

WYOMING JUDICIAL RETIREMENT SYSTEM
ACTUARIAL VALUATION REPORT
FOR THE YEAR BEGINNING JANUARY 1, 2017

April 24, 2017

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

Dear Board of Trustees:

Subject: Actuarial Valuation as of January 1, 2017

We are pleased to present the report of the actuarial valuation of the Wyoming Judicial Retirement System (“the Fund”) for the plan year commencing January 1, 2017. This report describes the current actuarial condition of the Fund, determines the calculated employer contribution rate (the actuarially determined contribution rate), and analyzes changes in this contribution rate from the prior year. Valuations are prepared annually, as of January 1, the first day of the Fund’s plan year.

Financing objectives and funding policy

The employer and employee contribution rates are specified in the statute. The purpose of this actuarial valuation is to determine whether or not this statutory contribution is sufficient to meet the obligations of the Fund.

Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan’s funded status. The funded ratio as of January 1, 2017 is 109.46%. This funded ratio is based on the assumption that no future cost-of-living increases will be paid. In the January 1, 2016 valuation, this funded ratio was 107.08%. On a market value of assets basis, the funded ratio increased from 100.86% as of January 1, 2016, to 103.81% as of January 1, 2017.

Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on January 1, 2017. 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. Therefore, this valuation does not include any liability for future cost increases. There were no benefit changes since the prior valuation.

The benefit provisions are summarized in Appendix B of the report.

Assumptions and methods

Actuarial assumptions and methods are set by the Board, based upon recommendations made by the plan's actuary. The current assumptions used in the actuarial valuation were adopted by the Board effective February 22, 2013 and were first utilized with the January 1, 2014 valuation report. For a detailed description of the experience related to these assumptions as well as the rationale for the changes please see our latest Wyoming Retirement System Actuarial Experience Study Report. Our experience study report was dated February 21, 2013 and it covered the five-year investigation period ending December 31, 2011.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. The actuarial calculations presented in the report are intended to provide information for rational decision making.

The 14.50% employer contribution and the 9.22% employee contribution are the rates that comply with State law. Due to the many factors affecting a retirement system, users of this report should be aware that contributions made at that rate do not necessarily guarantee long-term benefit security.

The employer contribution requirement in Table 1 of this report is determined using the actuarial assumptions and methods disclosed in Appendix A of this report. This report does not include a detailed assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the plan's financial condition.

All assumptions and methods are described in Appendix A of the report.

Data

Member data for retired, active and inactive members was supplied as of January 1, 2017 by the Fund's staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data.

Asset and financial information as of January 1, 2017 was prepared by Wyoming Retirement System and is the responsibility of management. Eide Bailly, LLP provided us the asset and financial information and will opine on Wyoming Retirement System's statements.

Plan experience

As part of each valuation, we examine the Fund's experience relative to the assumptions. As experience in a given year deviates from the assumptions, a gain occurs if the liabilities grow

slower than the assumption set anticipates and a loss occurs if the liabilities grow faster. Overall, the Fund had a total experience gain of \$657,841 including an investment loss of \$299,769, a contribution gain of \$336,657 and a liability gain of \$620,953. The aggregate results of these analyses are disclosed in Tables 4 and 5 under Section III of the report.

Actuarial certification


All of the tables contained in this actuarial valuation report were prepared by Gabriel, Roeder, Smith & Company. Historical information for years prior to 2010 was prepared by the prior actuarial firm and was not subjected to our actuarial review. We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Fund as of January 1, 2017.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code and ERISA. The undersigned are independent actuaries and consultants. Mark Randall and Leslie Thompson are Enrolled Actuaries and Mark Randall, Leslie Thompson, and Paul Wood are Members of the American Academy of Actuaries, and all three meet all the Qualification Standards of the American Academy of Actuaries.

Finally, all of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



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



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



Paul T. Wood, ASA, FCA, MAAA
Consultant

	Page
Section I — Executive Summary	
Executive Summary	1
Section II — Discussion	
Contribution Requirements	2
Calculation of Contribution Rates	3
Financial Data and Experience	4
Member Data	5
Benefit Provisions	6
Actuarial Methods and Assumptions	7
GASB and Funding Progress	8
Section III — Supporting Exhibits	
Table 1 - Calculation of Annual Required Contribution Rate	9
Table 2 - Cost Breakdown	10
Table 3 - History of Total Normal Cost.....	11
Table 4 - Calculation of Total Actuarial Gain/(Loss)	12
Table 5 - Change in Calculated Contribution Rate Since the Prior Valuation	13
Table 6 - Statement of Plan Net Assets.....	14
Table 7 - Reconciliation of Plan Net Assets	15
Table 8 - Progress of Fund Through December 31, 2016.....	16
Table 9 - Development of Actuarial Value of Assets	17
Table 10 - History of Investment Returns.....	18
Table 11 - Solvency Test	19
Table 12 - Schedule of Funding Progress	20
Table 13 - Schedule of Contributions from the Employer(s) and Other Contributing Entities ..	21
Table 14 - Reconciliation of Participant Data.....	22
Table 15 - Demographic Statistics	23
Table 16 - Distribution of Male Active Members by Age and by Years of Service	24
Table 17 - Distribution of Female Active Members by Age and by Years of Service	25
Table 18 - Distribution of Total Active Members by Age and by Years of Service	26

Table 19 - Schedule of Pension Recipients Added to and Removed from Rolls.....	27
Table 20 - Pensioners by Age	28
Table 21 - Pensions Awarded in 2016	29
Table 22 - Retirees and Disabled Members by Service at Retirement and Years Since Retirement.....	30
Table 23 - Retirees and Disableds by Year of Retirement.....	31
Table 24 - Thirty Year Projected Benefit Payments	32
Appendix A — Summary of Actuarial Assumptions and Methods.....	33
Appendix B — Summary of Plan Provisions	38

SECTION I

EXECUTIVE SUMMARY

Executive Summary

Item	January 1, 2017	January 1, 2016
	No COLA	No COLA
1. Contributions:		
a. Total normal cost	19.06%	19.07%
b. Employee contributions	(9.22%)	(9.22%)
c. Net employer normal cost	9.84%	9.85%
d. Amortization payment	(1.98%)	(1.40%)
e. Administrative expenses	0.35%	0.30%
f. Required contribution	8.21%	8.75%
g. Statutory	(14.50%)	(14.50%)
h. Shortfall/(surplus)	(6.29%)	(5.75%)
2. Funding Elements:		
a. Market value of assets (MVA)	\$25,391,547	\$23,202,291
b. Actuarial value of assets (AVA)	\$26,773,208	\$24,633,859
c. Actuarial accrued liability (AAL)	\$24,459,333	\$23,004,559
d. Unfunded/(overfunded) actuarial accrued liability (UAAL)	(\$2,313,875)	(\$1,629,300)
3. Contributions and Ratios:		
a. Annual required contribution	\$543,468	\$579,926
b. Actual contributions	N/A	925,971
i. Employer	N/A	925,971
ii. Other	N/A	-
c. Percentage contributed	N/A	159.67%
d. Funded ratio on an actuarial basis (AVA/AAL)	109.46%	107.08%
e. Funded ratio on a market basis (MVA/AAL)	103.81%	100.86%
f. Covered payroll	\$6,625,476	\$6,624,052

SECTION II

DISCUSSION

Contribution Requirements

- Exhibits throughout this report are based primarily, unless stated otherwise, on the assumption of no future cost-of-living adjustments (COLAs).
- 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. The actuarial value funded ratio is 109.46% and the market value funded ratio is 103.81%.
- There were no changes to the benefit provisions since the prior valuation.
- There were no changes to the actuarial assumptions or methods since the prior valuation.
- The amortization payment is based upon the following assumptions:
 - 30-year open funding period
 - Contribution amounts are calculated in such a way that they will increase as a level percentage of payroll
 - Total payroll increases are assumed at 3.75% per year
 - Future growth in the number of active members is not reflected in the annual valuation
- Analysis of the change in contribution rates is shown in Table 5 under Section III of the report.

Calculation of Contribution Rates

The funds available to pay benefits come from two sources, contributions and investment income on those contributions (the majority of the funds available to pay benefits typically come from investment income). The Fund receives contributions from two sources, employer contributions and member contributions, both of which are determined as a percentage of pay. As shown in Table 1 under Section III of the report, the employer contribution rate has three components:

- The normal cost percentage (NC%)
- The amortization percentage (UAAL%)
- The administrative expenses

The NC% is the theoretical amount which would be required to pay the members' benefits if this amount had been contributed from each member's entry date and if the fund's experience exactly followed the actuarial assumptions. The NC% is shown in Table 3 under Section III of the report.

Members are required to make employee contributions and only the excess of the NC% over the member contribution rate is included in the employer contribution rate.

The actuarial accrued liability (AAL) is the difference between (i) the actuarial present value of all future benefits for all current participants of the fund, including active, inactive and retired members, and (ii) the actuarial present value of future normal costs. Thus, the AAL represents the liability associated with past years. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and the actuarial value of assets (AVA). It is the shortfall/excess between the liability associated with prior years (the AAL) and the assets actually accumulated (the AVA). This shortfall/excess can arise from several sources, including actuarial gains and losses which are caused by differences between actual experience and the plan's assumptions, changes to the plan's actuarial assumptions, and amendments to the benefit provisions.

The UAAL% is the amount required to fund this difference. It is the amount, expressed as a level percentage of payroll, necessary to amortize the UAAL. This amortization is over a period of 30 years beginning January 1, 2017. The Executive Summary shows the UAAL%, called Amortization Payment, compared to that of last year.

Administrative expenses are the average of the actual expenses for the prior two years, with each year projected at 6.50% to the valuation date.

The calculated rate is used in determining the contributions necessary to meet the Actuarially Determined Contribution for the twelve-month period beginning January 1, 2017. Note, however, that the employer contribution is set at 14.50% of payroll. Therefore, the Actuarially Determined Contribution will be fully contributed. This is detailed in the Executive Summary.

Financial Data and Experience

As of January 1, 2017, the Fund has a total market value of \$25.4 million. Financial information was received from Eide Bailly, LLP.

Table 7 under Section III of the report shows a reconciliation of the market values between the beginning and end of 2016.

During 2016, the total investment return on the market value of assets (MVA) was 7.60%, as reported by Meketa Investment Group, Inc, as shown in Table 10 under Section III of the report.

In determining the contribution rates and funded status of the Fund, an actuarial value of assets (AVA) is used rather than the market 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 (or less than) expected investment income. 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.

The development of the AVA is shown in Table 9 under Section III of the report. The AVA is \$26.8 million. The AVA is 105.44% of the MVA as of December 31, 2016, compared to 106.17% last year. The difference between the AVA and the MVA is deferred gains and losses. As of January 1, 2016, the total deferred loss was \$1,431,568. As of January 1, 2017, the total deferred loss was \$1,381,661.

In addition to the market return, Table 10 also shows the return on the actuarial value of assets for the Fund. For 2016, this return was 6.55%. Because this is less than the assumed 7.75% investment return, an actuarial loss occurred increasing the unfunded actuarial accrued liabilities of the fund by \$0.3 million.

Member Data

Member data as of January 1, 2017 was supplied electronically by the Fund's staff. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall.

Table 15 under Section III of the report shows the number of members by category (active, inactive, retired, etc.) along with member statistics. Tables 16 through 23 show summaries of certain historical data and include membership statistics.

Total active member projected payroll increased 0.02% last year, compared with a 0.34% increase the prior year.

The change in payroll is significant because the methodology used in the valuation to amortize the unfunded actuarial accrued liability assumes a growing payroll into the future. If the payroll does not grow at the assumed 3.75% per year average, then the current amortization payments may be understated and the funding position of the Fund will not strengthen as assumed over time. Higher than expected payroll growth, however, has the opposite effect and the funded position of the Fund should trend upward. Table 5 under Section III of the report shows, for the past year, payroll for the plan increased less than expected. Because the plan has assets exceeding the accrued liability (assuming no future cost of living adjustments), the effect is a decrease in the calculated contribution rate of 0.07% of payroll.

Of the 46 active participants, 16 are eligible or will become eligible for normal retirement in 2017, and 15 are eligible or will become eligible for early retirement in 2017.

Benefit Provisions

Appendix B of the report includes a more detailed summary of the benefit provisions for the Fund. A brief summary is as follows:

- *Normal Retirement Eligibility*
 - Age 70, age 65 with four or more years of service, or age 60 with 20 or more years of service.
- *Normal Retirement Benefit*
 - One-twelfth of the Final Average Salary times the sum of the following:
 - a) 4% for each of the first five years of service,
 - b) 3% for each year from and including the sixth year through the fifteenth year of service,
 - c) 2% for each year from and including the sixteenth year through the twentieth year of service,
 - d) 1% for each year thereafter.
- *Early Retirement Eligibility and Benefit*
 - Age 55 with four or more years of service. Normal retirement benefit reduced five percent for each year of retirement prior to age 65.
- *Normal Form of Payment* is a monthly benefit for life. Upon death, 50% of the benefit continues to be paid to the beneficiary.
- *Employee Contributions* are required
 - 9.22% of pay.
- *Post-retirement Cost-of-Living Adjustments (COLAs)*
 - 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.

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

Actuarial Methods and Assumptions

Appendix A of the report includes a summary of the actuarial assumptions and methods used in this valuation. A few highlights are listed as follows:

- Costs are determined using the Entry Age Normal actuarial cost method, calculated as a level percentage of payroll.
- The unfunded actuarial accrued liability is amortized over an open 30 year period as a level percent of payroll.
- The assumed annual investment return rate is 7.75%, with assumed inflation of 3.25%.
- Payroll is assumed to increase at 3.75% per year.
- Inactive vested participants are assumed to retire at age 65 or on the valuation date if over age 65.
- 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.

The average future lifetime for current pensioners is 13.1 years.

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

The actuarial assumptions and methods will be reviewed in detail as part of the 2017 Experience Study covering the five year period ending December 31, 2016.

GASB and Funding Progress

Governmental Accounting Standards Board Statement Number 67 (GASB 67) contains certain accounting requirements for the Fund. Schedules, notes and required supplementary information are provided under separate cover.

SECTION III

SUPPORTING EXHIBITS

Calculation of Annual Required Contribution Rate
(Assumes No Future Cost-Of-Living Increases)

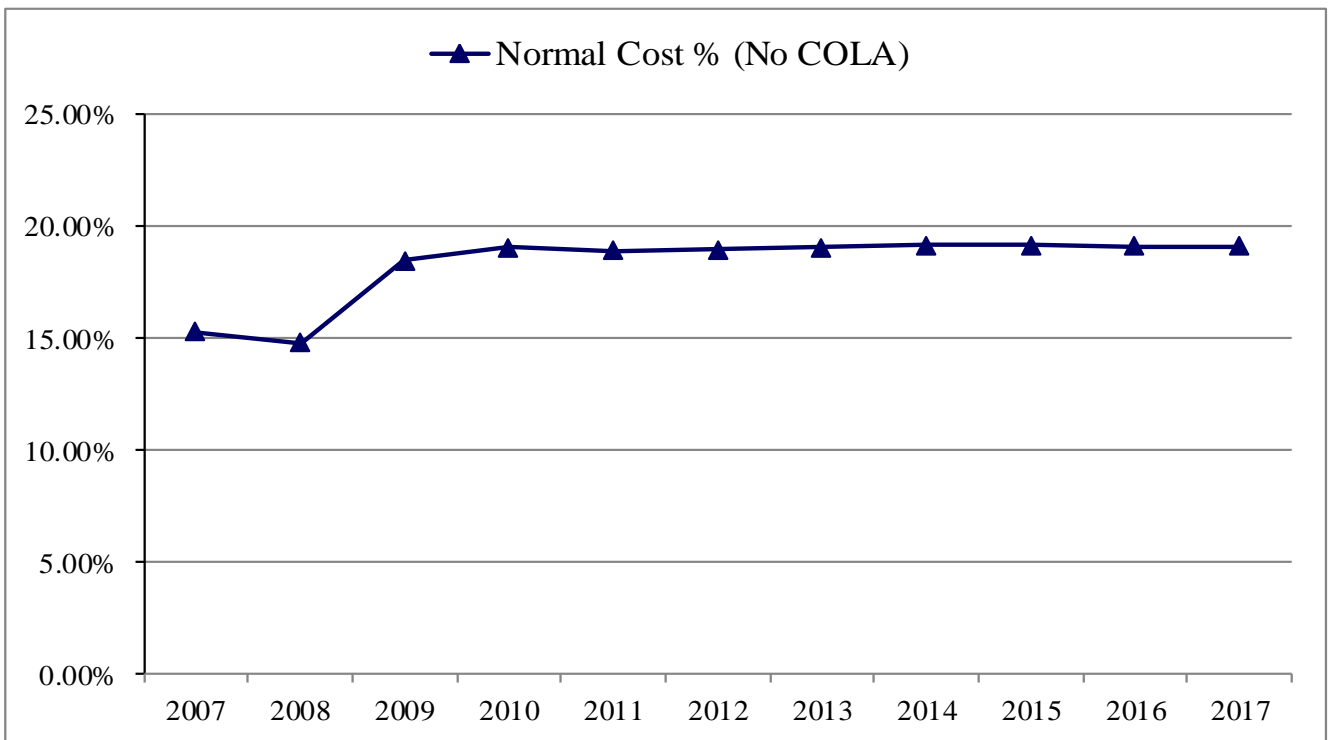
Item	January 1, 2017	January 1, 2016
1. Projected valuation payroll	\$6,625,476	\$6,624,052
2. Present value of future pay	\$47,449,880	\$50,909,264
3. Employer normal cost rate	9.84%	9.85%
4. Actuarial accrued liability for active members		
a. Present value of future benefits for active members	\$24,238,459	\$23,269,706
b. Less: present value of future employer normal costs	(4,264,021)	(4,617,193)
c. Less: present value of future employee contributions	(4,374,879)	(4,693,834)
d. Actuarial accrued liability	\$15,599,559	\$13,958,679
5. Total actuarial accrued liability for:		
a. Retirees and beneficiaries	\$8,859,774	\$9,045,880
b. Disabled members	-	-
c. Inactive members	-	-
d. Active members (Item 4d)	15,599,559	13,958,679
e. Total	\$24,459,333	\$23,004,559
6. Actuarial value of assets (Table 9)	\$26,773,208	\$24,633,859
7. Unfunded actuarial accrued liability (UAAL) (Item 5e - Item 6)	(\$2,313,875)	(\$1,629,300)
8. UAAL amortization period	30 years	30 years
9. Assumed payroll growth rate	3.75%	3.75%
10. Employer Contribution requirement		
a. UAAL amortization payment as % of pay	-1.98%	-1.40%
b. Employer normal cost	9.84%	9.85%
c. Administrative expense	0.35%	0.30%
d. Contribution requirement (a + b + c)	8.21%	8.75%

Cost Breakdown
(Assumes No Future Cost-Of-Living Increases)

Item	Present Value of Future Normal Costs (1)	Actuarial Accrued Liabilities (2)	Total Present Value of Benefits (3) = (1) + (2)
Age and service allowances based on total service and disability benefits likely to be rendered by present active members	\$8,202,843	\$15,086,250	\$23,289,093
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	316,797	511,185	827,982
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	119,260	2,124	121,384
Benefits likely to be paid to vested inactive members	0	0	0
Benefits to be paid to members due refunds	0	0	0
Benefits to be paid to current retirees, disabled members, beneficiaries, and future beneficiaries of current retirees	0	8,859,774	8,859,774
Total	\$8,638,900	\$24,459,333	\$33,098,233
Actuarial value of assets	2,313,875	24,459,333	26,773,208
Liabilities to be covered by future contributions	\$6,325,025	\$0	\$6,325,025

History of Total Normal Cost
(Assumes No Future Cost-Of-Living Increases)

Fiscal Year Ending December 31	Normal Cost as Percent of Payroll
2007	15.24%
2008	14.76%
2009	18.45%
2010	19.05%
2011	18.88%
2012	18.94%
2013	19.03%
2014	19.10%
2015	19.14%
2016	19.07%
2017	19.06%



Calculation of Total Actuarial Gain/(Loss)
(Assumes No Future Cost-Of-Living Increases)

Item	January 1, 2017
1. Derivation of Experience Gain/(Loss)	
a. Unfunded actuarial accrued liability (UAAL) - previous valuation	(\$1,629,300)
b. Normal cost (NC) for fiscal year ending December 31, 2016	1,263,270
c. Actual administrative expenses for fiscal year ending December 31, 2016	23,218
d. Actuarially determined contribution for fiscal year ending December 31, 2016	1,190,664
e. Interest accrual:	
(i) For whole year on (a)	(126,271)
(ii) For half year on (b) + (c) - (d)	3,713
(iii) Total interest: (e)(i) + (e)(ii)	(122,558)
f. Change in UAAL due to plan changes	-
g. Change in UAAL due to assumption change	-
h. Expected UAAL current year: (a) + (b) + (c) - (d) + (e)(iii) + (f) + (g)	(1,656,034)
i. Actual UAAL current year	(2,313,875)
j. Experience gain/(loss): (h) - (i)	657,841
k. Experience gain/(loss) as a % of actuarial accrued liability	2.69%
2. Approximate Portion of Gain/(Loss) Due to Investments (at Actuarial Value)	(\$299,769)
3. Approximate Portion of Gain/(Loss) Due to Contributions higher or lower than expected	\$336,657
4. Approximate Portion of Gain/(Loss) Due to Liabilities: (1)(j) - (2) - (3)	\$620,953
a. Age & service retirements	170,917
b. Disability retirements	1,137
c. Death-in-service	6,966
d. Withdrawal from employment	(13,444)
e. Rehires	-
f. Pay increases	565,296
g. Death after retirement	(124,823)
i. Other	14,904
j. Other as a % of actuarial accrued liability	0.06%

Change in Calculated Contribution Rate Since the Prior Valuation
(Assumes No Future Cost-Of-Living Increases)

Item	January 1, 2017
1. Calculated contribution rate as of January 1, 2016	8.75%
2. Change in contribution rate during year	
a. Change in employer normal cost	-0.01%
b. Assumption changes	0.00%
c. Actuarial (gain) loss from investments on actuarial value of assets	0.26%
d. Actuarial (gain) loss from liability sources and administrative expenses	-0.48%
e. Difference between contributions made and required contributions	-0.29%
f. Effect of payroll growing (slower)/faster than assumption	-0.07%
g. Open amortization period reset to 30 years	0.04%
h. Other changes	0.01%
i. Total change	-0.54%
3. Calculated contribution rate as of January 1, 2017	8.21%

Statement of Plan Net Assets

Assets at Market Value		
Item	FYE 2016	FYE 2015
1. Cash and Cash Equivalents (Operating Cash)	\$2,647,104	\$1,617,959
2. Receivables		
a. Employer contributions	\$77,164	\$77,164
b. Employee contributions	49,066	49,066
c. Securities sold	136,638	-
d. Accrued interest and dividends	45,323	45,640
e. Currency contract receivable	9,174,865	10,454,800
f. Other	-	112,427
g. Rebate and fee income receivable	-	-
h. Total receivables	\$9,483,056	\$10,739,097
3. Investments, at Fair Value	\$23,873,506	\$22,705,171
4. Liabilities		
a. Securities purchased	(\$89,430)	(\$191,045)
b. Administrative and consulting fees payable	(28,241)	(41,885)
c. Currency contract payable	(9,086,702)	(10,434,442)
d. Securities lending collateral	(1,407,746)	(1,192,564)
e. Total liabilities	(\$10,612,119)	(\$11,859,936)
5. Total Market Value of Assets Available for Benefits	\$25,391,547	\$23,202,291

Reconciliation of Plan Net Assets

Assets at Market Value		
Item	FYE 2016	FYE 2015
A. Market Value of Assets at Beginning of Year	\$23,202,291	\$22,874,709
B. Contribution Income:		
1. Contributions		
a. Employee	\$588,791	\$585,545
b. Employer	925,971	920,867
c. Other	0	0
d. Total	\$1,514,762	\$1,506,412
2. Investment Income		
a. Interest, dividends, and other income	\$488,997	\$535,522
b. Net appreciation	1,298,738	(634,341)
c. Investment expenses	(116,227)	(136,388)
d. Net investment income	\$1,671,508	(\$235,207)
3. Securities Lending		
a. Gross income	\$10,802	\$8,059
b. Deductions	(3,277)	(1,156)
c. Net investment income	\$7,525	\$6,903
4. Benefits and Refunds		
a. Refunds	\$0	\$0
b. Regular monthly benefits	(981,321)	(931,621)
c. Total	(\$981,321)	(\$931,621)
5. Administrative and Miscellaneous Expenses	(\$23,218)	(\$18,905)
C. Market Value of Assets at End of Year	\$25,391,547	\$23,202,291

Progress of Fund Through December 31, 2016

Plan Year Ending December 31	Employer Contributions*	Employee Contributions	Administrative Expenses	Net Investment Income**	Benefit Payments	Transfers	Actuarial Value of Assets
Total	\$ 17,287,988	\$ 6,281,634	\$ (137,283)	\$ 11,654,716	\$ (8,381,206)	\$ -	
1998	-	-	-	-	-	-	\$69,339
1999	\$70,511	\$41,294	(\$46)	\$4,527	(\$48,428)	-	137,197
2000	1,403,023	170,858	(106)	52,516	(74,665)	-	1,688,823
2001	307,576	-	(484)	74,536	(184,433)	-	1,886,018
2002	1,290,324	216,131	(3,246)	63,349	(206,260)	-	3,244,316
2003	151,661	274,149	(927)	182,283	(214,508)	-	3,636,994
2004	1,259,619	273,016	(1,166)	316,906	(297,375)	-	5,187,994
2005	241,273	306,642	(1,910)	432,813	(283,480)	-	5,883,332
2006	4,662,777	326,237	(1,681)	799,836	(315,032)	-	11,355,469
2007	370,372	363,692	(7,127)	1,136,494	(391,685)	-	12,827,215
2008	1,308,816	396,872	(10,490)	(1,693,118)	(484,882)	-	12,344,413
2009	644,302	408,953	(4,821)	2,072,540	(573,483)	-	14,891,904
2010	663,375	421,815	(5,762)	560,518	(624,150)	-	15,907,700
2011	674,598	428,952	(9,217)	356,446	(610,572)	-	16,747,907
2012	610,039	344,893	(13,779)	569,056	(708,756)	-	17,549,360
2013	866,286	550,963	(17,037)	1,985,989	(674,750)	-	20,260,811
2014	916,598	582,831	(17,361)	1,761,194	(775,805)	-	22,728,268
2015	920,867	585,545	(18,905)	1,349,705	(931,621)	-	24,633,859
2016	925,971	588,791	(23,218)	1,629,126	(981,321)	-	26,773,208

* Includes other funding sources

** Net of investment expenses

Development of Actuarial Value of Assets

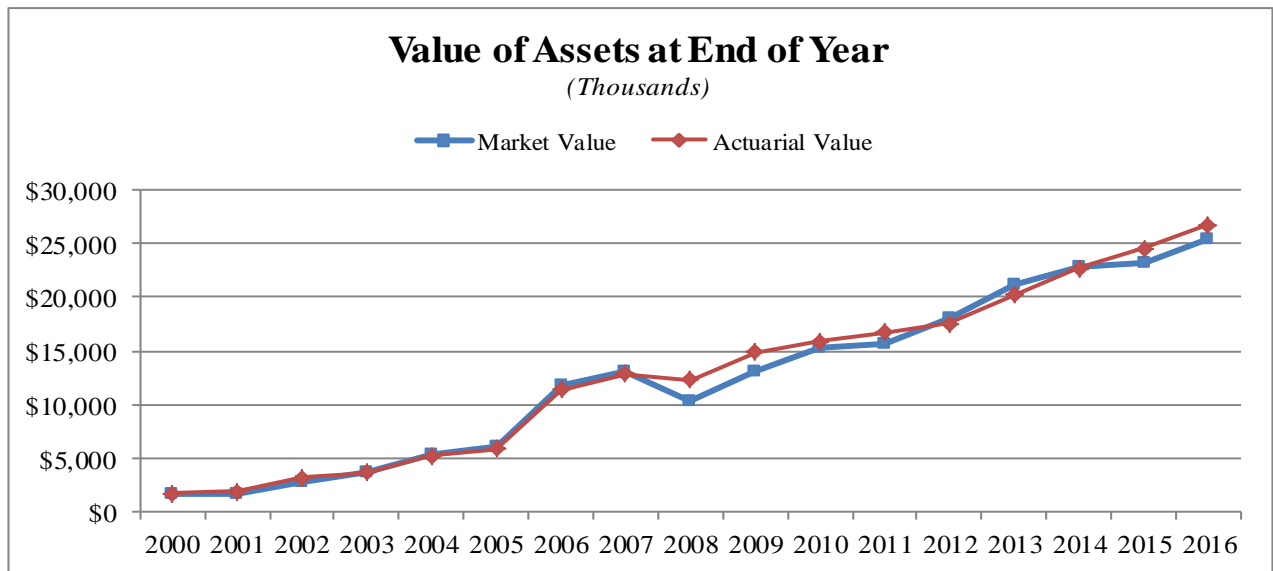
Item	FYE 2016	FYE 2015
1. Actuarial value of assets, beginning of year (without corridor)	\$24,633,859	\$22,728,268
2. Market value, end of year	\$25,391,547	\$23,202,291
3. Market value, beginning of year	\$23,202,291	\$22,874,709
4. Non-investment/administrative net cash flow:		
a. Employee contributions	\$588,791	\$585,545
b. Employer contributions	925,971	920,867
c. Other contributions	-	-
d. Refund of employee accounts	-	-
e. Retirement benefits	(981,321)	(931,621)
f. Administrative expenses	(23,218)	(18,905)
g. Total net cash flow: [sum of (4a) through (4f)]	\$510,223	\$555,886
5. Investments and securities lending:		
a. Interest and dividends on investments	\$488,997	\$535,522
b. Gross income from securities lending	10,802	8,059
c. Fees and expenses	(119,504)	(137,544)
d. Total net income: [sum of (5a) through (5c)]	\$380,295	\$406,037
6. Investment income:		
a. Actual market return: (2) - (3) - (4g) - (5d)	\$1,298,738	(\$634,341)
b. Assumed rate of return	7.75%	7.75%
c. Assumed amount of return	1,437,285	1,387,892
d. Amount subject to phase-in: (6a) - (6c)	(\$138,547)	(\$2,022,233)
7. Phase-in recognition of investment income:		
a. Current year: 0.20 * (6d)	(\$27,709)	(\$404,447)
b. First prior year	(404,447)	(125,264)
c. Second prior year	(125,264)	193,043
d. Third prior year	193,043	175,923
e. Fourth prior year	175,923	(283,479)
f. Total recognition	(\$188,454)	(\$444,224)
8. Actuarial value of assets, end of year		
a. Preliminary actuarial value of assets, end of year: (1) + (4g) + (5d) + (6c) + (7f)	\$26,773,208	\$24,633,859
b. Upper corridor limit: 120% * (2)	30,469,856	27,842,749
c. Lower corridor limit: 80% * (2)	20,313,238	18,561,833
d. Actuarial value of assets, end of year	\$26,773,208	\$24,633,859
9. Difference between market and actuarial value of assets	(\$1,381,661)	(\$1,431,568)
10. Actuarial rate of return	6.55%	5.87%
11. Market rate of return*	7.60%	-0.26%
12. Ratio of actuarial value to market value of assets	105.44%	106.17%

* Current year market rate of return is based on unaudited data and is supplied by the plan's investment consultant.

History of Investment Returns

Plan Year (1)	Market (2)	Actuarial (3)
2000	-0.99%	5.92%
2001	-4.47%	4.26%
2002	-9.29%	2.42%
2003	21.00%	5.44%
2004	11.54%	7.45%
2005	8.22%	8.14%
2006	12.63%	9.73%
2007	7.44%	9.86%
2008	-29.63%	-12.60%
2009	23.72%	16.47%
2010	13.80%	3.71%
2011	-0.90%	2.21%
2012	14.05%	3.37%
2013	13.53%	11.09%
2014	4.70%	8.54%
2015	-0.26%	5.87%
2016	7.60%	6.55%
Average returns:		
Last five years:	7.79%	6.97%
Last ten years:	4.38%	5.20%

The market returns above are gross of investment expenses and were provided by the plan's investment consultant. The actuarial returns above are based on the financial information provided by the plan's auditors.



Solvency Test

Valuation Date	Total Active Member Contributions	Inactive and Pensioner Liability	Employer Financed Active Accrued Liability	Actuarial Value of Assets	Percentage of Liabilities Covered by Assets		
					(1)	(2)	(3)
January 1	(1)	(2)	(3)				
2005	\$1,315,893	\$3,204,400	\$4,305,907	\$5,187,994	100%	100%	15.5%
2006	1,704,433	3,106,000	4,666,267	5,883,332	100%	100%	23.0%
2007	1,948,045	4,270,900	4,724,055	11,355,469	100%	100%	100.0%
2008	2,503,079	4,225,100	5,793,021	12,827,215	100%	100%	100.0%
2009	2,835,546	4,818,490	4,540,264	12,344,413	100%	100%	100.0%
2010	3,296,295	5,454,014	5,016,719	14,891,904	100%	100%	100.0%
2011	3,759,606	5,539,108	5,357,937	15,907,700	100%	100%	100.0%
2012	4,309,632	5,519,507	5,828,708	16,747,907	100%	100%	100.0%
2013	4,845,995	5,300,102	6,779,122	17,549,360	100%	100%	100.0%
2014	5,202,705	6,681,945	7,779,758	20,260,811	100%	100%	100.0%
2015	5,799,958	7,658,928	7,784,114	22,728,268	100%	100%	100.0%
2016	6,234,876	9,045,880	7,723,803	24,633,859	100%	100%	100.0%
2017	7,018,765	8,859,774	8,580,794	26,773,208	100%	100%	100.0%

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

Schedule of Funding Progress

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Valuation Date January 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) [(3) - (2)]	Funded Ratio [(2)/(3)]	Covered Payroll	UAAL as a Percentage of Covered Payroll [(4)/(6)]
2001	\$1,688,823	\$5,451,300	\$3,762,477	30.98%	\$1,992,400	188.84%
2002	1,886,018	6,479,300	4,593,282	29.11%	2,349,900	195.47%
2003	3,244,316	6,575,100	3,330,784	49.34%	2,363,000	140.96%
2004	3,636,994	8,371,700	4,734,706	43.44%	3,066,500	154.40%
2005	5,187,994	8,826,200	3,638,206	58.78%	3,059,900	118.90%
2006	5,883,332	9,775,300	3,891,968	60.19%	3,493,900	111.39%
2007	11,355,469	11,091,300	(264,169)	102.38%	3,591,300	-7.36%
2008	12,827,215	12,725,300	(101,915)	100.80%	4,122,100	-2.47%
2009	12,344,413	15,401,500	3,057,087	80.15%	4,401,600	69.45%
2010	14,891,904	13,767,028	(1,124,876)	108.17%	4,664,111	-24.12%
2011	15,907,700	14,656,651	(1,251,049)	108.54%	4,866,692	-25.71%
2012	16,747,907	15,657,847	(1,090,060)	106.96%	4,861,758	-22.42%
2013	17,549,360	16,925,219	(624,141)	103.69%	5,410,651	-11.54%
2014	20,260,811	19,664,408	(596,403)	103.03%	6,213,775	-9.60%
2015	22,728,268	21,243,000	(1,485,268)	106.99%	6,601,641	-22.50%
2016	24,633,859	23,004,559	(1,629,300)	107.08%	6,624,052	-24.60%
2017	26,773,208	24,459,333	(2,313,875)	109.46%	6,625,476	-34.92%

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

Schedule of Contributions from the Employer(s) and Other Contributing Entities

(1)	(2)	(3)	(4)	(5)	(6)
Fiscal Year Ending December 31	Actuarially Determined Contribution		Employer Contributions		Percentage of Actuarially Determined Contribution Contributed [(5)/(3)]
	% of Payroll	Amount	% of Payroll	Amount	
2004	8.75%	\$268,300	41.08%	\$1,259,619	469.48%
2005	9.03%	276,300	7.88%	241,273	87.32%
2006	8.78%	306,600	133.45%	4,662,777	1520.80%
2007	8.78%	315,200	10.31%	370,372	117.50%
2008	8.78%	362,100	31.75%	1,308,816	361.45%
2009	14.50%	638,400	14.64%	644,302	100.92%
2010	8.78%	409,105	14.22%	663,375	162.15%
2011	8.40%	409,031	13.86%	674,598	164.93%
2012	8.69%	422,266	12.55%	610,039	144.47%
2013	9.42%	509,643	16.01%	866,286	169.98%
2014	9.60%	596,723	14.75%	916,598	153.61%
2015	8.93%	589,177	13.95%	920,867	156.30%
2016	8.75%	579,926	13.98%	925,971	159.67%
2017	8.20%	543,468	-	-	-

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

Reconciliation of Participant Data

	Active Participants	Vested Former Participants	Retired Participants	Disables	Beneficiaries	Participants Due Refunds	Total
Number as of January 1, 2016	46	-	15	-	3	-	64
New participants	-	-	-	-	-	-	-
Vested terminations	-	-	-	-	-	-	-
Retirements	-	-	-	-	-	-	-
Disability	-	-	-	-	-	-	-
Deceased with beneficiary	-	-	-	-	-	-	-
Deceased without beneficiary	-	-	-	-	-	-	-
Due refunds	-	-	-	-	-	-	-
Lump sum payoffs	-	-	-	-	-	-	-
Rehires/return to active	-	-	-	-	-	-	-
Certain period expired	-	-	-	-	-	-	-
Reclassifications	-	-	-	-	-	-	-
Data corrections	-	-	-	-	-	-	-
Number as of January 1, 2017	46	-	15	-	3	-	64

Demographic Statistics

	January 1		Change
	2017	2016	
<u>Active Participants</u>			
Number	46	46	0.0%
<i>Vested</i>	36	32	
<i>Not vested</i>	10	14	
Average age (years)	58.96	57.96	1.7%
Average service (years)	10.44	9.44	10.6%
Average entry age (years)	48.52	48.52	0.0%
Total payroll*	\$6,625,476	\$6,624,052	0.0%
Average payroll*	\$144,032	\$144,001	0.0%
Total employee contributions with interest	\$7,018,765	\$6,234,876	12.6%
Average employee contributions with interest	\$152,582	\$135,541	12.6%
<u>Vested Former Participants</u>			
Number	0	0	0.0%
Average age (years)	0.00	0.00	
Total employee contributions with interest	\$0	\$0	
Average employee contributions with interest	N/A	N/A	
<u>Service Retirees</u>			
Number	15	15	0.0%
Average age (years)	73.9	72.9	1.4%
Total annual benefits	\$892,311	\$892,311	0.0%
Average annual benefit	\$59,487	\$59,487	0.0%
<u>Disability Retirees</u>			
Number	0	0	0.0%
Average age (years)	0.0	0.0	
Total annual benefits	\$0	\$0	
Average annual benefit	N/A	N/A	
<u>Beneficiaries</u>			
Number	3	3	0.0%
Average age (years)	77.3	76.3	1.3%
Total annual benefits	\$89,010	\$89,010	0.0%
Average annual benefit	\$29,670	\$29,670	0.0%
Participants Due Refunds	0	0	0.0%

* Projected payroll for the upcoming valuation year

Distribution of Male Active Members by Age and by Years of Service

Average Age = 59.7 Average Service = 10.9

Age Last Birthday		Whole Years of Service at Valuation Date						Totals
		0-4	5-9	10-14	15-19	20-24	25-29	
Less than 20	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
20-24	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
25-29	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
30-34	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
35-39	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
40-44	Count	-	-	1	-	-	-	1
	Avg. Salary	-	-	*	-	-	-	*
45-49	Count	4	-	-	-	-	-	4
	Avg. Salary	\$126,750	-	-	-	-	-	\$126,750
50-54	Count	2	-	1	-	-	-	3
	Avg. Salary	*	-	*	-	-	-	*
55-59	Count	4	-	2	-	-	-	6
	Avg. Salary	134,500	-	*	-	-	-	129,333
60-64	Count	1	4	3	8	2	-	18
	Avg. Salary	*	\$138,250	*	\$134,500	*	-	139,611
65-69	Count	-	-	1	3	1	-	5
	Avg. Salary	-	-	*	*	*	-	156,000
70 & Over	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
Totals	Count	11	4	8	11	3	-	37
	Avg. Salary	\$135,909	\$138,250	\$138,375	\$141,455	*	-	\$139,892

Average Salary represents annualized salary earned in 2016 and is not shown for cells with counts less than or equal to three participants.

Distribution of Female Active Members by Age and by Years of Service

Average Age = 55.7 Average Service = 8.5

Age Last Birthday		Whole Years of Service at Valuation Date						Totals
		0-4	5-9	10-14	15-19	20-24	25-29	
Less than 20	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
20-24	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
25-29	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
30-34	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
35-39	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
40-44	Count	1	-	-	-	-	-	1
	Avg. Salary	*	-	-	-	-	-	*
45-49	Count	-	2	-	-	-	-	2
	Avg. Salary	-	*	-	-	-	-	*
50-54	Count	-	1	-	-	-	-	1
	Avg. Salary	-	*	-	-	-	-	*
55-59	Count	1	-	-	-	1	-	2
	Avg. Salary	*	-	-	-	*	-	*
60-64	Count	1	-	-	-	-	-	1
	Avg. Salary	*	-	-	-	-	-	*
65-69	Count	-	-	1	1	-	-	2
	Avg. Salary	-	-	*	*	-	-	*
70 & Over	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
Totals	Count	3	3	1	1	1	-	9
	Avg. Salary	*	*	*	*	*	-	\$134,444

Average Salary represents annualized salary earned in 2016 and is not shown for cells with counts less than or equal to three participants.

Distribution of Total Active Members by Age and by Years of Service

Average Age = 59.0 Average Service = 10.4

Age Last Birthday		Whole Years of Service at Valuation Date						Totals
		0-4	5-9	10-14	15-19	20-24	25-29	
Less than 20	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
20-24	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
25-29	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
30-34	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
35-39	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
40-44	Count	1	-	1	-	-	-	2
	Avg. Salary	*	-	*	-	-	-	*
45-49	Count	4	2	-	-	-	-	6
	Avg. Salary	\$126,750	*	-	-	-	-	\$134,500
50-54	Count	2	1	1	-	-	-	4
	Avg. Salary	*	*	*	-	-	-	142,250
55-59	Count	5	-	2	-	1	-	8
	Avg. Salary	131,400	-	*	-	*	-	126,750
60-64	Count	2	4	3	8	2	-	19
	Avg. Salary	*	\$138,250	*	\$134,500	*	-	140,947
65-69	Count	-	-	2	4	1	-	7
	Avg. Salary	-	-	*	157,500	*	-	149,857
70 & Over	Count	-	-	-	-	-	-	-
	Avg. Salary	-	-	-	-	-	-	-
Totals	Count	14	7	9	12	4	-	46
	Avg. Salary	\$135,571	\$138,857	\$136,222	\$142,167	\$146,000	-	\$138,826

Average Salary represents annualized salary earned in 2016 and is not shown for cells with counts less than or equal to three participants.

Schedule of Pension Recipients Added to and Removed from Rolls

Fiscal Year Ending December 31	Added to Rolls*		Removed from Rolls		Total		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
	Count	Annual Pension Benefits	Count	Annual Pension Benefits	Count	Annual Pension Benefits		
2008	2	\$137,212	0	(\$11,043)	9	\$544,096	37.45%	\$60,455
2009	1	72,878	0	0	10	616,974	13.39%	61,697
2010	3	127,495	2	133,897	11	610,572	-1.04%	55,507
2011	0	0	0	0	11	610,572	0.00%	55,507
2012	0	0	0	0	11	610,572	0.00%	55,507
2013	2	113,010	0	0	13	723,582	18.51%	55,660
2014	3	107,248	0	0	16	830,830	14.82%	51,927
2015	2	150,491	0	0	18	981,321	18.11%	54,518
2016	0	0	0	0	18	981,321	0.00%	54,518

* Includes cost-of-living increases

Pensioners by Age

Average Age Male = 76.2

Average Age Female = 71.8

Average Age Total = 74.5

Age Last Birthday	Males	Females	Total
Under 50	0	0	0
50-54	0	0	0
55-59	0	0	0
60-64	0	1	1
65-69	2	3	5
70-74	2	1	3
75-79	5	0	5
80-84	1	2	3
85 & over	1	0	1
Total	11	7	18

Pensions Awarded in 2016

Average Age = 0.0

Males & Females	
Benefit Amount	Total
Under \$200	0
\$200-\$399	0
\$400-\$599	0
\$600-\$799	0
\$800-\$999	0
\$1,000-\$1,499	0
\$1,500-\$1,999	0
\$2,000-\$2,499	0
\$2,500 & over	0
Total	0
Males & Females	
Age Last Birthday	Total
Under 50	0
50-54	0
55-59	0
60-64	0
65-69	0
70-74	0
75-79	0
80-84	0
85 & over	0
Total	0

Retirees and Disabled Members by Service at Retirement and Years Since Retirement

Average Service at Retirement = 16.9 Average Years Since Retirement = 7.5

Service at Retirement		Years Elapsed Since Retirement							Totals
		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Less than 5	Count	-	-	-	-	-	-	-	-
	Avg. Benefit	-	-	-	-	-	-	-	-
5-9	Count	1	-	-	-	-	-	-	1
	Avg. Benefit	\$3,783	-	-	-	-	-	-	\$3,783
10-14	Count	3	-	1	-	-	-	-	4
	Avg. Benefit	3,839	-	\$3,014	-	-	-	-	3,633
15-19	Count	1	1	1	1	-	-	-	4
	Avg. Benefit	6,927	\$5,046	4,934	\$4,658	-	-	-	5,391
20-24	Count	1	2	1	1	-	-	-	5
	Avg. Benefit	6,831	5,779	5,145	4,998	-	-	-	5,706
25-29	Count	-	1	-	-	-	-	-	1
	Avg. Benefit	-	5,950	-	-	-	-	-	5,950
30-34	Count	-	-	-	-	-	-	-	-
	Avg. Benefit	-	-	-	-	-	-	-	-
35 & Over	Count	-	-	-	-	-	-	-	-
	Avg. Benefit	-	-	-	-	-	-	-	-
Totals	Count	6	4	3	2	-	-	-	15
	Avg. Benefit	\$4,843	\$5,638	\$4,365	\$4,828	-	-	-	\$4,957

Retirees and Disableds by Year of Retirement

January 1, 2017 Total = 15

Year of Retirement	Count
Under 2000	0
2000	1
2001	1
2002	0
2003	0
2004	1
2005	0
2006	1
2007	1
2008	2
2009	1
2010	1
2011	0
2012	0
2013	2
2014	2
2015	2
2016*	0

**May include retirements as of January 1, 2017*

Thirty Year Projected Benefit Payments

Year Ending December 31	Actives	Retirees*	Total
2017	\$ 77,392	\$ 973,436	\$ 1,050,829
2018	218,299	956,416	1,174,715
2019	380,521	938,040	1,318,560
2020	603,157	918,269	1,521,425
2021	853,373	897,062	1,750,436
2022	1,169,740	874,398	2,044,139
2023	1,445,552	850,316	2,295,868
2024	1,728,422	824,873	2,553,296
2025	2,034,776	798,107	2,832,884
2026	2,271,562	770,029	3,041,592
2027	2,519,458	740,658	3,260,116
2028	2,686,779	710,071	3,396,851
2029	2,786,561	678,384	3,464,945
2030	2,894,712	645,718	3,540,430
2031	3,058,909	612,243	3,671,152
2032	3,157,321	578,164	3,735,485
2033	3,175,702	543,696	3,719,398
2034	3,238,687	509,017	3,747,703
2035	3,291,284	474,224	3,765,508
2036	3,312,189	439,442	3,751,632
2037	3,406,257	404,924	3,811,180
2038	3,481,579	370,892	3,852,471
2039	3,474,613	337,506	3,812,120
2040	3,533,250	305,006	3,838,255
2041	3,613,787	273,633	3,887,421
2042	3,590,312	243,636	3,833,947
2043	3,524,889	215,279	3,740,168
2044	3,479,826	188,770	3,668,596
2045	3,384,357	164,295	3,548,652
2046	3,266,971	142,068	3,409,039

* Includes Disabled Members, Beneficiaries, and Deferred Vested Members. Retirement benefit payments for deferred vested members are assumed to commence at age 65.

APPENDIX A

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the January 1, 2017 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 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 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

3.75% per annum

c. Payroll growth rate

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

d. Cost-of-Living adjustment

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

5. Demographic Assumptions

a. Rates Before Retirement

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 2017 using Scale BB					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.03%	0.02%	2.57%	0.85%
25	0.03%	0.02%	0.04%	0.02%	2.57%	0.85%
30	0.04%	0.02%	0.04%	0.02%	2.57%	0.85%
35	0.04%	0.03%	0.07%	0.04%	2.57%	0.85%
40	0.08%	0.04%	0.10%	0.06%	2.57%	0.85%
45	0.11%	0.07%	0.14%	0.10%	3.30%	1.32%
50	0.15%	0.10%	0.20%	0.14%	4.04%	1.82%
55	0.21%	0.16%	0.32%	0.22%	4.48%	2.21%
60	0.36%	0.25%	0.56%	0.38%	4.90%	2.74%
65	0.62%	0.43%	0.97%	0.71%	5.81%	3.68%
70	1.08%	0.80%	1.59%	1.23%	7.62%	5.10%
75			2.73%	2.06%	10.15%	7.07%
80			4.66%	3.36%	13.14%	9.79%
85			8.03%	5.68%	18.24%	13.93%
90			14.10%	9.82%	28.98%	21.07%
95			23.14%	15.80%	39.29%	27.08%
100			32.63%	20.31%	47.75%	35.17%

b. Disability and Withdrawal

Age	Disability		Withdrawal	
	Male	Female	Ultimate	
			Male	Female
20	0.01%	0.01%	5.60%	5.60%
25	0.01%	0.01%	4.20%	4.20%
30	0.01%	0.01%	2.90%	2.90%
35	0.01%	0.01%	2.00%	2.00%
40	0.01%	0.01%	1.50%	1.50%
45	0.01%	0.01%	1.10%	1.10%
50	0.03%	0.03%	0.80%	0.80%
55	0.05%	0.05%	0.60%	0.60%
60	0.07%	0.07%	0.40%	0.40%

c. Retirement Rates

Age	Rate
55	2%
56	2%
57	2%
58	2%
59	2%
60	2%
61	2%
62	2%
63	2%
64	2%
65	15%
66	10%
67	10%
68	10%
69	10%
70	15%
71	15%
72	100%

6. Other Assumptions

- a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.

- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 65.
- f. No benefit data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.
- g. There will be no recoveries once disabled.
- h. Administrative expenses: Average of actual expenses for the prior two years, with each year projected at 6.50% to the valuation date.
- i. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- j. Decrement timing: Decrements of all types are assumed to occur mid-year.
- k. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- l. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- m. Benefit Service: All members are assumed to accrue one year of service each year.

APPENDIX B

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions

Covered Members	Any justice of the supreme court, district judge appointed or circuit court judge appointed to any of those offices on or after July 1, 1998, or who elects to participate in the judicial retirement program under this act in accordance with W.S. 9-3-713.
Final Average Salary	Employee's average annual salary for the highest paid three continuous years of service.
Form of Payment	Monthly benefit for life. Upon death, 50% of the benefit continues to be paid to the beneficiary.
Service Retirement	
Eligibility	Age 70 with continuous service from appointment, age 65 with four or more years of service, or age 60 with 20 or more years of service.
Monthly Benefit	Highest Average Salary times the sum of the following: <ul style="list-style-type: none">a) 4% for each of the first five years of service,b) 3% for each year from and including the sixth year through the fifteenth year of service,c) 2% for each year from and including the sixteenth year through the twentieth year of service,d) 1% for each year thereafter.
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 contributions with interest. An employee who terminates with less than four years of service and has not served continuously from the date of appointment to the age of 70 is only eligible for the lump-sum benefit.
Early Retirement	A member who is at least age 55 with four or more years of service may retire with the benefits described above reduced five percent for each year of retirement prior to age 65.
Disability Retirement	
Eligibility	Retirement by reason of permanent disability after completion of at least 10 years of service.
Monthly Benefit	Service retirement benefit determined as of the disability retirement date.

Pre-Retirement Death

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 benefit equal to the actuarial equivalent of the retirement benefit that would be due the employee as if the member had terminated on the date of death.

Contributions

Employee	9.22% of salary.
Employer	14.50% of salary.
Interest	3.00% 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.
------------------------------------	--