Gabriel Roeder Smith & Company
Consultants & Actuaries

WYOMING RETIREMENT SYSTEM

PAID FIREMEN'S RETIRMENT FUND PLAN A

GASB STATEMENT NOS. 67 AND 68 ACCOUNTING AND FINANCIAL REPORTING FOR PENSIONS

FOR THE MEASUREMENT DATE OF DECEMBER 31, 2014

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
7900 East Union Avenue
Suite 650
Denver, CO 80237-2746
720.274.7270 phone
303.694.0633 fax
www.gabrielroeder.com

July 31, 2015

The Board of Trustees
Wyoming Retirement System

Dear Board Members:

This report provides information required by the Wyoming Retirement System (WRS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 "Financial Reporting for Pension Plans" and Statement No. 68 "Accounting and Financial Reporting for Pensions".

The actuarial calculations for this report were prepared for the purpose of complying with the requirements of GASB Statements No. 67 and 68. These calculations have been made on a basis that is consistent with our understanding of this Statement.

The calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement No. 67 and GASB Statement No. 68. The calculation of the plan's liability for this report may not be applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement No. 67 and No. 68 may produce significantly different results. This report may be provided to parties other than the Wyoming Retirement System ("WRS") only in its entirety and only with the permission of WRS.

This report is based upon information, furnished to us by WRS, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different, please let us know. This information was checked for internal consistency, but it was not otherwise audited.

This report complements the actuarial valuation report that was provided to WRS and should be considered in conjunction with that report. Please see the actuarial valuation report as of January 1, 2014 for additional discussion of the nature of actuarial calculations and more information related to participant data.

To the best of our knowledge, the information contained with this report is accurate and fairly represents the actuarial position of the Wyoming Retirement System. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Leslie L. Thompson is a member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

By Leslie L. Thompson
Leslie L. Thompson
FSA, FCA, EA, MAAA

By Joseph R. Herm
Joseph R. Herm

TABLE OF CONTENTS

SECTION A

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY
AS OF DECEMBER 31, 2014

Actuarial Valuation Date	January 1, 2014
Measurement Date of the Net Pension Liability	December 31, 2014
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2015

Membership

Number of		
- Retirees and Beneficiaries		292
- Inactive, Nonretired Members		-
- Active Members		3
- Total		295
Covered Payroll	$	198,404

Net Pension Liability

Total Pension Liability	$	304,527,148
Plan Fiduciary Net Position		139,939,506
Net Pension Liability	$	164,587,642
Plan Fiduciary Net Position as a Percentage of Total Pension Liability		45.953%
Net Pension Liability as a Percentage of Covered Payroll		82955.641%

Development of the Single Discount Rate

Single Discount Rate	4.468%
Long-Term Expected Rate of Investment Return	7.750%
Long-Term Municipal Bond Rate*	3.650%
Last year ending December 31 in the 2014 to 2113 projection period for which projected benefit payments are fully funded	2026

Total Pension Expense	$	102,862,558

Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

		Deferred Outflows of Resources		Deferred Inflows of Resources
Difference between expected and actual experience	$	-	$	-
Changes in assumptions		-		-
Net difference between projected and actual earnings on pension plan investments		3,042,643		-
Total	$	3,042,643	$	-

**Source: "State & local bonds" rate from Federal Reserve statistical release (H.15) as of December 31, 2014. The statistical release describes this rate as "Bond Buyer Index, general obligation, 20 years to maturity, mixed quality." In describing this index, the Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.*

DISCUSSION

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans, to include certain additional information. The list of disclosure items should include:

- a description of the types of benefits provided by the plan, as well as automatic or ad hoc COLAs;
- the type of employees and number of members covered by the pension plan;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- the pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- the net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- significant assumptions and methods used to calculate the total pension liability;
- inputs to the discount rates; and
- certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- the composition of the pension plan's board and the authority under which benefit terms may be amended;
- a description of how fair value is determined;
- information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- the annual money-weighted rate of return on pension plan investments for each year.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- sources of changes in the net pension liability;
- information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and
- comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of January 1, 2014 and a measurement date of December 31, 2014.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 4.468%; the municipal bond rate is 3.650% (based on the weekly rate closest to but not later than the measurement date of the "state & local bonds" rate from Federal Reserve statistical release (H.15)); and the resulting Single Discount Rate is 4.468%. This blended rate is a change from the valuation rate of 7.75% (used in the starting value of the total pension liability) and the increase in the liability for the change in the discount rate is $99.3 million.

Effective Date and Transition

GASB Statement Nos. 67 and 68 are effective for fiscal years beginning after June 15, 2013, and June 15, 2014 respectively, earlier application is encouraged by the GASB.

SECTION B

FINANCIAL STATEMENTS

Auditor’s Note – This information is intended to assist in preparation of the financial statements of the Wyoming Retirement System. Financial statements are the responsibility of management, subject to the auditor’s review. Please let us know if the auditor recommends any changes.

PENSION EXPENSE UNDER GASB STATEMENT NO. 68
FISCAL YEAR ENDED JUNE 30, 2015

A. Expense

1. Service Cost	$	188,951
2. Interest on the Total Pension Liability		13,337,846
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		0
5. Projected Earnings on Plan Investments (made negative for addition here)		(10,867,370)
6. Pension Plan Administrative Expense		113,705
7. Other Changes in Plan Fiduciary Net Position		1,701
8. Recognition of Outflow (Inflow) of Resources due to Liabilities*		99,327,064
9. Recognition of Outflow (Inflow) of Resources due to Assets		760,661
10. Recognition of Outflow of Resources due to Contributions made from December 31, 2014 to June 30, 2015		- **
11. Total Pension Expense	**$**	**102,862,558**

*Change in the discount rate from 7.75% to the blended single discount rate of 4.468%.

**In accordance with GASB 71, employers may need to illustrate contributions made from January 1, 2015 through June 30, 2015.

STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM CURRENT REPORTING PERIOD

FISCAL YEAR ENDED JUNE 30, 2015

A. Outflows (Inflows) of Resources due to Liabilities		
1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	$	-
2. Assumption Changes (gains) or losses	$	99,327,064
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		1.0000
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the Difference between expected and actual experience of the Total Pension Liability	$	-
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	$	99,327,064
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	$	99,327,064
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the Difference between expected and actual experience of the Total Pension Liability	$	-
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	$	-
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	$	-
B. Outflows (Inflows) of Resources due to Assets		
1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	$	3,803,304
2. Recognition period for Assets {in years}		5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	$	760,661
3. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	$	3,042,643

STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM CURRENT AND PRIOR REPORTING PERIODS

FISCAL YEAR ENDED JUNE 30, 2015

A. Outflows and Inflows of Resources due to Liabilities and Assets to be recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. due to Liabilities	$ 99,327,064	$ 0	$ 99,327,064
2. due to Assets	760,661	-	760,661
3. Total	$ 100,087,725	$ 0	$ 100,087,725

B. Outflows and Inflows of Resources by Source to be recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	$ -	$ 0	$ -
2. Assumption Changes	99,327,064	-	99,327,064
3. Net Difference between projected and actual earnings on pension plan investments	760,661	-	760,661
4. Total	$ 100,087,725	$ 0	$ 100,087,725

C. Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	$ -	$ 0	$ -
2. Assumption Changes	-	-	0
3. Net Difference between projected and actual earnings on pension plan investments	3,042,643	-	3,042,643
4. Total	$ 3,042,643	$ 0	$ 3,042,643

D. Deferred Outflows and Deferred Inflows of Resources by Year to be recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2016	$ 760,661
2017	760,661
2018	760,661
2019	760,660
2020	-
Thereafter	0
Total	$ 3,042,643

STATEMENT OF FIDUCIARY NET POSITION
AS OF DECEMBER 31, 2014

		2014
Assets		
Cash and Deposits	$	8,996,647
Receivables		
Accounts Receivable - Sale of Investments	$	69,501
Accrued Interest and Other Dividends		363,556
Contributions		-
Accounts Receivable - Other		20,572,621
Total Receivables	$	21,005,678
Investments		
Fixed Income	$	28,142,294
Domestic Equities		71,067,069
International Equities		-
Real Estate		-
Other		44,155,120
Total Investments	$	143,364,483
Total Assets	$	173,366,808
Liabilities		
Payables		
Accounts Payable - Purchase of Investments	$	1,271,403
Accrued Expenses		244,313
Accounts Payable - Other		31,911,586
Total Liabilities	$	33,427,302
Net Position Restricted for Pensions	$	139,939,506

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION FOR YEAR ENDED DECEMBER 31, 2014

		2014
Additions		
Contributions		
Employer	$	-
Employee		-
Other		-
Total Contributions	$	-
Investment Income		
Net Appreciation in Fair Value of Investments	$	4,404,122
Interest and Dividends		3,568,784
Less Investment Expense		(908,840)
Net Investment Income	$	7,064,066
Other	$	-
Total Additions	$	7,064,066
Deductions		
Benefit Payments, including Refunds of Employee Contributions	$	14,581,980
Pension Plan Administrative Expense		113,705
Other		1,701
Total Deductions	$	14,697,386
Net Increase in Net Position	$	(7,633,320)
Net Position Restricted for Pensions		
Beginning of Year	$	147,572,826
End of Year	$	139,939,506

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Auditor’s Note – This information is intended to assist in preparation of the financial statements of the Wyoming Retirement System. Financial statements are the responsibility of management, subject to the auditor’s review. Please let us know if the auditor recommends any changes.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
CURRENT PERIOD
FISCAL YEAR ENDED JUNE 30, 2015

A. Total pension liability		
1. Service Cost	$	188,951
2. Interest on the Total Pension Liability		13,337,846
3. Changes of benefit terms		0
4. Difference between expected and actual experience of the Total Pension Liability		-
5. Changes of assumptions		99,327,064
6. Benefit payments, including refunds of employee contributions		(14,581,980)
7. Net change in total pension liability	$	98,271,881
8. Total pension liability – beginning		206,255,267
9. Total pension liability – ending	**$**	**304,527,148**
B. Plan fiduciary net position		
1. Contributions – employer	$	-
2. Contributions – employee		-
3. Net investment income		7,064,066
4. Benefit payments, including refunds of employee contributions		(14,581,980)
5. Pension Plan Administrative Expense		(113,705)
6. Other		(1,701)
7. Net change in plan fiduciary net position	$	(7,633,320)
8. Plan fiduciary net position – beginning		147,572,826
9. Plan fiduciary net position – ending	**$**	**139,939,506**
C. Net pension liability	**$**	**164,587,642**
D. Plan fiduciary net position as a percentage of the total pension liability		**45.95%**
E. Covered-employee payroll	**$**	**198,404**
F. Net pension liability as a percentage of covered employee payroll		**82,955.64 %**

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Measurement date as of December 31,	2014
Total Pension Liability	
Service Cost	$ 188,951
Interest on the Total Pension Liability	13,337,846
Benefit Changes	-
Difference between Expected and Actual Experience	-
Assumption Changes	99,327,064
Benefit Payments	(14,581,980)
Refunds	-
Net Change in Total Pension Liability	98,271,881
Total Pension Liability - Beginning	206,255,267
Total Pension Liability - Ending (a)	$ 304,527,148
Plan Fiduciary Net Position	
Employer Contributions	$ -
Employee Contributions	-
Pension Plan Net Investment Income	7,064,066
Benefit Payments	(14,581,980)
Refunds	-
Pension Plan Administrative Expense	(113,705)
Other	(1,701)
Net Change in Plan Fiduciary Net Position	(7,633,320)
Plan Fiduciary Net Position - Beginning	147,572,826
Plan Fiduciary Net Position - Ending (b)	$ 139,939,506
Net Pension Liability - Ending (a) - (b)	$ 164,587,642
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	45.95 %
Covered Employee Payroll	$ 198,404
Projected Valuation Payroll	$ 198,404
Net Pension Liability as a Percentage of Covered Employee Payroll	82,955.64 %

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF THE NET PENSION LIABILITY MULTIYEAR
Last 10 Plan Years (which may be built prospectively)

FY Ending December 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	$ 304,527,148	$ 139,939,506	$ 164,587,642	45.95%	$ 198,404	82955.64%

SCHEDULE OF CONTRIBUTIONS MULTIYEAR
LAST 10 PLAN YEARS

FY Ending December 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2014	$ 9,458,093	$ -	$ 9,458,093	$ 198,404	0.00%

NOTES TO SCHEDULE OF CONTRIBUTIONS

Valuation Date:	January 1, 2014
Notes	Actuarially determined contribution rates are calculated as of July 1 each year for implementation the following fiscal year.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Dollar, Open
Remaining Amortization Period	10 years
Asset Valuation Method	5-Year smoothed market
Inflation	3.25%
Salary Increases	4.25% including inflation
Investment Rate of Return	7.75%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2014 valuation pursuant to an experience study of the period 2007 - 2011.
Post-Retirement Mortality	RP-2000 Combined Mortality Table, generational projected with Scale BB. Males: No set back with a 104% multiplier. Females: Set forward 1 year with a 90% multiplier.
Pre-Retirement Mortality	RP-2000 Combined Mortality Table, generational projected with Scale BB. Males: Set back 4 years with a 104% multiplier. Females: Set back 3 years with a 90% multiplier.

Other Information:

Notes	There were no benefit changes during the year.

SCHEDULE OF INVESTMENT RETURNS MULTIYEAR
LAST 10 PLAN YEARS

FY Ending December 31,	Annual Return[1]
2014	4.70 %

[1] *Annual money-weighted rate of return, net of investment expenses.*

SECTION D

NOTES TO FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Wyoming Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

ASSET ALLOCATION

Long-Term Expected Return on Plan Assets

The assumed rate of investment return was adopted by the plan's trustees after considering input from the plan's investment consultant and actuary. Additional information about the assumed rate of investment return is included in our actuarial valuation report as of January 1, 2014. In addition, a five year experience study was completed as of December 31, 2011 and this study provides a detailed analysis regarding recommendations on the long term rates for inflation and the real rate of return. The assumed rate of investment return of 7.75% falls within a reasonable range of the long-term expected rate of return.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These real rates of return are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. For each major asset class that is included in the pension plan's target asset allocation as of January 1, 2014, these best estimates are summarized in the following table:

ASSET ALLOCATION

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Cash	2.50%	0.50%
Fixed Income	15.00%	0.80%
Equity	55.00%	5.26%
Marketable Alternatives	15.50%	3.79%
Private Markets	12.00%	5.76%
Total	100.00%	

The figures in the above table were supplied by NEPC; the investment consulting firm to the Wyoming Retirement System. Gabriel, Roeder, Smith and Company does not provide investment advice.

Single Discount Rate

A Single Discount Rate of 4.468% was used to measure the total pension liability. This Single Discount Rate was based on an expected rate of return on pension plan investments of 7.750% and a municipal bond rate of 3.650%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments through the year 2026. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2026, and the municipal bond rate was applied to all benefit payments after that date.

Sensitivity of Results

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 4.468%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

SENSITIVITY OF NET PENSION LIABILITY TO THE SINGLE DISCOUNT RATE ASSUMPTION

1% Decrease 3.47%	Current Single Discount Rate Assumption 4.47%	1% Increase 5.47%
$210,445,065	$164,587,642	$127,851,881

SUMMARY OF POPULATION STATISTICS

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	292
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	-
Active Plan Members	3
Total Plan Members	295

SECTION E

SUMMARY OF BENEFITS

Summary of Plan Provisions

Covered Members

Any person who is a member of Wyoming Paid Firemen's Retirement Fund Plan A. This plan only covers members hired prior to July 1, 1981.

Fireman First Class

The highest salary grade which a fireman can obtain within his department without any promotion in rank. The term specifically excludes chiefs, officers, engineers, fire equipment operators, secretaries, mechanics, inspectors and all other specialized grades, ratings and ranks.

Form of Payment

Monthly benefit for life. Upon death, 100% of the benefit continues to be paid to the beneficiary.

Service Retirement

Eligibility

20 or more years of service.

Monthly Benefit

75.0% of the maximum salary for a fireman first class for 20 years of service plus 1.5% of the maximum salary for a fireman first class for each year of service in excess of 20 years.

Vesting

Any employee who has left the service with at least 10 years of service, and who has not withdrawn accumulated contributions, is eligible to receive a monthly benefit of 3.75% of final average salary per year of service payable upon the 20th anniversary of employment, or can elect to receive a lump-sum refund of 99.5% of contributions. An employee who terminates with less than ten years of service is only eligible for the lump-sum benefit.

Disability Retirement

Eligibility

No age or service eligibility requirements. Partial or total disability resulting from an individual and specific act, the type of which would normally occur only while employed as an employee, or as otherwise defined under W.S. 15-5-204.

Monthly Benefit

75.0% of the maximum salary for a fireman first class for 20 years of service plus 1.5% of the maximum salary for a fireman first class for each year of service in excess of 20 years.

Pre-retirement Death Benefit

Eligibility	No age or service requirements.
Monthly Benefit	75.0% of the maximum salary for a fireman first class for 20 years of service plus 1.5% of the maximum salary for a fireman first class for each year of service in excess of 20 years.

Contributions

Employee	None
Employer	None
Interest	None

Cost-of-Living Improvements 3.0% per year, applied annually following the one-year anniversary of retirement. In the event the most current actuarial valuation indicates the market value of assets is greater than 115% of the actuarial value of liabilities, the Board may elect to grant up to a 5.0% increase if the System's actuary determines such an increase to be actuarially sound.

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the January 1, 2014 actuarial valuation report.

1. Valuation Date

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

2. Actuarial Cost Method

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

a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 7.75%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.

b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and a unfunded accrued liability contribution.

c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage amount of employer contribution which, if applied to each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.

d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 10 years from the valuation date.

3. Actuarial Value of Assets

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

4. Economic Assumptions

a. Investment return:

7.75% per year, compounded annually, composed of an assumed 3.25% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of investment expenses.

b. Salary increase rate:

4.25% per year

c. Payroll growth rate:

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

5. Demographic Assumptions

a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

RP-2000 Combined Mortality Table, fully generational, projected with Scale BB

Males: Set back 4 years with a multiplier of 104%

Females: Set back 3 years with a multiplier of 90%

Healthy Post-Retirement Mortality:

RP-2000 Combined Mortality Table, fully generational, projected with Scale BB

Males: Set back 0 years with a multiplier of 104%

Females: Set forward 1 year with a multiplier of 90%

Disabled Mortality:

RP-2000 Disabled Mortality Table, fully generational, projected with Scale BB

Males: Set forward 5 years with a multiplier of 120%

Females: Set forward 5 years with a multiplier of 120%

	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2014 using Scale BB					
Age	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.03%	0.02%	2.60%	0.86%
25	0.04%	0.02%	0.04%	0.02%	2.60%	0.86%
30	0.04%	0.02%	0.04%	0.03%	2.60%	0.86%
35	0.05%	0.03%	0.08%	0.04%	2.60%	0.86%
40	0.08%	0.05%	0.11%	0.07%	2.60%	0.86%
45	0.11%	0.07%	0.15%	0.11%	3.33%	1.33%
50	0.16%	0.11%	0.21%	0.16%	4.08%	1.85%
55	0.24%	0.17%	0.36%	0.26%	4.57%	2.28%
60	0.42%	0.28%	0.64%	0.45%	5.08%	2.84%
65	0.71%	0.51%	1.12%	0.83%	6.08%	3.81%
70	1.25%	0.92%	1.87%	1.41%	7.97%	5.29%
75			3.18%	2.35%	10.62%	7.33%
80			5.42%	3.86%	13.75%	10.15%
85			9.32%	6.56%	18.85%	14.39%
90			16.34%	11.31%	29.51%	21.46%
95			25.57%	17.23%	39.64%	27.32%
100			34.36%	21.43%	47.75%	35.17%

b. Disability and withdrawal

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

-

c. Retirement Rates

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

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

a. Percent married: 100.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)

b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.

c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.

d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.

e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is 20 years after hire date.

f. No benefit data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.

g. There will be no recoveries once disabled.

h. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 6.5% to the valuation date.

i. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.

j. Decrement timing: Decrements of all types are assumed to occur mid-year.

k. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

l. Benefit Service: All members are assumed to accrue one year of service each year.

EXPERIENCE ANALYSIS

An experience study was conducted on behalf of all WRS' plans covering the five year period ending December 31, 2011. That study provided a detailed analysis concerning the development of the long term inflation rate, real rate of return and discount rate. The study also analyzed each major actuarial assumption (e.g. mortality, salary increases, retirement, termination and disability) and proposed assumptions consistent with the findings. For further information on the experience study and related assumption recommendation, the reader is directed to request the December 31, 2011 Wyoming Retirement System Experience Study.

SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

CALCULATION OF THE SINGLE DISCOUNT RATE

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a "risk-free" rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.750%; the municipal bond rate is 3.650%; and the resulting Single Discount Rate is 4.468%.

The tables in this section provide background for the development of the Single Discount Rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate (SDR). It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF CONTRIBUTIONS ENDING DECEMBER 31 FOR 2014 TO 2063

Year	Payroll for Current Employees	Payroll for Future Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for Current Employees	Employer Contributions Related to Payroll of Future Employees	Total Contributions
	(a)	(b)=max(0,(c)-(a))	(c)	(d)	(e)=(a)*ER%	(f) = (b)*netER%	(g)=(d)+(e)+(f)
2014	$ 198,404	$ -	$ 198,404	$ -	$ -	$ -	$ -
2015	154,538	-	154,538	-	-	-	-
2016	120,322	-	120,322	-	-	-	-
2017	63,589	-	63,589	-	-	-	-
2018	23,485	-	23,485	-	-	-	-
2019	18,275	-	18,275	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-
2029	-	-	-	-	-	-	-
2030	-	-	-	-	-	-	-
2031	-	-	-	-	-	-	-
2032	-	-	-	-	-	-	-
2033	-	-	-	-	-	-	-
2034	-	-	-	-	-	-	-
2035	-	-	-	-	-	-	-
2036	-	-	-	-	-	-	-
2037	-	-	-	-	-	-	-
2038	-	-	-	-	-	-	-
2039	-	-	-	-	-	-	-
2040	-	-	-	-	-	-	-
2041	-	-	-	-	-	-	-
2042	-	-	-	-	-	-	-
2043	-	-	-	-	-	-	-
2044	-	-	-	-	-	-	-
2045	-	-	-	-	-	-	-
2046	-	-	-	-	-	-	-
2047	-	-	-	-	-	-	-
2048	-	-	-	-	-	-	-
2049	-	-	-	-	-	-	-
2050	-	-	-	-	-	-	-
2051	-	-	-	-	-	-	-
2052	-	-	-	-	-	-	-
2053	-	-	-	-	-	-	-
2054	-	-	-	-	-	-	-
2055	-	-	-	-	-	-	-
2056	-	-	-	-	-	-	-
2057	-	-	-	-	-	-	-
2058	-	-	-	-	-	-	-
2059	-	-	-	-	-	-	-
2060	-	-	-	-	-	-	-
2061	-	-	-	-	-	-	-
2062	-	-	-	-	-	-	-
2063	-	-	-	-	-	-	-
2064	-	-	-	-	-	-	-
2065	-	-	-	-	-	-	-
2066	-	-	-	-	-	-	-
2067	-	-	-	-	-	-	-
2068	-	-	-	-	-	-	-

SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF CONTRIBUTIONS ENDING DECEMBER 31 FOR 2064 TO 2113

Year	Payroll for Current Employees	Payroll for Future Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for Current Employees	Employer Contributions Related to Payroll of Future Employees	Total Contributions
	(a)	(b)=max(0,(c)-(a))	(c)	(d)	(e)=(a)*ER%	(f) = (b)*netER%	(g)=(d)+(e)+(f)
2064	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2065	-	-	-	-	-	-	-
2066	-	-	-	-	-	-	-
2067	-	-	-	-	-	-	-
2068	-	-	-	-	-	-	-
2069	-	-	-	-	-	-	-
2070	-	-	-	-	-	-	-
2071	-	-	-	-	-	-	-
2072	-	-	-	-	-	-	-
2073	-	-	-	-	-	-	-
2074	-	-	-	-	-	-	-
2075	-	-	-	-	-	-	-
2076	-	-	-	-	-	-	-
2077	-	-	-	-	-	-	-
2078	-	-	-	-	-	-	-
2079	-	-	-	-	-	-	-
2080	-	-	-	-	-	-	-
2081	-	-	-	-	-	-	-
2082	-	-	-	-	-	-	-
2083	-	-	-	-	-	-	-
2084	-	-	-	-	-	-	-
2085	-	-	-	-	-	-	-
2086	-	-	-	-	-	-	-
2087	-	-	-	-	-	-	-
2088	-	-	-	-	-	-	-
2089	-	-	-	-	-	-	-
2090	-	-	-	-	-	-	-
2091	-	-	-	-	-	-	-
2092	-	-	-	-	-	-	-
2093	-	-	-	-	-	-	-
2094	-	-	-	-	-	-	-
2095	-	-	-	-	-	-	-
2096	-	-	-	-	-	-	-
2097	-	-	-	-	-	-	-
2098	-	-	-	-	-	-	-
2099	-	-	-	-	-	-	-
2100	-	-	-	-	-	-	-
2101	-	-	-	-	-	-	-
2102	-	-	-	-	-	-	-
2103	-	-	-	-	-	-	-
2104	-	-	-	-	-	-	-
2105	-	-	-	-	-	-	-
2106	-	-	-	-	-	-	-
2107	-	-	-	-	-	-	-
2108	-	-	-	-	-	-	-
2109	-	-	-	-	-	-	-
2110	-	-	-	-	-	-	-
2111	-	-	-	-	-	-	-
2112	-	-	-	-	-	-	-
2113	-	-	-	-	-	-	-

SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF PLAN FIDUCIARY NET POSITION ENDING DECEMBER 31 FOR 2014 TO 2063

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.750%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2014	$ 139,939,506	$ -	$ 14,690,255	$ 127,100	$ 10,281,853	$ 135,404,004
2015	135,404,004	-	15,080,109	127,100	9,915,526	130,112,321
2016	130,112,321	-	15,459,514	127,100	9,490,993	124,016,700
2017	124,016,700	-	15,821,719	127,100	9,004,809	117,072,690
2018	117,072,690	-	16,135,578	127,100	8,454,713	109,264,725
2019	109,264,725	-	16,414,966	127,100	7,838,971	100,561,631
2020	100,561,631	-	16,667,335	127,100	7,154,885	90,922,080
2021	90,922,080	-	16,885,472	127,100	6,399,525	80,309,033
2022	80,309,033	-	17,078,342	127,100	5,569,679	68,673,270
2023	68,673,270	-	17,245,695	127,100	4,661,544	55,962,018
2024	55,962,018	-	17,387,481	127,100	3,671,030	42,118,467
2025	42,118,467	-	17,503,695	127,100	2,593,735	27,081,408
2026	27,081,408	-	17,594,151	127,100	1,424,924	10,785,081
2027	10,785,081	-	17,658,538	127,100	159,510	-
2028	-	-	17,696,331	127,100	-	-
2029	-	-	17,706,435	127,100	-	-
2030	-	-	17,687,544	127,100	-	-
2031	-	-	17,637,953	127,100	-	-
2032	-	-	17,555,527	127,100	-	-
2033	-	-	17,438,385	127,100	-	-
2034	-	-	17,284,343	127,100	-	-
2035	-	-	17,091,273	127,100	-	-
2036	-	-	16,857,334	127,100	-	-
2037	-	-	16,580,704	127,100	-	-
2038	-	-	16,259,660	127,100	-	-
2039	-	-	15,893,614	127,100	-	-
2040	-	-	15,482,544	127,100	-	-
2041	-	-	15,026,336	127,100	-	-
2042	-	-	14,525,477	127,100	-	-
2043	-	-	13,980,411	127,100	-	-
2044	-	-	13,392,395	127,100	-	-
2045	-	-	12,763,897	127,100	-	-
2046	-	-	12,098,142	127,100	-	-
2047	-	-	11,398,430	127,100	-	-
2048	-	-	10,669,162	127,100	-	-
2049	-	-	9,916,643	127,100	-	-
2050	-	-	9,148,274	127,100	-	-
2051	-	-	8,373,917	127,100	-	-
2052	-	-	7,604,219	127,100	-	-
2053	-	-	6,849,994	127,100	-	-
2054	-	-	6,123,079	127,100	-	-
2055	-	-	5,435,069	127,100	-	-
2056	-	-	4,795,190	127,100	-	-
2057	-	-	4,209,852	127,100	-	-
2058	-	-	3,682,303	127,100	-	-
2059	-	-	3,212,640	127,100	-	-
2060	-	-	2,799,514	127,100	-	-
2061	-	-	2,439,914	127,100	-	-
2062	-	-	2,129,927	127,100	-	-
2063	-	-	1,865,923	127,100	-	-

SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF PLAN FIDUCIARY NET POSITION ENDING DECEMBER 31 FOR 2064 TO 2113

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.750%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2064	$ -	$ -	$ 1,643,614	$ 127,100	$ -	$ -
2065	-	-	1,457,963	127,100	-	-
2066	-	-	1,303,383	127,100	-	-
2067	-	-	1,175,851	127,100	-	-
2068	-	-	1,070,580	127,100	-	-
2069	-	-	983,320	127,100	-	-
2070	-	-	910,965	127,100	-	-
2071	-	-	849,604	127,100	-	-
2072	-	-	795,610	127,100	-	-
2073	-	-	746,273	127,100	-	-
2074	-	-	699,342	127,100	-	-
2075	-	-	652,853	127,100	-	-
2076	-	-	605,551	127,100	-	-
2077	-	-	556,791	127,100	-	-
2078	-	-	506,595	127,100	-	-
2079	-	-	454,761	127,100	-	-
2080	-	-	402,797	127,100	-	-
2081	-	-	352,380	127,100	-	-
2082	-	-	304,677	127,100	-	-
2083	-	-	260,062	127,100	-	-
2084	-	-	218,655	127,100	-	-
2085	-	-	180,949	127,100	-	-
2086	-	-	147,133	127,100	-	-
2087	-	-	117,070	127,100	-	-
2088	-	-	90,748	127,100	-	-
2089	-	-	68,601	127,100	-	-
2090	-	-	50,652	127,100	-	-
2091	-	-	36,739	127,100	-	-
2092	-	-	26,179	127,100	-	-
2093	-	-	18,237	127,100	-	-
2094	-	-	12,384	127,100	-	-
2095	-	-	8,311	127,100	-	-
2096	-	-	5,583	127,100	-	-
2097	-	-	3,448	127,100	-	-
2098	-	-	1,704	127,100	-	-
2099	-	-	503	127,100	-	-
2100	-	-	-	127,100	-	-
2101	-	-	-	127,100	-	-
2102	-	-	-	127,100	-	-
2103	-	-	-	127,100	-	-
2104	-	-	-	127,100	-	-
2105	-	-	-	127,100	-	-
2106	-	-	-	127,100	-	-
2107	-	-	-	127,100	-	-
2108	-	-	-	127,100	-	-
2109	-	-	-	127,100	-	-
2110	-	-	-	127,100	-	-
2111	-	-	-	127,100	-	-
2112	-	-	-	127,100	-	-
2113	-	-	-	127,100	-	-

SINGLE DISCOUNT RATE DEVELOPMENT PRESENT VALUES OF PROJECTED BENEFITS ENDING DECEMBER 31 FOR 2014 TO 2063

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=((c)/(1+SDR)^(a-.5)
2014	$ 139,939,506	$ 14,690,255	$ 14,690,255	$ -	$ 14,152,094	$ -	$ 14,372,707
2015	135,404,004	15,080,109	15,080,109	-	13,482,752	-	14,123,170
2016	130,112,321	15,459,514	15,459,514	-	12,827,814	-	13,859,324
2017	124,016,700	15,821,719	15,821,719	-	12,184,093	-	13,577,454
2018	117,072,690	16,135,578	16,135,578	-	11,532,057	-	13,254,632
2019	109,264,725	16,414,966	16,414,966	-	10,887,921	-	12,907,485
2020	100,561,631	16,667,335	16,667,335	-	10,260,154	-	12,545,452
2021	90,922,080	16,885,472	16,885,472	-	9,646,808	-	12,166,112
2022	80,309,033	17,078,342	17,078,342	-	9,055,216	-	11,778,847
2023	68,673,270	17,245,695	17,245,695	-	8,486,264	-	11,385,610
2024	55,962,018	17,387,481	17,387,481	-	7,940,635	-	10,988,306
2025	42,118,467	17,503,695	17,503,695	-	7,418,755	-	10,588,691
2026	27,081,408	17,594,151	17,594,151	-	6,920,737	-	10,188,244
2027	10,785,081	17,658,538	11,195,205	6,463,334	4,086,945	3,983,556	9,788,232
2028	-	17,696,331	-	17,696,331	-	10,522,727	9,389,689
2029	-	17,706,435	-	17,706,435	-	10,157,969	8,993,269
2030	-	17,687,544	-	17,687,544	-	9,789,804	8,599,486
2031	-	17,637,953	-	17,637,953	-	9,418,578	8,208,648
2032	-	17,555,527	-	17,555,527	-	9,044,440	7,820,883
2033	-	17,438,385	-	17,438,385	-	8,667,718	7,436,467
2034	-	17,284,343	-	17,284,343	-	8,288,618	7,055,564
2035	-	17,091,273	-	17,091,273	-	7,907,411	6,678,390
2036	-	16,857,334	-	16,857,334	-	7,524,532	6,305,285
2037	-	16,580,704	-	16,580,704	-	7,140,428	5,936,593
2038	-	16,259,660	-	16,259,660	-	6,755,593	5,572,682
2039	-	15,893,614	-	15,893,614	-	6,370,967	5,214,275
2040	-	15,482,544	-	15,482,544	-	5,987,640	4,862,192
2041	-	15,026,336	-	15,026,336	-	5,606,569	4,517,117
2042	-	14,525,477	-	14,525,477	-	5,228,838	4,179,816
2043	-	13,980,411	-	13,980,411	-	4,855,404	3,850,926
2044	-	13,392,395	-	13,392,395	-	4,487,396	3,531,197
2045	-	12,763,897	-	12,763,897	-	4,126,199	3,221,554
2046	-	12,098,142	-	12,098,142	-	3,773,256	2,922,936
2047	-	11,398,430	-	11,398,430	-	3,429,835	2,636,114
2048	-	10,669,162	-	10,669,162	-	3,097,343	2,361,935
2049	-	9,916,643	-	9,916,643	-	2,777,502	2,101,458
2050	-	9,148,274	-	9,148,274	-	2,472,063	1,855,726
2051	-	8,373,917	-	8,373,917	-	2,183,130	1,626,005
2052	-	7,604,219	-	7,604,219	-	1,912,654	1,413,404
2053	-	6,849,994	-	6,849,994	-	1,662,274	1,218,766
2054	-	6,123,079	-	6,123,079	-	1,433,550	1,042,842
2055	-	5,435,069	-	5,435,069	-	1,227,662	886,078
2056	-	4,795,190	-	4,795,190	-	1,044,986	748,327
2057	-	4,209,852	-	4,209,852	-	885,120	628,884
2058	-	3,682,303	-	3,682,303	-	746,939	526,553
2059	-	3,212,640	-	3,212,640	-	628,722	439,747
2060	-	2,799,514	-	2,799,514	-	528,579	366,811
2061	-	2,439,914	-	2,439,914	-	444,460	306,022
2062	-	2,129,927	-	2,129,927	-	374,329	255,718
2063	-	1,865,923	-	1,865,923	-	316,383	214,441

SINGLE DISCOUNT RATE DEVELOPMENT PRESENT VALUES OF PROJECTED BENEFITS ENDING DECEMBER 31 FOR 2064 TO 2113 (CONCLUDED)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=((c)/(1+SDR)^(a-.5)
2064	$ -	$ 1,643,614	$ -	$ 1,643,614	$ -	$ 268,875	$ 180,814
2065	-	1,457,963	-	1,457,963	-	230,106	153,532
2066	-	1,303,383	-	1,303,383	-	198,465	131,384
2067	-	1,175,851	-	1,175,851	-	172,741	113,460
2068	-	1,070,580	-	1,070,580	-	151,737	98,884
2069	-	983,320	-	983,320	-	134,462	86,940
2070	-	910,965	-	910,965	-	120,181	77,098
2071	-	849,604	-	849,604	-	108,139	68,830
2072	-	795,610	-	795,610	-	97,700	61,699
2073	-	746,273	-	746,273	-	88,415	55,398
2074	-	699,342	-	699,342	-	79,937	49,694
2075	-	652,853	-	652,853	-	71,995	44,407
2076	-	605,551	-	605,551	-	64,427	39,428
2077	-	556,791	-	556,791	-	57,153	34,703
2078	-	506,595	-	506,595	-	50,170	30,224
2079	-	454,761	-	454,761	-	43,450	25,971
2080	-	402,797	-	402,797	-	37,130	22,020
2081	-	352,380	-	352,380	-	31,339	18,440
2082	-	304,677	-	304,677	-	26,142	15,262
2083	-	260,062	-	260,062	-	21,528	12,470
2084	-	218,655	-	218,655	-	17,463	10,036
2085	-	180,949	-	180,949	-	13,943	7,950
2086	-	147,133	-	147,133	-	10,938	6,188
2087	-	117,070	-	117,070	-	8,397	4,713
2088	-	90,748	-	90,748	-	6,279	3,497
2089	-	68,601	-	68,601	-	4,580	2,531
2090	-	50,652	-	50,652	-	3,262	1,789
2091	-	36,739	-	36,739	-	2,283	1,242
2092	-	26,179	-	26,179	-	1,570	847
2093	-	18,237	-	18,237	-	1,055	565
2094	-	12,384	-	12,384	-	691	367
2095	-	8,311	-	8,311	-	447	236
2096	-	5,583	-	5,583	-	290	152
2097	-	3,448	-	3,448	-	173	90
2098	-	1,704	-	1,704	-	82	42
2099	-	503	-	503	-	23	12
2100	-	-	-	-	-	-	-
2101	-	-	-	-	-	-	-
2102	-	-	-	-	-	-	-
2103	-	-	-	-	-	-	-
2104	-	-	-	-	-	-	-
2105	-	-	-	-	-	-	-
2106	-	-	-	-	-	-	-
2107	-	-	-	-	-	-	-
2108	-	-	-	-	-	-	-
2109	-	-	-	-	-	-	-
2110	-	-	-	-	-	-	-
2111	-	-	-	-	-	-	-
2112	-	-	-	-	-	-	-
2113	-	-	-	-	-	-	-
				Totals	$ 138,882,243	$ 166,928,740	$ 305,810,983

SECTION H

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Actuarial Accrued Liability (AAL) The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."

Actuarial Assumptions These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.

Accrued Service Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Equivalent A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

Actuarial Cost Method A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.

Actuarial Gain (Loss) The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.

Actuarial Present Value (APV) The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.

Actuarial Valuation The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.

Actuarial Valuation Date The date as of which an actuarial valuation is performed.

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC) A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

GLOSSARY OF TERMS

Amortization Payment The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.

Amortization Method The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year.

Cost-of-Living Adjustments Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan) A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

Covered-Employee Payroll The payroll of employees that are provided with pensions through the pension plan.

Deferred Retirement Option Program (DROP) A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.

Deferred Inflows and Outflows The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.

Discount Rate For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically:

1. The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and
2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

GLOSSARY OF TERMS

Entry Age Actuarial Cost Method (EAN)	The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
GASB	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
Fiduciary Net Position	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
Long-Term Expected Rate of Return	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
Money-Weighted Rate of Return	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
Multiple-Employer Defined Benefit Pension Plan	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Municipal Bond Rate	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
Net Pension Liability (NPL)	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
Non-Employer Contribution Entities	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contribution entities.
Normal Cost	The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.

GLOSSARY OF TERMS

Other Postemployment Benefits (OPEB) All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.

Real Rate of Return The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.

Service Cost The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

Total Pension Expense The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

1. Service Cost
2. Interest on the Total Pension Liability
3. Current-Period Benefit Changes
4. Employee Contributions (made negative for addition here)
5. Projected Earnings on Plan Investments (made negative for addition here)
6. Pension Plan Administrative Expense
7. Other Changes in Plan Fiduciary Net Position
8. Recognition of Outflow (Inflow) of Resources due to Liabilities
9. Recognition of Outflow (Inflow) of Resources due to Assets

Total Pension Liability (TPL) The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued Liability (UAAL) The UAAL is the difference between actuarial accrued liability and valuation assets.

Valuation Assets The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.