



SERS Spokane Employees'
Retirement System

Comprehensive Annual Report
FOR THE YEAR ENDED DECEMBER 31, 2019

Photography by Donald G. Brown

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FOR THE YEAR ENDED DECEMBER 31, 2019



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Introductory Section

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To the Honorable Mayor and
Spokane City Council
Spokane, WA 99201

This 78th 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, 2019

A handwritten signature in black ink, appearing to read "P. Tencick", written over a light gray circular background.

Phillip Tencick
Retirement Director

Administrative Organization

BOARD OF ADMINISTRATION

Michael F. Coster (Chair)	Elected Employee	WWTP Operations Superintendent, Advanced Waste Water Treatment Plant
Joseph Cavanaugh	Elected Employee	Water Engineering Tech Foreperson, Water Division
James Tieken	Elected Employee	Refuse District Supervisor, Solid Waste Management
Candace Mumm	Council Appointee	City Council Member, City of Spokane
Brian Brill	Council Appointee	Portfolio Manager, Washington Trust Bank
Dean Kiefer	Council Appointee	Associate Professor, Finance and Marketing 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	Associate Professor, Finance and Marketing 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

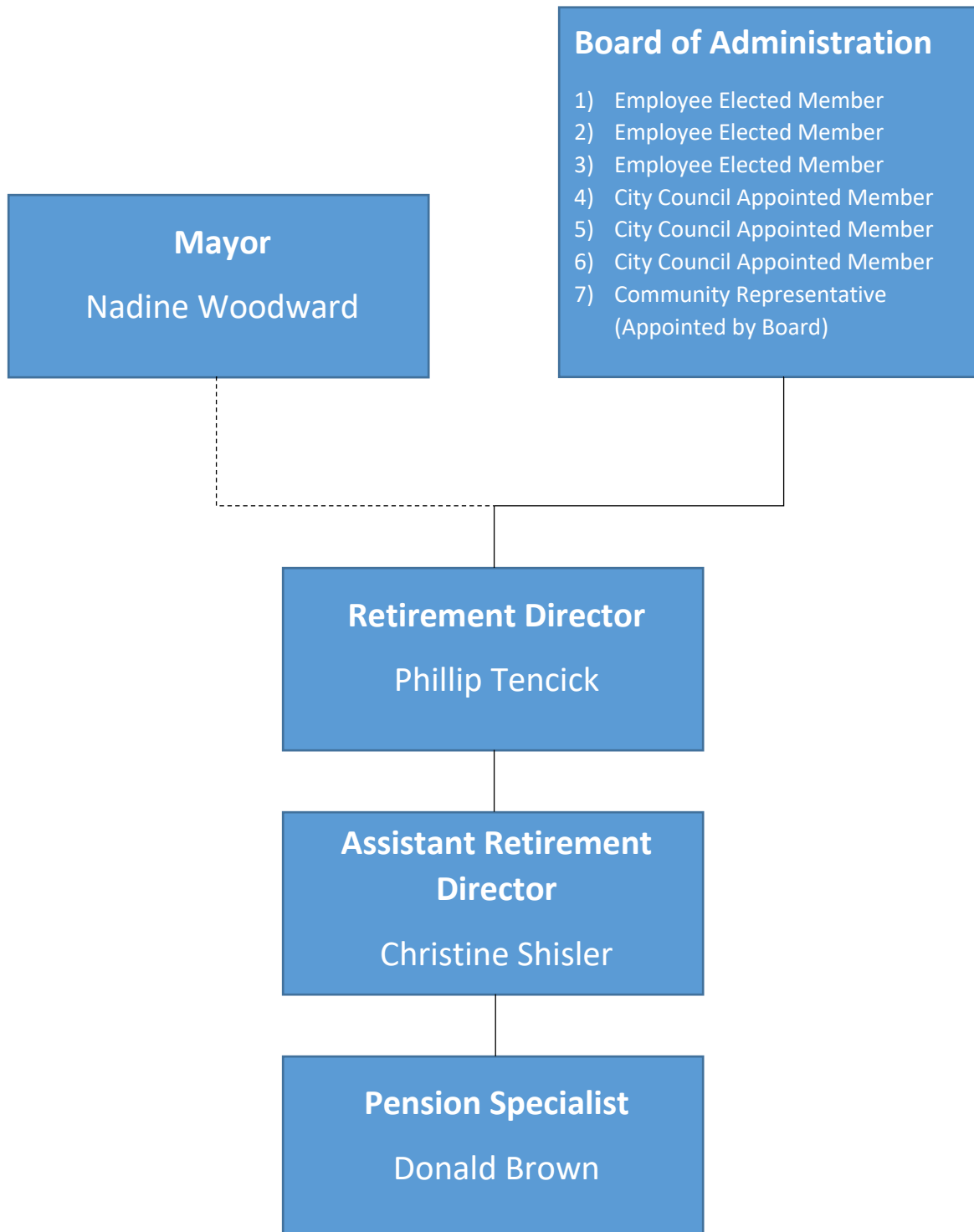
ADVISORY

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 9.75% 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 9.75% contribution. The City's contributions are used for funding the overall plan. The contribution rate increased from 9.25% to 9.75% for both the member and the City on December 15, 2019.

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

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Financial Section

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

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Report of Independent Auditors

The Trustees
Spokane Employees' Retirement System

Report on the Financial Statements

We have audited the accompanying financial statements of the Spokane Employees' Retirement System, a component unit of the City of Spokane, Washington, which comprise the statements of fiduciary net position as of December 31, 2019 and 2018, 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 and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. 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, 2019 and 2018, 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 9 and schedules of changes in the employer's net pension liability and related ratios, employer's contributions, and investment returns on pages 22 through 25 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the 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 26 through 27, 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.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated May 29, 2020, on our consideration of Spokane Employees' Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and the results of that testing, and not to provide an opinion on the effectiveness of the Spokane Employees' Retirement System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Spokane Employees' Retirement System's internal control over financial reporting and compliance.



Spokane, Washington
May 29, 2020

Spokane Employees' Retirement System 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, 2019. 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 these narratives 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 employer's 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 System 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 employer's 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-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 \$38.7 million (13.9%) during 2019 and decreased by \$29.8 million (9.6%) during 2018. Investments returned 18.4% for the year, providing \$50.2 million of net investment income. The net outflows for benefit payments (benefit payments and refunds less total contributions) were \$10.9 million.
- Total additions to net position were \$69.8 million in 2019, compared to a decrease of \$340 thousand in the prior year. For 2019, revenue includes member and employer contributions of \$19.7 million and net investment income of \$50.2 million. Member and employer contributions increased by \$1.3 million (6.9%) in 2019 compared to an increase of \$2.1 million (13.2%) in 2018. Net investment income (or loss), which fluctuates year-to-year depending on market conditions, was \$50.2 million in 2019, an increase in \$68.9 million compared to a loss of \$18.7 million of income in 2018.
- Total Plan expenses and payments for 2019 were \$31.2 million, a 5.9% increase from 2018. Total expense amounts and fluctuations are primarily driven by pension benefit payments, which make up 96.5% of total expenses. Retiree benefits increased by \$1.7 million (6.2%) during 2019 and by \$1.4 million (5.3%) during 2018. Administrative expenses increased by \$1 thousand (0.2%) during 2019 compared to a decrease of \$9 thousand (-1.5%) in 2018.

Spokane Employees' Retirement System Management Discussion and Analysis

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, 2019:

	2019	2018	2017
Additions			
Employer contributions	\$ 9,824,717	\$ 9,187,420	\$ 8,113,319
Plan member contributions	9,827,760	9,188,781	8,113,319
Miscellaneous revenue	-	-	988
Net investment income (loss)	50,166,728	(18,715,945)	43,084,584
Total additions	69,819,205	(339,744)	59,312,210
Deductions			
Benefits	30,055,864	28,309,344	26,891,785
Refunds of contributions	544,438	554,422	551,908
Net administrative expenses	555,763	554,484	563,078
Total deductions	31,156,065	29,418,250	28,006,771
Net increase (decrease) in net position	38,663,140	(29,757,994)	31,305,439
Net position restricted for pensions			
Beginning of year	278,879,226	308,637,220	277,331,781
End of year	\$ 317,542,366	\$ 278,879,226	\$ 308,637,220

Revenues – Additions to Net Plan Position

- Employer contributions increased by 6.9% (\$637 thousand) and Plan participant contributions increased by 7.0% (\$639 thousand) in 2019. In 2018, employer contributions and participant contributions each increased by 13.2% (\$1.1 million). Participant contributions may vary from employer contributions if rehired employees exercise their option to buy-back 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 15, 2019, the contribution rate changed from 9.25% to 9.75% of salary for both parties. Effective December 16, 2018, the contribution rate changed from 9.00% to 9.25% of salary for both parties.

Spokane Employees' Retirement System Management Discussion and Analysis

Revenues – Additions to Net Plan Position (continued)

- Net investment return was a \$50.2 million gain in 2019 compared to an \$18.7 million loss in 2018. In 2019, the portfolio's annual return was 18.4% compared to -6.3% in 2018. In 2019, markets performed exceptionally well, with all asset classes generating positive returns for the year. The year began positively as markets reversed the December 2018 sell-off. Growth concerns in the second half of the year were allayed by the Federal Reserve reducing interest rates and sparked a market rally into year-end. Domestic equity was the top performing asset class, returning 29.1% for the year, which, when combined with it being the largest target allocation of 32.0%, accounted for 48% of the total investment income. The Federal Reserve's interest rate cuts also produce strong returns in interest rate sensitive assets, with the capital preservation asset class returning 8.7% for the year. Opportunistic credit was the weakest performing asset class with a return of 1.1% for the year. The 2018 investment loss of -6.3% was due to broad market weakness in the second half of the year and a sharp downturn in equity markets in December. Equities suffered the largest losses, with international equities down 15.8% and domestic equities down 7.8%.

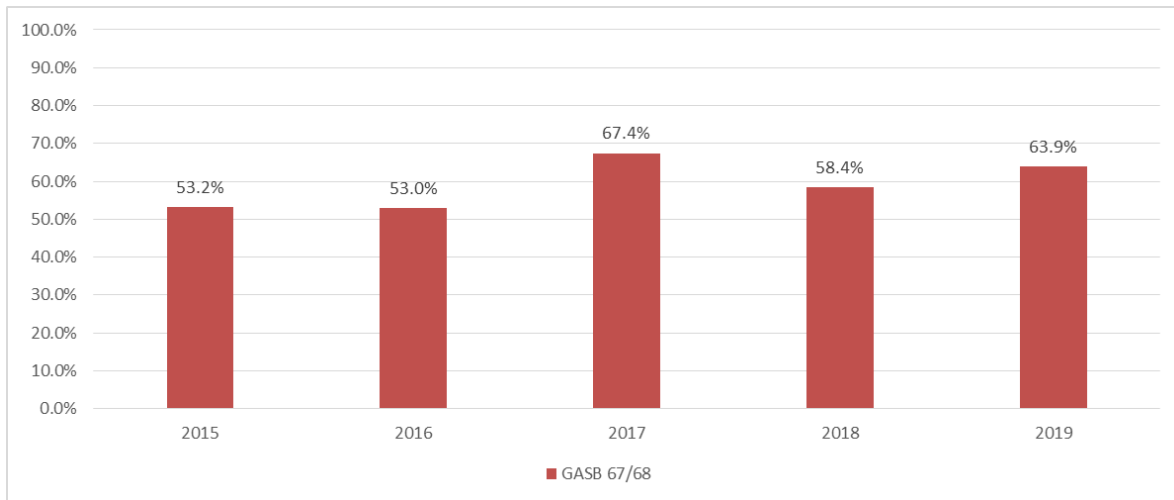
Expenses – Deductions from Net Plan Assets

- Retiree benefits paid increased by \$1.7 million (6.2%) in 2019 and \$1.4 million (5.3%) in 2018. The number of retirees and beneficiaries increased by 33 (2.3%) in 2019 and by 48 (3.5%) in 2018. SERS' active member age is an average of 47.3 years old, which is a slight decrease from 47.5 in 2018. Similarly, average active participant service has decreased slightly from 11.3 years in 2018 to 11.1 years in 2019.
- Refunds of contributions decreased by \$10 thousand (1.8%) in 2019 compared to an increase of just under \$3 thousand (0.5%) in 2018. Lump sum withdrawals from the Plan can 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 SERS staff, along with other costs associated with administering the Plan. These expenses are shown on the Schedule of Administrative Expenses. Staff and the Board continue to be diligent about Plan operating expenses. The net administrative expenses were \$556 thousand, an increase of 0.2% compared to 2018 and represent only 0.2% of net Plan assets and 1.8% of total annual expenditures.

Spokane Employees' Retirement System Management Discussion and Analysis

Funding Status

The Net Pension Liability (NPL) is the actuarial present value of benefits accrued, adjusted to reflect future changes based on the actuarial assumptions. The funded ratio compares the NPL to Plan assets.



Beginning in 2014, and reported retrospectively, the implementation of the Governmental Accounting Standards Board (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.

In 2017, a new tier was added to the Plan that reduced the normal cost for employees hired on or after January 1, 2018. In addition, the participant and employee contribution rates are 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 sets the discount rate equal to the 7.50% assumed rate of return.

Funds are accumulated from employer and employee contributions and investment earnings, and are used to pay present and future benefit obligations and administrative expenses. For most of 2019, active members contributed 9.25% of their salaries to the Plan and the City contributed 9.25%, for a total of 18.50%. Starting December 15, 2019, active members contribute 9.75% of their salaries to the Plan and the City contributes 9.75%, for a total of 19.50%. The current 9.75% employer and employee contribution rate is expected to allow the Plan to gradually improve its funded position.

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 funded ratio is 90% or greater and remains above 90% after the ad hoc adjustment is granted. The funded ratio was less than 90% as of December 31, 2019. The last ad hoc retiree adjustment occurred in 2001. Based on the current funded ratio, the Plan does not anticipate making ad hoc adjustments for the foreseeable future. It will take continued 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 System Management Discussion and Analysis

Investment Activities

One-year returns on asset classes and comparative benchmarks are presented in the table below. The policy indices and benchmarks are in italics.

	Investment Return	
	2019	2018
Total portfolio	18.40%	-6.27%
<i>Policy Index</i>	17.50%	-5.11%
Capital Preservation	8.71%	-0.94%
<i>Capital Preservation Policy Index</i>	9.11%	-0.72%
Total Return Bonds	9.38%	-0.09%
<i>Barclays US Aggregate Bond Index</i>	8.72%	0.01%
High Yield Bonds	9.71%	-3.46%
<i>Barclays US Corporate High Yield Index</i>	14.32%	-2.08%
Absolute Return	8.10%	-1.11%
<i>HFRI FOF Conservative Index</i>	6.35%	-0.86%
Domestic Equity	29.14%	-7.80%
<i>Domestic Equity Policy Index</i>	30.24%	-6.30%
US Large Cap Equities	30.06%	-7.70%
<i>S&P 500 Index</i>	31.49%	-4.38%
US Small/Mid Cap Equities	27.27%	-8.05%
<i>Russell 2500 Index</i>	27.77%	-10.00%
International Equity	25.02%	-15.78%
<i>International Equity Policy Index</i>	21.27%	-14.96%
International Large Cap Equities	25.78%	-15.14%
<i>MSCI ACWI Ex-US Index</i>	21.51%	-14.20%
International Small/Mid Cap Equities	27.88%	-20.33%
<i>MSCI ACWI Ex-US Small Cap Index</i>	22.42%	-18.20%
Emerging Market Equities	18.64%	-14.62%
<i>MSCI EM Free Index</i>	18.44%	-14.58%
Long Biased Hedge Funds	12.74%	2.43%
<i>HFRI FOF Composite Index</i>	8.42%	-4.08%
Opportunistic Credit	1.14%	-5.68%
<i>HFRI Distressed Restructuring Index</i>	2.92%	-2.02%
Real Estate	16.62%	3.68%
<i>NCREIF ODCE Index</i>	5.34%	8.35%
Special Opportunities	10.54%	-11.43%
<i>Russell 3000 Index</i>	31.02%	-5.24%

Spokane Employees' Retirement System 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.

In 2019, total investments increased \$38.4 million based on an investment return of 18.4%. The increase was composed of \$44.4 million of market appreciation, \$6.2M of income, \$12.6 million of net sales to fund expenditures, and investment expenses of \$0.4 million. Total investments, valued at fair market value and net asset value, decreased in 2018 by \$27.0 million, which is composed of an investment loss of \$23.0 million (-6.3%) \$4.7 million of income, and offsetting net sales of \$10.8 million to fund expenditures. The strong investment performance for 2019 was attributable to broad market strength throughout the year. Following a sharp equity decline in December 2018, markets rallied strongly to begin the year. Markets then moderated into the summer as concerns about global growth prospects took root. The Federal Reserve countered these concerns with three interest rate cuts totaling 0.75% and bringing the year end Fed Funds Policy Rate to 1.75%. Beginning with these cuts in August, the market surged in the second half of the year. All asset classes posted positive returns for the year, with growth sensitive assets tracking equity markets up and diversifying assets appreciating as interest rates fell. Domestic and international equity returned 29.1% and 25.0%, respectively, while long-biased hedge fund and capital preservation asset classes, returned 12.7% and 8.7% respectively. SERS continued to utilize alternative investments to provide diversification and reduce short-term volatility, as seen with the contribution provided by long/short hedge funds. 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 Chief Investment Officer (CIO) and Board believes the use of alternative investments increases the expected return and reduces the risk of the Plan compared to investing only in traditional asset classes.

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
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Spokane, WA 99201
www.spokanesers.org
509.625.6330

Spokane Employees' Retirement System Statements of Fiduciary Net Position

	December 31,	
	2019	2018
Assets		
Cash	\$ 138,989	\$ 108,124
Short-term investments	802,670	554,256
Total cash and short-term investments	<u>941,659</u>	<u>662,380</u>
Receivables		
Investment income	200,409	191,119
Other	13,364	2,835
Total receivables	<u>213,773</u>	<u>193,954</u>
Investments		
U.S. fixed income securities	34,497,331	34,402,792
International fixed income securities	4,335,694	684,533
U.S. equities	108,337,917	75,843,382
International/global equities	58,286,239	58,948,145
Real estate	26,471,829	25,314,141
Alternatives	84,399,383	82,721,805
Total investments	<u>316,328,393</u>	<u>277,914,798</u>
Capitalized software, net	<u>211,788</u>	<u>229,437</u>
Total assets	<u>\$ 317,695,613</u>	<u>\$ 279,000,569</u>
Liabilities		
Payables		
Accounts payable	\$ 96,261	\$ 69,398
Employee salaries and benefits	15,191	13,540
Employee leave benefits	28,684	26,401
Other liabilities	13,111	12,004
Total liabilities	<u>153,247</u>	<u>121,343</u>
Net position restricted for pensions	<u>\$ 317,542,366</u>	<u>\$ 278,879,226</u>

Spokane Employees' Retirement System Statements of Changes in Fiduciary Net Position

	Years Ended December 31,	
	2019	2018
Additions		
Contributions		
Employer	\$ 9,824,717	\$ 9,187,420
Member	9,827,760	9,188,781
Total contributions	<u>19,652,477</u>	<u>18,376,201</u>
Investment income (loss)		
Net appreciation (depreciation) in fair value of	44,429,487	(23,011,419)
Interest and dividends	6,183,982	4,731,880
Less investment expense	<u>(446,741)</u>	<u>(436,406)</u>
Net investment income (loss)	<u>50,166,728</u>	<u>(18,715,945)</u>
Total additions	<u>69,819,205</u>	<u>(339,744)</u>
Deductions		
Benefit payments	30,055,864	28,309,344
Refunds of member contributions	544,438	554,422
Administrative expenses, net of administrative income	<u>555,763</u>	<u>554,484</u>
Total deductions	<u>31,156,065</u>	<u>29,418,250</u>
Net increase (decrease) in net position	38,663,140	(29,757,994)
Net position restricted for pensions		
Beginning of year	<u>278,879,226</u>	<u>308,637,220</u>
End of year	<u>\$ 317,542,366</u>	<u>\$ 278,879,226</u>

See accompanying notes.

Spokane Employees' Retirement System

Notes to Financial Statements

Note 1 – Plan Description

Plan administration – The Spokane Employees' Retirement System (SERS, System, or Plan) is a multiple employer defined benefit pension plan covering employees of the City of Spokane (City), 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 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 elected officials, who may opt out of the Plan, and police and firefighters, who are members of the State Law Enforcement Officers and Firefighters' Retirement System. Additionally, certain SERS members that moved to the Spokane Public Facilities District (PFD) or Spokane Regional Emergency Communications (SREC) are eligible to remain in SERS. Such members have the same benefits, eligibility requirements, and contribution rates as current SERS members.

Management of SERS is vested in the 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, 2019, pension Plan membership consisted of the following:

Retirees or beneficiaries currently receiving benefits	1,457
Inactive plan members entitled to but not yet receiving benefits	119
Active plan members	<u>1,499</u>
	<u><u>3,075</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 64.5%. Employees hired prior to January 1, 2009, may retire under the terms of a subsequent tier if it provides a greater benefit.

All employees hired between January 1, 2009, and December 31, 2014, who participate in SERS, are eligible for service retirement after completing five years of service and reaching the normal retirement age of 62. This group of employees may retire early with full benefits if they reach age 50 and their age, plus years of service, total to 75. 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 70.0%. In addition, the employees hired between January 1, 2009, and December 31, 2014, may retire under the terms of a subsequent tier if it provides a greater benefit.

Spokane Employees' Retirement System Notes to Financial Statements

Note 1 – Plan Description (continued)

All employees hired between January 1, 2015, and December 21, 2017, who participate in SERS, are eligible for service retirement after completing seven years of service and reaching the normal retirement age of 65. This group of employees may retire early, with full benefits, if they reach age 50 and their age, plus years of service, total to 80. 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%. Employees hired between January 1, 2015, and December 31, 2017, may retire under the terms of a subsequent tier if it provides a greater benefit.

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 reaching 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 total to 90 or if they are age 50 or older and complete 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. 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, with an annual cap on overtime plus base pay equal to 120% of base pay. The maximum retirement factor is 80.0%.

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 funded ratio is 90% or greater and remains above 90% after the ad hoc adjustment is granted. The funded ratio was less than 90% as of December 31, 2019. The last ad hoc retiree adjustment occurred in 2001. Based on the current funded ratio, the Plan does not anticipate making ad hoc adjustments for the foreseeable future. It will take continued 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

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.

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.

Spokane Employees' Retirement System

Notes to Financial Statements

Note 2 – Summary of Significant Accounting Policies (continued)

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.

Investment fees detailed in the Schedule of Investment Expenses represent cash payments made to money managers and other investment professionals. Certain investments, such as mutual funds and limited partnerships, net their management fees before the fund itself reports net investment income for the period and are not reflected in this schedule. However, these 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 depositor. 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 not updated during the reporting period.

The following was the Board's target asset allocation as of December 31, 2019:

Asset Class	Target Allocation
Domestic equities	32%
Capital preservation	23%
International equities	22%
Real estate	9%
Long biased	7%
Opportunistic credit	7%
Special opportunities ¹	0%
	100%

¹ By policy, special opportunities may be up to 10%

Spokane Employees' Retirement System Notes to Financial Statements

Note 3 – Deposits and Investments (continued)

Rate of return – For the year ended December 31, 2019, the annual money-weighted rate of return on pension Plan investments, net of pension Plan investment expense, was 18.4%. 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, 2019, are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Nominal Return</u>
Domestic equities	6.5%	9.54%
Capital preservation	1.9%	4.92%
International equities	5.9%	8.90%
Long biased	3.2%	6.20%
Opportunistic credit	7.0%	9.95%
Real estate	2.2%	5.15%
Inflation		3.00%

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 9.75% contribution rate, which went into effect December 15, 2019, 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, currently 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:

	<u>1% Decrease (6.5%)</u>	<u>Current Discount Rate (7.5%)</u>	<u>1% Increase (8.5%)</u>
Net pension liability	\$ 231,504,737	\$ 179,444,905	\$ 135,023,895

Spokane Employees' Retirement System

Notes to Financial Statements

Note 3 – Deposits and Investments (continued)

Investments – The SERS'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.

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.

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, 2019, were:

<u>Organization</u>	<u>% of Net Position</u>
Fidelity Investments	11.5%
Hotchkis & Wiley	9.7%
Sterling Capital Management	9.4%
American Funds	7.3%
Artisan Partners	7.3%
MFS Investment Management	5.4%
Evanston Capital Management	5.3%

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 System 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 limit 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, 2019:

Asset	Fair Value	Less than 1 Year	1-5 Years	6-10 Years	More than 10 Years
Fixed income mutual funds	\$ 13,686,339	\$ 13,686,339	\$ -	\$ -	\$ -
Corporate notes and bonds	8,828,374	388,228	939,922	2,774,276	4,725,948
Asset backed securities	4,858,867	-	954,522	893,348	3,010,998
Governmental CMOs	5,262,025	-	-	124,361	5,137,664
Municipal bonds	1,988,025	-	704,498	762,599	520,928
Mortgage backed governmental passthrough	1,381,376	-	-	328,155	1,053,221
U.S. government treasuries	2,828,018	787,028	243,584	395,209	1,402,197
	<u>\$ 38,833,025</u>	<u>\$ 14,861,595</u>	<u>\$ 2,842,526</u>	<u>\$ 5,277,948</u>	<u>\$ 15,850,956</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, 2019, 29.4% 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, 2019, were:

	Total Investments	US Issues	Foreign Issues	% Foreign
Cash	\$ 802,670	\$ 802,670	\$ -	0.0%
Fixed income	38,833,025	37,877,856	955,169	2.5%
Equities	166,624,156	96,628,317	69,995,839	42.0%
Real estate	26,471,829	26,145,472	326,356	1.2%
Alternatives	84,399,383	62,587,925	21,811,458	25.8%
Total	<u>\$ 317,131,063</u>	<u>\$ 224,042,241</u>	<u>\$ 93,088,822</u>	<u>29.4%</u>

Spokane Employees' Retirement System

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, 2019:

	Fair Value	Level 1	Level 2	Level 3	NAV
Cash equivalents	\$ 802,670	\$ 802,670	\$ -	\$ -	\$ -
US Government	9,471,419	9,471,419	-	-	-
US corporate fixed income	7,873,205	7,873,205	-	-	-
International fixed income	955,169	955,169	-	-	-
Asset backed securities	4,858,867	4,858,867	-	-	-
Municipal bonds	1,988,025	1,988,025	-	-	-
Fixed income mutual funds	13,686,339	13,686,339	-	-	-
Total fixed income	38,833,025	38,833,025	-	-	-
US Common Stock	21,988,565	21,988,565	-	-	-
International Common Stock	1,160,064	1,160,064	-	-	-
Equity mutual funds	140,034,821	140,034,821	-	-	-
Total equities	163,183,449	163,183,449	-	-	-
Real estate	14,007,622	-	-	-	14,007,622
Alternatives	100,304,297	-	-	-	100,304,297
Total investments	<u>\$ 317,131,063</u>	<u>\$ 202,819,144</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 114,311,919</u>

Spokane Employees' Retirement System Notes to Financial Statements

Note 4 – Fair Value Measurement (continued)

The following table presents fair value measurements as of December 31, 2019:

	Fair Value	Level 1	Level 2	Level 3	NAV
Cash equivalents	\$ 554,256	\$ 554,256	\$ -	\$ -	\$ -
US Government	7,089,834	7,089,834	-	-	-
US corporate fixed income	8,390,879	8,390,879	-	-	-
International fixed income	684,533	684,533	-	-	-
Asset backed securities	5,977,991	5,977,991	-	-	-
Municipal bonds	1,452,795	1,452,795	-	-	-
Fixed income mutual funds	11,491,293	11,491,293	-	-	-
Total Fixed Income	35,087,325	35,087,325	-	-	-
US Common Stock	17,651,848	17,651,848	-	-	-
International Common Stock	583,537	583,537	-	-	-
Equity mutual funds	112,129,047	99,169,281	12,959,766	-	-
Total equities	130,364,432	117,404,665	12,959,766	-	-
Real estate	15,796,228	-	-	-	15,796,228
Alternatives	96,666,813	-	-	-	96,666,813
Total investments	<u>\$ 278,469,054</u>	<u>\$ 153,046,246</u>	<u>\$ 12,959,766</u>	<u>\$ -</u>	<u>\$ 112,463,042</u>

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	\$ 15,904,913	\$ -	Monthly, annually	15-90 days
Long/short hedge fund	21,552,029	-	Quarterly	60-65 days
Real estate fund	14,007,622	1,398,976	N/A, quarterly with queue	90 days
Absolute return hedge fund	32,163,209	-	Monthly, quarterly, semi-annual	30-45 days
Closed-end hedge fund	4,469,676	2,780,081	N/A	N/A
Fixed income fund	26,214,470	-	Quarterly	90 days
Total investments valued at NAV	<u>\$ 114,311,919</u>	<u>\$ 4,179,057</u>		

Equity fund – One US fund and one international fund that invest long-only in less efficient markets seeking to capture illiquidity and information asymmetry premiums. The international fund is a fund of funds and valued based on the net asset value provided for each of the underlying investments. The US fund net asset value is based on the pro-rata value of the underlying holdings.

Long/short hedge fund – Two funds that invest long and short to generate outsize risk-adjusted returns. One fund is 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.

Spokane Employees' Retirement System

Notes to Financial Statements

Note 4 – Fair Value Measurement (continued)

Real estate fund – Four 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. Three funds are not eligible for redemption with distributions received as underlying investments within the funds are liquidated, which on average can occur over the span of 5 to 10 years. One fund allows for quarterly redemptions subject to a queue and provides quarterly distributions based on the net operating profit of the properties owned.

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 – Two funds 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 – Three funds that invest in less liquid or distressed debt securities. All funds unit net asset value is based on the value of the underlying holdings.

Note 5 – Contributions Required and Contributions Made

Member and employer contribution rates are established by City Code, Chapter 4.14. Effective December 15, 2019, member contributions are 9.75% of eligible compensation and are deducted from the member's salary and paid into the retirement fund; the City contributes 9.75% of eligible compensation for a combined total of 19.50%. Previously, the contribution rate was 18.50% of payroll (9.25% of pay paid by the employee, 9.25% 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.

Spokane Employees' Retirement System Notes to Financial Statements

Note 6 – Subsequent Events

Subsequent events are events or transactions that occur after the statement of fiduciary net position date but before the financial statements are available to be issued. The Plan recognizes in the financial statements the effects of all subsequent events that provide additional evidence about conditions that existed at the date of the statement of fiduciary net position, including the estimates inherent in the process of preparing the financial statements. The Plan's financial statements do not recognize subsequent events that provide evidence about conditions that did not exist at the date of the statement of fiduciary net position but arose after the statement of fiduciary net position date and before the financial statements are available to be issued.

Subsequent to December 31, 2019, the World Health Organization declared the novel coronavirus outbreak a public health emergency. As a result, economic uncertainties have arisen, which could negatively impact investment performance. The SERS will continue to monitor the situation closely.

Required Supplementary Information

**Spokane Employees' Retirement System
Schedule of Changes in the Employer's Net Pension Liability and Related Ratios**

	2019	2018	2017	2016	2015	2014
Total pension liability						
Service cost	\$ 9,814,459	\$ 9,397,166	\$ 13,133,393	\$ 12,896,547	\$ 12,384,960	\$ 11,405,611
Interest	34,666,267	33,296,148	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	5,866,404	5,291,272	(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	(30,600,302)	(28,863,766)	(27,443,693)	(26,467,256)	(24,597,020)	(22,884,026)
Net change in total pension liability	19,746,828	19,120,820	(65,615,356)	11,711,646	20,630,208	32,834,091
Total pension liability—beginning	477,240,443	458,119,623	523,734,979	512,023,333	491,393,125	458,559,034
Total pension liability—ending (a)	\$ 496,987,271	\$ 477,240,443	\$ 458,119,623	\$ 523,734,979	\$ 512,023,333	\$ 491,393,125
Plan fiduciary net position						
Contributions—employer	\$ 9,824,717	\$ 9,187,420	\$ 8,113,319	\$ 7,586,365	\$ 7,398,945	\$ 6,822,279
Contributions—member	9,827,760	9,188,781	8,113,319	7,586,362	7,402,905	6,822,279
Net investment income	50,166,728	(18,715,945)	43,085,572	16,802,274	(3,228,439)	14,497,901
Benefit payments, including refunds of member contributions	(30,600,302)	(28,863,766)	(27,443,693)	(26,467,256)	(24,597,020)	(22,884,026)
Administrative expense	(555,763)	(554,484)	(563,078)	(477,252)	(447,921)	(386,713)
Net change in plan fiduciary net position	38,663,140	(29,757,994)	31,305,439	5,030,490	(13,471,530)	4,871,720
Plan fiduciary net position—beginning	278,879,226	308,637,220	277,331,781	272,301,291	285,772,821	280,901,101
Plan fiduciary net position—ending (b)	\$ 317,542,366	\$ 278,879,226	\$ 308,637,220	\$ 277,331,781	\$ 272,301,291	\$ 285,772,821
Plan's net pension liability—ending (a) – (b)	\$ 179,444,905	\$ 198,361,217	\$ 149,482,403	\$ 246,403,195	\$ 239,722,042	\$ 205,620,304
Plan fiduciary net position as a percentage of the total pension liability	63.9%	58.4%	67.4%	53.0%	53.18%	58.16%
Covered-payroll, as of December 31	\$ 111,746,539	\$ 107,017,146	\$ 102,844,614	\$ 102,378,550	\$ 93,899,096	\$ 89,034,522
Plan's net pension liability as a percentage of covered-payroll	160.6%	185.4%	145.3%	240.7%	255.3%	230.9%

Notes to Schedule:

Legislative and administrative changes: The contribution rate for all participants and the City increased to 9.75% on December 15, 2019. The contribution rate is now tied to the Actuarially Determined Contribution (ADC) rate as determined by the Plan's actuary in the annual valuation.

See report of independent auditors.

**Spokane Employees' Retirement System
Schedule of Employer's Contributions**

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially determined contribution	\$ 11,078,489	\$ 10,044,342	\$ 9,765,949	\$ 9,853,762	\$ 9,069,276	\$ 8,292,066	\$ 8,237,317	\$ 8,325,936	\$ 10,010,885	\$ 8,955,055
Contributions in relation to the actuarially determined contribution	9,824,717	9,187,420	8,113,319	7,586,362	7,388,945	6,822,279	6,715,376	6,937,750	6,799,258	6,580,795
Contribution deficiency (excess)	\$ 1,253,772	\$ 856,922	\$ 1,652,630	\$ 2,267,400	\$ 1,670,331	\$ 1,469,787	\$ 1,521,941	\$ 1,388,186	\$ 3,211,627	\$ 2,374,260
Covered-payroll	\$ 106,213,157	\$ 102,082,444	\$ 98,343,261	\$ 91,955,903	\$ 89,684,182	\$ 86,139,886	\$ 86,650,013	\$ 89,519,355	\$ 90,264,062	\$ 88,093,679
Contributions as a percentage of covered payroll	9.25%	9.00%	8.25%	8.25%	8.25%	7.92%	7.75%	7.75%	7.75%	7.75%

See report of independent auditors.

Spokane Employees' Retirement System Schedule of Employer's Contributions

Valuation date: December 31, 2019

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	21 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%
1-2	10.0%
3	8.0%
4	5.0%
5-9	4.0%
10-19	3.0%
20+	2.5%

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	20.0%
68	10.0%
69	25.0%
70	15.0%
71-74	30.0%
75+	100.0%

Mortality RP - 2000 Fully Generational

See report of independent auditors.

**Spokane Employees' Retirement System
Schedule of Investment Returns**

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Annual money-weighted rate of return, net of investment expense	18.35%	-6.27%	15.40%	6.70%	-0.94%	5.34%	18.89%	11.70%	-2.80%	13.47%

See report of independent auditors.

Additional Supplementary Information

Spokane Employees' Retirement System Schedule of Administrative Expenses

	<u>2019 Budget</u>	<u>2019 Actual</u>	<u>2018 Actual</u>
Personnel services			
Salaries and wages	\$ 320,122	\$ 287,887	\$ 279,091
Personnel benefits	65,681	82,456	83,449
Administrative income	(10,000)	(21,009)	(20,854)
Total personnel services	<u>375,803</u>	<u>349,334</u>	<u>341,686</u>
Supplies			
Office supplies	2,000	178	521
Publications	250	35	-
Postage	2,000	619	621
Software (non-capitalized)	200	124	191
Minor equipment	500	-	-
Other	1,000	261	637
Total supplies	<u>5,950</u>	<u>1,217</u>	<u>1,970</u>
Other services and charges			
State audit charges	15,000	11,147	12,444
Professional services	175,000	133,696	132,743
Travel	15,000	3,489	7,873
Registration and schooling	16,000	810	8,575
Other dues, subscriptions and memberships	2,500	2,274	1,710
Printing	2,500	1,136	719
Depreciation/Amortization	-	17,649	17,649
Other miscellaneous charges	1,300	2,000	664
Total other services and charges	<u>227,300</u>	<u>172,201</u>	<u>182,377</u>
Interfund (IF) payments for services			
IF office performance mgmt services	800	4,189	-
IF centralized purchasing	1,241	1,252	506
IF centralized accounting	2,080	2,017	1,958
IF IT communications replacement	-	-	-
IF risk management	584	584	790
IF unemployment	-	-	-
IF workers' compensation	122	122	109
IF reprographics	5,000	9,376	15,825
IF IT	13,108	12,896	6,720
IF IT replacement	1,965	1,965	2,066
IF My Spokane	643	610	477
Total interfund services	<u>25,543</u>	<u>33,011</u>	<u>28,451</u>
TOTAL ADMINISTRATIVE EXPENSES, NET OF ADMINISTRATIVE INCOME	<u>\$ 634,596</u>	<u>\$ 555,763</u>	<u>\$ 554,484</u>

See report of independent auditors.

Spokane Employees' Retirement System
Additional Supplementary Information
Schedule of Investment Expenses

	Year Ended December 31, 2019
Investment services	
Bridge City Capital LLC	\$ 20,217
Champlain Small Cap Fund LLC	58,642
Principal Real Estate Investors LLC	94,075
Sterling Capital Management LLC	98,456
	<hr/> 271,390 <hr/>
Investment consulting	
Hyas Group, LLC	<hr/> 125,000 <hr/>
Custodial services	
U.S. Bank	<hr/> 50,351 <hr/>
 TOTAL INVESTMENT EXPENSES	 <hr/> \$ 446,741 <hr/>

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.

See report of independent auditors.



Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

The Trustees
Spokane Employees' Retirement System

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Spokane Employees' Retirement System (System), a component unit of the City of Spokane, Washington, which comprise the statement of fiduciary net position as of December 31, 2019, and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated May 29, 2020.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



Spokane, Washington
May 29, 2020

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Actuarial Section

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

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**SPOKANE EMPLOYEES'
RETIREMENT SYSTEM**

**ACTUARIAL VALUATION
AS OF DECEMBER 31, 2019**



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

May 6, 2020

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, 2019, 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 9.75% of pay) and Employer Contributions (currently 9.75% of pay).

The December 31, 2019 valuation develops an Actuarially Determined Employer Contribution Rate (ADC), exclusive of employee contributions, of 10.17% of total payroll. The ADC rate compares with an actual Employer Contribution rate of 9.75% of total payroll. The Employer Contribution for the 2019 fiscal year of \$9,824,717 was less than the ADC of \$11,078,489 by \$1,253,772.

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, 2019 and December 31, 2018 is as follows:

	December 31 2019	December 31 2018
Total Pension Liability:	\$496,987,271	\$477,240,443
Fiduciary Net Position:	\$317,542,366	\$278,879,226
Net Pension Liability:	\$179,444,905	\$198,361,217
Fiduciary Net Position as a Percentage of Total Pension Liability:	63.9%	58.4%
GASB 67 Discount Rate:	7.50%	7.50%

Spokane Employees' Retirement System
May 6, 2020
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.

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.

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

Employer and Employee contribution rates were both increased from 9.25% to 9.75%, effective the last pay period in 2019.

There were no other legislative or administrative changes since the last valuation that had a financial impact on the System.

Spokane Employees' Retirement System
May 6, 2020
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 of the annual financial report for the fiscal year ended December 31, 2019.

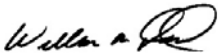
To the best of our knowledge, this report is complete and accurate. All costs and liabilities have been determined in conformance with generally accepted actuarial principles and on the basis of actuarial assumptions and methods which are individually reasonable (taking into account past experience and 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.

Future liability and asset values may differ from the results shown in this report for many reasons including, but not limited to, actual experience differing from assumed experience, changes in actuarial assumptions or methods, plan amendments, regulatory changes or changes in contribution strategy. An impact analysis of such potential changes is not included in this report. Potential plan risks are discussed in Appendix I in compliance with ASOP 51.

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, 2019 for the Spokane Employees' Retirement System.

The principal results include:

- The Actuarially Determined Employer Contribution Rate (ADC) is 10.17% of total payroll. This compares to an actual Employer Contribution rate of 9.75% 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, 2019 and December 31, 2018 is as follows:

	December 31 2019	December 31 2018
Total Pension Liability:	\$496,987,271	\$477,240,443
Fiduciary Net Position:	\$317,542,366	\$278,879,226
Net Pension Liability:	\$179,444,905	\$198,361,217
Fiduciary Net Position as a Percentage of Total Pension Liability:	63.9%	58.4%
 GASB 67 Discount Rate:	 7.50%	 7.50%

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.

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 years ended 2017 and later, 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.

- **Legislative and Administrative Changes**

Employer and Employee contribution rates were both increased from 9.25% to 9.75%, effective the last pay period in 2019.

There were no other legislative or administrative changes since the last valuation that had a financial impact on the System.

Summary of Valuation Results (continued)

<u>Demographics</u>	<u>2019</u>	<u>2018</u>
<u>Active</u>		
Number	1,499	1,481
Average Pay for Coming Year	\$ 74,547	\$ 72,260
<u>Retired and Beneficiaries</u>		
Number	1,457	1,424
Average Annual Allowance	20,910	20,323
<u>Terminated Vested and Portables</u>		
Number	119	123
<u>Total Membership</u>	3,075	3,028
<u>Net Pension Liability</u>		
Total Pension Liability	\$496,987,271	\$477,240,443
Fiduciary Net Position	\$317,542,366	\$278,879,226
Net Pension Liability	\$179,444,905	\$198,361,217
Fiduciary Net Position as a Percentage of the Total Pension Liability	63.9%	58.4%
<u>Contribution Rates</u>		
Actuarially Determined Employer Contribution Rate (ADC)*	10.17%	10.06%
Actual Employer Contribution Rate	9.75%	9.25%

* Exclusive of Employee Contributions (9.75% of pay effective December 15, 2019, 9.25% of pay effective December 16, 2018, 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, 2019 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 31, 2019 the actual Employer Contribution rate of 9.75% is less than the ADC rate of 10.17%.

Reasons for Change in the ADC

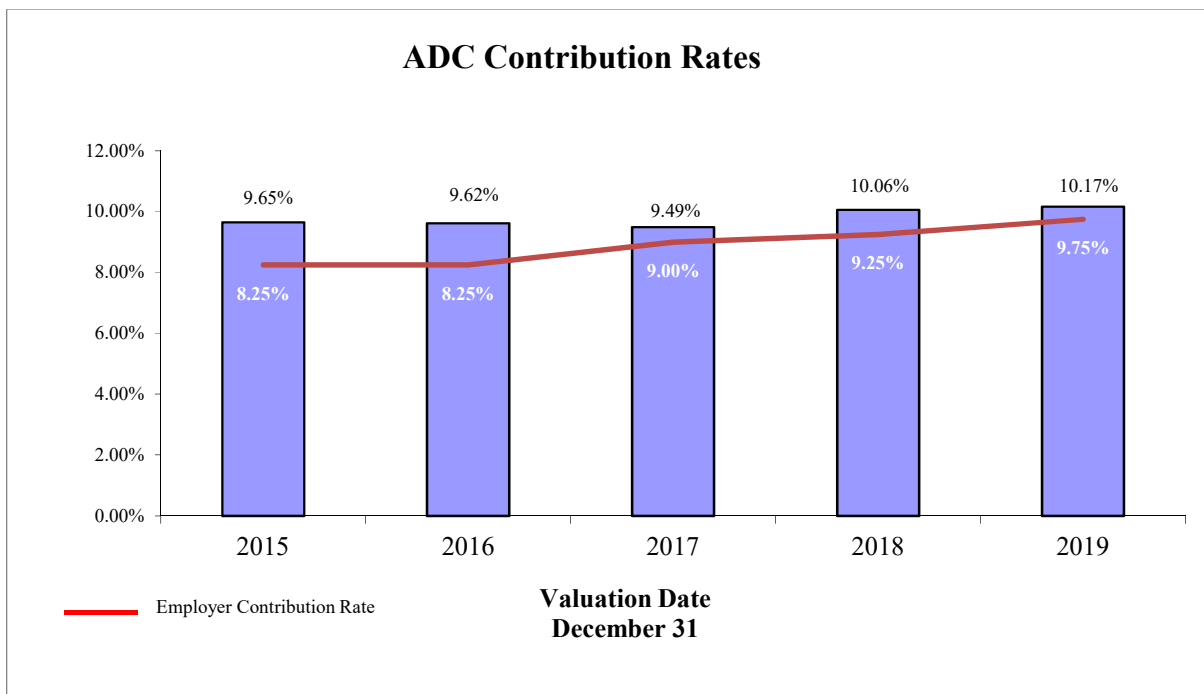
The recommended employer contribution rate as determined by the ADC increased from 10.06% as of December 31, 2018 to 10.17% as of December 31, 2019. The increase of 0.11% is due to the following reasons:

● Increase due to return on actuarial assets	0.27%
● Decrease due to change in normal cost rate	(0.46%)
● Increase due to change in benefit provisions	0.00%
● Decrease due to legislative changes	0.00%
● Increase due to change in assumptions	0.00%
● Decrease due to change in funding method	0.00%
● Increase due to other factors	0.30%
● Total	<u>0.11%</u>

Summary of Valuation Results (continued)

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

Valuation Date	ADC	Employer Rate
2015	9.65%	8.25%
2016	9.62%	8.25%
2017	9.49%	9.00%
2018	10.06%	9.25%
2019	10.17%	9.75%



Summary of Valuation Results (continued)

Unfunded Accrued Liability

The financing objective of the System is to:

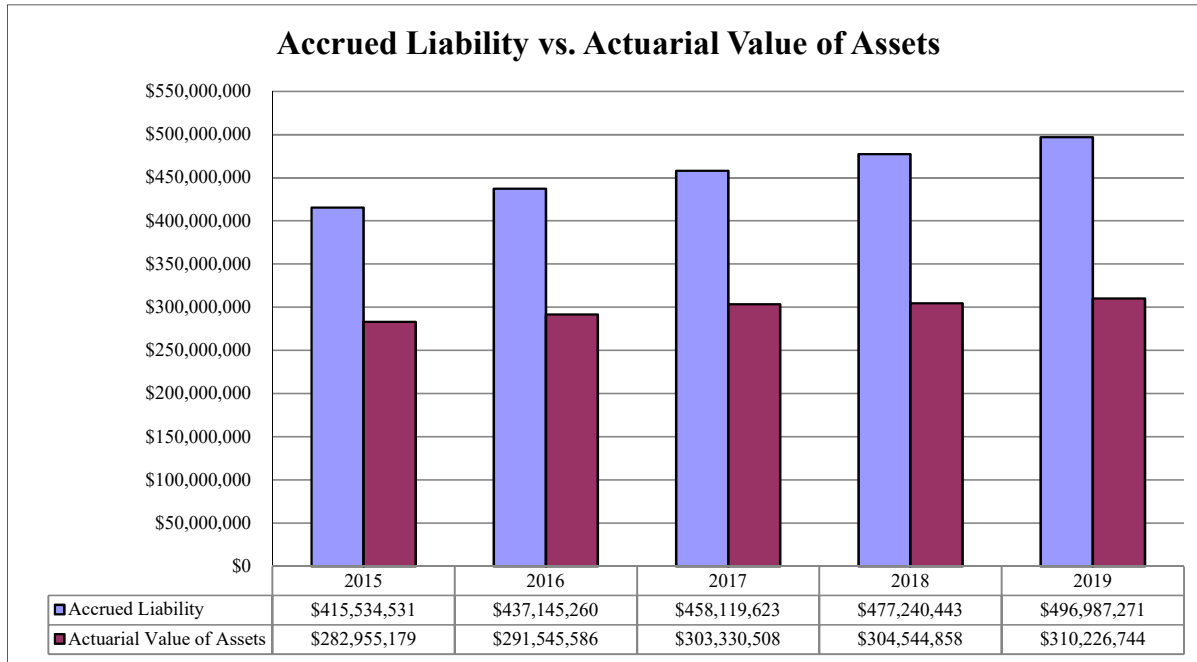
- fully fund all current costs based on the normal contribution rate payable by the System determined under the funding method; and
- liquidate the unfunded accrued liability based on accrued liability contributions payable by the System over an amortization period of no more than 30 years; and
- accomplish the above through a combination of Employee Contributions (currently 9.75% of pay) and Employer Contributions (currently 9.75% 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 \$186,760,527 as of December 31, 2019. The unfunded actuarial liability is based on an actuarial value of assets of \$310,226,744 and an actuarial liability of \$496,987,271.

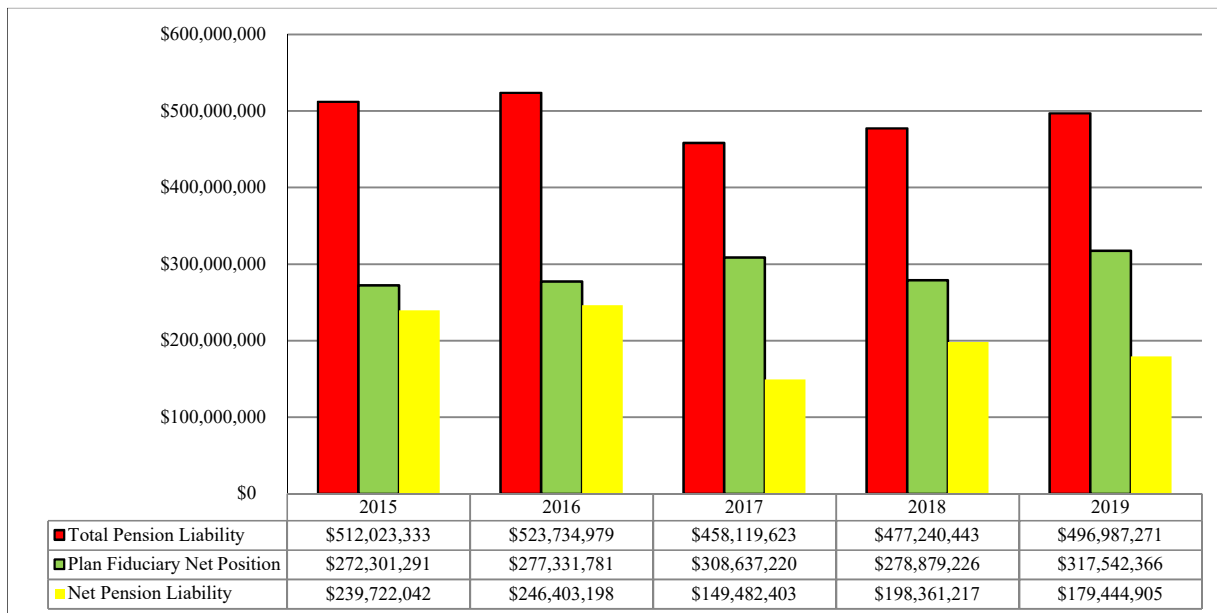
For purposes of financial reporting, the Fund's unfunded liability (net pension liability) is measured by comparing the market value of assets (fiduciary net position) with the actuarial liability (total pension liability). The total pension liability is determined under the entry age cost method. On this basis, the Fund's net pension liability is \$179,444,905 as of December 31, 2019. The net pension liability is based on an fiduciary net position of \$317,542,366 and a total pension liability of \$496,987,271.

Summary of Valuation Results (continued)

History of Accrued Liability and Actuarial Value of Assets



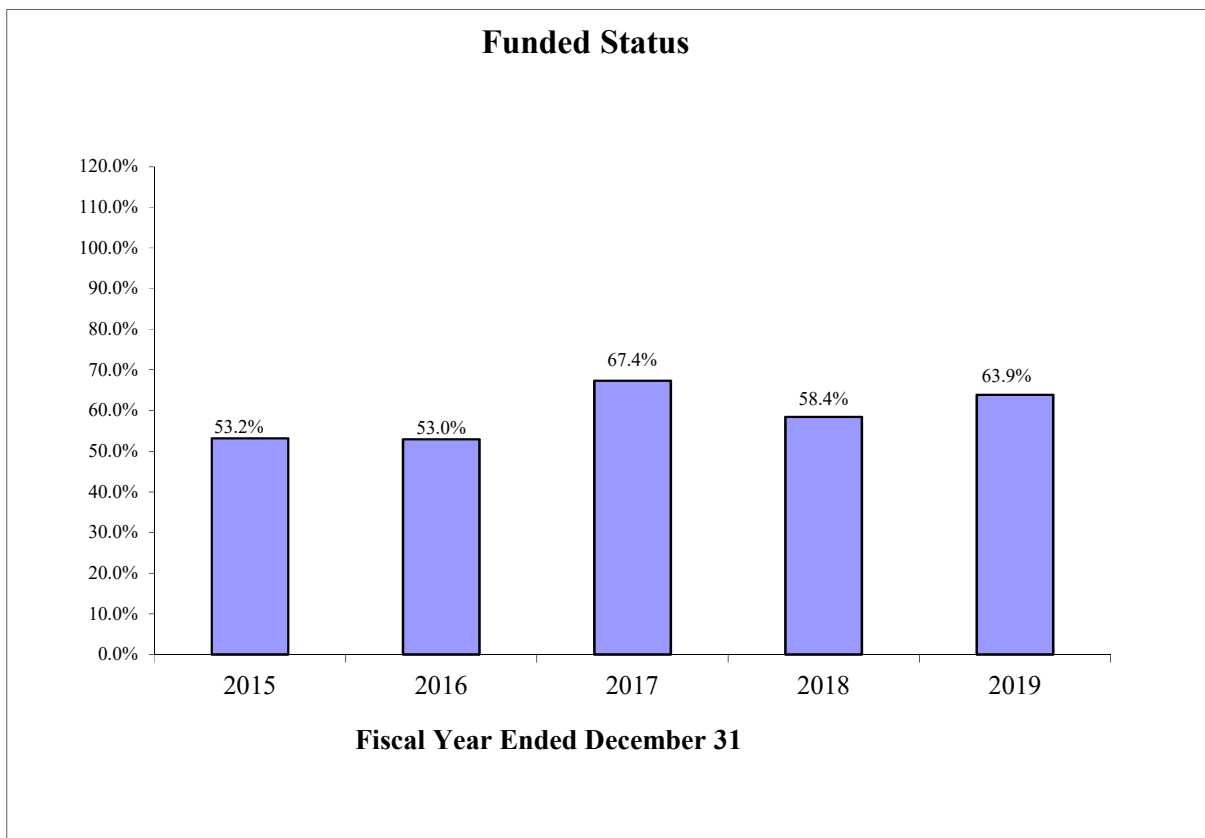
History of Net Pension Liability



Summary of Valuation Results (continued)

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

Fiscal Year Ending	Funded Status
2015	53.2%
2016	53.0%
2017	67.4%
2018	58.4%
2019	63.9%



Summary of Valuation Results (continued)

Rate of Return

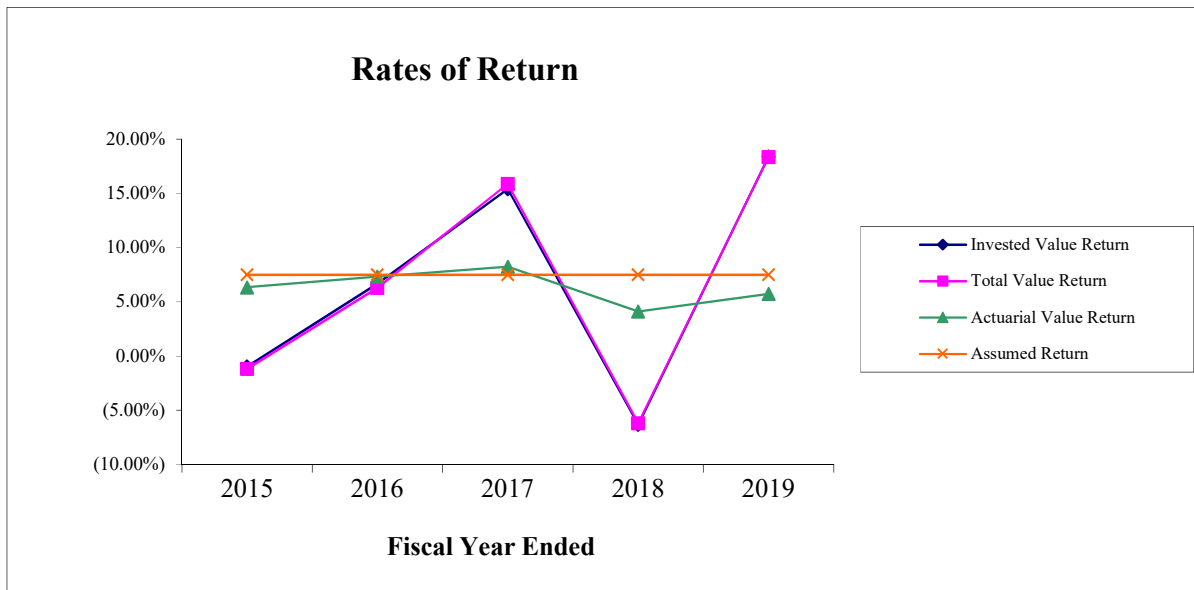
The investment return of the trust fund (i.e. total return including both realized and unrealized gains and losses) based on the market value of invested assets for the fiscal year ended December 31, 2019 was 18.40%. However, since some contributions go directly to paying benefits and are never invested in the trust, the net investment return on total assets of the System was 18.37%. The investment return on the smoothed fair value of assets was 5.75%. 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
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%
2018	(6.30%)	(6.17%)	4.12%	7.50%
2019	18.40%	18.37%	5.75%	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 2019
Table 14	GASB 68 Summary for 2020
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 I	Plan Risks (ASOP 51 Compliance)
Appendix II	Data Tables

Table 1**DEMOGRAPHICS**

	<u>2019</u>	<u>2018</u>	<u>Increase/ (Decrease)</u>
Number of Members:			
Retirees	1,284	1,253	31
Beneficiaries	165	162	3
Disabled	8	9	(1)
Terminated Vested	64	71	(7)
Portables	55	52	3
Active	1,499	1,481	18
Total Members	3,075	3,028	47
Projected Compensation for Coming Year	111,746,539	107,017,146	4,729,393
Average Compensation for Coming Year	74,547	72,260	2,287
Average Age (Active Members)	47.26	47.49	(0.23)
Average Service (Active Members)	11.11	11.25	(0.14)
Annual Retirement Allowance	30,465,677	28,940,185	1,525,492
Average Annual Retirement Allowance	20,910	20,323	587
Average Monthly Retirement Allowance	1,743	1,694	49

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

1. Total Market Value of Net Assets, 12/31/2018		278,879,226
2. Audit Adjustment		0
3. Contributions		
a. Employer	9,824,717	
b. Employee	9,827,760	
c. Total Contributions		19,652,477
4. Miscellaneous Revenue		-
5. Investment Earnings		
a. Interest & Dividends & Other Income	6,183,982	
b. Realized & Unrealized Gain/(Loss)	44,429,487	
c. Investment Expenses	(446,741)	
d. Total Investment Earnings		50,166,728
6. Benefit Payments		
a. Benefits	(30,055,864)	
b. Refund of Contributions	(544,438)	
c. Total Benefit Payments		(30,600,302)
7. Administrative Expenses		(555,763)
8. Total Market Value of Net Assets, 12/31/2019		317,542,366
9. Approximate Rate of Return on Total Assets		18.37%
10. Approximate Rate of Return on Invested Assets		18.40%

Table 3**ASSET INFORMATION****Smoothed Fair Value of Net Assets Determination**

1. Total Market Value of Net Assets, 12/31/2018	278,879,226																																			
2. Expected Return for Plan Year	20,492,356																																			
3. Actual Return for Plan Year	50,166,728																																			
4. Total Market Value of Net Assets, 12/31/2019	317,542,366																																			
5. Determination of Deferred Gain (Loss)																																				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Fiscal Year</th> <th style="text-align: right; border-bottom: 1px solid black;">Actual vs. Expected Return</th> <th style="text-align: right; border-bottom: 1px solid black;">Amount Recognized This Year</th> <th style="text-align: center; border-bottom: 1px solid black;">Portion Deferred</th> <th style="text-align: right; border-bottom: 1px solid black;">Deferred Amount</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td style="text-align: right;">29,674,372</td> <td style="text-align: right;">5,934,874</td> <td style="text-align: center;">4/5</td> <td style="text-align: right;">23,739,498</td> </tr> <tr> <td>2018</td> <td style="text-align: right;">(41,457,145)</td> <td style="text-align: right;">(8,291,429)</td> <td style="text-align: center;">3/5</td> <td style="text-align: right;">(24,874,287)</td> </tr> <tr> <td>2017</td> <td style="text-align: right;">22,719,457</td> <td style="text-align: right;">4,543,891</td> <td style="text-align: center;">2/5</td> <td style="text-align: right;">9,087,783</td> </tr> <tr> <td>2016</td> <td style="text-align: right;">(3,186,861)</td> <td style="text-align: right;">(637,372)</td> <td style="text-align: center;">1/5</td> <td style="text-align: right;">(637,372)</td> </tr> <tr> <td>2015</td> <td style="text-align: right;">(24,284,229)</td> <td style="text-align: right;">(4,856,846)</td> <td style="text-align: center;">0/5</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">(16,534,406)</td> <td style="text-align: right;">(3,306,882)</td> <td></td> <td style="text-align: right;">7,315,622</td> </tr> </tbody> </table>	Fiscal Year	Actual vs. Expected Return	Amount Recognized This Year	Portion Deferred	Deferred Amount	2019	29,674,372	5,934,874	4/5	23,739,498	2018	(41,457,145)	(8,291,429)	3/5	(24,874,287)	2017	22,719,457	4,543,891	2/5	9,087,783	2016	(3,186,861)	(637,372)	1/5	(637,372)	2015	(24,284,229)	(4,856,846)	0/5	0	Total	(16,534,406)	(3,306,882)		7,315,622
Fiscal Year	Actual vs. Expected Return	Amount Recognized This Year	Portion Deferred	Deferred Amount																																
2019	29,674,372	5,934,874	4/5	23,739,498																																
2018	(41,457,145)	(8,291,429)	3/5	(24,874,287)																																
2017	22,719,457	4,543,891	2/5	9,087,783																																
2016	(3,186,861)	(637,372)	1/5	(637,372)																																
2015	(24,284,229)	(4,856,846)	0/5	0																																
Total	(16,534,406)	(3,306,882)		7,315,622																																
6. Preliminary Smoothed Fair Value of Net Assets (4. - 5.)	310,226,744																																			
7. Ratio of Preliminary Smoothed Fair Value to Market Value	97.70%																																			
8. Smoothed Fair Value of Net Assets (6., but not less than 90% nor more than 110% of 4.)	310,226,744																																			
9. Ratio of Smoothed Fair Value to Market Value	97.70%																																			
10. Approximate Rate of Return on Smoothed Fair Value of Net Assets	5.75%																																			

Table 4**ACCRUED LIABILITY**

1. Accrued Liability prior to Changes in Benefit Provisions and Assumptions		
a. Active	193,587,073	
b. Terminated Vested & Portables	11,986,487	
c. Retirees	271,421,742	
d. Beneficiaries	18,836,285	
e. Disableds	1,155,684	
f. Total Accrued Liability prior to Changes		496,987,271
2. Actuarial Value of Assets		310,226,744
3. Unfunded Accrued Liability prior to Changes (1.f. - 2.)		186,760,527
4. Change in Unfunded Accrued Liability		
a. Due to Changes in Plan Provisions	0	
b. Due to Changes in Assumptions	0	
c. Due to Change in Funding Method	0	
d. Due to Change in Asset Method	0	
e. Total Change in Unfunded Accrued Liability		0
5. Actual Unfunded Accrued Liability (3. + 4.e.)		186,760,527

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

1. Increase (decrease) in Unfunded Accrued Liability	
a. Unfunded Accrued Liability, prior year	172,695,585
b. Entry Age Normal Cost (excluding expenses)	9,129,729
c. Contributions	19,652,477
d. Interest	12,913,254
e. Expected Unfunded Accrued Liability, current year (a. + b. - c. + d.)	175,086,091
f. Actual Unfunded Accrued Liability, current year before benefit, assumption, and method changes	186,760,527
g. (Gain)/Loss (f. -e.)	11,674,436
2. Reasons for (Gain)/Loss	
a. Investment Return on Smoothed Fair Value of Assets	5,808,032
b. Other	5,866,404
c. Total	11,674,436

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>
12/31/2019	Actuarial Loss	11,674,436	11,674,436	30	603,776
12/31/2018	Actuarial Loss	15,952,971	16,353,010	29	862,828
12/31/2017	Actuarial Gain	(5,056,189)	(5,299,116)	28	(285,559)
12/31/2017	Assumption Change	10,524,826	11,030,495	28	594,412
12/31/2017	Plan Amendment	165,092	173,024	28	9,324
12/31/2017	Reamortization of Prior Amounts	118,016,263	152,828,678	20	10,276,753
Total		151,277,399	186,760,527		12,061,534

* 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	9,606,064
2. Offset for Employee Contributions	(10,895,288)
3. Estimated Expenses	600,000
4. Total (1) - (2) + (3)	(689,224)

Table 8**CONTRIBUTION SUMMARY**

1. Actuarially Determined Employer Contribution Amount		
a. Normal Cost	(689,224)	
b. Amortization Charges	12,061,534	
c. Total		11,372,310
2. Actuarially Determined Employer Contribution Rate		
a. Normal Cost	-0.62%	
b. Amortization Charges	10.79%	
c. Total		10.17%
3. Projected Pay for the Upcoming Year		111,746,539

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

1. Cash		138,989
2. Short-term investments		802,670
3. Receivables		
a. Interest and Dividends	200,409	
b. Redemption Receivable	0	
c. Other receivables	13,364	
d. Total Receivables		<u>213,773</u>
4. Investments, at fair value		
a. U. S. Fixed Income	34,497,331	
b. International Fixed Income	4,335,694	
c. U.S. Equities	108,337,917	
d. International Equities	58,286,239	
e. Real Estate	26,471,829	
f. Alternatives	84,399,383	
g. Total Investments		<u>316,328,393</u>
5. Capitalized software, net of accumulated amortization		211,788
6. Total Assets		<u>317,695,613</u>

LIABILITIES

1. Accounts Payable	96,261	
2. Current portion employee salary & benefits	15,191	
3. Employee leave benefits	28,684	
4. Other current liabilities	13,111	
5. Total Liabilities		<u>153,247</u>

NET POSITION317,542,366

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

1. Contributions		
a. Employer	9,824,717	
b. Plan Members	9,827,760	
c. Miscellaneous Revenue	-	
d. Total Contributions		19,652,477
2. Investment Earnings:		
a. Net increase (decrease) in fair value of investments	44,429,487	
b. Interest, dividends and other investment income	6,183,982	
c. Total Investment Earnings (loss)		50,613,469
d. Less: investment expense		446,741
e. Net investment earnings (loss)		50,166,728
Total additions		69,819,205

DEDUCTIONS

1. Pension benefits	30,055,864	
2. Refund of contributions	544,438	
3. Administrative expenses	555,763	
Total deductions		31,156,065
Change in net assets:		38,663,140
Prior period adjustment		0
Plan Fiduciary Net Position, 12/31/2018		278,879,226
Plan Fiduciary Net Position, 12/31/2019		317,542,366

Table 11**NET PENSION LIABILITY**

	<u>2019</u>	<u>2018</u>
Total Pension Liability		
Service Cost	9,814,459	9,397,166
Interest	34,666,267	33,296,148
Changes of benefit terms	0	0
Differences between expected and actual experience	5,866,404	5,291,272
Changes of assumptions	0	0
Benefit Payments, including refunds of member contributions	(30,600,302)	(28,863,766)
Net change in total pension liability	19,746,828	19,120,820
Total pension liability - beginning	477,240,443	458,119,623
Total pension liability - ending (a)	496,987,271	477,240,443
Plan Fiduciary Net Position		
Contributions - employer	9,824,717	9,187,420
Contributions - member	9,827,760	9,188,781
Net investment income	50,166,728	(18,715,945)
Benefit payments, including refunds of member contributions	(30,600,302)	(28,863,766)
Administrative expense	(555,763)	(554,484)
Other	0	0
Net change in plan fiduciary net position	38,663,140	(29,757,994)
Plan fiduciary net position - beginning	278,879,226	308,637,220
Plan fiduciary net position - ending (b)	317,542,366	278,879,226
Net pension liability - ending (a) - (b) *	179,444,905	198,361,217
Plan fiduciary net position as a percentage of the total pension liability	63.9%	58.4%
Covered-employee payroll	111,746,539	107,017,146
Net pension liability as a percentage of covered-employee payroll	160.6%	185.4%
GASB 67 Blended Discount Rate Beginning of Period:	7.50%	7.50%
GASB 67 Blended Discount Rate End of Period:	7.50%	7.50%

* A 1% decrease in the discount rate increases the net pension liability to \$231,504,737, an increase of \$52,059,832.

A 1% increase in the discount rate decreases the net pension liability to \$135,023,895, a decrease of \$44,421,010.

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%
12/31/2018	10,044,342	9,187,420	856,922	102,082,444	9.00%
12/31/2019	11,078,489	9,824,717	1,253,772	106,213,157	9.25%

Table 13

GASB 68 Summary for 2019									
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)	458,119,623	308,637,220	149,482,403	108,110,636	198,000,057	31,113,467	95,209,518		
Changes for the year									
Service Cost	9,397,166		9,397,166					9,397,166	
Interest Cost	33,296,148		33,296,148					33,296,148	
Benefit Changes	-		-					-	
Experience loss (gain)	5,291,272		5,291,272			4,233,018	-	1,058,254	5.00
Changes in assumptions	-		-			-	-	-	5.00
Contributions - Employer		9,187,420	(9,187,420)						
Contributions - Employee		9,188,781	(9,188,781)					(9,188,781)	
Net Investment Income		(18,715,945)	18,715,945						
Expected Return on Investments								(22,741,200)	
Investment (gain) loss expensed								8,291,429	5.00
Benefits paid including refunds	(28,863,766)	(28,863,766)	-			33,165,716	-	-	
Administrative Expense		(554,484)	554,484					554,484	
Other Changes		-	-						
Amortization							(13,255,889)	(7,179,535)	
Net Changes	19,120,820	(29,757,994)	48,878,814			24,142,845	(20,435,424)		
Balance, End of Year (2)	477,240,443	278,879,226	198,361,217	155,541,772	248,551,705	55,256,312	74,774,094	13,487,965	
(1) Measurement Date December 31, 2017									
(2) Measurement Date December 31, 2018									

Table 14

GASB 68 Summary for 2020
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)	477,240,443	278,879,226	198,361,217	155,541,772	248,551,705	55,256,312	74,774,094		
Changes for the year									
Service Cost	9,814,459		9,814,459					9,814,459	
Interest Cost	34,666,267		34,666,267					34,666,267	
Benefit Changes	-		-					-	
Experience loss (gain)	5,866,404		5,866,404			4,888,670	-	977,734	6.00
Changes in assumptions	-		-			-	-	-	6.00
Contributions - Employer		9,824,717	(9,824,717)						
Contributions - Employee		9,827,760	(9,827,760)					(9,827,760)	
Net Investment Income		50,166,728	(50,166,728)						
Expected Return on Investments									
Investment (gain) loss expensed							23,739,498		
Investment (gain) loss deferred									
Benefits paid including refunds	(30,600,302)	(30,600,302)	-			-		(20,492,356)	5.00
Administrative Expense		(555,763)	555,763					555,763	
Other Changes									
Amortization						(21,363,834)	(20,435,424)	928,410	
Net Changes	19,746,828	38,663,140	(18,916,312)			(16,475,164)	3,304,074		
Balance, End of Year (2)	496,987,271	317,542,366	179,444,905	135,023,895	231,504,737	38,781,148	78,078,168	10,687,643	
(1) Measurement Date December 31, 2018									
(2) Measurement Date December 31, 2019									

Table 15**Deferred Outflows/(Inflows) Amortization Schedule as of December 31, 2020
(Measurement Date: December 31, 2019)**

Date Established	Source	Initial Amount	Deferred Amount	Remaining Years	Amortization Payment
12/31/2020	Experience Loss	5,866,404	4,888,670	5.00	977,734
12/31/2020	Investment Gain	(29,674,372)	(23,739,498)	4.00	(5,934,874)
12/31/2019	Experience Loss	5,291,272	3,174,764	3.00	1,058,254
12/31/2019	Investment Loss	41,457,145	24,874,287	3.00	8,291,429
12/31/2018	Experience Gain	(3,830,239)	(1,915,120)	3.00	(638,373)
12/31/2018	Assumption Change	(76,976,691)	(38,488,344)	3.00	(12,829,449)
12/31/2018	Investment Gain	(22,719,457)	(9,087,784)	2.00	(4,543,891)
12/31/2017	Experience Loss	12,381,445	4,127,149	2.00	2,063,574
12/31/2017	Assumption Change	(14,542,266)	(4,847,422)	2.00	(2,423,711)
12/31/2017	Investment Loss	3,178,881	635,777	1.00	635,777
12/31/2016	Experience Loss	6,483,011	1,080,501	1.00	1,080,501
Total			(39,297,020)		(12,263,029)

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>
12/31/10	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	7.75%	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
12/31/18	9.00%	9,187,420	9,188,781	(18,715,945)	(339,744)
12/31/19	9.25%	9,824,717	9,827,760	50,166,728	69,819,205

DEDUCTIONS BY TYPE

<u>Fiscal Year Ended</u>	<u>Benefit Payments</u>	<u>Refunds</u>	<u>Admin Expenses</u>	<u>Total</u>
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
12/31/18	28,309,344	554,422	554,484	29,418,250
12/31/19	30,055,864	544,438	555,763	31,156,065

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>
12/31/10	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
12/31/18	1,481	123	1,415	9	1,424	3,028
12/31/19	1,499	119	1,449	8	1,457	3,075

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>
12/31/2010	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%
12/31/2018	1,481	107,017,146	72,260	1.46%
12/31/2019	1,499	111,746,539	74,547	3.16%

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

<u>Fiscal Year Ended</u>	<u>Added</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>Number</u>	<u>Pay</u>	
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%
12/31/2018	81	2,054,117	33	488,082	1,424	28,940,185	5.7%	20,323	96.2%	27.0%
12/31/2019	80	2,240,959	47	715,467	1,457	30,465,677	5.3%	20,910	97.2%	27.3%

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	11	5	0	6	1	0	0	0	0	1	9
201 - 300	25	21	0	4	15	2	0	0	0	2	6
301 - 400	54	42	0	12	29	1	0	0	1	4	19
401 - 500	66	46	0	20	27	0	0	1	1	8	29
501 - 600	60	52	0	8	35	0	1	1	0	3	20
601 - 700	56	47	1	8	26	1	0	0	0	7	22
701 - 800	56	44	1	11	26	0	0	0	1	12	17
801 - 900	55	48	0	7	33	0	1	0	0	7	14
901 - 1,000	69	61	0	8	27	3	0	0	1	10	28
1,001 - 1,500	251	218	4	29	117	1	2	1	0	28	102
1,501 - 2,000	234	206	2	26	103	0	0	0	1	31	99
Over 2,000	<u>519</u>	<u>493</u>	<u>0</u>	<u>26</u>	<u>221</u>	<u>10</u>	<u>0</u>	<u>3</u>	<u>4</u>	<u>85</u>	<u>196</u>
Total	1,457	1,284	8	165	661	18	4	6	9	198	561

*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
12/31/2010	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
12/31/2018	26,202,801	125,328	1,981,215	554,422	28,863,766
12/31/2019	27,788,707	124,164	2,142,993	544,438	30,600,302

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>
12/31/2010	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%
12/31/2018	19,918	13,925	19,880	1.72%
12/31/2019	20,657	15,521	20,629	3.77%

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:	7.50%
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 2019 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 and City Contributions</u>	<table> <tr> <td>Effective 12/15/19</td> <td>9.75%</td> </tr> <tr> <td>12/16/18 - 12/14/19</td> <td>9.25%</td> </tr> <tr> <td>12/17/17 - 12/15/18</td> <td>9.00%</td> </tr> <tr> <td>08/31/14 - 12/16/17</td> <td>8.25%</td> </tr> <tr> <td>Prior to 9/1/14</td> <td>7.75%</td> </tr> </table>	Effective 12/15/19	9.75%	12/16/18 - 12/14/19	9.25%	12/17/17 - 12/15/18	9.00%	08/31/14 - 12/16/17	8.25%	Prior to 9/1/14	7.75%
Effective 12/15/19	9.75%										
12/16/18 - 12/14/19	9.25%										
12/17/17 - 12/15/18	9.00%										
08/31/14 - 12/16/17	8.25%										
Prior to 9/1/14	7.75%										

Member contributions are credited with 2.5% interest annually, compounded quarterly.

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

Service Retirement Eligibility:	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.
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:	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.
Disability Retirement Allowance:	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.

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 I - Plan Risks (ASOP 51 Compliance)

Risk may be broadly defined as the chance an outcome or result will differ from the expected outcome or result. In the context of defined benefit pension plans risk is the potential for the future financial condition of the plan to deviate from that expected due to future actual experience different from assumed or expected experience. ASOP 51 requires the actuary to identify and assess risks that may reasonably be expected to impact the plan. Some of the more significant risks are described below. Please let us know if you would like us to quantify or model these risks or any others in more detail.

A. Investment Risk

Investment risk is the risk that actual investment returns differ from the assumed rate of return. Investment returns can be very volatile. Even if the assumed rate of return is realized over the long term, this volatility can lead to significant swings in the plan's funded status and contribution requirement from year to year. Furthermore there is the risk that the assumed rate of return may not be realized.

The assumed rate of return for the plan was 7.50% for 2019. Investment returns below the assumed rate of return increase plan costs and decrease the plan's funded status while investment returns in excess of the assumed rate of return decrease plan costs and improve the plan's funded status.

B. Interest Rate Risk

Interest rate risk is the risk that future interest rates differ from expected interest rates. The interest rate is used to discount future expected benefit payments in order to determine a plan's liability as of the measurement date. Higher interest rates result in lower liabilities and lower interest rates result in higher liabilities.

The liability of your plan has a duration of 9.71 as of December 31, 2019. This means a 1% change in interest rates would result in approximately a 10% change in liability. A 1% increase in interest rates would lower plan liability and vice versa.

C. Asset/Liability Mismatch Risk

Asset/Liability mismatch risk is the risk that changes in future asset values are not matched by changes in the value of plan liabilities. Both assets and liabilities are sensitive to interest rates however the same change in interest rates may have differing impact on assets versus liabilities both in terms of direction and magnitude. Matching the duration of interest rate sensitive assets in the plan's portfolio with the duration of the plan's liabilities (see Interest Rate Risk above) is a method that can be employed to protect the plan's funded status from interest rate fluctuations.

D. Longevity Risk

Longevity risk is the risk that mortality experience will be different than expected. Since the plan is not large enough to have credible mortality experience, standard tables are used. The standard tables are comprised of "base rates" and a mortality improvement projection scale which anticipates continued improvement in mortality in the future. If plan participants live longer than expected, the cost of providing lifetime benefits increases and vice versa.

E. Contribution Risk

Contribution risk is the risk that required contributions as determined by the actuary are not made. A comparison of the actuarially determined contribution (ADC) to employer contributions actually made may be found in Table 12.

Appendix I - Plan Risks (ASOP 51 Compliance) (continued)

F. Plan Maturity Measures

Plan maturity measures are ratios intended to measure the maturity level of a plan. As a plan becomes more mature contribution requirements become more sensitive to investment volatility and more conservative investment strategies may be considered. A high ratio indicates a mature plan.

1. Ratio of retired life liability to total liability: 0.59

A high ratio of retired life liability to total liability indicates a larger proportion of the liability is due to "fixed" benefit amounts. As a result, attempts to mitigate fluctuating contribution requirements through plan amendments affecting future benefit accruals will have less of an impact.

2. Ratio of net cash flow to market value of assets: (0.04)

Net cash flow represents contributions received for the year less benefit payments and expenses. Investment income is excluded. A large negative ratio indicates a significant percentage of the assumed rate of return must be realized to cover the annual cash outflow.

3. Ratio of benefit payments to contributions: 1.56

A high ratio of benefit payments to contributions indicates the extent to which investment return is relied upon to improve the funded status and reduce future costs. A fully funded plan would expect benefit payments to equal or exceed contributions.

Appendix II - Data Tables

Exhibit A	Summary of Membership Data as of December 31, 2019
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, 2019

Active Members

Item	Male	Female	Total
Number of Members	1,019	480	1,499
Annual Salaries	\$74,227,083	\$32,086,894	\$106,313,977
Average Age	47.3	47.2	47.3
Average Service	11.4	10.4	11.1

EXHIBIT A
(continued)

Summary of Membership Data as of December 31, 2019

Retirees and Beneficiaries

Item	Number	Annual Annuities	Average Annuities
Retired Members	1,284	\$27,990,349	\$21,799
Survivor Annuitants	165	\$2,360,748	\$14,308
Disabled Annuitants	8	\$114,580	\$14,323
Total Annuitants	1,457	\$30,465,677	\$20,910

EXHIBIT A
(continued)

Summary of Membership Data as of December 31, 2019

Vested Terminations and Portables

Item	Number	Annual Annuities	Average Annuities
Vested Terminations	64	\$781,686	\$12,214
Portables*	55	\$502,361	\$9,134

* 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
2020	\$34,223,714	\$30,262,766
2021	35,842,555	29,804,186
2022	37,465,812	29,313,416
2023	38,914,461	28,788,451
2024	40,293,626	28,226,398
2025	41,508,808	27,628,745
2026	42,691,883	26,991,582
2027	43,700,988	26,315,684
2028	44,706,615	25,598,544
2029	45,606,535	24,840,627
2030	46,440,647	24,041,444
2031	47,110,006	23,199,866
2032	47,868,202	22,320,998
2033	48,433,514	21,402,047
2034	48,977,208	20,451,050
2035	49,478,057	19,468,023
2036	49,799,128	18,444,910
2037	50,016,843	17,407,488
2038	50,157,835	16,350,772
2039	50,126,450	15,236,669

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	6	10	0	0	0	0	0	0	0	0	0	16
25 to 29	28	54	6	0	0	0	0	0	0	0	0	88
30 to 34	22	75	34	14	0	0	0	0	0	0	0	145
35 to 39	17	81	38	51	5	0	0	0	0	0	0	192
40 to 44	15	59	45	52	33	5	0	0	0	0	0	209
45 to 49	13	49	42	42	32	21	2	0	0	0	0	201
50 to 54	7	40	29	42	31	34	21	9	1	0	0	214
55 to 59	7	29	31	39	22	32	37	8	1	0	0	206
60 to 64	2	13	22	30	27	17	33	17	6	3	3	170
65 to 69	0	4	11	8	4	7	4	2	2	4	4	46
70 & Up	0	0	1	1	3	2	2	0	0	3	3	12
Total	117	414	259	279	157	118	99	36	10	10	10	1,499
Freq. Pct.	7.8%	27.6%	17.3%	18.6%	10.5%	7.8%	6.6%	2.4%	0.7%	0.7%	0.7%	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	210,821	429,869	0	0	0	0	0	0	0	0	0	640,690
25 to 29	1,212,472	2,961,736	460,655	0	0	0	0	0	0	0	0	4,634,863
30 to 34	977,487	4,161,195	2,474,333	1,003,722	0	0	0	0	0	0	0	8,616,737
35 to 39	970,851	5,333,737	3,218,792	3,769,892	358,425	0	0	0	0	0	0	13,651,696
40 to 44	755,217	3,648,067	3,693,010	3,949,027	2,613,175	373,894	0	0	0	0	0	15,032,390
45 to 49	715,439	3,261,884	3,373,072	3,231,221	2,594,396	1,797,347	93,648	0	0	0	0	15,067,007
50 to 54	363,320	2,680,606	2,153,155	3,238,158	2,471,018	2,752,695	1,756,407	634,402	82,722	0	0	16,132,481
55 to 59	313,447	1,931,761	2,563,833	3,063,671	1,641,938	2,449,192	2,882,113	648,838	74,793	0	0	15,569,587
60 to 64	97,464	1,046,299	1,543,271	2,135,866	2,244,357	1,354,597	2,518,726	1,200,028	436,772	186,532	0	12,763,911
65 to 69	0	231,072	873,280	591,656	309,907	496,899	291,285	139,155	120,037	418,956	0	3,472,248
70 & Up	0	0	39,640	53,269	203,008	119,824	108,133	0	0	208,493	0	732,367
Total	5,616,517	25,686,226	20,393,040	21,036,481	12,436,224	9,344,448	7,650,312	2,622,423	714,323	813,981	106,313,976	

Freq. Pct. 5.3% 24.1% 19.2% 19.8% 11.7% 8.8% 7.2% 2.4% 0.7% 0.8% 100.0%

Avg. Sal. 48,004 62,044 78,738 75,400 79,212 79,190 77,276 72,845 71,432 81,398 70,923

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	25	24,229	17	20,392	42	22,676
55 to 59	64	26,745	39	24,172	103	25,771
60 to 64	98	25,867	87	23,190	185	24,608
65 to 69	209	26,835	140	20,727	349	24,385
70 to 74	186	23,821	103	16,584	289	21,241
75 to 79	98	20,658	69	13,326	167	17,628
80 to 84	44	21,016	42	13,270	86	17,233
85 to 89	20	14,141	14	8,264	34	11,721
90 to 94	12	14,234	10	13,254	22	13,789
95 & Up	2	11,223	5	6,314	7	7,717
Total	758	24,165	526	18,391	1284	21,799
Average Age	69.9		70.1		70.0	
Freq. Pct.	59.0%		41.0%		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	1	18,803	1	18,803
55 to 59	1	11,020	3	7,742	4	8,561
60 to 64	3	20,326	20	19,910	23	19,964
65 to 69	1	4,404	29	19,387	30	18,887
70 to 74	0	0	12	13,356	12	13,356
75 to 79	0	0	28	15,043	28	15,043
80 to 84	2	8,243	28	11,730	30	11,498
85 to 89	0	0	19	12,673	19	12,673
90 to 94	1	2,339	14	6,641	15	6,354
95 & Up	0	0	3	6,470	3	6,470
Total	8	11,903	157	14,430	165	14,308
Average Age	72.2		76.6		76.4	
Freq. Pct.	4.8%		95.2%		100.0%	

EXHIBIT C

**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	1	7,844	1	7,844
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	3	13,274	8	14,322
Average Age	63.6		65.6		64.3	
Freq. Pct.	62.5%		37.5%		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	9,644	1	5,553	6	8,962
35 to 39	3	14,517	5	9,916	8	11,642
40 to 44	4	11,574	12	14,235	16	13,570
45 to 49	13	15,876	9	10,655	22	13,740
50 to 54	2	7,330	3	10,965	5	9,511
55 to 59	4	10,222	1	9,054	5	9,988
60 to 64	0	0	2	8,939	2	8,939
65 & Up	0	0	0	0	0	0
Total	31	12,903	33	11,566	64	12,214
Average Age	45.4		45.8		45.6	
Freq. Pct.	48.4%		51.6%		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	0	0	1	223	1	223
30 to 34	1	3,462	1	760	2	2,111
35 to 39	2	9,397	6	4,802	8	5,951
40 to 44	5	5,157	2	6,000	7	5,398
45 to 49	6	15,875	3	21,650	9	17,800
50 to 54	8	7,247	6	19,087	14	12,321
55 to 59	4	3,334	5	5,187	9	4,364
60 to 64	1	8,229	3	9,398	4	9,106
65 & Up	1	4,128	0	0	1	4,128
Total	28	8,106	27	10,200	55	9,134
Average Age	49.1		48.2		48.7	
Freq. Pct.	50.9%		49.1%		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

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Schedule of Revenues by Source

Fiscal Year	Employer Contribution	Employer Contributions	Member Contributions	Net Investment Income	Total Revenues
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
2018 ³	9.00%	9,187,420	9,188,781	(18,715,945)	(339,744)
2019 ⁴	9.25%	9,824,717	9,827,760	50,166,728	69,819,205

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 9.00%. 8.25% represents the average rate of contributions received during 2017.

3 Effective December 16, 2018, the annual Contribution Rate changed from 9.00% to 9.25%. 9.00% represents the average rate of contributions received during 2018.

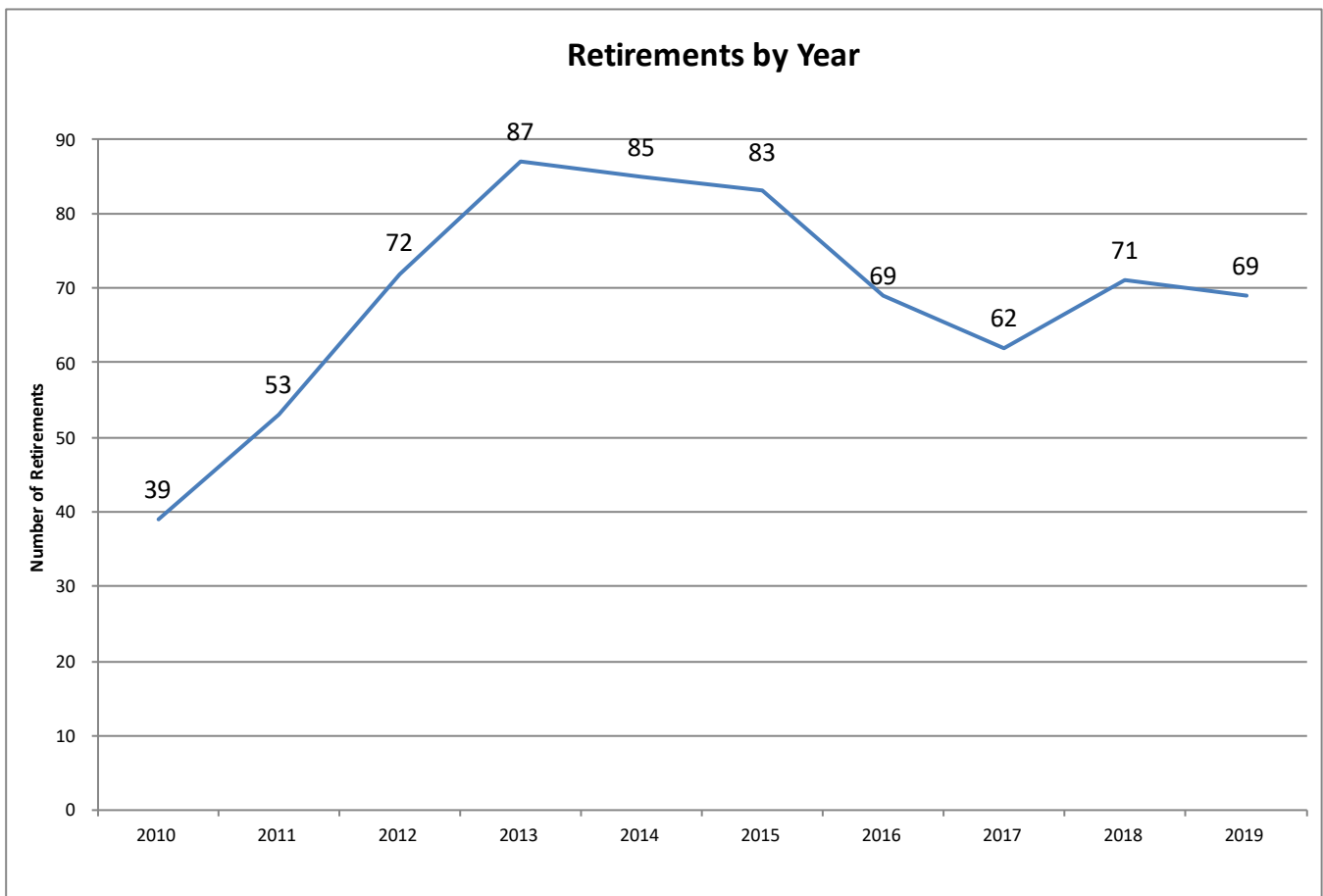
4 Effective December 15, 2019, the annual Contribution Rate changed from 9.25% to 9.75%. 9.25% represents the average rate of contributions received during 2019.

Schedule of Expenses by Type

Fiscal Year	Benefits	Refunds	Net Administrative	Total Expenses
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
2018	28,309,344	554,422	554,484	29,418,250
2019	30,055,864	544,438	555,763	31,156,065

Schedule of Benefit Expenses by Type

Year	Service Retiree Benefits	Survivor Benefits	Disability Retiree Benefits	Refunds	Total
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
2018	26,202,801	1,981,215	125,328	554,422	28,863,766
2019	27,788,707	2,142,993	124,164	544,438	30,600,302



Retirements During 2019

Date Name	Department	Position	Retired	Option	Serv Yrs	Age
Arndt, Don R.	Development Services Center	Certified Combination Inspector	1/12/2019	E	11.1	69
Ashwood, John W.	Park Meter	Parking Enforcement Specialist II	5/4/2019	C-20	36.5	72
Badeaux, Mary T.	Public Works & Utilities	Clerk III	9/7/2019	ST	21.1	69
Bernards, Mary W.	Library	Library Clerical Assistant I	4/3/2019	ST	16.8	70
Bisenius, Deborah Y.	Environmental Programs	Environmental Analyst	4/6/2019	ST	26.4	65
Blomgren, Penny S.	Advanced Wastewater Treatment	Clerk III	7/2/2019	ST	14.8	67
Burke, Karen C.	Parks & Recreation	Gardener II	7/3/2019	ST	18.2	58
Carlson, David R.	Public Defender	Public Defender II	7/6/2019	E	25.9	60
Chang, Shao-Zen	Advanced Wastewater Treatment	Stationary Engineer	2/2/2019	D	16.7	67
Chiappe, Robert D.	Code Enforcement	Certified Enforcement Specialist	1/12/2019	ST	21.7	53
Codd, Nicholas B.	Advanced Wastewater Treatment	Stationary Engineer	4/2/2019	E	39.2	65
Coles, Timothy J.	Development Services Center	Engineering Technician IV	2/2/2019	E	34.1	67
Crocker, Ernest R.	Development Services Center	Lead Building Services Inspector	6/4/2019	E	15.3	66
Danek, Thomas E. #	Mayor	City Administrator	2/1/2019	E	4.0	52
Dart, Jean M. *	Library	Librarian	1/1/2019	ST	10.5	64
Davey, Janet L.	Sewer Maintenance	Clerk III	2/8/2019	ST	18.2	67
Davidson, Kevin S. #	Solid Waste Management	Recycling Collector	11/1/2019	E	4.3	55
Doval, Matthew M.	Accounting	Accountant I	4/2/2019	ST	13.1	54
Eadie, Leroy E.	Parks & Recreation	Director	2/13/2019	ST	25.1	51
Eccles, Duane P.	Library	Library Caretaker II	9/4/2019	E	20.7	53
Enquist Jr., John H. *	Solid Waste Management	Refuse Collector III	6/1/2019	E	22.8	50
Fetcho, Michael G.	Police	Police Evidence Technician II	3/23/2019	E	13.1	69
Flynn, Dennis P. *	Library	Library Clerical Assistant II	9/1/2019	E	6.9	50
Gaines, Karen L.	Municipal Court	Court Clerk I	9/7/2019	E	17.4	62
Gimpel, Kenneth C. *	Solid Waste Disposal	Public Works Business Services Director	9/1/2019	E	5.3	62
Hamilton, Joan M. *	Information Technology	Computer Operations Manager	4/1/2019	ST	27.5	61
Hendrix, Linda L.	Combined Communications Center	Fire Communications Specialist	2/13/2019	B	21.1	62
Hess, Andrew C.	Public Defender	Public Defender II	3/19/2019	E	18.7	67
Hung, Ellen *	Treasurer	City Treasurer	4/1/2019	ST	12.3	50
Johnson, Cathleen E.	Fire	Clerk III	5/4/2019	ST	15.6	61
Johnson, John R.	Street	Street Maintenance Operator I	4/19/2019	E	29.6	60
Kaesemeyer, Gary W.	Street	Director	5/4/2019	ST	36.7	61
Kaiser, Randall W.	Fleet Services	Automotive Mechanic	6/7/2019	ST	25.8	63
Kelleher, Melinda J.	Public Works & Utilities	Clerk III	8/3/2019	ST	17.8	65
Kendall, Ron F.	Advanced Wastewater Treatment	Wastewater Treatment Plant Operator III	12/14/2019	E	29.0	59
Kinzer, Cindy J.	Engineering Services	Senior Engineer	8/16/2019	E	10.6	54
Magin, Jeffery E.	Water	Welder Foreperson	5/11/2019	E	33.7	62
Marchant, Wilfred P.	Golf	Golf Course Superintendent	5/4/2019	E	30.3	55
McCord, Rick A.	Parking Meter	Parking Enforcement Specialist II	8/9/2019	E	25.4	62
McLaughlin, John T.	Street	Bridge Maintainer II	2/10/2019	ST	7.5	67
Medina, Joan P.	Library	Library Assistant	4/6/2019	C-20	30.6	50
Moore, Ronald C.	Fleet Services	Certified Equipment Maintenance Foreperson	8/5/2019	D	10.6	52
Moxley, Roberta G. *	Information Technology	Mail Center Specialist	11/1/2019	A	18.7	50
Nauroth, Michael W.	Golf	Park Equipment Specialist	5/3/2019	E	18.4	67
Nelson, Douglas E.	Street	Asphalt Raker	8/2/2019	ST	18.4	65
Perkins, Frances I.	Engineering Services	Clerk III	10/5/2019	ST	13.3	62
Powell, Dennis C.	Police	Police Radio Dispatcher III	7/2/2019	E	23.7	58
Pray, Shawn C.	EMS Fund	Heavy Equipment Mechanic	1/3/2019	A	29.4	58
Reid, Lee Ann	Hearing Examiner	Attorney Assistant	4/5/2019	D	19.6	67
Rickard Jr., Ronald W.	Water	Water Quality Coordinator	7/13/2019	E	40.1	65
Ripley, Karen R.	Accounting	Accounting Clerk	6/29/2019	E	20.6	66
Rose, Brian L.	Fleet	Equipment Servicer	1/12/2019	ST	12.5	65
Rossey, Kristen L. *	Library	Librarian	12/1/2019	C-10	13.0	51
Schenk, Andrew E. *	Development Services Center	Principal Engineer	7/1/2019	E	16.3	50
Shafer, Linda G.	Municipal Court	Court Clerk I	2/9/2019	E	10.1	67
Sharts, Melora A.	CD/HS Operations	Housing Program Finance Officer	7/27/2019	ST	20.1	63
Smith, Donna A.	Public Defender	Public Defender II	2/2/2019	E	13.0	70
Smith, Mark A.	Street	Street Maintenance Foreperson	5/4/2019	E	26.0	58
Stewart, Scott A.	Sewer Maintenance	Waste Water Inspector	11/6/2019	D	25.8	59
Tang, Lillian S.	Public Defender	Public Defender II	8/3/2019	ST	27.7	69
Taylor, Linda A. ^	Advanced Wastewater Treatment	City Engineer	9/1/2019	E	10.7	68
Thompson, Albert M.	Advanced Wastewater Treatment	Wastewater Treatment Plant Operator II	2/2/2019	ST	12.0	67
Traynor, Paul A.	Water	Water Service Foreperson	1/8/2019	E	25.5	62
Wasley, Nancy B.	Information Technology	Mail Center Specialist	1/5/2019	ST	18.5	65
Wencel, Grant *	Planning Services	Assistant Planner	11/1/2019	E	5.1	62
Werner, Robert A.	Street	Street Maintenance Foreperson	6/14/2019	E	30.0	56
Williams, Lesley J.	Advanced Wastewater Treatment	Wastewater Treatment Plant Operator III	9/21/2019	ST	22.6	50
Worlock, Andrew E.	Planning Services	Principal Planner	1/1/2019	E	18.4	56
Zubaugh, Brian R.	Water	Water Service Specialist	7/10/2019	E	17.4	50

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

Retiree Deaths During 2019

Name	Date Retired	Date of Death	Age	Retirement Option
Bennett, Ollie J.	4/2/1991	8/29/2019	82	ST
Benson, Frank W.	2/10/1996	9/19/2019	79	E
Braun, Pamela K.	3/17/1993	11/21/2019	68	DIS
Brown, Linda C.	1/20/1911	2/18/2019	64	D
Butts, Roy C.	1/1/2014	1/1/2019	84	E
Danielson, Gerald M.	11/2/1999	10/19/2019	83	E
Davidson, Elizabeth	5/14/1998	12/12/2019	88	ST
Davis, George W.	1/12/1985	4/13/2019	96	E
Davis, Jr., James W.	10/5/1996	6/10/2019	83	E
Dayharsh, Mary Kay	12/19/2014	10/12/2019	85	D
Deininger, Patricia M.	6/2/2004	5/7/2019	71	ST
Espe, Rosella M.	6/19/2002	4/29/2019	92	D
Ferris, Abraham F.	6/3/2003	10/11/2019	73	D
Gibford, William J.	8/21/1991	11/26/2019	80	E
Goodson, Florida M.	7/4/1987	12/20/2019	94	E
Green, Sara J.B.	2/12/2005	7/7/2019	76	ST
Haugen, C. Dean	10/4/1994	10/23/2019	79	ST
Herbig, Harold "Herb"	6/5/1999	11/19/2019	88	E
Hill, Barbara A.	4/15/2006	2/12/2019	76	ST
Holland, Mearl	6/4/1985	12/14/2019	97	A
Humphreys, Elizabeth L.	2/14/2014	7/3/2019	89	E
Ibach, Doris L.	2/1/1994	9/14/2019	91	ST
Jewett, Paul T.	11/4/1993	6/23/2019	76	E
Johnson-Ross, Myrna F.	3/4/2003	5/23/2019	77	ST
Jones, Dorothy J.	2/8/2013	5/15/2019	90	E
Klein, Darrel C.	8/5/2008	9/19/2019	73	B
Kuntz, Kathleen J.	9/8/2009	7/4/2019	70	E
Larsen, Dale F.	10/17/2014	3/26/2019	64	ST
Lyson, Beverly J.	2/3/1995	11/2/2019	83	ST
Minnihan, Patricia A.	8/4/2009	6/19/2019	69	ST
Oakshott, Patricia J.	6/6/2001	8/12/2019	88	ST
Olsen, Richard L.	12/12/2009	9/9/2019	74	E
Olsen, Richard L.	12/11/2009	9/9/2019	74	E
Parker, Barbara L.	3/5/1992	5/24/2019	86	D
Perry, Thomas E.	6/3/1986	6/5/2019	90	A
Powell, Albert J.	8/6/2011	6/8/2019	74	ST
Quinlivan, Judith M.	7/3/2002	2/7/2019	68	ST
Rodgers, Roxanne	2/3/2001	9/9/2019	83	ST
Rothstein, Marion	11/2/1990	5/2/2019	93	ST
Schmeling, Lorraine	3/27/1985	10/7/2019	95	A
Sherick, Mike G.	1/14/1998	10/1/2019	80	ST
Sherman, Robert L.	3/1/1989	3/17/2019	84	E
Silk, Ronald W.	12/2/1989	5/2/2019	79	D
Stanton, Patricia C.	1/3/1996	1/23/2019	87	ST
Triplett, Ronald E.	10/2/2015	10/26/2019	67	ST
Voss, Genevieve E.	8/2/1991	3/11/2019	83	ST
Williams, Dennis R.	1/8/2008	1/25/2019	73	D

Active Member Deaths During 2019

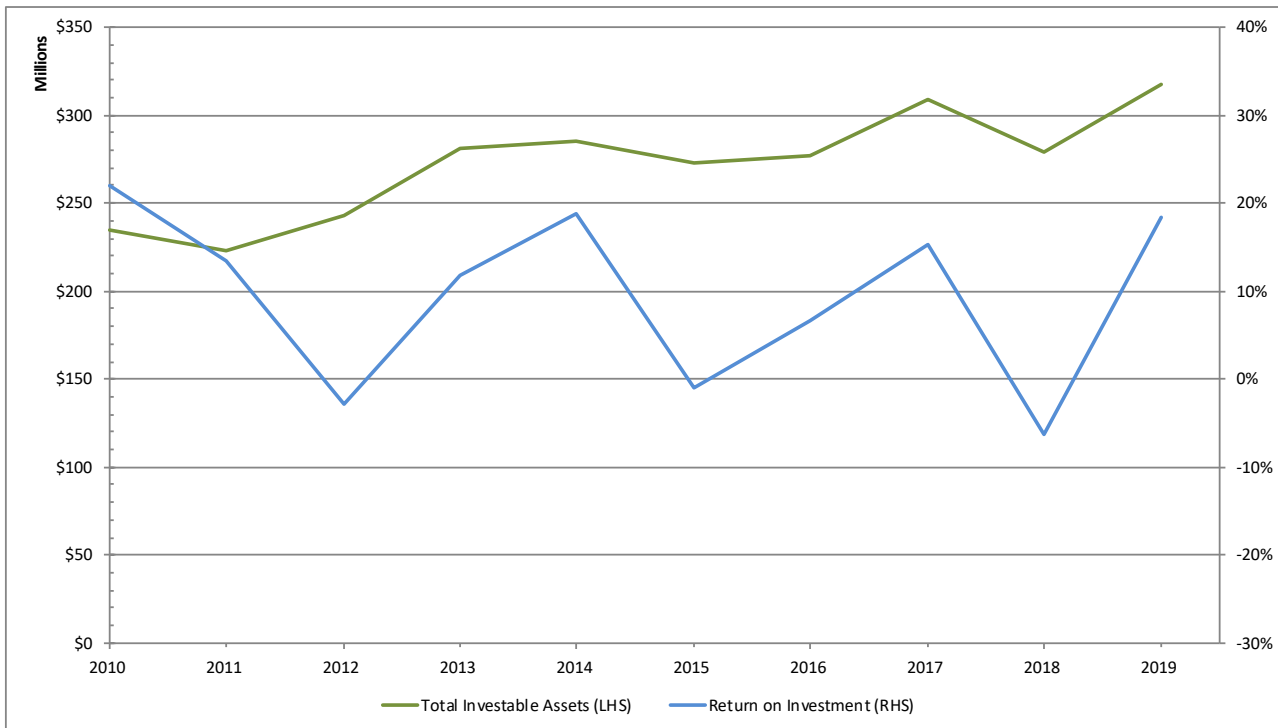
Name	Department	Date of Death	Age	Years of Service
Taylor, Perry M.	Advanced Wastewater Treatment	9/1/2019	75	10.7

Investment Section

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Total Retirement Assets

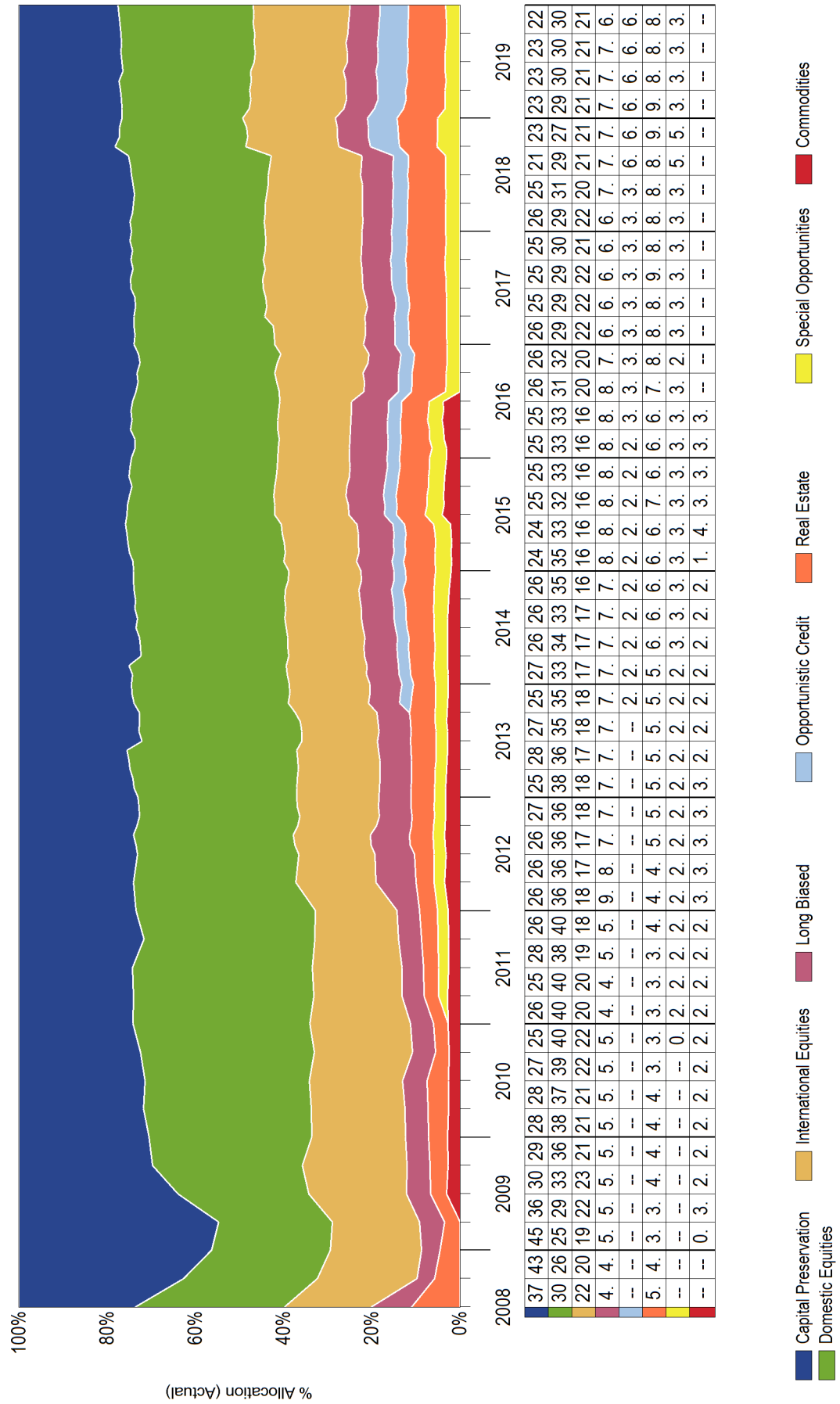
A 10 year look



Schedule of Investment Results

	Market Value of Investments	Net Investment Income	Investment Rate of Return (net of fees)
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%
2018	278,768,297	(18,715,945)	-6.27%
2019	317,470,461	50,166,728	18.35%

Investment Allocation History



Investments Listed by Type

As of December 31, 2019

	Market Value
Capital Preservation:	
Cash Held by Treasurer	\$138,989
Fidelity Government Money Market	146,265
Sterling Capital Core Bond	25,385,134
Hotchkis & Wiley High Yield	13,686,339
Polar Long/Short Fund	7,341,024
Castine Partners	8,228,531
Post Limited Term High Yield	6,510,979
Rimrock Low Volatility	10,082,676
Domestic Equities:	
Hotchkis & Wiley Large Cap Value	17,113,653
MFS Large Cap Growth	17,203,639
Fidelity S&P 500 Index	30,899,969
Sterling Mid Cap Value	5,002,792
Vanguard Mid Cap Growth	4,604,542
Fidelity Mid Cap Index	4,614,773
Champlain Small Cap	6,903,627
Frontier Phocas Small Cap Value	4,145,325
Bridge City Small Cap Growth	6,086,784
Fidelity Small Cap Index	965,452
International Equities:	
Artisan International Value	23,089,221
EuroPacific Growth	23,108,356
Trivalent Small Cap Value	13,008,016
Emerging Markets:	
ABS Emerging Markets Strategic Portfolio	9,001,286
Vanguard Emerging Market Equity	1,281,875
Real Estate:	
Metropolitan Real Estate Partners	160,996
Morrison Street Fund V	2,272,843
Morrison Street Debt Opportunities	4,097,494
Morgan Stanley PRIME Fund	7,476,289
Principal (REITs)	12,677,417
Long Biased Hedge Funds:	
Weatherlow Offshore	16,962,237
Royalty Opportunities I	1,936,087
Royalty Opportunities II	2,533,589
Opportunistic Credit:	
Beach Point Select Fund	11,506,888
Contrarian Capital Fund I	8,955,046
Special Opportunities:	
Contrarian Emerging Markets	5,752,536
OrbiMed Partners II	4,589,792.9
Total Cash and Investments	\$317,470,461

Note: Totals may not add due to rounding

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