



Spokane Employees'
Retirement System

Comprehensive Annual Report

FOR THE YEAR ENDED DECEMBER 31, 2017



Spokane Riverfront Park
Photography by James Richman

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FOR THE YEAR ENDED DECEMBER 31, 2017



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Introductory Section

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RETIREMENT SYSTEM**
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To the Honorable Mayor and
Spokane City Council
Spokane, WA 99201

This 76th Annual Report consists of five sections: The Introductory Section contains the letter of transmittal and an explanation of the administrative organization of the System; the Financial Section contains the audited financial statements of the System as well as an opinion letter from the System's independent certified public accountants; the Actuarial Section contains the consulting actuary's report along with related actuarial data and statements; the Statistical Section contains tables of significant data pertaining to the operation of the System; and the last section is the Investment Section, which includes information related to the System's investments.

The Retirement System began its first year of operations in 1942 and is managed in accordance with Chapters 3.05 and 4.14 of the Spokane Municipal Code. The retirement plan is an employer-sponsored defined benefit plan that pays a determinable amount to each member who retires after a minimum number of years of service. Refer to the *Summary of Benefit and Contribution Provisions* contained in the Actuarial Section of this report for criteria and a more detailed explanation of the benefits.

The compilation of this report reflects the combined efforts of the staff under the leadership of the Retirement Board. The intention of this report is to provide complete and reliable information to assist in management decisions, to present evidence of compliance with legal provisions and to demonstrate responsible stewardship for the assets contributed by the members and their employer. The accuracy and completeness of the data contained in this report are the sole responsibility of the management of the Spokane Employees' Retirement System.

We would like to express our gratitude to the advisors and the many people who have worked so diligently to assure the successful operation of the System. Lastly, the Director would like to acknowledge the hard work and dedication of the Retirement Department staff. Without them, this report would not be possible.

Respectfully submitted,

Board of Administration,
Spokane Employees' Retirement System
As of December 31, 2017

A handwritten signature in blue ink, appearing to read "Phillip Tencick". The signature is stylized and somewhat cursive.

Phillip Tencick
Retirement Director

Administrative Organization

BOARD OF ADMINISTRATION

Michael F. Coster (Chair)	Elected Employee	WWTP Operations Superintendent, Advanced Waste Water Treatment Plant
Michael Cavanaugh	Elected Employee	Water Service Foreperson, Water Division
James Tieken	Elected Employee	Refuse District Supervisor, Solid Waste Management
Candace Mumm	Council Appointee	City of Spokane, City Council Member
Brian Brill	Council Appointee	Portfolio Manager, Washington Trust Bank
Dean Kiefer	Council Appointee	Chair of Management Department, Eastern Washington University
J.D. Morscheck	Board Appointee	Assistant Professor of Finance, Gonzaga University

INVESTMENT ADVISORY COMMITTEE

Gene Fitzpatrick	President, Spokane City Credit Union
Brian Brill	Portfolio Manager, Washington Trust Bank
Dean Kiefer	Chair, Management Department , Eastern Washington University
Gavin Cooley	Chief Financial Officer, City of Spokane
Phillip Tencick	Retirement Director, Spokane Employees' Retirement System

STAFF

Phillip Tencick	Retirement Director
Christine Shisler	Assistant Retirement Director
Donald G. Brown	Pension Specialist
Timothy Szambelan	Legal Advisor

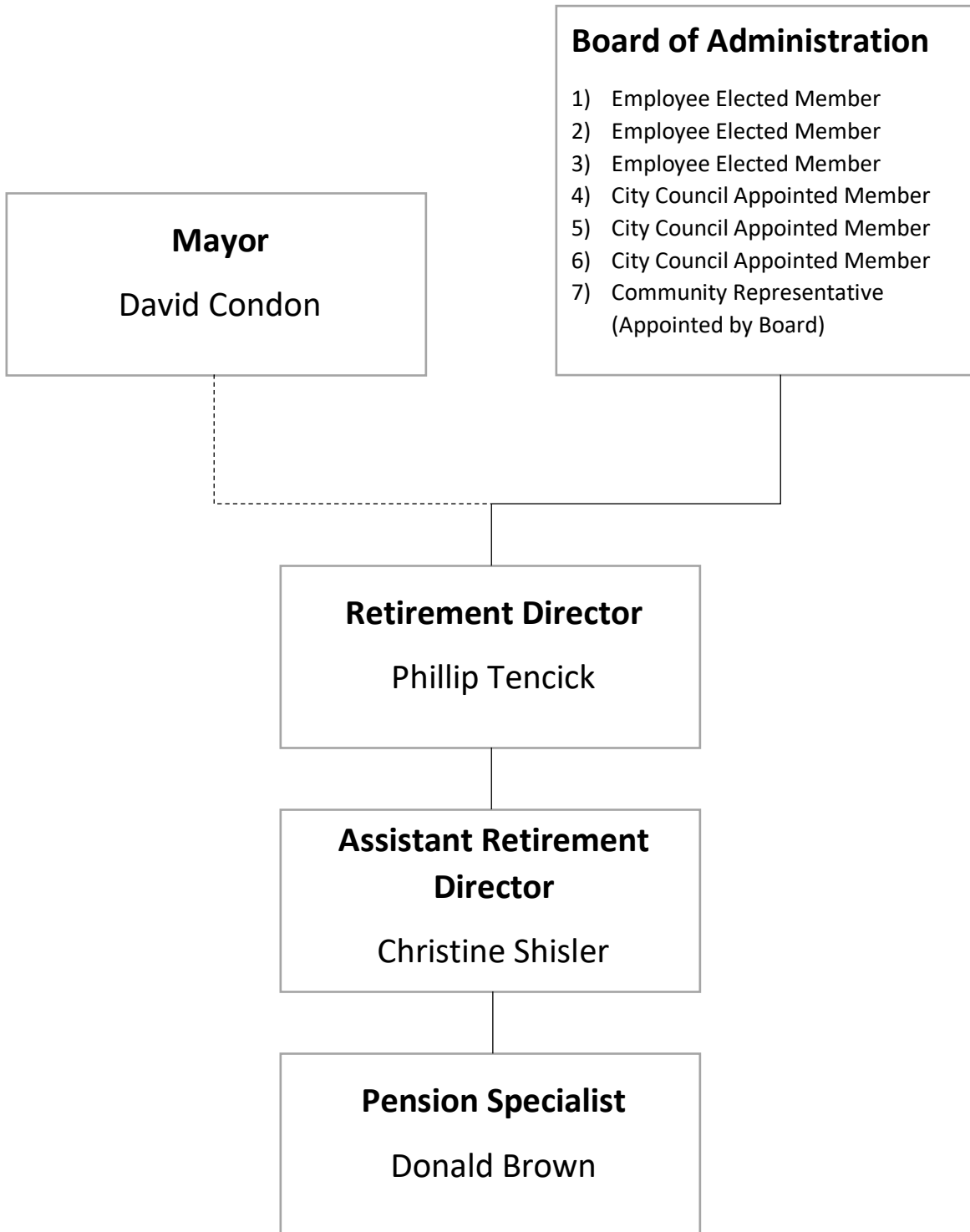
ADVISORY

Auditor	Moss Adams
Actuary	SageView Consulting Group
Investment Consultant	Hyas Group
Custodian	US Bank
Legal Counsel	K&L Gates and Ogletree, Deakins, Nash, Smoak & Stewart, PC

This Annual Report was printed and produced by Sir Speedy Printing, Spokane, WA.

Organization Chart

Retirement Department



Description of Retirement System

The Spokane Employees' Retirement System (SERS) is a defined benefit pension plan that was established July 1, 1942. Membership in SERS is required for all permanent non-uniformed employees of the City of Spokane. SERS provides retirement, death, and disability benefits after a member has vested.

SERS is governed by a Board of Administration of seven members. Three members are appointed by the City Council and three employee members are elected by the SERS membership. The seventh member is appointed by the other six members and may not be an elected official or an employee of the City.

Member contributions are currently 9.0% of total salary-based compensation. Member contributions are deducted from the member's salary and paid into the retirement fund, with credit given to the specific member. The City makes an equivalent 9.0% contribution. The City's contributions are used for funding the overall plan. The contribution rate increased from 8.25% to 9.0% for both the member and the City on December 17, 2017.

This following contains a brief summary of the Retirement System; refer to the *Summary of Benefit and Contribution Provisions* contained in the Actuarial Section of this report for a more detailed explanation of the benefits.

If a member terminates service before vesting, their contributions plus interest are available for withdrawal. If the member is vested and eligible to retire, they can elect to withdraw their contributions or they can elect to receive a monthly pension. If a member is vested and not yet eligible to retire, they can withdraw their contributions or they can vest and receive a pension when they meet the retirement eligibility requirements.

If a member has vested and becomes totally and permanently disabled, the member may be eligible for a disability pension. If the disability is due to an injury incurred on the job, no minimum service is required. The amount of disability pension is calculated based on 1.25% of final average salary and service that would have been creditable had the member worked until normal retirement age.

For employees hired on or before December 31, 2008, their benefits vest with five-years of service. The normal retirement age is 50. The normal retirement benefit is calculated by multiplying 2.15% times the member's years of creditable service times their consecutive two-year monthly salary. Creditable service is capped at 30 years.

For those employees hired between January 1, 2009 and December 31, 2014, their benefits vest with five-years of service. The normal retirement age is 62, with early eligibility when the employee's age plus years of service equals 75. The normal retirement benefit is calculated by multiplying 2.0% times the member's years of creditable service times their consecutive two-year monthly salary. Creditable service is capped at 35 years.

For those employees hired between January 1, 2015 and December 31, 2017, their benefits vest with seven-years of service. The normal retirement age is 65, with early eligibility when the employee's age plus years of service equals 80. The normal retirement benefit is calculated by multiplying 2.0% times the member's years of creditable service times their consecutive three-year monthly salary. Creditable service is capped at 35 years.

For those employees hired on or after January 1, 2018, their benefits vest with seven-years of service. The normal retirement age is 65, with early eligibility when the employee's age plus years of service equals 90 or upon completing 30 years of service and reaching age 50. The normal retirement benefit is calculated by multiplying 2.0% times the member's years of creditable service times their consecutive three-year monthly salary. Creditable service is capped at 40 years. Salary with overtime is capped at 120% for any given year.

There are a number of actuarially equivalent payment options that allow a retiree to provide benefits to his or her beneficiary with a reduction in monthly pension benefits.

Service Retirement Options

In each option, a pension is paid to the retiree for their lifetime. The options provide different types of a remaining cash balance, paid to a beneficiary, upon death of the retiree. Briefly, the options are as follows:

Normal Benefit The total pension is deducted each month from the retiree's total accumulated contributions, leaving any remaining balance to be paid to a beneficiary in one lump-sum upon the retiree's death.

Option "A" An annuity portion is deducted monthly from the retiree's total accumulations, with a lump-sum cash refund of any remaining balance being paid to a beneficiary upon the retiree's death.

Option "B" The death benefit is the same as in Option A, but it is paid in monthly payments until the balance of the total accumulations is exhausted.

Option "C" In case of death within the guaranteed period, a retiree's beneficiary receives the pension for the remainder of a pre-selected time period of 5, 10, 15, or 20 years.

Option "D" Upon the retiree's death, 50% of the pension is continued to the retiree's spouse for life.

Option "E" Upon the retiree's death, 100% of the pension is continued to retiree's spouse for life.

If a retiree elects options "A" through "E," their monthly pension is actuarially reduced to provide a total benefit equivalent to the Normal Benefit.

At the time of retirement, a retiree also has the option of withdrawing their contributions, with interest, in a lump-sum payment and foregoing all rights to any further benefits from SERS.

Additional information can be obtained at www.spokanesers.org

Financial Section

Moss-Adams L.L.P.
Independent Auditor's Report



Report of Independent Auditors

The Trustees
Spokane Employees' Retirement Plan

Report on the Financial Statements

We have audited the accompanying fiduciary financial statements of the Spokane Employees' Retirement System (SERS, System, or Plan), a pension trust fund of the City of Spokane, Washington, which comprise the statements of fiduciary net position as of December 31, 2017 and 2016, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Spokane Employees' Retirement System as of December 31, 2017 and 2016, and the changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matter*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 10 and schedules of changes in the employer's net pension liability and related ratios, employer's contributions, and investment returns on pages 23 through 26 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with managements responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements taken as a whole. The schedules of administrative and investment expenses, on pages 27 through 29, are presented for purposes of additional analysis and are not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates to the underlying accounting and other records used to prepare the financial statements. The schedules of administrative and investment expenses have been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedules of administrative and investment expenses are fairly stated in all material respects in relation to the financial statements as a whole.



Spokane, Washington
June 11, 2018

Spokane Employees' Retirement Plan Management Discussion and Analysis

This section presents management's discussion and analysis of the Spokane Employees' Retirement System's (SERS, System, or Plan) financial performance during the year ended December 31, 2017. Please read it in conjunction with the accompanying financial statements and the related notes.

This report is prepared in accordance with the principles of governmental accounting and reporting promulgated by the Governmental Accounting Standards Board (GASB). Investments are stated at fair market value or net asset value and income includes the recognition of unrealized gains or losses. The accrual basis of accounting is used to record assets, liabilities, revenues, and expenses. Revenue recognition occurs when earned without regard to the date of collection. Expense recognition occurs when the corresponding liabilities are incurred, regardless of payment date. For ease of reading, the dollar amounts that appear in this narrative are typically rounded to the closest one thousand dollars. The basis of contributions to the System is the Entry Age Normal funding method, with current service contributions based on the normal contribution rate determined under the funding method and unfunded prior service amortized as a level percentage of covered payroll over a period of no more than 30 years in accordance with GASB standards. SageView Consulting Group, LLC, the System's actuary, evaluates the funding status of the System.

The financial section contains the following information:

1. **Basic Financial Statements** including:
 - a. Statements of fiduciary net position
 - b. Statements of changes in fiduciary net position
 - c. Notes to financial statements

2. **Required Supplementary Information** including:
 - a. Schedule of changes in the employers' net pension liability and related ratios
 - b. Schedule of employer's contributions
 - c. Schedule of investment returns

3. **Additional Information** including:
 - a. Schedule of administrative expenses
 - b. Schedule of investment expenses

Spokane Employees' Retirement Plan Management Discussion and Analysis

The basic financial statements are described as follows:

- The statements of fiduciary net position show the account balances at year end and includes the net position available for future benefit payments. The Plan's net position is restricted to the payment as shown in the schedule of employers' net pension liability and related ratios.
- The statements of changes in fiduciary net position shows the sources and uses of funds during the year corresponding to the change in net position from the previous year.
- The notes to the financial statements are an integral part of the financial statements and include additional detailed information and schedules to provide a better understanding of the financial statements.

The required supplementary information provides historical data and projected obligations that reflect the long-term nature of the Plan and trends over time.

- Schedule of changes in the employers' net pension liability and related ratios contains the items contributing to the changes in the pension liability and Plan's net position. Ratios comparing the unfunded liability to the Plan's net position and covered-employee payroll are also provided.
- Schedule of employer's contributions contains a history of employee and employer contributions made to the Plan.
- Schedule of investment returns contains a history of the Plan's investment performance on a money-weighted basis.

Financial Highlights

- Net position increased by \$31.3 million (11.3%) during 2017 and increased by \$5.0 million (1.8%) during 2016. Investments returned 15.4% for the year. This more than offsets outflows for net benefit payments (benefit payments and refunds less total contributions) of \$11.2 million. In 2016, investments gained 6.7% and outflows for net benefit payments totaled \$11.3 million.
- Total additions to net position were \$59.3 million in 2017, compared to \$32.0 million in the prior year. For 2017, revenue includes member and employer contributions of \$16.2 million and net investment returns of \$43.1 million. Member and employer contributions increased by \$1.1 million in 2017 compared to an increase of \$371 thousand in 2016. Net investment income, which fluctuates year-to-year depending on market conditions, was \$26.3 million more in 2017 compared to 2016. The investment returns of 15.4% in 2017 were due to strong performance across all asset classes. International equities, domestic equities, and special opportunity investments were the largest contributors to the investment returns during 2017.

Spokane Employees' Retirement Plan Management Discussion and Analysis

Financial Highlights (continued)

- Total plan expenses and payments for 2017 were \$28 million, a 3.9% increase from 2016. Total expense amounts and fluctuations are primarily driven by pension benefit payments, which make nearly 96% of total expenses. Retiree benefits increased by \$1.2 million during 2017 and by \$1.8 million during 2016.

Financial Statements and Analysis

Changes in Plan Net Position

The table below provides a summary of the changes in Plan net position during the years ended December 31:

	2017	2016	2015
Additions			
Employer contributions	\$ 8,113,319	\$ 7,586,362	\$ 7,398,945
Plan member contributions	8,113,319	7,586,362	7,402,905
Miscellaneous revenue	988	-	-
Net investment income (loss)	43,084,584	16,802,274	(3,228,439)
Total additions	59,312,210	31,974,998	11,573,411
Deductions			
Benefits	26,891,785	25,737,515	23,959,198
Refunds of contributions	551,908	729,741	637,822
Net administrative expenses	563,078	477,252	447,921
Total deductions	28,006,771	26,944,508	25,044,941
Net increase (decrease) in net position	31,305,439	5,030,490	(13,471,530)
Net Position restricted for pensions			
Beginning of year	277,331,781	272,301,291	285,772,821
End of year	\$ 308,637,220	\$ 277,331,781	\$ 272,301,291

Spokane Employees' Retirement Plan Management Discussion and Analysis

Revenues – Additions to Net Plan Position

- Both employer and plan participant contributions increased by 6.9% (\$527 thousand) in 2017. In 2016, employer contributions and participant contributions each increased by 2.5% (\$187 thousand and \$183 thousand, respectively). Participant contributions may vary from employer contributions if rehired employees optionally buy-back their creditable service time from a prior withdrawal upon being rehired. Employer and participant contributions are driven by employees' salaries/wages and the contribution rate. Effective December 17, 2017, the contribution rate changed from 8.25% to 9.0% of salary for both parties.
- Net investment return was a \$43.1 million gain in 2017 compared to a \$16.8 million gain in 2016. In 2017, the portfolio's annual return was 15.4% compared to 6.7% in 2016. Markets performed exceptionally well, with all asset classes generating positive returns for the year. International equity was the top performing asset class with a 28.5% return for the year. Domestic equity contributed the largest amount dollar amount to the overall returns with a 32% target allocation and a 19.9% investment return.

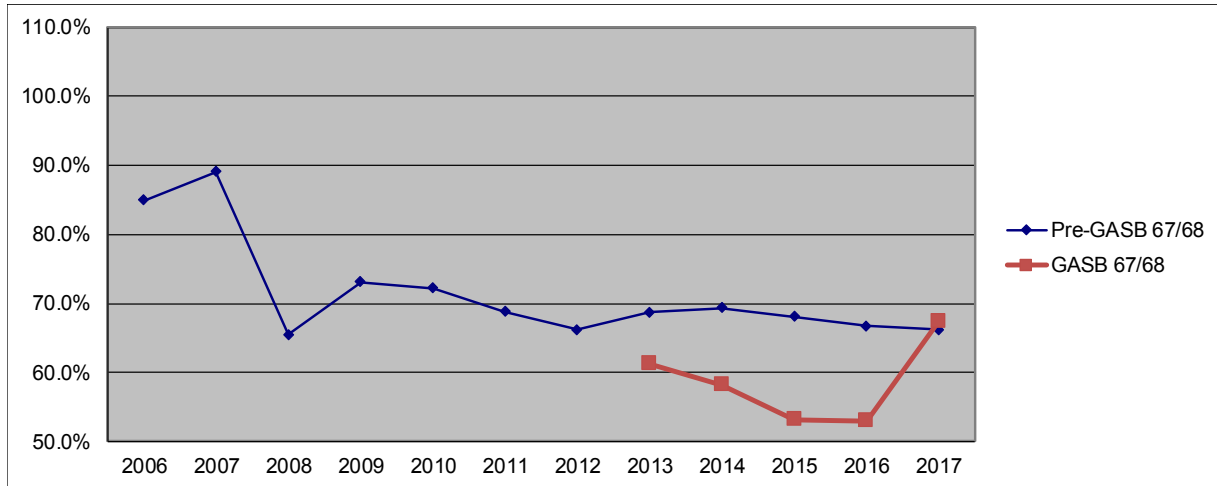
Expenses – Deductions from Net Plan Assets

- Retiree benefits paid increased by \$1.2 million (4.5%) in 2017 and \$1.8 million (7.4%) in 2016. The number of retirees and beneficiaries increased by 34 in 2017 and by 42 in 2016. SERS' active member age is an average of 47.95 years old, which is a slight increase from 47.8 as compared to 2016. Average active participant service has increased slightly from 11.5 years in 2016 to 11.7 years in 2017.
- Refunds of contributions decreased by \$178 thousand (-24.4%) in 2017 compared to an increase of \$92 thousand (14.4%) in 2016. Lump sum withdrawals from the Plan fluctuate from year to year based on the number of participants that leave the system and the average size of withdrawal.
- Net administrative expenses include salaries and benefits for the SERS staff, along with other costs associated with administering the Plan and are shown on the Schedule of Administrative Expenses. Staff and the Board continue to be diligent about Plan operating expenses, which were at 0.18% of net Plan assets and 2.0% of total deductions.

Spokane Employees' Retirement Plan Management Discussion and Analysis

Funding Status

The actuarial accrued liability (AAL) is the actuarial present value of benefits accrued to date, adjusted to reflect future salary increases in accordance with the actuarial assumptions. The AAL funded ratio compares the AAL to Plan assets.



The 2008 drop in funding status was caused by the global financial crisis. Following an initial rebound from the financial crisis in 2009, funding ratios (pre-GASB 67/68) have fallen gradually, as asset gains could not keep pace with increases in the value of future liabilities.

Beginning in 2014, and reported retrospectively, the implementation of GASB No. 67 resulted in a new method for measuring the future value of Plan liabilities. The discount rate for any funding shortfalls moved from the long-term assumed rate of return to the municipal bond borrowing rate for all points in time after fund assets are projected to be depleted. This change in methodology reduced the discount rate from 7.50% to 5.50%, which increased the value of the reported unfunded liability through 2016. The lower discount rate reduced the funding ratio from 69.3% to 58.2% in 2014 when GASB No. 67 was implemented for the Plan. The funding ratio fell as low as 53.0% in 2016 as investment returns did not meet the assumed rate of return for the year and the liability continued to grow.

At the end of 2017, a new tier was added to the Plan that will reduce the normal cost for employees hired on or after January 1, 2018. In addition, the contribution rate for all participants and the City increased to 9.0% on December 17, 2017. The contribution rate is now tied to the Actuarially Determined Contribution (ADC) rate as determined by the Plan's actuary in the annual valuation. These changes were sufficient to eliminate the projected depletion of assets and return the discount rate to the 7.50% assumed rate of return.

Spokane Employees' Retirement Plan Management Discussion and Analysis

Funding Status (continued)

Funds are accumulated from employer and employee contributions and investment earnings, and are used to pay present and future benefit obligations and administrative expenses. Starting December 17, 2017, active members contribute 9.00% of their salaries to the Plan and the City contributes 9.00%, for a total of 18.00%. Previously, from September 1, 2014, active members contribute 8.25% of their salaries to the Plan and the City contributes 8.25% for a total of 16.50%. Prior to that, both parties contributed 7.75% of salary for a total contribution of 15.50%. The current 9.00% employer and employee contribution rate is expected to allow the Plan to meet its continue improving its funded position. The contribution rate will be increased annually based on the ADC as determined by the Plan's actuary.

Retiree Benefit Adjustment

The SERS Board of Administration considers issuing an ad hoc adjustment for retiree benefits each year. The Board can grant an ad hoc adjustment if the AAL funded ratio is 90% or greater and remains above 90% after the ad hoc adjustment is granted. The AAL funded ratio was less than 90% as of December 31, 2017. The last ad hoc retiree adjustment occurred in 2001. Based on the current AAL funded ratio, the Plan does not anticipate making ad hoc adjustments. It will take continued significant favorable experience in the investment markets or an increase in contribution levels to raise the funded ratio above the ad hoc threshold.

Spokane Employees' Retirement Plan Management Discussion and Analysis

Investment Activities

One-year returns on asset classes and comparative benchmarks are presented in the table below. Negative returns are displayed in brackets and the policy index and benchmarks are in italics.

	Investment Return	
	2017	2016
Total portfolio	15.40%	6.71%
<i>Policy Index</i>	15.30%	9.87%
Capital Preservation	5.85%	8.12%
<i>Capital Preservation Policy Index</i>	4.56%	5.43%
Total Return Bonds ¹	4.20%	-2.47%
<i>Barclays US Aggregate Bond Index</i>	3.54%	2.65%
High Yield Bonds	8.22%	16.67%
<i>Barclays US Corporate High Yield Index</i>	7.50%	17.13%
Absolute Return	5.33%	7.75%
<i>HFRI FOF Conservative Index</i>	4.01%	1.90%
Domestic Equity	19.86%	10.91%
<i>Domestic Equity Policy Index</i>	20.11%	13.92%
US Large Cap Equities	22.54%	8.24%
<i>S&P 500 Index</i>	21.83%	11.96%
US Small/Mid Cap Equities	14.91%	15.37%
<i>Russell 2500 Index</i>	16.81%	17.59%
International Equity	28.45%	3.91%
<i>International Equity Policy Index</i>	29.35%	5.34%
International Large Cap Equities	27.50%	4.02%
<i>MSCI ACWI Ex-US Index</i>	27.19%	4.50%
International Small/Mid Cap Equities	37.08%	-0.68%
<i>MSCI ACWI Ex-US Small Cap Index</i>	31.65%	3.91%
Emerging Market Equities	23.58%	7.03%
<i>MSCI EM Free Index</i>	37.28%	11.19%
Long Biased Hedge Funds	1.19%	-2.99%
<i>HFRI FOF Composite Index</i>	7.69%	0.52%
Opportunistic Credit	7.08%	14.52%
<i>HFRI Distressed Restructuring Index</i>	6.66%	15.18%
Real Estate	10.01%	8.09%
<i>NCREIF ODCE Index</i>	7.62%	8.76%
Special Opportunities	25.32%	-21.90%
<i>Russell 3000 Index</i>	21.13%	12.73%

¹ Total Return Bonds is a new mandate as of September 1, 2016. Returns for 2016 are since inception.

Spokane Employees' Retirement Plan Management Discussion and Analysis

Investment Activities (continued)

The investments of the System are governed by the "prudent investor rule." The prudent investor rule, as set forth by state statute, establishes a standard for all fiduciaries, which includes anyone who has authority with respect to the fund.

Total investments, valued at fair market value and net asset value, increased in 2017 by \$29.1 million, which is composed of investment returns of \$43.1 million (15.4%) and offsetting sales of \$11.8 million to fund expenditures. In 2016, total investments increased \$6.3 million, which is composed of investment returns of \$16.8 million (6.7%) and offsetting sales of \$11.8 million to fund expenditures. The overall return for 2017 was attributable to broad appreciation across all asset classes. The equity and special opportunity assets classes were the largest contributors to the overall performance and were aided by strong equity market gains fueled by continued macro-economic strength and favorable policy. Long biased hedge funds were the weakest performer, returning only 1.1% for the year as the short-positions in the portfolio offset the equity returns. SERS continued to utilize alternative investments to provide diversification and reduce short-term volatility. These strategies provided solid returns in 2017, but were unable to keep pace with the public markets for the year. Over a full market cycle, SERS expects these strategies to provide equity-like returns and lower portfolio volatility due to their low correlations with traditional equity and fixed income markets.

The System is a long-term investor with a perpetual investment horizon, anticipating ongoing investment cycles with both good and bad years for financial markets. Investments are diversified to reduce investment risk and mitigate the risk of underperforming the actuarial rate of return. While annual market performance is unlikely to match the actuarial rate of return in any given year, long-term returns are expected to be in line with the assumption based on the diversified nature of the portfolio. Each alternative investment that SERS enters into has been carefully studied by the System's independent investment consultant and has been reviewed by the Retirement Director and the Board. The asset allocation study that was modeled by the independent consultant and completed in 2016 demonstrated that alternative assets have low correlations to traditional asset classes and are expected to add value to the portfolio over time. The Board believes the use of alternative investments is a prudent approach to managing risk.

Contacting the Spokane Employees' Retirement System

If you have questions about this report or need additional information, please contact:

Spokane Employees' Retirement System
City Hall – Suite 604
808 W. Spokane Falls Blvd.
Spokane, WA 99201
www.spokanesers.org
509.625.6330

Spokane Employees' Retirement Plan
Statements of Fiduciary Net Position
December 31, 2017 and 2016

	<u>2017</u>	<u>2016</u>
Assets		
Cash	\$ 32,606	\$ 247,764
Short-term investments	<u>896,869</u>	<u>955,792</u>
Total cash and short-term investments	<u>929,475</u>	<u>1,203,556</u>
Receivables:		
Investment income	193,877	190,309
Redemption receivable	2,500,000	-
Other	<u>1,674</u>	<u>748</u>
Total receivables	<u>2,695,551</u>	<u>191,057</u>
Investments:		
U.S. fixed income securities	47,390,265	42,647,067
International/global fixed income securities	815,292	826,120
U.S. equities	104,540,678	87,529,212
International/global equities	53,815,203	56,796,776
Real estate	27,096,456	23,739,250
Alternatives	<u>71,238,891</u>	<u>64,250,771</u>
Total investments	<u>304,896,785</u>	<u>275,789,196</u>
Capitalized software, net	<u>247,086</u>	<u>264,735</u>
Total assets	<u>308,768,897</u>	<u>277,448,544</u>
Liabilities		
Payables:		
Accounts payable	79,726	71,226
Current portion employee salaries and benefits	17,884	16,320
Employee leave benefits	21,968	17,017
Other liabilities	<u>12,099</u>	<u>12,200</u>
Total liabilities	<u>131,677</u>	<u>116,763</u>
Net position restricted for pensions	<u><u>\$ 308,637,220</u></u>	<u><u>\$ 277,331,781</u></u>

Spokane Employees' Retirement Plan
Statements of Changes in Fiduciary Net Position
Years Ended December 31, 2017 and 2016

	<u>2017</u>	<u>2016</u>
Additions		
Contributions:		
Employer	\$ 8,113,319	\$ 7,586,362
Member	8,113,319	7,586,362
Miscellaneous revenue	988	-
	<u>16,227,626</u>	<u>15,172,724</u>
Total contributions		
Investment income:		
Net appreciation in fair value of investments	39,406,448	11,110,583
Interest and dividends	4,127,973	6,072,656
Less investment expense	<u>(449,837)</u>	<u>(380,965)</u>
Net investment income	<u>43,084,584</u>	<u>16,802,274</u>
Total additions	<u>59,312,210</u>	<u>31,974,998</u>
Deductions		
Benefit payments	26,891,785	25,737,515
Refunds of member contributions	551,908	729,741
Administrative expenses, net of administrative income	<u>563,078</u>	<u>477,252</u>
Total deductions	<u>28,006,771</u>	<u>26,944,508</u>
Net increase (decrease) in net position	31,305,439	5,030,490
Net position restricted for pensions		
Beginning of year	<u>277,331,781</u>	<u>272,301,291</u>
End of year	<u>\$ 308,637,220</u>	<u>\$ 277,331,781</u>

Spokane Employees' Retirement Plan Notes to Financial Statements

Note 1 – Plan Description

Plan administration – The Spokane Employees' Retirement System (SERS, System, or Plan) is a single employer defined benefit pension plan covering employees of the City of Spokane, administered in accordance with Chapters 3.05 and 4.14 of the Spokane Municipal Code (SMC).

SERS is a pension trust fund of the City of Spokane and is presented as a blended component unit within the fiduciary fund of the City's comprehensive annual financial report. SERS has separate legal standing. The City is financially accountable for SERS because a financial burden is imposed on the City using the criteria of financial accountability. SERS has determined there are no entities that require inclusion within its financial statements.

All permanent employees of the City, including employees of the Plan, are eligible to belong to SERS with the exception of police and firefighters who are members of the State Law Enforcement Officers and Firefighters' Retirement System.

Management of SERS is vested in SERS Board, which consists of seven members—three members are elected by active employee Plan members, three members are appointed by the Spokane City Council, and one member (who may not be an elected official or employee of the City) is appointed by the other six Board members.

Plan membership – At December 31, 2017, pension Plan membership consisted of the following:

Retirees or beneficiaries currently receiving benefits	1,376
Inactive plan members entitled to but not yet receiving benefits	113
Active plan members	<u>1,444</u>
	<u><u>2,933</u></u>

Benefits provided – SERS provides retirement, death, and disability benefits. All employees hired before January 1, 2009, who participate in SERS, are eligible for service retirement after completing five years of service if they are age 50 or older. Their retirement benefits are calculated by multiplying 2.15% of the member's highest consecutive two-year average salary by the member's years of creditable service, not to exceed 64.50%. Employees hired prior to January 1, 2009, have a choice at retirement of choosing a 2.15% multiplier with a service cap of 30 years or a 2.00% multiplier with a service cap of 35 years.

All employees hired on or after January 1, 2009, who participate in SERS, are eligible for service retirement after completing five years of service and are age 50 or older; however, this group of employees must have their age, plus years of service, equal to 75 before they can draw a pension. Their retirement benefits are calculated by multiplying 2.00% of the member's highest consecutive two-year average salary by the member's years of creditable service, to a maximum of 70.00%. In addition, the normal retirement age for these employees is 62.

Spokane Employees' Retirement Plan

Notes to Financial Statements

Note 1 – Plan Description (continued)

All employees hired on or after January 1, 2015, who participate in SERS, are eligible for service retirement after completing seven years of service and are age 50 or older; however, this group of employees must have their age plus years of service equal to 80 before they can draw a pension. Their retirement benefits are calculated by multiplying 2.00% of the member's highest consecutive three-year average salary by the member's years of creditable service, to a maximum of 70.00%. In addition, the normal retirement age for these employees is 65.

All employees hired on or after January 1, 2018, who participate in SERS, are eligible for service retirement after completing seven years of service and reach the normal retirement age of 65. Early retirement, with no reduction of benefits, may be elected when an employee's age plus years of service equal to 90 before or if they are age 50 or older and have completed 30 years of service. A reduced early retirement may be elected with benefits reduced by 2.5% per year for each year before the retiree would be eligible for full retirement. Their retirement benefits are calculated by multiplying 2.00% by the member's years of creditable service times the member's highest consecutive three-year average salary, with an annual cap on overtime plus base pay equal to 120% of base pay. The maximum of retirement factor is 80.00%.

For all employee groups, benefits may be reduced on an actuarially equivalent basis according to the retirement annuity option selected for themselves and their beneficiaries.

The SERS Board of Administration considers issuing an ad hoc adjustment for retiree benefits each year. The Board can grant an ad hoc adjustment if the Actuarial Accrued Liability (AAL) funded ratio is 90% or greater and remains above 90% after the ad hoc adjustment is granted. The AAL funded ratio was less than 90% as of December 31, 2017. The last ad hoc retiree adjustment occurred in 2001. Based on the current AAL funded ratio, it will take continued significant favorable experience in the investment markets or an increase in contribution levels to raise the funded ratio above the ad hoc threshold.

Note 2 – Summary of Significant Accounting Policies

New accounting standard – Governmental Accounting Standards Board (GASB) Statement No. 72, *Fair Value Measurement and Application* (GASB 72), was implemented for the year ending December 31, 2016. GASB 72 establishes a hierarchy of inputs to valuation techniques used to measure fair value for financial reporting purposes. Additionally, GASB 72 provides guidance on applying fair value to certain investments and disclosures related to all fair value measurements. Implementation of GASB 72 did not have an impact on the beginning net position of any fund. Refer to Note 4 in the Notes to the Financial Statements for additional disclosure of the requirements of this statement.

Basis of accounting – The financial statements were prepared using the accrual basis of accounting. Employee and employer contributions are recorded as revenues in the period in which payroll is due and expenses are recorded when the corresponding liabilities are incurred. Interest income is recognized when earned and dividend income is recognized on the ex-dividend date.

Spokane Employees' Retirement Plan Notes to Financial Statements

Note 2 – Summary of Significant Accounting Policies (continued)

Use of estimates – In preparing the Plan's financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Methods used to value investments – All fixed income, common stock, and short-term investments are listed at fair market value. Short-term investments are reported at cost, which approximates fair value. Fixed income securities and common stock traded on national exchanges are valued at fair market value based on the closing price of the securities. Investments that do not have an established market are reported at estimated fair value.

Certain investments, such as mutual funds and limited partnerships, net their management fees before the fund itself reports net investment income for the period. Investment fees detailed in the Schedule of Investment Expenses represent cash payments made to money managers and other investment professionals. Mutual fund and limited partnership fees are not reflected in this schedule; however, investment expenses are netted against investment income in the statement of changes of Plan net position to arrive at a net investment income amount.

Investments are exposed to various risks, such as interest rate, market, credit, and regulatory risk. Due to the level of risk associated with certain investments, it is at least reasonably possible that changes in the values of investments will occur in the near term and that such changes could materially affect total net position and the amounts reported in the statements of fiduciary Plan net position.

Note 3 – Deposits and Investments

Deposits – The Federal Deposit Insurance Corporation (FDIC) insures the cash deposits up to \$250,000 per member of the System. As provided by State of Washington RCW 43.84, the Washington Public Deposit Protection Commission (PDPC) collateralizes deposits in excess of \$100,000.

Investment policy – The Plan's policy regarding the allocation of invested assets is established, and may be amended, by a majority vote of the SERS Board. It is the policy of the SERS Board to pursue an investment strategy that meets the projected return requirements while minimizing volatility by diversifying the portfolio across a broad selection of distinct asset classes. The Plan's investment policy limits the use of cash equivalents to meeting liquidity requirements and reviews rebalancing needs at least quarterly. The investment policy was updated during the reporting period to reflect the new target allocations resulting from an asset allocation study.

Spokane Employees' Retirement Plan

Notes to Financial Statements

Note 3 – Deposits and Investments (continued)

The following was the Board's target asset allocation as of December 31, 2017:

Asset Class	Target Allocation
Domestic Equites	32%
Capital Preservation	23%
International Equities	22%
Real Estate	9%
Long Biased	7%
Opportunistic Credit	7%
Special Opportunities ¹	0%
Total	100%

¹ By policy, Special Opportunities may be up to 10%

Rate of return – For the year ended December 31, 2017, the annual money-weighted rate of return on pension Plan investments, net of pension Plan investment expense, was 15.4%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

The long-term expected rate of return on pension Plan investments was determined using statistical methods to determine the best-estimate future real rate of return (net of pension Plan investment expense and inflation) based on long-term performance of the major asset classes. These returns are used to determine the estimated portfolio return based on the target asset allocation percentage of each asset class. Best estimates of geometric real rates of return for each major asset class included in the pension Plan's target asset allocation as of December 31, 2017, are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return
Domestic Equites	6.5%
Capital Preservation	1.9%
International Equities	5.9%
Long Biased	4.0%
Opportunistic Credit	7.0%
Real Estate	2.2%

Spokane Employees' Retirement Plan Notes to Financial Statements

Note 3 – Deposits and Investments (continued)

Discount rate – The discount rate used to measure the total pension liability was 7.5%. The projection of cash flows used to determine the discount rate assumed that Plan member contributions will be made at the current 9.0% contribution rate and that City contributions will be made at the same rate. GASB No. 67 requires the use of a blended discount rate to the extent future contributions are not projected to be sufficient to provide future benefits for the current closed group of Plan participants. If that is the case, the expected long-term rate of return on Plan assets (7.50%) is used for the period where assets are projected to be sufficient and the current yield on the 20-year AA municipal bonds is used thereafter.

Sensitivity of the net pension liability to changes in the discount rate – The following presents the net pension liability of SERS, calculated using the blended discount rate of 7.5%, as well as what SERS's net pension liability would be if it were calculated using a discount rate that is 1–percentage–point lower (6.5%) or 1–percentage–point higher (8.5%) than the current rate:

	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
Plan's net pension liability	\$198,000,057	\$149,482,403	\$108,110,636

Investments – The Spokane Employees' Retirement System's investment management policy is set by the Board of Administration. The investment policy sets strategic asset allocation targets and ranges for all approved asset classes. SERS' investments are governed by an investment standard known as the "prudent person rule." The prudent person rule, as set forth by state statute, establishes a standard for all fiduciaries, which includes anyone who has authority with respect to the Plan.

Investments of the pension trust funds are reported at fair value. The Board of Administration maintains a formal Statement of Investment Policy, which addresses governing provisions and additional guidelines for the investment process. In fulfilling its responsibilities, the Board of Administration has contracted with investment managers, a custodian, and an independent investment consultant. Investment manager contracts include specific guidelines regarding the investments under management. All investments are held in custody. The independent investment consultant monitors the fund on a regular basis and provides quarterly reports to staff and the Board.

Spokane Employees' Retirement Plan

Notes to Financial Statements

Note 3 – Deposits and Investments (continued)

The Board has an asset allocation policy that includes allocations to alternative investments. The term “alternative investments” encompasses a broad category of investments other than traditional asset classes of equities, fixed income, and real estate. Funding of these investments began in 2007 and continues on an ongoing basis. Each alternative investment that SERS enters into has been studied carefully by the System’s independent investment consultant, reviewed by staff, and approved by the Board. The asset allocation study that was modeled by the independent consultant demonstrated the alternative assets’ can add value to the portfolio over time through diversification and higher expected returns. The Chief Investment Officer (CIO) and Board believes the use of alternative investments increases the expected return of the Plan compared to investing only in traditional asset classes.

Credit risk – Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to the System. Although the SERS’ Investment Policy does not specifically address credit risk, this risk is mitigated by closely monitoring the credit quality ratings of its fixed income portfolios and by setting criteria for fixed income manager selection. SERS’ fixed income assets are comprised of one institutional class mutual fund and one separately managed account targeting different levels of credit risk.

Concentration of credit risk – SERS has no holdings by an issuer that represent five percent or more of SERS’ investments. SERS’ holdings in organizations that manage five percent or more of the Plan’s fiduciary net position at December 31, 2017, were:

<u>Organization</u>	<u>% of Net Position</u>
Hotchkis & Wiley	12.9%
Sterling Capital Management	9.6%
Artisan Partners	7.0%
American Funds	7.0%
Vanguard Funds	6.6%
MFS Investment Management	5.9%
Jackson Square	5.2%
Evanston Capital Management	5.0%
OrbiMed Advisors	5.0%

Custodial credit risk – Custodial credit risk is the risk that in the event of a financial institution or bank failure, SERS would not be able to recover the value of its deposits and investments that are in the possession of an outside party. Under GASB No. 40, *Deposit and Investment Risk Disclosures Guidelines*, SERS does not have exposure to custodial credit risk.

Spokane Employees' Retirement Plan Notes to Financial Statements

Note 3 – Deposits and Investments (continued)

Interest rate risk – Interest rate risk is the greatest risk faced by an investor in the debt securities market. The price of a debt security typically moves in the opposite direction of the change in interest rates. Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Although the SERS' Investment Policy does not specifically address interest rate risk, the System's fixed income portfolio is professionally managed with an expected range of interest rate risk within the portfolio. In addition, the portfolio is closely monitored by the independent consultant and the staff.

The table below shows the System's fixed income assets by investment type, average effective maturity and market value as of December 31, 2017:

Asset	Fair Value	Less than 1 Year	1-5 Years	6-10 Years	More than 10 Years
Fixed Income Mutual Funds	\$ 24,686,690	\$ -	\$ 24,686,690	\$ -	\$ -
Corporate notes and bonds	9,291,350	-	3,117,642	2,750,494	3,423,214
Asset backed securities	6,155,812	-	2,245,690	921,726	2,988,396
Governmental CMOs	2,820,460	-	-	93,155	2,727,305
Municipal bonds	1,665,983	-	920,844	555,754	189,386
Mortgage backed governmental passthrough	968,972	-	-	405,600	563,372
U.S. government treasuries	2,616,292	-	1,849,591	-	766,701
	<u>\$ 48,205,558</u>	<u>\$ -</u>	<u>\$ 32,820,455</u>	<u>\$ 4,726,730</u>	<u>\$ 10,658,373</u>

Foreign currency risk – Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. At December 31, 2017, 25.6% of the System's portfolio is invested in foreign issued securities, which primarily consist of equities, fixed income, and alternative investments. The SERS' Investment Policy does not specifically address foreign currency risk; however, the System considers foreign currency risk during the selection and monitoring process of fund managers. The fair market value of the foreign investments as of December 31, 2017, were:

	<u>Total Investments</u>	<u>US Issues</u>	<u>Foreign Issues</u>	<u>% Foreign</u>
Cash	\$ 896,869	\$ 896,869	\$ -	0.0%
Fixed Income	48,205,558	47,159,628	1,045,930	2.2%
Equities	158,355,880	96,908,155	61,447,725	38.8%
Real Estate	27,096,456	26,857,023	239,433	0.9%
Alternatives	71,238,892	55,571,112	15,667,779	22.0%
Total	<u>\$ 305,793,654</u>	<u>\$ 227,392,787</u>	<u>\$ 78,400,867</u>	<u>25.6%</u>

Spokane Employees' Retirement Plan

Notes to Financial Statements

Note 4 – Fair Value Measurement

Investments measured and reported at fair value are classified according to the following hierarchy, in accordance with GASB Statement 72 – *Fair Value Measurement and Application*:

- Level 1 – Quoted prices for an identical asset in an active market
- Level 2 – Market value where prices are determined using observable inputs
- Level 3 – Market value where prices are determined using unobservable inputs
- NAV – Net Asset Value (NAV) is used as a practical expedient where the investment does not have a readily determinable fair value and the investee is an investment company within the scope of Accounting Standards Codification (ASC) Topic 946, *Financial Services – Investment Companies*

The categorization of investments within the hierarchy is based upon the pricing transparency of the instrument and should not be perceived as the particular investment's risk.

Fixed income and equity investments classified as Level 1 in the fair value hierarchy are valued directly from a predetermined primary external pricing vendor.

Investments classified as Level 2 represent proportional ownership in a Collective Investment Trust (CIT). All assets in the CIT have observable prices in active markets, with the fair value of the CIT representing a proportionate share of all underlying assets held in the CIT.

The following table presents fair value measurements as of December 31, 2017:

	Fair Value	Level 1	Level 2	Level 3	NAV
Cash Equivalents	\$ 896,869	\$ 896,869	\$ -	\$ -	\$ -
US Government	6,405,724	6,405,724	-	-	-
US Corporate Fixed Income	8,476,057	8,476,057	-	-	-
International Fixed Income	815,293	815,293	-	-	-
Asset Backed Securities	6,155,812	6,155,812	-	-	-
Municipal Bonds	1,665,983	1,665,983	-	-	-
Fixed Income Mutual Funds	24,686,690	24,686,690	-	-	-
Total Fixed Income	48,205,558	48,205,558	-	-	-
US Common Stock	20,973,308	20,973,308	-	-	-
International Common Stock	937,517	937,517	-	-	-
Equity Mutual Funds	112,771,785	112,771,785	-	-	-
Total Equities	134,682,610	134,682,610	-	-	-
Real Estate	17,100,122	-	-	-	17,100,122
Alternatives	104,908,495	-	18,144,669	-	86,763,827
Total Investments	\$ 305,793,654	\$ 183,785,037	\$ 18,144,669	\$ -	\$ 103,863,949

Spokane Employees' Retirement Plan Notes to Financial Statements

Note 4 – Fair Value Measurement (continued)

The valuation method for investments measured at the NAV per share, or equivalent, is presented in the table below:

	Net Asset Value (NAV)	Unfunded Commitments	Redemption Frequency	Redemption Notice
Equity Fund	\$ 15,524,935	\$ -	Monthly, Annually	15-90 Days
Long/Short Hedge Fund	32,131,411	-	Quarterly	60-65 Days
Real Estate Fund	17,100,122	2,330,152	N/A	N/A
Absolute Return Hedge Fund	23,427,529	-	Monthly, Quarterly, Semi-Annual	30-45 Days
Closed-End Hedge Fund	5,385,761	2,125,357	N/A	N/A
Fixed Income Fund	10,294,191	-	Quarterly	90 Days
Total Investments Valued at NAV	\$ 103,863,949	\$ 4,455,509		

Equity Fund – One international fund and one US fund that invest long-only in less liquid markets seeking to capture an illiquidity premium. The international fund is a fund of funds and is valued based on the net asset value provided for each of the underlying units. The US fund unit net asset value is based on the value of the underlying holdings.

Long/Short Hedge Fund – Three funds that invest long and short to generate outsize risk-adjusted returns. Two funds are valued at net asset value of units held based on underlying holdings. One fund is a fund of funds and is valued based on the net asset value provided for each of the underlying units.

Real Estate Fund – Five funds that invest primarily in commercial real estate properties and debt instruments. The fair values of these funds has been determined using net assets valued based on the appraised value of the holdings. These funds are not eligible for redemption. Distributions are received as underlying investments within the funds are liquidated, which on average can occur over the span of 5 to 10 years.

Absolute Return Hedge Fund – Four funds that seek to generate consistent positive returns with low volatility and low net market exposure. Each fund's unit net asset value is based on the value of the underlying holdings.

Closed-end Hedge Fund – One fund that invests primarily in medical royalty streams or securities associated with the royalties. The fair value of the fund is determined using discounted cash flow models based on expected future cash flows. The fund is not eligible for redemption. Distributions are received as underlying investments within the fund generates cash flows, which on average can occur over the span of 5 to 10 years.

Fixed Income Fund – One fund that invests less liquid or distressed debt securities. The US fund unit net asset value is based on the value of the underlying holdings.

Spokane Employees' Retirement Plan

Notes to Financial Statements

Note 5 – Contributions Required and Contributions Made

Member and employer contribution rates are established by City Code, Chapter 4.14. Effective December 17, 2017, member contributions are 9.0% of eligible compensation and are deducted from the member's salary and paid into the retirement fund; the City contributes 9.0% of eligible compensation for a combined total of 18.0%. Previously, the contribution rate was 16.50% of payroll (8.25% of pay paid by the employee, 8.25% of pay paid by the City).

Contribution rates are reviewed annually to determine if they meet the Actuarially Determined Contribution (ADC). If the contribution rate is less than the ADC, the contribution rate shall be increased by up to 1.0% per year for both the employee and employer. It is contemplated that over the long term, the contribution by the City will, when added to the member's contribution, plus other revenues, be enough to properly fund the retirement benefits set forth.

Required Supplementary Information

**Spokane Employees' Retirement Plan
Required Supplementary Information
Schedule of Changes in the Employer's Net Pension Liability and Related Ratios**

	2017	2016	2015	2014
Total pension liability				
Service cost	\$ 13,133,393	\$ 12,896,547	\$ 12,384,960	\$ 11,405,611
Interest	29,336,782	27,443,176	26,359,257	25,718,424
Changes of benefit terms	165,092	-	-	86,298
Differences between expected and actual experience	(3,830,239)	12,381,445	6,483,011	18,507,784
Changes of assumptions	(76,976,691)	(14,542,266)	-	-
Benefit payments, including refunds of member contributions	(27,443,693)	(26,467,256)	(24,597,020)	(22,884,026)
Net change in total pension liability	(65,615,356)	11,711,646	20,630,208	32,834,091
Total pension liability—beginning	523,734,979	512,023,333	491,393,125	458,559,034
Total pension liability—ending (a)	<u>\$ 458,119,623</u>	<u>\$ 523,734,979</u>	<u>\$ 512,023,333</u>	<u>\$ 491,393,125</u>
Plan fiduciary net position				
Contributions—employer	\$ 8,113,319	\$ 7,586,365	\$ 7,398,945	\$ 6,822,279
Contributions—member	8,113,319	7,586,362	7,402,905	6,822,279
Net investment income	43,085,572	16,802,274	(3,228,439)	14,497,901
Benefit payments, including refunds of member contributions	(27,443,693)	(26,467,256)	(24,597,020)	(22,884,026)
Administrative expense	(563,078)	(477,252)	(447,921)	(386,713)
Net change in plan fiduciary net position	31,305,439	5,030,490	(13,471,530)	4,871,720
Plan fiduciary net position—beginning	277,331,781	272,301,291	285,772,821	280,901,101
Plan fiduciary net position—ending (b)	<u>\$ 308,637,220</u>	<u>\$ 277,331,781</u>	<u>\$ 272,301,291</u>	<u>\$ 285,772,821</u>
Plan's net pension liability—ending (a) – (b)	<u>\$ 149,482,403</u>	<u>\$ 246,403,195</u>	<u>\$ 239,722,042</u>	<u>\$ 205,620,304</u>
Plan fiduciary net position as a percentage of the total pension liability	67.4%	53.0%	53.2%	58.2%
Covered-employee salaries, as of December 31	\$ 102,844,614	\$ 102,378,550	\$ 93,899,096	\$ 89,034,522
Plan's net pension liability as a percentage of covered-employee salaries	145.30%	240.70%	255.30%	230.90%

Notes to Schedule:

Legislative and administrative changes: The System added a new benefit tier for employees hired on or after January 1, 2018. The details of the tier are included in the "Benefits Provided" of Note 1 to the Financial Statements. Additionally, the contribution rate for all participants and the City increased to 9.0% on December 17, 2017. The contribution rate is now tied to the Actuarially Determined Contribution (ADC) rate as determined by the Plan's actuary in the annual valuation.

**Spokane Employees' Retirement Plan
Required Supplementary Information
Schedule of Employer's Contributions**

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially determined contribution	\$ 9,765,949	\$ 9,853,762	\$ 9,069,276	\$ 8,292,066	\$ 8,237,317	\$ 8,325,936	\$ 10,010,885	\$ 8,955,055	\$ 8,267,280	\$ 8,826,967
Contributions in relation to the actuarially determined contribution	8,113,319	7,586,362	7,398,945	6,822,279	6,715,376	6,937,750	6,799,258	6,580,795	6,474,432	4,875,443
Contribution deficiency (excess)	\$ 1,652,630	\$ 2,267,400	\$ 1,670,331	\$ 1,469,787	\$ 1,521,941	\$ 1,388,186	\$ 3,211,627	\$ 2,374,260	\$ 1,792,848	\$ 3,951,524
Covered-employee payroll	\$ 98,343,261	\$ 91,955,903	\$ 89,684,182	\$ 86,139,886	\$ 86,650,013	\$ 89,519,355	\$ 90,264,062	\$ 88,093,679	\$ 83,455,429	\$ 74,183,014
Contributions as a percentage of covered-employee payroll	8.25%	8.25%	8.25%	7.92%	7.75%	7.75%	7.75%	7.75%	7.75%	6.72%

Spokane Employees' Retirement Plan Required Supplementary Information Schedule of Employer's Contributions

Valuation date: December 31, 2017

Actuarially determined contribution rates are calculated as of December 31, of the end of the fiscal year in which contributions are reported

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry age normal
Amortization method	Level percentage of payroll, closed
Remaining amortization period	22 years
Asset valuation method	5-year smoothed market
Inflation	2.25%
Salary increases	In accordance with the following table based on service:

<u>Years of Service</u>	<u>Annual Increase</u>
<1	12.0%
1-3	8.0%
4-6	6.0%
7-9	5.0%
10-11	4.0%
12+	2.0%

Investment rate of return	7.5%, net of pension plan investment expense
Retirement age	In accordance with the following table based on age:

<u>Age</u>	<u>Retirement Probability</u>
<50	0.0%
50-58	5.0%
59-61	10.0%
62	25.0%
63	20.0%
64	25.0%
65	30.0%
66	25.0%
67	30.0%
68	10.0%
69	25.0%
70	15.0%
71-74	30.0%
75+	100.0%

Mortality	RP - 2000 Fully Generational
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**Spokane Employees' Retirement Plan
Required Supplementary Information
Schedule of Investment Returns**

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Annual money-weighted rate of return, net of investment expense	15.40%	6.70%	(0.94%)	5.34%	18.89%	11.70%	(2.80%)	13.47%	21.99%	24.68%

Additional Supplementary Information

**Spokane Employees' Retirement Plan
Additional Supplementary Information
Schedule of Administrative Expenses**

	<u>2017 Budget</u>	<u>2017 Actual</u>	<u>2016 Actual</u>
Personnel services:			
Salaries and wages	\$ 279,341	\$ 272,809	\$ 261,985
Personnel benefits	80,482	78,628	76,532
Administrative income	<u>(10,000)</u>	<u>(19,374)</u>	<u>(19,375)</u>
Total personnel services	<u>349,823</u>	<u>332,063</u>	<u>319,142</u>
Supplies:			
Office supplies	4,000	508	1,545
Publications	-	-	204
Postage	10,000	1,843	8,716
Software (non-capitalized)	-	162	182
Minor equipment	500	-	-
Office furniture (non-capitalized)	-	1,289	-
Other	<u>1,500</u>	<u>666</u>	<u>604</u>
Total supplies	<u>16,000</u>	<u>4,468</u>	<u>11,251</u>
Other services and charges:			
State audit charges	12,000	10,670	11,172
Professional services	173,475	139,187	80,222
Travel	15,000	10,969	7,972
Registration and schooling	30,285	15,980	805
Other dues, subscriptions and memberships	2,500	1,886	1,993
Printing	500	212	181
Depreciation/amortization	-	17,649	1,278
Other miscellaneous charges	<u>1,826</u>	<u>709</u>	<u>17,649</u>
Total other services and charges	<u>235,586</u>	<u>197,262</u>	<u>121,272</u>

Spokane Employees' Retirement Plan
Additional Supplementary Information
Schedule of Administrative Expenses

	<u>2017 Budget</u>	<u>2017 Actual</u>	<u>2016 Actual</u>
Interfund (IF) payments for services:			
IF centralized account	\$ 2,347	\$ 2,347	\$ 2,304
IF IT phones	1,451	1,514	1,506
IF risk management	760	760	991
IF workers' compensation	104	104	198
IF IT	14,078	13,756	12,980
IF reprographics	4,500	7,596	4,930
IF IT replacement	2,772	2,772	1,927
IF My Spokane	-	436	751
	<u>26,012</u>	<u>29,285</u>	<u>25,587</u>
TOTAL ADMINISTRATIVE EXPENSES, NET OF ADMINISTRATIVE INCOME	<u>\$ 627,421</u>	<u>\$ 563,078</u>	<u>\$ 25,587</u>

**Spokane Employees' Retirement Plan
Additional Supplementary Information
Schedule of Investment Expenses**

	Year Ended December 31, 2017
Investment Services:	
Bridge City Capital LLC	\$ 20,393
Champlain Small Cap Fund LLC	53,776
Principal Real Estate Investors LLC	104,653
Sterling Capital Management LLC	101,031
	<hr/> 279,853
Investment Consulting:	
Hyas Group, LLC	<hr/> 118,000
Custodial Services:	
U.S. Bank	<hr/> 51,984
 TOTAL INVESTMENT EXPENSES	 <hr/> <hr/> \$ 449,837

Mutual fund and limited partnership fees are not reflected in this schedule; instead, these investment expenses are netted against investment income in the statement of changes of plan net assets to arrive at a net investment income amount.

Actuarial Section

SageView Consulting Group, L.L.C.
Actuarial Valuation

**SPOKANE EMPLOYEES'
RETIREMENT SYSTEM**

**ACTUARIAL VALUATION
AS OF DECEMBER 31, 2017**



Sageview Consulting Group
4510 Cox Road, Suite 200, Glen Allen, VA 23060
804.270.1508 www.sageviewadvisory.com

April 25, 2018

Spokane Employees' Retirement System
808 West Spokane Falls Boulevard
Spokane, Washington 99201-3324

Ladies and Gentlemen:

Effective December 31, 2008, actuarial valuations of the Spokane Employees' Retirement System are performed annually. The results of the latest actuarial valuation of the System, which was prepared as of December 31, 2017, are summarized in this letter.

The valuation reflects the benefits in effect on the valuation date, and was prepared on the basis of the data submitted by the System using generally accepted actuarial principles and methods.

Financing Objective and Contribution Rate

The financing objective of the System is to:

- (a) fully fund all current costs based on the normal contribution rate payable by the System determined under the funding method; and
- (b) liquidate the unfunded accrued liability based on accrued liability contributions payable by the System over an amortization period of no more than 30 years; and
- (c) accomplish the above through a combination of Employee Contributions (currently 9.00% of pay) and Employer Contributions (currently 9.00% of pay).

The December 31, 2017 valuation develops an Actuarially Determined Employer Contribution Rate (ADC), exclusive of employee contributions, of 9.49% of total payroll. The ADC rate compares with an actual Employer Contribution rate of 9.00% of total payroll. The Employer Contribution for the 2017 fiscal year of \$8,113,319 was less than the ADC of \$9,765,949 by \$1,652,630.

Net Pension Liability

Under GASB 67, the Net Pension Liability is the excess, if any, of the Total Pension Liability over the Fiduciary Net Position. The Total Pension Liability is determined under the Entry Age actuarial cost method. The Net Pension Liability as of December 31, 2017 and December 31, 2016 is as follows:

	December 31 2017	December 31 2016
Total Pension Liability:	\$458,119,623	\$523,734,979
Fiduciary Net Position:	\$308,637,220	\$277,331,781
Net Pension Liability:	\$149,482,403	\$246,403,198
Fiduciary Net Position as a Percentage of Total Pension Liability:	67.4%	53.0%
GASB 67 Discount Rate:	7.50%	5.75%

Spokane Employees' Retirement System
April 25, 2018
Page two

System's Assets and Member Data

The individual data for members of the System as of the valuation date were reported to the actuary by the System. While we did not verify the data at its source, we did perform tests for internal consistency and reasonability in relation to the data submitted for the previous valuation. It is our understanding that the outside auditor of the System has also made an examination of the data.

The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by the System's Staff and audited by the independent auditor of the System.

Actuarial Assumptions and Methods

Actuarial assumptions are adopted by the Board, upon review of recommendations made by the actuary. An experience study was conducted for the five-year period ended December 31, 2016. This study resulted in the Board adopting several changes in assumptions as of December 31, 2017, at the recommendation of the actuary, in order to better anticipate emerging experience under the System.

The net impact of the changes in assumptions and methods was an increase of \$10,524,826 in accrued liability.

In order to smooth out market value fluctuations for purposes of developing the ADC, the difference between actual investment earnings over expected investment earnings will be recognized in equal amounts over a five-year period with the restriction that the smoothed value of assets may not be less than 90% nor greater than 110% of market value.

In order to reduce complexity in the valuation report, amortization bases established between December 31, 2007 and December 31, 2016 for purposes of determining the ADC were combined into one base with a weighted average remaining amortization period of 22 years. The impact of this change on the ADC is not material.

Samples of the actuarial assumptions, and descriptions of the actuarial cost method and asset valuation method are set forth in the outline of actuarial assumptions and methods included in the report.

Legislative and Administrative Changes

The following changes were enacted for all employees hired on or after January 1, 2018. Employees hired prior to January 1, 2018 and terminating employment after January 1, 2018 will receive benefits under the previous plan provisions with no changes unless the new benefit structure provides a higher benefit.

1. Early retirement is permitted at any time after attaining age 50 with the sum of age plus Creditable Service greater than or equal to 90.
2. Service at Retirement is capped at 40 years, with a maximum benefit of 80% of final average compensation.

The annual Contribution Rate was changed to 18.00% of payroll (9.00% of pay paid by the Employee, 9.00% of pay paid by the Employer). Previously the Contribution Rate was 16.50% of payroll (8.25% of pay paid by the Employee, 8.25% of pay paid by the Employer). This change was effective December 17, 2017.

Additionally, if the current total contribution rates are less than the employee contributions plus the Actuarially Determined Employer Contribution rate, both the employer and employee contribution rates may be increased by up to 1% of pay each year without further negotiation. This change eliminates the need to apply a blended discount rate for purposes of determining the GASB 67 Total Pension Liability.

The impact of these changes was an increase of \$165,092 in accrued liability.

Spokane Employees' Retirement System
April 25, 2018
Page three

Financial Results and Membership Data

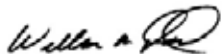
Detailed summaries of financial results of the valuation and membership data used in preparing the valuation are shown in the valuation report and the related membership data schedules. We were responsible for providing information for all schedules included in the Actuarial Section: information for the following schedules included in the Actuarial Section: Schedule of Actuarial Assumptions and Methods, Net Pension Liability, 20 Year Benefit Payment Projections, Schedule of Active Member Valuation Data, Schedule of Retiree and Beneficiary Data, Analysis of Financial Experience and Schedule of Benefit and Contribution Provisions, as well as the Schedule of Changes in Employers' Net Pension Liability and Related Ratios and Schedule of Employers' Contributions included in the annual financial report for the fiscal year ended December 31, 2017.

To the best of our knowledge, this report is complete and accurate. All costs and liabilities have been determined in conformance with generally accepted actuarial principles and on the basis of actuarial assumptions and methods which are individually reasonable (taking into account past experience and reasonable expectations of future experience) and which in combination represent the best estimate of anticipated experience under the System. In addition, the assumptions and methods used for funding purposes meet the parameters set by relevant Actuarial Standards of Practice.

The undersigned are available to provide additional information or answer any questions with respect to this report.

Respectfully Submitted By:

Sageview Consulting Group



William M. Dowd, FCA, EA
Managing Principal



William J. Reid, FCA, EA
Principal

Summary of Valuation Results

Presented in this report are the results of the actuarial valuation as of December 31, 2017 for the Spokane Employees' Retirement System.

The principal results include:

- The Actuarially Determined Employer Contribution Rate (ADC) is 9.49% of total payroll. This compares to an actual Employer Contribution rate of 9.00% of total payroll.

The valuation was completed based on membership and financial data submitted by the System.

Net Pension Liability

Under GASB 67, the Net Pension Liability is the excess, if any, of the Total Pension Liability over the Fiduciary Net Position. The Total Pension Liability is determined under the Entry Age actuarial cost method. The Net Pension Liability as of December 31, 2017 and December 31, 2016 is as follows:

	December 31 2017	December 31 2016
Total Pension Liability:	\$458,119,623	\$523,734,979
Fiduciary Net Position:	\$308,637,220	\$277,331,781
Net Pension Liability:	\$149,482,403	\$246,403,198
Fiduciary Net Position as a Percentage of Total Pension Liability:	67.4%	53.0%
 GASB 67 Discount Rate:	 7.50%	 5.75%

The following changes have been made since the last actuarial valuation:

- **Actuarial Assumptions and Methods**

Actuarial assumptions are adopted by the Board, upon review of recommendations made by the actuary. An experience study was conducted for the five-year period ended December 31, 2016. This study resulted in the Board adopting several changes in assumptions as of December 31, 2017, at the recommendation of the actuary, in order to better anticipate emerging experience under the System.

The net impact of the changes in assumptions and methods was an increase of \$10,524,826 in accrued liability.

In order to reduce complexity in the valuation report, amortization bases established between December 31, 2007 and December 31, 2016 for purposes of determining the ADC were combined into one base with a weighted average remaining amortization period of 22 years. The impact of this change on the ADC is not material.

GASB 67 requires the use of a blended discount rate to the extent future contributions are not projected to be sufficient to provide future benefits for the current closed group of plan participants. This was the case for years prior to 2017. For the year ended 2017, it was not necessary to apply a blended discount rate because of the negotiated terms that allow for both employer and employee contributions to increase or decrease up to 1% each year based on changes in the ADC.

Summary of Valuation Results (continued)

• Legislative and Administrative Changes

The following changes were enacted for all employees hired on or after January 1, 2018. Employees hired prior to January 1, 2018 and terminating employment after January 1, 2018 will receive benefits under the previous plan provisions with no changes unless the new benefit structure provides a higher benefit.

1. Early retirement is permitted at any time after attaining age 50 with the sum of age plus Creditable Service greater than or equal to 90.
2. Service at Retirement is capped at 40 years, with a maximum benefit of 80% of final average compensation.

The annual Contribution Rate was changed to 18.00% of payroll (9.00% of pay paid by the Employee, 9.00% of pay paid by the Employer). Previously the Contribution Rate was 16.50% of payroll (8.25% of pay paid by the Employee, 8.25% of pay paid by the Employer). This change was effective December 17, 2017.

Additionally, if the current total contribution rates are less than the employee contributions plus the Actuarially Determined Employer Contribution rate, both the employer and employee contribution rates may be increased by up to 1% of pay each year without further negotiation. This change eliminates the need to apply a blended discount rate for purposes of determining the GASB 67 Total Pension Liability.

Summary of Valuation Results (continued)

<u>Demographics</u>	<u>2017</u>	<u>2016</u>
<u>Active</u>		
Number	1,444	1,460
Average Pay for Coming Year	\$ 71,222	\$ 70,122
<u>Retired and Beneficiaries</u>		
Number	1,376	1,342
Average Annual Allowance	19,894	19,521
<u>Terminated Vested and Portables</u>		
Number	113	109
<u>Total Membership</u>	2,933	2,911
<u>Net Pension Liability</u>		
Total Pension Liability	\$458,119,623	\$523,734,979
Fiduciary Net Position	\$308,637,220	\$277,331,781
Net Pension Liability	\$149,482,403	\$246,403,198
Fiduciary Net Position as a Percentage of the Total Pension Liability	67.4%	53.0%
<u>Contribution Rates</u>		
Actuarially Determined Employer Contribution Rate (ADC) Rate*	9.49%	9.62%
Actual Employer Contribution Rate	9.00%	8.25%

* Exclusive of Employee Contributions (9.00% of pay effective December 17, 2017,
8.25% of pay prior to December 17, 2017, 7.75% of pay prior to September 1, 2014)

Summary of Valuation Results (continued)

Contribution Rates (ADC)

The results of the valuation as of December 31, 2017 determine the ADC rate for the System. The actual Employer Contribution rate is compared to the contribution rate developed in the valuation in order to determine the appropriateness of the actual Employer Contribution rate. As of December 17, 2017 the actual Employer Contribution rate of 9.00% is less than the ADC rate of 9.49%.

Reasons for Change in the ADC

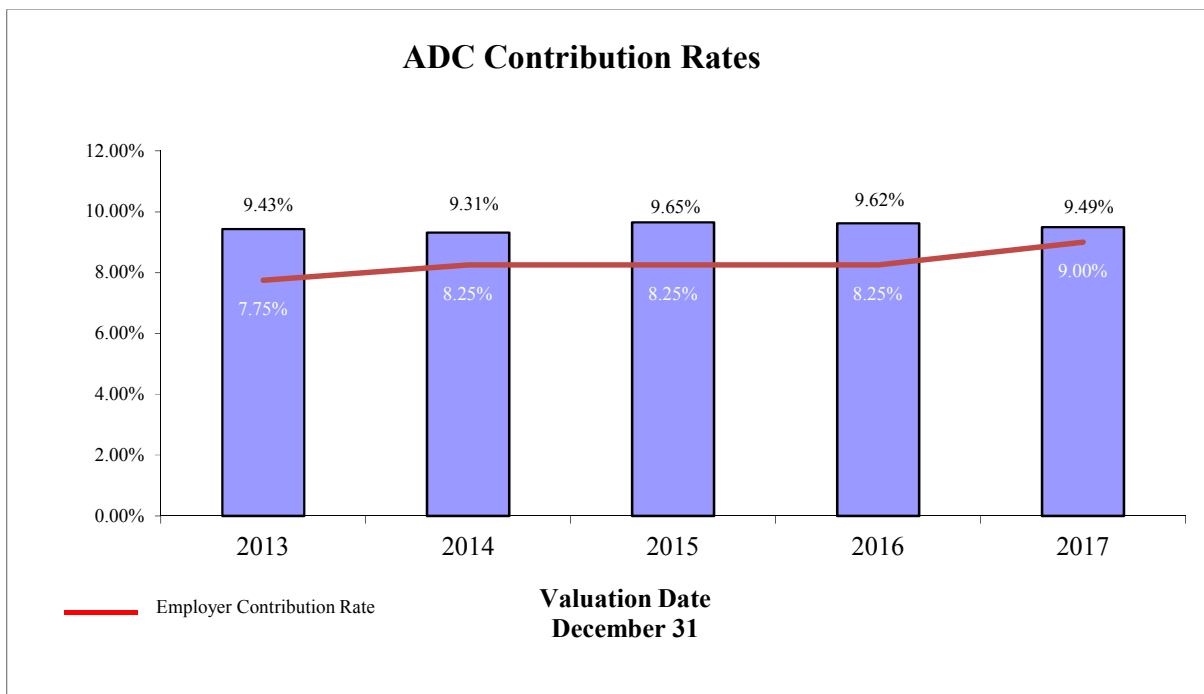
The recommended employer contribution rate as determined by the ADC decreased from 9.62% as of December 31, 2016 to 9.49% as of December 31, 2017. The decrease of 0.13% is due to the following reasons:

● Decrease due to return on actuarial assets	(0.08%)
● Decrease due to change in normal cost rate	(0.75%)
● Increase due to change in benefit provisions	0.01%
● Decrease due to legislative changes	0.00%
● Increase due to change in assumptions	0.53%
● Decrease due to change in funding method	0.00%
● Increase due to other factors	0.16%
● Total	<u>(0.13%)</u>

Summary of Valuation Results (continued)

**Five-Year History of Contribution Rates
(As a % of payroll)**

Valuation Date	ADC	Employer Rate
2013	9.43%	7.75%
2014	9.31%	8.25%
2015	9.65%	8.25%
2016	9.62%	8.25%
2017	9.49%	9.00%



Summary of Valuation Results (continued)

Unfunded Accrued Liability

The financing objective of the System is to:

- fully fund all current costs based on the normal contribution rate payable by the System determined under the funding method; and
- liquidate the unfunded accrued liability based on accrued liability contributions payable by the System over an amortization period of no more than 30 years; and
- accomplish the above through a combination of Employee Contributions (currently 9.00% of pay) and Employer Contributions (currently 9.00% of pay).

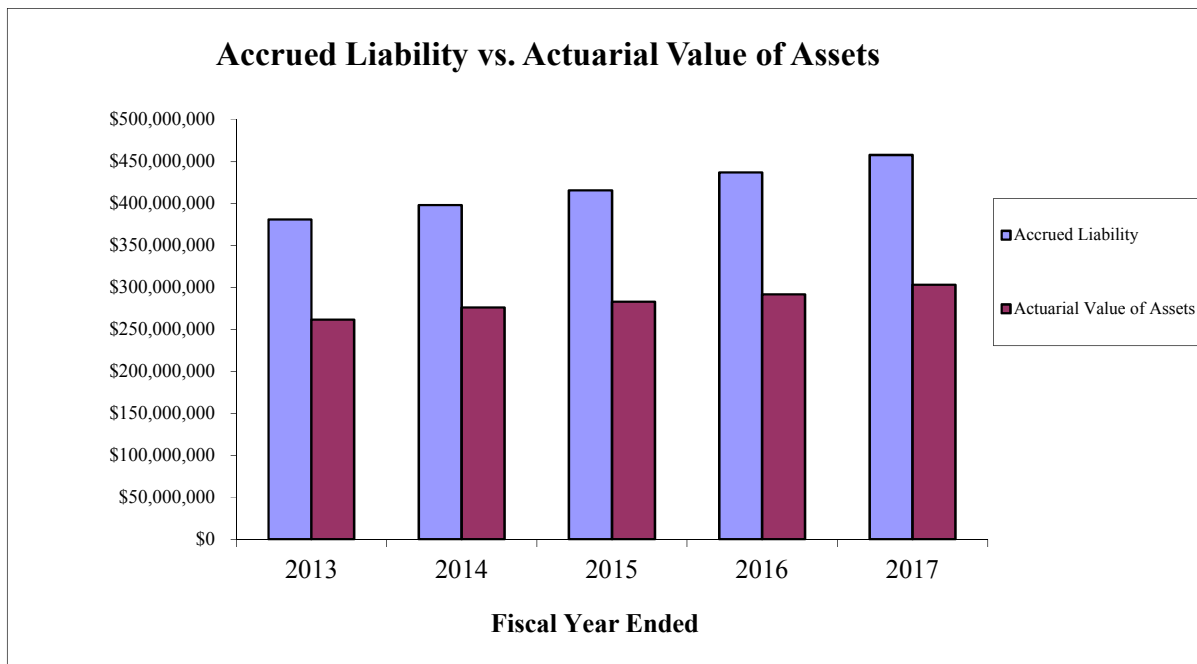
For purposes of determining contribution rates, the System's unfunded actuarial liability is measured by comparing the actuarial value of assets with the actuarial liability. The actuarial liability is determined under the entry age normal cost method. On this basis, the System's unfunded actuarial liability is \$154,789,115 as of December 31, 2017. The unfunded actuarial liability is based on an actuarial value of assets of \$303,330,508 and an actuarial liability of \$458,119,623.

For purposes of financial reporting, the Fund's unfunded liability (net pension liability) is measured by comparing the market value of assets (fiduciary net position) with the actuarial liability (total pension liability). The total pension liability is determined under the entry age cost method using a blended discount rate. On this basis, the Fund's net pension liability is \$149,482,403 as of December 31, 2017. The net pension liability is based on an fiduciary net position of \$308,637,220 and a total pension liability of \$458,119,623.

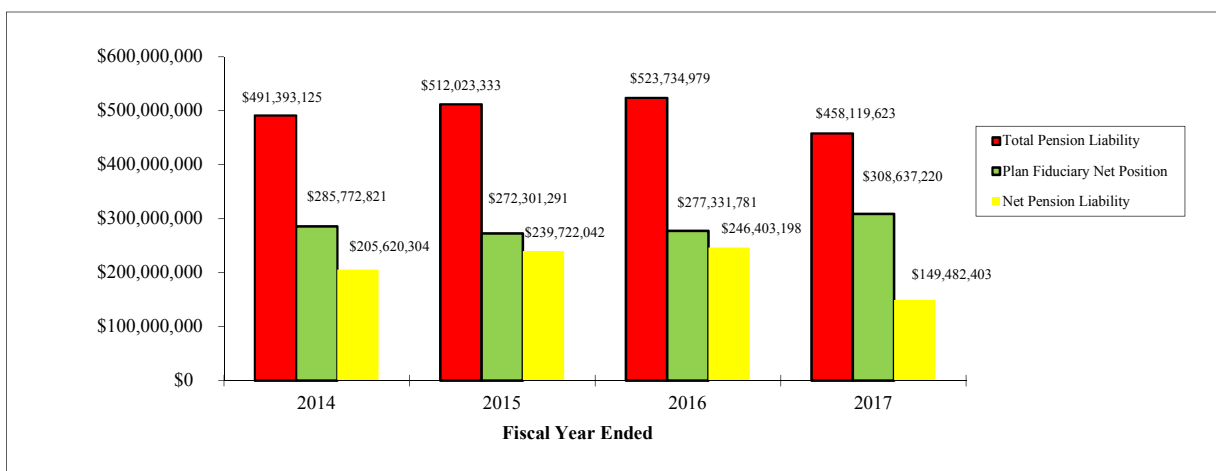
Summary of Valuation Results (continued)

Five-Year History of Accrued Liability and Actuarial Value of Assets

Fiscal Year Ending	Accrued Liability	Actuarial Value of Assets
2013	\$381,039,248	\$261,605,154
2014	\$398,057,936	\$276,002,759
2015	\$415,534,531	\$282,955,179
2016	\$437,145,260	\$291,545,586
2017	\$458,119,623	\$303,330,508



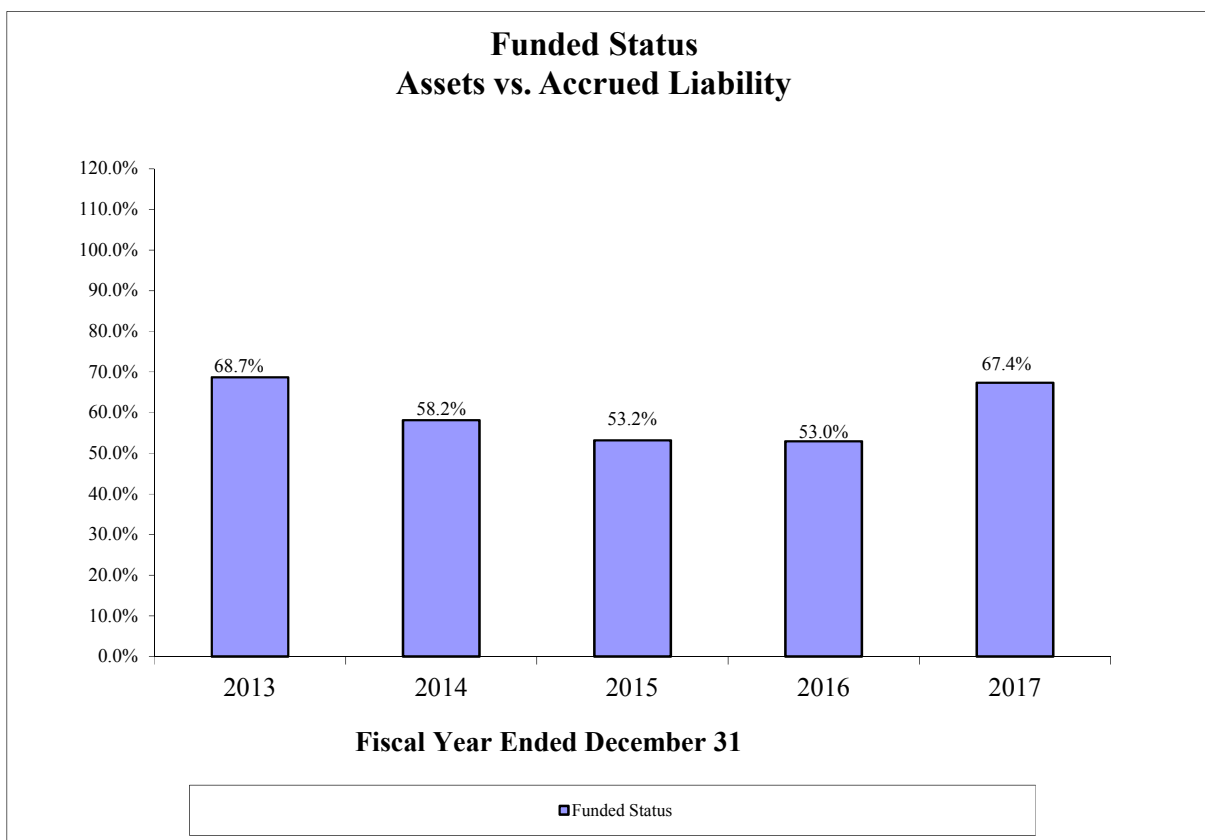
History of Net Pension Liability



Summary of Valuation Results (continued)

**Five-Year History of Funded Status*
(Assets vs. Accrued Liability)**

Fiscal Year Ending	Funded Status	
2013	68.7%	Pre-GASB 67
2014	58.2%	Post-GASB 67
2015	53.2%	Post-GASB 67
2016	53.0%	Post-GASB 67
2017	67.4%	Post-GASB 67



* Funded Status based on entry age normal liability and actuarial value of assets prior to 12/31/2014. Funded status based on total pension liability and fiduciary net position after 12/31/2013.

Summary of Valuation Results (continued)

Rate of Return

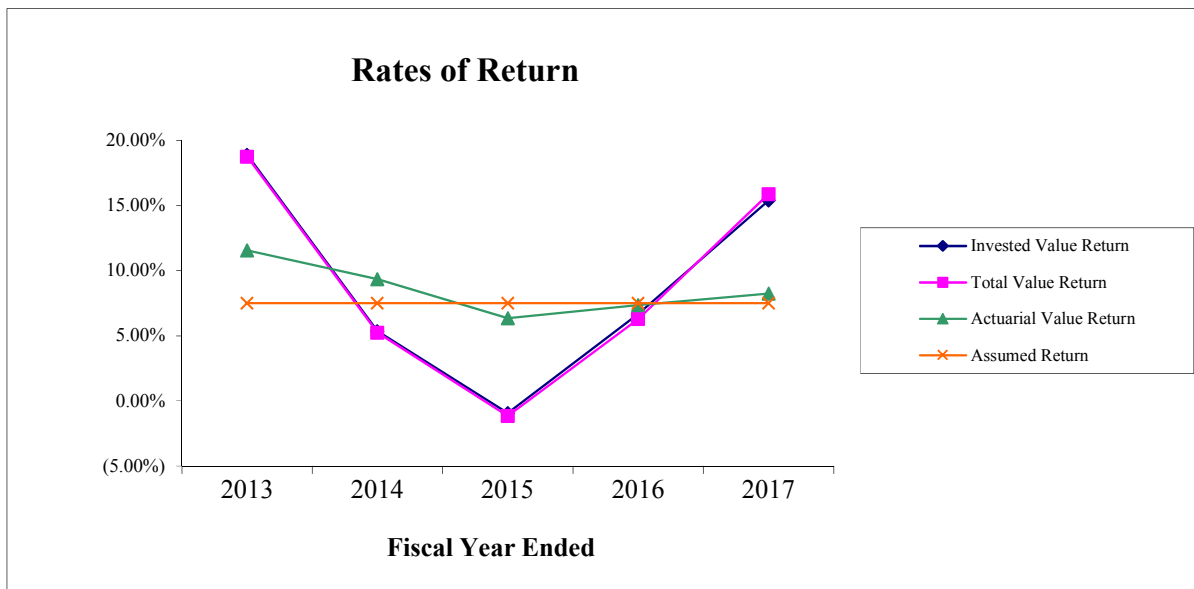
The investment return of the trust fund (i.e. total return including both realized and unrealized gains and losses) based on the market value of invested assets for the fiscal year ended December 31, 2017 was 15.40%. However, since some contributions go directly to paying benefits and are never invested in the trust, the net investment return on total assets of the System was 15.87%. The investment return on the smoothed fair value of assets was 8.25%. The expected rate of return was 7.50%.

The smoothed fair value of assets is determined using a method that is designed to smooth the impact of market fluctuations. Unlike the market value, which immediately reflects all investment gains and losses during the year, the smoothed fair value recognizes annual appreciation and depreciation over a five-year period.

Summary of Valuation Results (continued)

Five-Year History of Rates of Return

Fiscal Year Ending	Rate of Return on Assets			
	Invested	Total	Actuarial	Assumed
2013	18.89%	18.75%	11.56%	7.50%
2014	5.34%	5.25%	9.36%	7.50%
2015	(0.94%)	(1.15%)	6.35%	7.50%
2016	6.70%	6.31%	7.35%	7.50%
2017	15.40%	15.87%	8.25%	7.50%



Supporting Information

The remainder of the report is comprised of the following sections or schedules:

Table 1	Demographics
Table 2	Market Value Reconciliation
Table 3	Smoothed Fair Value of Net Assets Determination
Table 4	Accrued Liability
Table 5	Actuarial (Gain)/Loss
Table 6	Amortization Schedule
Table 7	Normal Cost
Table 8	Contribution Summary
Table 9	Statement of Fiduciary Net Position
Table 10	Statement of Changes in Fiduciary Net Position
Table 11	Net Pension Liability
Table 12	Schedule of Employer Contributions
Table 13	GASB 68 Summary for 2017
Table 14	GASB 68 Summary for 2018
Table 15	Deferred Outflows/(Inflows) Amortization Schedule
Table 16	Historical Summary of Fund Additions and Deductions
Table 17	Schedule of Membership
Table 18	Schedule of Active Members Valuation Data
Table 19	Schedule of Retirees Added to and Removed from Rolls
Table 20	Schedule of Retired Members by Type of Benefit; Schedule of Benefit Payments by Type
Table 21	Schedule of Average Annual Benefit Payments
Table 22	Description of Actuarial Assumptions and Methods
Table 23	Summary of Benefit and Contribution Provisions
Appendix	Data Tables

Table 1**DEMOGRAPHICS**

	<u>2017</u>	<u>2016</u>	<u>Increase/ (Decrease)</u>
Number of Members:			
Retirees	1,213	1,187	26
Beneficiaries	154	146	8
Disabled	9	9	0
Terminated Vested	67	65	2
Portables	46	44	2
Active	1,444	1,460	(16)
Total Members	2,933	2,911	22
Projected Compensation for Coming Year	102,844,614	102,378,550	466,064
Average Compensation for Coming Year	71,222	70,122	1,100
Average Age (Active Members)	47.95	47.76	0.19
Average Service (Active Members)	11.69	11.54	0.15
Annual Retirement Allowance	27,374,150	26,197,453	1,176,697
Average Annual Retirement Allowance	19,894	19,521	373
Average Monthly Retirement Allowance	1,658	1,627	31

Table 2**ASSET INFORMATION****Market Value Reconciliation**

1. Total Market Value of Net Assets, 12/31/2016		277,331,781
2. Audit Adjustment		0
3. Contributions		
a. Employer	8,113,319	
b. Employee	8,113,319	
c. Total Contributions		16,226,638
4. Miscellaneous Revenue		988
5. Investment Earnings		
a. Interest & Dividends & Other Income	4,127,973	
b. Realized & Unrealized Gain/(Loss)	39,406,448	
c. Investment Expenses	(449,837)	
d. Total Investment Earnings		43,084,584
6. Benefit Payments		
a. Benefits	(26,891,785)	
b. Refund of Contributions	(551,908)	
c. Total Benefit Payments		(27,443,693)
7. Administrative Expenses		(563,078)
8. Total Market Value of Net Assets, 12/31/2017		308,637,220
9. Approximate Rate of Return on Total Assets		15.87%
10. Approximate Rate of Return on Invested Assets		15.40%

Table 4**ACCRUED LIABILITY**

1. Accrued Liability prior to Changes in Benefit Provisions and Assumptions		
a. Active	177,558,335	
b. Terminated Vested & Portables	8,401,893	
c. Retirees	242,567,819	
d. Beneficiaries	17,628,944	
e. Disableds	1,272,714	
f. Total Accrued Liability prior to Changes		447,429,705
2. Actuarial Value of Assets		303,330,508
3. Unfunded Accrued Liability prior to Changes (1.f. - 2.)		144,099,197
4. Change in Unfunded Accrued Liability		
a. Due to Changes in Plan Provisions	165,092	
b. Due to Changes in Assumptions	10,524,826	
c. Due to Change in Funding Method	0	
d. Due to Change in Asset Method	0	
e. Total Change in Unfunded Accrued Liability		10,689,918
5. Actual Unfunded Accrued Liability (3. + 4.e.)		154,789,115

Table 5**ACTUARIAL (GAIN)/LOSS**

1. Increase (decrease) in Unfunded Accrued Liability	
a. Unfunded Accrued Liability, prior year	145,599,674
b. Entry Age Normal Cost (excluding expenses)	8,799,882
c. Contributions	16,226,638
d. Interest	10,982,468
e. Expected Unfunded Accrued Liability, current year (a. + b. - c. + d.)	149,155,386
f. Actual Unfunded Accrued Liability, current year before benefit, assumption, and method changes	144,099,197
g. (Gain)/Loss (f. -e.)	(5,056,189)
2. Reasons for (Gain)/Loss	
a. Investment Return on Smoothed Fair Value of Assets	(1,549,093)
b. Other	(3,507,096)
c. Total	(5,056,189)

Table 6**AMORTIZATION SCHEDULE***

<u>Date Established</u>	<u>Source</u>	<u>Initial Amount</u>	<u>Remaining Balance</u>	<u>Years to Amortize</u>	<u>Required Payment</u>
12/31/2017	Actuarial Gain	(5,056,189)	(5,056,189)	30	(261,495)
12/31/2017	Assumption Change	10,524,826	10,524,826	30	544,321
12/31/2017	Plan Amendment	165,092	165,092	30	8,538
12/31/2017	Reamortization of Prior Amounts	118,016,263	149,155,386	22	9,389,050
Total		123,649,992	154,789,115		9,680,414

* Effective December 31, 2017, prior bases established between December 31, 2007 and December 31, 2016 were combined into one base with a weighted average remaining amortization period of 22 years.

Table 7**NORMAL COST**

1. Normal Cost for All Benefits	8,741,550
2. Offset for Employee Contributions	(9,256,015)
3. Estimated Expenses	600,000
4. Total	85,535

Table 8**CONTRIBUTION SUMMARY**

1. Actuarially Determined Employer Contribution Amount		
a. Normal Cost	85,535	
b. Amortization Charges	9,680,414	
c. Total		9,765,949
2. Actuarially Determined Employer Contribution Rate		
a. Normal Cost	0.08%	
b. Amortization Charges	9.41%	
c. Total		9.49%
3. Projected Pay for the Upcoming Year		102,844,614

Table 9**ASSET INFORMATION****Statement of Fiduciary Net Position
(as provided by SERS staff)****ASSETS**

1. Cash		32,606
2. Short-term investments		896,869
3. Receivables		
a. Interest and Dividends	193,877	
b. Redemption Receivable	2,500,000	
c. Other	1,674	
d. Total Receivables		<u>2,695,551</u>
4. Investments, at fair value		
a. U. S. Fixed Income	47,390,265	
b. International/Global Fixed Income	815,292	
c. U. S. Equities	104,540,678	
d. Real Estate	27,096,456	
e. International Equities	53,815,203	
f. Alternatives	71,238,891	
g. Total Investments		<u>304,896,785</u>
5. Leasehold improvements, net of accumulated depreciation		0
6. Capitalized software, net of accumulated amortization		247,086
7. Total Assets		<u>308,768,897</u>

LIABILITIES

1. Accounts Payable	79,726	
2. Current portion employee salary & benefits	17,884	
3. Other current liabilities	12,099	
4. Employee leave benefits	21,968	
5. Total Liabilities		<u>131,677</u>

NET POSITION308,637,220

Table 10**ASSET INFORMATION****Statement of Changes in Fiduciary Net Position
(as provided by SERS staff)****ADDITIONS**

1. Contributions		
a. Employer	8,113,319	
b. Employee	8,113,319	
c. Total Contributions		16,226,638
2. Miscellaneous Revenue		988
3. Investment Earnings:		
a. Net increase (decrease) in fair value of investments	39,406,448	
b. Interest, dividends and other investment income	4,127,973	
c. Total Investment Earnings		<u>43,534,421</u>
d. Less: investment expense		<u>449,837</u>
e. Net investment earnings (loss)		<u>43,084,584</u>
Total additions		<u>59,312,210</u>

DEDUCTIONS

1. Pension benefits	26,891,785	
2. Refund of contributions	551,908	
3. Administrative expenses	563,078	
Total deductions		<u>28,006,771</u>
Change in net assets:		31,305,439
Prior period adjustment		0
Plan Fiduciary Net Position, 12/31/2016		<u>277,331,781</u>
Plan Fiduciary Net Position, 12/31/2017		<u><u>308,637,220</u></u>

Table 11**NET PENSION LIABILITY**

	<u>2017</u>	<u>2016</u>
Total Pension Liability		
Service Cost	13,133,393	12,896,547
Interest	29,336,782	27,443,176
Changes of benefit terms	165,092	0
Differences between expected and actual experience	(3,830,239)	12,381,445
Changes of assumptions	(76,976,691)	(14,542,266)
Benefit Payments, including refunds of member contributions	(27,443,693)	(26,467,256)
Net change in total pension liability	(65,615,356)	11,711,646
Total pension liability - beginning	523,734,979	512,023,333
Total pension liability - ending (a)	458,119,623	523,734,979
Plan Fiduciary Net Position		
Contributions - employer	8,113,319	7,586,362
Contributions - member	8,113,319	7,586,362
Net investment income	43,085,572	16,802,274
Benefit payments, including refunds of member contributions	(27,443,693)	(26,467,256)
Administrative expense	(563,078)	(477,252)
Other	0	0
Net change in plan fiduciary net position	31,305,439	5,030,490
Plan fiduciary net position - beginning	277,331,781	272,301,291
Plan fiduciary net position - ending (b)	308,637,220	277,331,781
Net pension liability - ending (a) - (b) *	149,482,403	246,403,198
Plan fiduciary net position as a percentage of the total pension liability	67.4%	53.0%
Covered-employee payroll	102,844,614	102,378,550
Net pension liability as a percentage of covered-employee payroll	145.3%	240.7%
GASB 67 Blended Discount Rate Beginning of Period:	5.75%	5.50%
GASB 67 Blended Discount Rate End of Period:	7.50%	5.75%

* A 1% decrease in the discount rate increases the net pension liability to \$198,000,057, an increase of \$48,517,654.

A 1% increase in the discount rate decreases the net pension liability to \$108,110,636, a decrease of \$41,371,767.

Table 12**SCHEDULE OF EMPLOYER CONTRIBUTIONS
(Excludes Member Contributions)**

<u>Fiscal Year Ended</u>	<u>Actuarially Determined Contribution</u>	<u>Contributions in Relation to the Actuarially Determined Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Employee Payroll</u>	<u>Percentage Contributed</u>
12/31/2012	8,325,936	6,937,750	1,388,186	89,519,355	7.75%
12/31/2013	8,237,317	6,715,376	1,521,941	86,650,013	7.75%
12/31/2014	8,292,066	6,822,279	1,469,787	86,139,886	7.92%
12/31/2015	9,069,276	7,398,945	1,670,331	89,684,182	8.25%
12/31/2016	9,853,762	7,586,362	2,267,400	91,955,903	8.25%
12/31/2017	9,765,949	8,113,319	1,652,630	98,343,261	8.25%

Table 13

GASB 68 Summary for 2017									
Total Plan									
	Total Pension Liability	Plan Net Position	Net Pension Liability (NPL)	NPL Discount Rate +1%	NPL Discount Rate -1%	Deferred Outflows of Resources	Deferred Inflows of Resources	Pension Expense	Amortization Period
Balance, Beginning of Year (1)	512,023,333	272,301,291	239,722,042	187,522,372	301,595,957	42,064,919	-	-	
Changes for the year									
Service Cost	12,896,547		12,896,547					12,896,547	
Interest Cost	27,443,176		27,443,176					27,443,176	
Benefit Changes									
Experience loss (gain)	12,381,445		12,381,445					2,063,574	6.00
Changes in assumptions	(14,542,266)		(14,542,266)			10,317,871	-	(2,423,711)	6.00
Contributions - Employer		7,586,362	(7,586,362)					(7,586,362)	
Contributions - Employee		7,586,362	(7,586,362)						
Net Investment Income		16,802,274	(16,802,274)						
Expected Return on Investments								(19,981,155)	
Investment (gain) loss expensed						2,543,105	-	635,776	5.00
Benefits paid including refunds	(26,467,256)	(26,467,256)							
Administrative Expense		(477,252)	477,252					477,252	
Other Changes		-	-					-	
Amortization						(10,556,539)	-	10,556,539	
Net Changes	11,711,646	5,030,490	6,681,156			2,304,437	12,118,555		
Balance, End of Year (2)	523,734,979	277,331,781	246,403,198	193,927,544	308,477,570	44,369,356	12,118,555	24,081,636	
(1) Measurement Date December 31, 2015									
(2) Measurement Date December 31, 2016									

Table 14

GASB 68 Summary for 2018

Total Plan

	Total Pension Liability	Plan Net Position	Net Pension Liability (NPL)	NPL Discount Rate +1%	NPL Discount Rate -1%	Deferred Outflows of Resources	Deferred Inflows of Resources	Pension Expense	Amortization Period
Balance, Beginning of Year (1)	523,734,979	277,331,781	246,403,198	193,927,544	308,477,570	44,369,356	12,118,555		
Changes for the year									
Service Cost	13,133,393		13,133,393					13,133,393	
Interest Cost	29,336,782		29,336,782					29,336,782	
Benefit Changes	165,092		165,092					165,092	
Experience loss (gain)	(3,830,239)		(3,830,239)				3,191,866	(638,373)	6.00
Changes in assumptions	(76,976,691)		(76,976,691)			-	64,147,242	(12,829,449)	6.00
Contributions - Employer		8,113,319	(8,113,319)						
Contributions - Employee		8,113,319	(8,113,319)						
Net Investment Income		43,085,572	(43,085,572)						
Expected Return on Investments									
Investment (gain) loss expensed							18,175,566	(20,366,115)	5.00
Investment (gain) loss deferred									
Benefits paid including refunds	(27,443,693)	(27,443,693)	-			-			
Administrative Expense		(563,078)	563,078					563,078	
Other Changes									
Amortization						(13,255,889)	(2,423,711)	10,832,178	
Net Changes	(65,615,356)	31,305,439	(96,920,795)			(13,255,889)	83,090,963		
Balance, End of Year (2)	458,119,623	308,637,220	149,482,403	108,110,636	198,000,057	31,113,467	95,209,518	7,539,376	
(1) Measurement Date December 31, 2016									
(2) Measurement Date December 31, 2017									

Table 15**Deferred Outflows/(Inflows) Amortization Schedule as of December 31, 2018
(Measurement Date: December 31, 2017)**

Date Established	Source	Initial Amount	Deferred Amount	Remaining Years	Amortization Payment
12/31/2018	Experience Gain	(3,830,239)	(3,191,866)	5.00	(638,373)
12/31/2018	Assumption Change	(76,976,691)	(64,147,242)	5.00	(12,829,449)
12/31/2018	Investment Gain	(22,719,457)	(18,175,566)	4.00	(4,543,891)
12/31/2017	Experience Loss	12,381,445	8,254,297	4.00	2,063,574
12/31/2017	Assumption Change	(14,542,266)	(9,694,844)	4.00	(2,423,711)
12/31/2017	Investment Loss	3,178,881	1,907,329	3.00	635,776
12/31/2016	Experience Loss	6,483,011	3,241,505	3.00	1,080,502
12/31/2016	Investment Loss	24,277,285	9,710,914	2.00	4,855,457
12/31/2015	Experience Loss	18,507,784	6,757,682	2.00	3,378,840
12/31/2015	Investment Loss	6,208,700	<u>1,241,740</u>	1.00	<u>1,241,740</u>
Total			(64,096,051)		(7,179,535)

Table 16**HISTORICAL SUMMARY OF FUND ADDITIONS AND DEDUCTIONS****ADDITIONS BY SOURCE**

<u>Fiscal Year Ended</u>	<u>Employer Contributions as a Percent of Payroll</u>	<u>Employer Contributions</u>	<u>Employee Contributions</u>	<u>Net Investment Income</u>	<u>Total</u>
12/31/08	6.72%	4,875,443	4,882,622	(59,972,361)	(50,214,296)
12/31/09	7.75%	6,474,432	6,637,872	38,442,846	51,555,150
12/31/10	7.75%	6,580,795	6,618,558	27,752,165	40,951,518
12/31/11	7.75%	6,799,258	6,831,742	(6,440,146)	7,190,854
12/31/12	7.75%	6,937,750	7,019,684	25,667,673	39,625,107
12/31/13	7.75%	6,715,376	6,715,376	45,323,533	58,754,285
12/31/14	8.25%	6,822,279	6,822,279	14,497,901	28,142,459
12/31/15	8.25%	7,398,945	7,402,905	(3,228,439)	11,573,411
12/31/16	8.25%	7,586,362	7,586,362	16,802,274	31,974,998
12/31/17	8.25%	8,113,319	8,113,319	43,085,572	59,312,210

DEDUCTIONS BY TYPE

<u>Fiscal Year Ended</u>	<u>Benefit Payments</u>	<u>Refunds</u>	<u>Admin Expenses</u>	<u>Total</u>
12/31/08	15,002,061	370,947	581,294	15,954,302
12/31/09	15,509,868	315,919	563,408	16,389,195
12/31/10	16,547,561	493,911	505,222	17,546,694
12/31/11	17,216,853	502,566	490,611	18,210,030
12/31/12	18,554,194	569,058	520,955	19,644,207
12/31/13	20,346,281	393,954	385,675	21,125,910
12/31/14	22,258,842	625,184	386,713	23,270,739
12/31/15	23,959,198	637,822	447,921	25,044,941
12/31/16	25,737,515	729,741	477,252	26,944,508
12/31/17	26,891,785	551,908	563,078	28,006,771

Table 17**SCHEDULE OF MEMBERSHIP**

<u>Fiscal Year Ended</u>	<u>Active Members</u>	<u>Terminated Vested Members</u>	<u>Service Retirees and Beneficiaries</u>	<u>Disabled Retirees</u>	<u>Total Retirees</u>	<u>Total Members</u>
12/31/08	1,492	94	1,008	11	1,019	2,605
12/31/09	1,501	89	1,041	10	1,051	2,641
12/31/10	1,516	90	1,050	10	1,060	2,666
12/31/11	1,491	84	1,079	9	1,088	2,663
12/31/12	1,453	96	1,119	9	1,128	2,677
12/31/13	1,422	98	1,171	9	1,180	2,700
12/31/14	1,407	105	1,234	9	1,243	2,755
12/31/15	1,424	97	1,291	9	1,300	2,821
12/31/16	1,460	109	1,333	9	1,342	2,911
12/31/17	1,444	113	1,367	9	1,376	2,933

Table 18**SCHEDULE OF ACTIVE MEMBERS VALUATION DATA**

<u>Fiscal Year Ended</u>	<u>Active Members</u>	<u>Covered Payroll</u>	<u>Average Payroll Rate</u>	<u>Annual Percentage Increase in Average Payroll Rate</u>
12/31/2008	1,492	74,183,014	49,721	2.30%
12/31/2009	1,501	83,455,429	55,600	11.82%
12/31/2010	1,516	88,093,679	58,109	4.51%
12/31/2011	1,491	90,264,062	60,539	4.18%
12/31/2012	1,453	89,015,136	61,263	1.20%
12/31/2013	1,422	87,337,232	61,419	0.25%
12/31/2014	1,407	89,034,522	63,280	3.03%
12/31/2015	1,424	93,899,096	65,940	4.20%
12/31/2016	1,460	102,378,550	70,122	6.34%
12/31/2017	1,444	102,844,614	71,222	1.57%

Table 19**SCHEDULE OF RETIREES ADDED TO AND REMOVED FROM ROLLS**

<u>Fiscal Year Ended</u>	<u>Added</u>	<u>Annual Allowances</u>		<u>Annual Allowances</u>		<u>Total</u>	<u>Annual Allowances</u>	<u>Percent Change</u>	<u>Average Annual Allowances</u>	<u>Retirees as Percent of Active Members</u>	
		<u>Added</u>	<u>Removed</u>	<u>Removed</u>	<u>Total</u>					<u>Number</u>	<u>Pay</u>
12/31/2008	50	830,767	39	357,857	1,019	15,155,066	3.2%	14,872	68.3%	20.4%	
12/31/2009	70	1,586,201	38	414,388	1,051	16,326,879	7.7%	15,535	70.0%	19.6%	
12/31/2010	52	1,103,228	43	554,985	1,060	16,875,122	3.4%	15,920	69.9%	19.2%	
12/31/2011	66	1,326,502	38	546,291	1,088	17,655,333	4.6%	16,227	73.0%	19.6%	
12/31/2012	72	1,945,840	32	423,102	1,128	19,178,071	8.6%	17,002	77.6%	21.5%	
12/31/2013	95	2,351,086	43	532,395	1,180	20,996,762	9.5%	17,794	83.0%	24.0%	
12/31/2014	100	2,552,358	37	573,123	1,243	22,975,997	9.4%	18,484	88.3%	25.8%	
12/31/2015	96	2,379,741	39	667,843	1,300	24,687,895	7.5%	18,991	91.3%	26.3%	
12/31/2016	82	2,262,702	40	753,144	1,342	26,197,453	6.1%	19,521	91.9%	25.6%	
12/31/2017	75	1,862,418	41	685,721	1,376	27,374,150	4.5%	19,894	95.3%	26.6%	

Table 20**SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT**

Amount of Monthly Benefit	Number of Retirees	Type of Retirement*			Option Selected**						
		<u>1</u>	<u>2</u>	<u>3</u>	<u>LIFE</u>	<u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>D</u>	<u>E</u>
1 - 100	1	1	0	0	1	0	0	0	0	0	0
101 - 200	12	5	0	7	1	0	0	0	0	3	8
201 - 300	25	23	0	2	16	2	0	0	0	2	5
301 - 400	56	44	0	12	29	1	0	0	1	5	20
401 - 500	66	48	0	18	28	0	0	1	1	9	27
501 - 600	63	55	0	8	36	0	1	1	0	4	21
601 - 700	62	52	1	9	30	1	0	0	0	8	23
701 - 800	58	46	1	11	27	0	0	0	1	12	18
801 - 900	55	48	1	6	34	0	1	0	0	6	14
901 - 1,000	62	56	0	6	26	3	0	0	0	8	25
1,001 - 1,500	250	217	4	29	125	1	1	1	0	29	93
1,501 - 2,000	219	193	2	24	96	0	0	0	1	32	90
Over 2,000	<u>447</u>	<u>425</u>	<u>0</u>	<u>22</u>	<u>203</u>	<u>9</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>79</u>	<u>153</u>
Total	1,376	1,213	9	154	652	17	3	5	5	197	497

*Type of Retirement:

- 1 Service Retirement
- 2 Disability Retirement
- 3 Beneficiary

**Option Selected:

- Life Remaining accumulated balance paid to beneficiary
- Opt. C1 60 months guaranteed
- Opt. C2 120 months guaranteed
- Opt. C3 180 months guaranteed
- Opt. C4 240 months guaranteed
- Opt. D 50% continuation to beneficiary
- Opt. E 100% continuation to beneficiary

SCHEDULE OF BENEFIT PAYMENTS BY TYPE

Fiscal Year Ended	Service Retirement	Disability Retirement	Beneficiaries	Refunds	Total Benefits
12/31/2008	13,835,194	136,093	1,030,774	370,947	15,373,008
12/31/2009	14,341,682	130,868	1,037,317	315,919	15,825,786
12/31/2010	15,302,791	120,261	1,124,509	493,911	17,041,472
12/31/2011	15,863,198	113,271	1,240,384	502,566	17,719,419
12/31/2012	17,161,187	109,122	1,283,885	569,058	19,123,252
12/31/2013	18,887,269	125,353	1,333,659	393,954	20,740,235
12/31/2014	20,659,575	125,329	1,473,938	625,184	22,884,026
12/31/2015	22,192,756	125,328	1,641,114	637,822	24,597,020
12/31/2016	23,765,713	125,328	1,846,474	729,741	26,467,256
12/31/2017	24,852,640	125,328	1,913,817	551,908	27,443,693

Table 21**SCHEDULE OF AVERAGE ANNUAL BENEFIT PAYMENTS**

<u>Fiscal Year Ended</u>	<u>Service Retirement and Beneficiaries</u>	<u>Disability Retirement</u>	<u>Total</u>	<u>Annual Percentage Increase in Average Benefits</u>
12/31/2008	14,748	12,372	14,722	4.11%
12/31/2009	14,773	13,087	14,757	0.24%
12/31/2010	15,645	12,026	15,611	5.79%
12/31/2011	15,851	12,586	15,824	1.36%
12/31/2012	16,484	12,125	16,449	3.95%
12/31/2013	17,268	13,928	17,243	4.83%
12/31/2014	17,936	13,925	17,907	3.85%
12/31/2015	18,462	13,925	18,430	2.92%
12/31/2016	19,214	13,925	19,178	4.06%
12/31/2017	19,580	13,925	19,543	1.90%

Table 22

DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Cost Method

The actuarial cost method used to determine the actuarial accrued liability and the normal cost for both funding and financial reporting purposes is the Entry Age Normal (EAN) Actuarial Cost Method. The accrued liability and the normal cost are used to determine the City's contribution requirement. Under this method, the cost of each individual's pension is allocated on a level percent of payroll basis between the time employment starts (entry age) and the assumed retirement date. The normal cost is the amount allocated for a given year and accrued liability is the accumulation of prior normal costs as of the determination date. The total actuarial liability for retirement benefits is the sum of the accrued liability for each active member.

The actuarial accrued liability and normal cost for termination benefits, disability benefits, and pre-retirement spouse's death benefits are determined in a similar manner as for retirement benefits described above.

The actuarial accrued liability for inactive members is determined as the actuarial present value of the benefits expected to be paid; no normal cost is determined for these members.

Prior to December 31, 2012 the Projected Unit Credit (PUC) Actuarial Cost Method was used.

Unless otherwise specified, the following actuarial assumptions and methods were adopted December 31, 2017.

Actuarial Assumptions

Mortality: Healthy Lives RP - 2000 Fully Generational
 Disabled Lives RP - 2000 Fully Generational

Interest: 7.5% per annum, compounded annually

GASB 67 Blended Beginning of Period: 5.75%
Discount Rate: End of Period: 7.50%

Amortization of Unfunded Liability: Closed 30 year amortization as a level percent of payroll. Payroll growth assumed to be 4.0% per year. Prior bases established between December 31, 2007 and December 31, 2016 were combined into one base with a weighted average remaining amortization period of 22 years.

Turnover: In accordance with the following table based on service:

<u>Years of Service</u>	<u>Turnover Probability</u>
<1	12.0%
1-3	8.0%
4-6	6.0%
7-9	5.0%
10-11	4.0%
12+	2.0%

Table 22**DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS**

Retirement: In accordance with the following table based on age:

<u>Age</u>	<u>Retirement Probability</u>
<50	0.0%
50-58	5.0%
59-61	10.0%
62	25.0%
63	20.0%
64	25.0%
65	30.0%
66	25.0%
67	20.0%
68	10.0%
69	25.0%
70	15.0%
71-74	30.0%
75+	100.0%

Disability: None assumed

Salary Increases: In accordance with the following table based on service:

<u>Years of Service</u>	<u>Annual Increase</u>
<1	12.0%
1-2	10.0%
3	8.0%
4	5.0%
5-9	4.0%
10-19	3.0%
20+	2.5%

Inflation Rate: 2.25% per year

**Non-Investment
Expenses:** Prior year's actual amount rounded up to next \$100,000

Family Composition: 75% of employees are assumed to be married with males assumed to be four years older than their spouses.

Asset Valuation Basis

In order to smooth out market value fluctuations for purposes of developing the ADC, the difference between actual investment earnings over expected investment earnings will be recognized in equal amounts over a five-year period with the restriction that the smoothed value of assets may not be less than 90% nor greater than 110% of market value.

Table 23**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS**

Outlined on the following pages are the principal features of the Plan reflected in the 2017 valuation.

Definitions:

<u>Creditable Service</u>	Service credited as an employee of the City of Spokane during which contributions were made as an eligible member of the Retirement System up to a maximum of 40 years. The maximum is 35 years for employees hired after January 1, 2015, but before December 31, 2017. The maximum is 30 years for employees hired prior to January 1, 2009 who terminate after January 1, 2009 and who do not elect the alternate benefit formula.
<u>Service Buy-Back</u>	A six-month window was opened from October 1, 2009 through March 31, 2010 during which members who had withdrawn their retirement accumulations and not elected to buy back prior service time could do so. Future rehired employees will have one year from their date of rehire to elect to buy back prior service time
<u>Compensation</u>	Total amount received by an employee including base pay, shift differential, overtime, holiday pay, hazardous duty pay and out-of-classification pay and not reduced by salary reduction contributions to the City's cafeteria plan or Section 457 plan. For employees hired after January 1, 2018, overtime compensation will be capped at 120% of an employee's annual base salary.
<u>Final Compensation</u>	The highest average annual Compensation received by a member during any three consecutive years. For employees hired prior to January 1, 2015, the highest average annual Compensation received by a member during any two consecutive years.
<u>Normal Retirement Date</u>	The first day of the month coinciding with or next following the attainment of age 65 and completion of 7 years of Creditable Service. For employees hired prior to January 1, 2015, the first day of the month coinciding with or next following the attainment of age 62 and completion of 5 years of Creditable Service.
<u>Early Retirement Date</u>	The first day of the month coinciding with or next following the attainment of age 50 and with the sum of age plus Creditable Service greater than or equal to 90. Employees hired between January 1, 2015 and December 31, 2017, the first day of the month coinciding with or next following the attainment of age 50 and with the sum of age plus Creditable Service greater than or equal to 80. Employees hired between January 1, 2009 and December 31, 2014, the first day of the month coinciding with or next following the attainment of age 50 and with the sum of age plus Creditable Service greater than or equal to 75. Employees hired prior to January 1, 2009 who terminate after January 1, 2009 and who do not elect the alternate benefit formula described below may retire after attainment of age 50 with 5 years of Creditable Service.
<u>Member Contributions</u>	9.00% of Compensation is required to be paid by the members. Between August 31, 2014 and December 16, 2017, 8.25% of Compensation was required to be paid by the members. Prior to September 1, 2014, 7.75% of Compensation was required to be paid by the members. These contributions are credited with 2.5% interest annually,

Table 23**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS**

Service Retirement Eligibility:	<p>A member is eligible for normal retirement on his Normal Retirement Date. For members hired after January 1, 2018, early retirement is permitted at any time after attaining age 50 if the sum of age plus Creditable Service is greater than or equal to 90. For members hired between January 1, 2015 and December 31, 2017, early retirement is permitted at any time after attaining age 50 if the sum of age plus Creditable Service is greater than or equal to 80. For member hired between January 1, 2009 and December 31, 2014, early retirement is permitted at any time after attaining age 50 if the sum of age plus Creditable Service is greater than or equal to 75. Early retirement is permitted at any time after attaining age 50 with 5 years of Credited Service for employees hired prior to January 1, 2009 who terminate after January 1, 2009 and who do not elect the alternate benefit formula described below.</p>
Service Retirement Allowance:	<p>Upon service retirement, a member becomes eligible to receive an annual allowance, payable in equal monthly installments. The annual allowance is computed as follows:</p> <p><u>Normal Retirement Allowance</u> Applies to all employees hired after December 31, 2017. Employees hired before January 1, 2018 who terminate after January 1, 2018 may elect this formula at retirement.</p> <p>An amount equal to 2.00% of the member's Final Compensation, multiplied by the number of years of Creditable Service up to 40 years. The maximum annual benefit is 80.0% of Final Compensation.</p> <p><u>Normal Retirement Allowance under Alternate Benefit Formula</u> Applies to all employees hired between January 1, 2009 and December 31, 2017. Employees hired before January 1, 2009 who terminate after January 1, 2009 may elect this formula at retirement.</p> <p>An amount equal to 2.00% of the member's Final Compensation, multiplied by the number of years of Creditable Service up to 35 years. The maximum annual benefit is 70.0% of Final Compensation.</p> <p><u>Normal Retirement Allowance under Benefit Formula in SMC 3.05.160</u> Employees hired before January 1, 2009 who terminate after January 1, 2009 may elect this formula at retirement.</p> <p>An amount equal to 2.15% of the member's Final Compensation, multiplied by the number of years of Creditable Service up to 30 years. The maximum annual benefit is 64.5% of Final Compensation.</p> <p>Early Retirement Allowance The Normal Retirement Allowance calculated using Creditable Service and Final Compensation as of the member's Early Retirement Date. For employees hired after January 1, 2018, a reduction of 2.5% will be applied for each year under age 65.</p>
Disability Retirement Eligibility:	<p>Permanent and total disability, as determined by the Board, prior to Normal Retirement Age provided the member has at least 7 years (5 years for employees hired prior to January 1, 2015) of City service in the ten-year period prior to disability. The 7 (or 5) year service requirement does not apply if the disability is due to accidental causes while engaged in City service.</p>
Disability Retirement Allowance:	<p>An amount equal to 1.25% of the member's Final Compensation, multiplied by the number of years of Creditable Service projected to Normal Retirement Age. The minimum annual benefit is \$2,400 per year for "Duty Related" disability and \$1,200 per year for "Non-duty Related" disability.</p>

Table 23**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS****Withdrawal Benefits:**

If termination occurs after seven years of service (five years of service for members hired prior to January 1, 2015), a member is entitled to a retirement allowance commencing on his Early Retirement Date or later, up to his Normal Retirement Date, based on his years of Creditable Service and Final Compensation as of his termination date provided he has not withdrawn his Member Contributions.

Death Benefit Before Retirement:

Not married or not completed 7 years of service (5 years of service if hired prior to January 1, 2015)

Beneficiary will receive a refund of the member's contributions with interest.

Married with 7 years of service (5 years of service if hired prior to January 1, 2015)

The surviving spouse of a member may elect to receive the survivor's portion of the benefit that would have been payable if the member had survived to his earliest retirement date and elected the 100% Joint & Survivor option in lieu of a refund of the member's contribution account.

Post-retirement Death:

An amount determined in accordance with the optional form of payment elected at retirement, but not less than the accumulated value of the member's contributions with interest less actual payments made.

Appendix - Data Tables

Exhibit A	Summary of Membership Data as of December 31, 2017
Exhibit B	20 Year Benefit Payment Projections
Exhibit C	Age and Service Distributions
Exhibit D	Age, Salary and Service Distributions
Exhibit E	Average Benefits for Service Retirement
Exhibit F	Average Benefits for Survivor Beneficiary
Exhibit G	Average Benefits for Disability Retirement
Exhibit H	Average Benefits for Vested Terminations
Exhibit I	Average Benefits for Portables

EXHIBIT A

Summary of Membership Data as of December 31, 2017

Active Members

Item	Male	Female	Total
Number of Members	978	466	1,444
Annual Salaries	\$68,106,005	\$29,441,902	\$97,547,907
Average Age	48.0	47.8	47.9
Average Service	12.0	11.0	11.7

EXHIBIT A
(continued)

Summary of Membership Data as of December 31, 2017

Retirees and Beneficiaries

Item	Number	Annual Annuities	Average Annuities
Retired Members	1,213	\$25,107,141	\$20,698
Survivor Annuitants	154	\$2,141,681	\$13,907
Disabled Annuitants	9	\$125,328	\$13,925
Total Annuitants	1,376	\$27,374,150	\$19,894

EXHIBIT A
(continued)

Summary of Membership Data as of December 31, 2017

Vested Terminations and Portables

Item	Number	Annual Annuities	Average Annuities
Vested Terminations	67	\$731,786	\$10,922
Portables*	46	\$227,862	\$4,954

* Annuity amounts are estimates based on last known earnings projected to retirement. Actual annuity amounts will be calculated using actual earnings at retirement.

EXHIBIT B

20 Year Benefit Payment Projection

Spokane Employees' Retirement System

Year Ended December 31	Current and Future Retirees	Current Retirees Only
2018	\$30,637,771	\$27,192,616
2019	32,205,765	26,784,277
2020	33,718,006	26,348,468
2021	35,175,172	25,881,739
2022	36,594,212	25,387,397
2023	37,877,950	24,862,262
2024	39,049,075	24,304,981
2025	40,129,337	23,714,374
2026	41,215,323	23,089,115
2027	42,106,850	22,428,224
2028	42,944,499	21,730,325
2029	43,695,426	20,996,969
2030	44,450,308	20,227,592
2031	45,078,128	19,422,014
2032	45,722,170	18,586,200
2033	46,113,375	17,720,914
2034	46,502,134	16,829,121
2035	46,817,474	15,914,159
2036	46,957,232	14,968,057
2037	47,000,354	14,018,189

EXHIBIT C

Age and Service Distribution

Spokane Employees' Retirement System

Attained Age	Years of Creditable Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up		
Under 25	8	8	0	0	0	0	0	0	0	0	0	16
25 to 29	15	50	8	0	0	0	0	0	0	0	0	73
30 to 34	10	76	34	16	0	0	0	0	0	0	0	136
35 to 39	17	54	48	39	11	0	0	0	0	0	0	169
40 to 44	9	56	38	41	27	2	0	0	0	0	0	173
45 to 49	17	45	39	36	49	23	9	0	0	0	0	218
50 to 54	7	36	37	36	35	29	33	4	0	0	0	217
55 to 59	3	32	30	34	30	36	35	6	4	0	0	210
60 to 64	4	18	26	23	31	24	28	6	13	0	0	173
65 to 69	0	2	5	9	12	7	2	2	3	2	2	44
70 & Up	0	0	1	3	3	1	2	0	2	3	3	15
Total	90	377	266	237	198	122	109	18	22	5	1,444	
Freq. Pct.	6.2%	26.1%	18.4%	16.4%	13.7%	8.5%	7.6%	1.3%	1.5%	0.3%	100.0%	

EXHIBIT D

Age, Salary and Service Distribution

Spokane Employees' Retirement System

Attained Age	Years of Creditable Service											Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up			
Under 25	274,812	351,417	0	0	0	0	0	0	0	0	0	0	626,229
25 to 29	680,128	2,573,728	477,030	0	0	0	0	0	0	0	0	0	3,730,886
30 to 34	485,347	4,515,067	2,437,825	976,772	0	0	0	0	0	0	0	0	8,415,010
35 to 39	1,000,954	3,677,147	3,451,689	2,650,169	739,962	0	0	0	0	0	0	0	11,519,921
40 to 44	349,785	3,650,595	2,615,071	2,806,236	2,028,334	124,296	0	0	0	0	0	0	11,574,317
45 to 49	890,267	3,129,504	2,531,596	2,718,171	3,746,303	1,846,479	553,177	0	0	0	0	0	15,415,498
50 to 54	439,567	2,619,826	2,581,326	2,381,530	2,597,622	2,096,971	2,418,797	279,856	0	0	0	0	15,415,495
55 to 59	141,117	2,288,957	2,116,908	2,403,702	2,194,859	2,819,977	2,555,361	426,157	258,534	0	0	0	15,205,571
60 to 64	311,153	1,151,628	1,779,369	1,535,654	2,060,270	1,665,605	1,929,948	370,786	907,780	0	0	0	11,712,192
65 to 69	0	158,412	292,262	580,757	767,680	450,733	140,322	160,515	181,210	250,605	0	0	2,982,497
70 & Up	0	0	126,071	149,136	161,789	71,731	103,647	0	157,861	180,056	0	0	950,292
Total	4,573,129	24,116,281	18,409,148	16,202,127	14,296,819	9,075,792	7,701,252	1,237,314	1,505,385	430,661	97,547,907	0	97,547,907
Freq. Pct.	4.7%	24.7%	18.9%	16.6%	14.7%	9.3%	8.0%	1.3%	1.5%	0.4%	100.0%	0.4%	100.0%
Avg. Sal.	50,813	63,969	69,207	68,363	72,206	74,392	70,654	68,740	68,427	86,132	67,554	86,132	67,554

EXHIBIT E

**Average Benefits for Service Retirement
Spokane Employees' Retirement System**

Attained Age	Male		Female		Total	
	Number	Avg. Ben.	Number	Avg. Ben.	Number	Avg. Ben.
Under 50	0	0	0	0	0	0
50 to 54	30	20,481	20	22,737	50	21,384
55 to 59	47	24,310	47	24,791	94	24,551
60 to 64	131	25,497	96	20,398	227	23,341
65 to 69	204	25,139	129	18,899	333	22,722
70 to 74	143	23,055	82	15,101	225	20,156
75 to 79	82	19,487	61	13,524	143	16,943
80 to 84	41	17,129	37	11,562	78	14,489
85 to 89	23	14,205	15	11,690	38	13,212
90 to 94	11	12,039	10	10,702	21	11,402
95 & Up	2	12,268	2	5,709	4	8,989
Total	714	22,838	499	17,637	1213	20,698
Average Age	69.4		69.4		69.4	
Freq. Pct.	58.9%		41.1%		100.0%	

EXHIBIT F

**Average Benefits for Survivor Beneficiary
Spokane Employees' Retirement System**

Attained Age	Male		Female		Total	
	Number	Avg. Ben.	Number	Avg. Ben.	Number	Avg. Ben.
Under 50	0	0	0	0	0	0
50 to 54	0	0	2	16,325	2	16,325
55 to 59	0	0	8	15,681	8	15,681
60 to 64	4	16,346	14	18,941	18	18,364
65 to 69	0	0	29	18,593	29	18,593
70 to 74	0	0	9	15,136	9	15,136
75 to 79	0	0	27	13,713	27	13,713
80 to 84	2	8,243	30	11,973	32	11,740
85 to 89	1	2,339	16	8,432	17	8,074
90 to 94	0	0	10	7,917	10	7,917
95 & Up	0	0	2	7,629	2	7,629
Total	7	12,030	147	13,996	154	13,907
Average Age	71.9		75.8		75.6	
Freq. Pct.	4.5%		95.5%		100.0%	

EXHIBIT G

**Average Benefits for Disability Retirement
Spokane Employees' Retirement System**

Attained Age	Male		Female		Total	
	Number	Avg. Ben.	Number	Avg. Ben.	Number	Avg. Ben.
Under 50	0	0	0	0	0	0
50 to 54	1	18,583	1	19,080	2	18,831
55 to 59	0	0	0	0	0	0
60 to 64	3	14,293	0	0	3	14,293
65 to 69	0	0	2	9,296	2	9,296
70 to 74	1	13,295	1	12,898	2	13,096
75 to 79	0	0	0	0	0	0
80 to 84	0	0	0	0	0	0
85 to 89	0	0	0	0	0	0
90 to 94	0	0	0	0	0	0
95 & Up	0	0	0	0	0	0
Total	5	14,952	4	12,643	9	13,925
Average Age	61.6		64.4		62.8	
Freq. Pct.	55.6%		44.4%		100.0%	

EXHIBIT H

**Average Benefits for Vested Terminations
Spokane Employees' Retirement System**

Attained Age	Male		Female		Total	
	Number	Avg. Ben.	Number	Avg. Ben.	Number	Avg. Ben.
Under 30	0	0	0	0	0	0
30 to 34	5	10,888	1	8,529	6	10,495
35 to 39	2	8,527	3	7,661	5	8,008
40 to 44	7	11,591	13	11,923	20	11,807
45 to 49	12	10,955	10	11,628	22	11,261
50 to 54	2	5,803	5	12,262	7	10,417
55 to 59	2	6,983	1	20,645	3	11,537
60 to 64	1	7,084	3	10,096	4	9,343
65 & Up	0	0	0	0	0	0
Total	31	10,218	36	11,529	67	10,922
Average Age	44.8		46.3		45.6	
Freq. Pct.	46.3%		53.7%		100.0%	

EXHIBIT I

Average Benefits for Portables

Spokane Employees' Retirement System

Attained Age	Male		Female		Total	
	Number	Avg. Ben.*	Number	Avg. Ben.*	Number	Avg. Ben.*
Under 30	1	535	1	760	2	647
30 to 34	1	3,920	0	0	1	3,920
35 to 39	2	1,530	6	4,474	8	3,738
40 to 44	3	6,330	1	1,754	4	5,186
45 to 49	5	4,054	5	9,284	10	6,669
50 to 54	8	4,022	1	7,207	9	4,376
55 to 59	0	0	6	7,626	6	7,626
60 to 64	3	3,506	1	50	4	2,642
65 & Up	1	4,128	1	5,472	2	4,800
Total	24	3,900	22	6,103	46	4,954
Average Age	49.2		48.1		48.6	
Freq. Pct.	52.2%		47.8%		100.0%	

* Annuity amounts are estimates based on last known earnings projected to retirement. Actual annuity amounts will be calculated using actual earnings at retirement.

Statistical Section

Schedule of Revenues by Source

Fiscal Year	Employer Contribution	Employer Contributions	Member Contributions	Net Investment Income	Total Revenues
2008	6.72%	4,875,443	4,882,622	(59,972,361)	(50,214,296)
2009	7.75%	6,474,432	6,637,872	38,442,846	51,555,150
2010	7.75%	6,580,795	6,618,558	27,752,165	40,951,518
2011	7.75%	6,799,258	6,831,742	(6,440,146)	7,190,854
2012	7.75%	6,937,750	7,019,684	25,667,673	39,625,107
2013	7.75%	6,715,376	6,715,376	45,323,533	58,754,285
2014 ¹	7.92%	6,822,279	6,822,279	14,497,901	28,142,459
2015	8.25%	7,398,945	7,402,905	(3,228,439)	11,573,411
2016	8.25%	7,586,362	7,586,362	16,802,274	31,974,998
2017 ²	8.25%	8,113,319	8,113,319	43,085,572	59,312,210

¹ Effective September 1, 2014, the annual Contribution Rate changed from 7.75% to 8.25%. 7.92% represents the average rate of contributions received during 2014.

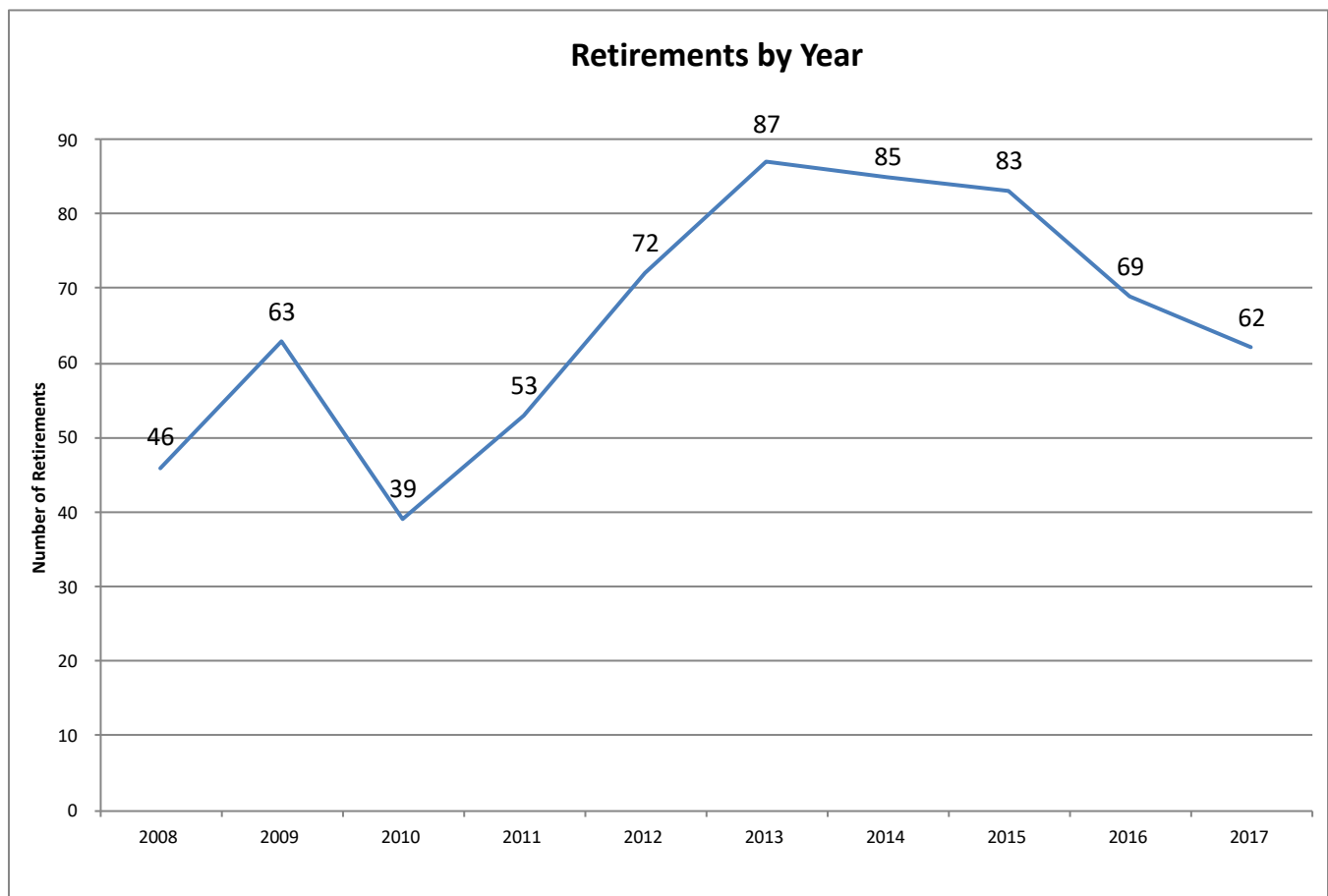
² Effective December 17, 2017, the annual Contribution Rate changed from 8.25% to 9.0%. 8.25% represents the average rate of contributions received during 2017.

Schedule of Expenses by Type

Fiscal Year	Benefits	Refunds	Net Administrative	Total Expenses
2008	15,002,061	370,947	581,294	15,954,302
2009	15,509,868	315,919	563,408	16,389,195
2010	16,547,561	493,911	505,222	17,546,694
2011	17,216,853	502,566	490,611	18,210,030
2012	18,554,194	569,058	520,955	19,644,207
2013	20,346,281	393,954	385,675	21,125,910
2014	22,258,842	625,184	386,713	23,270,739
2015	23,959,198	637,822	447,921	25,044,941
2016	25,737,515	729,741	477,252	26,944,508
2017	26,891,785	551,908	563,078	28,006,771

Schedule of Benefit Expenses by Type

Year	Service Retiree Benefits	Survivor Benefits	Disability Retiree Benefits	Refunds	Total
2008	13,835,194	1,030,774	136,093	370,947	15,373,008
2009	14,341,682	1,037,317	130,868	315,919	15,825,786
2010	15,302,791	1,124,509	120,261	493,911	17,041,472
2011	15,863,198	1,240,384	113,271	502,566	17,719,419
2012	17,161,187	1,283,885	109,122	569,058	19,123,252
2013	18,887,269	1,333,659	125,353	393,954	20,740,235
2014	20,659,575	1,473,938	125,329	625,184	22,884,026
2015	22,192,756	1,641,114	125,328	637,822	24,597,020
2016	23,765,713	1,846,474	125,328	729,741	26,467,256
2017	24,852,640	1,913,817	125,328	551,908	27,443,693



Retirements During 2017

Name	Department	Position	Date Retired	Option	Yrs Serv	Age
Gene B. Jakubczak	Fleet Services	Director	1/1/2017	D	25.6	64
Charles D. Fletcher	Water	Water Inspector	1/7/2017	E	28.1	62
Matthew W. Antush	Public Defender	Public Defender II	1/7/2017	E	23.8	51
Richard J. Gow	Water	Meter Reader	1/7/2017	E	11.1	71
Mindy C. Baker-Nygren	Probation Services	Probation Officer I	1/10/2017	ST	19.6	50
Karen S. Thornton ^	Street	Street Maintenance Supervisor	1/12/2017	E	40.4	62
Robert V. Inwards	Advanced Wastewater Treatment	Senior Wastewater Treatment Plant Maintenance Mechanic	1/14/2017	D	28.8	66
Robert A. Lincoln	Law Enforcement Information Systems	Director - Regional Emergency Communication Systems	1/21/2017	ST	18.6	67
William A. Flatt	Law Enforcement Information Systems	Information Analyst	2/2/2017	E	17.7	76
Clinton L. Tucker	Water	Certified Water Hydroelectric Plant Operator	2/4/2017	E	17.7	66
James C. Humphries, Jr. *	Water	Certified Heavy Equipment Operator	2/6/2017	E	9.6	53
Michael F. Curtis	Water	Meter Reader	2/11/2017	ST	45.8	68
Wanda T. Clark	Building Services	Planning Specialist	2/17/2017	ST	11.4	65
Joseph J. Keane	Water	Water Service Specialist	2/18/2017	E	17.8	67
Michael W. Hartman	Water	Certified Water Service Specialist	3/3/2017	ST	24.7	63
Jill R. Young	Library	Librarian	4/2/2017	D	20.6	59
Robert D. Wall	Advanced Wastewater Treatment	Chemist	4/4/2017	E	16.0	66
Suzanne M. Tresko	Code Enforcement	Code Enforcement Supervisor	4/8/2017	ST	26.5	61
Glenn A. Furman	Advanced Wastewater Treatment	Stationary Engineer	4/9/2017	ST	20.7	69
William J. Brown	Advanced Wastewater Treatment	Wastewater Treatment Plant Maintenance Mechanic	4/18/2017	B	20.6	50
Joel K. Cook *	Water Service Specialist	Water	4/19/2017	E	11.9	50
Scott M. Emmerson	Code Enforcement	Certified Enforcement Specialist	4/23/2017	E	24.1	50
Gary J. Brueher #	Municipal Court	Police Court Bailiff	5/1/2017	D	1.6	73
Lisa G. Porter	Legal	Clerk II	5/2/2017	ST	19.4	57
Margaret A. Schussler	Parks & Recreation	Gardner II	5/6/2017	ST	33.0	66
Daniel J. Hirst	Engineering Services	Public Works Lead Inspector	5/13/2017	E	15.3	70
Pedro A. Brown	Water	Water Service Specialist	5/20/2017	ST	27.4	61
Richard S. Rush *	Council	City Council Assistant	6/1/2017	ST	6.3	65
Rebecca L. Davis	Human Resources	Clerk III	6/2/2017	ST	20.2	62
Colleen A. Rugg	Building Services	Permit Specialist	6/3/2017	E	25.2	62
Robert J. Horrocks	Street	Signal Maintenance Foreperson	6/8/2017	ST	33.4	60
Rickey D. Penaluna	Street	Signal Maintenance Technician	6/17/2017	E	16.3	62
Marie Krohn	Utility - Billing	Clerk II	6/20/2017	ST	17.0	67
Wilford B. Hardy, Jr.	Advanced Wastewater Treatment	Chemist	7/4/2017	D	19.2	75
Paul E. Putman	Fleet Services	Heavy Equipment Mechanic	7/6/2017	ST	32.2	58
Sandra M. O'Connor	Police	Secretary II	7/6/2017	ST	9.3	52
Ellen P. Brown	Legal	Clerk III	7/8/2017	ST	20.4	66
Julie A. Neff	Planning Services	Associate Planner	7/8/2017	D	12.2	54
Linda J. Hartman	Library	Librarian	7/8/2017	E	28.7	65
William F. Thomas	Advanced Wastewater Treatment	Heavy Equipment Mechanic	7/8/2017	ST	25.0	63
Darlene L. Esperas	Solid Waste Management	Custodian II	7/13/2017	ST	26.8	65
Maryann G. Carey	Public Works & Utilities	Clerk III	7/15/2017	E	13.7	64
Jo Anne E. Wright	Planning Services	Associate Planner	7/29/2017	ST	19.5	70
Jerry J. Richardson	Solid Waste Disposal	Laborer II	8/2/2017	E	15.1	71
Mira Duong *	Municipal Court	Clerk III	8/10/2017	B	15.5	50
Donald B. Nelson	Golf	Assistant Golf Course Superintendent	8/12/2017	D	35.4	65
Brian K. Krech	Water	Certified Water Hydroelectric Plant Mechanic	9/2/2017	C-10	12.7	54
Robert K. Mielke	Golf	Golf Course Superintendent	9/9/2017	E	32.5	56
James E. Moe	Street	Lead Bridge Inspector	10/5/2017	D	34.0	61
Aaron J. McDanold	Street	Laborer II	10/20/2017	ST	16.0	61
Gregory N. Lorenzi *	Advanced Wastewater Treatment	Laborer II	11/1/2017	ST	8.6	57
Jody L. Treffry	Probation Services	Probation Officer I	11/2/2017	ST	11.8	62
Paul R. Peterson #	Water	Water Hydroelectric Plant Mechanic	11/6/2017	ST	5.1	67
Lee W. Joslyn	Water	Meter Reader	11/7/2017	ST	26.7	53
Shari L. Austin	CD/HS Operations	Accounting Clerk	11/18/2017	ST	23.1	56
Cassandra D. Friesen *	Accounting	Accountant I	12/1/2017	E	5.8	50
Kenneth R. Pierpont	Water	Water Service Specialist	12/2/2017	D	28.6	57
Lisa M. Dillmann	Finance	Taxes & Licenses Specialist	12/2/2017	A	26.2	58
Lynn M. Cunningham	Street	Street Maintenance Operator I	12/2/2017	ST	25.7	63
Terry M. Headley	Advanced Wastewater Treatment	Wastewater Treatment Plant Operator II	12/3/2017	E	41.2	67
Daniel L. LaPorte	Street	Laborer II	12/5/2017	ST	9.8	61
Daniel R. Keison	Sewer Maintenance	Laborer II	12/30/2017	A	28.8	68

* Retired as vested employee # Retired under membership through Portability ^ Retired as spouse of deceased vested employee

Retiree Deaths During 2017

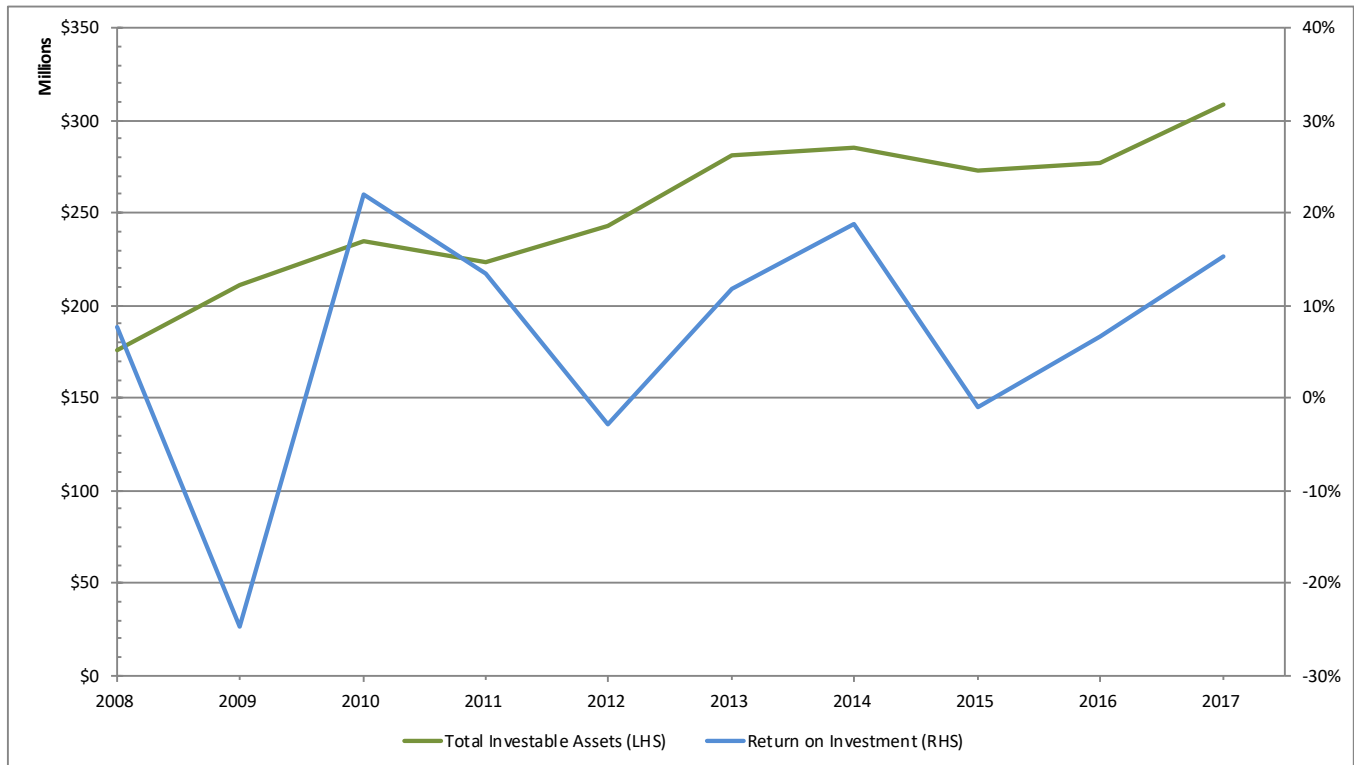
Name	Date Retired	Date of Death	Age	Retirement Option
Kenneth R. Johnson	10/2/1993	1/12/2017	76	E
Roy F. Triplett	6/2/2012	1/18/2017	66	E
Lynette P. Struck	1/8/2011	2/5/2017	73	ST
Margaret P. Bomben	7/30/2010	2/19/2017	86	E
Gerald J. Harnois	1/8/1999	2/21/2017	81	E
Robert P. Willson	12/25/1983	3/30/2017	94	A
David H. Rodgers	2/1/1994	4/18/2017	93	E
Veryl K. Cross	3/6/1983	4/24/2017	96	E
John W. Schulte	10/31/2009	4/24/2017	67	D
Richard A. Shobe	4/3/1982	5/10/2017	89	C-10
Joan L. Lockridge	3/30/2010	5/12/2017	83	D
Jack D. Bryan	10/19/1996	5/15/2017	70	E
Charles R. Benefiel	9/3/2005	5/19/2017	78	A
Sandra L. Johnson	3/5/1988	5/19/2017	85	ST
Benjamin J. Herres	6/7/1986	5/24/2017	97	ST
Arleigh Q. White	5/12/1990	6/1/2017	87	E
Marjorie L. Cromwell	1/19/1985	6/4/2017	93	A
Ila I. Greenaway	6/9/2015	6/12/2017	99	E
Gary R. Driskell	8/14/1999	6/22/2017	82	ST
Larry V. Stevens	9/7/2011	6/23/2017	67	E
Lorraine C. Johnson	6/1/2015	6/29/2017	76	D
Lawrence E. Maly	4/6/1991	7/14/2017	86	D
James M. Gaffney	12/23/1999	8/5/2017	79	D
Natale Polito	5/4/1993	8/17/2017	85	D
Jack G. Trelawney	5/6/2000	8/24/2017	83	ST
Virginia M. Watt	9/16/2000	8/28/2017	80	E
Jack N. Johnston	2/3/2002	8/31/2017	81	B
Otto L. Deneke	9/12/1981	9/15/2017	98	A
Alice M. Hartford	7/1/1993	9/27/2017	86	A
Bernice H. Rosendahl	11/11/2013	10/15/2017	92	D
Russell W. Beseler	4/2/2011	10/17/2017	68	D
Mary L. Franklin	4/22/2010	10/21/2017	59	E
Michael H. McGhee	3/30/1989	10/30/2017	80	ST
Edith A. Sramek	7/2/2002	10/30/2017	70	ST
Walter R. Cummings	11/8/1980	11/3/2017	99	E
Rodney R. Bishop	8/19/2003	11/20/2017	65	E
Keith M. Thackray	9/26/1985	12/11/2017	91	ST
David F. Scarpelli	5/14/2001	12/18/2017	66	ST
Richard A. Davis	6/21/2002	12/19/2017	71	ST
John H. Owen	7/12/2017	12/20/2017	68	E
Andrea E. Nierstheimer	7/23/2016	12/26/2017	64	D

Active Member Deaths During 2017

Name	Department	Date of Death	Age	Years of Service
Hunt M. Whaley	Legal	8/10/2017	44	3.9

Investment Section

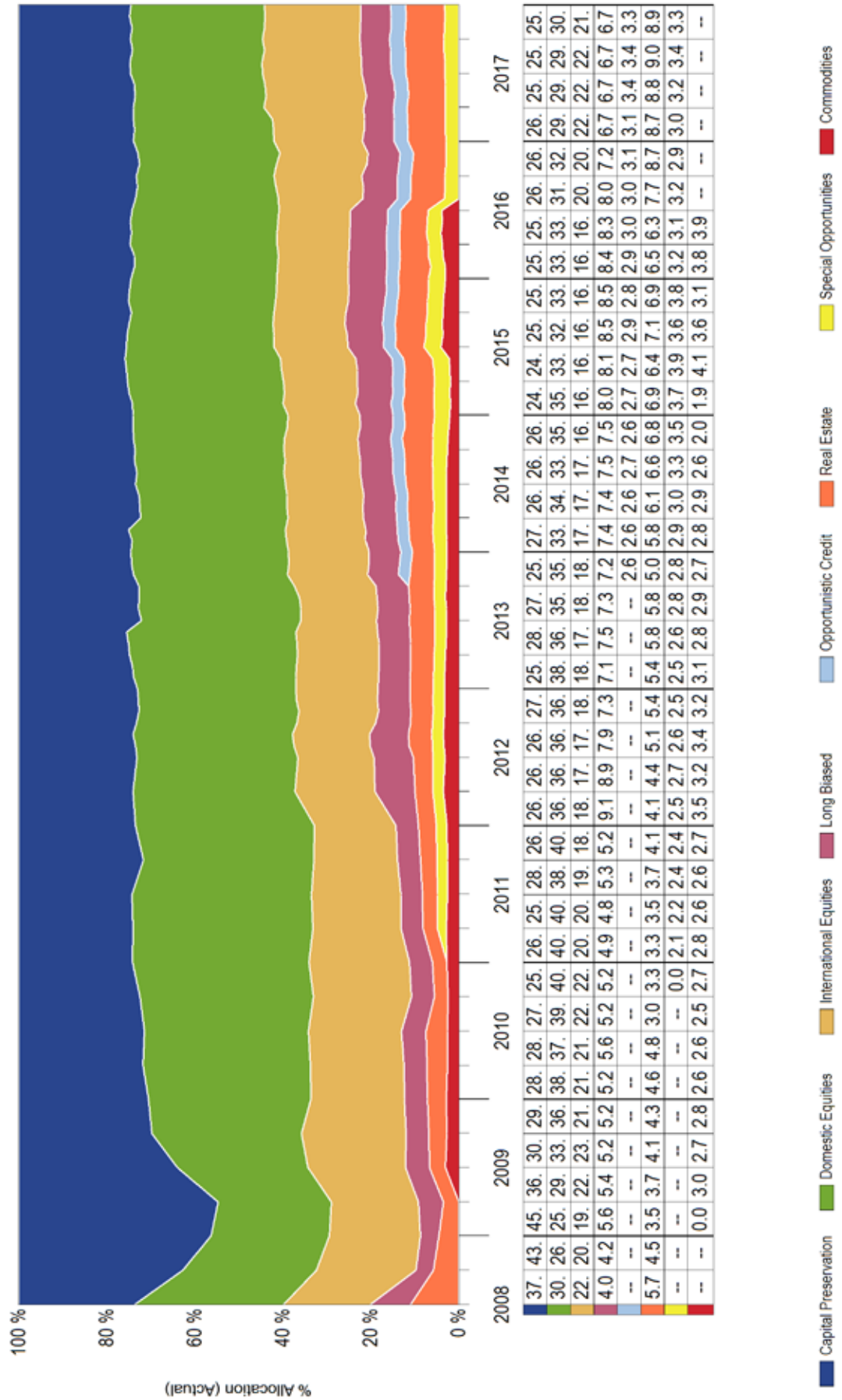
Total Retirement Assets A 10 year look



Schedule of Investment Results

	Market Value of Investments	Net Investment Income	Investment Rate of Return (net of fees)
2008	175,878,430	(59,972,361)	-24.68%
2009	211,055,762	38,442,846	21.99%
2010	234,404,883	27,752,165	13.47%
2011	222,991,899	(6,440,146)	-2.80%
2012	243,036,215	25,667,673	11.70%
2013	280,670,090	45,323,533	18.89%
2014	285,567,005	14,497,901	5.34%
2015	272,332,285	(3,228,439)	-0.94%
2016	276,992,752	16,802,274	6.71%
2017	308,520,137	43,084,584	15.40%

Investment Allocation History



Investments Listed by Type

As of December 31, 2017

Capital Preservation:

Cash Held by Treasurer	\$32,606
Fidelity Government Money Market	229,165
Sterling Capital Core Bond	23,798,158
Hotchkis & Wiley High Yield	23,296,834
Polar Long/Short Fund	6,634,594
Castine Partners	7,752,590
Post Limited Term High Yield	6,003,233
Rimrock Low Volatility	9,671,706
American Beacon Flexible Bond	1,389,936

Domestic Equities:

Hotchkis & Wiley Large Cap Value	16,510,608
Jackson Square Large Cap Growth	16,048,057
MFS Blended Research Core	18,144,669
Vanguard S&P 500 Index	10,612,535
Sterling Mid Cap Value	6,152,998
Vanguard Mid Cap Growth	4,832,653
Vanguard Mid Cap Index	3,932,311
Champlain Small Cap	5,661,018
Frontier Phocas Small Cap Value	4,423,145
Bridge City Small Cap Growth	6,204,281
Vanguard Small Cap Index	1,054,555

International Equities:

Artisan International Value	21,644,352
EuroPacific Growth	21,608,849
Victory Trivalent International Small Cap	12,104,720
Berens Global Value	12,363,917

Real Estate:

Legacy Partners Realty Fund III	
Metropolitan Real Estate Partners	223,118
Morrison Street Fund IV	812,244
Morrison Street Fund V	5,261,746
Morrison Street Debt Opportunities	3,751,854
Morgan Stanley PRIME Fund	7,051,160
Principal (REITs)	10,135,757

Long Biased Hedge Funds:

Weatherlow Offshore	15,455,154
Royalty Opportunities I	2,686,206
Royalty Opportunities II	2,699,555

Opportunistic Credit:

Beach Point Select Fund	10,294,191
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Special Opportunities:

OrbiMed Partners II	10,041,663
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Total Cash and Investments

\$ 308,520,137

Note: Totals may not add due to rounding

