, if successful, hire its own in-house legal counsel, who should report to the Executive Director. (This type of exemption is not unprecedented in Wyoming; there is a similar "carve out" for state elected officials. 1) The autonomy we contemplate with respect to hiring in-house legal counsel would include the authority to continue to use the Attorney General for certain issues that do not raise potential conflicts, legal matters in which the Attorney General has expertise and matters as to which familiarity with Wyoming law would render reliance on the Attorney General's Office prudent. If the Board hires its own attorney, the Board should establish in its Governance Statement the scope and limits of the internal counsel's authority, as well as the relationship between the in-house counsel and the Attorney General's staff. The Board should also work with the Attorney General to develop and institutionalize, in advance, a process that will be invoked in the event a potential conflict of interest arises. Finally, we recommend the Board consider hiring independent fiduciary counsel to conduct annual fiduciary education training, in conjunction with the Attorney General's Office. Note: This recommendation is in no way meant to suggest that the Attorney General's Office is not doing a fine job in representing the System. By all accounts, the Board and staff are very satisfied with the legal work currently provided by the Attorney General's staff.
	The Board has authorized the Executive Director to hire in-house legal counsel to represent both the Retirement System and the Board. Legal Counsel works in conjunction with representation from the Attorney General's Office. The Retirement System does have the ability to retain outside legal expertise from time to time, however, such services are subject to the administrative budget.

13	We recommend that the Board revisit the decision to use a single consulting firm to provide actuarial and investment consulting services and consider hiring two separate and independent firms.
	The Board has hired two separate and independent firms to provide actuarial and investment consulting services.

14	We recommend that the Board prepare a Governance Statement, setting forth the respective duties, authority and lines of reporting of staff, the full Board and the various committees. The Governance Statement should clearly delineate the roles and responsibilities of key staff (e.g., the Executive Director, the Deputy Director, the to-be-hired Chief Investment Officer, and the Internal Auditor), the Attorney General's Office, and service providers (e.g., the investment consultant) versus the Board (e.g., officers and committees) for the administration and management of the fund. The Governance Statement should clarify responsibility for investment decisions, management of staff, budgeting, employee training and development, succession planning, actuarial valuations, and legal representation. The Governance Statement should be reviewed annually.
	The Board has prepared and adopted a comprehensive Governance Policy Manual which is reviewed annually and amended regularly.

15	We recommend that the Board develop written delegations of authority from the Board to the Executive Director, the to-be-hired CIO, and other key staff, and to the external investment consultants, with clearly defined limitations and reservations of the Board's authority. We also recommend that the Executive Director prepare a delegation of investment authority to the Deputy Director and the CIO.
	The Board, through its Governance Policy Manual, has delegated decision making authority over system administration and investments to staff.

16	With a new Executive Director and the expected arrival of the System's first Chief Investment Officer, the Board is presented with a unique opportunity to undertake a comprehensive review of the System's staffing, compensation and resource needs, which we highly recommend. We also recommend that the Board develop a plan for addressing those needs as part of its strategic planning process.
	Following implementation of the internal investment team, the Board has regularly undertaken comprehensive review of the System's investment staffing compensation and resource needs. Absent autonomy over the administrative budget, the Board is not in a position to implement staffing compensation and resource needs of the entire agency.

17	We recommend that the Board create functional day-to-day position descriptions that outline the precise duties of the System's staff, including the Executive Director, the Deputy Director and the to-be-hired Chief Investment Officer. The position descriptions should include a breakdown of day-to-day functions that are necessary to effectuate investment transactions.
	The Board has developed a functional day-to-day position description for the Executive Director, and the Executive Director has developed position descriptions for staff.

18	We recommend that the Board review the internal audit charter and make changes to strengthen the reporting line to the Audit Committee. One such change would be for the Audit Committee to retain the hiring and firing decision; another would be for internal audit reports to be addressed to the Audit Committee. A third option would be to grant the internal auditor full unrestricted access to the Audit Committee.
	The Board has annually reviewed and approved the Internal Audit Charter and has developed a reporting line directly to the Internal Audit Department through the Chief Compliance Officer. The Internal Audit Department reports regularly to the Audit Committee.

19	The Executive Director should not use the internal auditor as an extension of staff or to develop procedures. Instead, the Board should hire sufficient staff so that the internal auditor is not required to assist in staff functions and can devote her full time to internal auditing.
	Recent efforts have been made to focus the internal audit function on overall risk management and direct audit responsibilities and away from special projects and staff functions.

20	The Audit Committee should draft an Audit Committee charter to submit to the full Board for review and approval. (Please refer to section A.8 on Board Governance Documentation.)
	The Audit Committee Charter is reviewed and approved annually by the Board.

21	We recommend that the Board adopt a committee charter for each authorized Board committee. The charters should describe: (1) the purpose of the committee; and (2) the authority and role of each committee, relative to the Board and to each other committee (including how jurisdictional disputes will be resolved). We also recommend that at least one staff member be assigned to each Board committee to provide support in implementing the committee's mandate. Finally, we recommend that the Board establish two additional committees: a Personnel Committee to assist the Board and the Executive Director in developing appropriate personnel policies and procedures. This Committee should be also responsible for creating and overseeing the evaluation process for the Executive Director; and a Governance or Policy Committee with responsibility for developing governance policies, and overseeing implementation of the System's policies.
	The various committee charters are reviewed and approved annually by the Board. The Governance Committee assists the Board and Executive Director in reviewing personnel policies and procedures; is responsible for creating and overseeing the evaluation process of the Executive Director; and develops governance policies of the Board and oversees the System's policies.

22	We recommend that the Board compile all of its policies and procedures into a single compilation for easy access and reference. In addition to serving as the repository for all of the System's investment policies and procedures, we recommend that the Standard Operating Procedures Manual include the following specific procedures: manager search and selection, ongoing manager due diligence and criteria for termination, monitoring compliance with manager guidelines, performance monitoring, asset allocation rebalancing, monitoring securities lending, and monitoring proxy voting guidelines. Consideration should be given to including the functional position descriptions in the Standard Operating Procedures Manual.
	The Board has developed a Governance Policy Manual, which includes an Investment Policy Statement that serves as the repository of all of the System's investment policies and procedures.

23	We recommend that the Board develop a Strategic Plan that describes the System's short and long term goals and objectives for the one year, three year and five year periods. Budgetary considerations, including staffing, compensation, technology and resources, should be incorporated into the Strategic Plan. The Strategic Plan should be reviewed annually by the Board, key decision makers and the investment staff. We also recommend that the Board consider holding an annual retreat to discuss strategic planning, among other things.
	The Board has developed a Strategic Plan which is reviewed annually and incorporated into the System's more concentrated Strategic Planning process. The current Strategic Plan consists of five general goals: 1) Retain quality staff and leadership; 2) Continue to improve risk-adjusted investment performance; 3) Enhance further credibility and influence with Executive Branch, Legislature and Wyoming constituents.; 4) Ensure consistent and accurate benefit administration and recordkeeping.; and 5) Identify and manage WRS and the Investment Program in an Enterprise-Risk Aware approach.

24	We recommend that the Board institute a formal annual performance evaluation program for the System's staff.
	The Board has achieved this through the State's PMI process.

25	We recommend that the Board expand the Travel Policy into a Travel and Education Policy. The Education section of the Policy should include, at a minimum: * An orientation protocol for new board members, including an outline of an orientation program and written materials to be distributed to new members. The written materials should include a Board Member Handbook that contains all of the Board's policies and procedures; * A protocol for continuing board member education; * A list (that is updated regularly by staff) of appropriate educational conferences and seminars; * Requirements for fiduciary training. We believe fiduciary training should be conducted annually; and * Minimum education requirements for board members. Using the Board's Travel Policy as the starting point, we offer the following recommendations for enhancements: the Board should authorize and approve Board member travel and procedures should be in place for approval of staff travel related to the retirement system; that the Policy include a requirement that staff prepares a summary of all Board and staff travel, which should include, at a minimum, the name of the conference/seminar, the source of funding (e.g., System, third party) and a summary of the purpose of travel. The summary should be presented to the Board at least annually to ensure that the Board members are in compliance with the Policy; and that exceptions to the Policy be approved by the entire board. We also suggest the Board attach Sections 60.00 through 63.00 of the Wyoming SAO Accounting Policies and Procedures Manual to the Travel Policy to make the document complete, since these sections govern reimbursement. We recommend that staff annually provide a list of educational opportunities to the Board at its January meeting, in conformity with Board's Travel Policy.
	The Board has instituted an orientation program for new board members, a process for continuing board member education, and an environment that encourages Board members to attend educational conferences and seminars. The Board conducts regular fiduciary training and makes appropriate efforts to improve and expand the Board Policies.

26	We recommend that the Board develop an Ethics Policy that addresses the unique issues that confront a retirement system. The Policy should set the ethical standards to which the Board will adhere, define prohibited activities, define conflicts of interest, describe the process for disclosing conflicts, identify a process for remedying and/or managing conflicts and provide enforcement and reporting procedures relating to conflicts of interest. The Ethics Policy should also include a "Gifts" provision and include the circumstances, if any, under which Board members can accept gratuities, which ones, from whom, and under what circumstances or whether Board members are prohibited from accepting any gratuities. We also recommend that the Board consider including provisions in the Ethics Policy regarding campaign contributions, more commonly referred to as "Pay to Play" (e.g., whether they can be made, if so, when, under what circumstance, with what limitations.). Finally, we recommend that the Board work with the Attorney General's Office to identify ethics provisions found in other provisions of Wyoming law and ensure that they are incorporated (either directly or through cross-reference) into the Ethics Policy, if applicable and ensure that there are no inconsistencies between the State's Ethics Policy and the Board's Policy. We also recommend that the Board update its Conflict of Interest Policy for Consultants.
	The Board members are subject to the State's ethics, laws and policies. Board member training includes exposure to those laws and policies. Ongoing effort to consolidate various laws and policies into a comprehensive ethics policy specific to the System and the Board.

27	The Board should adopt a policy (1) to require the Board and staff to maintain the confidentiality of confidential information they may obtain relating to the System; and (2) to prohibit the Board and staff from engaging in "insider trading" or otherwise misusing confidential information relating to the System for personal gain.
	The Board undergoes regular fiduciary and legal training and has adopted a Governance Policy Manual.

28	As part of the Board's strategic planning process, we recommend that the Board devote time to developing a succession plan.
	The Board has incorporated succession planning into its Strategic Planning process.

29	We recommend that the Board create a policy that includes the factors it will take into consideration in determining whether or not to participate in a securities litigation case. We recommend that the Board implement a claims identification, filing, collection and audit process to ensure that the System receives its share of any judicial or administrative settlements in which it is a qualified recipient. We also recommend that the System set up a procedure to periodically audit the claims settlement payments received by the System.
	The Board has adopted a securities litigation policy. The Board generally administers its securities claims filing processes through its custodial bank. The System is currently implementing internal claims identification filing collection and audit processes.

Task Area B: Delineated Policy

1	Expand the section of the IPS on roles and responsibilities to address the duties of staff and relevant service providers, e.g., the investment consultant, investment managers, custodian, etc.
	This is addressed in the Investment Limitations section of the Governance Policy Manual.

2	Consider adopting a requirement that formal asset allocation studies be conducted every three to five years and expand the description of the requirements of an asset allocation/asset liability study.
	This is addressed in the Investment Limitations section of the Governance Policy Manual.

3	Revise the definition of Alternatives to reflect asset classes currently allowed and in use by the System, e.g., distressed debt, infrastructure and absolute return and designate the policy benchmark or benchmarks for the various strategies allowed.
	The IPS of the Governance Policy Manual addresses asset class definitions and is reviewed by the Board annually and amended as appropriate.

4	The “market composite” benchmark should be updated to reflect the current asset allocation policy and it should include a policy benchmark(s) for Alternatives.
	The IPS of the Governance Policy Manual addresses asset class definitions and is reviewed by the Board annually and amended as appropriate.

5	Consider revising the Board’s review requirements so that they must review performance at least quarterly and formally review the IPS annually.
	The Board reviews performance quarterly and formally reviews the IPS annually.

6	The Board should clarify the proxy voting requirements in the IPS so it is clear whether or not the Board is giving specific proxy voting direction to the System’s investment managers.
	Proxy voting requirements are specifically addressed in the IPS.

7	The Board should include in the IPS “meeting or exceeding the actuarial rate over the long-term” as an additional long-term investment objective.
	The Board's investment philosophy and core beliefs are outlined in the IPS, which is reviewed annually.

8	Consider expanding the discussion on risk in the IPS to define more thoroughly the Board’s risk tolerance.
	The Board's investment philosophy and core beliefs are outlined in the IPS, which is reviewed annually.

9	The Board should outline the critical manager selection items in a manager search policy section of the IPS or create a separate manager search policy document and reference it in the IPS.
	The Board has delegated manager selection and search policy to staff.

10	The Board should expand the IPS to include a section on brokerage and trading and define how transactions costs such as brokerage commissions should be monitored.
	Manager and cost review process is incorporated in the IPS.

11	The Board should include a discussion of securities lending in the IPS, including the broad parameters of the program.
	Securities Lending program is referenced in the Governance Policy Manual and the System contracts its securities lending program through its custodial services bank.

12	The IPS should address the Board's policy with regard to securities litigation.
	The Board has developed and adopted a securities litigation policy which is incorporated into the Governance Policy Manual.

Task Area C: Investment Decision Making

1	The Board, in conjunction with its investment consultant and the to-be-hired CIO, should conduct structural reviews of each asset class to define the goals, including appropriate risk level, for each asset class to verify that the current structures are appropriate and make changes as deemed necessary.
	The investment staff does conduct annual reviews of each asset class and conveys those reports to the Board on an ongoing basis.

2	The Board should work with the new CIO to determine how best to conduct on-site manager due diligence visits and set up a schedule accordingly.
	The Board and the CIO have implemented on-site manager due-diligence procedures.

3	The Board should develop a written policy/procedure for monitoring investment manager guideline compliance, which should specify all of the procedures, including identifying responsible parties and detailing a method to document monitoring activity.
	Compliance monitoring procedures are contained in the IPS.

4	In order to comply with the IPS, the Board should ensure that custom guidelines exist for each investment manager (separate accounts).
	Staff negotiates investment guidelines for each separately managed account.

5	Report performance for the Total Fund and the individual asset class on a consecutive year basis.
	Total fund performance is reported to the Board annually.

6	Compare asset class level performance to an appropriate peer universe.
	Performance is reported on a comparative basis; i.e. benchmarks and peer universe.

7	The Board should discuss with its consultant what equity characteristics it would like to see on a quarterly basis on a composite and individual manager level.
	The Board meets with its investment consultant quarterly and discusses portfolio performance and characteristics.

8	The Board should discuss with its consultant what fixed income characteristics it would like to see on a quarterly basis on a composite and individual manager level.
	The Board meets with its investment consultant quarterly and discusses portfolio performance and characteristics.

9	The investment consultant should include exhibits on the risk characteristics of the portfolio (e.g., risk/return, Sharpe ratio, etc.) at least semi-annually in order to comply with their contract and to meet best practices.
	The Board meets with its investment consultant quarterly and discusses portfolio performance and characteristics.

10	The investment consultant should include performance attribution and stock selection characteristics at least semi-annually in order to comply with their contract.
	The Board meets with its investment consultant quarterly and discusses portfolio performance and characteristics.

11	Report Total Fund performance on a net of fee basis in order to comply with the IPS.
	Total Fund performance is reported on a net of fee basis.

12	The Board should consider requiring that the investment consultant include a summary of compliance monitoring in the quarterly report to ensure this function is being fulfilled.
	The Board meets with its investment consultant quarterly and discusses portfolio performance and characteristics.

13	Ensure that the next asset allocation and/or asset liability study include information on the System's liabilities.
	Asset allocation and/or asset liability study procedures are addressed in the Governance Policy Manual.

14	Continue to ensure that Board members are comfortable with the current asset allocation and new asset classes as they are introduced and receive the necessary education.
	The asset allocation is contained in Appendix 1 of the IPS and is reviewed annually and amended accordingly.

15	Revise the Investment Policy so it is clear when physical rebalancing versus the overlay manager will be used.
	Overlay manager procedure is addressed in the IPS.

16	Define the frequency that staff and the overlay manger will review the portfolio and expand the description of the overlay manager's mandate.
	Overlay manager procedure is addressed in the IPS.

17	Consider revising the range for alternatives to reflect the current allocation and better explain how alternatives (private investments) will be handled in terms of rebalancing.
	The range for alternatives has been addressed by the Board and is reflected in a current asset allocation appendix.

Task Area D: Delineated Policy - Actuarial

1	The Board should adopt a formal policy reflecting its desired level of funding for the plan, including whether there is a need for an automatic COLA, continuation of the current break-even methodology, or providing ad hoc COLAs. Typically, this takes the form of choosing a desired number of years in which to achieve 100% funding and the actuarial assumptions under which the level of funding is to be measured. The policy should also reflect some degree of certainty of achieving intermediate and long term funding goals based on both the projected assets and liabilities.
	The Legislature assumed authority for granting COLAs in 2012. The Board has adopted a formal policy designed to recommend that a particular plan be eligible for a COLA based upon advice from the Actuary that the plan will remain over 100% funded after administration of the COLA. Funding levels required in order to provide COLAs from system funds are specified in Wyo. Stat. 9-3-454. The Board's policy is documented in the Member Benefits section of its Governance Policy Manual.

2	The formal policy should then be used to evaluate the contribution rates currently being charged and decide if they are adequate to achieve the desired goal. If the rate is not adequate, the policy and assumptions can be used to derive a revised contribution rate, including the possibility of employee contributions, which would have a greater likelihood of attaining the goal given the current benefit structure.
	The Board has adopted a formal policy designed to recommend funding adjustments to a particular plan based upon advice from the Actuary. The Actuary provides the Board valuation studies for each plan annually. The Board's policy is documented in the Member Benefits section of its Governance Policy Manual.

3	If there are to be no changes to the current contribution rates and COLA mechanism, the Board should make clear the effect of the break-even COLA. That while it gives the perception that post-retirement COLA is being prefunded for active members, there is no guarantee that a COLA will be granted in any given year.
	Break-even COLAs are no longer calculated and statute specifies that COLAs are not guaranteed.

4	We recommend the Board make the Benefits Policy Statement available to all stakeholders and update it every year.
	The Member Benefits policy is contained in the Governance Policy Manual, is reviewed and amended appropriately, and is available to all stakeholders on the System's website.

5	As economic conditions will likely cause the current statutory contribution rate to be insufficient to fund any level of COLA, we recommend the legislature review the rate structure and consider increasing it, including consideration for increasing the employee contribution rate.
	The Board has recommended and the legislature has recently enacted increased contribution rates for three of its plans and created a new tier of benefits in the Public Employee plan which created a more conservative benefit program for new employees.

6	While the break even COLA has been an adequate means of balancing the needs of the System in the short time during which it has been in use, we believe it will not continue to be useful in an increasingly volatile market environment and should be replaced with a more traditional measure of funding. This might include linking the COLA to some index of inflation and building in an actuarial assumption for funding purposes and for use in developing a revised fixed contribution rate. If the break even COLA mechanism is to be maintained, the Board might consider building in additional safeguards to protect the funding against downside risk, such as moving to a more conservative assumption set that typically spends up to the legislative contribution so if there is a margin it can be anticipated to truly be available for COLA.

	Break-even COLAs are no longer calculated and COLAs cannot be granted from pension funds until the plan meets certain criteria set by statute.

7	The actuarial smoothing method in place meets the IRS definition of a reasonable method and is in line with methods used by Wyoming's peers in that it is based on a five-year smoothing period. There are two areas in which we believe the smoothing method could be improved. The first is the treatment of interest and dividend income and the second is the use of an 80%/120% corridor around market value. We would recommend reviewing the two items we have pointed out to make sure the Board's philosophy is being appropriately represented.
	The Board reviews the actuarial smoothing method every five years through an Experience Study and the Board's philosophy is reviewed accordingly. The next Experience Study is scheduled to be conducted in 2017 based on data from 2012 through 2016. The Board has maintained its use of an 80%/120% corridor around market value, and reduced the actuarial rate from 8% to 7.75% in 2013.

8	In reaction to the possibility that the Government Accounting Standards Board may require liabilities to be reported using market rates, which currently are much lower than the median 8% used by most funds, we believe that public sector pension plans will start to ratchet down their expectations in hopes of avoiding an external pronouncement that they must do so in an onerous way. Also given that the contribution rate is legislated, maintaining the investment return rate at 8% when many asset allocations are projecting long term returns below this rate results in an added risk of funding inadequacy over other public retirement systems, where contribution rates float with experience. A more conservative assumption would help ensure that a legislated contribution rate will be sufficient.
	The Board lowered its investment return rate in 2013 from 8% to 7.75% based upon extensive study, comparative analysis and advice from the actuarial firm.

Task Area E: Actuarial Valuation and Plan Funding Decision Making

1	We recommend that the Actuary routinely provide projections as part of the annual valuation presentation, the Trustees could develop an understanding of whether the 30 open amortization technique is likely to improve or defund the plan. Presenting such projections in a graphical format, which makes it easier to see developing trends, could also provide a better understanding of how the asset smoothing method works over time.
	30 year graphical projections are provided annually as part of the annual valuation presentation.

2	We recommend that the Board revisit their asset smoothing method to review the impact of the treatment of cash income and the corridor. We would recommend that the actuary prepare projections of the current method and variations to properly assess and communicate any decisions the Board might be asked to make.
	Valuations are presented to the Board annually demonstrating the ratio of actuarial value to market value of assets. The WRS investment consultant also periodically provides an asset/liability study to the Board which projects income and cash flow needs.

3	We recommend for increased transparency that the Board should review projections from the actuary before making any decisions on how best to fund the Plan.
	Actuarial projections are reviewed annually by the Board.

4	We also recommend that Board continue to hold periodic actuarial audits but expand the scope of such audits to include more than simply replicating valuation results but commenting more fully on the assumptions and methods in place.
	The Board does hold periodic actuarial audits and has expanded the scope of such audits. The next actuarial audit is scheduled to be completed in 2016.

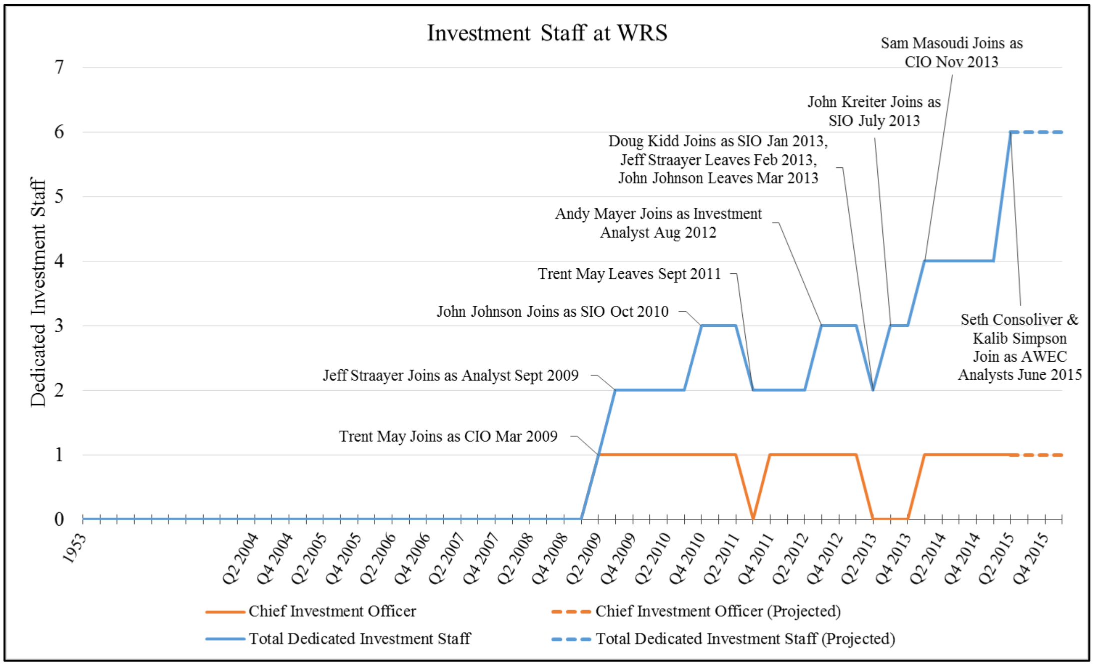
Appendix C

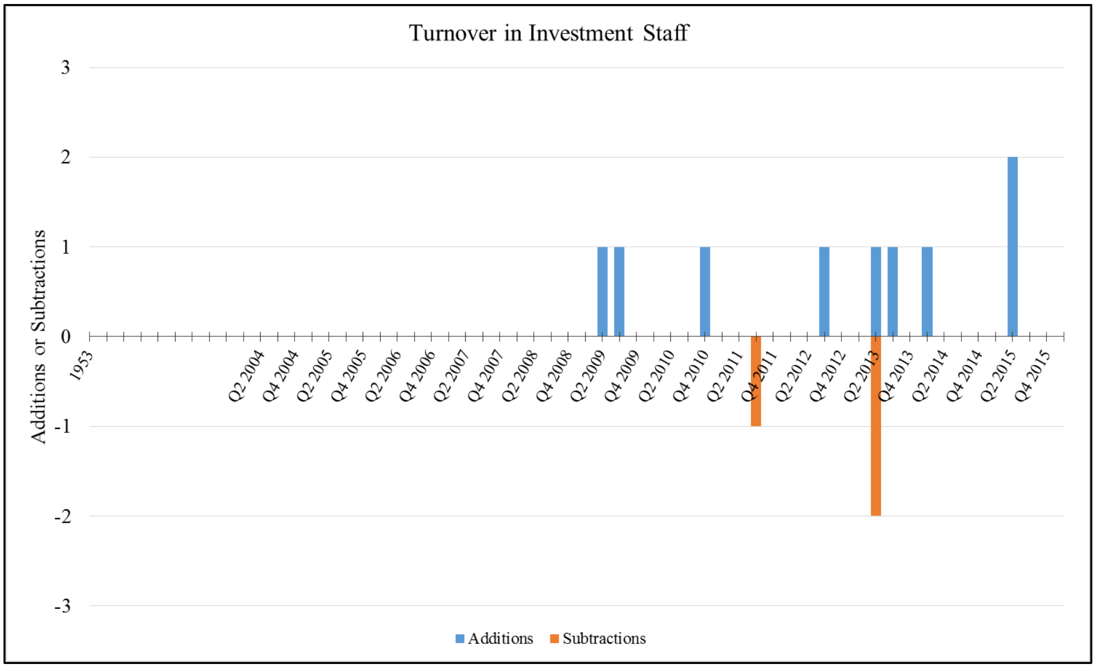
<u>WRS Investment Staff History</u>

Prior to the financial crisis in 2008/2009 WRS did not have an investment staff. The portfolio was managed by the then executive director and deputy director with guidance from the previous consultant. During this time, relative performance was extremely poor. In early 2009, the Governor appointed several new members to the WRS Board. Subsequently, and upon a recommendation from IFS, an independent consultant commissioned by the State Auditor to review all aspects of WRS operations, the Board determined that hiring a professional investment staff would improve investment outcomes. The first CIO and investment team member was hired in March 2009 and subsequently hired two other investment professionals. He departed to become the CIO of an investment group affiliated with the Koch brothers in September 2011, followed by one WRS SIO in early 2013. His deputy became CIO a few months later but was terminated in March 2013 due to personal legal issues unrelated to WRS. Sam Masoudi, the current CIO, was hired in December 2013.

Since the crisis, the growth of the overall investment team has shown progress but as noted above has been marked by several departures and, at times, a lack of staff leadership within the investment program, which have been very disruptive. For example, in early 2013, half of the investment team turned over. There have not been any departures in the trailing two-year period, the longest period of stability in the investment group's existence.

The following charts show the growth of the investment team and the timing of additions and departures of investment staff.





In addition to turnover within the investment team, there has been turnover at the executive director level over the past decade. Tom Mann served as the executive director from April 2002 until his retirement in April of 2008. Thom Williams became the new executive director in August 2008 and served until his retirement in August 2013. Ruth Ryerson assumed the executive director title in August 2013 after serving the same role at Fort Worth Retirement System from 2006 to 2013 and Colorado Fire and Police from 1986 to 2006. While the executive director is involved in all aspects of the operations of WRS, the Board governance policy delegates decision making of the investment program to the executive director. The executive director spends considerable time on the investment program and as a result turnover at the executive director level can have a disruptive effect on investment group execution.

As previously noted, the investment team recently hired the first two Analysts through the Analyst program. Both were WRS summer investment interns last year. They were hired after a thorough recruiting process in which more than 50 other candidates for the position were considered. Their biographical information is as follows:

- Kalib Simpson – Kalib was a summer intern last year and worked part-time throughout the year. He is finishing his Masters in Economics at UW this year and will join WRS in late June. He was awarded the Margaret and Sam Kelly Business Scholarship and is a teaching assistant at UW. Kalib completed his B.A. in International Studies at UW and was a UW Trustees' Scholarship recipient. He grew up in Green River and graduated as valedictorian of his class from Green River High School.
- Seth Consoliver – Seth was also a summer intern last year and worked part-time throughout the year. He just completed a BS in Finance and Economics at UW and joined WRS at the end of May. Seth was recently awarded the M. Clare Mundell Outstanding Senior Award, UW College of Business Best Economics Senior Award and the Dean's Award for Outstanding Seniors. He was chosen as one of three students to speak at the graduation ceremony. Seth graduated from Burlington High School and was valedictorian of his class.

Appendix D - Highlights of WRS Investment Program 5-Year Plan

(Originally presented by Sam Masoudi, CIO, to the Board in November 2014)

Table of Contents

Overview/Goals

We have prepared a 5-year staffing plan to address the following issues:

- Stability of Staff – Develop redundancy and a deeper bench
  - Staff turnover over the past five years has been extremely disruptive and costly
- Greater Potential for Improved Returns
  - Greater Asset Class and Manager Expertise
  - Improved Focus
  - Improved ability to understand more complex investment landscape
  - Additional time spent on investing rather than administration
- Insource more of our investments
  - Reduce fees (2013 fees were ~$45 mil.)
- Increase connection to WY by targeting students from instate for new hires

Recommendations

- Short Term:
  - Hire two Analysts by Summer 2015
  - Implement asset class specialization teams (comprised of 1 SIO and 1 Analyst each)
- Long Term:
  - Hire two additional staff (1 SIO and 1 Analyst) in 2016 or 2017

Peer Staffing Comparison

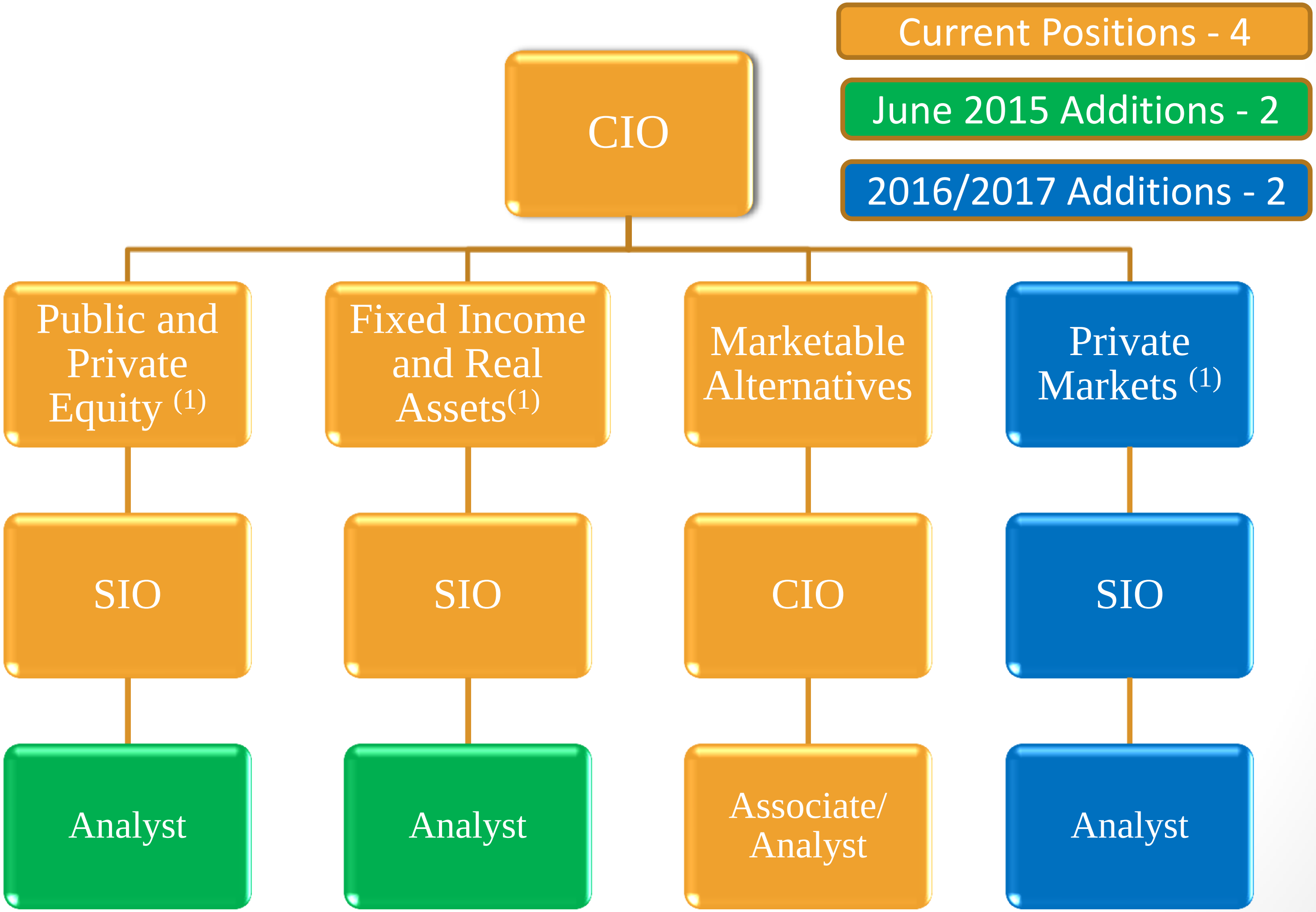
- WRS has significantly lower staffing levels than comparable entities and has had lower investment returns despite paying higher management fees
- While WRS has had an investment staff over the past five years, we have experienced substantial turnover which has been a drag on 5-year returns
- Also, the five-year returns below include a 9-month period in '08/'09 in which there was no investment staff and performance was extremely poor

Entity	Invest. Staff	Assets ($bil)	Inv. Staff per $10 Bil. Assets	External Mgmt Fees ('13; % of AUM)	Annualized Return (FY '13)	
					5-Year	10- Year
Colorado PERA	39	$44.1	8.8	.34%	4.7%	8.0%
Montana PERA	14	$8.5	16.4	.22%	4.8%	6.6%
Nebraska PERS	5	$9.4	5.3	.34%	2.8%	7.1%
S. Dakota SDIC	20	$11.3	17.7	.26%	7.7%	9.2%
Idaho PERSI	2	$13.9	1.4	.27%	4.8%	7.8%
State Pensions (Avg.)	**19**	**$29.7**	**7.4**	**.44%**	**4.9%**	**7.3%**
WRS	**4**	**$7.5**	**5.3**	**.56%**	**4.1%**	**6.1%**
Avg. Pension vs. WRS	**+15**		**+39%**	**-.12%**	**+0.8%**	**+1.2%**

Team Structure, Asset Class Specialization

- Build the overall investment team as a collection of two-person teams (one SIO and one Associate/Analyst)
- Each team dedicated to specific asset classes and new manager hires in those areas
  - Improves specialization
  - Reduces needless duplication of effort
  - Reduces errors - Two sets of eyes on all decisions
  - Redundancy in case of staff turnover
  - Streamlines communication with current and prospective managers
- The team structure provides for natural mentoring and supervision

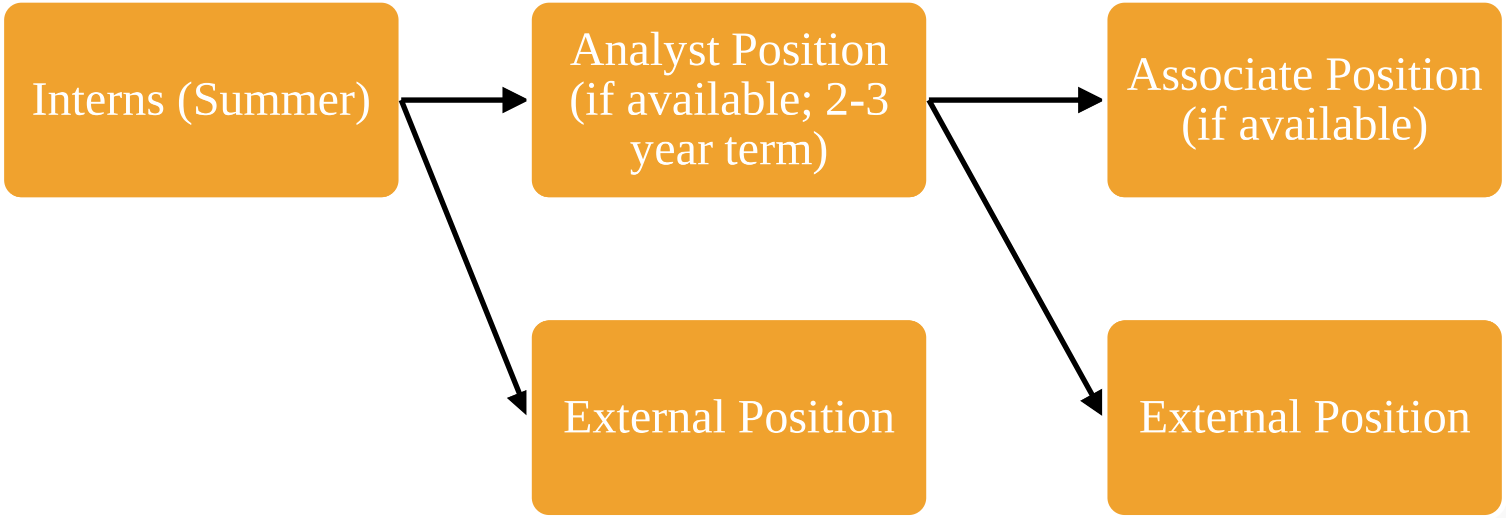
Organizational Chart



(1) Coverage of Private Equity and Real Assets would transfer to the new staff upon hiring.

Staffing Lifecycle

- Create a program where we can develop homegrown (WY) talent to improve stability and reduce turnover
- This model for the Analyst program is common for pensions



Internship Program

- Our first summer internship program this past summer was very successful. We hired two students from UW (one grad and one undergrad).
- We plan to continue the program in future years
- Hire 2-3 summer interns from WY schools every year
- An internship program provides a number of benefits
  - A proving ground for future potential WRS analyst hires
  - Inexpensive labor to work on special projects
  - Supports WY schools and the state by providing excellent work experience
- There will be no assurances that there will be a full time position available

Proposed Analyst Program

- This is a common program for institutional investment groups
- 2-3 year program. Rotate through asset classes (1 per year)
- Prioritize hiring from WY schools
- Open to undergraduate and graduate students with relevant majors
- After the program, they will either go to business school or we will help them find jobs at similar institutional investors such as pensions, endowments and foundations
- Ideally we eventually will create a pool of three Analysts with one rotating off and one being hired each year
- Star performers could have the ability to stay on after their tenure if there are open positions

Why Hire Additional Staff?

- Reduce the impact of staff turnover
- Become more proactive instead of reactive
- Improve analysis of existing managers with quicker decision making
    - Increase the odds of identifying and terminating underperforming managers
- Improve analysis of prospective managers
    - Increase the likelihood of finding premiere managers and avoiding underperforming managers
- Improve ability to identify market opportunities
    - Increase the ability to identify market dislocations and act on them in a timely manner
- Increase bandwidth to utilize current resources (i.e. consultants)
- Improve institutional memory and due diligence execution
    - Depositing information into Tamale
    - Trip notes

Staffing Implementation

- November 2014: Board Approval of 5-Year Plan
- March 2015: Present B11s (non-budgeted request) for funding of two analysts for a one-year period with supplementary funds
- June 2015: Two new temporary Analysts start
- Fall 2015: Present budget for 2016-2018 biennium including funding to convert two temporary Analysts to permanent positions
- TBD: Process for funding for next two employees starting in 2016/2017

Conclusion

- Increased staffing levels will:
  - Reduce turnover
  - Improve redundancy and team stability
  - Improve potential to produce higher returns
  - Potentially reduce external management fees

Next Steps

- IC needs to determine support for:
  - Additional Staffing
    - Phase 1: 2 Analysts
    - Phase 2: 1 SIO and 1 Analyst
- Research compensation levels and formulas
  - By IC with staff input
  - Hire a consultant
- Make recommendations to the WRS Board
- If approved, propose to JAC/Governor as appropriate

Wyoming Retirement System

Summary of Results as of January 1, 2015

	State[4]	Law Enforcement	Wardens[4]	Judges	Fire A[1]	Fire B[4]	Guard Fire	EMT[3]	Volunteer Fire[2]
Member Statistics									
Number of actives	36,489	2,755	304	46	3	369	38	159	2,144
Average age	46.36	39.44	41.19	57.59	57.15	39.46	38.36	46.41	44.46
Average service	9.99	8.05	11.11	9.07	35.96	10.28	9.19	4.32	11.77
Average entry age	36.37	31.39	30.08	48.52	21.19	29.18	29.17	42.09	32.69
Total payroll	$1,818,197,022	$156,791,728	$23,140,300	$6,601,641	$179,486	$27,090,867	$2,214,578	N/A	N/A
Average salary	$49,829	$56,912	$76,119	$143,514	$59,829	$73,417	$58,278	N/A	N/A
Accumulated contributions	$1,394,083,171	$128,198,774	$32,457,623	$5,799,958	$96,203	$16,382,165	$3,550,851	$108,754	$5,143,872
Average accumulated contributions	$38,206	$46,533	$106,768	$126,086	$32,068	$44,396	$93,443	$684	$2,399
Number of Deferred vesteds	5,905	277	19	-	-	29	1	15	-
Total contributions	$187,435,793	$11,955,415	$2,001,836	$0	$0	$884,015	$98,364	$13,810	$0
Number of employees due refunds	20,242	735	24	-	1	26	3	23	1,352
Total contributions	$42,815,005	$3,013,319	$318,460	$0	$1,544	$172,479	$25,734	$10,225	$880,183
Number of pensioners	23,760	1,001	308	16	289	90	5	8	1,243
Total benefits	$431,910,936	$24,292,401	$8,608,680	$830,830	$14,704,390	$3,318,671	$152,480	$7,699	$4,242,644
Average benefits	$18,178	$24,268	$27,950	$51,927	$50,880	$36,874	$30,496	$962	$3,413
Total count	86,396	4,768	655	62	293	514	47	205	4,739
Funded Status (No COLA)									
Actuarial value of assets	$6,609,612,342	$528,542,864	$123,680,718	$22,728,268	$138,087,746	$115,323,104	$5,929,006	$1,343,907	$72,064,598
Market value of assets	$6,672,165,875	$533,067,313	$124,821,143	$22,874,709	$139,939,506	$116,157,258	$5,884,598	$1,363,394	$72,666,383
Actuarial accrued liability	$8,370,666,482	$564,241,353	$156,201,302	$21,243,000	$205,216,099	$115,152,708	$6,611,411	$1,075,720	$75,964,986
Unfunded actuarial accrued liability	$1,761,054,140	$35,698,489	$32,520,584	($1,485,268)	$67,128,353	($170,396)	$682,405	($268,187)	$3,900,388
Actuarial rate of return	8.70%	8.64%	8.68%	8.54%	8.89%	8.58%	7.58%	9.34%	8.64%
Market rate of return*	4.90%	4.90%	4.90%	4.90%	4.90%	4.90%	4.90%	4.90%	4.90%
Funded ratios									
- Actuarial value	78.96%	93.67%	79.18%	106.99%	67.29%	100.15%	89.68%	124.93%	94.87%
- Market value	79.71%	94.48%	79.91%	107.68%	68.19%	100.87%	89.01%	126.74%	95.66%
Contributions (No COLA)									
Normal cost	11.96%	14.54%	23.20%	19.14%	$52,589	20.99%	14.95%	$132,844	$943,869
Employee statutory contribution requirement	(8.25%)	(8.60%)	(14.56%)	(9.22%)	$0	(9.25%)	(16.65%)	($23,850)	($321,600)
Other contribution	0.00%	0.00%	(0.31%)	0.00%	$0	0.00%	0.00%	$0	$0
Net employer normal cost	3.71%	5.94%	8.33%	9.92%	$52,589	11.75%	(1.70%)	$108,994	$622,269
Amortization of unfunded liability	5.19%	1.22%	7.54%	(1.28%)	$9,527,008	(0.03%)	1.65%	($38,062)	$325,853
Administrative expenses	0.36%	0.31%	0.49%	0.29%	$135,100	0.38%	0.23%	$8,200	$112,200
Total employer cost, not less than $0	9.26%	7.47%	16.36%	8.93%	$9,714,697	12.10%	0.18%	$79,132	$1,060,322
Total cost (Employee + Employer)	17.51%	16.07%	31.23%	18.15%	$9,714,697	21.34%	16.83%	$102,982	$1,381,922
Employer statutory contribution requirement	7.62%	8.60%	13.86%	14.50%	$0	12.00%	7.12%	$0	$1,995,000
Total statutory requirement	15.87%	17.20%	28.42%	23.72%	$0	21.25%	23.77%	$23,850	$2,316,600
Shortfall/(surplus)	1.64%	(1.13%)	2.50%	(5.57%)	$9,714,697	0.10%	(6.94%)	$79,132	($934,678)
Actual Asset Values for Prior Year									
Employer contributions	$127,929,930	$13,308,281	$3,006,277	$916,598	$0	$3,184,045	$142,437	$0	$0
Other contributions[5]	$1,697,817	$188,632	$71,238	$0	$0	$265,481	$1,145	$93,196	$1,994,911
Administrative expenses	$5,258,065	$414,331	$97,878	$17,361	$115,406	$88,678	$4,372	$7,163	$68,274
Key Assumptions									
Discount rate	7.75%	7.75%	7.75%	7.75%	7.75%	7.75%	7.75%	7.75%	7.75%
Amortization period	30	30	30	30	10	30	30	10	30

Notes

* Market rate of return is supplied by NEPC, LLC.

(1) Fire A guarantees at least a 3.0% COLA, so the funding and contribution amounts above include a 3% COLA for Fire A

(2) For the Volunteer Fire plan, "Employer statutory contribution requirement" is the premium tax allocation

(3) Contributions for the EMT plan come from a "set-aside" fund which, as of January 1, 2015, has a balance of $186,316. There is currently no additional known contingent funding source.

(4) Total contribution rates are scheduled to increase for the State, Wardens, and Fire B plans after the valuation date. The results shown do not reflect these increases.

(5) Excludes service purchase contributions and member redeposits

GRS

Gabriel Roeder Smith & Company
Consultants & Actuaries

5605 N. MacArthur Blvd.
Suite 870
Irving, TX 75038-2631

469.524.0000 phone
469.524.0003 fax
www.gabrielroeder.com

April 28, 2015

Ms. Ruth Ryerson
Executive Director
Wyoming Retirement System
6101 Yellowstone Road, Suite 500
Cheyenne, WY 82009

Subject: Requested Actuarial Projections for the Wyoming Retirement System

Dear Ruth:

As requested, we are providing 30-year projections for each plan in the Wyoming Retirement System ("WRS") as of January 1, 2015 estimating the future Funded Ratio and Annual Required Contribution ("ARC") for each plan.

Analysis

The sets of 30-year baseline projections for each plan are detailed in Appendix A and incorporate data as of January 1, 2015. Annual contributions based on the plan's individual funding source, if applicable, are assumed to be made annually. Please note that these projections are estimates only and are based upon the current set of actuarial assumptions as adopted by the WRS Board of Trustees on February 22, 2013.

The results of these future projections are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ as actual future experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods.

Summary and Conclusions

The estimated funded ratios for most WRS plans are projected to be over 100% within 30 years, with the following three exceptions:

1) Fire A: With no funding source for the plan, trust assets are projected to be depleted in approximately 14 years.

2) Wardens: The Wardens plan is projected to be 94% funded after 30 years. Though the exhibit only projects the funding status over the next 30 years, it should be noted that funding status estimates are projected to continue to grow beyond 100% within 40 years.

3) Fire B: This plan is projected to be 99.8% funded in 30 years.

A summary of the results detailed in Appendix A is as follows for each WRS plan:

Plan	Funded Ratio		Actuarially Determined Contribution	
	2015	**2045**	**2015**	**2045**
State	79.0%	107.9%	9.26%	0.60%
Fire A	67.3%	N/A (2029)	$9,715k	N/A
Fire B	100.1%	99.8%	12.09%	12.56%
Wardens	79.2%	94.0%	16.36%	11.40%
Law Enforcement	93.7%	120.0%	7.47%	1.06%
Judges	107.0%	163.4%	8.93%	0.00%
Guard Fire	89.7%	163.0%	0.18%	0.00%

Assumptions and Methods

- All calculations incorporate data, provisions, and assumptions used in the January 1, 2015 actuarial valuations, including:
  - Future investment returns are assumed to equal the discount rate of 7.75% each year.
  - A second tier of benefits for participants who are hired after September 1, 2012 for the State plan;
  - No post-retirement cost-of-living adjustment ("COLA") is reflected, with the exception of the Fire A plan;

- The Actuarially Determined Contribution "ADC" is based upon an "open" amortization period over the same number of years as specified in the January 1, 2015 actuarial valuation.

- Increases after January 1, 2015 to the employer rates for the State and Wardens plans, are in accordance with recent legislation and are as follows:
  - State
    - Employer rate increases from 7.62% to 8.37% of pay, effective July 1, 2015
  - Wardens
    - Employer rate increases from 13.86% to 14.88% of pay, effective July 1, 2015

- The Guard Fire plan faces an uncertain future regarding its funding from Federal sources which are assumed to continue in these projections.

Our calculations detailed in Appendix A are based upon assumptions regarding future events, which may or may not materialize. Please bear in mind that actual results could deviate significantly from our projections which will move the projected "fully funded" year up in time if actual future experience is favorable or back in time if actual future experience is not favorable. In addition, note that these results show projections based upon a limited set of assumptions and contribution scenarios and are to be viewed as rough estimates only.

Closing

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. The actuaries submitting this statement are members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. In addition, the undersigned are experienced in performing actuarial valuations for other large public retirement systems.

If you require any additional or clarifying information, please do not hesitate to contact the undersigned.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Mark R. Randall

Leslie L. Thompson

Mark R. Randall, FCA, EA, MAAA
Chief Executive Officer

Leslie Thompson, FSA, FCA, EA, MAAA
Senior Consultant

cc: Polly Scott
Diane Hunt, FSA, FCA, EA, MAAA

Circular 230 Notice: Pursuant to regulations issued by the IRS, to the extent this communication (or any attachment) concerns tax matters, it is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) marketing or recommending to another party any tax-related matter addressed within. Each taxpayer should seek advice based on the individual's circumstances from an independent tax advisor.

This communication shall not be construed to provide tax advice, legal advice or investment advice.

Wyoming Retirement System - Public Employees' Pension Plan ("State")
Projection Results Based on January 1, 2015 Actuarial Valuation - Baseline
Includes 0.75% Employer Contribution Increase effective July 1, 2015

Discount Rate: 7.75%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Projected Payroll (in Millions)	Employer Contributions (in Millions)	Actuarial Accrued Liability (AAL, in Millions)	Actuarial Value of Assets (AVA, in Millions)	Unfunded Actuarial Accrued Liability (UAAL, in Millions)	Funded Ratio	Funding Shortfall/ (Surplus)	30-Year GASB ARC	Employer Normal Cost (NC)	30-Year Amortization Payment	Assumed Expenses
		Employee	Employer											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2015	7.75%	8.250%	7.620%	$1,818.2	$145	$8,371	$6,610	$1,761	79.0%	1.64%	9.26%	3.71%	5.19%	0.36%
2016	7.75%	8.250%	8.370%	1,892.4	158	8,504	6,877	1,627	80.9%	0.14%	8.51%	3.54%	4.61%	0.36%
2017	7.75%	8.250%	8.370%	1,966.8	165	8,880	7,298	1,582	82.2%	-0.29%	8.08%	3.41%	4.31%	0.36%
2018	7.75%	8.250%	8.370%	2,043.6	171	9,257	7,662	1,595	82.8%	-0.54%	7.83%	3.28%	4.19%	0.36%
2019	7.75%	8.250%	8.370%	2,122.8	178	9,634	7,967	1,667	82.7%	-0.63%	7.74%	3.17%	4.21%	0.36%
2020	7.75%	8.250%	8.370%	2,205.2	185	10,012	8,313	1,699	83.0%	-0.82%	7.55%	3.06%	4.13%	0.36%
2021	7.75%	8.250%	8.370%	2,290.7	192	10,390	8,664	1,726	83.4%	-1.01%	7.36%	2.95%	4.04%	0.36%
2022	7.75%	8.250%	8.370%	2,381.0	199	10,770	9,021	1,749	83.8%	-1.21%	7.16%	2.86%	3.94%	0.36%
2023	7.75%	8.250%	8.370%	2,475.3	207	11,152	9,387	1,765	84.2%	-1.42%	6.95%	2.77%	3.82%	0.36%
2024	7.75%	8.250%	8.370%	2,574.5	215	11,538	9,762	1,775	84.6%	-1.63%	6.74%	2.68%	3.70%	0.36%
2025	7.75%	8.250%	8.370%	2,678.8	224	11,929	10,150	1,778	85.1%	-1.85%	6.52%	2.60%	3.56%	0.36%
2026	7.75%	8.250%	8.370%	2,788.1	233	12,327	10,554	1,773	85.6%	-2.07%	6.30%	2.53%	3.41%	0.36%
2027	7.75%	8.250%	8.370%	2,902.6	243	12,734	10,976	1,758	86.2%	-2.30%	6.07%	2.46%	3.25%	0.36%
2028	7.75%	8.250%	8.370%	3,022.5	253	13,152	11,419	1,733	86.8%	-2.54%	5.83%	2.40%	3.08%	0.36%
2029	7.75%	8.250%	8.370%	3,147.9	263	13,583	11,886	1,697	87.5%	-2.78%	5.59%	2.34%	2.89%	0.36%
2030	7.75%	8.250%	8.370%	3,279.1	274	14,028	12,379	1,649	88.2%	-3.03%	5.34%	2.29%	2.70%	0.36%
2031	7.75%	8.250%	8.370%	3,416.3	286	14,489	12,903	1,586	89.1%	-3.28%	5.09%	2.24%	2.49%	0.36%
2032	7.75%	8.250%	8.370%	3,559.6	298	14,967	13,459	1,508	89.9%	-3.55%	4.82%	2.19%	2.27%	0.36%
2033	7.75%	8.250%	8.370%	3,709.1	310	15,466	14,053	1,413	90.9%	-3.82%	4.55%	2.15%	2.04%	0.36%
2034	7.75%	8.250%	8.370%	3,865.1	324	15,986	14,687	1,299	91.9%	-4.10%	4.27%	2.11%	1.80%	0.36%
2035	7.75%	8.250%	8.370%	4,027.8	337	16,529	15,365	1,164	93.0%	-4.38%	3.99%	2.08%	1.55%	0.36%
2036	7.75%	8.250%	8.370%	4,197.6	351	17,098	16,091	1,007	94.1%	-4.68%	3.69%	2.04%	1.29%	0.36%
2037	7.75%	8.250%	8.370%	4,374.5	366	17,693	16,868	825	95.3%	-4.98%	3.39%	2.02%	1.01%	0.36%
2038	7.75%	8.250%	8.370%	4,558.9	382	18,317	17,702	615	96.6%	-5.30%	3.07%	1.99%	0.72%	0.36%
2039	7.75%	8.250%	8.370%	4,751.1	398	18,971	18,595	376	98.0%	-5.62%	2.75%	1.97%	0.42%	0.36%
2040	7.75%	8.250%	8.370%	4,951.5	414	19,657	19,554	103	99.5%	-5.95%	2.42%	1.95%	0.11%	0.36%
2041	7.75%	8.250%	8.370%	5,160.7	432	20,377	20,582	(205)	101.0%	-6.30%	2.07%	1.93%	-0.21%	0.36%
2042	7.75%	8.250%	8.370%	5,379.3	450	21,133	21,685	(552)	102.6%	-6.65%	1.72%	1.91%	-0.55%	0.36%
2043	7.75%	8.250%	8.370%	5,607.4	469	21,927	22,869	(942)	104.3%	-7.01%	1.36%	1.90%	-0.90%	0.36%
2044	7.75%	8.250%	8.370%	5,845.4	489	22,762	24,141	(1,379)	106.1%	-7.39%	0.98%	1.89%	-1.26%	0.36%
2045	7.75%	8.250%	8.370%	6,093.4	510	23,640	25,506	(1,866)	107.9%	-7.77%	0.60%	1.88%	-1.64%	0.36%

Wyoming Paid Firemen's Retirement Fund Plan A ("Fire A")
Projection Results Based on January 1, 2015 Actuarial Valuation - Baseline

Discount Rate: 7.75%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Projected Payroll (in Thousands)	Actuarial Accrued Liability (AAL, in Thousands)	Actuarial Value of Assets (AVA, in Thousands)	Unfunded Actuarial Accrued Liability (UAAL, in Thousands)	Funded Ratio	Funding Shortfall/ (Surplus)	10-Year GASB ARC (in Thousands)	Employer Normal Cost (NC, in Thousands)	10-Year Amortization Payment (in Thousands)	Assumed Expenses (in Thousands)
		Employee	Employer										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2015	7.75%	-	-	$179	$205,216	$138,088	$67,128	67.3%	$9,715	$9,714.7	$52.6	$9,527.0	$135.1
2016	7.75%	-	-	140	205,696	132,947	72,749	64.6%	10,496	10,495.7	35.9	10,324.7	135.1
2017	7.75%	-	-	75	205,788	129,684	76,104	63.0%	10,953	10,953.4	17.5	10,800.8	135.1
2018	7.75%	-	-	27	205,478	124,042	81,436	60.4%	11,701	11,700.8	8.0	11,557.6	135.1
2019	7.75%	-	-	21	204,801	116,095	88,706	56.7%	12,728	12,728.1	3.6	12,589.4	135.1
2020	7.75%	-	-	0	203,775	108,062	95,713	53.0%	13,719	13,718.9	0.0	13,583.8	135.1
2021	7.75%	-	-	-	202,404	99,145	103,259	49.0%	14,790	14,789.9	-	14,654.8	135.1
2022	7.75%	-	-	-	200,704	89,314	111,390	44.5%	15,944	15,943.8	-	15,808.7	135.1
2023	7.75%	-	-	-	198,675	78,524	120,151	39.5%	17,187	17,187.2	-	17,052.1	135.1
2024	7.75%	-	-	-	196,321	66,730	129,591	34.0%	18,527	18,526.9	-	18,391.8	135.1
2025	7.75%	-	-	-	193,642	53,880	139,762	27.8%	19,970	19,970.4	-	19,835.3	135.1
2026	7.75%	-	-	-	190,640	39,918	150,721	20.9%	21,526	21,525.8	-	21,390.7	135.1
2027	7.75%	-	-	-	187,316	24,786	162,530	13.2%	23,202	23,201.7	-	23,066.6	135.1
2028	7.75%	-	-	-	183,672	8,418	175,254	4.6%	25,008	25,007.5	-	24,872.4	135.1
2029	7.75%	-	-	-	179,709	(7,404)	187,113	-4.1%	26,691	26,690.6	-	26,555.5	135.1
2030	7.75%	-	-	-	175,431	(22,645)	198,075	-12.9%	28,246	28,246.4	-	28,111.3	135.1
2031	7.75%	-	-	-	170,840	(39,051)	209,891	-22.9%	29,923	29,923.3	-	29,788.2	135.1
2032	7.75%	-	-	-	165,945	(56,688)	222,633	-34.2%	31,732	31,731.7	-	31,596.6	135.1
2033	7.75%	-	-	-	160,753	(75,626)	236,379	-47.0%	33,682	33,682.5	-	33,547.4	135.1
2034	7.75%	-	-	-	155,275	(95,938)	251,213	-61.8%	35,788	35,787.8	-	35,652.7	135.1
2035	7.75%	-	-	-	149,527	(117,701)	267,228	-78.7%	38,061	38,060.7	-	37,925.6	135.1
2036	7.75%	-	-	-	143,527	(140,996)	284,523	-98.2%	40,515	40,515.3	-	40,380.2	135.1
2037	7.75%	-	-	-	137,297	(165,909)	303,206	-120.8%	43,167	43,166.8	-	43,031.7	135.1
2038	7.75%	-	-	-	130,862	(192,530)	323,392	-147.1%	46,032	46,031.7	-	45,896.6	135.1
2039	7.75%	-	-	-	124,254	(220,954)	345,208	-177.8%	49,128	49,127.8	-	48,992.7	135.1
2040	7.75%	-	-	-	117,506	(251,284)	368,790	-213.8%	52,475	52,474.5	-	52,339.4	135.1
2041	7.75%	-	-	-	110,654	(283,629)	394,282	-256.3%	56,093	56,092.6	-	55,957.5	135.1
2042	7.75%	-	-	-	103,738	(318,107)	421,845	-306.6%	60,004	60,004.3	-	59,869.2	135.1
2043	7.75%	-	-	-	96,799	(354,847)	451,646	-366.6%	64,234	64,233.8	-	64,098.7	135.1
2044	7.75%	-	-	-	89,883	(393,987)	483,869	-438.3%	68,807	68,806.9	-	68,671.8	135.1
2045	7.75%	-	-	-	83,035	(435,676)	518,711	-524.7%	73,752	73,751.8	-	73,616.7	135.1

Appendix A

Wyoming Paid Firemen's Retirement Fund Plan B ("Fire B")
Projection Results Based on January 1, 2015 Actuarial Valuation - Baseline

Discount Rate: 7.75%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Projected Payroll (in Thousands)	Employer Contributions (in Thousands)	Actuarial Accrued Liability (AAL, inThousands)	Actuarial Value of Assets (AVA, in Thousands)	Unfunded Actuarial Accrued Liability (UAAL, in Thousands)	Funded Ratio	Funding Shortfall/ (Surplus)	30-Year GASB ARC	Employer Normal Cost (NC)	30-Year Amortization Payment	Assumed Expenses
		Employee	Employer											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2015	7.75%	9.245%	12.000%	$27,091	$3,251	$115,153	$115,323	($170)	100.1%	0.09%	12.09%	11.75%	-0.03%	0.38%
2016	7.75%	9.245%	12.000%	28,237	3,388	126,108	126,140	(32)	100.0%	0.06%	12.06%	11.69%	-0.01%	0.38%
2017	7.75%	9.245%	12.000%	29,453	3,534	137,498	138,876	(1,379)	101.0%	-0.22%	11.78%	11.65%	-0.25%	0.38%
2018	7.75%	9.245%	12.000%	30,783	3,694	149,449	151,260	(1,811)	101.2%	-0.32%	11.68%	11.62%	-0.32%	0.38%
2019	7.75%	9.245%	12.000%	32,151	3,858	161,982	163,237	(1,255)	100.8%	-0.23%	11.77%	11.60%	-0.21%	0.38%
2020	7.75%	9.245%	12.000%	33,549	4,026	175,089	176,441	(1,352)	100.8%	-0.25%	11.75%	11.58%	-0.22%	0.38%
2021	7.75%	9.245%	12.000%	35,007	4,201	188,856	190,273	(1,416)	100.7%	-0.26%	11.74%	11.58%	-0.22%	0.38%
2022	7.75%	9.245%	12.000%	36,501	4,380	203,246	204,734	(1,488)	100.7%	-0.26%	11.74%	11.58%	-0.22%	0.38%
2023	7.75%	9.245%	12.000%	38,072	4,569	218,260	219,823	(1,563)	100.7%	-0.27%	11.73%	11.57%	-0.22%	0.38%
2024	7.75%	9.245%	12.000%	39,688	4,763	233,929	235,575	(1,646)	100.7%	-0.27%	11.73%	11.57%	-0.22%	0.38%
2025	7.75%	9.245%	12.000%	41,325	4,959	250,201	251,941	(1,740)	100.7%	-0.27%	11.73%	11.58%	-0.23%	0.38%
2026	7.75%	9.245%	12.000%	43,020	5,162	267,051	268,889	(1,839)	100.7%	-0.26%	11.74%	11.59%	-0.23%	0.38%
2027	7.75%	9.245%	12.000%	44,791	5,375	284,507	286,445	(1,937)	100.7%	-0.25%	11.75%	11.61%	-0.23%	0.38%
2028	7.75%	9.245%	12.000%	46,615	5,594	302,577	304,614	(2,037)	100.7%	-0.22%	11.78%	11.63%	-0.23%	0.38%
2029	7.75%	9.245%	12.000%	48,439	5,813	321,182	323,318	(2,137)	100.7%	-0.18%	11.82%	11.67%	-0.24%	0.38%
2030	7.75%	9.245%	12.000%	50,286	6,034	340,203	342,430	(2,227)	100.7%	-0.13%	11.87%	11.72%	-0.24%	0.38%
2031	7.75%	9.245%	12.000%	52,232	6,268	359,599	361,892	(2,293)	100.6%	-0.08%	11.92%	11.77%	-0.24%	0.38%
2032	7.75%	9.245%	12.000%	54,245	6,509	379,405	381,741	(2,335)	100.6%	-0.04%	11.96%	11.82%	-0.23%	0.38%
2033	7.75%	9.245%	12.000%	56,376	6,765	399,667	402,012	(2,346)	100.6%	0.02%	12.02%	11.86%	-0.22%	0.38%
2034	7.75%	9.245%	12.000%	58,542	7,025	420,347	422,675	(2,328)	100.6%	0.08%	12.08%	11.91%	-0.21%	0.38%
2035	7.75%	9.245%	12.000%	60,841	7,301	441,425	443,693	(2,268)	100.5%	0.13%	12.13%	11.95%	-0.20%	0.38%
2036	7.75%	9.245%	12.000%	63,261	7,591	462,961	465,125	(2,164)	100.5%	0.18%	12.18%	11.99%	-0.18%	0.38%
2037	7.75%	9.245%	12.000%	65,843	7,901	485,021	487,031	(2,010)	100.4%	0.24%	12.24%	12.02%	-0.16%	0.38%
2038	7.75%	9.245%	12.000%	68,543	8,225	507,640	509,448	(1,808)	100.4%	0.28%	12.28%	12.04%	-0.14%	0.38%
2039	7.75%	9.245%	12.000%	71,439	8,573	530,925	532,474	(1,549)	100.3%	0.33%	12.33%	12.07%	-0.12%	0.38%
2040	7.75%	9.245%	12.000%	74,455	8,935	554,956	556,193	(1,237)	100.2%	0.38%	12.38%	12.09%	-0.09%	0.38%
2041	7.75%	9.245%	12.000%	77,658	9,319	579,786	580,647	(861)	100.1%	0.42%	12.42%	12.10%	-0.06%	0.38%
2042	7.75%	9.245%	12.000%	81,024	9,723	605,548	605,972	(424)	100.1%	0.46%	12.46%	12.10%	-0.03%	0.38%
2043	7.75%	9.245%	12.000%	84,571	10,149	632,307	632,228	79	100.0%	0.49%	12.49%	12.11%	0.01%	0.38%
2044	7.75%	9.245%	12.000%	88,284	10,594	660,163	659,515	648	99.9%	0.52%	12.52%	12.11%	0.04%	0.38%
2045	7.75%	9.245%	12.000%	92,155	11,059	689,192	687,907	1,284	99.8%	0.56%	12.56%	12.10%	0.07%	0.38%

Wyoming Retirement System - State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund ("Wardens")
Projection Results Based on January 1, 2015 Actuarial Valuation - Baseline
Includes 1.02% Employer Contribution Increase effective July 1, 2015

Discount Rate: 7.75%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date			Projected Payroll (in Thousands)	Employer Contributions (in Thousands)	Actuarial Accrued Liability (AAL, in Thousands)	Actuarial Value of Assets (AVA, in Thousands)	Unfunded Actuarial Accrued Liability (UAAL, in Thousands)	Funded Ratio	Funding Shortfall/ (Surplus)	30-Year GASB ARC	Employer Normal Cost (NC)	30-Year Amortization Payment	Assumed Expenses
		Employee	Employer	HP Game & Fish Commission											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
2015	7.75%	14.56%	13.86%	0.31%	$23,140	$3,325	$156,201	$123,681	$32,521	79.2%	2.50%	16.36%	8.33%	7.54%	0.49%
2016	7.75%	14.56%	14.88%	0.26%	24,296	3,615	164,502	130,643	33,859	79.4%	1.43%	16.31%	8.35%	7.47%	0.49%
2017	7.75%	14.56%	14.88%	0.21%	25,498	3,794	173,184	139,930	33,254	80.8%	0.99%	15.87%	8.39%	6.99%	0.49%
2018	7.75%	14.56%	14.88%	0.16%	26,730	3,977	182,259	148,506	33,753	81.5%	0.81%	15.69%	8.43%	6.77%	0.49%
2019	7.75%	14.56%	14.88%	0.11%	28,038	4,172	191,695	156,277	35,418	81.5%	0.86%	15.74%	8.48%	6.77%	0.49%
2020	7.75%	14.56%	14.88%	0.06%	29,424	4,378	201,564	165,159	36,404	81.9%	0.76%	15.64%	8.52%	6.63%	0.49%
2021	7.75%	14.56%	14.88%	0.01%	30,902	4,598	212,047	174,579	37,468	82.3%	0.67%	15.55%	8.56%	6.50%	0.49%
2022	7.75%	14.56%	14.88%	0.00%	32,444	4,828	223,120	184,595	38,526	82.7%	0.54%	15.42%	8.56%	6.37%	0.49%
2023	7.75%	14.56%	14.88%	0.00%	34,053	5,067	234,839	195,269	39,570	83.2%	0.38%	15.26%	8.54%	6.23%	0.49%
2024	7.75%	14.56%	14.88%	0.00%	35,698	5,312	247,203	206,616	40,587	83.6%	0.24%	15.12%	8.53%	6.10%	0.49%
2025	7.75%	14.56%	14.88%	0.00%	37,368	5,560	260,157	218,586	41,571	84.0%	0.09%	14.97%	8.51%	5.97%	0.49%
2026	7.75%	14.56%	14.88%	0.00%	39,135	5,823	273,739	231,210	42,529	84.5%	-0.06%	14.82%	8.50%	5.83%	0.49%
2027	7.75%	14.56%	14.88%	0.00%	40,976	6,097	287,991	244,540	43,450	84.9%	-0.22%	14.66%	8.48%	5.69%	0.49%
2028	7.75%	14.56%	14.88%	0.00%	42,877	6,380	302,947	258,624	44,323	85.4%	-0.38%	14.50%	8.47%	5.54%	0.49%
2029	7.75%	14.56%	14.88%	0.00%	44,847	6,673	318,610	273,467	45,142	85.8%	-0.53%	14.35%	8.46%	5.40%	0.49%
2030	7.75%	14.56%	14.88%	0.00%	46,845	6,971	334,942	289,049	45,893	86.3%	-0.69%	14.19%	8.45%	5.25%	0.49%
2031	7.75%	14.56%	14.88%	0.00%	48,992	7,290	352,038	305,450	46,588	86.8%	-0.85%	14.03%	8.44%	5.10%	0.49%
2032	7.75%	14.56%	14.88%	0.00%	51,151	7,611	369,939	322,751	47,187	87.2%	-1.00%	13.88%	8.44%	4.95%	0.49%
2033	7.75%	14.56%	14.88%	0.00%	53,456	7,954	388,641	340,932	47,708	87.7%	-1.17%	13.71%	8.43%	4.79%	0.49%
2034	7.75%	14.56%	14.88%	0.00%	55,790	8,302	408,162	360,047	48,115	88.2%	-1.34%	13.54%	8.43%	4.62%	0.49%
2035	7.75%	14.56%	14.88%	0.00%	58,240	8,666	428,493	380,082	48,411	88.7%	-1.50%	13.38%	8.43%	4.46%	0.49%
2036	7.75%	14.56%	14.88%	0.00%	60,727	9,036	449,608	401,040	48,568	89.2%	-1.67%	13.21%	8.43%	4.29%	0.49%
2037	7.75%	14.56%	14.88%	0.00%	63,365	9,429	471,563	422,971	48,592	89.7%	-1.86%	13.02%	8.42%	4.11%	0.49%
2038	7.75%	14.56%	14.88%	0.00%	66,103	9,836	494,442	445,989	48,453	90.2%	-2.04%	12.84%	8.42%	3.93%	0.49%
2039	7.75%	14.56%	14.88%	0.00%	68,992	10,266	518,329	470,189	48,141	90.7%	-2.23%	12.65%	8.42%	3.74%	0.49%
2040	7.75%	14.56%	14.88%	0.00%	71,927	10,703	543,265	495,649	47,616	91.2%	-2.42%	12.46%	8.42%	3.55%	0.49%
2041	7.75%	14.56%	14.88%	0.00%	75,059	11,169	569,284	522,402	46,883	91.8%	-2.61%	12.27%	8.43%	3.35%	0.49%
2042	7.75%	14.56%	14.88%	0.00%	78,256	11,644	596,450	550,559	45,891	92.3%	-2.83%	12.05%	8.42%	3.14%	0.49%
2043	7.75%	14.56%	14.88%	0.00%	81,664	12,152	624,820	580,183	44,637	92.9%	-3.04%	11.84%	8.42%	2.93%	0.49%
2044	7.75%	14.56%	14.88%	0.00%	85,139	12,669	654,431	611,368	43,063	93.4%	-3.26%	11.62%	8.42%	2.71%	0.49%
2045	7.75%	14.56%	14.88%	0.00%	88,774	13,210	685,285	644,129	41,156	94.0%	-3.48%	11.40%	8.42%	2.49%	0.49%

Wyoming Retirement System - Law Enforcement Retirement Fund ("Law Enforcement")
Projection Results Based on January 1, 2015 Actuarial Valuation - Baseline

Discount Rate: 7.75%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Projected Payroll (in Thousands)	Employer Contributions (in Thousands)	Actuarial Accrued Liability (AAL, in Thousands)	Actuarial Value of Assets (AVA, in Thousands)	Unfunded Actuarial Accrued Liability (UAAL, in Thousands)	Funded Ratio	Funding Shortfall/ (Surplus)	30-Year GASB ARC	Employer Normal Cost (NC)	30-Year Amortization Payment	Assumed Expenses
		Employee	Employer											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2015	7.75%	8.60%	8.60%	$156,792	$13,484	$564,241	$528,543	$35,698	93.7%	-1.13%	7.47%	5.94%	1.22%	0.31%
2016	7.75%	8.60%	8.60%	163,190	14,034	600,102	566,546	33,556	94.4%	-1.29%	7.31%	5.90%	1.10%	0.31%
2017	7.75%	8.60%	8.60%	169,985	14,619	636,952	613,213	23,738	96.3%	-1.66%	6.94%	5.88%	0.75%	0.31%
2018	7.75%	8.60%	8.60%	177,020	15,224	675,179	657,249	17,931	97.3%	-1.88%	6.72%	5.87%	0.54%	0.31%
2019	7.75%	8.60%	8.60%	184,279	15,848	714,910	698,498	16,412	97.7%	-1.96%	6.64%	5.85%	0.48%	0.31%
2020	7.75%	8.60%	8.60%	191,782	16,493	756,110	744,706	11,403	98.5%	-2.13%	6.47%	5.84%	0.32%	0.31%
2021	7.75%	8.60%	8.60%	199,627	17,168	799,598	793,072	6,526	99.2%	-2.29%	6.31%	5.83%	0.18%	0.31%
2022	7.75%	8.60%	8.60%	207,724	17,864	844,765	843,742	1,023	99.9%	-2.44%	6.16%	5.82%	0.03%	0.31%
2023	7.75%	8.60%	8.60%	216,288	18,601	891,705	896,834	(5,129)	100.6%	-2.60%	6.00%	5.81%	-0.13%	0.31%
2024	7.75%	8.60%	8.60%	225,190	19,366	940,544	952,561	(12,017)	101.3%	-2.77%	5.83%	5.81%	-0.29%	0.31%
2025	7.75%	8.60%	8.60%	234,523	20,169	991,366	1,011,056	(19,690)	102.0%	-2.93%	5.67%	5.81%	-0.45%	0.31%
2026	7.75%	8.60%	8.60%	244,276	21,008	1,044,275	1,072,497	(28,222)	102.7%	-3.10%	5.50%	5.81%	-0.62%	0.31%
2027	7.75%	8.60%	8.60%	254,383	21,877	1,099,402	1,137,096	(37,694)	103.4%	-3.28%	5.32%	5.81%	-0.79%	0.31%
2028	7.75%	8.60%	8.60%	264,935	22,784	1,156,754	1,204,940	(48,186)	104.2%	-3.46%	5.14%	5.81%	-0.98%	0.31%
2029	7.75%	8.60%	8.60%	275,878	23,725	1,216,199	1,275,994	(59,795)	104.9%	-3.64%	4.96%	5.81%	-1.16%	0.31%
2030	7.75%	8.60%	8.60%	287,315	24,709	1,277,782	1,350,390	(72,608)	105.7%	-3.83%	4.77%	5.81%	-1.36%	0.31%
2031	7.75%	8.60%	8.60%	299,288	25,739	1,341,521	1,428,242	(86,721)	106.5%	-4.03%	4.57%	5.81%	-1.55%	0.31%
2032	7.75%	8.60%	8.60%	311,745	26,810	1,407,506	1,509,765	(102,259)	107.3%	-4.23%	4.37%	5.82%	-1.76%	0.31%
2033	7.75%	8.60%	8.60%	324,809	27,934	1,475,835	1,595,171	(119,336)	108.1%	-4.44%	4.16%	5.82%	-1.97%	0.31%
2034	7.75%	8.60%	8.60%	338,490	29,110	1,546,614	1,684,702	(138,089)	108.9%	-4.66%	3.94%	5.82%	-2.19%	0.31%
2035	7.75%	8.60%	8.60%	352,819	30,342	1,620,053	1,778,714	(158,661)	109.8%	-4.88%	3.72%	5.82%	-2.41%	0.31%
2036	7.75%	8.60%	8.60%	367,739	31,626	1,696,310	1,877,533	(181,223)	110.7%	-5.11%	3.49%	5.82%	-2.64%	0.31%
2037	7.75%	8.60%	8.60%	383,327	32,966	1,775,471	1,981,406	(205,935)	111.6%	-5.35%	3.25%	5.82%	-2.88%	0.31%
2038	7.75%	8.60%	8.60%	399,618	34,367	1,857,728	2,090,711	(232,984)	112.5%	-5.59%	3.01%	5.83%	-3.13%	0.31%
2039	7.75%	8.60%	8.60%	416,601	35,828	1,943,211	2,205,787	(262,576)	113.5%	-5.84%	2.76%	5.83%	-3.38%	0.31%
2040	7.75%	8.60%	8.60%	434,315	37,351	2,032,088	2,327,012	(294,923)	114.5%	-6.10%	2.50%	5.83%	-3.64%	0.31%
2041	7.75%	8.60%	8.60%	452,795	38,940	2,124,573	2,454,835	(330,262)	115.5%	-6.37%	2.23%	5.83%	-3.91%	0.31%
2042	7.75%	8.60%	8.60%	472,052	40,596	2,220,788	2,589,635	(368,847)	116.6%	-6.65%	1.95%	5.83%	-4.19%	0.31%
2043	7.75%	8.60%	8.60%	492,150	42,325	2,320,831	2,731,780	(410,949)	117.7%	-6.94%	1.66%	5.83%	-4.48%	0.31%
2044	7.75%	8.60%	8.60%	513,087	44,125	2,425,001	2,881,868	(456,867)	118.8%	-7.24%	1.36%	5.83%	-4.77%	0.31%
2045	7.75%	8.60%	8.60%	534,916	46,003	2,533,454	3,040,373	(506,919)	120.0%	-7.54%	1.06%	5.83%	-5.08%	0.31%

Wyoming Retirement System - Judicial Retirement System ("Judges")
Projection Results Based on January 1, 2015 Actuarial Valuation - Baseline

Discount Rate: 7.75%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Projected Payroll (in Thouands)	Employer Contributions (in Thouands)	Actuarial Accrued Liability (AAL, in Thouands)	Actuarial Value of Assets (AVA, in Thouands)	Unfunded Actuarial Accrued Liability (UAAL, in Thouands)	Funded Ratio	Funding Shortfall/ (Surplus)	30-Year GASB ARC	Employer Normal Cost (NC)	30-Year Amortization Payment	Assumed Expenses
		Employee	Employer											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2015	7.75%	9.22%	14.50%	$6,602	$957	$21,243	$22,728	($1,485)	107.0%	-5.57%	8.93%	9.92%	-1.28%	0.29%
2016	7.75%	9.22%	14.50%	6,853	994	23,281	25,150	(1,869)	108.0%	-5.89%	8.61%	9.87%	-1.55%	0.29%
2017	7.75%	9.22%	14.50%	7,114	1,032	25,436	28,021	(2,584)	110.2%	-6.46%	8.04%	9.81%	-2.06%	0.29%
2018	7.75%	9.22%	14.50%	7,392	1,072	27,696	30,872	(3,176)	111.5%	-6.90%	7.60%	9.75%	-2.44%	0.29%
2019	7.75%	9.22%	14.50%	7,681	1,114	30,038	33,671	(3,633)	112.1%	-7.22%	7.28%	9.68%	-2.69%	0.29%
2020	7.75%	9.22%	14.50%	7,966	1,155	32,422	36,704	(4,282)	113.2%	-7.67%	6.83%	9.59%	-3.05%	0.29%
2021	7.75%	9.22%	14.50%	8,270	1,199	34,778	39,780	(5,002)	114.4%	-8.12%	6.38%	9.52%	-3.43%	0.29%
2022	7.75%	9.22%	14.50%	8,592	1,246	37,126	42,922	(5,796)	115.6%	-8.59%	5.91%	9.45%	-3.83%	0.29%
2023	7.75%	9.22%	14.50%	8,946	1,297	39,436	46,110	(6,674)	116.9%	-9.04%	5.46%	9.40%	-4.24%	0.29%
2024	7.75%	9.22%	14.50%	9,314	1,350	41,750	49,389	(7,639)	118.3%	-9.55%	4.95%	9.31%	-4.66%	0.29%
2025	7.75%	9.22%	14.50%	9,728	1,411	44,031	52,737	(8,706)	119.8%	-10.02%	4.48%	9.27%	-5.08%	0.29%
2026	7.75%	9.22%	14.50%	10,133	1,469	46,267	56,148	(9,881)	121.4%	-10.45%	4.05%	9.30%	-5.54%	0.29%
2027	7.75%	9.22%	14.50%	10,533	1,527	48,528	59,695	(11,167)	123.0%	-10.94%	3.56%	9.29%	-6.02%	0.29%
2028	7.75%	9.22%	14.50%	10,970	1,591	50,796	63,369	(12,572)	124.8%	-11.48%	3.02%	9.23%	-6.51%	0.29%
2029	7.75%	9.22%	14.50%	11,416	1,655	53,149	67,263	(14,114)	126.6%	-12.02%	2.48%	9.21%	-7.02%	0.29%
2030	7.75%	9.22%	14.50%	11,882	1,723	55,659	71,460	(15,801)	128.4%	-12.58%	1.92%	9.18%	-7.55%	0.29%
2031	7.75%	9.22%	14.50%	12,377	1,795	58,326	75,972	(17,646)	130.3%	-13.21%	1.29%	9.10%	-8.09%	0.29%
2032	7.75%	9.22%	14.50%	12,899	1,870	61,106	80,776	(19,670)	132.2%	-13.83%	0.67%	9.03%	-8.66%	0.29%
2033	7.75%	9.22%	14.50%	13,387	1,941	64,054	85,945	(21,891)	134.2%	-14.49%	0.01%	9.01%	-9.28%	0.29%
2034	7.75%	9.22%	14.50%	13,909	2,017	67,225	91,538	(24,312)	136.2%	-15.15%	-0.65%	8.99%	-9.92%	0.29%
2035	7.75%	9.22%	14.50%	14,443	2,094	70,563	97,517	(26,954)	138.2%	-15.83%	-1.33%	8.97%	-10.60%	0.29%
2036	7.75%	9.22%	14.50%	14,998	2,175	74,067	103,898	(29,832)	140.3%	-16.56%	-2.06%	8.94%	-11.29%	0.29%
2037	7.75%	9.22%	14.50%	15,573	2,258	77,754	110,721	(32,967)	142.4%	-17.30%	-2.80%	8.93%	-12.02%	0.29%
2038	7.75%	9.22%	14.50%	16,178	2,346	81,553	117,933	(36,380)	144.6%	-18.05%	-3.55%	8.93%	-12.77%	0.29%
2039	7.75%	9.22%	14.50%	16,797	2,435	85,462	125,552	(40,090)	146.9%	-18.85%	-4.35%	8.91%	-13.55%	0.29%
2040	7.75%	9.22%	14.50%	17,439	2,529	89,508	133,633	(44,125)	149.3%	-19.66%	-5.16%	8.92%	-14.37%	0.29%
2041	7.75%	9.22%	14.50%	18,148	2,631	93,608	142,113	(48,505)	151.8%	-20.43%	-5.93%	8.95%	-15.18%	0.29%
2042	7.75%	9.22%	14.50%	18,847	2,733	97,724	150,984	(53,261)	154.5%	-21.29%	-6.79%	8.97%	-16.04%	0.29%
2043	7.75%	9.22%	14.50%	19,557	2,836	101,925	160,346	(58,421)	157.3%	-22.20%	-7.70%	8.97%	-16.96%	0.29%
2044	7.75%	9.22%	14.50%	20,291	2,942	106,231	170,250	(64,019)	160.3%	-23.12%	-8.62%	9.01%	-17.91%	0.29%
2045	7.75%	9.22%	14.50%	21,056	3,053	110,615	180,699	(70,084)	163.4%	-24.08%	-9.58%	9.03%	-18.90%	0.29%

Wyoming Air Guard Firefighters Retirement System ("Guard Fire")
Projection Results Based on January 1, 2015 Actuarial Valuation - Baseline

Discount Rate: 7.75%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Projected Payroll (in Thousands)	Employer Contributions (in Thousands)	Actuarial Accrued Liability (AAL, in Thousands)	Actuarial Value of Assets (AVA, in Thousands)	Unfunded Actuarial Accrued Liability (UAAL, in Thousands)	Funded Ratio	Funding Shortfall/ (Surplus)	30-Year GASB ARC	Employer Normal Cost (NC)	30-Year Amortization Payment	Assumed Expenses
		Employee	Employer											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2015	7.75%	16.650%	7.120%	$2,215	$158	$6,611	$5,929	$682	89.7%	-6.94%	0.18%	-1.70%	1.65%	0.23%
2016	7.75%	16.650%	7.120%	2,313	165	7,238	6,637	601	91.7%	-7.19%	-0.07%	-1.69%	1.39%	0.23%
2017	7.75%	16.650%	7.120%	2,416	172	7,915	7,550	364	95.4%	-7.77%	-0.65%	-1.69%	0.81%	0.23%
2018	7.75%	16.650%	7.120%	2,523	180	8,630	8,487	143	98.3%	-8.29%	-1.17%	-1.70%	0.30%	0.23%
2019	7.75%	16.650%	7.120%	2,634	188	9,399	9,458	(58)	100.6%	-8.72%	-1.60%	-1.71%	-0.12%	0.23%
2020	7.75%	16.650%	7.120%	2,751	196	10,213	10,534	(321)	103.1%	-9.24%	-2.12%	-1.72%	-0.62%	0.23%
2021	7.75%	16.650%	7.120%	2,869	204	11,077	11,685	(609)	105.5%	-9.76%	-2.64%	-1.73%	-1.14%	0.23%
2022	7.75%	16.650%	7.120%	2,993	213	11,979	12,910	(931)	107.8%	-10.29%	-3.17%	-1.74%	-1.67%	0.23%
2023	7.75%	16.650%	7.120%	3,119	222	12,920	14,210	(1,290)	110.0%	-10.84%	-3.72%	-1.73%	-2.22%	0.23%
2024	7.75%	16.650%	7.120%	3,251	232	13,898	15,586	(1,689)	112.2%	-11.41%	-4.29%	-1.73%	-2.78%	0.23%
2025	7.75%	16.650%	7.120%	3,391	241	14,916	17,047	(2,131)	114.3%	-11.99%	-4.87%	-1.73%	-3.37%	0.23%
2026	7.75%	16.650%	7.120%	3,534	252	15,968	18,590	(2,622)	116.4%	-12.59%	-5.47%	-1.73%	-3.98%	0.23%
2027	7.75%	16.650%	7.120%	3,681	262	17,049	20,214	(3,165)	118.6%	-13.22%	-6.10%	-1.72%	-4.61%	0.23%
2028	7.75%	16.650%	7.120%	3,840	273	18,157	21,921	(3,764)	120.7%	-13.86%	-6.74%	-1.71%	-5.26%	0.23%
2029	7.75%	16.650%	7.120%	4,007	285	19,302	23,725	(4,424)	122.9%	-14.51%	-7.39%	-1.70%	-5.92%	0.23%
2030	7.75%	16.650%	7.120%	4,179	298	20,494	25,644	(5,151)	125.1%	-15.19%	-8.07%	-1.69%	-6.61%	0.23%
2031	7.75%	16.650%	7.120%	4,358	310	21,729	27,680	(5,951)	127.4%	-15.89%	-8.77%	-1.68%	-7.32%	0.23%
2032	7.75%	16.650%	7.120%	4,546	324	23,018	29,847	(6,829)	129.7%	-16.62%	-9.50%	-1.67%	-8.05%	0.23%
2033	7.75%	16.650%	7.120%	4,741	338	24,365	32,158	(7,793)	132.0%	-17.37%	-10.25%	-1.67%	-8.81%	0.23%
2034	7.75%	16.650%	7.120%	4,946	352	25,775	34,625	(8,850)	134.3%	-18.14%	-11.02%	-1.66%	-9.59%	0.23%
2035	7.75%	16.650%	7.120%	5,157	367	27,254	37,263	(10,009)	136.7%	-18.95%	-11.83%	-1.65%	-10.41%	0.23%
2036	7.75%	16.650%	7.120%	5,381	383	28,807	40,083	(11,277)	139.1%	-19.78%	-12.66%	-1.65%	-11.24%	0.23%
2037	7.75%	16.650%	7.120%	5,619	400	30,447	43,110	(12,663)	141.6%	-20.62%	-13.50%	-1.65%	-12.08%	0.23%
2038	7.75%	16.650%	7.120%	5,864	418	32,181	46,361	(14,180)	144.1%	-21.50%	-14.38%	-1.65%	-12.97%	0.23%
2039	7.75%	16.650%	7.120%	6,119	436	34,011	49,849	(15,837)	146.6%	-22.42%	-15.30%	-1.65%	-13.88%	0.23%
2040	7.75%	16.650%	7.120%	6,387	455	35,935	53,583	(17,648)	149.1%	-23.35%	-16.23%	-1.65%	-14.82%	0.23%
2041	7.75%	16.650%	7.120%	6,657	474	37,941	57,567	(19,626)	151.7%	-24.34%	-17.22%	-1.65%	-15.81%	0.23%
2042	7.75%	16.650%	7.120%	6,942	494	40,030	61,813	(21,783)	154.4%	-25.36%	-18.24%	-1.65%	-16.83%	0.23%
2043	7.75%	16.650%	7.120%	7,235	515	42,209	66,344	(24,136)	157.2%	-26.43%	-19.31%	-1.65%	-17.89%	0.23%
2044	7.75%	16.650%	7.120%	7,544	537	44,477	71,176	(26,699)	160.0%	-27.51%	-20.39%	-1.65%	-18.98%	0.23%
2045	7.75%	16.650%	7.120%	7,864	560	46,845	76,336	(29,491)	163.0%	-28.65%	-21.53%	-1.65%	-20.11%	0.23%

GASB 68 Reporting Requirements

Most WRS employers have a June 30 fiscal year end and will subsequently begin preparing annual financial statements. This year, entities preparing accrual based financial statements subject to standards issued by the Governmental Accounting Standards Board (GASB) have new requirements involving pension reporting, per GASB statement 68.

GASB 68 requires that WRS employers recognize a liability on their financial statements related to the unfunded pension liability of the pension system of which they are a member. Previously, entities reported their participation in WRS in a note to their financial statements. Typical notes included the amounts contributed to WRS and directed readers to view WRS's financial statements to understand the financial situation of the pension.

Under GASB 68, the entity will report their proportionate share of the Net Pension Liability (NPL) for each WRS plan they participate in on the face of their financial statements as a liability. GASB intends this change to improve financial reporting and transparency; but like any change, it has potential to confuse as well.

Q: How is the Net Pension Liability (NPL) calculated?

WRS's actuarial firm projects the cost of future benefits and the resulting payouts over the assumed lifespan of the participants. That future stream of payments is then discounted back to present value using a discount rate (generally the assumed rate of return on the pension plan investments). The present value of the liability is compared to the market value of pension assets at the measurement moment. These measurements are calculated with methods and assumption rules per new accounting rules for pension systems contained in GASB statement 67.

Public Employee Pension Plan Example:

Total Pension Liability	-	Pension Net Position	=	Net Pension Liability (NPL)	(Pension Net Position as % of Total Pension Liability)
$8,436,858,102	-	$6,672,165,875	=	$1,764,692,227	79.08%
(PV of projected payments)		(PV of plan assets)		(NPL)	

Q: How is my entity's proportional share of the NPL calculated?

GASB allows several "rational and systematic" methods. WRS will allocate shares according to proportion of contributions last year. If your entity contributed .5% of all the contributions from all the employers in the plan last year, your entity's share is .5% of the NPL.

Q: Any exceptions?

Since the Fire A plan is closed with no new contributions, the NPL for Fire A will be allocated proportional to benefits paid last year. If the retirees from your entity in Fire A received 5% of the benefits paid last year, your entity's share is 5% of the NPL for Fire A.

Q: How will we obtain the NPL and percentages we need for our report and when will they be available?

WRS will publish the NPLs for all nine plans and the proportional shares for each participating employer in our 2014 annual financial report. The report will be published no later than June 30, 2015 and will be downloadable from the WRS website at retirement.wyo.gov/employers/gasb.html

GASB Continued...

Q: Is this something we have to pay?

Although the accounting rules require including this as a liability, it is nothing that your entity needs to pay. It will decrease over time with normal contribution rates. All of WRS's plans are projected to obtain 100% funding within 30 years, except the Warden Patrol plan which is 40 years and Fire A which has a known funding problem that requires legislative resolution.

Q: It is still a big number, and it is new. Aren't people going to be alarmed at the cost of the pension?

Some may misunderstand and some won't want to understand. But, the new reporting method doesn't change the financial reality of the pension system or any member entity. It's true that WRS doesn't have all the money today to pay all future benefits, but we don't have to pay them today. It's similar to your home mortgage. It's a liability on your balance sheet, but you don't have to pay it all today. You just have to keep up the payments. If you owed $100,000 on your house but had $80,000 in financial assets today, some would say "you are only 80% funded" and can't afford to be a homeowner. WRS suspects that most would disagree, pointing to your track record of making payments and your projection to be fully funded.

Q: If it's nothing we need to pay and nothing to be alarmed about, why did GASB change the rules?

The GASB's purpose is not to alarm, but to inform. The new reporting method does serve to highlight the funding status of pension systems and involve member entities in new ways. Previously it was unknown whether entities were aware of WRS's finances (which are comparatively strong) or if anyone read WRS' financial reports. The new GASB rules force member entities to acknowledge the situation in their own financial statements. It is a fact that some states like Illinois and New Jersey have serious pension funding problems. Their biggest problem was failing to pay past contributions to the pension system. Although that helped balance the state's budget at the time, now their pensions are in trouble. Wyoming has never failed to pay required contributions. Wyoming has been willing to raise rates or modify benefits as prudent analysis indicated.

Q: We're a small organization and we're not familiar with GASB. What do we have to do?

Many of WRS's employers aren't required to file accrual-based accounting statements prepared according to GASB rules. Thus, many small employers are unaffected. But, cities (as opposed to towns) probably do prepare GASB reports, as do most of the larger school districts, counties and of course, the State of Wyoming itself.

Q: What are the key take-aways?

1. Employers who prepare accrual based financial statements have to report their share of WRS pension liabilities in those financial statements for the first time.
2. The information they need will be in WRS's 2014 financial report, available by June 30, 2015.
3. The purpose is to inform, not alarm. Financial situations have not changed. WRS is comparatively strong and all the funds (except Fire A) have good trajectories.
4. WRS is available to help employers plan and communicate.