SAN JOAQUIN CEARA

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE YEAR ENDED DECEMBER 31, 2018

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE YEAR ENDED DECEMBER 31, 2018

ISSUED BY SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

Johanna Shick, *Chief Executive Officer*
Lily Cherng, CPA *Retirement Financial Officer*

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Stockton, California 95202 www.sjcera.org

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INTRODUCTION

San Joaquin County Employees' Retirement Association
6 S. El Dorado Street, Suite 400 • Stockton, CA 95202 • (209) 468-2163 • (209) 468-0480 • www.sjcera.org

May 24, 2019

Board of Retirement
6 S. El Dorado Street, Suite 400
Stockton, CA 95202

To SJCERA's Trustees, Members and Beneficiaries, Plan Sponsor and Participating Employers:

I am pleased to present to you the Comprehensive Annual Financial Report (CAFR) for the year ended December 31, 2018. This report provides a detailed overview of the SJCERA Plan and the fund's financial, actuarial and investment-related activities for the year. All data and information presented is accurate and reliable, conforms to generally accepted accounting principles, and is free of material misstatements. This Letter of Transmittal is a narrative introduction to the CAFR; I encourage you to read it in conjunction with the Management's Discussion and Analysis included in the Financial Section.

SJCERA AND ITS SERVICES

SJCERA is a public retirement system established by the San Joaquin County Board of Supervisors effective June 28, 1946. SJCERA provides retirement, disability and survivors' benefits to eligible General and Safety members employed by the County of San Joaquin and nine other public agencies:

- Lathrop-Manteca Rural Fire Protection District
- Mountain House Community Services District
- San Joaquin County Historical Society and Museum
- San Joaquin County Law Library
- San Joaquin County Mosquito and Vector Control District
- San Joaquin County Superior Court
- San Joaquin Local Agency Formation Commission
- Tracy Public Cemetery District
- Waterloo-Morada Rural Fire Protection District

SJCERA's nine-member Board of Retirement has exclusive control and fiduciary responsibility for administering the benefits and managing the investment of plan assets. The Board oversees the Chief Executive Officer and staff in the performance of their duties in accordance with the County Employees' Retirement Law (CERL) and the Public Employees' Pension Reform Act of 2013 (PEPRA) as adopted by the Board of Supervisors and Board of Retirement, and the bylaws, policies, and procedures adopted by the Board.

The Board of Retirement includes four trustees appointed by the San Joaquin County Board of Supervisors, the San Joaquin County Treasurer-Tax Collector, four trustees elected by SJCERA members, and one alternate retired member.

LETTER OF TRANSMITTAL

FINANCIAL INFORMATION

SJCERA management is responsible for the accuracy, completeness, and fair presentation of the information in this report, as well as for establishing and maintaining internal controls that ensure SJCERA's financial reporting is accurate and reliable and that SJCERA's assets are protected from loss, theft or misuse. Internal controls are designed to provide reasonable, but not absolute, assurance that these objectives are met. Reasonable assurance recognizes the cost of a control relative to the benefits likely to be derived and that these judgments by management are based on estimates.

Brown Armstrong Accountancy Corporation, a certified public accounting firm, has audited SJCERA's financial statements and related disclosures, which are prepared by management, and attests they are presented in conformity with generally accepted accounting principles (GAAP) in the United States of America as promulgated by the Governmental Accounting Standards Board (GASB) and are free from material misstatement. Internal controls are sufficient to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements and supporting schedules. The accompanying basic financial statements and transactions of the organization are prepared on the accrual basis of accounting.

INVESTMENTS

SJCERA's strategic asset allocation is designed to ensure diversification among asset classes and achieve SJCERA's long-term objectives. For the year ended December 31, 2018, the portfolio lost 2.11 percent net of fees, which was below SJCERA's assumed rate of return of 7.25 percent. As of December 31, 2018, SJCERA's annualized three-year net return was 5.2 percent, the five-year annualized net return was 3.6 percent, and the 10-year annualized net return was 6.3 percent. Plan assets totaled $2.8 billion as of December 31, 2018. More information about SJCERA's investments is included in the Investment Section.

FUNDING

SJCERA engages a professional pension actuary to perform an annual actuarial valuation and Governmental Accounting Standards Board (GASB) 67/68 Report. The GASB 67/68 Report indicates that during 2018, SJCERA's total pension liability increased from $4.5 billion to $4.7 billion, the market value of assets decreased from $2.9 billion to $2.8 billion, and the net pension liability increased from $1.7 billion to $1.9 billion.

The actuarial valuation determines the progress made in accumulating sufficient assets to pay benefits when due. The January 1, 2019 valuation, which reflects the Plan's progress in 2018, will be available in August 2019, after the publication of this report. As a result, the detailed discussion of funding provided in the Actuarial Section of this report is based on the January 1, 2018 valuation, which reflects SJCERA's progress in 2017.

MAJOR INITIATIVES

In July 2018, SJCERA published its first Investment Fee Transparency Report in accordance with California Government Code Section 7514.7. In that same spirit of transparency, following are highlights of SJCERA's 2018 initiatives.

Strengthen Fund Stability. In 2018, SJCERA lowered the assumed rate of return from 7.4 percent to 7.25 percent. The decreased return assumption better reflects SJCERA's expectations for future returns. SJCERA's diversified portfolio protected the fund during the turbulent markets in late 2018. Although the 2018 return of -2.11 percent is appreciably lower than our 7.25 percent target, the portfolio returned top quartile performance compared to public funds over $1 billion nationwide and outperformed the traditional 60 percent stock, 40 percent bond portfolio, which earned -5.3 percent.

For the year 2018, two employers made additional contributions to reduce their portion of the unfunded liability: San Joaquin County (which began paying additional voluntary contributions in 2017), and the Mosquito and Vector Control District.

Prudently Use Resources. SJCERA continues its focus on reducing investment fees by renegotiating with existing managers and improving strategies to use when negotiating with new managers. This year's efforts resulted in a projected total cost-avoidance of $580,000 in investment fees annually. Additionally, SJCERA renegotiated a cost-effective lease resulting in a savings of $72,600 over the course of the first year.

Deliver Excellent Service and Support. SJCERA received high marks from our members: 95 percent of survey respondents were satisfied with our service. In addition, retirees received timely and reoccurring communication including payroll inserts and monthly earnings statement messages. SJCERA implemented online completion of forms on our website, adding convenience for members and improving legibility for SJCERA processing.

Improve Efficiency. In August, SJCERA began a project to enhance the efficiency and effectiveness of our pension administration system. Additionally, staff implemented a streamlined retirement process which improved efficiency and accuracy.

ACHIEVEMENTS IN FINANCIAL REPORTING AND PLAN ADMINISTRATION

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to SJCERA for its Comprehensive Annual Financial Report for the Year Ended December 31, 2017. This award recognizes compliance with the highest standards for state and local government financial reporting.

ACKNOWLEDGMENT

SJCERA's success, as reflected in this report, is the result of the combined effort of many. I want to recognize the trustees of the Board of Retirement for their leadership and policy decisions, which provide direction and focus to our work. Additionally, I want to thank SJCERA's staff for their dedicated service to our members, their commitment to administering the Plan with integrity, and their hard work in compiling this report. We are proud to count ourselves among the many public employees who diligently serve the people of San Joaquin County.

Sincerely,

JShick

Johanna Shick
Chief Executive Officer

CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

San Joaquin County

Employees' Retirement Association

California

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2017

Christopher P. Morrill

Executive Director/CEO

PUBLIC PENSION STANDARDS AWARD FOR FUNDING AND ADMINISTRATION 2018

Public Pension Coordinating Council

Public Pension Standards Award
For Funding and Administration
2018

Presented to

San Joaquin County Employees' Retirement Association

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle
Program Administrator

INTRODUCTION

MEMBERS OF THE BOARD OF RETIREMENT AS OF DECEMBER 31, 2018

MICHAEL RESTUCCIA
Chair
Appointed by Board of Supervisors

MICHAEL DUFFY
Vice Chair
Appointed by Board of Supervisors

RAYMOND MCCRAY
Secretary
Appointed by Board of Supervisors

PHONXAY KEOKHAM
Treasurer-Tax Collector
Ex-Officio Member

JENNIFER GOODMAN
Elected by General Members

KATHERINE MILLER
Appointed by Board of Supervisors

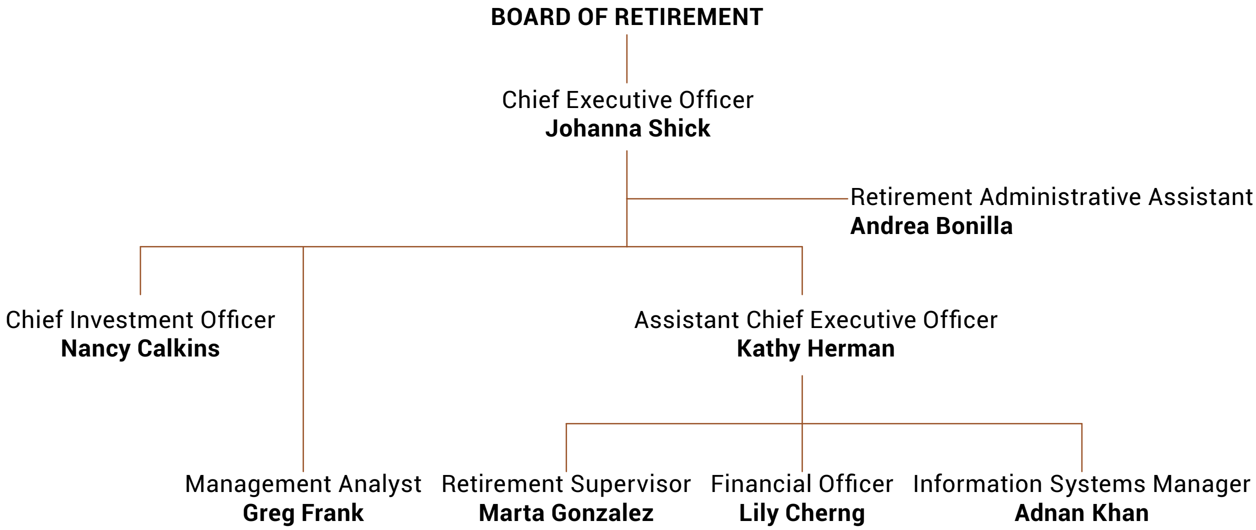
ADRIAN VAN HOUTEN
Elected by Retired Members

J.C. WEYDERT
Elected by General Members

CHANDA BASSETT
Elected by Safety Members

MARGO PRAUS
Elected by Retired Members - Alternate

ADMINISTRATIVE ORGANIZATION CHART



LIST OF PROFESSIONAL CONSULTANTS

CONSULTING SERVICES

ACTUARY

Cheiron Actuaries

AUDITORS

Brown Armstrong Accountancy Corporation

CUSTODIAN

Northern Trust Company

INFORMATION SYSTEMS

IG, Incorporated

INVESTMENT CONSULTANTS

StepStone Company

Meketa Investment Group (formerly Pension Consulting Alliance)

LEGAL COUNSEL

Hanson Bridgett, LLP

Haydel and Ornellas

Law Office of Ted M. Cabral

Morrison & Foerster

Nossaman, LLP

Olson, Hagel & Fishburn, LLP

San Joaquin County Counsel

Please refer to the Investment Section for a *List of Investment Managers*, and the *Schedule of Investment Fees and Commissions* on pages 65-68.

FINANCIAL

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REGISTERED with the Public Company Accounting Oversight Board and MEMBER of the American Institute of Certified Public Accountants

BROWN ARMSTRONG
Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

To the Members of the Board of Retirement and Audit Committee of
San Joaquin County Employees' Retirement Association
Stockton, California

Report on the Financial Statements and Other Information

We have audited the accompanying Statement of Fiduciary Net Position of the San Joaquin County Employees' Retirement Association (SJCERA) as of December 31, 2018, the related Defined Benefit Pension Plan Statement of Changes in Fiduciary Net Position for the year then ended, and the related notes to the financial statements, which collectively comprise SJCERA's basic financial statements as listed in the table of contents. We have also audited the Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) as of and for the year ended December 31, 2018, listed as other information in the table of contents.

Management's Responsibility for the Financial Statements and Other Information

SJCERA's management is responsible for the preparation and fair presentation of these financial statements and other information 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 opinions on these financial statements and other information based on our audit. We conducted our audit 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 audit to obtain reasonable assurance about whether the financial statements and other information are free of 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 SJCERA'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 SJCERA'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 and other information.

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INDEPENDENT AUDITOR'S REPORT

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

Opinions

In our opinion, the financial statements and other information referred to above present fairly, in all material respects, the Fiduciary Net Position of SJCERA as of December 31, 2018; the changes in the Defined Benefit Plan's Fiduciary Net Position for the year then ended; the Schedule of Cost Sharing Employer Allocations; the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) as of and for the year ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information (RSI), as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the RSI 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 basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise SJCERA's basic financial statements. The other supplementary information and the introductory, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Additional Information

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Report on Summarized Comparative Information

We have previously audited SJCERA's December 31, 2017 financial statements, and our report dated June 1, 2018, expressed an unmodified opinion on those audited financial statements. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2017, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated May 24, 2019, on our consideration of SJCERA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the 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 SJCERA's internal control over financial reporting and compliance.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
May 24, 2019

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MANAGEMENT'S DISCUSSION AND ANALYSIS

Management's Discussion and Analysis (MD&A) presents the overview and analysis of the financial activities of the San Joaquin County Employees' Retirement Association (SJCERA or the Plan) for the year ended December 31, 2018. This MD&A presents SJCERA's overall financial position and the results of its operations, in conjunction with SJCERA's financial statements and notes.

FINANCIAL HIGHLIGHTS

- SJCERA's fiduciary net position, decreased by $38.2 million, or 1.3 percent, to $2.8 billion as of December 31, 2018.
- SJCERA's funding objective is to meet long-term benefit obligations through contributions and investment income. As of January 1, 2018, the date of the last actuarial valuation, the funded ratio for the actuarial liability was approximately 64.8 percent. In general, this indicates that for every dollar of benefits liability, SJCERA has about 65 cents. The portion of the pension liability attributable to inactive members (retired or deferred) is fully funded by plan assets. (Note 8c provides a more detailed explanation of recent changes in funded ratio.)
- Revenues for the year were $188.1 million, a decrease from the prior year's $534 million. The decrease was mainly caused by the investment losses compared to the prior year.
- Expenses for the year were $226.3 million, an increase of $16.7 million, or 8.0 percent, from the prior year's $209.5 million. This increase was primarily due to the $16 million increase in pension benefit payments to retirees.

OVERVIEW OF FINANCIAL STATEMENTS

The SJCERA 2018 financial statements, notes to the financial statements, required supplementary information, other supplementary information, and other information were prepared in accordance with the accounting principles and reporting standards prescribed by the Governmental Accounting Standards Board (GASB). The following discussion and analysis are intended to serve as an introduction and overview of SJCERA's financial reporting components.

The **Statement of Fiduciary Net Position** is the financial statement that presents the major categories of assets and liabilities and their related values. It represents the resources available for future benefit payments to retirees and beneficiaries and the current liabilities owed as of December 31, 2018, with comparative totals as of December 31, 2017.

The **Statement of Changes in Fiduciary Net Position** is the financial statement that provides an income statement presentation of annual additions to and deductions from the Plan for the year ended December 31, 2018, with comparative totals as of December 31, 2017.

The **Notes to the Financial Statements** provide additional information that is essential to a full understanding of the data provided in the audited financial statements.

The **Required Supplementary Information** provides the Schedule of Changes of Net Pension Liability and Related Ratios, Schedule of Contributions from the Employers and Other Contributing Sources, Schedule of Investment Returns, and Notes to Required Supplementary Information.

The **Other Supplementary Information** includes a Schedule of Administrative Expenses, Schedule of Investment Expenses, Schedule of Payments to Consultants, and Statement of Changes in Assets and Liabilities for the Post-Employment Healthcare Agency Fund.

The **Other Information** includes two schedules pertaining to GASB Statement No. 68: the Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan.

DEFINED BENEFIT PENSION PLAN FINANCIAL ANALYSIS

As of December 31, 2018, SJCERA's fiduciary net position was $2.841 billion, a decrease of $38.2 million. Employer and member contributions were $244.1 million, which were offset by a net investment loss of $56.4 million, and benefits payments and administrative expenses of $226.3 million. Over time, increases and decreases in fiduciary net position are one of the indicators of whether SJCERA's financial situation is improving or deteriorating. Additional factors, such as market conditions, also need to be considered in assessing SJCERA's overall financial situation.

The table below compares SJCERA's fiduciary net position as of December 31, 2018 and 2017.

SJCERA FIDUCIARY NET POSITION

	2018	2017	INCREASE (DECREASE) AMOUNT	PERCENT CHANGE
Cash and Receivables	$ 224,623,198	$ 194,077,851	$ 30,545,347	15.74%
Investments	2,701,518,859	2,773,700,839	(72,181,980)	-2.60%
Other Assets	297,261	163,925	133,336	81.34%
TOTAL ASSETS	2,926,439,318	2,967,942,615	(41,503,297)	-1.40%
TOTAL LIABILITIES	85,397,242	88,653,984	(3,256,742)	-3.67%
TOTAL FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS	$ 2,841,042,076	$ 2,879,288,631	$ (38,246,555)	-1.33%

REVENUES – ADDITIONS TO FIDUCIARY NET POSITION

The reserves needed to finance the retiree benefits are accumulated through the collection of employer and member contributions and through earnings on investments. The contributions and net investment loss for the year ended December 31, 2018, totaled $188.1 million. Net investment losses totaled $56.4 million. In 2018, the overall revenues decreased by $345.9 million from that of the prior year, primarily due to investment losses.

In 2018, both the County of San Joaquin (County) and the Mosquito and Vector Control District (MVCD) paid additional contributions to decrease their proportionate share of the unfunded actuarial liability (UAL). Employer contributions increased by $8.7 million, or 4.4 percent, over the prior year, and member contributions increased by $1.7 million, or 5.2 percent, over the prior year. The County and the majority of its members equally share the normal cost of pre-funding post-retirement cost-of-living adjustments. Some members also pay 114% or 133% of the basic member contribution rate, which reduces the employers' Normal Cost portion of the required contribution. Employers pay all of the required unfunded actuarial liability amortization payment.

EXPENSES – DEDUCTIONS FROM FIDUCIARY NET POSITION

SJCERA's primary expenses are the payment of benefits to retirees and beneficiaries, the refund of contributions to former members, and the administrative costs. Expenses for the year 2018 totaled $226.3 million, an increase of 8.01 percent over 2017. The increase is primarily attributed to annual cost-of-living adjustment to retirees' benefit payments and the growth in the number and average amount of benefits paid to retirees.

The table below compares SJCERA's Changes in Fiduciary Net Position.

Changes in Fiduciary Net Position

	2018	2017	INCREASE (DECREASE) AMOUNT	PERCENT CHANGE
ADDITIONS				
Employer Contributions	$ 208,757,572	$ 200,051,742	$ 8,705,830	4.35%
Member Contributions	35,377,951	33,634,906	1,743,045	5.18%
Net Investment Income (Loss) and Miscellaneous Income	(56,397,598)	299,960,693	(356,358,291)	-118.80%
Transfer from Healthcare Agency Fund	324,269	364,714	(40,445)	-11.09%
TOTAL ADDITIONS	$ 188,062,194	$ 534,012,055	$ (345,949,861)	-64.78%
DEDUCTIONS				
Benefit Payments	$ 218,456,053	$ 202,408,260	$ 16,047,793	7.93%
Members Death Benefits	622,901	701,206	(78,305)	-11.17%
Refunds	2,364,713	2,297,504	67,209	2.93%
Administrative and Other Expenses	4,865,082	4,118,578	746,504	18.13%
TOTAL DEDUCTIONS	$ 226,308,749	$ 209,525,548	$ 16,783,201	8.01%
NET INCREASE (DECREASE)	$ (38,246,555)	$ 324,486,507	$ (362,733,062)	-111.79%
FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS				
Beginning of Year	2,879,288,631	2,554,802,124	324,486,507	12.70%
End of Year	$ 2,841,042,076	$ 2,879,288,631	$ (38,246,555)	-1.33%

PLAN ADMINISTRATION

SJCERA MEMBERSHIP

The table below provides comparative SJCERA membership data for the last two years. Total membership at December 31, 2018, was 14,142, an increase of 477 members, or 3.5 percent, compared to December 31, 2017.

SJCERA Membership
AS OF DECEMBER 31, 2018 AND 2017

	2018	2017	INCREASE (DECREASE) AMOUNT	PERCENT CHANGE
Active Members	6,455	6,229	226	3.63%
Retired Members	6,051	5,821	230	3.95%
Deferred Members	1,636	1,615	21	1.30%
TOTAL MEMBERSHIP	14,142	13,665	477	3.49%

ADMINISTRATIVE EXPENSES

The County Employees Retirement Law of 1937 (CERL) Section 31580.2 limits the Administrative Expense to twenty-one hundredths of one percent (0.21 percent) of the accrued actuarial liability (AAL) of the system.

The table below provides comparison of the actual administrative expenses for the fiscal years ended 2018 and 2017. The AAL was used to calculate the statutory budget amount. SJCERA's administrative expenses were well below the limit imposed by CERL for both years.

Compliance with Statutory Limitation Administrative Expenses
AS OF DECEMBER 31, 2018 AND 2017
(Dollars in Thousands)

	2018	2017
BASIS FOR BUDGET CALCULATION (ACCRUED ACTUARIAL LIABILITY)		
Actual Administrative Expenses	$ 3,650	$ 3,369
Accrued Actuarial Liability as Basis for Budget Calculation[1]	4,235,093	4,006,390
ADMINISTRATIVE EXPENSES AS A PERCENTAGE OF		
The Basis for Budget Calculation	0.09%	0.08%
Limit per CERL	0.21%	0.21%

[1] Based on valuations dated January 1, 2017 and January 1, 2016, respectively.

ACTUARIAL VALUATIONS

SJCERA engages an independent actuarial firm, Cheiron, Inc., to perform an annual actuarial valuation to monitor its funding and funding integrity. The valuation assesses the magnitude of SJCERA's benefit commitments, in comparison with the assets expected to be available to support

MANAGEMENT'S DISCUSSION AND ANALYSIS

those commitments. The most recent annual actuarial valuation as of January 1, 2018, contains a detailed discussion of the funding requirements. This valuation is used for funding purposes and establishing employer and member contributions rates. As of the January 1, 2018 actuarial valuation, the AAL was $4.5 billion and the Actuarial Value of Assets was $2.9 billion, resulting in a UAL of $1.6 billion. The funded ratio increased from 64.6 percent last year to 64.8 percent on an actuarial value of assets basis. Using the market value of assets as of the valuation date, the funded ratio increased from 60.3 percent to 64.0 percent.

For the year ended December 31, 2018, a GASB Statement No. 67/68 report was prepared by Cheiron, Inc., to provide accounting and financial disclosure information. In order to accommodate the annual reporting requirements of our plan sponsors in a timely manner, the valuation was prepared using the January 1, 2018 valuation as the basis for calculating the total pension liability (TPL) and projected to December 31, 2018. Based on this actuarial valuation, the TPL was $4.7 billion compared to a fiduciary net position of $2.8 billion, resulting in the employers' net pension liability (NPL) of $1.9 billion and a fiduciary net position as a percentage TPL of 60.4 percent. The NPL as a percentage of covered payroll was 425.7 percent. Please see the Note 8 and Required Supplementary Information for more details.

REPORTING SJCERA'S FIDUCIARY RESPONSIBILITIES

SJCERA's Board of Retirement and staff are fiduciaries for the pension plan. Accordingly, SJCERA is responsible for ensuring that the assets reported in the statements are used for the intended purpose of paying retirement benefits to the eligible members and beneficiaries.

THE DEFINED BENEFIT PENSION PLAN FUND AS A WHOLE

The fund decreased 1.3 percent from 2017 to 2018; the net decrease in the fair value of investments was $72.1 million versus the prior year's net increase in the fair value of investments of $135.5 million. The investment section of Note 4 of this report reviews the result of investment activity for the year ended December 31, 2018.

CONTACTING SJCERA'S MANAGEMENT

This financial report is designed to provide the Board of Retirement, members, taxpayers, and investment managers with a general overview of SJCERA's finances and to show SJCERA's accountability for the money it receives. Any questions about this report, or requests for additional financial information, can be addressed to SJCERA, 6 South El Dorado Street, Suite 400, Stockton, California 95202.

Respectfully Submitted,

Lily Cherng

Lily Cherng, CPA, CGMA
Retirement Financial Officer

STATEMENT OF FIDUCIARY NET POSITION

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
STATEMENT OF FIDUCIARY NET POSITION
AS OF DECEMBER 31, 2018 (WITH COMPARATIVE TOTALS)

	2018		2017	
	Defined Benefit Pension Plan	Post-Employment Healthcare Agency Fund	Defined Benefit Pension Plan	Post-Employment Healthcare Agency Fund
Assets				
Cash and Short-Term Investments				
Cash and Cash Equivalents	$ 129,812,307	$ 10,274	$ 98,314,384	$ 7,707
Cash Collateral – Securities Lending	81,063,525	-	86,901,391	-
Total Cash and Short-Term Investments	210,875,832	10,274	185,215,775	7,707
Receivables				
Investment Income Receivables	3,643,209	-	2,974,773	-
Contributions Receivables	7,643,798	-	5,793,466	-
Securities Sold, Not Received	2,411,261	-	35,717	-
Miscellaneous Receivables	49,098	-	58,120	-
Total Receivables	13,747,366	-	8,862,076	-
Investments, at Fair Value				
Stable Fixed Income	295,492,803	-	275,595,222	-
Credit	317,627,170	-	321,700,181	-
Global Public Equity	822,935,436	-	995,174,782	-
Private Appreciation	387,844,390	-	328,280,801	-
Risk Parity	368,268,349	-	372,838,817	-
Crisis Risk Offset	509,350,711	-	480,111,036	-
Total Investments, at Fair Value	2,701,518,859	-	2,773,700,839	-
Other Assets				
Prepaid Expenses	85,135	-	90,155	-
Equipment and Fixtures, Net	212,126	-	73,770	-
Total Other Assets	297,261	-	163,925	-
Total Assets	2,926,439,318	10,274	2,967,942,615	7,707
Liabilities				
Securities Lending – Cash Collateral	81,063,525	-	86,901,391	-
Securities Purchased, Not Paid	2,417,979	-	172,476	-
Accrued Expenses and Other Payables	1,722,948	-	1,475,117	-
Securities Lending Interest and Other Payables	192,790	-	105,000	-
Retiree Sick Leave Bank Benefits Payable	-	10,274	-	7,707
Total Liabilities	85,397,242	10,274	88,653,984	7,707
Fiduciary Net Position Restricted for Pension Benefits	$ 2,841,042,076	$ -	$ 2,879,288,631	$ -

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
DEFINED BENEFIT PENSION PLAN
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED DECEMBER 31, 2018 (WITH COMPARATIVE TOTALS)

	2018	2017
Additions		
Contributions		
Employer Contributions	$ 208,757,572	$ 200,051,742
Member Contributions	35,377,951	33,634,906
Total Contributions	244,135,523	233,686,648
Net Investment Income (Loss)		
Net Appreciation (Depreciaiton) in Fair Value of Investments	(74,208,559)	284,668,325
Interest	17,748,616	19,065,667
Dividends	11,859,972	8,375,172
Real Estate Income, Net	8,320,486	8,352,681
Investment Expenses	(20,513,425)	(20,954,361)
Miscellaneous Investment Income	1,353	1,943
Net Investment Income (Loss), Before Securities Lending Income	(56,791,557)	299,509,427
Securities Lending Income		
Earnings	1,743,726	1,440,490
Rebates	(1,309,501)	(943,349)
Fees	(108,406)	(124,117)
Net Securities Lending Income	325,819	373,024
Total Net Investment Income (Loss)	(56,465,738)	299,882,451
Miscellaneous Income	68,140	78,242
Transfer Between Plans	324,269	364,714
Total Additions	188,062,194	534,012,055
Deductions		
Benefit Payments	218,456,053	202,408,260
Death Benefits	622,901	701,206
Refunds of Member Contributions	2,364,713	2,297,504
Administrative Expenses		
General Administrative Expenses	3,650,150	3,369,124
Other Expenses		
Information Technology Expenses	194,498	171,534
Actuary Fees	120,122	144,211
Fund Legal Fees	900,312	433,709
Total Administrative and Other Expenses	4,865,082	4,118,578
Total Deductions	226,308,749	209,525,548
Changes in Fiduciary Net Position	(38,246,555)	324,486,507
Fiduciary Net Position Restricted for Pension Benefits		
Beginning of Year	2,879,288,631	2,554,802,124
End of Year	$ 2,841,042,076	$ 2,879,288,631

The San Joaquin County Employees' Retirement Association (SJCERA) is the public employee retirement system established by the County of San Joaquin (County) and is administered by the Board of Retirement of SJCERA (Board) to provide retirement, disability, and survivor benefits under the County Employees Retirement Law of 1937 (CERL) for the employees of the County and certain special districts within the County. SJCERA also administers the Post-Employment Healthcare Agency Fund. Although the assets of the plans (defined benefit pension and post-employment healthcare) are commingled for investment purposes, each plan's assets may be used only for the payment of benefits to eligible members and beneficiaries of that plan, in accordance with the terms of the plan. A description of the Post-Employment Healthcare Agency Fund is located in Note 2. All notes to the financial statements apply to both plans unless indicated otherwise.

NOTE 1 – DEFINED BENEFIT PENSION PLAN DESCRIPTION

A. GENERAL DESCRIPTION

SJCERA is a public retirement system established by the San Joaquin County Board of Supervisors effective June 28, 1946, under the provisions of the CERL and the Public Employees' Pension Reform Act of 2013 (PEPRA). SJCERA is administered by the Board. Pursuant to Government Code Sections 31520.1 and 31520.5, the Board consists of nine regular members, one alternate retired member, and under certain circumstances an alternate Safety member. Four members and the alternate member(s) are elected by SJCERA's members, four are appointed by the County Board of Supervisors, and the County Treasurer is an ex-officio member. Board members serve for a term of three years, except for the County Treasurer who is a permanent member. The Board members as of December 31, 2018, were as follows:

Michael Restuccia, Chair	Jennifer Goodman
Michael Duffy, Vice Chair	Adrian Van Houten
Raymond McCray, Secretary	Katherine Miller
Phonxay Keokham, County Treasurer	Margo Praus
Chanda Bassett	J.C. Weydert

SJCERA is a multiple-employer retirement system covering the County and the SJC Historical Society and Museum, Local Agency Formation Commission (LAFCO), Lathrop-Manteca Rural Fire Protection District, San Joaquin County Law Library, SJC Mosquito and Vector Control District, Mountain House Community Services District, Superior Court, Tracy Public Cemetery District, and Waterloo-Morada Rural Fire Protection District. All employees appointed to full-time, permanent positions with a SJCERA participating employer become SJCERA members. Persons who commence covered employment at age 60 or older may irrevocably elect to waive membership in SJCERA. Public Health, a division of the County's Healthcare Services Department, became a participant of SJCERA effective June 27, 1993. Prior to that date, they were members of the California Public Employees' Retirement System (CalPERS). The elected officials of the County may request to become members of SJCERA. All benefits vest after attaining five years of service credit.

SJCERA has two benefit tiers:

- Tier 1 - Hired into public service before January 1, 2013.
- Tier 2 - Hired into public service for the first time on or after January 1, 2013

NOTES TO THE FINANCIAL STATEMENTS

There are two types of membership:

1. **Safety Member —** Permanent employees engaged in the performance of active law enforcement, including probation officers and fire suppression employees, are considered Safety members and are not generally covered by Social Security.
2. **General Member —** All other eligible employees not classified as Safety members are considered General members and are covered by Social Security.

Membership Summary

SJCERA's membership as of December 31, 2018, is presented below:

YEAR 2018	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2
	RETIREES		BENEFICIARIES		ACTIVE		DEFERRED		TOTAL	
General	4,363	12	633	-	2,964	2,637	1,181	283	9,141	2,932
Safety	844	2	197	-	594	260	158	14	1,793	276
TOTAL	5,207	14	830	-	3,558	2,897	1,339	297	10,934	3,208

B. PLAN BENEFITS

Eligibility for Retirement

TIER 1:

A Tier 1 member may retire for service at age 50 or older with five years of service credit, and at least ten years have elapsed since the date of membership. A General, Tier 1 member may retire at any age with 30 or more years of service. A Safety, Tier 1 member may retire at any age with 20 or more years of service.

TIER 2:

A Tier 2 member may retire for service with five or more years of service credit upon attaining the minimum retirement: Age 52 for General members, and Age 50 for Safety members.

Any member of SJCERA, regardless of benefit tier, may retire at age 70 with no minimum service credit requirement.

Retirement Benefit

The monthly benefit amount at retirement depends upon the type of membership, years of retirement service credit, final average compensation, age at retirement, and the benefit option elected by the member.

TIER 1:

For Tier 1 members, final average compensation for purposes of computing a retirement allowance is the average monthly salary for the highest twelve consecutive months of employment. In addition to base salary, final average compensation may include other items defined as compensation earnable for retirement purposes.

The benefit formula for General, Tier 1 members is 2.6 percent of final average compensation for each year of service credit at age 62. The formula for Safety, Tier 1 members is 3.0 percent of final average compensation for each year of service credit at age 50. Members who retired prior to April 1, 1982, with 15 years or more of County service, receive an additional $50 monthly supplement commencing at age 65. Members who retired on or after April 1, 1982, but before January 1, 2001, receive a supplemental monthly benefit of $10 per year of service up to 30 years. This "Post 1982" supplemental benefit is payable if sufficient funds exist.

Federal law limits the annual compensation that may be used to calculate retirement benefits (applicable to persons who became SJCERA members on or after January 1, 1996, and the maximum annual benefit payable by SJCERA to any retired member. For 2018, the annual compensation limit under Internal Revenue Code Section 401(a)(17) is $275,000 and the annual benefit limit under Internal Revenue Code Section 415(b) is $220,000. Retired members whose statutory benefits from SJCERA would exceed the annual benefit limitation are eligible for the County's Replacement Benefits Plan.

TIER 2:

For Tier 2 members, final average compensation for purposes of computing a retirement allowance is the average monthly salary for the highest 36 consecutive months of employment. In addition to base salary, final average compensation may include other items defined as pensionable compensation.

The benefit formula for General, Tier 2 members is 2.5 percent of final compensation for each year of service credit at age 67. The formula for Safety, Tier 2 members is 2.7 percent of final compensation for each year of service credit at age 57. PEPRA specifies the maximum annual compensation that may be used to calculate retirement benefits. The limits are adjusted annually based on changes in the Consumer Price Index (CPI). For 2018, the Tier 2 annual compensation limit is $121,388 for those included in the Federal Social Security System and $145,666 for those not included.

Cost-of-Living Adjustment (COLA)

For both Tier 1 and Tier 2 members, monthly allowances are eligible for an annual COLA based on the change in the CPI for the San Francisco-Oakland-San Jose area for the previous calendar year, up to a maximum of 3.0 percent. The Bureau of Labor Statistics does not publish a CPI for San Joaquin County. When the CPI exceeds 3.0 percent in any year, the difference between the actual change in CPI (rounded to the nearest one-half percent) and the 3.0 percent ceiling is "accumulated" for future years when the change is less than 3.0 percent. The plan's actuary has determined that the CPI increased by 3.22 percent in 2017, resulting in the maximum COLA of 3.0 percent, effective in April 2018. Under the statutory requirements of the CERL, this change is rounded to the nearest half percent. Members received an increase in benefits of 3.0 percent in 2018, based on the changes in the CPI. Members' accumulated carry-over balances as of April 1, 2018, remain the same as they were on April 1, 2017.

NOTES TO THE FINANCIAL STATEMENTS

Terminated Members Deferred Retirement Benefit and Withdrawal of Contributions

A member leaving employment with at least five years of service credit becomes eligible for a retirement benefit once they meet the minimum service retirement age and have not withdrawn their accumulated member contributions.

Members who terminate employment with fewer than five years of service credit may leave their accumulated contributions on deposit until they become eligible for a retirement benefit at age 70. Contributions left on deposit with SJCERA continue to accrue interest.

Upon termination of employment, members may withdraw their member contributions plus interest. Employer-paid contributions are not refundable. Members who take a refund of contributions become ineligible for future SJCERA retirement benefits.

Death Benefits

The beneficiary of an actively employed member who dies prior to attaining five years of credited service is refunded the member's accumulated contributions, with interest, and receives one month's salary for each full year of service, up to a maximum of six months' salary.

If the death occurs after five years of credited service and is not the result of a service-related injury or disease, the surviving spouse or minor children may elect to receive a lump sum benefit of the retirement contributions including interest and one month's salary for each full year of service up to six months' salary; 60 percent of the retirement allowance the deceased member would have received if they had retired with a nonservice-connected disability retirement benefit on the date of death; or a lump sum payment of six months' salary and a reduced monthly retirement benefit. The monthly allowance to minor children is discontinued once they marry or reach age 18 (age 22 if a full-time student).

The beneficiary of a deferred member receives the member's contributions plus accumulated interest.

Upon the death of a retiree, the beneficiary receives a retirement benefit as determined by the benefit option elected by the member at the time of retirement. In addition, the beneficiary also receives a $5,000 death benefit, which is paid from retirement reserves.

NOTE 2 – POST-EMPLOYMENT HEALTHCARE AGENCY FUND

The Post-Employment Healthcare Agency Fund is used as a clearing account for cash flows from employers to fund Sick Leave Bank Benefits for their eligible retired members on a pay-as-you-go basis, and for cash flows out for payment of Sick Leave Bank Benefits. The Sick Leave Bank Benefit allows accumulated unused and uncashed sick leave to be converted to a Sick Leave Bank upon retirement at a rate of $27.65 per hour. Retired or deferred members who were employed prior to August 27, 2001, are eligible for Sick Leave Bank Benefits. In 2007, the San Joaquin Superior Court (Court) extended eligibility for Sick Leave Bank Benefits to Court employees hired on or after August 27, 2001. Employers fund the Sick Leave Bank Benefits and employees are not required to contribute to the plan.

Sick Leave Bank Benefits may be used to pay for employer-sponsored group health, dental, and vision care insurance premiums and/or reimbursement of Medicare Part B premiums for the eligible members, their spouses, and dependents. When a retiree's Sick Leave Bank is depleted, the retiree assumes responsibility for payment of health, dental, and vision care insurance premiums.

SJCERA allocates the investments held at December 31, 2018, between the Defined Benefit Pension Plan and the Post-Employment Healthcare Agency Fund based on the internal records of the respective accounts at December 31, 2018.

The Post-Employment Healthcare Agency Fund accounts for assets held as an agent on behalf of others. The funds held within the Post-Employment Healthcare Agency Fund do not meet the definition of a qualifying Other Post-Employment Benefits (OPEB) Trust under GASB Statement No. 74. This fund is custodial in nature and does not measure the results of operations.

NOTE 3 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – PENSION PLAN

A. BASIS OF ACCOUNTING

SJCERA's financial statements are presented on the accrual basis of accounting. Employer and member contributions that should have been made in the calendar year based on the actuarially determined contribution rates or amounts are recognized as revenues of that calendar year. Contributions receivable pursuant to an installment contract are also recognized in full in the year in which the contract is made. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

B. REPORTING ENTITY

SJCERA, governed by the Board, an independent entity, is a blended component unit of the County. SJCERA's annual financial statements are included in the County's financial reports as a pension trust fund.

NOTES TO THE FINANCIAL STATEMENTS

C. CASH EQUIVALENTS

SJCERA's cash and short-term investments are managed by The Northern Trust Company (NT) and the County Treasurer.

THE NORTHERN TRUST COMPANY

Cash not required for daily operations is deposited with NT, SJCERA's master custodian for investment securities. NT pools cash from its clients pending permanent investment in its Short-Term Investment Fund (STIF). The cash in the STIF account is invested in high-grade money market instruments with very short maturities, such as bonds, notes, and other evidence of indebtedness, in accordance with SJCERA's investment policy.

The cash collateral received under the securities lending program is invested by NT through its securities lending collateral fund, which is created solely for the investment of cash collateral.

COUNTY TREASURER

Cash necessary for SJCERA's daily operations is pooled with other County funds for short-term investment by the County Treasurer. The County is responsible for the control and safekeeping of all instruments of title and for all investment of the pooled funds.

D. METHOD USED TO VALUE INVESTMENTS

Investments are carried at fair value. Fair values for investments are derived by various methods as indicated in the following table.

INVESTMENTS	SOURCE
Publicly traded stocks and bonds, and issues of the U.S. Government and its agencies	Most recent sales price as of the fiscal year-end. International securities reflect currency exchange rates in effect at December 31, 2018.
Mortgages	Equivalent pricing to comparable Government National Mortgage Association (GNMA).
Real estate equity funds	Fair market value as provided by real estate fund manager.
Real estate title holding corporations and limited liability companies	Fair market value of the investment as provided by fund managers, unless an alternative value has been determined by the Board per SJCERA's Real Estate Investment Policy and reviewed by SJCERA's Investment Consultant.
Private equity	Fair market value as provided by the investment manager and reviewed by SJCERA's Investment Consultant.
Private placement bonds	Face value of the security subject to designated conditions such as sales restrictions or limited marketability.

E. CAPITAL ASSETS

Capital assets, mainly leasehold improvements, furniture, and equipment, acquired by SJCERA are capitalized at cost. Depreciable capital assets are depreciated using the straight-line method over estimated useful lives of three to seven years for computer equipment, furniture, and other equipment. Leasehold improvements are amortized over the life of the lease. Depreciation expenses of the capital assets are included in general administrative expenses.

The change in capital assets owned for the year ended December 31, 2018, is presented below.

	BALANCE JANUARY 1, 2018	ADDITIONS	DELETIONS	BALANCE DECEMBER 31, 2018
Original Cost	$ 1,536,863	$ 201,298	$ -	$ 1,738,161
Accumulated Depreciation	(1,463,093)	(62,942)	-	(1,526,035)
NET BOOK VALUE	$ 73,770	$ 138,356	$ -	$ 212,126

Depreciation expense for the year ended December 31, 2018, was $62,942.

F. OPERATING LEASE

SJCERA leases office facilities on the fourth floor of 6 S. El Dorado Street in Stockton. In June 2018 SJCERA signed a new 12-year lease with significantly reduced rent. The lease specifies the rate for each year of the term. Total rent expense for the current year was $228,881. The terms of the lease expire at the end of June 2030.

The table below presents SJCERA's future projected rent expense based on the remaining term of the lease agreement is $2,651,027.

YEAR ENDED DECEMBER 31	TOTAL
2019	$ 203,827
2020	208,923
2021	214,019
2022	219,114
2023	224,210
Thereafter	1,580,934
	$ 2,651,027

G. RECEIVABLES

Receivables consist primarily of interest, dividends, investments in transition (traded but not yet settled), and contributions owed by participating employers. Contributions receivable pursuant to an installment contract between the member and SJCERA for purchase of service credit are recognized in full in the year in which the contract is made.

H. USE OF ESTIMATES IN THE PREPARATION OF FINANCIAL STATEMENTS

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

NOTE 4 – CASH AND INVESTMENTS

A. INVESTMENT SECURITIES LENDING

SJCERA participates in NT's pooled securities lending program. Under the agreement, NT is authorized to lend the SJCERA securities that it holds to certain SJCERA-approved borrowers. NT does not have the ability to pledge or sell collateral securities unless a borrower default occurs.

All loans are fully collateralized with either cash, securities issued or fully guaranteed by the U.S. government, or irrevocable bank letters of credit. All collateral is held or invested by NT. The term or maturity of the securities loaned is generally matched with the term or maturity of the investment of the cash collateral. U.S. securities are loaned with collateral valued at 102 percent of the fair value of the securities plus any accrued interest. Non-U.S. securities are loaned with collateral valued at 105 percent of the fair value of the securities plus any accrued interest.

As of December 31, 2018, SJCERA had the following securities out on loan.

	FAIR VALUE OF SECURITIES LENT	CASH COLLATERAL VALUE	NON-CASH COLLATERAL VALUE
U.S. Equities	$ 16,814,889	$ 16,102,035	$ 1,023,426
U.S. Debt Securities	129,349,266	64,961,490	66,795,644
TOTAL U.S. SECURITIES	$ 146,164,155	$ 81,063,525	$ 67,819,070
Non-U.S. Equities	$ 9,558,493	-	$ 10,084,563
Non-U.S. Debt Securities	34,610,716	-	36,710,050
TOTAL NON-U.S. SECURITIES	$ 44,169,209	-	$ 46,794,613
TOTAL	$ 190,333,364	$ 81,063,525	$ 114,613,683

The cash collateral is reported on the financial statements as an asset and as a liability of SJCERA. Securities lending transactions collateralized by letters of credit or by securities that SJCERA does not have the ability to pledge or sell unless the borrower defaults are not be reported as assets and liabilities in accordance with Governmental Accounting Standards Board (GASB) Statement No. 28. The potential risks involved in the securities lending program include borrower bankruptcy, collateral deficiencies, settlement problems, corporate actions, dividends, and interest. SJCERA's pro-rata share of net income derived from NT's pooled securities lending transactions in 2018 was $1,743,726. As of December 31, 2018, there was no credit risk exposure to borrowers because the collateral exceeded the amount borrowed. The securities on loan at year-end were $190 million and the collateral received for those securities on loan was $196 million.

B. CASH AND SHORT-TERM INVESTMENTS

The carrying value of cash and short-term investments at December 31, 2018, consists of the following.

		AMOUNT
Cash and Cash Equivalents – Custodian	$	128,901,165
Cash and Cash Equivalents – County Treasury		921,416
TOTAL CASH AND CASH EQUIVALENTS	$	129,822,581
Cash Collateral – Securities Lending – Custodian		81,063,525
TOTAL CASH AND SHORT-TERM INVESTMENTS	$	210,886,106

C. LONG-TERM INVESTMENTS

SJCERA owned the following long-term investments at December 31, 2018.

		FAIR VALUE
INVESTMENTS – CATEGORIZED		
Stable Fixed Income	$	295,492,803
Credit		317,627,170
Global Public Equities		822,935,436
Private Appreciation		387,844,390
Risk Parity		368,268,349
Crisis Risk Offset (CRO)		509,350,711
TOTAL INVESTMENTS - CATEGORIZED	$	2,701,518,859
INVESTMENTS – NOT CATEGORIZED		
Investments Held by Broker-Dealers Under Securities Loans		
U.S. Equities	$	16,102,035
U.S. Debt Securities		64,961,490
TOTAL INVESTMENTS HELD BY BROKER-DEALERS UNDER SECURITIES LOANS	$	81,063,525
TOTAL INVESTMENTS	$	2,782,582,384

GASB Statement No. 40, *Deposits and Investments Risk Disclosures*, establishes and modified disclosure requirements related to the following:

- Credit risk
- Custodial credit risk
- Concentration of credit risk
- Interest rate risk
- Foreign currency risk

NOTES TO THE FINANCIAL STATEMENTS

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. SJCERA's Investment Policy seeks to maintain a diversified portfolio of fixed income instruments in order to obtain the highest total return for the fund at an acceptable level of risk within the asset class. To control such risk, credit quality guidelines have been established for the separately managed accounts. The following table depicts the value of the investments exposed to those risks and the corresponding credit ratings from Standard & Poor's (S&P) as of December 31, 2018.

QUALITY RATINGS	FAIR VALUE
AAA	$ 6,424,360
AA	8,579,014
A	13,565,736
BBB	48,641,610
BB	13,244,771
B	2,960,294
CCC	4,200,683
CC	5,496,326
D	857,293
Not Rated	207,667,072
SUBTOTAL	$ 311,637,159
U.S. Government Agencies - Implied AAA (FNMA, FHLB, FHLMC, FFCB, SLMA, Other)	301,482,814
TOTAL INVESTMENTS IN FIXED INCOME SECURITIES	$ 613,119,973

Custodial Credit Risk

The custodial credit risk represents the risk that, in the event of the failure of the counterparty of a transaction, SJCERA will not be able to recover the value of deposits and investments or collateral securities that are in the possession of an outside party.

DEPOSITS

The deposits with the County Treasurer are uninsured but secured by public funds of the pledging banks. The pool's investments, all held in the County's name, are short-term and include U.S. Treasury Bills, certain Federal agencies' instruments, bankers' acceptances, "prime" commercial paper, certificates of deposit, repurchase agreements, and the State Treasurer's Local Agency Investment Fund.

The cash deposits with NT are uninsured and uncollateralized. All underlying investments in the commingled STIF account are not registered in SJCERA's name.

INVESTMENTS

Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in SJCERA's name, and held by the counterparty. SJCERA's investment securities are not exposed to custodial credit risk because all securities are held by SJCERA's custodial bank in SJCERA's name, or by other qualified third party administrator trust accounts.

Concentration of Credit Risk

This risk represents the potential loss attributable to the magnitude of SJCERA's investments in a single issuer. As of December 31, 2018, for separately managed investment accounts, SJCERA did not hold any investments within any one issuer that would represent five percent (5%) or more of plan fiduciary net position.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration is a measure of the price sensitivity of a fixed income portfolio to changes in interest rates. It is calculated as the weighted average time to receive a bond's coupon and principal payments. The longer the duration of a portfolio, the greater its price sensitivity to changes in interest rates. SJCERA does not have formal policy relating to interest rate risk.

As of December 31, 2018, SJCERA had the following interest rate sensitive investments.

INVESTMENT TYPE	FAIR VALUE	WEIGHTED AVERAGE MATURITY – YEARS
U.S. GOVERNMENT AND AGENCY INSTRUMENTS		
U.S. Government Mortgages	$ 71,289,672	25.45
U.S. Government Bonds	179,775,000	19.87
Municipal / Revenue Bonds	3,531,021	17.94
Agency	1,710,875	17.08
Short-Term Bills and Notes	69,748,432	0.06
TOTAL U.S. GOVERNMENT AND AGENCY INSTRUMENTS	$ 326,055,000	
CORPORATE SECURITIES		
Asset-Backed Securities	$ 24,773,777	20.65
Collateralized Bonds	4,180	27.53
Commercial Mortgage-Backed Securities	16,707,164	19.00
Corporate and Other Credit	72,354,133	10.45
Non-Government Backed Collateralized Mortgage Obligations (CMOs)	40,434,044	20.07
TOTAL CORPORATE SECURITIES	$ 154,273,298	
REAL ESTATE FINANCING	132,791,675	
TOTAL FIXED INCOME SECURITIES	$ 613,119,973	

NOTES TO THE FINANCIAL STATEMENTS

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates may adversely affect the fair value of an investment. SJCERA's external non-U.S. equity and fixed income investment managers may invest in international securities in accordance with their investment guidelines pertaining to these types of investments.

Currency hedging on an unleveraged basis is permitted by non-U.S. equity managers as a strategy to protect against losses due to currency translations (defensive hedging). However, it is expected that the primary sources of added value for non-U.S. equity investment managers will be stock and country selection, with currency management focused on limiting losses due to fluctuations in currency values. Managers may purchase or sell currency on a spot basis to accommodate securities settlements.

Managers may invest in developed market currencies and emerging market currencies in accordance with their investment guidelines. Permitted derivative instruments are currency spots, currency forward contracts (deliverable or non-deliverable), currency futures, options on currency forwards or futures, and currency swaps. Other investments, contracts, or positions that, in the managers' judgment, are of similar purpose and character and equal credit quality and marketability to any of the investments above, are also permissible.

SJCERA's exposure to foreign currency risk in U.S. dollars as of December 31, 2018 is as follows.

CURRENCY	FAIR VALUE
Australian Dollar	$ (1)
British Pound Sterling	3
Canadian Dollar	210,078
Euro Currency	61,043
Swiss Franc	11,286
TOTAL	$ 282,409

D. FAIR VALUE MEASUREMENT

In accordance with GASB Statement No. 72, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The statement establishes a fair value hierarchy based on three types of input to develop the fair value measurements for investments. The level is determined based on the lowest level of input significant to the measurement in its entirety.

Assets and liabilities measured at fair value are classified into one of the following categories.

Fair Value Hierarchy

Level 1 – reflects unadjusted quoted prices in active markets for identical assets or liabilities accessible on the measurement date. Observable markets include exchange markets, dealer markets, and brokered markets.

Level 2 – reflects similar observable inputs other than quoted market prices. It includes quoted prices for similar assets in active markets or quoted prices for identical or similar assets in inactive markets.

Level 3 – reflects prices based on unobservable sources. They should be used only when relevant Level 1 and Level 2 inputs are unavailable.

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NOTES TO THE FINANCIAL STATEMENTS

The following table presents fair value measurements as of December 31, 2018.

INVESTMENTS BY FAIR VALUE LEVEL	TOTAL FAIR VALUE	QUOTED PRICES IN ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1)	SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2)	SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)
EQUITIES				
Common Stocks	$ 128,201,428	$ 128,013,592	$ 5,844	$ 181,992
Preferred Stocks	985,839	985,839	-	-
TOTAL EQUITIES	$ 129,187,267	$ 128,999,431	$ 5,844	$ 181,992
FIXED INCOME				
Asset-Backed Securities	$ 24,773,777	-	$ 24,773,777	-
Collateralized Bonds	4,180	-	4,180	-
Commercial Mortgage-Backed Securities	16,707,164	-	16,707,164	-
Corporate Bonds	72,354,133	-	72,354,133	-
Funds - Corporate Bonds	6,236,346	-	6,236,346	-
Funds - Government Bonds	9,291,376	-	9,291,376	-
Government Agencies Securities	1,710,875	-	1,710,875	-
Government Bonds	179,775,000	-	179,775,000	-
Government Mortgage-Backed Securities	71,289,672	-	71,289,672	-
Municipal/Provincial Bonds	3,531,021	-	3,531,021	-
Non-Government Backed CMOs	40,434,044	-	40,434,044	-
Other Fixed Income	104,254,141	-	-	104,254,141
TOTAL FIXED INCOME	$ 530,361,729	-	$ 426,107,588	$ 104,254,141
OTHER ASSETS				
Short-Term Bills and Notes	$ 66,534,596	-	$ 66,534,596	-
Futures Contracts	682,898	-	682,898	-
Options Contracts	226,060	-	226,060	-
Rights and Warrants	5	-	5	-
Swaps	(120,361)	-	-	(120,361)
TOTAL OTHER ASSETS	$ 67,323,198	-	$ 67,443,559	$ (120,361)
Collateral from Securities Lending	81,063,525	-	81,063,525	-
TOTAL INVESTMENTS BY FAIR VALUE	$ 807,935,719	$ 128,999,431	$ 574,620,516	$ 104,315,772

INVESTMENTS MEASURED AT THE NET ASSET VALUE (NAV)	
Global Equities Funds	$ 751,693,880
Fixed Income Funds	135,361,374
Risk Parity Funds	368,268,349
Multi-Strategy Hedge Funds	272,676,733
Hedge Funds - Fixed Income	27,336,348
Private Equity Funds	139,578,691
Private Real Estate Funds	279,731,290
TOTAL INVESTMENTS MEASURED AT NAV	$ 1,974,646,665
TOTAL INVESTMENTS	$ 2,782,582,384

Investments Measured at Net Asset Value (NAV)

SJCERA measures certain investments that do not have a readily determinable fair value, such as hedge funds, commingled funds, and private equity funds, using NAV as a practical expedient. SJCERA's investments valued at NAV are the majority holdings in the portfolio. The following table presents the unfunded commitments, redemption frequency (if currently eligible), and the redemption notice period for SJCERA investments measured at NAV.

The following table presents the investments measured at NAV as December 31, 2018.

INVESTMENTS MEASURED AT NAV	FAIR VALUE	UNFUNDED COMMITMENT	REDEMPTION FREQUENCY IF CURRENTLY ELIGIBLE	REDEMPTION NOTICE PERIOD
Global Equity Funds	$ 751,693,880	$ -	Daily, Weekly, Semi-Monthly, Monthly	1-30 Days
Fixed Income Funds	135,361,374	22,500,903	Daily, Not Eligible	1 Day
Risk Parity Funds	368,268,349	-	Monthly	5-15 Days
Multi-Strategy Hedge Funds	272,676,733	-	Daily, Weekly, Semi-Monthly, Monthly	0-15 Days
Fixed Income Hedge Funds	27,336,348	12,717,985	Daily, Quarterly, Not Eligible	0-60 Days
Private Equity Funds	139,578,691	103,704,789	Not Eligible	Not Applicable
Private Real Estate Funds	279,731,290	146,048,273	Quarterly, Not Eligible	Not Applicable
TOTAL INVESTMENTS MEASURED AT NAV	$1,974,646,665	$ 284,971,950		

Global Equity Funds - Assets within these funds represent shares of ownership in a U.S. headquartered corporation, including publicly traded common stocks, American and Global Depository Receipts, as well as Real Estate Investment Trusts (REITs).

Fixed Income Funds - Funds within this segment represent debt instruments of corporations, government or agencies characterized by a fixed or variable interest rate and stated maturity date, including marketable bonds.

Risk Parity Funds - Funds within this segment represent portfolios that seek to balance the risk characteristics of assets across multiple segments. These portfolios generally invest in equities, bonds and commodities among other assets.

Multi-Strategy Hedge Funds - Funds within this segment can involve holding both long and short positions in securities instead of traditional long-only investments in publicly traded investments. Portfolios also may utilize derivatives or hedging strategies as well. Multi-Strategy managers utilized various investment segments to invest, including but not limited to, equities, bonds, currency, and commodities.

Fixed Income Hedge Funds - Funds within this segment can involve holding both long and short positions in securities instead of traditional long-only investments in publicly traded investments. Portfolios also may utilize derivatives or hedging strategies as well. These investment funds generally focus on opportunities within fixed income markets.

NOTES TO THE FINANCIAL STATEMENTS

Private Equity Funds - These funds are illiquid allocations that invest primarily in buyout funds, venture capital, and debt/special situations. These funds are not eligible for redemption and investment periods are generally between 5 and 15 years.

Private Real Estate Funds - These funds are defined as those investments that are unleveraged or leveraged positions in real property. The portfolios may pursue direct privately held partnership interests, fund-of-funds interests, and direct holdings for its real estate allocation.

E. SUMMARY OF INVESTMENT POLICY

The CERL vests the Board with exclusive control over SJCERA's investment portfolio. The Board established Investment Policies in accordance with applicable local, State, and Federal laws. The Board members exercise authority and control over the management of SJCERA's assets by setting policy, which the staff executes either internally or through the use of external prudent experts. The Board provides oversight and guidance subject to the following basic fiduciary responsibilities:

- Solely in the interest of, and for the exclusive purpose of, providing economic benefits to participants and their beneficiaries.
- With the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character with like objectives.
- Diversify the investments of the Plans so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances, it is clearly prudent not to do so. Diversification is applicable to the deployment of the assets as a whole.

F. TARGET ASSET ALLOCATION

The Board completed an asset-liability study during 2015, facilitated by its investment consultant and its consulting actuary. A key aspect of the study was the Board's consensus on how it defines risk and determining its tolerance for risk, which plays a significant role in the selection of the policy mix of assets that comprise the strategic asset allocation for the investment program.

On October 23, 2015, the Board adopted a revised strategic asset allocation policy for SJCERA's investments. The portfolio was reorganized into more risk-aligned strategic asset classes, and a 20 percent allocation to the Crisis Risk Offset (CRO) strategic class was added. The purpose of the CRO class is to provide significant return during a growth crisis using liquid instruments available at scale for a reasonable cost. This would include strategies involving treasury rate duration, systematic trend following, and liquid alternative risk premia.

The strategic asset allocation is expected to improve the likelihood of the plan accomplishing its primary financial objective: to earn a long-term return that, coupled with projected contributions, is projected to be sufficient to attain full funding in the long term while avoiding substantial deterioration in funded status along the way.

CURRENT ASSET ALLOCATION POLICY			
ASSET CLASS	POLICY ALLOCATION PERCENTAGE	PURPOSE	MAIN RISK EXPOSURES
Global Public Equity[1]	30.00%	Return	Growth, Currency
Stable Fixed Income	10.00%	Income, Stability	Interest Rates
Credit	14.00%	Income, Growth	Growth
Private Appreciation[2]	12.00%	Return	Growth
Risk Parity	14.00%	Balanced Return	Growth, Interest Rates, Inflation
Crisis Risk Offset (CRO) Long Duration Systematic Trend Following Alternative Risk Premia	20.00%	Return and Liquidity During a Growth Crisis	Interest Rates Variable Based on Trends Alternative Factor Risks
	100.00%		

[1] Includes 3% public real estate securities

[2] Includes 7% private real estate equity investments

NOTE 5 – DERIVATIVE FINANCIAL INSTRUMENTS

The Board has authorized certain investment managers to invest in, or otherwise enter into, transactions involving derivative financial instruments when such transactions are consistent with the investment objectives established for a specific investment manager's assignment. A professional investment consultant is employed to monitor and review each investment manager's securities and derivative position as well as the manager's performance relative to established benchmark rates of return and risk measures. Derivative activities must be evaluated within the context of the overall portfolio performance and cannot be evaluated in isolation.

Investment derivatives involve the following types of risks.

Market Risk: Market risk is the risk of change in value of an instrument in response to changes in a market price or index. While all investments are subject to market risk, derivatives often have a higher degree of market risk than other types of investment instruments. Values of cash securities containing derivative features are often more susceptible to market risk than other types of fixed income securities because the amounts and/or timing of their scheduled cash flows may fluctuate under changing market conditions, according to their contractual terms. For other types of derivatives, amounts of contractual cash flows may be either positive or negative depending upon prevailing market conditions relative to the reference prices or rates, and thus the values of such instruments may be positive or negative, despite the fact that little or no cash is initially exchanged to enter into such contacts.

NOTES TO THE FINANCIAL STATEMENTS

Credit Risk: Credit risk of cash securities containing derivative features is based upon the credit worthiness of the issuers of such securities. It includes the risk that counterparties to contracts will not perform and/or the public exchange will not meet its obligation to assume this counterparty risk. Exchange traded derivatives are generally considered to be of lower credit risk than over-the-counter derivatives due to the exchange's margin requirements. SJCERA's derivative investments are exchange traded, and credit risk is limited to the clearing corporation. As of December 31, 2018, collateral for derivatives was $11.0 million. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted.

The following Credit Risk Analysis schedule discloses the counterparty credit ratings of SJCERA's derivative investments as December 31, 2018.

CREDIT RISK ANALYSIS
AS OF DECEMBER 31, 2018

	S & P CREDIT RATING	
DERIVATIVE TYPE	A	TOTAL FAIR VALUE
Future Contracts	$ 682,898	$ 682,898
Options Contracts	226,060	226,060
TOTAL	$ 908,958	$ 908,958

Interest Rate Risk: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Interest rate swaps are an example of an investment that has a fair value that is highly sensitive to interest rate changes. SJCERA is exposed to interest rate risk in the form of futures contracts and options contracts in the following global government bond markets.

INTEREST RATE RISK
AS OF DECEMBER 31, 2018

GLOBAL BONDS	FUTURES CONTRACTS	OPTIONS CONTRACTS
Canadian Government Bond	$ 19,754,163	$ -
Long Gilt	19,792,692	-
Japanese Government Bond	20,867,661	-
Euro Bond	20,233,954	-
U.S. Ten-Year Notes	12,445,594	-
Eurodollars	-	150,375
TOTAL	$ 93,094,064	$ 150,375

SJCERA measures derivative interest rate risk using duration with varying maturities of less than three months to more than 10 years. At December 31, 2018, SJCERA had the following investment derivative interest rate risks.

INTEREST RATE RISK ANALYSIS

As of December 31, 2018

(DOLLARS IN THOUSANDS)

DERIVATIVE TYPE	NOTIONAL VALUE	FAIR VALUE	< 3 MONTHS	3 TO 6 MONTHS	6 TO 12 MONTHS	1 TO 5 YEARS	5 TO 10 YEARS	10+ YEARS
Futures Contracts	$ (58,030)	$ -	$(58,030)	$ -	$ -	$ -	$ -	$ -
Swap Agreements	-	(120)	-	-	-	(120)	-	-
TOTAL	$ (58,030)	(120)	$(58,030)	$ -	$ -	$ (120)	$ -	$ -

Foreign Currency Risk: Foreign currency risk is the risk that changes in currency exchange rates will adversely affect the fair value of an investment. Currency forward contracts represent foreign exchange contracts that are used to control currency exposure and facilitate the settlement of international security purchase and sale transactions. At December 31, 2018, SJCERA had the derivative foreign currency exposures listed in the table below.

FOREIGN CURRENCY RISK ANALYSIS

As of December 31, 2018

CURRENCY	FUTURES CONTRACTS	OPTIONS CONTRACTS	INTEREST RATE CONTRACTS
Australian Dollar	$ (12,129,440)	$ -	$ -
Canadian Dollar	(12,276,170)	-	-
Euro Currency	(12,674,750)	-	(75,052)
British Pound Sterling	(11,910,688)	48,725	-
Japanese Yen	(12,954,038)	-	-
Swiss Franc	(12,805,000)	-	-
TOTAL	$ (74,750,086)	$ 48,725	$ (75,052)

Derivatives are carried as assets when the fair value is positive, and as liabilities when the fair value is negative. Gains and losses from derivatives are included in net investment income (loss). For financial reporting purposes, all SJCERA derivatives are classified as investment derivatives.

NOTES TO THE FINANCIAL STATEMENTS

Derivative financial instruments held by SJCERA from time to time consist of the following:

FUTURES CONTRACTS

A futures contract represents an agreement to buy (long position) or sell (short position) an underlying asset at a specified future date for a specified price. Payment for the transaction is delayed until a future date, which is referred to as the settlement or expiration date. Futures contracts are standardized contracts traded on organized exchanges.

OPTIONS CONTRACTS

An options contract is a type of derivative security in which a buyer (purchaser) has the right, but not the obligation, to buy or sell a specified amount of an underlying security at a fixed price by exercising the option before its expiration date. The seller (writer) has an obligation to buy or sell the underlying security if the buyer decides to exercise the option.

SWAP AGREEMENTS

A swap is an agreement between two or more parties to exchange a sequence of cash flows over a period of time in the future. No principal is exchanged at the beginning of the swap. The cash flows the counterparties exchange are tied to a notional amount. A swap agreement specifies the time period over which the periodic payments will be exchanged. The fair value represents the gains or losses as of the prior marking-to-market.

All investment derivative positions are included as part of investments at fair value on the Statement of Fiduciary Net Position. All changes in fair value are reported as part of net appreciation/(depreciation) in fair value of investments in the Statement of Changes in Fiduciary Net Position. Investment information was provided either by SJCERA's investment managers or SJCERA's custodian bank. The Investment Derivatives schedule below is classified by type and reports the fair value balances and notional amounts of derivatives outstanding as of and for the year ended December 31, 2018.

INVESTMENT DERIVATIVES

As of December 31, 2018

DERIVATIVE TYPE	NOTIONAL AMOUNT	FAIR VALUE
Futures Contracts	$ (72,279,081)	$ 682,898
Options Contracts	1,125,045	226,060
Rights / Warrants	-	5
Swap Agreements	-	(120,361)
TOTAL	$ (71,154,036)	$ 788,602

NOTE 6 – CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

DEFINED BENEFIT PENSION PLAN

The funding objective of the plan is to establish contribution rates that, over time, are likely to remain as a level percentage of payroll unless plan benefit provisions are changed. Actuarial valuations involve estimates and make assumptions about the probability of events far into the future, therefore actuarially determined rates are subject to continual revision as results are compared to past expectations and new estimates are made about the future.

Tier 1 member contribution rates are calculated by the actuary using the Entry Age Normal Funding Method (Cost Method). Most Tier 1 members pay one-half of the cost of pre-funding post-retirement COLAs, and some pay an additional percentage of the basic member contribution rate, which reduces the employers' normal cost. Tier 2 members pay a single contribution rate adjusted annually. The required contribution rates are expressed as a percentage of covered payroll. The 2018 contribution rates were determined using the actuarial valuations performed as of January 1, 2017.

EMPLOYER CONTRIBUTIONS

For 2018, the required employer contribution rates including normal cost and amortization of the unfunded actuarial liability (UAL) were determined by using the valuation report as of January 1, 2017. In accordance with its Funding Policy, SJCERA amortizes any unexpected changes in UAL over a period of 15 years as a level percent of pay, with new amortization layers each year. The 2008 Extraordinary Actuarial Loss is amortized over a closed 30-year period, with 21 years remaining as of January 1, 2018. The remaining UAL as of December 31, 2014, is amortized over a closed 19-year period with 15 years remaining as of January 1, 2018; new additions to the UAL on and after January 1, 2014, are being amortized over 15 years. The single amortization period for these streams of payments is 16 years as of January 1, 2018. The amortization period for each unfunded actuarial liability layer will decrease each year.

Effective January 1, 2017, the County began making additional annual contributions ranging from zero percent to five percent of payroll. These additional contributions, made for the next ten years, decrease only the County's share of the UAL and not the liability for other entities participating in SJCERA. In November 2018, SJC Mosquito and Vector Control District (MVCD) made an additional $80,000 contribution to decrease its unfunded actuarial liability. The MVCD plans to contribute an additional $70,000 per budget year from 2019 through 2024. These additional annual contributions decrease only the MVCD's share of the UAL and not the liability for other entities participating in SJCERA.

NOTES TO THE FINANCIAL STATEMENTS

EMPLOYER RETIREMENT CONTRIBUTION RATES Expressed as a Percentage of Active Member Payroll	2018 (PER 1/1/2017 VALUATION)		
	NORMAL COST	UAL AMORTIZATION	TOTAL
TIER 1			
For General Members			
Paying Basic Rate Only (G.C. 31621.3)	17.71%	24.25%	41.96%
Paying Basic Rate with COLA Cost Share	15.19%	24.25%	39.44%
Paying 114% of Basic Rate with COLA Cost Share	14.69%	24.25%	38.94%
For Safety Members			
Paying Basic Rate Only (G.C. 31639.5)	30.83%	49.25%	80.08%
Paying Basic Rate with COLA Cost Share	26.21%	49.25%	75.46%
Paying 133% of Basic Rate with COLA Cost Share	24.75%	49.25%	74.00%
Composite Total for General and Safety Combined			
Paying Basic Rate Only (G.C. 31621.3)	20.06%	28.69%	48.75%
Paying Basic Rate with COLA Cost Share	17.17%	28.69%	45.86%
Paying 114% / 133% of Basic Rate with COLA Cost Share	16.49%	28.69%	45.18%
TIER 2			
For General Members	8.90%	24.25%	33.15%
For Safety Members	14.33%	49.25%	63.58%
COMPOSITE TOTAL FOR GENERAL AND SAFETY COMBINED	9.39%	26.41%	35.80%

The composite employer contribution rates (for General and Safety members combined) expressed as a percentage, or range of percentages, of covered payroll for the past seven years are as follows:

CONTRIBUTION YEAR	TIER 1	TIER 2
2018	45.18% – 48.75%	35.80%
2017	44.31% – 47.91%	34.48%
2016	42.06% – 45.58%	31.95%
2015	39.84% – 43.06%	30.34%
2014	36.59% – 38.93%	29.43%
2013	32.66% – 35.12%	26.65%
2012	29.30% - 32.04%	-

MEMBER CONTRIBUTIONS

Member contributions are deducted from the member's salary on a biweekly basis.

Tier 1 members pay contributions based upon their membership category, General or Safety, and age at entry into membership. General, Tier 1 members employed before March 7, 1973 and all Safety, Tier 1 members stop paying member contributions when they have 30 years of service, but continue to accrue retirement service credit for subsequent active employment subject to membership.

Tier 2 members pay contributions based upon their membership category equal to one-half of the normal cost of the applicable benefits

In 2018, member contributions totaled $35,377,951, and employer contributions totaled $208,757,572. Member contributions increased by $1.7 million, or 5.2 percent, over the prior year, and employer contributions increased by $8.7 million, or 4.4 percent, over the prior year.

NOTE 7 – FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS

As required by the CERL and the Board's policy, the following reserves from Fiduciary Net Position Restricted for Pension Benefits must be established and used to account for the members', employers', and retirees' contributions. The Unappropriated Earnings Reserves were not sufficient to fully credit interest earnings at the 7.25 percent assumption rate for all of the reserves except for the active and deferred members' reserves in 2018. In addition, there were no excess earnings to fund the Contingency Reserve in 2018.

A. ACTIVE AND DEFERRED MEMBERS' RESERVE

This reserve represents the cumulative contributions made by active members, net of refunds to the members, plus the investment earnings credited to the reserve at assumption rates determined by the actuary.

B. EMPLOYER ADVANCE RESERVES

This reserve represents the cumulative contributions made by the County and participating certain special districts for the active members. Interest earnings are credited semi-annually to the reserves at the assumption rate determined by the actuary if sufficient unappropriated earnings reserve funds exist.

C. COUNTY ADDITIONAL 5% CONTRIBUTIONS RESERVE

This reserve represents the additional contributions in excess of actuarially determined contributions paid by the County in order to decrease its share of the UAL.

D. RETIRED MEMBERS' RESERVES

These reserves are established to account for the unpaid retirees' pension benefits. Upon a member's retirement, the member's accumulated contributions are transferred from the Active and Deferred Members' Reserve account to the Retired Members' Annuity Reserve account.

NOTES TO THE FINANCIAL STATEMENTS

In addition, the actuarially determined amount of the member's vested interest is transferred from the Employer Advance Reserves account to the Retired Members' Pension Reserve account.

The Retired Members' Reserve account at December 31, 2018, includes the authorized "Purchasing Power" benefit reserve and additional pension benefits specified in the pre-April 1, 1982 class-action lawsuit settlement agreement. These benefits are explained in Note 1b. In accordance with the Statement of Reserve Policy, the post-April 1, 1982 Settlement Reserve is a Special Reserve, which is not included in valuation assets.

E. CONTINGENCY RESERVE

Earnings of the retirement fund during any year in excess of the total interest credited to contributions and reserves during the year remain in the fund as a reserve against deficiencies in interest earnings in other years, losses on investments, and other contingencies. The CERL provides that when the contingency reserve exceeds one percent of total assets, the retirement board may transfer all or any part of the surplus as specified in Government Code Section 31592.2. In June 2017, the Board amended the Reserve Policy, lowering the Contingency Reserve target from three percent to one percent of total assets. The Contingency Reserve is zero percent of the fair value of total assets at December 31, 2018.

F. MARKET STABILIZATION DESIGNATION RESERVE

This "designation" account is used to further minimize the impact of the fluctuations in the fair value of the investments owned by SJCERA. It represents the difference between the actuarial value of assets and the fair value of assets at year-end. It is the balance of deferred earnings and losses created by a five-year smoothing of actual gains and losses compared to the assumed investment rate of return.

G. UNAPPROPRIATED EARNINGS RESERVE

The Unappropriated Earnings Reserve (UER) is used to accumulate investment income earned by SJCERA, net of the investment expenses and SJCERA's administration cost. From this unappropriated earnings account, interest is credited to various reserve accounts. In addition, at the Board's discretion and subject to the settlement agreement in 2001, this account may also be used, from time to time, to stabilize the County's and the special districts' actuarially determined contributions, and to fund the market stabilization and contingency reserves accounts.

H. CLASS ACTION SETTLEMENT – POST 4/1/82 RESERVE

The Class Action Settlement – Post 4/1/82 Reserve designates the fund that pays the Post-82 Class Action Settlement allowances for the lifetime of the members and beneficiaries, who retired between April 1, 1982, and December 31, 2000, to the extent sufficient funds are available.

I. MOSQUITO AND VECTOR CONTROL DISTRICT ADDITIONAL CONTRIBUTIONS RESERVE

This reserve represents the additional contributions in excess of actuarially determined contributions paid by the MVCD in order to decrease its share of the UAL.

J. SUMMARY OF RESERVES

A summary of reserved and designated net position as of December 31, 2018 follows.

RESERVES	
Active and Deferred Members	$ 374,294,622
Employer Advance	1,372,139,555
County Additional 5% Contribution	40,468,809
MVCD Additional Contributions	80,000
Retired Members	1,257,914,705
Class Action Settlement – Post-4/1/82	62,951
Contingency	-
Market Stabilization Designation	(203,918,566)
TOTAL RESERVES	$ 2,841,042,076

NOTE 8 – NET PENSION LIABILITY AND SIGNIFICANT ASSUMPTIONS

A. NET PENSION LIABILITY OF EMPLOYERS

SJCERA is a cost sharing, multiple-employer pension plan with a reporting date of December 31, 2018. Measurements as of the reporting date are based on the fair value of assets as of December 31, 2018, and the total pension liability as of the valuation date, January 1, 2018, projected to December 31, 2018. There were no significant events between the valuation date and the measurement date, so the updated procedures consisted of updated actuarial assumptions, plus the addition of service cost and interest cost offset by benefit payments.

The net pension liability was measured as of December 31, 2018, and determined based upon rolling forward the total pension liability from the actuarial valuation as of January 1, 2018. The net pension liability (i.e., the pension plan's liability determined in accordance with GASB Statement No. 67 less the fiduciary net position) is shown below.

Employers' Net Pension Liability (GASB Statement No. 67)

AS OF DECEMBER 31, 2018

(Dollars in Millions)

Total Pension Liability	$ 4,701
Plan Fiduciary Net Position	2,841
Employers' Net Pension Liability	1,860
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	60.4%

NOTES TO THE FINANCIAL STATEMENTS

B. ACTUARIAL ASSUMPTIONS AND SIGNIFICANT ASSUMPTIONS

SJCERA retains an independent actuarial firm to conduct actuarial valuations of the pension plan, monitor SJCERA's funding status, and establish the contribution rate requirements for the pension plan. Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future. Projections of benefits for financial reporting purposes are based on the plan and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in accrued actuarial liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations. The total pension liability was determined by an actuarial valuation as of January 1, 2018, using the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB Statement No. 67.

In the January 1, 2018 actuarial valuation, the Entry Age Normal Funding Method (Cost Method) was used. The actuarial assumptions include a 7.25 percent investment rate of return, annual inflation rate of 2.90 percent per year, and projected salary increases at 3.15 percent per year for the year ended 2018. The actuarial value of the plan's assets was based on a five-year smoothing of actual versus expected returns.

In 2015, the SJCERA Board changed the funding policy to amortize any unexpected changes in the UAL over a period of 15 years as a level percent of pay, with new amortization layers each year. The 2008 Extraordinary Actuarial Loss, which is amortized over a closed 30-year period, has 21 years remaining. The remaining UAL as of December 31, 2014, which is amortized over a closed 19-year period, has 15 years remaining. The new additions to the UAL on and after January 1, 2014, are amortized over 15 years. The single amortization period for these streams of payments is 16 years as of January 1, 2018. The amortization period for each unfunded actuarial liability layer will decrease each year.

The total pension liability for the pension plan was determined by an actuarial valuation as of January 1, 2018, and accepted actuarial procedures were applied to project the total pension liability to December 31, 2018. Key methods and assumptions used in the latest actuarial valuations as of January 1, 2018, are presented in the table that follows.

(Remainder of page intentionally left blank)

Key methods and assumptions used in the latest actuarial valuations are presented below.

Valuation Date	January 1, 2018
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll with Separate Amortization Periods for Extraordinary Actuarial Gains or Losses
Remaining Amortization Period	2008 Extraordinary Actuarial Loss – 21 years Remaining UAL as of January 1, 2014 – 15 years Subsequent Unexpected Changes in UAL after January 1, 2014 – 15 years Single Equivalent Period as of January 1, 2017 – 16 years
Asset Valuation Method	Smoothed Actuarial Value (5 years): 80%–120% Asset Corridor
ACTUARIAL ASSUMPTIONS:	
Discount Rate	7.25%, Net of Pension Plan Investment Expenses, Including Inflation
Projected Salary Increases	3.15%, Plus Service-Based Rates
General Inflation Rate	2.90%
Cost-of-Living Adjustments	2.60% Per Year Assumed
Healthy Mortality	Mortality rates for active members are based on the sex distinct CalPERS Preretirement Non-Industrial Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for healthy annuitants are based on the sex distinct CalPERS Healthy Annuitant Mortality Table, with a partial credibility adjustment of 1.10 for Safety members, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for active members who die in the line-of-duty are based on the sex distinct CalPERS Preretirement Industrial Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.
Disabled Mortality	Mortality rates for Safety disabled annuitants are based on the sex distinct CalPERS Industrially Disabled Annuitant Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for General disabled annuitants are based on the sex distinct CalPERS Non-Industrially Disabled Annuitant Mortality Table, with a partial credibility adjustment of 1.05, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.

NOTES TO THE FINANCIAL STATEMENTS

C. FUNDED STATUS AND FUNDING PROGRESS

The plan's funded status is determined from a long-term, ongoing perspective. The annual actuarial valuation determines the progress made in accumulating sufficient assets to pay benefits when due. As of January 1, 2018, the pension plan's accrued actuarial liabilities were $4.5 billion and the actuarial value of assets was $2.9 billion, resulting in UAL of $1.6 billion. The funded status (ratio) of actuarial value of assets over accrued actuarial liabilities was 64.8 percent.

As of the January 1, 2018 actuarial valuation, the funded status increased to 64.8 percent from 64.6 percent. In addition, for January 1, 2018, the discount rate assumption was lowered from 7.4 percent to 7.25 percent since the prior valuation. No other assumption changes were made.

SJCERA's Funding Policy provides for regular employer and member contributions at actuarially determined rates, expressed as percentages of annual covered payroll. Contributions required and contributions made are explained in Note 6.

D. ASSET ALLOCATION POLICY AND EXPECTED LONG-TERM RATE OF RETURN BY ASSET CLASS

The allocation of investment assets within SJCERA's portfolio is approved by the Board. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the defined benefit pension plans. The long-term expected rate of return on defined benefit pension plan investment assets was determined using a building-block method in which best estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation. The following table displays the Board-approved asset allocation policy for 2018 and the long-term expected real rates of return.

ASSET CLASS	TARGET ALLOCATION	ARITHMETIC LONG-TERM EXPECTED REAL RATE OF RETURN
Global Public Equities	30.00%	9.15%
Stable Fixed Income	10.00%	4.45%
Credit	14.00%	7.45%
Risk Parity	14.00%	6.55%
Private Appreciation	12.00%	9.75%
Crisis Risk Offset (CRO)	20.00%	5.50%
Short Term Investments / Cash / Cash Equivalents	0.00%	3.15%
TOTAL	100.00%	

E. DISCOUNT RATE

The discount rate used to measure the total pension liability was 7.25 percent as of December 31, 2018. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate, and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2018.

F. SENSITIVITY OF THE NET PENSION LIABILITY TO CHANGES IN THE DISCOUNT RATE

The table below presents the net pension liability of SJCERA as of December 31, 2018, calculated using the discount rate of 7.25 percent, as well as what SJCERA's net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate.

	1% DECREASE (6.25%)	CURRENT DISCOUNT RATE (7.25%)	1% INCREASE (8.25%)
Total Pension Liability	$ 5,337,558,782	$ 4,700,655,459	$ 4,177,696,831
Pension Plan Fiduciary Net Position	2,841,042,076	2,841,042,076	2,841,042,076
COLLECTIVE NET PENSION LIABILITY	$ 2,496,516,706	$ 1,859,613,383	$ 1,336,654,755
Fiduciary Net Position as a Percentage of the Total Pension Liability	53.2%	60.4%	68.0%

G. RATE OF RETURN

For the year ended December 31, 2018, the annual money-weighted rate of return on investments, net of investment expense, was -2.11 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

NOTE 9 – INVESTMENT EXPENSES

Investment expenses include fees paid for investment management services, investment consulting services, fund evaluation services, securities custodian services, and interest expense and other fees incurred in security lending transactions.

NOTE 10 – GENERAL ADMINISTRATIVE EXPENSES

General administrative expenses, including the depreciation and amortization of capital assets, are funded by investment income earnings and are limited, pursuant to Government Code Section 31580.2, to twenty-one-hundredths of one percent (0.21 percent) of SJCERA's accrued actuarial liability. The actual administration expense for the year ended December 31, 2018, was 0.09 percent of the accrued actuarial liability. SJCERA was in compliance with this requirement during 2018.

NOTE 11 – PENDING LITIGATION

Allum, et al. v. SJCERA, et al.

SJCERA Retirees Edward Allum and Pauline Toy ("Plaintiff Retirees") have sued SJCERA and its Board of Retirement ("SJCERA Respondents") in San Joaquin County Superior Court, on behalf of a class of similarly situated retirees ("post-'82 Retirees"), alleging that SJCERA breached a 2001 class action settlement agreement and committed other alleged wrongdoing by taking a variety of actions, and allegedly failing to take a variety of actions, related to the reserving for, and payment of, supplemental retirement benefits ("post-'82 Benefits") ("*Allum* Class Action"). Plaintiff Retirees claim over $25 million in damages. The SJCERA Respondents have denied the post-'82 Retirees' claims of wrongdoing with respect to the post-'82 Benefits and are vigorously defending themselves in the *Allum* Class Action. SJCERA and cross-defendant County of San Joaquin have each filed Motions for Summary Judgment and/or Summary Adjudication, which are scheduled for hearing on June 14, 2019.

SJCERA v. Travelers

SJCERA has sought coverage for its defense fees and costs incurred in the *Allum* Class Action under a fiduciary liability insurance policy issued by SJCERA's prior fiduciary insurance carrier, Travelers Casualty & Surety Company of America ("Travelers"). Travelers declined to provide a defense to SJCERA, and SJCERA is pursuing it for coverage in a federal court action that alleges both that Travelers breached the insurance contract and acted in bad faith by failing to defend.

NOTE 12 – COMMITMENTS AND CONTINGENCIES

SJCERA participates in certain investments that require commitments of a specified amount of capital upfront that is then drawn down at a later time as the investment vehicle requires. The total unfunded capital commitment represents the amount of funds that SJCERA could potentially be required to contribute at a future date. SJCERA had unfunded capital commitments totaling $284.9 million at December 31, 2018.

NOTE 13 – SUBSEQUENT EVENTS

SJCERA has evaluated subsequent events through May 24, 2019, the date on which the financial statements were available to be issued. There are no pending subsequent events.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

For the Years Ended[1]

	DECEMBER 31, 2018	DECEMBER 31, 2017	DECEMBER 31, 2016	DECEMBER 31, 2015	DECEMBER 31, 2014
TOTAL PENSION LIABILITY					
Service Cost	$ 103,300,553	$ 98,438,144	$ 92,857,369	$ 94,377,630	$ 90,429,416
Interest (Includes Interest on Service Cost)	325,161,265	308,566,601	295,197,992	280,581,484	266,668,435
Change of Benefit Terms	-	-	-	-	-
Differences Between Expected and Actual Experience	(49,383,683)	37,219,673	(10,171,368)	(25,752,670)	-
Changes of Assumptions	81,854,664	-	87,601,669	-	-
Benefit Payments, Including Refunds of Employee Contributions	(221,443,668)	(205,406,970)	(194,719,177)	(181,468,913)	(165,870,971)
NET CHANGE IN TOTAL PENSION LIABILITY	239,489,131	238,817,448	270,766,485	167,737,531	191,226,880
TOTAL PENSION LIABILITY – BEGINNING	4,461,166,328	4,222,348,880	3,951,582,395	3,783,844,864	3,592,617,984
TOTAL PENSION LIABILITY – ENDING (A)	$4,700,655,459	$4,461,166,328	$4,222,348,880	$3,951,582,395	$3,783,844,864
FIDUCIARY NET POSITION					
Contributions – Employer	$ 208,757,572	$ 200,051,742	$ 159,122,523	$ 150,371,556	$ 136,686,133
Contributions – Member	35,377,951	33,634,906	30,117,408	29,026,901	27,367,908
Transfer Between Plans	324,269	364,714	293,779	378,969	19,968,779
Net Investment Income (Loss)	(56,397,598)	299,960,693	151,114,788	(47,339,750)	110,728,303
Benefit Payments, Including Refunds of Member Contributions	(221,443,668)	(205,406,970)	(194,719,177)	(181,468,913)	(165,870,971)
Administrative Expenses	(4,865,082)	(4,118,578)	(4,369,744)	(4,075,745)	(4,042,986)
NET CHANGE IN FIDUCIARY NET POSITION	(38,246,555)	324,486,507	141,559,577	(53,106,982)	124,837,166
FIDUCIARY NET POSITION – BEGINNING	2,879,288,631	2,554,802,124	2,413,242,547	2,466,349,529	2,341,512,363
FIDUCIARY NET POSITION – ENDING (B)	$2,841,042,076	$2,879,288,631	$2,554,802,124	$2,413,242,547	$2,466,349,529
NET PENSION LIABILITY – ENDING (A)–(B)	$1,859,613,383	$1,581,877,697	$1,667,546,756	$1,538,339,848	$1,317,495,335
FIDUCIARY NET POSITION AS A PERCENTAGE OF THE TOTAL PENSION LIABILITY	60.44%	64.54%	60.51%	61.07%	65.18%
COVERED PAYROLL[2]	$ 436,763,447	$ 425,886,951	$ 392,227,314	$ 396,136,470	$ 376,030,944
NET PENSION LIABILITY AS A PERCENTAGE OF COVERED PAYROLL	425.77%	371.43%	425.15%	388.34%	350.37%

[1] Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

[2] Covered Payroll reported by plan sponsors is the payroll on which contributions are based in accordance with GASB Statement No. 82.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CONTRIBUTIONS FROM THE EMPLOYERS AND OTHER CONTRIBUTING SOURCES – DEFINED BENEFIT PENSION PLAN

For the Ten Years Ended December 31

2018–2014

	2018	2017	2016	2015	2014
Actuarially Determined Contributions	$ 188,322,653	$ 179,824,882	$ 159,122,523	$ 150,371,556	$ 136,686,133
Contributions in Relation to the Actuarially Determined Contribution	208,757,572	200,051,742	159,122,523	150,371,556	136,686,133
Contribution Deficiency / (Excess)[1]	$ (20,434,919)	$ (20,226,860)	$ -	$ -	$ -
Covered Payroll[2]	$ 436,763,447	$ 425,886,951	$ 392,227,314	$ 396,136,470	$ 376,030,944
Contributions as a Percentage of Covered Payroll	47.80%	46.97%	40.57%	37.96%	36.35%

2013–2009

	2013	2012	2011	2010	2009
Actuarially Determined Contributions	$ 119,494,319	$ 108,062,510	$ 112,891,701	$ 104,451,673	$ 97,805,585
Contributions in Relation to the Actuarially Determined Contribution	119,494,319	108,062,510	112,891,701	104,451,673	97,805,585
Contribution Deficiency / (Excess)[1]	$ -	$ -	$ -	$ -	$ -
Covered Payroll[2]	$ 362,650,568	$ 356,419,000	$ 367,344,000	$ 384,442,000	$ 377,559,000
Contributions as a Percentage of Covered Payroll	32.95%	30.32%	30.73%	27.10%	25.90%

[1] The contributions in excess of Actuarially Determined Contributions are due to the County's additional 5% contributions and MVCD's additional contributions.

[2] Covered Payroll reported by plan sponsors for 2018, 2017, 2016, 2015, and 2014. Previous years' amounts are based on projected payroll from the actuarial valuation reports.

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SCHEDULE OF INVESTMENT RETURNS

For the Years Ended[1]

	DECEMBER 31, 2018	DECEMBER 31, 2017	DECEMBER 31, 2016	DECEMBER 31, 2015	DECEMBER 31, 2014
Annual Money-Weighted Rate of Return, Net of Investment Expense	-2.11%	11.85%	6.20%	-2.06%	4.29%

[1] Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. It is calculated by finding the rate of return that will set the present values of all cash flows and terminal values equal to the value of the initial investment. The money-weighted rate of return is equivalent to the internal rate of return (IRR).

A time-weighted rate of return assumes that all cash distributions are reinvested in the portfolio and the exact same periods are used for comparisons. When calculating the time-weighted rate of return, the effect of varying cash inflows is eliminated by assuming a single investment at the beginning of a period and measuring the growth or loss of fair value to the end of that period.

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NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

NOTE 1 – KEY METHODS AND ASSUMPTIONS USED TO DETERMINE CONTRIBUTION RATES

The following actuarial methods and assumptions were used to determine contribution rates for the year ended December 31, 2018, in the Schedule of Contributions from the Employers and Other Contributing Sources.

Valuation Date	January 1, 2017
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll with Separate Amortization Periods for Extraordinary Actuarial Gains or Losses.
Remaining Amortization Period	2008 Extraordinary Actuarial Loss – 22 years Remaining UAL as of January 1, 2014 – 16 years Subsequent Unexpected Changes in UAL after January 1, 2014 – 15 years Single Equivalent Period as of January 1, 2016 – 17 years
Asset Valuation Method	Smoothed Actuarial Value (5 years) 80%–120% Asset Corridor
ACTUARIAL ASSUMPTIONS:	
Discount Rate	7.4%, Net of Pension Plan Investment Expenses, Including Inflation
Projected Salary Increases	3.15%, Plus Service-Based Rates
General Inflation Rate	2.90%
Cost-of-Living Adjustments	2.6% Per Year Assumed
Healthy Mortality	Mortality rates for active members are based on the sex distinct CalPERS Preretirement Non-Industrial Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for healthy members are based on the sex distinct CalPERS Healthy Annuitant Mortality Table, with a partial credibility adjustment of 1.10 for Safety members, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for active members who die in the line-of-duty are based on the sex distinct CalPERS Preretirement Industrial Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.
Disabled Mortality	Mortality rates for Safety disabled annuitants are based on the sex distinct CalPERS Industrially Disabled Annuitant Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for General disabled annuitants are based on the sex distinct CalPERS Non-Industrially Disabled Annuitant Mortality Table, with a partial credibility adjustment of 1.05, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.

A complete description of the methods and assumptions used to determine contribution rates for the year ending December 31, 2018, can be found in the January 1, 2017 actuarial valuation report.

NOTE 2 – CHANGES OF ASSUMPTIONS

The most recent Actuarial Experience Study was performed in 2016, covering experience from January 1, 2013 through December 31, 2015, leading to changes in demographic and economic assumptions. This experience study specifically analyzed and made the following recommendations for the demographic and economic assumptions. The merit salary rates increased at lower service levels and decreased at higher service levels for all members. The retirement rates reduced at younger ages for General members. The termination rates had minor increases to General members with less than 20 years of service, and modest increases for Safety members with less than five years of service and decreased after five years of service. Disability rates decreased in Safety members over age 50. Mortality rates adjusted California Public Employees Retirement System (CalPERS) base tables, with generational improvement for all members.

On November 18, 2016, the Board of Retirement adopted new economic assumptions effective with the January 1, 2016 valuation. To reflect changes in market conditions, the long-term rate of return on plan assets was adjusted from 7.5 percent to 7.4 percent, the long-term inflation rate measured by the Consumer Price Index (CPI) was adjusted from 3.00 percent to 2.9 percent, the annual wage was adjusted from 3.25 percent to 3.15 percent, and a post-retirement COLA average growth rate was 2.60 percent.

In 2018, the assumptions and methods used in the most current valuation as of January 1, 2018, are based on the Actuarial Experience Study performed in 2016. The discount rate assumption was lowered from 7.4 percent to 7.25 percent since the prior valuation. No other changes in assumptions or methods were made.

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OTHER SUPPLEMENTARY INFORMATION

SCHEDULE OF ADMINISTRATIVE EXPENSES

For the Year Ended December 31, 2018

		2018
GENERAL ADMINISTRATIVE EXPENSES (Expenses Subject to the Statutory Limit)		
Personnel Services		
Staff Salaries	$	1,703,447
Cafeteria Benefits		21,532
Insurance		247,543
Social Security		111,298
Retirement		630,498
TOTAL PERSONNEL SERVICES	$	2,714,318
Professional Services		
Professional and Specialized Services	$	365,098
Allocated Department Costs		64,164
TOTAL PROFESSIONAL SERVICES	$	429,262
Communications		
Postage	$	13,631
Telephone		18,800
Travel		55,404
TOTAL COMMUNICATIONS	$	87,835
Rentals / Equipment		
Office Space and Equipment	$	235,800
Depreciation-Equipment		34,949
Equipment Leasing		10,184
TOTAL RENTALS/EQUIPMENT	$	280,933
Miscellaneous		
Office Supplies / Expense	$	31,721
Subscriptions and Periodicals		5,055
Memberships		7,536
Maintenance		17,693
Insurance		75,797
TOTAL MISCELLANEOUS	$	137,802
TOTAL GENERAL ADMINISTRATIVE EXPENSES	$	3,650,150
OTHER EXPENSES (Expenses Not Subject to the Statutory Limit)		
Information Technology Expenses	$	194,498
Actuary Fees		120,122
Fund Legal Fees		900,312
TOTAL OTHER EXPENSES	$	1,214,932
TOTAL GENERAL ADMINISTRATIVE AND OTHER EXPENSES	**$**	**4,865,082**

SCHEDULE OF INVESTMENT EXPENSES

For the Year Ended December 31, 2018

		2018
INVESTMENT MANAGEMENT FEES		
Global Public Equities	$	1,719,517
Stable Fixed Income		1,026,460
Credit		3,985,460
Risk Parity		1,442,587
Private Appreciation		5,796,818
Credit Risk Offset		5,340,242
Short-Term Investments / Cash / Cash Equivalents		137,169
TOTAL INVESTMENT MANAGEMENT FEES	$	19,448,253
OTHER INVESTMENT FEES AND EXPENSES		
Custodian Fees	$	176,581
Investment Consultant Fees		320,417
Investment Legal Fees		60,555
Miscellaneous Investment Expense		507,619
TOTAL OTHER INVESTMENT FEES AND EXPENSES	$	1,065,172
TOTAL INVESTMENT EXPENSE	$	20,513,425
SECURITIES LENDING FEES		
Securities Lending Fees and Interest Expense	$	1,417,907
TOTAL INVESTMENT FEES AND EXPENSES	$	21,931,332

SCHEDULE OF PAYMENTS TO CONSULTANTS

For the Year Ended December 31, 2018

		2018
NATURE OF SERVICE		
Actuarial-Retainer and Valuation	$	120,122
Audit		60,670
Fund Legal Fees		900,312
Business Technology Services		60,650
TOTAL PAYMENTS TO CONSULTANTS	$	1,141,754

OTHER SUPPLEMENTARY INFORMATION

STATEMENT OF CHANGES IN ASSETS AND LIABILITIES
POST-EMPLOYMENT HEALTHCARE AGENCY FUND

For the Year Ended December 31, 2018

	BALANCE JANUARY 1, 2018	ADDITIONS	DELETIONS	BALANCE DECEMBER 31, 2018
ASSETS				
Cash and Cash Equivalents	$ 7,707	$ 4,295,486	$ (4,292,919)	$ 10,274
TOTAL ASSETS	$ 7,707	$ 4,295,486	$ (4,292,919)	$ 10,274
LIABILITIES				
Retiree Sick Leave Bank Benefits Payable	$ 7,707	$ 4,295,486	$ (4,292,919)	$ 10,274
TOTAL LIABILITIES	$ 7,707	$ 4,295,486	$ (4,292,919)	$ 10,274

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SCHEDULE OF COST SHARING EMPLOYER ALLOCATIONS

For the Year Ended December 31, 2018

EMPLOYER	PROPORTIONATE SHARE [1]	NET PENSION LIABILITY [2]
County of San Joaquin	93.3689%	$ 1,736,300,650
Superior Court	3.9003%	72,531,091
Lathrop-Manteca Rural Fire Protection District	1.3047%	24,263,171
SJC Mosquito and Vector Control District	0.4860%	9,036,978
Waterloo-Morada Rural Fire Protection District	0.4421%	8,222,002
Mountain House Community Services District	0.4017%	7,469,538
Tracy Public Cemetery District	0.0547%	1,016,587
SJC Historical Society and Museum	0.0275%	511,144
San Joaquin County Law Library	0.0141%	262,222
Local Agency Formation Commission	0.0000%	-
TOTAL	100.0000%	$ 1,859,613,383

[1] As SJCERA is a cost sharing multiple-employer pension plan, each employer participating in SJCERA must reflect a portion of the collective net pension liability and pension expense in their financial statements. The calculation for the proportionate share for each employer allocates net pension liability and pension expense based on each employer's share of the unfunded liability amortization payment. The proportionate shares are then adjusted to account for the additional contributions made by the County of San Joaquin and the Mosquito and Vector Control District for the year ended December 31, 2018.

[2] Proportionate share of net pension liability is based on the actuarial valuation.

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SCHEDULE OF EMPLOYER PENSION AMOUNTS ALLOCATED BY COST SHARING PLAN

For the Year Ended December 31, 2018

		DEFERRED OUTFLOWS OF RESOURCES					DEFERRED INFLOWS OF RESOURCES			PENSION EXPENSE		
EMPLOYER	NET PENSION LIABILITY	DIFFERENCES BETWEEN EXPECTED AND ACTUAL ECONOMIC EXPERIENCE	NET DIFFERENCES BETWEEN PROJECTED AND ACTUAL INVESTMENT EARNINGS ON PENSION PLAN INVESTMENTS	CHANGES OF ASSUMPTIONS	CHANGES IN PROPORTION AND DIFFERENCES BETWEEN CONTRIBUTIONS AND PROPORTIONATE SHARE OF CONTRIBUTIONS	TOTAL DEFERRED OUTFLOWS OF RESOURCES	DIFFERENCES BETWEEN EXPECTED AND ACTUAL ECONOMIC EXPERIENCE	CHANGES IN PROPORTION AND DIFFERENCES BETWEEN EMPLOYER CONTRIBUTIONS AND PROPORTIONATE SHARE OF CONTRIBUTIONS	TOTAL DEFERRED INFLOWS OF RESOURCES	PROPORTIONATE SHARE OF ALLOCABLE PLAN PENSION EXPENSE	NET AMORTIZATION OF DEFERRED AMOUNTS FROM CHANGES IN PROPORTION AND DIFFERENCES BETWEEN EMPLOYER CONTRIBUTIONS AND PROPORTIONATE SHARE OF CONTRIBUTIONS	TOTAL PENSION EXPENSE
County of San Joaquin	$1,736,300,650	$20,850,960	$190,373,068	$93,858,530	$ 2,727,254	$307,809,812	$ 45,494,957	$ 7,099,725	$ 52,594,682	$ 288,121,843	$ (2,161,548)	$ 285,960,295
Superior Court	72,531,091	871,014	7,952,520	3,920,785	3,771,178	16,515,497	1,900,477	2,037,375	3,937,852	12,035,814	1,341,534	13,377,348
Lathrop-Manteca Rural Fire Protection District	24,263,171	291,373	2,660,285	1,311,585	2,732,994	6,996,237	635,749	669,451	1,305,200	4,026,232	677,575	4,703,807
SJC Mosquito and Vector Control District	9,036,978	108,524	990,841	488,508	16,759	1,604,632	236,789	441,447	678,236	1,499,597	(118,617)	1,380,980
Waterloo-Morada Rural Fire Protection District	8,222,002	98,737	901,484	444,454	208,551	1,653,226	215,435	275,777	491,212	1,364,360	(3,770)	1,360,590
Mountain House Community Services District	7,469,538	89,700	818,982	403,778	959,175	2,271,635	195,719	208,323	404,042	1,239,496	201,083	1,440,579
Tracy Public Cemetery District	1,016,587	12,208	111,462	54,953	101,784	280,407	26,637	32,026	58,663	168,692	35,452	204,144
SJC Historical Society and Museum	511,144	6,138	56,043	27,631	233,961	323,773	13,393	28,256	41,649	84,819	50,369	135,188
San Joaquin County Law Library	262,222	3,149	28,751	14,175	120,309	166,384	6,871	60,599	67,470	43,513	17,592	61,105
Local Agency Formation Commission	-	-	-	-	-	-	-	18,976	18,976	-	(39,670)	(39,670)
TOTALS	$ 1,859,613,383	$ 22,331,803	$203,893,436	$100,524,398	$ 10,871,965	$ 337,621,603	$ 48,726,026	$ 10,871,956	$ 59,597,983	$ 308,584,366	$ -	$ 308,584,366

Numbers may not sum to total due to rounding.

NOTE 1 – BASIS OF PRESENTATION AND BASIS OF ACCOUNTING

Because San Joaquin County Employees' Retirement Association (SJCERA) is a cost sharing multiple-employer pension plan, employers participating in SJCERA are required to report a portion of the collective Net Pension Liability, Pension Expense, and Deferred Outflows and Inflows of Resources in their financial statements for fiscal periods beginning on or after June 15, 2014, in accordance with Governmental Accounting Standards Board (GASB) Statement No. 68, *Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27*. GASB Statement No. 68 requires that the proportionate share for each employer be determined based on the employer's projected long-term contribution effort to the pension plan.

SJCERA's actuary prepared the following documents, (1) the Schedule of Cost Sharing Employer Allocations and (2) the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan, in accordance with accounting principles generally accepted in the United States of America as applicable to governmental organizations based on information provided by SJCERA. These documents provide the required information for financial reporting related to SJCERA that employers may use in their financial statements. The measurement date for SJCERA is December 31, 2018. Measurements are based on the fair value of assets as of December 31, 2018, and the Total Pension Liability, $4,700,655,459, as of December 31, 2018, was measured as of a valuation date of January 1, 2018, and projected to December 31, 2018.

NOTE 2 – AMORTIZATION OF DEFERRED OUTFLOWS AND DEFERRED INFLOWS OF RESOURCES

The difference between projected and actual investment earnings on pension plan investments is amortized over five years on a straight-line basis. One-fifth is recognized in Total Pension Expense for each of the five years. The changes in assumptions and differences between expected and actual experience are recognized over the average of the expected remaining service lives of all active and inactive members of SJCERA, which is also five years. The net effect of the change in the employer's proportionate share of the collective net pension liability and collective deferred outflows of resources and deferred inflows of resources is recognized over the average expected remaining service lives of all active and inactive members of SJCERA.

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INVESTMENT

M

MEMORANDUM

April 15, 2019

Board of Trustees
San Joaquin County Employees' Retirement Association
6 South El Dorado Street
Suite 400
Stockton, CA 95202

Dear Trustees:

Enclosed is our report on the investment activity for the San Joaquin County Employees' Retirement Association (SJCERA) for the period ending December 31, 2018.

SJCERA - Total Fund Performance
As of December 31, 2018, the SJCERA Portfolio had approximately $2.8 billion in total assets, a decrease of roughly $48.4 million for the calendar year due to cash flows and investment results. The SJCERA Total Fund generated a gross of fees return of (1.4%) for the year, underperforming its policy benchmark but was in the top quartile of public plans greater than $1 billion. Private Appreciation provided strong double-digit returns, matching its benchmark over the one-year period, net of fees. Stable Fixed income was the lone class to provide meaningful relative performance in 2018. Global Equity and Risk Parity, experienced a challenging year as both portfolios had mid to high negative single digit returns. Performance from the remaining strategic classes were positive, but trailed their respective benchmarks over the 1-year period. Each quarter, the Pension Plan reviews the performance of the total fund along with the underlying strategic classes and individual managers versus their appropriate benchmarks. In 2018, SJCERA met its primary goal of ensuring sufficient funds were available to make scheduled benefit payments.

Market Review
After a very strong 2017, global equities experienced a sharp reversal in the last quarter of 2018 as the MSCI ACWI was down nearly (13.0%) for the quarter, and down (8.9%) for the year. Despite global equities producing their worst calendar year returns since 2008, U.S. equity valuations are still in the top decile relative to history, and non-U.S. equity valuations are in-line with historical levels. Broad U.S. and international bond markets were generally flat, and the more equity-like bonds (high yield and emerging market debt) produced negative returns in 2018 as credit spreads rose above their historical average late in the year. As of year-end, the market sentiment towards taking on growth risk turned negative for the first time since 2016. The Fed increased the federal fund rate three times in 2018 and ended the year between 2.25% and 2.50%, Fiscal policy, monetary policy, and economic fundamentals were all drivers of returns within the global capital markets during the year, and these various aspects will continue to be interrelated. Throughout the complicated market conditions of the past few years, with its constant review and oversight, the Board continues to position SJCERA for competitive long-term performance consistent with its objectives.

Strategic Asset Allocation
In 2015, SJCERA completed an extensive review of its strategic allocation. The 2015 asset allocation was designed to reduce the dependency on the global public equity risk premium through the addition of a risk reducing class that is expected to correlate negatively with public equities during crisis periods. The 2015 strategic allocation was fully implemented by 2016, and as a result, SCJERA's portfolio was appropriately positioned for the fourth quarter of 2018 as the

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M

MEMORANDUM

Global Equity portfolio declined by (12.9%), net of fees, while the Crisis Risk Offset portfolio appreciated 2.8% over that period. Going into 2019, Meketa and SJCERA are going to conduct a asset-liability study with the intention of adopting a Functional Framework to structuring the portfolio that make the portfolio more transparent and the underlying risks that drive the behavior of the portfolio more easily understood. Periodic reviews of the strategic asset allocation and investment policies are performed on a regular basis. The move to the new strategic asset allocation should improve the likelihood of the plan accomplishing its primary financial objective: to earn a long-term return that, coupled with projected contributions, is projected to be sufficient to attain full funding in the long term while avoiding substantial deterioration in funded status along the way.

Gross of Fees Investment Performance as of December 31, 2018:

	Annualized			
Asset Class	1-Year	3-Year	5-Year	10-Year
Global Equity	**-9.1**	**7.6**	**4.0**	**9.2**
MSCI World Index	-8.9	7.2	4.8	10.0
Private Appreciation	**14.8**	**11.9**	**13.2**	**4.5**
MSCI ACWI +2% (lagged)	12.5	16.3	11.4	10.9
Stable Fixed Income	**2.3**	**3.8**	**4.2**	**6.5**
Bloomberg BC US Aggregate Index	0.0	2.1	2.5	3.5
Credit	**3.0**	**5.4**	**4.8**	**5.7**
Custom Credit Benchmark[1]	4.1	6.7	4.8	7.8
Risk Parity	**-6.0**	**5.6**	**1.9**	**---**
ICE BofA Merrill Lynch 3 Month T-Bill +4%	5.9	5.1	4.6	---
CRO℠	**0.2**	**0.0**	**7.6**	**12.2**
CRO℠ Benchmark[2]	-0.4	1.5	3.8	3.1
Cash	**1.1**	**0.9**	**0.5**	**0.3**
ICE BofA Merrill Lynch 3 Month T-Bill	1.9	1.0	0.6	0.4
Total Fund, Gross of Fees	**-1.4**	**6.0**	**4.5**	**7.1**
Total Fund, Net of Fees	-2.1	5.2	3.6	6.3
Policy Benchmark[3]	0.2	6.4	5.1	7.3

[1] Asset Class performance is lagged one quarter
[2] 50% Bloomberg Barclays High Yield, 50% S&P Leveraged Loans
[3] (1/3) BB Long Duration Treasuries, (1/3) BTOP50 Index, (1/3) 5% Annual
[4] The Policy Benchmark currently consists of: 36% MSCI ACWI, 11% MSCI ACWI +2% (lagged), 10% Bloomberg Barclays US Aggregated, 14% Custom Credit, 14% BofA Merrill Lynch 3 Month US T-Bills +4%, 15% CRO℠ Benchmark

Sincerely,

Meketa Investment Group

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503 226 1050 fax 503 226 7702 www.meketagroup.com

ASSET ALLOCATION AS OF DECEMBER 31, 2018

	INVESTMENT	ACTUAL ALLOCATION	TARGET ALLOCATION
Global Public Equities	$ 822,935,436	29.0%	30.0%
Stable Fixed Income	295,492,803	10.4%	10.0%
Credit	317,627,170	11.3%	14.0%
Risk Parity	368,268,349	13.1%	14.0%
Private Appreciation	387,844,390	13.6%	12.0%
Crisis Risk Offset (CRO)	509,350,711	18.0%	20.0%
Short Term Investments / Cash / Cash Equivalents	129,822,581	4.6%	0.0%
TOTAL	$ 2,831,341,440	100.0%	100.0%

LIST OF LARGEST ASSETS HELD

LARGEST STOCK HOLDINGS (BY FAIR VALUE)
December 31, 2018

	SHARES	STOCKS	FAIR VALUE
1	1,798,201	CF Blackrock Russell 1000 Index Fund	$ 344,450,056
2	1,687,187	CF Panagora Diversified Ltd Ser III Sub-Ser 6	185,574,511
3	6,790,385	CF Blackrock MSCI World Ex-US Index A Fund	122,769,758
4	25,025	CF Bridgewater Pure Alpha II LLC FD	88,554,214
5	59,873	Stone Harbor Leveraged Loan B Shr	69,665,803
6	773,503	CF Blackrock Russell 2000 Growth Fund	31,698,885
7	2,287,396	CF Blackrock Developed Ex-US Real Estate Index Fund	26,744,538
8	15,234	American Tower Corp	2,409,866
9	10,678	Simon Property Group Inc Com	1,793,797
10	16,494	Crown Castle Intl Corp New Com	1,791,743

A complete list of the stock holdings is available upon request.

LARGEST BOND HOLDINGS (BY FAIR VALUE)
December 31, 2018

	PAR	BONDS	FAIR VALUE
1	25,000,000	United States Treas Bds Dtd 00246 3% Due 11-15-2045 Reg	$ 24,948,250
2	25,500,000	United States Treas Bds Dtd 00247 2.5% Due 02-15-2046 Reg	23,021,732
3	20,100,000	United States Treas Nts Dtd 683 1.625% Due 02-15-2026 Reg	18,815,489
4	37,700,000	United States Treas Bd Stripped Prin Pmt 02-15-2044 Reg	17,498,493
5	15,900,000	United States Treas Bds 3.125% Due 11-15-2041 Reg	16,279,485
6	9,850,000	United States Treas Bds 5.500 Due 08-15-2028 Reg	12,168,601
7	9,100,000	United States Treas Bds Dtd 05-16-2011 4.375 Due 05-15-2041 Reg	11,200,107
8	7,500,000	United States Treas Bds 00202 4.75% Due 02-15-2037 Reg	9,558,690
9	18,000,000	United States Gov Natl Treas Bd Stripped Prin Pmt 4.375 05-15-2040	9,557,352
10	1,013,236	MFO Stone Hbr Invt Fds Emerging Mkts Debt Fd Instl Cl	9,291,376

A complete list of the bond holdings is available upon request.

SCHEDULE OF INVESTMENT FEES

	2018
INVESTMENT MANAGEMENT FEES	
Global Public Equities	$ 1,719,517
Stable Fixed Income	1,026,460
Credit	3,985,460
Risk Parity	1,442,587
Private Appreciation	5,796,818
Credit Risk Offset (CRO)	5,340,242
Short Term Investments / Cash / Cash Equivalents	137,169
	$ 19,448,253
OTHER INVESTMENT FEES AND EXPENSES	
Custodian Fees	$ 176,581
Investment Consultant Fees	320,417
Investment Legal Fees	60,555
Miscellaneous Investment Expense	507,619
	$ 1,065,172
TOTAL INVESTMENT EXPENSES	$ 20,513,425
SECURITIES LENDING FEES	
Securities Lending Fees and Interest Expense	$ 1,417,907
TOTAL INVESTMENT FEES AND EXPENSES	$ 21,931,332

SCHEDULE OF FEES AND COMMISSIONS

For the year ended December 31, 2018

RANK	BROKER	COMMISSIONS PAID	PERCENTAGE OF TOTAL COMMISSIONS
1	Tourmaline Partners, LLC	$ 6,505.14	11.05%
2	J.P. Morgan Securities, LLC / JPMC	4,092.16	6.95%
3	Goldman, Sachs & Co.	3,457.65	5.87%
4	Jones Trading Institutional Services, LLC	3,074.49	5.22%
5	Northern Trust Securities, Inc.	2,443.40	4.15%
6	Citigroup Global Markets, Inc.	2,234.84	3.80%
7	Liquidnet, Inc.	1,974.91	3.35%
8	UBS Securities, LLC	1,805.06	3.07%
9	Cantor Fitzgerald & Co.	1,754.00	2.98%
10	Green Street Trading, LLC	1,357.68	2.31%
11	Others[1]	30,173.67	51.25%
		$ 58,873.00	100.00%

[1] Includes approximately 70 additional firms each with less than 2.3% of total commissions.

INVESTMENT SUMMARY

		FAIR VALUE DECEMBER 31, 2018	PERCENTAGE OF MARKET VALUE
GLOBAL PUBLIC EQUITIES			
BlackRock MSCI World Ex-US	$	122,769,759	4.3%
BlackRock R1000 Index-Large Cap Core		344,450,056	12.2%
BlackRock R2000 Growth Index		31,698,885	1.1%
Blackrock RE Dev EX US		26,744,538	0.9%
Capital Prospects – Small Cap Value		36,516,581	1.3%
Invesco REIT		34,724,975	1.2%
PIMCO RAE FUNDAMENTAL (Research Affiliates) Emerging		93,070,726	3.3%
PIMCO RAE FUNDAMENTAL (Resarch Affiliates) International		132,959,916	4.7%
TOTAL GLOBAL PUBLIC EQUITIES	$	822,935,436	29.0%
STABLE FIXED INCOME			
Dodge & Cox – Fixed	$	99,094,213	3.5%
Double Line – MBS		92,144,449	3.3%
Prima – Mortgage Inv. Trust		104,254,141	3.6%
TOTAL STABLE FIXED INCOME	$	295,492,803	10.4%
CREDIT			
Crestline – Opportunity Fund II	$	27,336,349	1.0%
Medley Capital – Opportunity Fund II		25,084,274	0.9%
Mesa West III		7,343,703	0.3%
Mesa West IV		24,121,888	0.9%
Raven Capital – Fund II		15,674,659	0.6%
Raven Capital – Fund III		34,553,233	1.2%
Stone Harbor Bank Loan		56,954,028	2.0%
Stone Harbor – Absolute Return		79,221,603	2.7%
White Oak Summit		47,337,433	1.7%
TOTAL CREDIT	$	317,627,170	11.3%
RISK PARITY			
Bridgewater All-Weather	$	182,693,838	6.5%
PanAgora Diversified Risk		185,574,511	6.6%
TOTAL RISK PARITY	$	368,268,349	13.1%
PRIVATE APPRECIATION			
Almanac Realty	$	8,513,823	0.3%
Angelo Gordon & Co.		16,640,553	0.6%
Colony Realty Parners III		13,079,940	0.5%
Colony Realty Parners IV		20,274,955	0.7%
Greenfield V		460,102	0.0%
Greenfield VI		2,466,857	0.1%
Greenfield VII		18,909,826	0.7%
Greenfield VIII		8,087,110	0.3%
Miller Global Fund V		479,363	0.0%

(Continued on page 67)

INVESTMENT SUMMARY

		FAIR VALUE DECEMBER 31, 2018	PERCENTAGE OF MARKET VALUE
PRIVATE APPRECIATION			
Miller Global Fund VI		1,444,128	0.1%
Miller Global Fund VII		890,555	0.0%
Morgan Creek III		11,295,387	0.4%
Morgan Creek V		10,719,487	0.4%
Morgan Creek VI		18,802,997	0.7%
Oaktree Middle Market		11,141,759	0.4%
Ocean Avenue II		38,921,090	1.4%
Ocean Avenue III		35,561,776	1.3%
Principal US Property		32,188,260	1.1%
Prologis / AMB Propery		61,718,760	2.1%
RREEF America II		50,008,625	1.7%
Stockbridge Value Fund II		13,136,195	0.4%
Walton Street Fund V		6,868,799	0.2%
Walton Street Fund VI		6,234,042	0.2%
TOTAL PRIVATE APPRECIATION	$	387,844,390	13.6%
CRISIS RISK OFFSET (CRO)			
AQR Style Premia	$	36,740,956	1.2%
Bridgewater Pure Alpha		88,554,214	3.1%
Dodge & Cox Long Duration		169,230,426	6.0%
Graham Tactical Trend		69,408,937	2.5%
Mount Lucas - Managed Futures		77,534,602	2.8%
PE Diversified Global Macro / Almond Global		67,881,576	2.4%
TOTAL CRISIS RISK OFFSET (CRO)	$	509,350,711	18.0%
TOTAL INVESTMENT AT FAIR VALUE	$	2,701,518,859	
SHORT TERM INVESTMENTS / CASH / CASH EQUIVALENTS			
Parametric PIOS	$	4,750,547	0.2%
STIF – Northern Trust		125,072,034	4.4%
TOTAL SHORT TERM INVESTMENTS	$	129,822,581	4.6%
TOTAL	$	2,831,341,440	100.0%

LIST OF INVESTMENT MANAGERS

CREDIT

Crestline Associates
Medley Capital
Mesa West Capital
Raven Capital Management
Stone Harbor Investment Partners
White Oak Global Advisors

CRISIS RISK OFFSET

AQR Capital Management
Bridgewater Associates (Pure Alpha)
Dodge & Cox Investment Managers (Long Duration)
Graham Capital Management
Mount Lucas Management
PE Global, LLC

GLOBAL PUBLIC EQUITIES

BlackRock Institutional Trust Co.
Capital Prospects
Invesco Advisers Inc.
PIMCO RAE Fundamental Funds

PRIVATE APPRECIATION

Almanac Realty Investors
Angelo Gordon & Co.
Colony Realty Partners

PRIVATE APPRECIATION (CONT.)

Deutsche Asset & Wealth Management (RREEF)
Greenfield Acquistion Partners
Miller Global Properties
Morgan Creek Capital Management
Oaktree Middle Market
Ocean Avenue Capital Partners
Principal Financial Group
Prologis
Stockbridge Value Fund
Walton Street Capital

RISK PARITY

Bridgewater Associates (All Weather)
PanAgora Asset Management Inc.

SHORT TERM INVESTMENTS / CASH / CASH EQUIVALENTS

Parametric Portfolio Associates, LLC
STIF - Northern Trust Company

STABLE FIXED INCOME

Dodge & Cox Investment Managers (Fixed Income)
DoubleLine Capital
Prima Capital Advisors

ACTUARIAL

CHEIRON *Classic Values, Innovative Advice*

June 25, 2019

Retirement Board of San Joaquin
County Employees' Retirement Association
6 South El Dorado Street, Suite 400
Stockton, CA 95202

Actuarial Certification

Dear Members of the Board:

This is the Actuary's Certification Letter for the Actuarial Section of the Comprehensive Annual Financial Report (CAFR) for the San Joaquin County Employees' Retirement Association (the Plan) as of December 31, 2018. This letter includes references to two documents produced by Cheiron for the Plan: the Actuarial Valuation Report as of January 1, 2018 (August 1, 2018) and the GASB 67/68 Report as of December 31, 2018 (May 15, 2019).

Actuarial Valuation Report as of January 1, 2018

The purpose of the annual Actuarial Valuation Report as of January 1, 2018 is to determine the actuarial funding status of the Plan on that date and to calculate recommended contribution rates for the participating employers and Plan members for the year 2019. The prior review was conducted as of January 1, 2017, and included recommended contribution rates for the year 2018.

Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost and expected administrative expenses) plus a level percentage of payroll to amortize the unfunded actuarial liability (UAL). As of the valuation date (January 1, 2018), the amortization period is 21 years for half of the 2008 investment loss and 15 years for the remaining UAL as of January 1, 2014. Any unexpected change in the UAL occurring after January 1, 2014 is amortized over a closed 15-year period.

The funding objective of the Plan is to accumulate sufficient assets over each Member's working life to provide for Plan benefits after termination of employment or retirement. For actuarial valuation purposes, Plan assets are valued at Actuarial Value, with adjustments for certain Special Reserves. Under this method, the assets used to determine employer contribution rates take into account market value by spreading all investment gains and losses (returns above or below expected returns) over a period of five years, limited by a corridor that restrains the Actuarial Value to within 20% of the market value of assets.

The Board of Retirement is responsible for establishing and maintaining the funding policy of the Plan.

www.cheiron.us 1.877.CHEIRON (243.4766)

ACTUARY'S CERTIFICATION LETTER

Board Members
June 25, 2019
Page 2

We prepared the following schedules, which we understand will be included in the Actuarial Section of the CAFR, based on the January 1, 2018 actuarial valuation. All historical information prior to the January 1, 2013 actuarial valuation shown in these schedules is based on information reported by EFI Actuaries, which was acquired by Cheiron in January 2013.

- Summary of Actuarial Assumptions and Methods
- Schedule of Active Member Valuation Data
- Schedule of Retirees and Beneficiaries Valuation Data
- Retirants and Beneficiaries Added to and Removed from Retiree Payroll
- Solvency Test
- Actuarial Value of Assets and Reserves
- Summary of Plan Provisions

We reviewed the actuarial assumptions shown in the schedules and found them to be reasonably appropriate for use under the Plan. The assumptions used in this report reflect the results of an Experience Study performed by Cheiron covering the period from January 1, 2013 through December 31, 2015, and approved by the Board. The assumptions used in the most recent valuation are intended to produce results that, in the aggregate, reasonably approximate the anticipated future experience of the Plan. The next experience analysis is expected to cover the years through 2018.

This actuarial valuation report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice. In particular, the assumptions and methods used for funding purposes meet the requirements of the Actuarial Standards of Practice, in particular Standards No. 4, 27, 35, and 44.

GASB 67/68 Report as of December 31, 2018

The purpose of GASB 67/68 Report as of December 31, 2018, is to provide accounting and financial reporting information under GASB 67 for the Plan and under GASB 68 for the County of San Joaquin and other participating employers. This report is not appropriate for other purposes, including the measurement of funding requirements for the Plan.

For financial reporting purposes, the Total Pension Liability is based on the January 1, 2018, actuarial valuation updated to the measurement date of December 31, 2018. There were no significant events between the valuation date and the measurement date so the update procedures only included the addition of service cost and interest cost offset by actual benefit payments.

Beginning of year measurements are based on the actuarial valuation as of January 1, 2017. The December 31, 2017, Total Pension Liability presented in the GASB 67/68 Report was based

CHEIRON

Board Members
June 25, 2019
Page 3

upon the same data, plan provisions, actuarial methods, and assumptions as were used in the Actuarial Valuation Report as of January 1, 2017. The December 31, 2018, Total Pension Liability presented in the GASB 67/68 Report was based upon the same data, plan provisions, actuarial methods, and assumptions as were used in the Actuarial Valuation Report as of January 1, 2018.

Please refer to our GASB 67 report as of December 31, 2018, for additional information related to the financial reporting of the System. We prepared the following schedules for inclusion in the Financial Section of the CAFR based on the December 31, 2018, GASB 67/68 report:

- Change in Net Pension Liability
- Sensitivity of Net Pension Liability to Changes in Discount Rate
- Schedule of Changes in Net Pension Liability and Related Ratios
- Schedule of Employer Contributions
- Notes to the Schedule of Employer Contributions

The GASB 67 report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in the GASB 67 report. The report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice. In particular, the assumptions and methods used for disclosure purposes have been prepared in accordance with our understanding of generally accepted accounting principles as promulgated by the GASB.

Disclaimers

In preparing our reports, we relied on information (some oral and some written) supplied by the San Joaquin County Employees' Retirement Association. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and, changes in plan provisions or applicable law.

Cheiron's reports were prepared solely for the Plan for the purposes described herein, except that the Plan and participating employers' auditors may rely on these reports solely for the purpose of completing an audit related to the matters herein. Other users of these reports are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

CHEIRON

ACTUARY'S CERTIFICATION LETTER

Board Members
June 25, 2019
Page 4

We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. These reports do not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

Respectfully Submitted,
Cheiron

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CHEIRON

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial assumptions and methods are both recommended by our actuaries, Cheiron, and adopted by the Board of Retirement on an annual basis. The most current Actuarial Valuation was conducted on January 1, 2018 for the period ending December 31, 2017.

An Experience Analysis is completed once every three years. The most recent Experience Analysis was conducted on November 1, 2016 for the years 2013 through 2015.

ACTUARIAL COST METHOD	Entry Age Normal Cost Method
UNFUNDED LIABILITY	The excess of the Actuarial Liability over Plan assets is the Unfunded Actuarial Liability (UAL). Half the actuarial loss experienced in 2008 was deemed to be an Extraordinary Actuarial Loss. Thus, 50% of the loss is separately amortized as a level percentage of pay over a closed 30-year period, with 21 years remaining as of January 1, 2018. The remainder of the Plan's UAL as of January 1, 2014 is being amortized over a closed 19 year period (15 years remaining as of January 1, 2018), decreasing by one year in each annual valuation report. All subsequent unexpected change in the UAL after January 1, 2014 is amortized over a 15 year closed period, beginning from the date the change is measured.
VALUATION INTEREST RATE	The annual rate of return on all Plan assets is assumed to be 7.25%, net of investment expenses.
INFLATION ASSUMPTION	2.90% per annum
ADMINISTRATIVE EXPENSES	Administrative expenses are assumed to be $4,628,096 for the next year, to be split between employees and employers based on their share of the overall contributions. Expenses are expected to growth with the cost of living (by 2.90% per year).
POST RETIREMENT COLA	Benefits are assumed to increase after retirement at the rate of 2.6% per year.
INCREASES IN PAY	Assumed pay increases for active members consist of increases due to base salary adjustments plus service-based increases due to longevity and promotion. Rates vary by age and classification (See *Salary Scale Schedule*).
ASSET VALUATION METHOD	The Plan uses a modified market-related value method called the Actuarial Value of Plan Assets. The fair value of assets is adjusted to recognize, over a five-year period, differences between actual investment earnings and the assumed investment return. Accordingly, only 20% of this difference is being recognized in any one year (See Actuarial Value of Assets Schedule). The actuarial value of assets is limited to no less than 80% and no more than 120% of the fair value.
HEALTHY MEMBER MORTALITY	Mortality rates for active members are based on the sex distinct CALPERS Preretirement Non-Industrial Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.

(*Continued on page 75*)

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

HEALTHY MEMBER MORTALITY (CONT.)	Mortality rates for healthy annuitants are based on the sex distinct CALPERS Healthy Annuitant Mortality Table, with a partial credibility adjustment of 1.10 for Safety members, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for active members who die in the line-of-duty are based on the sex distinct CALPERS Preretirement Industrial Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.
DISABLED MEMBER MORTALITY	Mortality rates for Safety disabled annuitants are based on the sex distinct CALPERS Industrially Disabled Annuitant Mortality Table, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries. Mortality rates for General disabled annuitants are based on the sex distinct CALPERS Non-Industrially Disabled Annuitant Mortality Table, with a partial credibility adjustment of 1.05, with generational mortality improvements projected from 2009 using Projection Scale MP-2015, published by the Society of Actuaries.
VESTED TERMINATION RATES	Rates vary by service and classification (See Probabilities of Separation Schedule).
WITHDRAWAL RATES	Rates vary by service and classification (See Probabilities of Separation Schedule).
DISABILITY RATES	Rates vary by age, gender and classification (See Probabilities of Separation Schedule).
DUTY DISABILITY RATES	Rates vary by age, gender and classification (See Probabilities of Separation Schedule).
SERVICE RETIREMENT RATES	Rates vary by age, service, gender and classification (See Probabilities of Separation Schedule).
FAMILY COMPOSITION	55% of female members and 75% of male members are assumed to be married. Male members are assumed to be four years older than their spouses. Female members are assumed to be two years younger than their spouses.
VESTED TERMINATIONS	No terminations are assumed for participants who are eligible for retirement. 60% of all General Member terminations with less than five years of service are a assumed to take a refund of contributions, as well as 30% of those with five to fourteen years of service. 60% of all Safety Member terminations with less than five years of service are assumed to take a refund of contributions and 10% of those between five and fourteen years are assumed to take a refund. For General Members who terminate with a deferred benefit, 25% are assumed to go to work with a reciprocal employer. This rate is 50% for Safety Members.
DEFERRAL AGE FOR VESTED TERMINATORS	Vested terminated General Members are assumed to begin receiving benefits at age 58 terminated. Safety Members are assumed to begin receiving benefits at age 50.
EMPLOYMENT STATUS	No future transfers among member groups are assumed.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

ACTUARIAL VALUATION DATE	PLAN TYPE	MEMBERS	ANNUAL PAYROLL	AVERAGE ANNUAL SALARY	AVERAGE SALARY INCREASE
	General	5,180	315,202,954	60,850	5.49%
	Safety	900	67,127,759	74,586	3.14%
01/01/2009	TOTAL	6,080	$ 382,330,713	$ 62,883	5.28%
	General	4,990	320,526,792	64,234	5.56%
	Safety	925	70,801,157	76,542	2.62%
01/01/2010	TOTAL	5,915	391,327,949	66,159	5.21%
	General	4,643	308,183,424	66,376	3.33%
	Safety	830	64,817,396	78,093	2.03%
01/01/2011	TOTAL	5,473	373,000,820	68,153	3.01%
	General	4,441	298,308,687	67,172	1.20%
	Safety	813	64,041,814	78,772	0.87%
01/01/2012	TOTAL	5,254	362,350,501	68,967	1.19%
	General	4,492	301,505,122	67,120	-0.08%
	Safety	803	64,386,900	80,183	1.79%
01/01/2013	TOTAL	5,295	365,892,022	69,101	0.19%
	General	4,748	316,885,044	66,741	-0.57%
	Safety	805	65,640,055	81,540	1.69%
01/01/2014	TOTAL	5,553	382,525,099	68,886	-0.31%
	General	4,879	322,836,680	66,169	-0.86%
	Safety	827	68,491,483	82,819	1.57%
01/01/2015	TOTAL	5,706	391,328,163	68,582	-0.44%
	General	5,131	340,731,847	66,407	0.36%
	Safety	793	66,456,278	83,804	1.19%
01/01/2016	TOTAL	5,924	407,188,125	68,735	0.22%
	General	5,291	373,202,798	70,535	6.22%
	Safety	811	67,593,920	83,346	-0.55%
01/01/2017	TOTAL	6,102	440,796,718	72,238	5.10%
	General	5,370	381,151,442	70,978	0.63%
	Safety	848	70,776,611	83,463	0.14%
01/01/2018	TOTAL	6,218	$ 451,928,053	$ 72,681	0.61%

Payroll figures represent year end monthly retirement benefits annualized and exclude Post-Employment Healthcare benefit and benefits under the Class Action Settlement. The most current Actuarial Valuation was conducted on January 1, 2018 for the period ending December 31, 2017. The information in subsequent years is currently not available.

SCHEDULE OF RETIREES AND BENEFICIARIES VALUATION DATA

ACTUARIAL VALUATION DATE	PLAN TYPE	MEMBER RETIREMENTS	BENEFICIARY CONTINUANCE	MEMBERS AND BENEFICIARIES REMOVED	TOTAL RETIREES ON PAYROLL	ANNUAL RETIREMENT PAYROLL	AVERAGE ANNUAL ALLOWANCE	AVERAGE ALLOWANCE % INCREASE
	General	203	30	83	3,388	$ 71,488,335	$ 21,100	4.8%
	Safety	50	10	18	710	$ 30,575,540	$ 43,064	5.0%
01/01/2009	TOTAL	253	40	101	4,098	$ 102,063,875	$ 24,906	5.0%
	General	207	31	104	3,522	78,988,070	22,427	6.3%
	Safety	24	7	11	730	32,575,964	44,625	3.6%
01/01/2010	TOTAL	231	38	115	4,252	111,564,034	26,238	5.3%
	General	242	35	102	3,697	85,931,078	23,243	3.6%
	Safety	65	5	8	792	36,354,738	45,902	2.9%
01/01/2011	TOTAL	307	40	110	4,489	122,285,816	27,241	3.8%
	General	240	42	108	3,871	92,938,361	24,009	3.3%
	Safety	32	4	14	814	38,098,866	46,805	2.0%
01/01/2012	TOTAL	272	46	122	4,685	131,037,227	27,970	2.7%
	General	278	27	135	4,041	102,025,575	25,248	5.2%
	Safety	52	12	20	856	42,008,598	49,075	4.9%
01/01/2013	TOTAL	330	39	155	4,897	144,034,173	29,413	5.2%
	General	213	52	134	4,172	109,864,971	26,334	4.3%
	Safety	22	11	20	869	43,546,661	50,111	2.1%
01/01/2014	TOTAL	235	63	154	5,041	153,411,632	30,433	3.5%
	General	247	51	112	4,358	120,722,240	27,701	5.2%
	Safety	29	14	21	891	45,889,472	51,503	2.8%
01/01/2015	TOTAL	276	65	133	5,249	166,611,712	31,742	4.3%
	General	228	45	136	4,494	129,928,957	28,912	4.4%
	Safety	54	15	19	941	50,813,875	54,000	4.9%
01/01/2016	TOTAL	282	60	155	5,435	180,742,832	33,255	4.8%
	General	251	40	128	4,657	139,511,334	29,957	3.6%
	Safety	40	12	22	971	54,508,607	56,137	4.0%
01/01/2017	TOTAL	291	52	150	5,628	194,019,941	34,474	3.7%
	General	249	49	149	4,806	149,183,295	31,041	3.6%
	Safety	46	12	13	1,016	57,837,517	56,927	1.4%
01/01/2018	TOTAL	295	61	162	5,822	$ 207,020,812	$ 35,558	3.1%

Payroll figures represent year end monthly retirement benefits annualized and exclude Post-Employment. Healthcare benefit and benefits under the Class Action Settlement. The most current Actuarial Valuation was conducted on January 1, 2018 for the period ending December 31, 2017. The information in subsequent years is currently not available.

RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM RETIREE PAYROLL

	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS AT YEAR END			
FISCAL YEAR	MEMBER COUNT	ANNUAL ALLOWANCE (IN 000'S)[1]	MEMBER COUNT	ANNUAL ALLOWANCE (IN 000'S)	MEMBER COUNT	ANNUAL ALLOWANCE (IN 000'S)	% INCREASE IN RETIREE ALLOWANCE	AVERAGE ANNUAL ALLOWANCE
2012	361	$ 16,400	(149)	$ (3,403)	4,897	$ 144,034	5.16%	$ 29,413
2013	297	12,908	(153)	(3,530)	5,041	153,412	3.47%	30,433
2014	340	16,230	(132)	(3,030)	5,249	166,612	4.30%	31,742
2015	341	17,766	(155)	(3,651)	5,435	180,737	4.77%	33,255
2016	343	17,151	(150)	(3,868)	5,628	194,020	3.66%	34,474
2017	355	17,288	(161)	(4,287)	5,822	207,021	3.15%	35,558
2018	382	$ 19,839	(151)	$ (3,893)	6,053	$ 222,967	3.59%	$ 36,836

[1] Includes COLA amounts not included in previous year's Annual Allowance totals.

SOLVENCY TEST

(DOLLARS IN THOUSANDS)								
	ACTUARIAL ACCRUED LIABILITY							
ACTUARIAL VALUATION DATE	(1) ACTIVE MEMBERS CONTRIBUTIONS	(2) RETIREES AND BENEFICIARIES	(3) ACTIVE MEMBERS (EMPLOYER FINANCED PORTION)	TOTAL ACTUARIAL ACCRUED LIABILITY	ACTUARIAL VALUE OF ASSETS	PORTION OF ACCRUED LIABILITIES COVERED BY REPORTED ASSETS (1)	(2)	(3)
1/1/2009	$ 176,236	$ 1,231,648	$ 1,103,042	$ 2,510,926	$ 1,821,357	100%	100%	37.0%
1/1/2010	187,987	1,373,257	1,208,368	2,769,612	1,949,011	100%	100%	32.0%
1/1/2011	193,613	1,495,665	1,228,410	2,917,688	2,120,384	100%	100%	35.0%
1/1/2012	202,925	1,627,338	1,218,058	3,048,321	2,130,053	100%	100%	25.0%
1/1/2013	209,987	1,810,776	1,332,531	3,353,294	2,125,700	100%	100%	8.0%
1/1/2014	258,198	1,956,931	1,346,730	3,561,859	2,285,166	100%	100%	5.0%
1/1/2015	276,818	2,117,010	1,337,806	3,731,634	2,471,291	100%	100%	6.0%
1/1/2016	297,179	2,347,908	1,361,303	4,006,390	2,604,473	100%	98%	0.0%
1/1/2017	318,021	2,513,640	1,403,433	4,235,094	2,733,852	100%	96%	0.0%
1/1/2018	$ 344,504	$ 2,706,791	$ 1,445,681	$ 4,496,976	$ 2,913,161	100%	95%	0.0%

This schedule excludes Post 4/1/82 Retiree Class Action Settlement Reserve and Unapportioned Earnings Reserve. The most current Actuarial Valuation was conducted on January 1, 2018 for the period ending December 31, 2017. The information in subsequent years is currently not available.

SCHEDULE OF FUNDING PROGRESS DEFINED BENEFIT PENSION PLAN

FOR THE LAST TEN FISCAL YEARS ENDED DECEMBER 31

(DOLLARS IN THOUSANDS)

ACTUARIAL VALUATION DATE	ACTUARIAL VALUE OF ASSETS[1] (A)	ACTUARIAL LIABILITY (AL) (B)	UNFUNDED ACTUARIAL LIABILITY (UAL) (B-A)	FUNDED RATIO (A/B)	COVERED PAYROLL[2] (C)	UAL AS A PERCENTAGE OF ANNUAL COVERED PAYROLL ((B-A)/C)
1/1/2018	$ 2,913,161	$ 4,496,976	$ 1,583,815	64.8%	$ 458,991	345.1%
1/1/2017	2,733,852	4,235,094	1,501,242	64.6%	447,685	335.3%
1/1/2016	2,604,473	4,006,390	1,401,917	65.0%	413,552	339.0%
1/1/2015	2,471,291	3,731,634	1,260,343	66.2%	397,636	317.0%
1/1/2014	2,285,166	3,561,859	1,276,693	64.2%	388,691	328.5%
1/1/2013	2,125,700	3,353,294	1,227,594	63.4%	365,892	335.5%
1/1/2012	2,130,053	3,048,321	918,268	69.9%	356,419	257.6%
1/1/2011	2,120,384	2,917,688	797,304	72.7%	367,344	217.0%
1/1/2010	1,949,011	2,769,612	820,601	70.4%	385,442	212.9%
1/1/2009	$ 1,821,357	$ 2,510,925	$ 689,568	72.5%	$ 377,559	182.6%

[1] The actuarial value of assets reflects the smoothing method that adjusts fair value differences between the assumed and the actual investment return over a 5-year period.

[2] Represents the annualization of active members' pay rates on December 31 as determined by the actuarial study.

ASSUMED PROBABILITIES OF SEPARATION FROM ACTIVE MEMBERSHIP (GENERAL)

AGE	NON-DUTY DEATH	ORDINARY DISABILITY	SERVICE RETIREMENT[1]	DUTY DEATH	DUTY DISABILITY
GENERAL MEMBERS - MALE					
20	0.0002	0.000	0.000	0.000	0.001
25	0.0003	0.001	0.000	0.000	0.001
30	0.0005	0.001	0.000	0.000	0.001
35	0.0005	0.001	0.000	0.000	0.001
40	0.0007	0.001	0.000	0.000	0.004
45	0.0009	0.002	0.000	0.000	0.004
50	0.0014	0.002	0.040	0.000	0.002
55	0.0022	0.003	0.085	0.000	0.002
60	0.0034	0.003	0.150	0.000	0.002
65	0.0046	0.004	0.250	0.000	0.002
GENERAL MEMBERS - FEMALE					
20	0.0002	0.000	0.000	0.000	0.000
25	0.0002	0.001	0.000	0.000	0.000
30	0.0003	0.001	0.000	0.000	0.000
35	0.0004	0.001	0.000	0.000	0.001
40	0.0005	0.001	0.000	0.000	0.001
45	0.0006	0.002	0.000	0.000	0.001
50	0.0010	0.002	0.035	0.000	0.001
55	0.0015	0.003	0.035	0.000	0.002
60	0.0021	0.004	0.125	0.000	0.002
65	0.0029	0.005	0.250	0.000	0.003

[1] Lower rates assumed for members with less than 10 years of service, and higher rates assumed for members with at least 30 years of service.

The probabilities for each cause of separation represent the likelihood that a given member will separate at a particular age for the indicated reason. As an example, if the probability of separation of a male General member at age 50 is 0.040, that indicates that 4.0% of active General members are expected to separate from service during the year. Rates of Duty and Non-Duty Death are for active members who reach the given age during 2017.

ASSUMED PROBABILITIES OF SEPARATION FROM ACTIVE MEMBERSHIP (SAFETY)

AGE	NON-DUTY DEATH	ORDINARY DISABILITY	SERVICE RETIREMENT[1]	DUTY DEATH	DUTY DISABILITY
SAFETY MEMBERS - MALE					
20	0.0002	0.000	0.000	0.000	0.000
25	0.0003	0.000	0.000	0.001	0.001
30	0.0005	0.000	0.000	0.001	0.001
35	0.0005	0.000	0.000	0.001	0.002
40	0.0007	0.000	0.000	0.001	0.004
45	0.0009	0.000	0.050	0.001	0.008
50	0.0014	0.001	0.150	0.001	0.014
55	0.0022	0.001	0.300	0.001	0.014
SAFETY MEMBERS - FEMALE					
20	0.0002	0.000	0.000	0.000	0.000
25	0.0002	0.000	0.000	0.001	0.001
30	0.0003	0.000	0.000	0.001	0.001
35	0.0004	0.000	0.000	0.001	0.002
40	0.0005	0.000	0.000	0.001	0.004
45	0.0006	0.000	0.050	0.001	0.009
50	0.0010	0.001	0.150	0.001	0.014
55	0.0015	0.001	0.300	0.002	0.014

[1] Lower rates assumed for members with less than 20 years of service.

The probabilities for each cause of separation represent the likelihood that a given member will separate at a particular age for the indicated reason. As an example, if the probability of separation of a male Safety member at age 50 is 0.150, that indicates that 15.0% of active Safety members are expected to separate from service during the year.

SALARY INCREASE, TERMINATION, AND WITHDRAWAL ASSUMPTIONS

YEARS OF SERVICE	SALARY INCREASE		WITHDRAWAL		TERMINATION	
	GENERAL	SAFETY	GENERAL	SAFETY	GENERAL[1]	SAFETY[2]
0	0.0934	0.1037	0.105	0.060	0.070	0.040
1	0.0831	0.0934	0.066	0.047	0.044	0.031
2	0.0728	0.0831	0.060	0.035	0.040	0.023
3	0.0624	0.0728	0.047	0.030	0.031	0.020
4	0.0521	0.0624	0.041	0.027	0.027	0.018
5	0.0470	0.0547	0.019	0.002	0.044	0.018
6	0.0418	0.0444	0.018	0.002	0.042	0.016
7	0.0392	0.0444	0.014	0.002	0.032	0.014
8	0.0367	0.0444	0.014	0.002	0.032	0.014
9	0.0367	0.0444	0.011	0.002	0.026	0.014
10	0.0367	0.0444	0.011	0.001	0.026	0.007
11	0.0367	0.0444	0.008	0.001	0.019	0.007
12	0.0367	0.0444	0.008	0.001	0.019	0.007
13	0.0367	0.0444	0.008	0.001	0.018	0.007
14	0.0367	0.0444	0.008	0.001	0.018	0.007
15	0.0367	0.0444	0.003	0.000	0.023	0.008
16	0.0367	0.0444	0.003	0.000	0.023	0.008
17	0.0367	0.0444	0.003	0.000	0.023	0.008
18	0.0367	0.0444	0.003	0.000	0.023	0.008
19	0.0367	0.0444	0.003	0.000	0.023	0.008
20	0.0367	0.0444	0.001	0.000	0.009	0.000
21	0.0367	0.0444	0.001	0.000	0.009	0.000
22	0.0367	0.0444	0.001	0.000	0.009	0.000
23	0.0367	0.0444	0.001	0.000	0.009	0.000
24	0.0367	0.0444	0.001	0.000	0.009	0.000
25	0.0367	0.0444	0.001	0.000	0.009	0.000
26	0.0367	0.0444	0.001	0.000	0.009	0.000
27	0.0367	0.0444	0.001	0.000	0.009	0.000
28	0.0367	0.0444	0.001	0.000	0.009	0.000
29	0.0367	0.0444	0.001	0.000	0.009	0.000
30+	0.0315	0.0444	0.000	0.000	0.000	0.000

[1] 25% of General Terminations are assumed to be reciprocal.

[2] 50% of Safety Terminations are assumed to be reciprocal.

ACTUARIAL VALUE OF ASSETS AND RESERVES

The Actuarial Value of Assets represents a "smoothed" value developed by the actuary to reduce contribution volatility, which could develop due to short-term fluctuations in the Market Value of Assets. For this System, the Actuarial Value of Assets is calculated by recognizing the deviation of actual investment returns compared to the expected return over a five-year period.

The dollar amount of the expected return on the Market Value of Assets is determined using the actual contributions, administrative expense, and benefit payments during the year. Any difference between this amount and the actual investment earnings is considered a gain or loss. However, in no event will the Actuarial Value of Assets be less than 80% or more than 120% of market value on the valuation date. The following table shows the development of the actuarial asset value.

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS AS OF JANUARY 1, 2018

YEAR	(A) CONTRIBUTIONS	(B) BENEFITS	(C) ADMIN. EXPENSE	(D) HEALTHCARE FUND TRANSFER	(E) EXPECTED RETURN	(F) ACTUAL RETURN	(G)=(F)−(E) ADDITIONAL EARNINGS	(H) NOT RECOGNIZED	(I)=(G)X(H) UNRECOGNIZED EARNINGS
2014	$164,054,041	$165,870,971	$4,042,986	$19,968,779	$176,895,311	$110,728,303	$(66,167,008)	20%	$(13,233,402)
2015	179,398,457	181,468,912	4,075,745	378,969	184,778,322	(47,339,751)	(232,118,073)	40%	(92,847,229)
2016	189,239,931	194,719,177	4,369,744	293,779	178,243,779	151,114,788	(27,128,991)	60%	(16,277,396)
2017	233,686,648	205,406,970	4,118,578	364,714	189,960,353	299,960,693	110,000,340	80%	88,000,272

(1)	Total Unrecognized Dollars		(34,357,755)
(2)	Fair Value of Assets as of December 31, 2017		2,879,288,631
(3)	Preliminary Actuarial Value of Assets as of December 31, 2017: [(2) – (1)]		2,913,646,386
(4)	Corridor Limits		
	a. 80% of Net Fair Value		2,303,430,905
	b. 120% of Net Fair Value		3,455,146,357
(5)	Actuarial Value of Assets after Corridor		2,913,646,386
(6)	Ratio of Actuarial Value to Market Value [(5) ÷ (2)]		101.19%
(7)	Market Stabilization Designation [(2) – (5)]		(34,357,755)
(8)	Special (Non Valuation) Reserves:		
	Class Action Settlement – Post 4/1/1982		485,100
	Contingency		0
	Undistributed Earnings Reserve		0
	Total Special Reserves		485,100
(9)	ACTUARIAL VALUE OF ASSETS FOR THE FUNDING RATIO: [(5) – (8)*(6)]	$	2,913,161,286
(10)	ADDITIONAL COUNTY CONTRIBUTION RESERVE	$	20,385,011
(11)	ACTUARIAL VALUE OF ASSETS USED FOR CALCULATING THE EMPLOYER CONTRIBUTION RATES: [(9) – (10)]	$	2,892,776,276

SUMMARY OF MAJOR PLAN PROVISIONS

MEMBERSHIP

Membership is mandatory upon appointment to a full-time, permanent position with the County or other participating employer. Persons who commence covered employment at age 60 or older may irrevocably elect to waive membership in SJCERA.

Tier 1 - Employees who established and maintain membership in SJCERA prior to January 1, 2013, and other eligible employees as defined by law, participate in the defined benefit formula that was in place before January 1, 2013, termed “SJCERA Tier 1.”

Tier 2 - Employees who establish membership in SJCERA on or after January 1, 2013, who are subject to the provisions of the Public Employees' Pension Reform Act of 2013 (Article 4 (commencing with Section 7522, et seq.) of Chapter 21 of Division 7 of Title 1 of the Government Code), also known as “PEPRA,” participate in the defined benefit formula prescribed by PEPRA for these employees, termed “SJCERA Tier 2.”

FINAL AVERAGE SALARY

For Tier 1 members, final compensation for purposes of computing a retirement allowance is the average monthly salary for the highest twelve consecutive months of employment. In addition to base salary, final compensation may include other items defined as compensation earnable for retirement purposes. Overtime pay is excluded.

For Tier 2 members, final compensation for purposes of computing a retirement allowance is the average monthly salary for the highest thirty-six consecutive months of employment. In addition to base salary, final compensation may include other items defined as pensionable compensation. Allowances, incentives, employer contributions to deferred compensation, annual leave cash outs and overtime pay are excluded.

CONTRIBUTIONS

Member contributions are based upon membership category, General or Safety, are expressed as a percentage of covered payroll, and are deducted from employees' earnings on a biweekly basis. Collective bargaining agreements and employment resolutions may also specify terms that affect members' retirement contributions.

Tier 1 members pay contributions also based upon the age at which the employee entered SJCERA membership. General members of Tier 1 employed prior to March 7, 1973, and all Safety members of Tier 1 stop paying member contributions when they have 30 years of service credit, but continue to accrue retirement service credit for subsequent active employment subject to membership.

Tier 2 members pay contributions equal to one-half of the normal cost of their applicable benefits.

Member contributions are credited with interest semi-annually. Upon termination of employment prior to retirement, a member may elect to withdraw his or her accumulated member contributions and interest, terminating SJCERA membership and forfeiting all related rights and benefits.

VESTING

A member with five years of retirement service credit is vested in the plan as long as accumulated member contributions remain on deposit with SJCERA.

SERVICE RETIREMENT

TIER 1 MEMBERS:

For retirements effective January 1, 2001 and later, retirement benefits are as provided under Sections 31676.14 and 31664.1 of the County Employees' Retirement Law.

A Tier 1 member may retire for service at age 50 or older with five years of service credit, and at least ten years has elapsed since the date of membership. A General Member may retire at any age with 30 or more years of service. A Safety Member may retire at any age with 20 or more years of service.

Tier 1 provides a 2.6 percent of final compensation for each year of service credit at age 62 benefit formula for General Members, and a 3.0 percent of final compensation for each year of service credit at age 50 benefit formula for safety members of Tier 1. Social Security integration reduces benefits by one-third on the first $350 of monthly final average salary. The maximum benefit payable is the lesser of 100 percent of final average salary or the federal annual compensation limit under Internal Revenue Code Section 401(a)(17), if applicable.

TIER 2 MEMBERS:

Tier 2 Members – Retirement benefits are as provided under Sections 7522.20 and 7522.25(d) of PEPRA.

A Tier 2 member may retire for service with five years of service credit upon attaining the minimum retirement age: Age 52 for General Members, and Age 50 for Safety Members.

Tier 2 provides a 2 percent of final compensation for each year of service credit at age 62 benefit formula for General Members, and a 2.7 percent of final compensation for each year of service credit at age 57 benefit formula for Safety Members. PEPRA specifies the maximum annual compensation that may be used to calculate retirement benefits. A lower limit applies to members whose service under SJCERA is also covered by Social Security, and a higher limit applies to members whose service under SJCERA is not covered by Social Security. These limits are adjusted annually based on changes in the Consumer Price Index.

Any member of SJCERA, regardless of benefit tier, may retire at age 70 with no minimum service credit requirement.

DISABILITY RETIREMENT

Members with five years of service credit, regardless of age, are eligible to apply for a non-service connected disability retirement. If granted, the benefit is the greater of:

1) 1.5% of final average salary for General Members, or 1.8% for final average salary for Safety Members, for each year of service, not to exceed 33 1/3% of final average salary, or
2) the amount of the member's service retirement benefit, if the member is eligible to retire for service.

Any active member, regardless of years of service credit, is eligible to apply for a service-connected disability retirement. If granted, the benefit is the greater of:

1) 50% of the member's final average salary, or
2) the amount of the member's service retirement benefit, if the member is eligible to retire for service.

DEATH BENEFITS

Basic Death Benefit - The beneficiary of a member who dies prior to attaining five years of credited service receives a refund of the member's accumulated contributions and interest plus one month's salary for each full year of service, up to a maximum of six months' salary.

If the death occurs after the member attained five years of credited service and is not the result of a service-related injury or disease, the surviving spouse or minor children may elect to receive, in lieu of the Basic Death Benefit, either 60% of the retirement allowance to which the deceased member would have been entitled had the member retired for service or non-service-connected disability on the date of death, or a lump sum payment of six months' salary and a reduced monthly retirement benefit. The monthly allowance payable to a minor child is discontinued when the child marries or attains age 18, or age 22 if a full-time student.

Upon the death of a retiree, the beneficiary may receive a continuance of 100%, 60%, or 50% of the deceased member's retirement benefit as determined by the type of retirement and benefit option elected by the member. The beneficiary also receives a $5,000 lump-sum death benefit.

COST-OF-LIVING BENEFITS

All monthly allowances are eligible for an annual cost-of-living adjustment (COLA) based on the change in the Consumer Price Index (CPI) for the San Francisco-Oakland-San Jose area for the previous calendar year, up to a maximum of 3.0%. When the CPI exceeds 3.0% in any year, the difference between the actual change in CPI (rounded to the nearest one-half percent) and the 3.0% ceiling is "accumulated" for future years when the change is less than 3.0%.

STATISTICAL

SUMMARY OF STATISTICAL DATA

This section of the Comprehensive Annual Financial Report provides additional historical perspective, context, and detail in order to provide a more comprehensive understanding of this year's financial statements, note disclosures, and supplementary information.

This section provides supplementary information according to Governmental Accounting Standards Board (GASB) Statement No. 44, which establishes and modifies required data by providing multi-year trend information to provide an understanding of how the organization's financial activities and positions have changed over time. The Statistical Information is presented to include two main categories required by pension plans: Financial Trends Information and Operating Information.

FINANCIAL TRENDS

Ten-year Trend Information is presented to assist users in understanding how the Plan's financial position has changed over time and provides historical information as to total plan net position and total changes in plan net position, the Plan's additions by source, deductions by type, benefits and refunds by type (service retirement, disability retirement, survivors/beneficiaries benefits, refunds and death benefits).

OPERATING INFORMATION

Operating Information is intended to provide information about operations and resources to assist readers in using financial statement information to understand and assess a government's economic condition. The following schedules present the average monthly benefit, average final salary, organized in five-year increments of credit service and since retirement, as well as the participating employers and their corresponding covered employees.

SCHEDULE OF FIDUCIARY NET POSITION

For the last ten fiscal years ended December 31

	(DOLLARS IN THOUSANDS)									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
ASSETS										
Cash and Cash Equivalents	$ 210,876	$ 185,216	$ 225,343	$ 226,912	$ 250,500	$ 169,701	$ 208,032	$ 195,648	$ 183,531	$ 233,929
Receivables	13,747	8,862	10,524	8,930	12,081	28,491	11,152	9,587	34,581	14,516
Investments	2,701,519	2,773,701	2,463,816	2,328,265	2,371,380	2,256,908	2,054,715	1,851,212	1,842,483	1,588,186
Prepaid Expenses	85	90	127	112	86	82	101	91	75	70
Equipment and Fixtures, Net	212	74	116	192	315	427	487	572	635	729
TOTAL ASSETS	$2,926,439	$2,967,943	$2,699,926	$2,564,411	$2,634,362	$2,455,610	$2,274,487	$2,057,110	$2,061,305	$1,837,430
LIABILITIES										
Securitites Lending – Cash Collateral	$ 81,063	$ 86,901	$ 141,349	$ 147,106	$ 164,195	$ 107,127	$ 108,958	$ 104,691	$ 113,171	$ 108,791
Securities Purchased, Not Paid	2,418	173	2,542	2,739	1,671	5,433	3,783	1,455	16,858	5,878
Accrued Expenses and Other Payables	1,723	1,475	1,170	1,306	2,138	1,538	1,329	1,019	1,278	1,080
Securities Lending Interest and Other Expense	193	105	63	17	8	-	2	-	12	7
TOTAL LIABILITIES	$ 85,397	$ 88,654	$ 145,124	$ 151,168	$ 168,012	$ 114,097	$ 114,072	$ 107,165	$ 131,319	$ 115,756
FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS	$2,841,042	$2,879,289	$2,554,802	$2,413,243	$2,466,350	$2,341,513	$2,160,415	$1,949,945	$1,929,986	$1,721,674

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION

For the last ten fiscal years ended December 31

	(DOLLARS IN THOUSANDS)									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
ADDITIONS										
Member Contributions	$ 35,378	$ 33,635	$ 30,117	$ 29,027	$ 27,368	$ 22,690	$ 19,900	$ 14,041	$ 13,098	$ 13,013
Employer Contributions:										
Retirement Plan	208,758	200,052	159,123	150,372	136,686	119,494	108,063	112,892	104,452	97,806
Post-Employment Health Plan	-	-	-	-	-	-	-	0	0	4,202
Investment Income	(56,466)	299,882	151,031	(47,449)	110,651	198,173	230,954	29,262	217,123	182,006
Miscellaneous	68	78	84	109	77	72	62	68	46	12
Transfers Between Plan	324	365	294	379	19,969	204	339	154	166	84
TOTAL ADDITIONS	$188,062	$534,012	$340,649	$132,438	$294,751	$340,633	$359,317	$156,417	$ 334,885	$ 297,123
DEDUCTIONS										
Benefits	$ 219,079	$ 203,109	$ 192,732	$ 179,585	$ 164,335	$ 154,233	$ 143,669	$ 131,642	$ 121,641	$ 112,647
Post-Employment Health Benefits	-	-	0	0	0	0	0	0	0	3,431
Administrative Expenses	4,865	4,119	4,370	4,076	4,043	4,135	3,869	3,749	3,682	3,527
Refunds	2,365	2,298	1,987	1,884	1,536	1,169	1,309	1,068	1,251	1,038
Miscellaneous	0	0	0	0	0	0	0	0	0	0
Transfers Between Plan	0	0	0	0	0	-	-	-	-	84
TOTAL DEDUCTIONS	$226,309	$209,526	$199,089	$185,545	$169,914	$159,537	$148,848	$136,459	$ 126,573	$ 120,727
CHANGE IN FIDUCIARY NET POSITION	$ (38,247)	$ 324,486	$ 141,560	$ (53,107)	$ 124,837	$ 181,096	$ 210,469	$ 19,958	$ 208,312	$ 176,396

SCHEDULE OF REVENUE BY SOURCE AND EXPENSES BY TYPE

SCHEDULE OF REVENUE BY SOURCE

YEAR ENDED	MEMBER CONTRIBUTIONS	EMPLOYER CONTRIBUTIONS		INVESTMENT INCOME (LOSS)	MISC	TRANSFER BETWEEN PLANS	TOTAL
		RETIREMENT PLAN	POST-EMPLOYMENT HEALTH PLAN				
2009	$ 13,012,755	$ 97,805,585	$ 4,202,490	$182,006,435	$ 12,091	$ 84,032	$297,123,388
2010	13,098,043	104,451,673	0	217,123,404	46,407	165,625	334,885,152
2011	14,040,773	112,891,701	0	29,262,231	68,107	154,232	156,417,044
2012	19,900,088	108,062,510	0	230,953,847	61,657	339,344	359,317,446
2013	22,689,882	119,494,319	0	198,172,396	72,467	204,375	340,633,439
2014	27,367,908	136,686,133	0	110,651,111	77,192	19,968,779	294,751,123
2015	29,026,901	150,371,556	0	(47,449,240)	109,490	378,969	132,437,676
2016	30,117,408	159,122,523	0	151,031,174	83,614	293,779	340,648,498
2017	33,634,906	200,051,742	0	299,882,451	78,242	364,714	534,012,055
2018	35,377,951	208,757,572	0	(56,465,738)	68,140	324,269	188,062,194

SCHEDULE OF EXPENSES BY TYPE

YEAR ENDED	BENEFITS	POST-EMPLOYMENT HEALTH BENEFITS	ADMINISTRATIVE EXPENSES	REFUNDS	MISC	TRANSFER BETWEEN PLANS	TOTAL
2009	$ 112,646,911	$ 3,430,517	$ 3,527,196	$ 1,038,467	$ 0	$ 84,032	$120,727,123
2010	121,640,992	0	3,681,545	1,250,644	0	0	126,573,181
2011	131,641,539	0	3,748,948	1,067,734	0	0	136,458,221
2012	143,669,140	0	3,869,321	1,308,900	0	0	148,847,361
2013	154,232,885	0	4,134,716	1,168,934	0	0	159,536,535
2014	164,335,273	0	4,042,986	1,535,698	0	0	169,913,957
2015	179,585,136	0	4,075,745	1,883,777	0	0	185,544,658
2016	192,732,311	0	4,369,744	1,986,866	0	0	199,088,921
2017	203,109,466	0	4,118,578	2,297,504	0	0	209,525,548
2018	219,078,954	0	4,865,082	2,364,713	0	0	226,308,749

SCHEDULE OF BENEFIT EXPENSES BY TYPE

YEAR END	PLAN TYPE	SERVICE RETIREMENT PAYROLL	DISABILITY RETIREMENT PAYROLL	SURVIVORS AND BENEFICIARIES	REFUNDS OF MEMBERS CONTRIBUTIONS	DEATH BENEFITS	TOTAL
	General	$ 65,145,084	$ 6,712,540	$ 7,129,980	$ 914,476	$ 517,085	$ 80,419,165
	Safety	21,763,980	7,311,808	3,500,406	123,289	45,000	32,744,483
2009	TOTAL	$ 86,909,064	$ 14,024,348	$ 10,630,386	$ 1,037,765	$ 562,085	$ 113,163,648
	General	$ 71,097,399	$ 7,044,294	$ 7,789,890	$ 1,159,876	$ 511,293	$ 87,602,752
	Safety	24,861,690	7,618,760	3,874,365	90,768	0	36,445,583
2010	TOTAL	$ 95,959,089	$ 14,663,054	$ 11,664,255	$ 1,250,644	$ 511,293	$ 124,048,335
	General	$ 77,067,730	$ 7,136,889	$ 8,549,504	$ 1,016,661	$ 537,007	$ 94,307,791
	Safety	26,462,625	7,889,616	3,963,168	51,073	35,000	38,401,482
2011	TOTAL	$ 103,530,355	$ 15,026,505	$ 12,512,672	$ 1,067,734	$ 572,007	$ 132,709,273
	General	$ 82,676,254	$ 9,694,257	$ 8,823,169	$ 1,150,943	$ 503,221	$ 102,847,844
	Safety	27,151,058	10,311,212	4,405,737	157,957	104,232	42,130,196
2012	TOTAL	$ 109,827,312	$ 20,005,469	$ 13,228,906	$ 1,308,900	$ 607,453	$ 144,978,040
	General	$ 95,109,549	$ 5,667,332	$ 8,876,109	$ 900,756	$ 572,733	$ 111,126,479
	Safety	31,116,346	8,938,667	3,912,149	268,178	40,000	44,275,339
2013	TOTAL	$ 126,225,895	$ 14,605,999	$ 12,788,257	$ 1,168,934	$ 612,733	$ 155,401,817
	General	$ 100,668,155	$ 8,493,931	$ 9,401,576	$ 1,427,885	$ 548,606	$ 120,540,152
	Safety	31,407,516	9,555,857	4,184,681	107,813	74,951	45,330,819
2014	TOTAL	$ 132,075,671	$ 18,049,788	$ 13,586,257	$ 1,535,698	$ 623,557	$ 165,870,971
	General	$ 110,694,430	$ 8,608,271	$ 9,864,262	$ 1,584,403	$ 449,742	$ 131,201,108
	Safety	35,096,063	10,179,970	4,580,169	299,374	112,229	50,267,805
2015	TOTAL	$ 145,790,493	$ 18,788,241	$ 14,444,431	$ 1,883,777	$ 561,971	$ 181,468,913
	General	$ 118,912,565	$ 8,650,277	$ 10,544,504	$ 1,840,117	$ 563,769	$ 140,511,232
	Safety	38,262,562	10,660,155	5,083,479	146,749	55,000	54,207,945
2016	TOTAL	$ 157,175,127	$ 19,310,432	$ 15,627,983	$ 1,986,866	$ 618,769	$ 194,719,177
	General	$ 126,046,097	$ 8,807,111	$ 10,729,415	$ 2,108,790	$ 656,206	$ 148,347,619
	Safety	40,336,132	11,088,325	5,401,180	188,714	45,000	57,059,351
2017	TOTAL	$ 166,382,229	$ 19,895,436	$ 16,130,595	$ 2,297,504	$ 701,206	$ 205,406,970
	General	$ 137,812,569	$ 9,134,223	$ 11,265,536	$ 1,975,078	$ 565,401	$ 160,752,807
	Safety	42,762,050	11,814,374	5,667,301	389,635	57,500	60,690,860
2018	TOTAL	$ 180,574,619	$ 20,948,597	$ 16,932,837	$ 2,364,713	$ 622,901	$ 221,443,667

SCHEDULE OF RETIRED MEMBERS BY TYPE

ACTUARIAL VALUATION DATE	PLAN TYPE	MEMBERS WITH SERVICE RETIREMENTS	MEMBERS WITH DISABILITY RETIREMENTS	SURVIVORS AND BENEFICIARIES	TOTAL
	General	2,547	355	486	3,388
	Safety	409	183	118	710
01/01/2009	TOTAL	2,956	538	604	4,098
	General	2,654	373	495	3,522
	Safety	420	184	126	730
01/01/2010	TOTAL	3,074	557	621	4,252
	General	2,799	383	515	3,697
	Safety	469	188	135	792
01/01/2011	TOTAL	3,268	571	650	4,489
	General	2,946	381	544	3,871
	Safety	485	190	139	814
01/01/2012	TOTAL	3,431	571	683	4,685
	General	3,113	387	541	4,041
	Safety	514	195	147	856
01/01/2013	TOTAL	3,627	582	688	4,897
	General	3,227	388	557	4,172
	Safety	516	199	154	869
01/01/2014	TOTAL	3,743	587	711	5,041
	General	3,385	393	580	4,358
	Safety	524	205	162	891
01/01/2015	TOTAL	3,909	598	742	5,249
	General	3,506	390	598	4,494
	Safety	554	210	177	941
01/01/2016	TOTAL	4,060	600	775	5,435
	General	3,655	399	603	4,657
	Safety	572	215	184	971
01/01/2017	TOTAL	4,227	614	787	5,628
	General	3,789	402	615	4,806
	Safety	600	221	195	1,016
01/01/2018	TOTAL	4,389	623	810	5,822

Figures are extracted from actuarial reports which include individuals receiving divorce settlement payments.
The most current Actuarial Valuation was conducted as of January 1, 2018 for the period ending December 31, 2017.
The information in subsequent years is currently not available.

SCHEDULE OF AVERAGE MONTHLY BENEFIT PAYMENTS BY NUMBER OF YEARS OF CREDITED SERVICE

	NUMBER OF YEARS OF COUNTY SERVICE CREDIT						
RETIREMENT EFFECTIVE DATE	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2012							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 517	$ 1,077	$ 1,481	$ 2,129	$ 2,729	$ 4,198	$ 6,317
Average Final Compensation	$ 7,532	$ 5,925	$ 5,233	$ 4,900	$ 5,338	$ 6,449	$ 7,295
Count	19	31	56	36	42	30	44
SAFETY MEMBERS							
Average Benefits	$ 429	$ 2,194	$ 3,026	$ 4,186	$ 5,302	$ 9,183	$ 13,206
Average Final Compensation	$ 6,793	$ 5,812	$ 6,636	$ 8,124	$ 7,306	$ 13,360	$ 13,606
Count	4	5	7	3	14	11	5
Survivors / DROs							
GENERAL MEMBERS							
Average Benefits	$ 331	$ 1,189	$ 1,017	$ 1,525	$ 1,274	$ 3,105	$ 2,783
Average Final Compensation	$ 4,482	$ 3,558	$ 2,664	$ 2,604	$ 3,639	$ 4,794	$ 3,940
Count	4	4	8	3	1	2	4
SAFETY MEMBERS							
Average Benefits	$ 0	$ 1,039	$ 2,423	$ 3,450	$ 3,573	$ 3,206	$ 4,887
Average Final Compensation	$ 0	$ 6,972	$ 7,561	$ 1,358	$ 1,776	$ 3,836	$ 6,169
Count	0	2	2	2	1	3	2
2013							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 433	$ 1,410	$ 1,589	$ 2,556	$ 3,149	$ 4,241	$ 5,837
Average Final Compensation	$ 7,695	$ 7,279	$ 5,787	$ 6,125	$ 6,132	$ 6,467	$ 6,718
Count	10	25	40	35	35	26	29
SAFETY MEMBERS							
Average Benefits	$ 1,165	$ 1,435	$ 2,621	$ 3,501	$ 4,260	$ 11,134	$ 9,279
Average Final Compensation	$ 9,478	$ 7,434	$ 6,316	$ 7,044	$ 5,599	$ 13,945	$ 9,670
Count	3	2	7	4	1	2	2
Survivors / DROs							
GENERAL MEMBERS							
Average Benefits	$ 687	$ 1,000	$ 883	$ 1,182	$ 2,063	$ 1,572	$ 2,985
Average Final Compensation	$ 3,804	$ 4,531	$ 3,953	$ 3,163	$ 3,722	$ 1,821	$ 3,681
Count	6	9	15	7	5	2	5
SAFETY MEMBERS							
Average Benefits	$ 650	$ 3,101	$ 1,385	$ 2,012	$ 1,918	$ 3,745	$ 4,936
Average Final Compensation	$ 4,955	$ 10,868	$ 2,506	$ 3,966	$ 2,525	$ 6,184	$ 5,381
Count	3	1	2	1	2	1	1

SCHEDULE OF AVERAGE MONTHLY BENEFIT PAYMENTS BY NUMBER OF YEARS OF CREDITED SERVICE

	NUMBER OF YEARS OF COUNTY SERVICE CREDIT						
RETIREMENT EFFECTIVE DATE	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2014							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 461	$ 1,237	$ 1,775	$ 2,567	$ 4,363	$ 4,570	$ 6,392
Average Final Compensation	$ 8,494	$ 6,593	$ 5,772	$ 6,380	$ 7,652	$ 6,782	$ 7,760
Count	13	28	50	46	26	43	39
SAFETY MEMBERS							
Average Benefits	$ 1,715	$ 2,429	$ 3,207	$ 4,546	$ 3,993	$ 7,239	$ 11,302
Average Final Compensation	$ 7,439	$ 6,281	$ 6,826	$ 8,863	$ 6,031	$ 8,897	$ 11,762
Count	2	3	5	5	4	7	1
Survivors / DROs							
GENERAL MEMBERS							
Average Benefits	$ 478	$ 1,016	$ 1,007	$ 935	$ 2,002	$ 1,153	$ 2,941
Average Final Compensation	$ 5,752	$ 4,218	$ 2,698	$ 2,835	$ 4,914	$ 2,966	$ 8,069
Count	12	6	13	4	6	1	5
SAFETY MEMBERS							
Average Benefits	$ 2,030	$ 2,464	$ 2,890	$ 3,326	$ 3,002	$ 3,282	$ 0
Average Final Compensation	$ 9,251	$ 8,582	$ 5,516	$ 4,818	$ 2,992	$ 4,429	$ 0
Count	2	3	4	1	2	2	0
2015							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 319	$ 969	$ 1,877	$ 2,334	$ 3,290	$ 4,418	$ 5,705
Average Final Compensation	$ 5,983	$ 5,857	$ 6,166	$ 5,409	$ 5,854	$ 6,614	$ 6,691
Count	14	26	40	43	26	27	38
SAFETY MEMBERS							
Average Benefits	$ 585	$ 2,212	$ 3,041	$ 3,959	$ 6,341	$ 8,438	$ 10,290
Average Final Compensation	$ 7,403	$ 6,103	$ 6,469	$ 6,943	$ 8,580	$ 9,869	$ 11,511
Count	2	3	6	3	11	23	2
Survivors / DROs							
GENERAL MEMBERS							
Average Benefits	$ 576	$ 989	$ 1,002	$ 1,803	$ 3,042	$ 2,827	$ 5,276
Average Final Compensation	$ 3,420	$ 6,179	$ 3,344	$ 4,974	$ 7,108	$ 6,234	$ 5,851
Count	6	10	11	3	5	2	5
SAFETY MEMBERS							
Average Benefits	$ 530	$ 2,019	$ 2,184	$ 1,970	$ 2,767	$ 5,547	$ 5,026
Average Final Compensation	$ 6,053	$ 11,396	$ 9,909	$ 3,888	$ 3,983	$ 8,256	$ 5,406
Count	2	1	2	1	3	3	3

SCHEDULE OF AVERAGE MONTHLY BENEFIT PAYMENTS BY NUMBER OF YEARS OF CREDITED SERVICE

RETIREMENT EFFECTIVE DATE	NUMBER OF YEARS OF COUNTY SERVICE CREDIT						
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2016							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 310	$ 1,410	$ 1,816	$ 2,607	$ 3,457	$ 4,047	$ 5,986
Average Final Compensation	$ 6,616	$ 6,159	$ 6,368	$ 6,088	$ 6,269	$ 5,888	$ 7,069
Count	21	27	52	50	22	31	41
SAFETY MEMBERS							
Average Benefits	$ 3,817	$ 1,759	$ 2,546	$ 6,290	$ 5,510	$ 10,275	$ 10,494
Average Final Compensation	$ 7,634	$ 5,986	$ 6,353	$ 11,453	$ 8,566	$ 12,432	$ 11,081
Count	1	6	6	3	7	14	2
Survivors / DROs							
GENERAL MEMBERS							
Average Benefits	$ 313	$ 858	$ 1,065	$ 1,877	$ 2,207	$ 1,763	$ 2,769
Average Final Compensation	$ 5,727	$ 4,674	$ 4,527	$ 3,984	$ 7,223	$ 4,176	$ 3,314
Count	5	7	11	7	2	4	1
SAFETY MEMBERS							
Average Benefits	$ 495	$ 2,235	$ 1,253	$ 1,661	$ 4,086	$ 5,943	$ 4,712
Average Final Compensation	$ 7,339	$ 9,643	$ 3,843	$ 2,755	$ 5,646	$ 8,004	$ 4,804
Count	2	4	1	1	1	1	2
2017							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 377	$ 1,420	$ 2,070	$ 2,325	$ 3,951	$ 4,678	$ 6,187
Average Final Compensation	$ 9,793	$ 6,878	$ 6,534	$ 5,719	$ 6,851	$ 6,763	$ 7,391
Count	23	36	42	48	22	31	33
SAFETY MEMBERS							
Average Benefits	$ 787	$ 1,223	$ 2,529	$ 3,318	$ 5,973	$ 7,370	$ 9,169
Average Final Compensation	$ 9,859	$ 5,688	$ 6,385	$ 6,311	$ 9,021	$ 9,265	$ 9,050
Count	5	4	7	8	6	8	1
Survivors / DROs							
GENERAL MEMBERS							
Average Benefits	$ 678	$ 1,055	$ 1,622	$ 1,126	$ 1,850	$ 1,779	$ 5,139
Average Final Compensation	$ 5,110	$ 4,344	$ 4,225	$ 3,696	$ 4,288	$ 1,841	$ 6,188
Count	12	9	10	6	5	2	3
SAFETY MEMBERS							
Average Benefits	$ 667	$ 2,413	$ 1,292	$ 0	$ 0	$ 3,922	$ 6,511
Average Final Compensation	$ 5,605	$ 6,311	$ 3,454	$ 0	$ 0	$ 4,565	$ 2,765
Count	2	3	2	0	0	2	2

SCHEDULE OF AVERAGE MONTHLY BENEFIT PAYMENTS BY NUMBER OF YEARS OF CREDITED SERVICE

	NUMBER OF YEARS OF COUNTY SERVICE CREDIT						
RETIREMENT EFFECTIVE DATE	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
2018							
Retirees							
GENERAL MEMBERS							
Average Benefits	$ 596	$ 1,166	$ 1,759	$ 2,671	$ 3,522	$ 5,202	$ 6,036
Average Final Compensation	$ 9,601	$ 6,704	$ 5,920	$ 6,603	$ 6,555	$ 7,633	$ 6,975
Count	21	45	47	55	25	33	39
SAFETY MEMBERS							
Average Benefits	$ 2,721	$ 2,622	$ 2,166	$ 3,313	$ 3,997	$ 7,453	$ 10,935
Average Final Compensation	$ 5,485	$ 8,987	$ 6,168	$ 6,135	$ 6,442	$ 9,615	$ 11,725
Count	1	3	5	5	8	7	4
Survivors / DROs							
GENERAL MEMBERS							
Average Benefits	$ 224	$ 659	$ 1,201	$ 1,204	$ 2,150	$ 2,590	$ 2,759
Average Final Compensation	$ 4,220	$ 3,482	$ 5,324	$ 4,292	$ 3,513	$ 3,538	$ 4,382
Count	3	5	10	10	1	5	9
SAFETY MEMBERS							
Average Benefits	$ 0	$ 1,724	$ 3,203	$ 0	$ 1,201	$ 0	$ 6,213
Average Final Compensation	$ 0	$ 6,376	$ 4,065	$ 0	$ 3,140	$ 0	$ 4,768
Count	0	3	1	0	1	0	3

SCHEDULE OF AVERAGE MONTHLY BENEFIT PAYMENTS BY NUMBER OF YEARS SINCE RETIREMENT

GENERAL AND SAFETY MEMBERS

YEAR ENDED		NUMBER OF YEARS SINCE RETIREMENT						
		0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
	Average Benefit	$ 2,549	$ 2,408	$ 1,959	$ 1,846	$ 1,723	$ 1,527	$ 1,339
2009	Number of Retirees	1,312	1,083	729	506	307	170	145
	Average Benefit	$ 2,569	$ 2,565	$ 2,052	$ 1,972	$ 1,764	$ 1,602	$ 1,329
2010	Number of Retirees	1,384	1,153	790	502	319	185	156
	Average Benefit	$ 2,639	$ 2,564	$ 2,199	$ 2,006	$ 1,870	$ 1,743	$ 1,364
2011	Number of Retirees	1,430	1,190	838	522	333	196	$ 176
	Average Benefit	$ 2,798	$ 2,591	$ 2,473	$ 2,075	$ 1,839	$ 1,874	$ 1,376
2012	Number of Retirees	1,515	1,185	947	545	334	194	177
	Average Benefit	$ 2,840	$ 2,755	$ 2,609	$ 2,049	$ 2,029	$ 1,881	$ 1,348
2013	Number of Retirees	1,520	1,211	990	577	372	208	163
	Average Benefit	$ 2,961	$ 2,873	$ 2,706	$ 2,223	$ 2,106	$ 1,899	$ 1,477
2014	Number of Retirees	1,609	1,224	987	642	404	209	174
	Average Benefit	$ 3,139	$ 2,918	$ 2,921	$ 2,333	$ 2,221	$ 1,995	$ 1,566
2015	Number of Retirees	1,587	1,291	1,046	692	412	212	194
	Average Benefit	$ 3,254	$ 3,057	$ 2,960	$ 2,532	$ 2,285	$ 2,022	$ 1,765
2016	Number of Retirees	1,606	1,351	1,073	742	428	234	194
	Average Benefit	$ 3,178	$ 3,236	$ 3,023	$ 2,874	$ 2,350	$ 2,084	$ 1,750
2017	Number of Retirees	1,605	1,434	1,067	831	452	245	188
	Average Benefit	$ 3,259	$ 3,283	$ 3,235	$ 3,050	$ 2,353	$ 2,314	$ 1,838
2018	Number of Retirees	1,694	1,441	1,101	873	466	271	207

SCHEDULE OF AVERAGE MONTHLY BENEFIT PAYMENTS BY NUMBER OF YEARS SINCE RETIREMENT

GENERAL MEMBERS

YEAR ENDED		NUMBER OF YEARS SINCE RETIREMENT						
		0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
	Average Benefit	$ 2,278	$ 1,923	$ 1,632	$ 1,683	$ 1,524	$ 1,250	$ 1,073
2009	Number of Retirees	1,108	850	598	433	271	143	119
	Average Benefit	$ 2,269	$ 2,093	$ 1,696	$ 1,806	$ 1,549	$ 1,379	$ 1,015
2010	Number of Retirees	1,149	912	640	428	285	157	126
	Average Benefit	$ 2,349	$ 2,168	$ 1,737	$ 1,799	$ 1,649	$ 1,506	$ 1,050
2011	Number of Retirees	1,198	976	654	444	289	169	141
	Average Benefit	$ 2,456	$ 2,285	$ 1,893	$ 1,868	$ 1,614	$ 1,617	$ 1,108
2012	Number of Retirees	1,267	992	721	467	283	166	145
	Average Benefit	$ 2,572	$ 2,370	$ 2,062	$ 1,787	$ 1,855	$ 1,623	$ 1,003
2013	Number of Retirees	1,297	1,000	762	485	319	177	132
	Average Benefit	$ 2,689	$ 2,566	$ 2,133	$ 1,847	$ 1,950	$ 1,628	$ 1,158
2014	Number of Retirees	1,371	1,030	767	524	342	180	144
	Average Benefit	$ 2,821	$ 2,577	$ 2,359	$ 1,942	$ 2,036	$ 1,763	$ 1,269
2015	Number of Retirees	1,353	1,066	821	560	345	188	160
	Average Benefit	$ 2,887	$ 2,721	$ 2,483	$ 2,005	$ 2,085	$ 1,778	$ 1,428
2016	Number of Retirees	1,358	1,125	878	576	360	201	159
	Average Benefit	$ 2,884	$ 2,836	$ 2,659	$ 2,201	$ 2,112	$ 1,872	$ 1,331
2017	Number of Retirees	1,357	1,195	887	628	384	204	151
	Average Benefit	$ 2,937	$ 2,967	$ 2,767	$ 2,402	$ 2,081	$ 2,103	$ 1,422
2018	Number of Retirees	1,434	1,222	903	667	392	227	165

SCHEDULE OF AVERAGE MONTHLY BENEFIT PAYMENTS BY NUMBER OF YEARS SINCE RETIREMENT

SAFETY MEMBERS

YEAR ENDED		NUMBER OF YEARS SINCE RETIREMENT 0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
	Average Benefit	$ 4,022	$ 4,178	$ 3,453	$ 2,811	$ 3,220	$ 2,997	$ 2,553
2009	Number of Retirees	204	233	131	73	36	27	26
	Average Benefit	$ 4,033	$ 4,353	$ 3,570	$ 2,931	$ 3,567	$ 2,848	$ 2,646
2010	Number of Retirees	235	241	150	74	34	28	30
	Average Benefit	$ 4,134	$ 4,371	$ 3,841	$ 3,183	$ 3,322	$ 3,223	$ 2,633
2011	Number of Retirees	232	214	184	78	44	27	35
	Average Benefit	$ 4,543	$ 4,164	$ 4,322	$ 3,312	$ 3,086	$ 3,397	$ 2,589
2012	Number of Retirees	248	193	226	78	51	28	32
	Average Benefit	$ 4,398	$ 4,581	$ 4,437	$ 3,431	$ 3,076	$ 3,354	$ 2,813
2013	Number of Retirees	223	211	228	92	53	31	31
	Average Benefit	$ 4,526	$ 4,505	$ 4,705	$ 3,896	$ 2,968	$ 3,582	$ 3,013
2014	Number of Retirees	238	194	220	118	62	29	30
	Average Benefit	$ 4,975	$ 4,531	$ 4,975	$ 3,990	$ 3,171	$ 3,814	$ 2,964
2015	Number of Retirees	234	225	225	132	67	24	34
	Average Benefit	$ 5,266	$ 4,730	$ 5,104	$ 4,364	$ 3,345	$ 3,506	$ 3,295
2016	Number of Retirees	248	226	195	166	68	33	35
	Average Benefit	$ 4,788	$ 5,234	$ 4,819	$ 4,956	$ 3,691	$ 3,140	$ 3,459
2017	Number of Retirees	248	239	180	203	68	41	37
	Average Benefit	$ 5,030	$ 5,047	$ 5,371	$ 5,148	$ 3,795	$ 3,406	$ 3,471
2018	Number of Retirees	260	219	198	206	74	44	42

SCHEDULE OF PARTICIPATING EMPLOYERS

For the Last Ten Fiscal Years ended December 31

	2018		2017		2016		2015		2014		2013		2012	2011	2010	2009
	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2	TIER 1	TIER 2				
COUNTY OF SAN JOAQUIN																
General Members	2,750	2,473	2,962	2,050	3,205	1,717	4,614	1,416	4,864	918	5,138	507	5,379	5,308	5,476	5,712
Safety Members	563	235	596	204	622	138	800	85	861	59	881	12	901	920	945	1,026
TOTAL	3,313	2,708	3,558	2,254	3,827	1,855	5,414	1,501	5,725	977	6,019	519	6,280	6,228	6,421	6,738
SUPERIOR COURT																
General Members	184	114	194	105	202	101	255	66	263	38	269	20	289	326	357	375
Safety Members	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	184	114	194	105	202	101	255	66	263	38	269	20	289	326	357	375
LATHROP–MANTECA RURAL FIRE PROTECTION DISTRICT																
General Members	1	3	1	2	1	2	1	1	1	1	1	0	1	0	0	1
Safety Members	21	19	25	7	25	8	41	8	42	7	43	3	45	39	41	43
TOTAL	22	22	26	9	26	10	42	9	43	8	44	3	46	39	41	44
WATERLOO-MORADA RURAL FIRE PROTECTION DISTRICT																
General Members	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Safety Members	10	6	11	6	12	6	14	7	12	6	13	5	15	15	17	17
TOTAL	10	6	11	6	12	6	14	7	12	6	13	5	15	15	18	18
OTHER SPECIAL DISTRICTS (GENERAL MEMBERS)																
Tracy Public Cemetery District	2	4	2	4	2	4	5	5	5	4	6	3	6	8	7	8
SJC Mosquito & Vector Control District	21	15	23	11	26	9	30	8	32	7	38	2	38	38	37	39
SJC Historical Society & Museum	1	3	1	0	2	0	2	0	2	0	2	0	2	2	2	2
Mountain House Community Services District	4	23	6	17	6	13	10	11	9	9	13	5	16	14	14	16
Local Agency Formation Commission	0	2	0	0	0	0	0	0	0	0	1	0	1	1	2	2
San Joaquin County Law Library	1	0	1	1	1	0	1	0	1	0	2	0	2	1	1	1
TOTALS	29	47	33	33	37	26	48	24	49	20	62	10	65	64	63	68
GRAND TOTAL	3,558	2,897	3,822	2,407	4,104	1,998	5,773	1,607	6,092	1,049	6,407	557	6,695	6,672	6,900	7,243

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COMPILATION, EDITING AND REVIEW

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DESIGN AND LAYOUT

Design Forge

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