

WYOMING RETIREMENT SYSTEM

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

FOR THE MEASUREMENT DATE OF DECEMBER 31, 2014

July 27, 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.

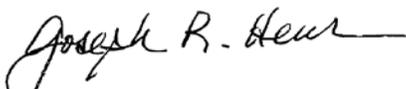
This report complements the actuarial valuation report that was provided to WRS and should be considered in conjunction with that report. Please see the actuarial valuation report as of January 1, 2014 for additional discussion of the nature of actuarial calculations and more information related to participant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

By 

Joseph R. Herm

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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	22,731
- Inactive, Nonretired Members	24,773
- Active Members	36,354
- Total	83,858
Covered Payroll	\$ 1,709,412,443

Net Pension Liability

Total Pension Liability	\$ 8,436,858,102
Plan Fiduciary Net Position	6,672,165,875
Net Pension Liability	\$ 1,764,692,227
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	79.084%
Net Pension Liability as a Percentage of Covered Payroll	103.234%

Development of the Single Discount Rate

Single Discount Rate	7.750%
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	2113

Total Pension Expense \$ 229,230,077

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	144,689,490	-
Total	\$ 144,689,490	\$ -

*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 benefits provided by the plan;
- 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;
- 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 7.750%; 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 7.750%.

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

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

A. Expense

1. Service Cost	\$ 213,059,299
2. Interest on the Total Pension Liability	614,848,444
3. Current-Period Benefit Changes	0
4. Employee Contributions (made negative for addition here)	(141,061,289)
5. Projected Earnings on Plan Investments (made negative for addition here)	(499,046,815)
6. Pension Plan Administrative Expense	5,182,863
7. Other Changes in Plan Fiduciary Net Position	75,202
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	0
9. Recognition of Outflow (Inflow) of Resources due to Assets	36,172,373
10. Recognition of Outflow of Resources due to Contributions made from December 31, 2014 to June 30, 2015	-
11. Total Pension Expense	\$ 229,230,077

*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	\$	-
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	\$	-
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$	-
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	\$	180,861,863
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	\$	36,172,373
3. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$	144,689,490

**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	\$ -	\$ 0	\$ -
2. Due to Assets	36,172,373	-	36,172,373
3. Total	\$ 36,172,373	\$ 0	\$ 36,172,373

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	-	-	0
3. Net Difference between projected and actual earnings on pension plan investments	36,172,373	-	36,172,373
4. Total	\$ 36,172,373	\$ 0	\$ 36,172,373

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	144,689,490	-	144,689,490
4. Total	\$ 144,689,490	\$ 0	\$ 144,689,490

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

Fiscal Year Ending June 30	Net Deferred Outflows of Resources
2016	\$ 36,172,373
2017	36,172,373
2018	36,172,373
2019	36,172,371
2020	-
Thereafter	0
Total	\$ 144,689,490

**STATEMENT OF FIDUCIARY NET POSITION
AS OF DECEMBER 31, 2014**

	2014
Assets	
Cash and Deposits	\$ 399,160,716
Receivables	
Accounts Receivable - Sale of Investments	\$ 3,317,938
Accrued Interest and Other Dividends	17,352,715
Contributions	22,515,841
Accounts Receivable - Other	982,264,013
Total Receivables	\$ 1,025,450,507
Investments	
Fixed Income	\$ 1,343,506,334
Domestic Equities	3,392,724,719
International Equities	-
Real Estate	-
Other	2,107,430,534
Total Investments	\$ 6,843,661,587
Total Assets	\$ 8,268,272,810
Liabilities	
Payables	
Accounts Payable - Purchase of Investments	\$ 60,696,494
Accrued Expenses	11,173,928
Accounts Payable - Other	1,524,236,513
Total Liabilities	\$ 1,596,106,935
Net Position Restricted for Pensions	\$ 6,672,165,875

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

	2014
Additions	
Contributions	
Employer	\$ 127,929,930
Employee	137,144,565
Other	5,614,541
Total Contributions	\$ 270,689,036
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 198,057,505
Interest and Dividends	162,674,373
Less Investment Expense	(42,546,926)
Net Investment Income	\$ 318,184,952
Other	\$ -
Total Additions	\$ 588,873,988
 Deductions	
Benefit Payments, including Refunds of Employee Contributions	\$ 436,096,614
Pension Plan Administrative Expense	5,182,863
Other	75,202
Total Deductions	\$ 441,354,679
Net Increase in Net Position	\$ 147,519,309
 Net Position Restricted for Pensions	
Beginning of Year	\$ 6,524,646,566
End of Year	\$ 6,672,165,875

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

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	\$ 213,059,299
2. Interest on the Total Pension Liability	614,848,444
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	0
5. Changes of assumptions	0
6. Benefit payments, including refunds of employee contributions	(436,096,614)
7. Net change in total pension liability	\$ 391,811,130
8. Total pension liability – beginning	8,045,046,972
9. Total pension liability – ending	<u><u>\$ 8,436,858,102</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 127,929,930
2. Contributions – employee	137,144,565
3. Net investment income	318,184,952
4. Benefit payments, including refunds of employee contributions	(436,096,614)
5. Pension Plan Administrative Expense	(5,182,863)
6. Other	5,539,339
7. Net change in plan fiduciary net position	\$ 147,519,309
8. Plan fiduciary net position – beginning	6,524,646,566
9. Plan fiduciary net position – ending	<u><u>\$ 6,672,165,875</u></u>
C. Net pension liability	<u><u>\$ 1,764,692,227</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	79.08%
E. Covered-employee payroll	\$ 1,709,412,443
F. Net pension liability as a percentage of covered employee payroll	103.23%

Notes to Schedule:

Other changes to Plan Fiduciary Net Position includes member redeposits, member service purchase contributions, other funding sources, and depreciation expenses.

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	\$ 213,059,299
Interest on the Total Pension Liability	614,848,444
Benefit Changes	-
Difference between Expected and Actual Experience	-
Assumption Changes	-
Benefit Payments	(418,274,815)
Refunds	(17,821,799)
Net Change in Total Pension Liability	<u>391,811,130</u>
Total Pension Liability - Beginning	<u>8,045,046,972</u>
Total Pension Liability - Ending (a)	<u>\$ 8,436,858,102</u>
Plan Fiduciary Net Position	
Employer Contributions	\$ 127,929,930
Employee Contributions	137,144,565
Pension Plan Net Investment Income	318,184,952
Benefit Payments	(418,274,815)
Refunds	(17,821,799)
Pension Plan Administrative Expense	(5,182,863)
Other	5,539,339
Net Change in Plan Fiduciary Net Position	<u>147,519,309</u>
Plan Fiduciary Net Position - Beginning	<u>6,524,646,566</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 6,672,165,875</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,764,692,227</u>
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	79.08%
Covered Employee Payroll	\$ 1,709,412,443
Projected Valuation Payroll	\$ 1,782,062,471
Net Pension Liability as a Percentage of Covered Employee Payroll	103.23%
Notes to Schedule:	
Other changes to Plan Fiduciary Net Position includes member redeposits, member service purchase contributions, other funding sources, and	

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	\$8,436,858,102	\$6,672,165,875	\$1,764,692,227	79.08%	\$1,709,412,443	103.23%

**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	\$ 183,086,430	\$ 129,627,747	\$ 53,458,683	\$1,709,412,443	7.58%

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

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 Percentage of Payroll, Open
Remaining Amortization Period	30 years
Asset Valuation Method	5-Year smoothed market
Inflation	3.25%
Salary Increases	4.25% to 6.00% 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: Set back 1 year with a 104% multiplier. Females: No set back with a 90% multiplier.
Pre-Retirement Mortality	RP-2000 Combined Mortality Table, generational projected with Scale BB. Males: Set back 5 years with a 104% multiplier. Females: Set back 4 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 Return¹
2014	4.70 %

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

SECTION D

NOTES TO FINANCIAL STATEMENTS

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 7.750% was used to measure the total pension liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 7.750%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions and the employer contributions will be made at the current will be made at the current schedule contribution rates. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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 7.750%, 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	Current Single Discount Rate Assumption	1% Increase
6.750%	7.750%	8.750%
\$2,757,678,617	\$1,764,692,227	\$930,812,524

SUMMARY OF POPULATION STATISTICS

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	22,731
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	24,773
Active Plan Members	<u>36,354</u>
Total Plan Members	83,858

SECTION E

SUMMARY OF BENEFITS

Summary of Plan Provisions

Covered Members	Any full-time or regular part-time employee of an employer as defined under W.S. 9-3-402(a)(vii)
Tier	Members who join the State of Wyoming Retirement System by August 31, 2012 are in Tier 1, while members who join on or after September 1, 2012 are in Tier 2.
Final Average Salary	For Tier 1 member: employee's average annual salary for the highest paid three continuous years of service. For Tier 2 member: employee's average annual salary for the highest paid five continuous years of service.
Service Retirement	
Eligibility	Tier 1 members may retire upon normal retirement on the date he/she attains age 60 with four or more years of service while Tier 2 members may retire upon normal retirement on the date he/she attains age 65 with four or more years of service. All employees may also retire upon normal retirement on the date that the sum of the member's age and service is at least 85. Tier 1 members are eligible for a reduced benefit at age 50 with four or more years of service and Tier 2 members are eligible for a reduced benefit at age 55 with four or more years of service. All members are eligible for a reduced benefit at any age with 25 or more years of service.
Monthly Benefit	For Tier 1 member: 2.125% of employee's Final Average Salary for each year of credited service for the first 15 years of service credit plus 2.25% of Final Average Salary for any years of service credit exceeding 15 years. For Tier 2 member: 2.000% of employee's Final (5-year) Average Salary for each year of credited service. This amount is reduced by 5.0% per year that the employee is under age 60 for Tier 1 and under age 65 for Tier 2. However, members retiring with a combined age and service of at least 85 receive an unreduced benefit. Employees hired prior to July 1, 1981 may be entitled to benefits earned under a different formula.
Vesting	Any employee who has left employment with four or more years of service, and who has not withdrawn accumulated contributions, is eligible to receive the above benefit or can elect to receive a lump-sum refund of employee contributions with interest. An employee who terminates with less than four years of service is only eligible for the lump-sum benefit.
Disability Benefit	
Eligibility	Ten or more years of service.
Benefit	Service retirement benefit earned as of the date of disability, payable immediately.

Pre-retirement Death Benefit

Eligibility	No age or service requirements.
Benefit	A lump sum equal to two times the employee contributions with interest. If the employee is vested, the beneficiary can elect, in lieu of this lump sum, to receive a monthly annuity equal to the actuarial equivalent of the retirement benefit that would be due the employee.

Contributions

Employee	7.50% of salary before July 1, 2014 and 8.25% after
Employer	7.12% of salary before July 1, 2014, then 7.62% before July 1, 2015, and 8.37% after
Interest	5.50% annually.

Cost-of-Living Improvements

W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change.

Optional Forms of Payment

Option 1 (normal form)	Monthly benefit for life with a lump-sum death benefit equal to the excess (if any) of the employee contributions with interest over the total benefits received.
Option 2	Monthly benefit for life. Upon death, 100% of the benefit continues to be paid to the beneficiary.
Option 2P	Monthly benefit for life. Upon death, 100% of the benefit continues to be paid to the beneficiary. Benefit reverts to Option 1 amount but without the cash refund feature upon beneficiary death.
Option 3	Monthly benefit for life. Upon death, 50% of the benefit continues to be paid to the beneficiary.
Option 3P	Monthly benefit for life. Upon death, 50% of the benefit continues to be paid to the beneficiary. Benefit reverts to Option 1 amount but without the cash refund feature upon beneficiary death.
Option 4	Monthly benefit for life with a guarantee of 120 monthly payments
Option 5	The largest possible monthly benefit payable for life with no lump-sum death benefit.

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 percentage of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 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. Future salary increases are also anticipated. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.

- d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 30 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

Age	Rate
20	6.00%
25	6.00%
30	5.75%
35	5.75%
40	5.50%
45	5.50%
50	5.50%
55	5.25%
60	4.25%

- c. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 4.25% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

5. Demographic Assumptions

a. Mortality

Healthy Pre-Retirement Mortality:

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

Males: Set back 5 years with a multiplier of 104%

Females: Set back 4 years with a multiplier of 90%

Healthy Post-Retirement Mortality:

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

Males: Set back 1 year with a multiplier of 104%

Females: Set back 0 years 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%

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2014 using Scale BB					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.03%	0.02%	2.60%	0.86%
25	0.03%	0.02%	0.04%	0.02%	2.60%	0.86%
30	0.04%	0.02%	0.04%	0.02%	2.60%	0.86%
35	0.04%	0.03%	0.07%	0.04%	2.60%	0.86%
40	0.08%	0.04%	0.10%	0.06%	2.60%	0.86%
45	0.11%	0.07%	0.14%	0.10%	3.33%	1.33%
50	0.15%	0.11%	0.20%	0.14%	4.08%	1.85%
55	0.21%	0.16%	0.32%	0.23%	4.57%	2.28%
60	0.36%	0.26%	0.57%	0.40%	5.08%	2.84%
65	0.64%	0.45%	1.00%	0.74%	6.08%	3.81%
70	1.12%	0.83%	1.67%	1.27%	7.97%	5.29%
75			2.85%	2.14%	10.62%	7.33%
80			4.88%	3.49%	13.75%	10.15%
85			8.40%	5.89%	18.85%	14.39%
90			14.62%	10.15%	29.51%	21.46%
95			23.63%	16.09%	39.64%	27.32%
100			32.93%	20.49%	47.75%	35.17%

b. Disability and Withdrawal

Age	Disability		Withdrawal	
	Male	Female	Ultimate	
			Male	Female
20	0.01%	0.01%	10.00%	11.00%
25	0.01%	0.01%	10.00%	11.00%
30	0.01%	0.01%	4.50%	7.50%
35	0.01%	0.01%	4.00%	5.00%
40	0.01%	0.01%	4.00%	5.00%
45	0.03%	0.03%	3.50%	5.00%
50	0.15%	0.06%	3.00%	4.00%
55	0.30%	0.15%	3.00%	4.00%
60	0.30%	0.30%	3.00%	4.00%

Service	Withdrawal	
	Male	Female
1	22%	26%
2	18%	21%
3	13%	15%
4	11%	15%
5	11%	14%

c. Retirement Rates

Age	Retirement	
	Unreduced	Reduced
<50	10.0%	1.0%
50	10.0%	4.5%
51	10.0%	4.5%
52	10.0%	4.5%
53	10.0%	5.0%
54	10.0%	5.0%
55	17.0%	5.0%
56	17.0%	5.0%
57	15.0%	5.0%
58	15.0%	5.5%
59	15.0%	6.0%
60	13.0%	13.0%
61	13.0%	13.0%
62	17.5%	17.5%
63	17.5%	17.5%
64	17.0%	17.0%
65	25.0%	25.0%
66	32.0%	32.0%
67	20.0%	20.0%
68	20.0%	20.0%
69	20.0%	20.0%
70+	100.0%	100.0%

6. Other Assumptions

- a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit. It is assumed that 25% of active members who terminate with a deferred vested benefit will elect to have their contributions refunded.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 60 (65 for Tier 2).
- 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. We assume all members are totally disabled.
- h. No surviving spouse will remarry.
- i. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 6.5% to the valuation date.
- j. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- k. Decrement timing: Decrements of all types are assumed to occur mid-year.
- l. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- m. Decrement relativity: Decrement rates are converted to probabilities in order to account for multiple decrements.

- n. **Incidence of Contributions:** Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- o. **Benefit Service:** All members are assumed to accrue one year of service each year. Exact fractional service is used to determine the amount of benefit payable.

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 concerned 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 requested 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 7.750%.

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		Total Employee Payroll	Contributions from Current Employees	Employer	Employer	Total Contributions
	Current Employees	Future Employees			Contributions for Current Employees	Contributions Related to Payroll of Future Employees	
	(a)	(b)=max(0,(c)-(a))	(c)	(d)	(e)=(a)*ER%	(f) = (b)*netER%	(g)=(d)+(e)+(f)
2014	\$ 1,697,741,555	\$ 84,320,916	\$ 1,782,062,471	\$ 137,144,565	\$ 129,646,794	\$ 3,897,677	\$ 270,689,036
2015	1,594,158,678	263,641,448	1,857,800,126	131,518,091	127,452,986	14,809,878	273,780,955
2016	1,515,138,326	421,618,305	1,936,756,631	124,998,912	126,817,078	25,294,509	277,110,499
2017	1,445,765,049	573,303,739	2,019,068,788	119,275,617	121,010,535	34,409,537	274,695,689
2018	1,383,007,520	721,871,691	2,104,879,211	114,098,120	115,757,729	43,339,377	273,195,226
2019	1,325,215,808	869,120,769	2,194,336,577	109,330,304	110,920,563	52,189,701	272,440,568
2020	1,270,244,026	1,017,351,856	2,287,595,882	104,795,132	106,319,425	61,135,855	272,250,412
2021	1,216,387,181	1,168,431,526	2,384,818,707	100,351,942	101,811,607	70,325,378	272,488,927
2022	1,162,931,793	1,323,241,709	2,486,173,502	95,941,873	97,337,391	79,819,464	273,098,728
2023	1,110,148,361	1,481,687,515	2,591,835,876	91,587,240	92,919,418	89,618,173	274,124,831
2024	1,059,063,055	1,642,925,846	2,701,988,901	87,372,702	88,643,578	99,676,159	275,692,439
2025	1,009,584,370	1,807,239,059	2,816,823,429	83,290,711	84,502,212	110,014,639	277,807,562
2026	961,285,514	1,975,252,911	2,936,538,425	79,306,055	80,459,598	120,671,006	280,436,659
2027	914,129,292	2,147,212,016	3,061,341,308	75,415,667	76,512,622	131,659,362	283,587,651
2028	868,069,700	2,323,378,614	3,191,448,314	71,615,750	72,657,434	142,995,823	287,269,007
2029	823,014,359	2,504,070,508	3,327,084,867	67,898,685	68,886,302	154,696,866	291,481,853
2030	778,950,203	2,689,535,771	3,468,485,974	64,263,392	65,198,132	166,775,274	296,236,798
2031	735,580,786	2,880,315,842	3,615,896,628	60,685,415	61,568,112	179,259,937	301,513,464
2032	692,800,552	3,076,771,683	3,769,572,235	57,156,046	57,987,406	192,171,170	307,314,622
2033	650,303,066	3,279,475,989	3,929,779,055	53,650,003	54,430,367	205,540,350	313,620,720
2034	607,720,057	3,489,074,608	4,096,794,665	50,136,905	50,866,169	219,404,745	320,407,819
2035	565,070,823	3,705,837,615	4,270,908,438	46,618,343	47,296,428	233,775,248	327,690,019
2036	522,636,336	3,929,785,711	4,452,422,047	43,117,498	43,744,661	248,652,527	335,514,686
2037	480,085,109	4,161,564,875	4,641,649,984	39,607,021	40,183,124	264,073,684	343,863,829
2038	437,337,188	4,401,582,920	4,838,920,108	36,080,318	36,605,123	280,061,086	352,746,527
2039	394,368,343	4,650,205,870	5,044,574,213	32,535,388	33,008,630	296,636,968	362,180,986
2040	351,591,494	4,907,377,123	5,258,968,617	29,006,298	29,428,208	313,794,868	372,229,374
2041	310,046,361	5,172,428,422	5,482,474,783	25,578,825	25,950,880	331,483,117	383,012,822
2042	270,558,454	5,444,921,507	5,715,479,961	22,321,072	22,645,743	349,665,100	394,631,915
2043	233,448,448	5,724,939,411	5,958,387,859	19,259,497	19,539,635	368,333,396	407,132,528
2044	199,105,608	6,012,513,735	6,211,619,343	16,426,213	16,665,139	387,473,352	420,564,704
2045	167,833,866	6,307,779,299	6,475,613,165	13,846,294	14,047,695	407,077,700	434,971,689
2046	139,977,881	6,610,848,844	6,750,826,725	11,548,175	11,716,149	427,143,425	450,407,749
2047	115,542,102	6,922,194,759	7,037,736,861	9,532,223	9,670,874	447,698,187	466,901,284
2048	94,402,057	7,242,438,621	7,336,840,678	7,788,170	7,901,452	468,782,487	484,472,109
2049	76,167,785	7,572,488,622	7,648,656,407	6,283,842	6,375,244	490,459,174	503,118,260
2050	60,375,614	7,913,348,690	7,973,724,304	4,980,988	5,053,439	512,794,071	522,828,498
2051	47,177,207	8,265,430,380	8,312,607,587	3,892,120	3,948,732	535,817,422	543,658,274
2052	36,224,533	8,629,668,876	8,665,893,409	2,988,524	3,031,993	559,594,894	565,615,411
2053	27,147,147	9,007,046,732	9,034,193,879	2,239,640	2,272,216	584,191,352	588,703,208
2054	19,853,689	9,398,293,430	9,418,147,119	1,637,929	1,661,754	609,658,113	612,957,796
2055	14,136,212	9,804,282,160	9,818,418,372	1,166,238	1,183,201	636,055,090	638,404,529
2056	9,792,143	10,225,909,010	10,235,701,153	807,852	819,602	663,444,122	665,071,576
2057	6,472,681	10,664,245,771	10,670,718,452	533,996	541,763	691,898,201	692,973,960
2058	4,062,974	11,120,161,012	11,124,223,986	335,195	340,071	721,477,781	722,153,047
2059	2,456,589	11,594,546,916	11,597,003,505	202,669	205,616	752,245,322	752,653,607
2060	1,375,780	12,088,500,374	12,089,876,154	113,502	115,153	784,275,303	784,503,958
2061	720,382	12,602,975,509	12,603,695,891	59,431	60,296	817,631,994	817,751,721
2062	371,515	13,138,981,451	13,139,352,966	30,650	31,096	852,384,335	852,446,081
2063	177,232	13,697,598,235	13,697,775,467	14,622	14,834	888,606,059	888,635,515

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

Year	Payroll for		Total Employee Payroll	Contributions from Current Employees	Employer Contributions for Current Employees		Employer Contributions Related to Payroll of Future Employees	Total Contributions
	Current Employees	Payroll for Future Employees			(e)=(a)*ER%	(f) = (b)*netER%		
	(a)	(b)=max(0,(c)-(a))	(c)	(d)	(e)=(a)*ER%	(f) = (b)*netER%	(g)=(d)+(e)+(f)	
2064	\$ 56,906	\$ 14,279,874,018	\$ 14,279,930,924	\$ 4,695	\$ 4,763	\$ 926,367,166	\$ 926,376,624	
2065	10,845	14,886,817,143	14,886,827,988	895	908	965,734,169	965,735,972	
2066	3,118	15,519,515,059	15,519,518,177	257	261	1,006,778,002	1,006,778,520	
2067	1,181	16,179,096,519	16,179,097,700	97	99	1,049,571,786	1,049,571,982	
2068	-	16,866,709,352	16,866,709,352	-	-	1,094,189,699	1,094,189,699	
2069	-	17,583,544,499	17,583,544,499	-	-	1,140,708,445	1,140,708,445	
2070	-	18,330,845,140	18,330,845,140	-	-	1,189,207,978	1,189,207,978	
2071	-	19,109,906,058	19,109,906,058	-	-	1,239,771,554	1,239,771,554	
2072	-	19,922,077,065	19,922,077,065	-	-	1,292,485,986	1,292,485,986	
2073	-	20,768,765,340	20,768,765,340	-	-	1,347,441,790	1,347,441,790	
2074	-	21,651,437,867	21,651,437,867	-	-	1,404,733,377	1,404,733,377	
2075	-	22,571,623,976	22,571,623,976	-	-	1,464,459,226	1,464,459,226	
2076	-	23,530,917,995	23,530,917,995	-	-	1,526,722,076	1,526,722,076	
2077	-	24,530,982,010	24,530,982,010	-	-	1,591,629,137	1,591,629,137	
2078	-	25,573,548,745	25,573,548,745	-	-	1,659,292,312	1,659,292,312	
2079	-	26,660,424,567	26,660,424,567	-	-	1,729,828,374	1,729,828,374	
2080	-	27,793,492,611	27,793,492,611	-	-	1,803,359,178	1,803,359,178	
2081	-	28,974,716,047	28,974,716,047	-	-	1,880,011,875	1,880,011,875	
2082	-	30,206,141,479	30,206,141,479	-	-	1,959,919,146	1,959,919,146	
2083	-	31,489,902,492	31,489,902,492	-	-	2,043,219,406	2,043,219,406	
2084	-	32,828,223,348	32,828,223,348	-	-	2,130,057,035	2,130,057,035	
2085	-	34,223,422,840	34,223,422,840	-	-	2,220,582,615	2,220,582,615	
2086	-	35,677,918,311	35,677,918,311	-	-	2,314,953,191	2,314,953,191	
2087	-	37,194,229,839	37,194,229,839	-	-	2,413,332,520	2,413,332,520	
2088	-	38,774,984,607	38,774,984,607	-	-	2,515,891,352	2,515,891,352	
2089	-	40,422,921,453	40,422,921,453	-	-	2,622,807,701	2,622,807,701	
2090	-	42,140,895,615	42,140,895,615	-	-	2,734,267,148	2,734,267,148	
2091	-	43,931,883,679	43,931,883,679	-	-	2,850,463,144	2,850,463,144	
2092	-	45,798,988,735	45,798,988,735	-	-	2,971,597,347	2,971,597,347	
2093	-	47,745,445,756	47,745,445,756	-	-	3,097,879,960	3,097,879,960	
2094	-	49,774,627,201	49,774,627,201	-	-	3,229,530,085	3,229,530,085	
2095	-	51,890,048,857	51,890,048,857	-	-	3,366,776,096	3,366,776,096	
2096	-	54,095,375,933	54,095,375,933	-	-	3,509,856,024	3,509,856,024	
2097	-	56,394,429,410	56,394,429,410	-	-	3,659,017,967	3,659,017,967	
2098	-	58,791,192,660	58,791,192,660	-	-	3,814,520,522	3,814,520,522	
2099	-	61,289,818,348	61,289,818,348	-	-	3,976,633,226	3,976,633,226	
2100	-	63,894,635,628	63,894,635,628	-	-	4,145,637,026	4,145,637,026	
2101	-	66,610,157,642	66,610,157,642	-	-	4,321,824,768	4,321,824,768	
2102	-	69,441,089,342	69,441,089,342	-	-	4,505,501,709	4,505,501,709	
2103	-	72,392,335,639	72,392,335,639	-	-	4,696,986,044	4,696,986,044	
2104	-	75,469,009,904	75,469,009,904	-	-	4,896,609,470	4,896,609,470	
2105	-	78,676,442,825	78,676,442,825	-	-	5,104,717,759	5,104,717,759	
2106	-	82,020,191,645	82,020,191,645	-	-	5,321,671,366	5,321,671,366	
2107	-	85,506,049,790	85,506,049,790	-	-	5,547,846,057	5,547,846,057	
2108	-	89,140,056,906	89,140,056,906	-	-	5,783,633,566	5,783,633,566	
2109	-	92,928,509,325	92,928,509,325	-	-	6,029,442,276	6,029,442,276	
2110	-	96,877,970,971	96,877,970,971	-	-	6,285,697,937	6,285,697,937	
2111	-	100,995,284,737	100,995,284,737	-	-	6,552,844,404	6,552,844,404	
2112	-	105,287,584,338	105,287,584,338	-	-	6,831,344,410	6,831,344,410	
2113	-	109,762,306,672	109,762,306,672	-	-	7,121,680,372	7,121,680,372	

**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	\$ 6,524,646,566	\$ 270,689,036	\$ 436,096,614	\$ 5,258,065	\$ 318,184,952	\$ 6,672,165,875
2015	6,672,165,875	273,780,955	475,402,335	7,431,201	509,143,218	6,972,256,512
2016	6,972,256,512	277,110,499	506,168,826	7,672,715	531,347,714	7,266,873,185
2017	7,266,873,185	274,695,689	537,163,959	7,922,078	552,900,545	7,549,383,381
2018	7,549,383,381	273,195,226	570,743,785	8,179,546	573,451,297	7,817,106,574
2019	7,817,106,574	272,440,568	604,350,205	8,445,381	592,883,088	8,069,634,644
2020	8,069,634,644	272,250,412	637,338,585	8,719,856	611,181,896	8,307,008,512
2021	8,307,008,512	272,488,927	669,709,606	9,003,251	628,345,693	8,529,130,275
2022	8,529,130,275	273,098,728	701,327,283	9,295,857	644,369,867	8,735,975,730
2023	8,735,975,730	274,124,831	731,801,324	9,597,972	659,269,085	8,927,970,350
2024	8,927,970,350	275,692,439	760,638,340	9,909,906	673,099,833	9,106,214,375
2025	9,106,214,375	277,807,562	787,916,411	10,231,978	685,944,627	9,271,818,174
2026	9,271,818,174	280,436,659	814,063,965	10,564,517	697,871,940	9,425,498,291
2027	9,425,498,291	283,587,651	838,772,913	10,907,864	708,949,309	9,568,354,473
2028	9,568,354,473	287,269,007	862,285,647	11,262,370	719,253,055	9,701,328,518
2029	9,701,328,518	291,481,853	884,737,350	11,628,397	728,851,056	9,825,295,679
2030	9,825,295,679	296,236,798	906,225,997	12,006,320	737,807,807	9,941,107,967
2031	9,941,107,967	301,513,464	926,419,337	12,396,525	746,201,185	10,050,006,755
2032	10,050,006,755	307,314,622	945,346,483	12,799,412	754,126,379	10,153,301,861
2033	10,153,301,861	313,620,720	963,040,651	13,215,393	761,682,878	10,252,349,414
2034	10,252,349,414	320,407,819	979,965,890	13,644,893	768,957,208	10,348,103,657
2035	10,348,103,657	327,690,019	996,298,944	14,088,352	776,017,121	10,441,423,501
2036	10,441,423,501	335,514,686	1,011,474,905	14,546,223	782,952,450	10,533,869,509
2037	10,533,869,509	343,863,829	1,025,733,444	15,018,975	789,874,322	10,626,855,242
2038	10,626,855,242	352,746,527	1,038,667,713	15,507,092	796,908,086	10,722,335,050
2039	10,722,335,050	362,180,986	1,051,057,599	16,011,072	804,176,220	10,821,623,586
2040	10,821,623,586	372,229,374	1,062,041,024	16,531,432	811,815,737	10,927,096,241
2041	10,927,096,241	383,012,822	1,070,568,840	17,068,704	820,055,212	11,042,526,731
2042	11,042,526,731	394,631,915	1,076,307,390	17,623,437	829,203,600	11,172,431,420
2043	11,172,431,420	407,132,528	1,078,834,024	18,196,199	839,628,713	11,322,162,438
2044	11,322,162,438	420,564,704	1,078,167,682	18,787,575	851,746,503	11,497,518,387
2045	11,497,518,387	434,971,689	1,074,166,712	19,398,171	866,013,368	11,704,938,561
2046	11,704,938,561	450,407,749	1,066,085,587	20,028,612	882,958,745	11,952,190,857
2047	11,952,190,857	466,901,284	1,054,283,011	20,679,542	903,172,061	12,247,301,649
2048	12,247,301,649	484,472,109	1,038,681,902	21,351,627	927,279,018	12,599,019,247
2049	12,599,019,247	503,118,260	1,019,547,320	22,045,555	955,947,431	13,016,492,063
2050	13,016,492,063	522,828,498	997,589,954	22,762,036	989,858,822	13,508,827,393
2051	13,508,827,393	543,658,274	973,033,741	23,501,802	1,029,712,571	14,085,662,694
2052	14,085,662,694	565,615,411	946,487,763	24,265,611	1,076,232,688	14,756,757,419
2053	14,756,757,419	588,703,208	918,306,490	25,054,243	1,130,162,147	15,532,262,041
2054	15,532,262,041	612,957,796	888,650,159	25,868,506	1,192,282,861	16,422,984,034
2055	16,422,984,034	638,404,529	857,828,600	26,709,232	1,263,421,558	17,440,272,288
2056	17,440,272,288	665,071,576	825,930,398	27,577,282	1,344,455,447	18,596,291,630
2057	18,596,291,630	692,973,960	793,257,052	28,473,544	1,436,316,376	19,903,851,371
2058	19,903,851,371	722,153,047	760,084,526	29,398,934	1,539,988,109	21,376,509,068
2059	21,376,509,068	752,653,607	726,608,541	30,354,399	1,656,515,582	23,028,715,317
2060	23,028,715,317	784,503,958	692,997,681	31,340,917	1,787,013,344	24,875,894,020
2061	24,875,894,020	817,751,721	659,408,697	32,359,497	1,932,672,559	26,934,550,106
2062	26,934,550,106	852,446,081	626,036,573	33,411,181	2,094,766,776	29,222,315,209
2063	29,222,315,209	888,635,515	593,040,894	34,497,044	2,274,658,180	31,758,070,965

**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	\$ 31,758,070,965	\$ 926,376,624	\$ 560,492,580	\$ 35,618,198	\$ 2,473,809,511	\$ 34,562,146,322
2065	34,562,146,322	965,735,972	528,400,725	36,775,789	2,693,798,404	37,656,504,184
2066	37,656,504,184	1,006,778,520	496,807,495	37,971,002	2,936,327,807	41,064,832,014
2067	41,064,832,014	1,049,571,982	465,762,593	39,205,060	3,203,234,136	44,812,670,479
2068	44,812,670,479	1,094,189,699	435,299,849	40,479,224	3,496,498,247	48,927,579,353
2069	48,927,579,353	1,140,708,445	405,450,572	41,794,799	3,818,257,703	53,439,300,129
2070	53,439,300,129	1,189,207,978	376,247,198	43,153,130	4,170,819,216	58,379,926,995
2071	58,379,926,995	1,239,771,554	347,721,172	44,555,607	4,556,672,004	63,784,093,774
2072	63,784,093,774	1,292,485,986	319,913,866	46,003,664	4,978,501,863	69,689,164,093
2073	69,689,164,093	1,347,441,790	292,879,030	47,498,783	5,439,205,813	76,135,433,884
2074	76,135,433,884	1,404,733,377	266,684,877	49,042,493	5,941,907,730	83,166,347,620
2075	83,166,347,620	1,464,459,226	241,407,738	50,636,374	6,489,975,340	90,828,738,075
2076	90,828,738,075	1,526,722,076	217,132,251	52,282,056	7,087,038,811	99,173,084,655
2077	99,173,084,655	1,591,629,137	193,946,722	53,981,223	7,737,010,952	108,253,796,800
2078	108,253,796,800	1,659,292,312	171,942,250	55,735,613	8,444,109,218	118,129,520,467
2079	118,129,520,467	1,729,828,374	151,207,848	57,547,020	9,212,879,660	128,863,473,632
2080	128,863,473,632	1,803,359,178	131,828,179	59,417,298	10,048,223,013	140,523,810,347
2081	140,523,810,347	1,880,011,875	113,877,999	61,348,360	10,955,423,137	153,184,019,000
2082	153,184,019,000	1,959,919,146	97,417,886	63,342,182	11,940,178,049	166,923,356,127
2083	166,923,356,127	2,043,219,406	82,487,353	65,400,803	13,008,633,813	181,827,321,190
2084	181,827,321,190	2,130,057,035	69,098,738	67,526,329	14,167,421,579	197,988,174,737
2085	197,988,174,737	2,220,582,615	57,239,052	69,720,935	15,423,697,677	215,505,495,042
2086	215,505,495,042	2,314,953,191	46,868,124	71,986,865	16,785,186,836	234,486,780,081
2087	234,486,780,081	2,413,332,520	37,919,771	74,326,438	18,260,228,807	255,048,095,199
2088	255,048,095,199	2,515,891,352	30,303,544	76,742,047	19,857,828,494	277,314,769,454
2089	277,314,769,454	2,622,807,701	23,910,097	79,236,164	21,587,709,734	301,422,140,628
2090	301,422,140,628	2,734,267,148	18,618,115	81,811,339	23,460,372,778	327,516,351,100
2091	327,516,351,100	2,850,463,144	14,300,549	84,470,208	25,487,155,747	355,755,199,233
2092	355,755,199,233	2,971,597,347	10,830,744	87,215,490	27,680,300,396	386,309,050,741
2093	386,309,050,741	3,097,879,960	8,085,460	90,049,993	30,053,022,641	419,361,817,889
2094	419,361,817,889	3,229,530,085	5,948,427	92,976,618	32,619,588,325	455,112,011,254
2095	455,112,011,254	3,366,776,096	4,312,404	95,998,358	35,395,394,666	493,773,871,254
2096	493,773,871,254	3,509,856,024	3,080,688	99,118,305	38,397,057,910	535,578,586,195
2097	535,578,586,195	3,659,017,967	2,169,071	102,339,650	41,642,507,663	580,775,603,104
2098	580,775,603,104	3,814,520,522	1,505,691	105,665,689	45,151,088,512	629,634,040,758
2099	629,634,040,758	3,976,633,226	1,030,594	109,099,824	48,943,669,563	682,444,213,130
2100	682,444,213,130	4,145,637,026	695,708	112,645,568	53,042,762,526	739,519,271,406
2101	739,519,271,406	4,321,824,768	463,733	116,306,549	57,472,649,034	801,196,974,926
2102	801,196,974,926	4,505,501,709	305,265	120,086,512	62,259,518,021	867,841,602,878
2103	867,841,602,878	4,696,986,044	198,464	123,989,324	67,431,613,906	939,846,015,041
2104	939,846,015,041	4,896,609,470	127,258	128,018,977	73,019,396,396	1,017,633,874,672
2105	1,017,633,874,672	5,104,717,759	80,278	132,179,594	79,055,712,817	1,101,662,045,375
2106	1,101,662,045,375	5,321,671,366	49,824	136,475,431	85,575,983,936	1,192,423,175,422
2107	1,192,423,175,422	5,547,846,057	30,101	140,910,883	92,618,404,337	1,290,448,484,832
2108	1,290,448,484,832	5,783,633,566	17,713	145,490,487	100,224,158,425	1,396,310,768,622
2109	1,396,310,768,622	6,029,442,276	10,173	150,218,928	108,437,653,258	1,510,627,635,055
2110	1,510,627,635,055	6,285,697,937	5,595	155,101,043	117,306,769,556	1,634,064,995,911
2111	1,634,064,995,911	6,552,844,404	2,968	160,141,827	126,883,132,209	1,767,340,827,729
2112	1,767,340,827,729	6,831,344,410	1,532	165,346,436	137,222,401,826	1,911,229,225,998
2113	1,911,229,225,998	7,121,680,372	924	170,720,195	148,384,588,966	2,066,564,774,217

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 ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=((c)/(1+SDR) ^a ((a)-.5)
2014	\$ 6,524,646,566	\$ 436,096,614	\$ 436,096,614	\$ -	\$ 420,120,695	\$ -	\$ 420,120,695
2015	6,672,165,875	475,402,335	475,402,335	-	425,045,470	-	425,045,470
2016	6,972,256,512	506,168,826	506,168,826	-	420,002,811	-	420,002,811
2017	7,266,873,185	537,163,959	537,163,959	-	413,662,727	-	413,662,727
2018	7,549,383,381	570,743,785	570,743,785	-	407,909,140	-	407,909,140
2019	7,817,106,574	604,350,205	604,350,205	-	400,860,847	-	400,860,847
2020	8,069,634,644	637,338,585	637,338,585	-	392,335,764	-	392,335,764
2021	8,307,008,512	669,709,606	669,709,606	-	382,610,546	-	382,610,546
2022	8,529,130,275	701,327,283	701,327,283	-	371,855,204	-	371,855,204
2023	8,735,975,730	731,801,324	731,801,324	-	360,104,909	-	360,104,909
2024	8,927,970,350	760,638,340	760,638,340	-	347,373,580	-	347,373,580
2025	9,106,214,375	787,916,411	787,916,411	-	333,949,994	-	333,949,994
2026	9,271,818,174	814,063,965	814,063,965	-	320,215,644	-	320,215,644
2027	9,425,498,291	838,772,913	838,772,913	-	306,204,193	-	306,204,193
2028	9,568,354,473	862,285,647	862,285,647	-	292,146,451	-	292,146,451
2029	9,701,328,518	884,737,350	884,737,350	-	278,193,219	-	278,193,219
2030	9,825,295,679	906,225,997	906,225,997	-	264,454,777	-	264,454,777
2031	9,941,107,967	926,419,337	926,419,337	-	250,902,640	-	250,902,640
2032	10,050,006,755	945,346,483	945,346,483	-	237,613,633	-	237,613,633
2033	10,153,301,861	963,040,651	963,040,651	-	224,650,651	-	224,650,651
2034	10,252,349,414	979,965,890	979,965,890	-	212,156,696	-	212,156,696
2035	10,348,103,657	996,298,944	996,298,944	-	200,178,843	-	200,178,843
2036	10,441,423,501	1,011,474,905	1,011,474,905	-	188,610,705	-	188,610,705
2037	10,533,869,509	1,025,733,444	1,025,733,444	-	177,512,305	-	177,512,305
2038	10,626,855,242	1,038,667,713	1,038,667,713	-	166,821,991	-	166,821,991
2039	10,722,335,050	1,051,057,599	1,051,057,599	-	156,670,023	-	156,670,023
2040	10,821,623,586	1,062,041,024	1,062,041,024	-	146,920,840	-	146,920,840
2041	10,927,096,241	1,070,568,840	1,070,568,840	-	137,448,318	-	137,448,318
2042	11,042,526,731	1,076,307,390	1,076,307,390	-	128,246,014	-	128,246,014
2043	11,172,431,420	1,078,834,024	1,078,834,024	-	119,301,227	-	119,301,227
2044	11,322,162,438	1,078,167,682	1,078,167,682	-	110,652,009	-	110,652,009
2045	11,497,518,387	1,074,166,712	1,074,166,712	-	102,312,196	-	102,312,196
2046	11,704,938,561	1,066,085,587	1,066,085,587	-	94,238,965	-	94,238,965
2047	11,952,190,857	1,054,283,011	1,054,283,011	-	86,492,484	-	86,492,484
2048	12,247,301,649	1,038,681,902	1,038,681,902	-	79,083,603	-	79,083,603
2049	12,599,019,247	1,019,547,320	1,019,547,320	-	72,043,365	-	72,043,365
2050	13,016,492,063	997,589,954	997,589,954	-	65,421,634	-	65,421,634
2051	13,508,827,393	973,033,741	973,033,741	-	59,221,574	-	59,221,574
2052	14,085,662,694	946,487,763	946,487,763	-	53,462,562	-	53,462,562
2053	14,756,757,419	918,306,490	918,306,490	-	48,139,895	-	48,139,895
2054	15,532,262,041	888,650,159	888,650,159	-	43,234,559	-	43,234,559
2055	16,422,984,034	857,828,600	857,828,600	-	38,733,206	-	38,733,206
2056	17,440,272,288	825,930,398	825,930,398	-	34,610,598	-	34,610,598
2057	18,596,291,630	793,257,052	793,257,052	-	30,850,507	-	30,850,507
2058	19,903,851,371	760,084,526	760,084,526	-	27,434,243	-	27,434,243
2059	21,376,509,068	726,608,541	726,608,541	-	24,339,649	-	24,339,649
2060	23,028,715,317	692,997,681	692,997,681	-	21,544,098	-	21,544,098
2061	24,875,894,020	659,408,697	659,408,697	-	19,025,406	-	19,025,406
2062	26,934,550,106	626,036,573	626,036,573	-	16,763,384	-	16,763,384
2063	29,222,315,209	593,040,894	593,040,894	-	14,737,687	-	14,737,687

**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	\$ 31,758,070,965	\$ 560,492,580	\$ 560,492,580	\$ -	\$ 12,926,986	\$ -	\$ 12,926,986
2065	34,562,146,322	528,400,725	528,400,725	-	11,310,285	-	11,310,285
2066	37,656,504,184	496,807,495	496,807,495	-	9,869,178	-	9,869,178
2067	41,064,832,014	465,762,593	465,762,593	-	8,586,975	-	8,586,975
2068	44,812,670,479	435,299,849	435,299,849	-	7,448,123	-	7,448,123
2069	48,927,579,353	405,450,572	405,450,572	-	6,438,415	-	6,438,415
2070	53,439,300,129	376,247,198	376,247,198	-	5,544,942	-	5,544,942
2071	58,379,926,995	347,721,172	347,721,172	-	4,755,954	-	4,755,954
2072	63,784,093,774	319,913,866	319,913,866	-	4,060,900	-	4,060,900
2073	69,689,164,093	292,879,030	292,879,030	-	3,450,326	-	3,450,326
2074	76,135,433,884	266,684,877	266,684,877	-	2,915,768	-	2,915,768
2075	83,166,347,620	241,407,738	241,407,738	-	2,449,563	-	2,449,563
2076	90,828,738,075	217,132,251	217,132,251	-	2,044,770	-	2,044,770
2077	99,173,084,655	193,946,722	193,946,722	-	1,695,061	-	1,695,061
2078	108,253,796,800	171,942,250	171,942,250	-	1,394,659	-	1,394,659
2079	118,129,520,467	151,207,848	151,207,848	-	1,138,263	-	1,138,263
2080	128,863,473,632	131,828,179	131,828,179	-	920,999	-	920,999
2081	140,523,810,347	113,877,999	113,877,999	-	738,369	-	738,369
2082	153,184,019,000	97,417,886	97,417,886	-	586,213	-	586,213
2083	166,923,356,127	82,487,353	82,487,353	-	460,666	-	460,666
2084	181,827,321,190	69,098,738	69,098,738	-	358,139	-	358,139
2085	197,988,174,737	57,239,052	57,239,052	-	275,332	-	275,332
2086	215,505,495,042	46,868,124	46,868,124	-	209,230	-	209,230
2087	234,486,780,081	37,919,771	37,919,771	-	157,107	-	157,107
2088	255,048,095,199	30,303,544	30,303,544	-	116,522	-	116,522
2089	277,314,769,454	23,910,097	23,910,097	-	85,325	-	85,325
2090	301,422,140,628	18,618,115	18,618,115	-	61,661	-	61,661
2091	327,516,351,100	14,300,549	14,300,549	-	43,956	-	43,956
2092	355,755,199,233	10,830,744	10,830,744	-	30,896	-	30,896
2093	386,309,050,741	8,085,460	8,085,460	-	21,406	-	21,406
2094	419,361,817,889	5,948,427	5,948,427	-	14,615	-	14,615
2095	455,112,011,254	4,312,404	4,312,404	-	9,834	-	9,834
2096	493,773,871,254	3,080,688	3,080,688	-	6,520	-	6,520
2097	535,578,586,195	2,169,071	2,169,071	-	4,260	-	4,260
2098	580,775,603,104	1,505,691	1,505,691	-	2,745	-	2,745
2099	629,634,040,758	1,030,594	1,030,594	-	1,743	-	1,743
2100	682,444,213,130	695,708	695,708	-	1,092	-	1,092
2101	739,519,271,406	463,733	463,733	-	676	-	676
2102	801,196,974,926	305,265	305,265	-	413	-	413
2103	867,841,602,878	198,464	198,464	-	249	-	249
2104	939,846,015,041	127,258	127,258	-	148	-	148
2105	1,017,633,874,672	80,278	80,278	-	87	-	87
2106	1,101,662,045,375	49,824	49,824	-	50	-	50
2107	1,192,423,175,422	30,101	30,101	-	28	-	28
2108	1,290,448,484,832	17,713	17,713	-	15	-	15
2109	1,396,310,768,622	10,173	10,173	-	8	-	8
2110	1,510,627,635,055	5,595	5,595	-	4	-	4
2111	1,634,064,995,911	2,968	2,968	-	2	-	2
2112	1,767,340,827,729	1,532	1,532	-	1	-	1
2113	1,911,229,225,998	924	924	-	1	-	1
Totals					\$ 9,616,559,961	\$ -	\$ 9,616,559,961

SECTION H

GLOSSARY OF TERMS

GLOSSARY OF TERMS

<i>Actuarial Accrued Liability (AAL)</i>	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."
<i>Actuarial Assumptions</i>	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.
<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Equivalent</i>	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.
<i>Actuarial Cost Method</i>	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.
<i>Actuarial Gain (Loss)</i>	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.
<i>Actuarial Present Value (APV)</i>	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.
<i>Actuarial Valuation</i>	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.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC)</i>	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.

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<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Amortization Method</i>	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).
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	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.
<i>Covered-Employee Payroll</i>	The payroll of employees that are provided with pensions through the pension plan.
<i>Deferred Retirement Option Program (DROP)</i>	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.
<i>Deferred Inflows and Outflows</i>	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.
<i>Discount Rate</i>	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: <ol style="list-style-type: none"> 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.

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<i>Entry Age Actuarial Cost Method (EAN)</i>	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.
<i>GASB</i>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<i>Fiduciary Net Position</i>	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
<i>Long-Term Expected Rate of Return</i>	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.
<i>Money-Weighted Rate of Return</i>	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.
<i>Multiple-Employer Defined Benefit Pension Plan</i>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<i>Municipal Bond Rate</i>	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.
<i>Net Pension Liability (NPL)</i>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<i>Non-Employer Contribution Entities</i>	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.
<i>Normal Cost</i>	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

<i>Other Postemployment Benefits (OPEB)</i>	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.
<i>Real Rate of Return</i>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<i>Service Cost</i>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<i>Total Pension Expense</i>	The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year: <ol style="list-style-type: none">1. Service Cost2. Interest on the Total Pension Liability3. Current-Period Benefit Changes4. Employee Contributions (made negative for addition here)5. Projected Earnings on Plan Investments (made negative for addition here)6. Pension Plan Administrative Expense7. Other Changes in Plan Fiduciary Net Position8. Recognition of Outflow (Inflow) of Resources due to Liabilities9. Recognition of Outflow (Inflow) of Resources due to Assets
<i>Total Pension Liability (TPL)</i>	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<i>Valuation Assets</i>	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.