San Joaquin County Employees' Retirement Association

A PENSION TRUST FUND
OF THE COUNTY OF
SAN JOAQUIN, CALIFORNIA
AND NINE SPECIAL DISTRICTS

# Comprehensive Annual Financial Report

For the Year Ended December 31, 2016

2016

# San Joaquin County Employees' Retirement Association

A PENSION TRUST FUND OF THE
COUNTY OF SAN JOAQUIN, CALIFORNIA
AND NINE SPECIAL DISTRICTS

# 2016

# Comprehensive Annual Financial Report

For the Year Ended December 31, 2016


ISSUED BY:

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

SAN JOAQUIN COUNTY
EMPLOYEES' RETIREMENT ASSOCIATION

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SAN JOAQUIN C▲E▲R▲A

Comprehensive Annual Financial Report For the Year Ended December 31, 2016

*"If you wish to fly to new heights, begin by setting your sights on a destination you can reach and then create a flight plan, a map, that will be your guide."*
~ DEBBIE FORD

# Introduction

## Preparing for the Journey

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

June 2, 2017

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, 2016. This report is created annually to provide 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 by Ordinance No. 485, dated 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 Local Agency Formation Commission
- 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
- Tracy Public Cemetery District
- Waterloo-Morada Rural Fire Protection District

The Board of Retirement is SJCERA's governing body. It 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) as adopted by the Board of Supervisors and Board of Retirement, and the bylaws, policies, and procedures adopted by the Board.

# Introduction

## LETTER OF TRANSMITTAL

The Board of Retirement's nine trustees include four trustees appointed by the San Joaquin County Board of Supervisors, the San Joaquin County Treasurer-Tax Collector, and four trustees elected by SJCERA members (two elected by active General members, one elected by active Safety members and two elected by retired members, one of which is the alternate retired member, who (until 2017) votes only in the absence of the retired member.) With the exception of the County Treasurer, board members serve three-year terms with no term limits.

### FINANCIAL INFORMATION

SJCERA has adopted the accounting and reporting standards from the Governmental Accounting Standards Board (GASB) Statement 72, which ensures reporting of the fair value of investments, and Statement 82, which clarifies, among other things, the earnings to be included in covered payroll. Statements 72 and 82 are implemented in this report.

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 new asset allocation, designed to attain its target investment return over the long term while reducing global public equity risk and providing down side protection, became effective January 1, 2016. During 2016, staff and consultants transitioned assets, and in November, the new asset allocation was fully implemented. As part of this portfolio, the Board updated its investment policies. The most significant change was the creation of a Crisis Risk Offset (CRO) Investment Policy.The CRO policy is comprised of three equally weighted components: Long Duration, Systematic Trend Following and Alternative Risk Premia. CRO's objective is to add diversification and provide portfolio protection during market downturns.

For the year ended December 31, 2016, the portfolio gained 7.0 percent gross of fees (6.1 percent net of fees). As of December 31, 2016, SJCERA's annualized three-year gross return was 3.4 percent, the five-year annualized gross return was 6.6 percent, and the 10-year annualized gross return was 3.9 percent. These returns are below SJCERA's return assumption for each of these periods. Plan assets totaled $2.55 billion as of December 31, 2016. More information about SJCERA's investments is included in the Investments Section.

### ACTUARIAL FUNDING

SJCERA engages a professional pension actuary to perform an annual actuarial valuation of the pension plan. The results of the January 1, 2016 valuation reflect changes in assumptions adopted by the Board, the most significant of which is the reduction of the investment return assumption from 7.5 percent to 7.4 percent. Actuarial funding status is determined from a long-term, ongoing perspective. The valuation determines the progress made in accumulating sufficient assets to pay benefits when due. As of January 1, 2016, the pension plan's actuarial accrued liability increased from $3.7 billion to $4.0 billion, the actuarial value of assets increased from $2.5 billion to $2.6 billion, and the unfunded actuarial liability (UAL) increased from $1.2 billion to $1.4 billion. The funding status (ratio of plan assets to plan liabilities) decreased from 66.2 percent to 65 percent. A more detailed discussion of funding is provided in the Actuarial Section of this report.

### MAJOR INITIATIVES

The County Board of Supervisors demonstrated its commitment to the secure funding of the retirement benefit, by authorizing the County to pay more than the actuarially determined employer contribution. The additional contribution of up to five percent of payroll for the next 10 years is effective January 1, 2017. The additional contribution will be attributed to only the County share of the unfunded actuarial liability.

In November, the Board of Retirement unanimously approved amendments to SJCERA's Bylaws, which delegated to the Chief Executive Officer (CEO) personnel oversight of the Chief Investment Officer and Assistant CEO. In January 2017, I became SJCERA's third Chief Executive Officer, marking a new page in SJCERA's history. We have adopted a 2017 Action Plan, which includes important goals for the year: reducing costs, improving efficiency, investing in staff, optimizing the organizational structure and managing emerging needs. I look forward to reporting on these initiatives in our 2017 CAFR.

As part of a settlement agreement, SJCERA pays a contingent supplemental benefit to members who retired between April 1, 1982 and December 31, 2000. The benefit is funded to the extent that sufficient earnings are available. In November 2016, members were notified that the benefit would be suspended effective with their February 1, 2017 retirement benefit payment until sufficient funding is available again.

In 2015, SJCERA submitted its second remedial plan determination letter application to the Internal Revenue Service (IRS); on January 5, 2017, the IRS issued SJCERA a favorable Tax Determination Letter.

### ACHIEVEMENTS IN FINANCIAL REPORTING AND PLAN ADMINISTRATION

The Government Finance Officers Association of the United States and Canada (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, 2015. This award, reproduced on page 6, recognizes compliance with the highest standards for state and local government financial reporting.

# Introduction

## LETTER OF TRANSMITTAL

### 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 and set the course towards full funding through prudent investing. 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, 2015**

Executive Director/CEO

# Introduction

## MEMBERS OF THE BOARD OF RETIREMENT AS OF DECEMBER 31, 2016

**MICHAEL RESTUCCIA**

*Chair*
*Appointed by*
*Board of Supervisors*

**CINDY GARMAN**

*Vice-Chair*
*Elected by*
*General Members*

**RAYMOND MCCRAY**

*Secretary*
*Appointed by*
*Board of Supervisors*

**SHABBIR KHAN**

*Treasurer*
*Tax Collector*
*Ex-Officio Member*

**KATHERINE MILLER**

*Appointed by*
*Board of Supervisors*

**MICHAEL DUFFY**

*Appointed by*
*Board of Supervisors*

**ADRIAN VAN HOUTEN**

*Elected by*
*Retired Members*

**J.C. WEYDERT**

*Elected by*
*General Members*

**CHANDA BASSETT**

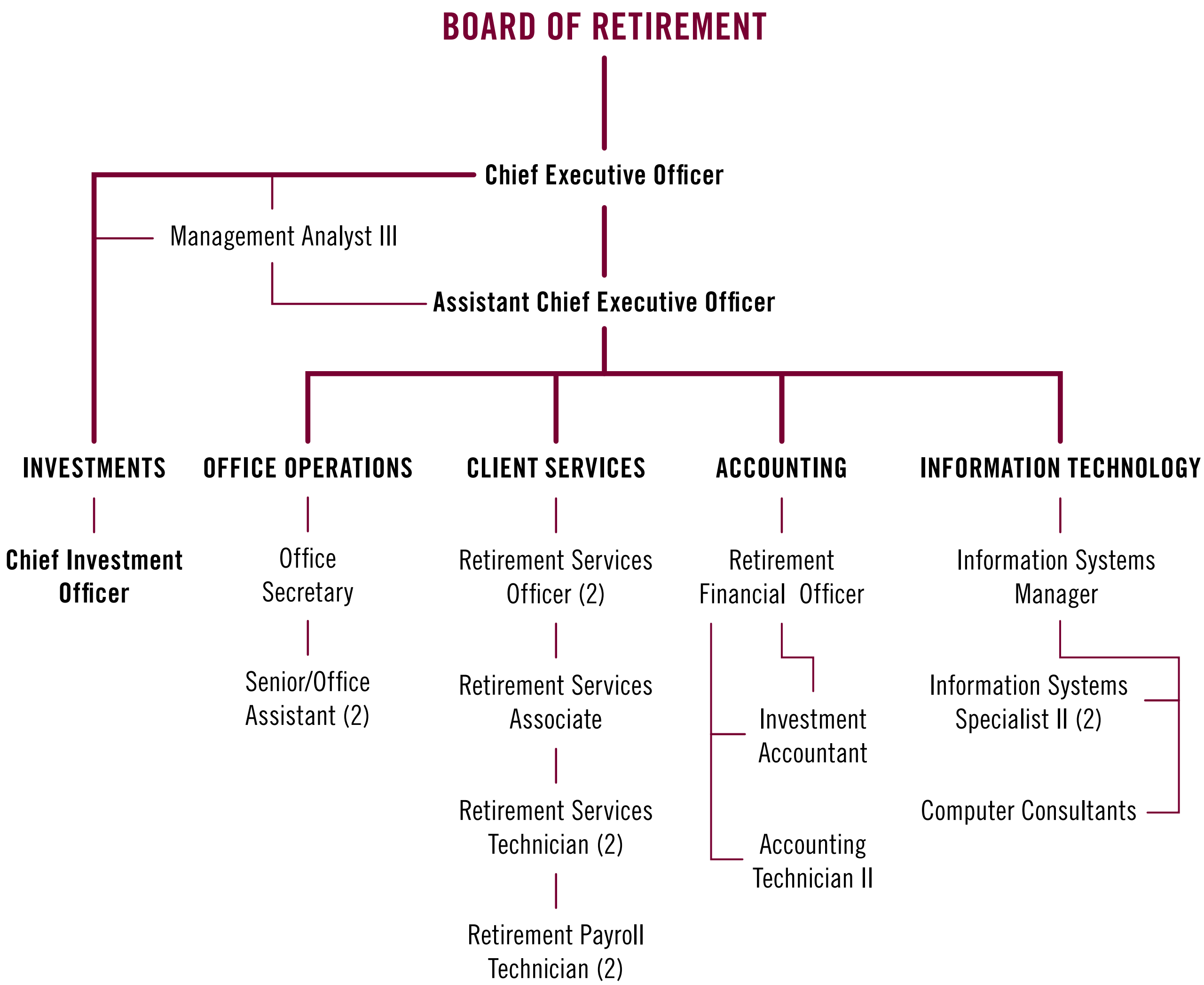
*Elected by*
*Safety Members*

**MARGO PRAUS**

*Elected by Retired*
*Members – Alternate*

## ADMINISTRATIVE ORGANIZATION CHART

# San Joaquin County Employees' Retirement Association



# Introduction

## LIST OF PROFESSIONAL CONSULTANTS

### CONSULTING SERVICES

**CUSTODIAN**

Northern Trust Company

**ACTUARY**

Cheiron Actuaries

**AUDITORS**

Brown Armstrong Accountancy Corporation

**INFORMATION SYSTEMS**

IG, Incorporated

**INVESTMENT CONSULTANTS**

Courtland Partners

Pension Consulting Alliance

**LEGAL COUNSEL**

Hanson, Bridgett, Marcus, Viahos & Rudy

Haydel and Ornellas

Morrison & Foerster

San Joaquin County Counsel

### INVESTMENT MANAGERS

**CREDIT**

Crestline Associates

Marinus Capital Advisors

Medley Capital

Mesa West Capital

Raven Capital Management

Stone Harbor Investment Partners

White Oak Global Advisors

**CRISIS RISK OFFSET**

AQR Style Premia

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.

Legato Capital Management

PIMCO RAE Fundamental Funds

**PRIVATE APPRECIATION**

Almanac Realty Investors

Angelo Gordon & Co.

Colony Realty Partners

Deutsche Asset & Wealth Management (RREEF)

Greenfield Acquistion Partners

Legacy Fund Partners

Miller Global Properties

Morgan Creek Capital Management

Ocean Avenue Capital Partners

Principal Financial Group

Prologis

Sarofim Realty Advisors

Walton Street Capital

**RISK PARITY**

Bridgewater Associates

PanAgora Asset Management Inc.

**SHORT TERM INVESTMENTS/CASH/ CASH EQUIVALENTS**

Parametric Engineered Portfolio Solutions

STIF – Northern Trust Company

**STABLE FIXED INCOME**

Dodge & Cox Investment Managers

DoubleLine Capital

Prima Capital Advisors

Note: Please refer to the Investment Section for a list of *Investment Managers* on pages 75-76 and the *Schedule of Investment Fees* on page 73.

SAN JOAQUIN
C ▲ E ▲ R ▲ A

# Comprehensive Annual Financial Report For the Year Ended December 31, 2016

*"No bird soars too high if he soars with his own wings."*
~ WILLIAM BLAKE

# Financial

## Setting out on the Pathway

BROWN ARMSTRONG
CERTIFIED PUBLIC ACCOUNTANTS

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TEL 949.652.5422

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5250 CLAREMONT AVENUE
SUITE 150
STOCKTON, CA 95207
TEL 209.451.4833

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 of the
San Joaquin County Employees' Retirement Association

### Report on the Financial Statements

We have audited the accompanying Defined Benefit Pension Plan and Post-Employment Healthcare Agency Fund Statement of Fiduciary Net Position of the San Joaquin County Employees' Retirement Association (SJCERA) as of December 31, 2016, 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 for the years ended December 31, 2016 and 2015, and the schedule of employer pension amounts allocated by the 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, 2016, listed as other information in the table of contents.

### Management's Responsibility for the Financial Statements

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

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our 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 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

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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.

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

**Opinion**

In our opinion, the financial statements and other information referred to above present fairly, in all material respects, the Fiduciary Net Position of the Defined Benefit Pension Plan and Post-Employment Healthcare Agency Fund of SJCERA as of December 31, 2016; 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 the 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, 2016, 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, 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 required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the 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 and Other 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, as listed in the table of contents, and the introductory, investment, actuarial, and statistical sections 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.

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, 2015 financial statements, and our report dated June 1, 2016, expressed an unmodified opinion on those audited financial statements. In our opinion, the summarized comparative information presented herein as of December 31, 2015, 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 June 2, 2017, 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 grant 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
June 2, 2017

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# Financial

## 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) for the year ended December 31, 2016. 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, increased by $141.6 million, or 5.87 percent, to $2.5 billion as of December 31, 2016.
- SJCERA's funding objective is to meet long-term benefit obligations through contributions and investment income. As of January 1, 2016, the date of the last actuarial valuation, the funded ratio for the actuarial accrued liability was approximately 65 percent. In general, this indicates that for every dollar of benefits liability, SJCERA has $0.65 of fiduciary net position to cover it. The portion of the pension liability attributable to inactive members (retired or deferred) is fully funded by plan assets. (Note 9c provides a more detailed explanation of recent changes in funded ratio.)
- Revenues for the year were $340.6 million, an increase of $208.2 million, or 157 percent, from the prior year's $132.4 million. The increase was mainly caused by the increase in unrealized gains in comparison to the prior year.
- Expenses for the year were $199 million, an increase of $13.5 million, or 7.30 percent, from the prior year's $185.5 million. This increase was primarily due to the $13.1 million increase in pension benefit payments to retirees.

### STATEMENT OF FIDUCIARY NET POSITION AND STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

This annual financial report consists of two financial statements:

1. The Statement of Fiduciary Net Position provides a snapshot of account balances at year-end and indicates the assets available for future payments to retirees and any current liabilities that are owed at this time. The assets, less liabilities, give the reader a clear picture of what funds are available for future payments.
2. The Statement of Changes in Fiduciary Net Position gives the reader a view of current year additions and deductions to SJCERA.

| | 2016 | 2015 | INCREASE (DECREASE) AMOUNT | PERCENT CHANGE |
|---|---|---|---|---|
| Cash and Receivables | $ 235,867,811 | $ 235,841,691 | $ 26,120 | 0.01% |
| Investments | 2,463,815,871 | 2,328,264,996 | 135,550,875 | 5.82% |
| Other Assets | 242,630 | 304,655 | (62,025) | -20.36% |
| TOTAL ASSETS | 2,699,926,312 | 2,564,411,342 | 135,514,970 | 5.28% |
| TOTAL LIABILITIES | 145,124,188 | 151,168,795 | (6,044,607) | -4.00% |
| TOTAL FIDUCIARY NET POSITION | $2,554,802,124 | $2,413,242,547 | $141,559,577 | 5.87% |

Together these two statements report SJCERA's fiduciary net position—the difference between assets and liabilities—as one way to measure SJCERA's financial position. Over time, increases and decreases in fiduciary net position are one indicator 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.

### REVENUE – ADDITIONS TO FIDUCIARY NET POSITION

The reserves needed to finance the retiree benefits are accumulated through the collection of employer and employee contributions and through earnings on investments. The contributions and investment income for the year ended December 31, 2016, totaled $340.6 million. Of the total $151.1 million in net investment gain, $119.6 million is attributable to net appreciation in the fair value of investments.

The overall year 2016 revenues increased by $208.2 million from that of the prior year, primarily due to appreciation in the fair value of investments.

The employers' contributions increased by $8.7 million, or 5.82 percent, over the prior year, and employees' contributions increased by $1.0 million, or 3.76 percent, over the prior year. The County of San Joaquin (the County) and the majority of its employees agreed to equally share the normal cost of pre-funding post-retirement cost-of-living adjustments. Prior to 2012, the employer paid 100 percent of the cost to fund this benefit. Beginning in 2013, some employees also began paying an additional percentage of the basic member contribution rate, which reduced the employers' Normal Cost portion of the required contribution. Employers pay all of the required unfunded accrued liability (UAL) amortization payment.

Below is the summary of the changes from year 2015 to year 2016.

| | 2016 | 2015 | INCREASE (DECREASE) AMOUNT | PERCENT CHANGE |
|---|---|---|---|---|
| Employers' Contributions | $ 159,122,523 | $ 150,371,556 | $ 8,750,967 | 5.82% |
| Members' Contributions | 30,117,408 | 29,026,901 | 1,090,507 | 3.76% |
| Net Investment and Miscellaneous Income (Loss) | 151,114,788 | (47,339,750) | 198,454,538 | 419.21% |
| Transfer between Plans | 293,779 | 378,969 | (85,190) | -22.48% |
| TOTAL | $ 340,648,498 | $ 132,437,676 | $ 208,210,822 | 157.21% |

# MANAGEMENT'S DISCUSSION AND ANALYSIS

## EXPENSES - DEDUCTIONS FROM FIDUCIARY NET POSITION

The primary expenses of SJCERA include the payment of benefits to retirees and beneficiaries, the refund of contributions to former members, and the cost of administering the defined benefit pension plan. Expenses for the year 2016 totaled $199 million, an increase of 7.3 percent over 2015. The increase is attributed to annual cost-of-living adjustment to the benefit payments for retirees as well as the growth in the number and average amount of benefits paid to retirees.

| | 2016 | 2015 | INCREASE (DECREASE) AMOUNT | PERCENT CHANGE |
|---|---|---|---|---|
| Benefit Payments | $ 192,113,542 | $ 179,023,165 | $ 13,090,377 | 7.31% |
| Members Death Benefits | 618,769 | 561,971 | 56,798 | 10.11% |
| Refunds | 1,986,866 | 1,883,777 | 103,089 | 5.47% |
| Administrative and Other Expenses | 4,369,744 | 4,075,745 | 293,999 | 7.21% |
| TOTAL | $ 199,088,921 | $ 185,544,658 | $ 13,544,263 | 7.30% |

## REPORTING SJCERA'S FIDUCIARY RESPONSIBILITIES

SJCERA's Board of Retirement and staff are fiduciaries for the pension plan of the County and certain special districts. 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 employees of the County and certain special districts.

## THE RETIREMENT FUND AS A WHOLE

The fund increased 5.87 percent for 2016 from 2015; the net increase in the fair value of investments was $135.5 million versus the prior year's depreciation of investments of $43.1 million. The investment section of Note 4 of this report reviews the result of investment activity for the year ended December 31, 2016.

## CONTACTING SJCERA'S MANAGEMENT

This financial report is designed to provide the Board of Retirement, the membership, 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 need 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

## SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
## STATEMENT OF FIDUCIARY NET POSITION
## AS OF DECEMBER 31, 2016 (WITH COMPARATIVE TOTALS)

| | 2016 | | 2015 | |
|---|---|---|---|---|
| | Defined Benefit Pension Plan | Post-Employment Healthcare Agency Fund | Defined Benefit Pension Plan | Post-Employment Healthcare Agency Fund |
| **Assets** | | | | |
| Cash and Cash Equivalents | $ 83,994,149 | $ 16,105 | $ 79,806,039 | $ - |
| Cash Collateral - Securities Lending | 141,349,290 | - | 147,105,961 | - |
| Total Cash and Cash Equivalents | 225,343,439 | 16,105 | 226,912,000 | - |
| Receivables | | | | |
| Investment Income Receivables | 3,753,205 | - | 3,103,370 | - |
| Contributions Receivables | 4,190,176 | - | 3,041,118 | - |
| Securities Sold, Not Received - Domestic | 2,517,855 | - | 2,720,987 | - |
| Other Investment Income Receivables | 869 | - | 1,142 | - |
| Miscellaneous Receivables | 62,267 | - | 63,074 | - |
| Retiree Sick Leave Bank Benefits Receivables | - | - | - | 3,929 |
| Total Receivables | 10,524,372 | - | 8,929,691 | 3,929 |
| Investments, at Fair Value | | | | |
| Stable Fixed Income | 230,000,201 | - | 357,541,649 | - |
| Credit | 314,318,602 | - | 360,797,765 | - |
| Global Public Equity | 811,746,374 | - | 879,628,825 | - |
| Private Appreciation | 308,327,211 | - | 251,292,149 | - |
| Risk Parity | 330,517,689 | - | 334,346,257 | - |
| Crisis Risk Offset | 468,905,794 | - | 144,658,351 | - |
| Total Investments, at Fair Value | 2,463,815,871 | - | 2,328,264,996 | - |
| Other Assets | | | | |
| Prepaid Expenses | 127,142 | - | 112,136 | - |
| Equipment and Fixtures, Net | 115,488 | - | 192,519 | - |
| **Total Assets** | 2,699,926,312 | 16,105 | 2,564,411,342 | 3,929 |
| **Liabilities** | | | | |
| Securities Lending - Cash Collateral | 141,349,290 | - | 147,105,961 | - |
| Securities Purchased, Not Paid | 2,542,373 | - | 2,739,348 | - |
| Accrued Expenses and Other Payables | 1,169,645 | - | 1,306,553 | 3,929 |
| Securities Lending Interest and Other Payables | 62,880 | - | 16,933 | - |
| Retiree Sick Leave Bank Benefits Payable | - | 16,105 | - | - |
| **Total Liabilities** | 145,124,188 | 16,105 | 151,168,795 | 3,929 |
| **Fiduciary Net Position Restricted for Pension Benefits** | $2,554,802,124 | $ - | $2,413,242,547 | $ - |

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

# Financial

## STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION AVAILABLE FOR BENEFITS

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**
**DEFINED BENEFIT PENSION PLAN**
**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**
**FOR THE YEAR ENDED DECEMBER 31, 2016 (WITH COMPARATIVE TOTALS)**

| | 2016 | 2015 |
|---|---|---|
| **Additions** | | |
| Contributions | | |
| Employers' Contributions | $ 159,122,523 | $ 150,371,556 |
| Members' Contributions | 30,117,408 | 29,026,901 |
| Total Contributions | 189,239,931 | 179,398,457 |
| Net Investment Income (Loss) | | |
| Investment Income (Loss) | | |
| Net Appreciation (Depreciation) in Fair Value of Investments | 119,638,107 | (81,873,012) |
| Interest | 21,433,543 | 41,500,345 |
| Dividends | 18,476,288 | 4,613,426 |
| Real Estate Income, Net | 9,870,590 | 8,039,770 |
| Investment Expenses | (19,015,255) | (20,220,393) |
| Miscellaneous Investment Income | 8,057 | 6,835 |
| Net Investment Income (Loss), Before Securities Lending Income (Loss) | 150,411,330 | (47,933,029) |
| Securities Lending Income (Loss) | | |
| Earnings | 1,149,690 | 527,763 |
| Rebates | (323,724) | 116,314 |
| Fees | (206,122) | (160,288) |
| Net Securities Lending Income (Loss) | 619,844 | 483,789 |
| Net Investment Income (Loss) | 151,031,174 | (47,449,240) |
| Miscellaneous Income | 83,614 | 109,490 |
| Transfer Between Plans | 293,779 | 378,969 |
| **Total Additions** | 340,648,498 | 132,437,676 |
| **Deductions** | | |
| Benefit Payments | 192,113,542 | 179,023,165 |
| Death Benefits | 618,769 | 561,971 |
| Refunds of Members' Contributions | 1,986,866 | 1,883,777 |
| Administrative and Other Expenses | | |
| General Administrative Expenses | 3,830,298 | 3,710,047 |
| Actuary Fees | 251,775 | 151,893 |
| Fund Legal Fees | 287,671 | 213,805 |
| Total Administrative and Other Expenses | 4,369,744 | 4,075,745 |
| **Total Deductions** | 199,088,921 | 185,544,658 |
| Changes in Fiduciary Net Position | 141,559,577 | (53,106,982) |
| Fiduciary Net Position Restricted for Pension Benefits | | |
| Beginning of Year | 2,413,242,547 | 2,466,349,529 |
| End of Year | $ 2,554,802,124 | $ 2,413,242,547 |

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

## NOTES TO THE FINANCIAL STATEMENTS

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 to provide retirement, disability, death, and survivor benefits under the County Employees Retirement Law for the employees of the County and certain special districts within the County. SJCERA also administers the Post-Employment Healthcare Agency Fund. The Post-Employment Healthcare Agency Fund is an agency fund of SJCERA. 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 contributory defined benefit pension plan initially organized on April 29, 1946, under the provisions of the County Employees Retirement Law. SJCERA is administered by the Board of Retirement (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, 2016, were as follows:

| | |
|---|---|
| Michael Restuccia, Chair | Michael Duffy |
| Cindy Garman, Vice Chair | Katherine Miller |
| Raymond McCray, Secretary | Chanda Bassett |
| Shabbir Khan, County Treasurer | Adrian Van Houten |
| Margo Praus (Retired Alternate) | J.C. Weydert |

SJCERA is a multiple-employer retirement system covering the County and certain special districts including 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, the Superior Court of California – County of San Joaquin, Tracy Public Cemetery District, and Waterloo-Morada Rural Fire Protection District. All employees of these special districts and employees of the County are required, automatically upon appointment to a full-time, permanent position, to become members of SJCERA. 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 become members of SJCERA by applying to the Board of Retirement. All benefits vest after five years of service.

# Financial

## NOTES TO THE FINANCIAL STATEMENTS

The Public Employees' Pension Reform Act of 2013 (PEPRA) (Article 4, Chapter 21, Division 7 of Title I of the California Government Code) became operative on January 1, 2013. PEPRA is applicable to most public pension systems in California, and mandates new, lower benefit formulas and later retirement ages for employees entering public employment for the first time on or after January 1, 2013.

For SJCERA, the benefit structure in place prior to PEPRA is designated as "Tier I," and the benefits mandated by PEPRA are designated as "Tier II."

There are two types of memberships:

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, 2016 and 2015, is presented below:

| | RETIREES | | BENEFICIARIES | | ACTIVE | | DEFERRED | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | TIER I | TIER II | TIER I | TIER II | TIER I | TIER II | TIER I | TIER II | TIER I | TIER II |
| **YEAR 2016** | | | | | | | | | | |
| General | 4,050 | 4 | 603 | - | 3,445 | 1,846 | 1,192 | 148 | 9,291 | 1,997 |
| Safety | 786 | 1 | 184 | - | 659 | 152 | 161 | 8 | 1,789 | 162 |
| TOTAL | 4,836 | 5 | 787 | - | 4,104 | 1,998 | 1,353 | 156 | 11,080 | 2,159 |

| | RETIREES | | BENEFICIARIES | | ACTIVE | | DEFERRED | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | TIER I | TIER II | TIER I | TIER II | TIER I | TIER II | TIER I | TIER II | TIER I | TIER II |
| **YEAR 2015** | | | | | | | | | | |
| General | 3,892 | 3 | 598 | - | 3,710 | 1,421 | 1,208 | 86 | 9,408 | 1,510 |
| Safety | 764 | - | 177 | - | 699 | 94 | 156 | 6 | 1,796 | 100 |
| TOTAL | 4,656 | 3 | 775 | - | 4,409 | 1,515 | 1,364 | 92 | 11,204 | 1,610 |

#### B. PLAN BENEFITS

### Eligibility for Retirement

**Tier I:**

A Tier I 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 II:**

A Tier II 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.

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

### Retirement Benefits

The amount of a monthly allowance at retirement depends upon the type of membership, years of retirement service credit, final compensation, age at retirement, and the optional settlement, if any, elected by the member.

**Tier I:**

Final compensation for purposes of computing a Tier I member's 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.

In accordance with a settlement agreement issued on August 22, 2001, SJCERA implemented Government Code Sections 31676.14 and 31664.1 to provide a benefit formula of 2.61 percent of final compensation for each year of service credit at age 62 for General Tier I Members, and a benefit formula of 3.0 percent of final compensation for each year of service credit at age 50 for Safety Tier I Members, effective January 1, 2001. The settlement also provides an additional $50 monthly supplemental payment to retirees who retired prior to April 1, 1982, with 15 years or more of County service commencing when the retiree attains age 65. It also provides a supplemental monthly benefit of $10 per year of service up to 30 years to retirees who retired on or after April 1, 1982, but before January 1, 2001. This "Post 1982" supplemental benefit is payable if sufficient funds exist. In November 2016, members were notified that the benefit would be suspended effective with their February 1, 2017 retirement payment until sufficient funding is available again.

Federal law limits the annual compensation that may be used to calculate retirement benefits (applicable to persons who became SJCERA members January 1, 1996, or later), and the maximum annual benefit payable by SJCERA to any retired member.

For 2016, the annual compensation limit under Internal Revenue Code Section 401(a)(17) is $265,000 and the annual benefit limit under Internal Revenue Code Section 415(b) is $210,000. Tier I retirees whose statutory benefits from SJCERA would exceed the annual benefit limitation are eligible for the County's Replacement Benefits Plan.

**Tier II:**

For Tier II 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.

Tier II provides a benefit formula of 2.5 percent of final compensation for each year of service credit at age 67 for General Members, and a benefit formula of 2.7 percent of final compensation for eachyear of service credit at age 57 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. For 2016, these annual compensation limits are $117,020 and $140,424, respectively.

Active members receive a personalized Annual Member Statement that provides the member's accumulated member contributions and interest, years of service credit, and estimated projected retirement benefits based on various assumptions. Members may also use the benefit calculator on SJCERA's web site (www.sjcera.org) to estimate their projected retirement benefits under the various available retirement options.

### Cost-of-Living Adjustment (COLA)

For both Tier I and Tier II members, 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 percent. 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 change in CPI for calendar years 2015 and 2014 was 2.58 percent and 2.85 percent, respectively. Under the statutory requirements of the County Employees Retirement Law, this change must be rounded to the nearest half percent. Therefore, members received an increase in benefits of at least 2.50 percent in 2016, and at least 3.0 percent in 2015, based on the changes in the CPI. Therefore, based on the accumulated carry-over balances as of April 2015, members who retired prior to April 2, 1989 received a 3 percent increase on April 1, 2016. Their accumulated carry-over balances were reduced by 0.5 percent. Those who retired on or after April 2, 1989, received a 2.5 percent increase in their benefit, with no change in the carry-over balances.

The Board implemented "Purchasing Power Protection" (PPP) benefits at the 75 percent level in 2000, and the 80 percent level in 2001 for allowances for retirees with an "initial retirement date" of April 1, 1982, or earlier, pursuant to Government Code Section 31874.3. A one-time permanent increase was added to the monthly allowance amount to restore purchasing power to 80 percent of the purchasing power of the original allowance, determined as of April 1, 2001. The monthly allowances, including the PPP benefit, are adjusted each year by the annual COLA.

## Terminated Member's Deferred Allowance and Withdrawal Benefits

A member with less than five years of credited service who terminates all employment with participating employers may elect to withdraw his or her accumulated member contributions, including credited interest. A member electing such withdrawal terminates membership in, and forfeits all related rights and benefits from, SJCERA. A terminated member does not have a right to withdraw or otherwise receive employer contributions prior to the member's retirement.

Alternatively, terminated members with less than five years of service may leave their member contributions on account with SJCERA and continue participating in interest accumulation thereon.

A member with five or more years of credited service who terminates all employment with participating employers is eligible for a deferred retirement. A deferred vested member may retire on or after the date the member meets the retirement eligibility requirements for the tier of benefits to which the member is subject.

## Death Benefits

The beneficiary of a 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 the member attains 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 lump sum benefit of the retirement contributions to date including interest and one month's salary for each full year of service up to six months' salary, either 60 percent of the retirement allowance to which the deceased member would have been entitled had the member retired on either a service retirement or non service-connected disability retirement 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).

Upon the death of a retiree, the beneficiary receives a retirement benefit as determined by the optional settlement 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.

# Financial

## NOTES TO THE FINANCIAL STATEMENTS

### NOTE 2 – POST-EMPLOYMENT HEALTHCARE AGENCY FUND

#### A. DESCRIPTION

The Post-Employment Healthcare Agency Fund is used for cash flows in from employers to fund Sick Leave Bank Benefits for their eligible retired employees on a pay-as-you-go basis, and for cash flows out for payment of Sick Leave Bank Benefits. The Sick Leave Bank Benefit provides that accumulated unused and un-cashed sick leave upon retirement can be converted to a Sick Leave Bank 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.

Eligible retired and deferred members may use their Sick Leave Bank Benefits to pay for employer-sponsored group health, dental, and vision care insurance premiums and/or reimbursement of Medicare Part B premiums for the 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.

#### B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Post-Employment Healthcare Agency Fund was established to account for the sick leave bank contribution for eligible members. In 2011, SJCERA filed a request for a plan determination letter and Voluntary Compliance Program (VCP) with the Internal Revenue Service (IRS). As the result of the IRS filing, the Board decided to "freeze" the Post-Employment Healthcare Agency Fund pending the response from the IRS. Participating employers are now funding Sick Leave Bank Benefits on a pay-as-you-go basis. Prior to 2011, participating employers were pre-funding these benefits. SJCERA continues its role as a third-party administrator of these benefits. SJCERA has determined that the proper presentation of this fund is as an agency fund, and not a trust fund.

SJCERA received a favorable plan determination letter from the IRS dated January 29, 2014, that by its own terms expired on January 31, 2014, at the end of the second remedial amendment Cycle C filing period. IRS Revenue Procedure 2012-50 provided that if Cycle E is elected as the plan's second remedial amendment cycle, the plan determination letter expiration date is extended to January 31, 2016, the end of the second Cycle E filing period. In 2014, the Board formally elected Cycle E as the second remedial amendment cycle for SJCERA. In compliance with SJCERA's VCP filing as approved by the IRS, $19.9 million was transferred from the Post-Employment Healthcare Agency Fund to the Defined Benefit Pension Plan in 2014. The Post-Employment Healthcare Agency Fund is used for cash flows in from employers to fund Sick Leave Bank Benefits for their eligible retired employees on a pay-as-you-go basis, and for cash flows out for payment of Sick Leave Bank Benefits.

In 2015, SJCERA submitted its second determination letter application to the Internal Revenue Service (IRS); on January 5, 2017, the IRS issued SJCERA a favorable Tax determination letter, confirming our compliance with federal tax law.

## 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 employee contributions that should have been made in the calendar year based on the actuarial 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 of Retirement and considered as an independent entity, is a blended component unit of the County in accordance with Statement No. 14, as amended by Statement No. 39 and amended further by Statement No. 61, of the Governmental Accounting Standards Board (GASB). SJCERA's annual financial statements are included in the County's financial reports as a pension trust fund.

### 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 from its clients all cash 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 security-lending program is invested by NT through its security 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.

## NOTES TO THE FINANCIAL STATEMENTS

### 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, 2016 and 2015. |
| Mortgages | Equivalent pricing to comparable Government National Mortgage Association (GNMA). |
| Real estate equity funds | Fair value as provided by real estate fund manager unless an alternative value has been determined by the Board per SJCERA's Real Estate Investment Policy. |
| Real estate title holding corporations and limited liability companies | Fair value of the investment as provided by fund managers. |
| Private equity | Fair 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. FOREIGN CURRENCY TRANSACTIONS

Foreign currency transactions are translated into U.S. dollars on the following basis:

1. Fair value of investment securities at the daily rates of exchange on December 31, 2016 and 2015; and
2. Purchases and sales of investment securities, dividend and interest income, and certain expenses at the rates of exchange prevailing on the respective dates when such transactions were incurred.

Gains and losses on investments that are due to changes in foreign exchange rates and market prices of the investments are accounted for in the net appreciation/(depreciation) in fair value of investments in the Statement of Changes in Fiduciary Net Position.

Realized and unrealized gain/(loss) from foreign currency related transactions, such as gains and losses between trade and settlement dates on securities transactions, gains and losses arising from the sales of foreign currency, and gains and losses between the ex-date and the payment date on dividends and foreign withholding taxes, are also accounted for in net appreciation/(depreciation) in fair value of investments in the Statement of Changes in Fiduciary Net Position.

### F. FORWARD FOREIGN CURRENCY EXCHANGE CONTRACTS

A forward foreign currency exchange contract is a commitment to purchase or sell a foreign currency at the settlement date at a negotiated rate. During the year, the investment managers utilize forward contracts as a hedge in connection with portfolio purchases and sales of securities denominated in foreign currencies. Forward contracts are valued at the prevailing forward exchange rate of the underlying currencies. Gain/(loss) is recorded on the trade date. Realized and unrealized gains and losses due to the difference between the value of the forward contract to buy and the forward contract to sell are included in net appreciation/(depreciation) in fair value of investments in the Statement of Changes in Fiduciary Net Position.

### G. SECURITIES TRANSACTIONS AND RELATED INVESTMENT INCOME

Securities transactions are accounted for on a trade date basis. Interest income is recognized when earned and dividend income is recognized on the ex-dividend date. Stock dividends or stock splits are recorded as memo items and do not affect the total value of the securities.

Realized gains and losses on investments sold during the year are not displayed separately in the financial statements. Instead, the realized gains and losses, along with unrealized gains and losses on investments, are reported as "net appreciation/(depreciation) in fair value of investments."

The realized gain/(loss) on the sale of securities was computed as the difference between the proceeds of sale in 2016 and the carrying cost of the securities at December 31, 2016, or the original cost of the securities acquired during 2016. The calculation of realized gains/(losses) is independent of the calculation of net appreciation/(depreciation) in fair value of plan investments. Unrealized gain/(loss) on investments sold in the current year that had been held for more than one year were included in the net appreciation/(depreciation) reported in prior years and the current year.

### H. METHOD USED IN ALLOCATING INVESTMENTS BETWEEN THE DEFINED BENEFIT PENSION PLAN AND THE POST-EMPLOYMENT HEALTHCARE AGENCY FUND

SJCERA allocates the investments held at December 31, 2016 and 2015, 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, 2016 and 2015.

### I. 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 3 to 7 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.

## NOTES TO THE FINANCIAL STATEMENTS

The change in capital assets owned for years 2016 and 2015 is presented below:

**2016**

| | BALANCE 12/31/2015 | ADDITIONS | DELETIONS | BALANCE 12/31/2016 |
|---|---|---|---|---|
| Original Cost | $ 1,532,066 | $ 17,210 | $ (1,805) | $ 1,547,471 |
| Accumulated Amortization and Depreciation | (1,339,547) | (94,241) | 1,805 | (1,431,983) |
| NET BOOK VALUE | $ 192,519 | $ (77,031) | $ - | $ 115,488 |

**2015**

| | BALANCE 12/31/2014 | ADDITIONS | DELETIONS | BALANCE 12/31/2015 |
|---|---|---|---|---|
| Original Cost | $ 1,511,660 | $ 23,423 | $ (3,017) | $ 1,532,066 |
| Accumulated Amortization and Depreciation | (1,197,016) | (145,548) | 3,017 | (1,339,547) |
| NET BOOK VALUE | $ 314,644 | $ (122,125) | $ - | $ 192,519 |

Depreciation expense for the years ended December 31, 2016 and 2015, was $94,241 and $145,548, respectively.

### J. OPERATING LEASE

SJCERA leases office space for the administration of the plan on the fourth floor of 6 South El Dorado Street in Stockton. The lease specifies the actual rate for each year of term. Total rent expense under this agreement for the current year was $257,499. The terms of the lease expire at the end of November 2019.

The estimated total minimum rent expense projected based on the remaining term of the lease agreement is $788,768.

| YEAR ENDED DECEMBER 31, | TOTAL |
|---|---|
| 2017 | $ 264,338 |
| 2018 | 270,708 |
| 2019 | 253,722 |
| | $ 788,768 |

### K. UNPAID COMPENSATED ABSENCES FOR ADMINISTRATION EMPLOYEES

SJCERA accrues as a liability the vacation and other leave benefits earned by its employees. Accrued vacation hours that will be paid in cash to employees upon retirement is also accrued as a liability by SJCERA.

### L. INVESTMENT INCOME RECEIVABLE

Interest receivable consists of interest earned, but not received, as of December 31, 2016 and 2015, on debt securities, short-term investment funds and securities lending.

Dividends receivable are those dividends declared, but not received, as of December 31, 2016 and 2015, on stocks owned by SJCERA on the ex-dividend date.

### M. CONTRIBUTION RECEIVABLE

County, district and member contributions made in the following year for the current year were accrued in accordance with accounting principles generally accepted in the United States of America. Contributions receivable pursuant to an installment contract between the employee and SJCERA for purchases of certain service credits are recognized in full in the year in which the contract is made even though the service credits are not granted until the full payment is received.

### N. SECURITIES/FOREIGN EXCHANGE - SOLD, NOT RECEIVED AND PURCHASED, NOT PAID

The accrual basis of accounting requires that securities and foreign exchange purchase and sale transactions be recorded on a trade-date basis. Unsettled securities and foreign exchange transactions were accrued at year-end as either receivables or payables.

### O. MISCELLANEOUS RECEIVABLES

Other receivables at December 31, 2016 and 2015, consist mainly of overpaid benefit payments to be recovered from retirees or their beneficiaries.

### P. RECLASSIFICATIONS

Comparative data for the prior year have been presented in the selected sections of the accompanying Statements of Fiduciary Net Position and Changes in Fiduciary Net Position. Also, certain accounts presented in the prior year's data may have been reclassified to be consistent with the current year's presentation.

### Q. IMPLEMENTATION OF ACCOUNTING STANDARDS

**GASB Statement No. 72**

In February 2015, GASB issued Statement No. 72, *Fair Value Measurement and Application*, which provides guidance for determining a fair value measurement for financial reporting purposes. The statement establishes a hierarchy of inputs to valuation techniques used to measure fair value and the application to certain investments. GASB Statement No. 72 will be effective for periods beginning after June 15, 2015. SJCERA implemented GASB Statement No. 72 in the financial statement for the year ended December 31, 2016.

**GASB Statement No. 82**

In April 2016, GASB issued Statement No. 82, *Pension Issues, an amendment of GASB Statements No. 67, No. 68, and No. 73*, to address certain pension issues raised by stakeholders. The statement provides additional guidance for the following: (1) the presentation of payroll-related measures in the Required Supplementary Information Section, (2) the treatment of deviations from the actuarial standards of practice when selecting actuarial assumptions, and (3) the classification for employer-paid member contributions for reporting purpose. SJCERA implemented GASB Statement No. 82 in the financial statements for the year ended December 31, 2016.

## NOTE 4 – CASH AND INVESTMENTS

### A. INVESTMENT SECURITIES LENDING

Under provisions of State statutes, SJCERA, along with other NT clients, participate in NT's pooled security lending program. Under the agreement, NT is authorized to lend securities of SJCERA that it holds to certain SJCERA approved security borrowers. NT does not have the ability to pledge or sell collateral securities absent a borrower default.

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 versus collateral valued at 102 percent of the fair value of the securities plus any accrued interest. Non-U.S. securities are loaned versus collateral valued at 105 percent of the fair value of the securities plus any accrued interest.

At December 31, 2016 and 2015, SJCERA had the following securities out-on-loan.

| DECEMBER 31, 2015 | FAIR VALUE OF SECURITIES LENT | CASH COLLATERAL VALUE | NON-CASH COLLATERAL VALUE |
|---|---|---|---|
| U.S. Equities | $ 81,133,438 | $ 79,979,805 | $ 3,333,633 |
| U.S. Debt Securities | 67,551,163 | 61,369,485 | 7,679,261 |
| TOTAL U.S. SECURITIES | 148,684,601 | 141,349,290 | 11,012,894 |
| | | | |
| Non-U.S. Equities | 16,764,371 | - | 17,876,707 |
| Non-U.S. Debt Securities | 16,850,554 | - | 17,552,929 |
| TOTAL NON-U.S. SECURITIES | 33,614,925 | - | 35,429,636 |
| TOTAL | $ 182,299,526 | $ 141,349,290 | $ 46,442,530 |

| DECEMBER 31, 2015 | FAIR VALUE OF SECURITIES LENT | CASH COLLATERAL VALUE | NON-CASH COLLATERAL VALUE |
|---|---|---|---|
| U.S. Equities | $ 102,110,149 | $ 102,716,394 | $ 2,432,696 |
| U.S. Debt Securities | 47,480,291 | 43,834,952 | 4,814,436 |
| TOTAL U.S. SECURITIES | 149,590,440 | 146,551,346 | 7,247,132 |
| | | | |
| Non-U.S. Equities | 12,189,597 | 554,615 | 12,551,506 |
| TOTAL NON-U.S. SECURITIES | 12,189,597 | 554,615 | 12,551,506 |
| TOTAL | $ 161,780,037 | $ 147,105,961 | $ 19,798,638 |

The cash collateral is reported on the financial statements as an asset and as a liability of SJCERA while the non-cash collateral is reported neither as an asset nor a liability in accordance with 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. In November 2009, NT made the first partial reversal of collateral deficiency; then in March 2010, NT made another reversal for remaining collateral deficiency payable. These two reversals basically eliminated the original securities lending deficiency, which occurred in 2008. SJCERA's pro-rata share of net income derived from NT's pooled securities lending transactions in 2016 and 2015 was $619,844 and $483,789, respectively.

### B. CASH AND SHORT-TERM INVESTMENTS

The carrying value of cash and short-term investments at December 31, 2016 and 2015, consists of the following:

| | 2016 AMOUNT | 2015 AMOUNT |
|---|---|---|
| Cash and Cash Equivalents - Custodian | $ 83,335,417 | $ 78,204,993 |
| Cash and Cash Equivalents - County Treasury | 674,837 | 1,601,046 |
| TOTAL CASH AND CASH EQUIVALENTS | 84,010,254 | 79,806,039 |
| Cash and Cash Equivalents - Custodian-Securities Lending | 141,349,290 | 147,105,961 |
| TOTAL | $ 225,359,544 | $ 226,912,000 |

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# Financial

## NOTES TO THE FINANCIAL STATEMENTS

### C. LONG-TERM INVESTMENTS

SJCERA owned the following long-term investments at December 31, 2016 and 2015, contained in both the pension trust and healthcare agency fund:

| | 2016 FAIR VALUE | 2015 FAIR VALUE |
|---|---|---|
| **INVESTMENTS - CATEGORIZED** | | |
| Stable Fixed Income | $ 230,000,201 | $ 357,541,649 |
| Credit | 314,318,602 | 360,797,765 |
| Global Public Equities | 811,746,374 | 879,628,825 |
| Private Appreciation | 308,327,211 | 251,292,149 |
| Risk Parity | 330,517,689 | 334,346,257 |
| Crisis Risk Offset (CRO) | 468,905,794 | 144,658,351 |
| TOTAL INVESTMENTS - CATEGORIZED | $ 2,463,815,871 | $ 2,328,264,996 |
| **INVESTMENTS - NOT CATEGORIZED** | | |
| *Investments Held by Broker-Dealers Under Securities Loans* | | |
| U.S. Equities | $ 79,979,805 | $ 102,716,394 |
| Non-U.S. Equities | - | 554,615 |
| U.S. Debt Securities | 61,369,485 | 43,834,952 |
| TOTAL INVESTMENTS HELD BY BROKER-DEALERS UNDER SECURITIES LOANS | 141,349,290 | 147,105,961 |
| TOTAL INVESTMENTS | $ 2,605,165,161 | $ 2,475,370,957 |

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

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

### Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. SJCERA 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 credit risk, credit quality guidelines have been established for our separately managed accounts.

The list of investments exposed to those risks and the corresponding credit ratings from Standard & Poor's (S&P) at December 31, 2016 and 2015, is as follows.

| QUALITY RATINGS | 2016 FAIR VALUE | 2015 FAIR VALUE |
|---|---|---|
| AAA | $ 5,483,708 | $ 10,431,182 |
| AA | 4,876,610 | 7,509,196 |
| A | 11,582,333 | 21,019,759 |
| BBB | 33,565,935 | 40,776,173 |
| BB | 8,136,182 | 24,624,908 |
| B | 5,643,384 | 13,581,007 |
| CCC | 2,952,075 | 3,722,948 |
| CC | - | 4,516,290 |
| D | 9,411,151 | 18,398,004 |
| Not Rated | 220,449,889 | 236,766,197 |
| SUB-TOTALS | 302,101,267 | 381,345,664 |
| U.S. Government Agencies - Implied AAA (FNMA, FHLB, FHLMC, FFCB, SLMA, Other) | 242,217,536 | 153,228,924 |
| TOTAL INVESTMENTS IN FIXED INCOME SECURITIES | $ 544,318,303 | $ 534,574,588 |

## 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 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 are all held in the County's name.

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

**Investments:**

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, SJCERA would not be able to recover the value of the investment or collateral securities that are in possession of an outside party. 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.

# NOTES TO THE FINANCIAL STATEMENTS

## 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, 2016 and 2015, for separately managed investment accounts, SJCERA did not hold any investments in any one issuer that would represent five percent (5%) or more of total investments.

## 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.

As of December 31, 2016 and 2015, SJCERA had the following investments.

| 2016 INVESTMENT TYPE | 2016 FAIR VALUE | WEIGHTED AVERAGE MATURITY - YEARS |
|---|---|---|
| **U.S. GOVERNMENT AND AGENCY INSTRUMENTS** | | |
| U.S. Government Mortgages | $ 47,752,906 | 22.97 |
| U.S. Government Bonds | 152,658,224 | 18.96 |
| U.S. Government-Issued Commercial Mortgage-Backed | 227,812 | 3.02 |
| Municipal/Revenue Bonds | 3,278,814 | 20.40 |
| Agency | 1,481,445 | 16.20 |
| Short-Term Bills and Notes | 65,543,226 | 0.06 |
| | $ 270,942,427 | |
| **CORPORATE SECURITIES** | | |
| Asset Backed Securities | 4,875,575 | 14.05 |
| Bank Loans | 11,485 | 6.28 |
| Commercial Mortgage-Backed | 7,458,926 | 18.78 |
| Corporate and Other Credit | 57,596,442 | 11.36 |
| Non-Government Backed Collateralized Mortgage Obligations (CMOs) | 36,575,442 | 20.02 |
| | $ 106,517,922 | |
| **REAL ESTATE FINANCING** | $ 166,858,454 | |
| TOTAL FIXED INCOME SECURITIES | $ 544,318,803 | |

| 2015 INVESTMENT TYPE | 2015 FAIR VALUE | WEIGHTED AVERAGE MATURITY - YEARS |
|---|---|---|
| **U.S. GOVERNMENT AND AGENCY INSTRUMENTS** | | |
| U.S. Government Mortgages | $ 89,000,380 | 23.12 |
| U.S. Government Bonds | 24,804,106 | 1.60 |
| U.S. Government-Issued Commercial Mortgage-Backed | 245,598 | 1.90 |
| Index Linked Government Bonds | 56,455,103 | 8.63 |
| Municipal/Revenue Bonds | 4,230,463 | 19.75 |
| Agency | 680,092 | 8.92 |
| Short-Term Bills and Notes | 9,334,569 | 0.19 |
| | $ 184,750,311 | |
| **CORPORATE SECURITIES** | | |
| Asset Backed Securities | 14,384,964 | 14.54 |
| Bank Loans | 19,974,030 | 4.88 |
| Commercial Mortgage-Backed | 9,206,290 | 17.82 |
| Corporate and Other Credit | 79,413,471 | 11.47 |
| Non-Government Backed Collateralized Mortgage Obligations (CMOs) | 56,568,119 | 21.10 |
| | $ 179,546,874 | |
| **REAL ESTATE FINANCING** | $ 170,277,403 | |
| TOTAL FIXED INCOME SECURITIES | $ 534,574,588 | |

## 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 investment managers may invest in international securities in accordance with their investment guidelines pertaining to these types of investments.

Currency hedging on an un-leveraged 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 value-added for non-U.S. equity investment managers will be issue 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. Cross hedging is allowed. Permitted instruments are the use of 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.

## NOTES TO THE FINANCIAL STATEMENTS

SJCERA's exposure to foreign currency risk in U.S. dollars as of December 31, 2016 and 2015, is as follows.

| CURRENCY | 2016 FAIR VALUE | 2015 FAIR VALUE |
|---|---|---|
| Australian Dollar | $ 315,750 | $ 19,311 |
| Brazilian Real | - | 949,276 |
| British Pound Sterling | 11,659,994 | 18,003,137 |
| Canadian Dollar | 6,176,445 | 806,617 |
| Euro Currency | 11,522,446 | 12,389,204 |
| Israel Skekel | - | 140,983 |
| Japanese Yen | 11,605,950 | 75,101 |
| Norwegian Krone | - | 426,210 |
| Singapore Dollar | - | 589,811 |
| Swiss Franc | 11,822,551 | 710,702 |
| TOTAL | $ 53,103,136 | $ 34,110,352 |

### D. FAIR VALUE MEASUREMENT

SJCERA implemented GASB Statement No. 72, Fair Value Measurement and Application, in 2016. 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.

The following table presents fair value measurements as December 31, 2016.

| INVESTMENTS BY FAIR VALUE LEVEL | 12/31/2016 | QUOTED PRICES IN ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1) | SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2) | SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3) |
|---|---|---|---|---|
| **EQUITIES** | | | | |
| Common Stocks | $ 199,030,879 | $ 199,024,547 | $ - | $ 6,332 |
| Equities - EFT | 783,247 | 783,247 | - | - |
| Preferred Stocks | 715,214 | 715,214 | - | - |
| Rights and Warrants | 766 | 603 | - | 163 |
| TOTAL EQUITIES | $ 200,530,106 | $ 200,523,611 | $ - | $ 6,495 |
| **FIXED INCOME** | | | | |
| Asset Backed Securities | 4,875,575 | - | 4,875,575 | - |
| Bank Loans | 11,485 | - | 11,485 | - |
| Collateralized Bonds | 499,000 | - | 499,000 | - |
| Commercial Mortgage-Backed | 7,458,927 | - | 7,458,927 | - |
| Corporate Bonds | 56,832,239 | - | 56,832,239 | - |
| Corporate Convertible Bonds | 265,203 | - | 265,203 | - |
| Funds - Government Bonds | 4,709,753 | - | 4,709,753 | - |
| Government Issued Commercial Mortgage backed | 227,812 | - | 227,812 | - |
| Government Agencies | 1,481,445 | - | 1,481,445 | - |
| Government Bonds | 215,646,527 | 62,988,303 | 152,658,224 | - |
| Government Mortgage Backed Securities | 47,752,906 | - | 47,752,906 | - |
| Municipal/Provincial Bonds | 3,278,814 | - | 3,278,814 | - |
| Non Government Backed CMO's | 36,575,494 | - | 36,575,494 | - |
| Other Fixed Income | 96,734,004 | - | 96,734,004 | - |
| TOTAL FIXED INCOME | $ 476,349,184 | $ 62,988,303 | $413,360,881 | $ - |
| **OTHER ASSETS** | | | | |
| Cash and Securities for Futures | 209,433 | - | 209,433 | - |
| Future Contracts | 1,341,877 | 1,341,877 | - | - |
| Option Contracts | 299,757 | 299,757 | - | - |
| Swaps | (407,768) | - | (407,768) | - |
| TOTAL OTHER ASSETS | $ 1,443,299 | $ 1,641,634 | $ (198,335) | $ - |
| TOTAL INVESTMENTS BY FAIR VALUE | $ 678,322,589 | $ 265,153,548 | $413,162,546 | $ 6,495 |
| **INVESTMENTS MEASURED AT THE NET ASSET VALUE (NAV)** | | | | |
| Global Equities Funds | 611,957,158 | | | |
| Fixed Income Funds | 149,865,674 | | | |
| Risk Parity Funds | 330,517,689 | | | |
| Multi-Strategy Hedge Funds | 263,811,248 | | | |
| Hedge Funds - Fixed Income | 93,521,261 | | | |
| Private Equity Funds | 54,673,719 | | | |
| Private Real Estate Funds | 281,146,533 | | | |
| TOTAL INVESTMENTS MEASURED AT NAV | $1,785,493,282 | | | |
| TOTAL INVESTMENTS | $2,463,815,871 | | | |

# Financial

## NOTES TO THE FINANCIAL STATEMENTS

### Investments Measured at Net Asset Value (NAV)

SJCERA measures certain investments that do not have a readily determinable fair value, using NAV as a practical expedient for investments such as hedge funds, commingled funds, and private equity funds. The majority of SJCERA's holdings are valued at NAV are the majority holdings for SJCERA 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, 2016.

| INVESTMENTS MEASURED AT NAV | 12/31/2016 | UNFUNDED COMMITMENT | REDEMPTION FREQUENCY IF CURRENTLY ELIGIBLE | REDEMPTION NOTICE PERIOD |
|---|---|---|---|---|
| Global Equities Funds | $611,957,158 | $ - | Daily, Weekly Semi-Monthly, Monthly | 1-30 Days |
| Fixed Income Funds | 149,865,674 | 40,136,803 | Daily, Not Eligible | 1 Day |
| Risk Parity Funds | 330,517,689 | - | Monthly | 5-15 Days |
| Multi-Strategy Hedge Funds | 263,811,248 | - | Daily, Weekly, Semi-Monthly, Monthly | 0-15 Days |
| Hedge Funds - Fixed Income | 93,521,261 | 12,717,985 | Daily, Quarterly, Not Eligible | 0-60 Days |
| Private Equity Funds | 54,673,719 | 73,060,000 | Not Eligible | Not Applicable |
| Private Real Estate Funds | 281,146,533 | 165,874,487 | Quarterly, Not Eligible | 5-90 Days, Not Applicable |
| TOTAL INVESTMENTS MEASURED AT NAV | $1,785,493,282 | $291,789,275 | | |

**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.

**Hedge Funds (Fixed Income)** – 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.

**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, publicly traded real estate securities, fund-of-funds interests and direct holdings for its real estate allocation.

## E. SUMMARY OF INVESTMENT POLICY

The County Employees Retirement Law 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 (the Plan's) assets by setting policy, which the Investment staff executes either internally, or through the use of external prudent experts. The Board oversees and guides the Plan 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 Plan's investments 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, Pension Consulting Alliance (PCA), and its consulting actuary, Cheiron, Inc. A key aspect of the study was the Board's consensus on how it defines risk and determining its risk tolerance, 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 into more risk-aligned strategic asset classes, and the Board added a 20 percent allocation to a Crisis Risk Offset (CRO) strategic class. The objective of the CRO class is to add diversification and provide portfolio protection during market downturns. This would include strategies involving treasury rate duration, systematic trend following and liquid alternative risk premia.

| FORMER ASSET ALLOCATION | | CURRENT ASSET ALLOCATION POLICY | | | |
|---|---|---|---|---|---|
| POLICY ALLOCATION PERCENTAGE | ASSET CLASS | ASSET CLASS | POLICY ALLOCATION PERCENTAGE | PURPOSE | MAIN RISK EXPOSURES |
| 16.25% | U.S. Public Equity | Global Public Equity[1] | 30.00% | Return | Growth, Currency |
| 16.25% | Non-U.S. Public Equity | | | | |
| 1.50% | Global Public Equity | | | | |
| 24.00% | U.S. Fixed Income | Stable Fixed Income | 10.00% | Income, Stability | Interest Rates |
| | | Credit | 14.00% | Income, Growth | Growth |
| 15.00% | Global Opportunistic[2] | Private Appreciation[3] | 12.00% | Return | Growth |
| 10.00% | Real Estate | | | | |
| 10.00% | Risk Parity | Risk Parity | 14.00% | Balanced Return | Growth, Interest Rates, Inflation |
| 7.00% | Real Assets[4] | | | | |
| | | Crisis Risk Offset (CRO)[5]<br>Long Duration<br>Systematic Trend Following<br>Alternative Risk Premia | 20.00% | Return and Liquidity During a Growth Crisis | Interest Rates Variable Based on Trends Alternative Factor Risks |
| 100.00% | | | 100.00% | | |

[1] Includes 3% public real estate securities

[2] Existing strategies reallocated to "Credit" and "Private Appreciation" classes

[3] Includes 7% private real estate equity investments

[4] Discontinued as a separate asset class

[5] New asset class

Performance measurement and reporting using the revised strategic asset allocation began with the first quarter of 2016.

## 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, in the judgment of management, 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. In management's opinion, 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.

**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. The derivative investments are exchange traded, and credit risk is limited to the clearing corporation. As of December 31, 2016 and 2015, collateral for derivatives was $9.3 million and $56.5 million, respectively. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted.

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## NOTES TO THE FINANCIAL STATEMENTS

The following Credit Risk Analysis schedule discloses the counterparty credit ratings of SJCERA's derivative investments as of December 31, 2016 and 2015.

### 2016 CREDIT RISK ANALYSIS (AS OF DECEMBER 31, 2016)

| | S & P CREDIT RATING | |
|---|---|---|
| DERIVATIVE TYPE | A+ | TOTAL FAIR VALUE |
| Swap Agreements | $ (17,143) | $ (17,143) |
| TOTAL | $ (17,143) | $ (17,143) |

### 2015 CREDIT RISK ANALYSIS (AS OF DECEMBER 31, 2015)

| | S & P CREDIT RATING | |
|---|---|---|
| DERIVATIVE TYPE | A+ | TOTAL FAIR VALUE |
| Swap Agreements | $ (88,546) | $ (88,546) |
| TOTAL | $ (88,546) | $ (88,546) |

**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 option contracts in the following global government bond markets.

### 2016 INTEREST RATE RISK (AS OF DECEMBER 31, 2016)

| GLOBAL BONDS | FUTURES CONTRACTS | OPTION CONTRACTS |
|---|---|---|
| Canadian Government Bond | $ (18,422,623) | $ - |
| Long Gilt | (2,635,277) | - |
| Japanese Government Bond | (18,012,075) | - |
| Euro Bond | (864,455) | 27,722 |
| U.S. Ten Year Notes | (18,517,906) | - |
| TOTAL | $ (58,452,336) | $ 27,722 |

### 2015 INTEREST RATE RISK (AS OF DECEMBER 31, 2015)

| GLOBAL BONDS | FUTURES CONTRACTS | OPTION CONTRACTS |
|---|---|---|
| Canadian Government Bond | $ 26,096,989 | $ - |
| Long Gilt | 4,300,639 | - |
| Japanese Government Bond | 29,752,215 | - |
| Euro Bond | 29,838,447 | 149,930 |
| U.S. Ten Year Notes | (1,384,969) | - |
| TOTAL | $ 88,603,321 | $ 149,930 |

SJCERA measures derivative interest rate risk using duration with varying maturities of less than three months to more than 10 years. At December 31, 2016 and 2015, SJCERA had the following investment derivative interest rate risks.

### 2016 INTEREST RATE RISK ANALYSIS (AS OF DECEMBER 31, 2016)
*(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 | $ 14,598 | $ - | $14,598 | $ - | $ - | $ - | $ - | $ - |
| Swap Agreements | - | (408) | - | - | - | (391) | - | (17) |
| Rights/Warrants | 1 | 1 | - | - | - | 1 | - | - |
| TOTAL | $ 14,599 | $ (407) | $14,598 | $ - | $ - | $ (390) | $ - | $ (17) |

### 2015 INTEREST RATE RISK ANALYSIS (AS OF DECEMBER 31, 2015)
*(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 | $ 57,002 | $ - | $30,246 | $25,406 | $1,350 | $ - | $ - | $ - |
| Swap Agreements | - | (148) | - | - | - | (59) | - | (89) |
| Rights/Warrants | 1 | 1 | 1 | - | - | - | - | - |
| TOTAL | $ 57,003 | $ (147) | $30,247 | $25,406 | $1,350 | $ (59) | $ - | $ (89) |

**Foreign Currency Risk:** Foreign currency risk is the risk that changes in currency exchange rates will adversely affect the fair 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, 2016 and 2015, SJCERA had the derivative foreign currency exposures listed in the table below.

### 2016 FOREIGN CURRENCY RISK ANALYSIS (AS OF DECEMBER 31, 2016)

| CURRENCY | FUTURES CONTRACTS | EQUITY CONTRACTS OPTION CONTRACTS | INTEREST RATE CONTRACTS |
|---|---|---|---|
| Australian Dollar | $ (576,160) | $ - | $ - |
| Canadian Dollar | (5,240,119) | - | - |
| Euro Currency | (11,763,575) | 241,075 | - |
| British Pound Sterling | (11,662,863) | - | - |
| Japanese Yen | (11,605,950) | - | - |
| Swiss Franc | (11,839,200) | - | - |
| TOTAL | $ (52,687,867) | $ 241,075 | $ - |

### 2015 FOREIGN CURRENCY RISK ANALYSIS (AS OF DECEMBER 31, 2015)

| CURRENCY | FUTURES CONTRACTS | EQUITY CONTRACTS OPTION CONTRACTS | INTEREST RATE CONTRACTS |
|---|---|---|---|
| Australian Dollar | $ (22,742,580) | $ 60,300 | $ - |
| Canadian Dollar | (15,681,488) | (876,424) | 6,462,436 |
| Euro Currency | (16,785,456) | 156,275 | - |
| British Pound Sterling | (15,640,943) | - | - |
| Japanese Yen | (14,269,406) | (72,006) | 6,194,771 |
| Swiss Franc | - | 531,788 | - |
| TOTAL | $ (85,119,873) | $ (200,067) | $ 12,657,207 |

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.

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.

**Forward Contracts:** A forward contract represents an agreement to buy or sell an underlying asset at a specified date in the future at a specified price. Payment for the transaction is delayed until the settlement or expiration date. A forward contract is a non-standardized contract that is tailored to each specific transaction. Forward contracts are privately negotiated and are intended to be held until the settlement date. Currency forward contracts are used to control currency exposure and facilitate the settlement of international security purchase and sale transactions.

**Option Contracts:** An option 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.

The Investment Derivatives schedule listed below reports the fair value balances, changes in fair value, and notional amounts of derivatives outstanding as of and for the years ended December 31, 2016 and 2015, classified by type.

### INVESTMENT DERIVATIVES (AS OF DECEMBER 31, 2016 AND 2015)

| | 2016 | | 2014 | 2016/2015 CHANGE IN FAIR VALUE |
|---|---|---|---|---|
| DERIVATIVE TYPE | NOTIONAL AMOUNT | FAIR VALUE | FAIR VALUE | |
| Futures Contracts | $ (85,080,139) | $ 1,341,877 | $ 7,597,875 | $ (6,255,998) |
| Option Contracts | 321,052 | 299,757 | 1,677,626 | (1,377,869) |
| Swap Agreements | - | (407,768) | (146,786) | (260,982) |
| TOTAL | $ (84,759,087) | $ 1,233,866 | $ 9,128,715 | $ (7,894,849) |

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 investment managers or SJCERA's custodian bank.

## 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.

Beginning in 2011, the County and a few special district employers have established employment resolutions and collective bargaining agreements that increase the employees' share of the cost of funding their retirement benefits. As of the close of 2014, most General Members and some Safety Members pay one-half of the cost of pre-funding post-retirement COLAs. Prior to 2012, the employer paid 100 percent of the cost to fund this benefit.

Beginning in 2013, some of these members also began paying an additional percentage of the basic member contribution rate, which reduced the employers' Normal Cost portion of the required contribution. Employers pay all of the required Unfunded Accrued Liability (UAL) amortization payment.

Tier I members' contribution rates are calculated by the actuary using the entry age-based rates as computed under the provisions reflected in the County Employees Retirement Law (CERL). Tier II members pay a contribution rate that is based on 50 percent of the total average normal cost for all active members of the plan with the same benefit provisions.

## NOTES TO THE FINANCIAL STATEMENTS

The required contribution rates are expressed as a percentage of covered payroll. The 2016 and 2015 contribution rates were determined using the actuarial valuations performed as of January 1, 2015 and 2014, respectively.

The Actuarial Experience Study as of December 31, 2012, recommended significant contribution increases due to improving mortality rates and reducing the expected long-term rate of inflation, which also reduces the expected return on plan assets. The County requested, and the Board agreed, that employer contribution rates will increase by approximately 2.97 percent per year (plus interest on any contribution shortfall from the full employer rates) in 2015 and 2016 to phase in the impact of the assumption changes adopted by the Board. This phase in of rate increases is consistent with model practice specified by the California Actuarial Advisory Panel (CAAP).

### EMPLOYER CONTRIBUTIONS

For 2016, the required employer contribution rates including normal cost and amortization of the UAL were determined by using the valuation report as of January 1, 2015. 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 result is a set of three amortization bases as of January 1, 2016: The 2008 Extraordinary Actuarial Loss being amortized over a closed 30-year period, with 23 years remaining as of January 1, 2016; the remaining UAL as of December 31, 2014, being amortized over a closed 19-year period with 17 years remaining as of January 1, 2016; and new additions to the UAL on and after January 1, 2014, being amortized over 15 years. The single amortization period for these streams of payments is 19 years as of January 1, 2016. The amortization period for each unfunded actuarial liability layer will decrease each year.

On March 29, 2016, the County Board of Supervisors approved additional annual contributions from the County, ranging from 0 percent to 5 percent of payroll for the next 10 years effective January 1, 2017. These additional contributions will decrease the County share of the unfunded actuarial liability and will not decrease the liability for other entities participating in SJCERA.

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## EMPLOYER RETIREMENT CONTRIBUTION RATES

*Expressed as a Percentage of Active Member Payroll*

| | 2016 (PER 1/1/2015 VALUATION) | | | 2015 (PER 1/1/2014 VALUATION) | | |
|---|---|---|---|---|---|---|
| | NORMAL COST | UAL AMORTIZATION | TOTAL | NORMAL COST | UAL AMORTIZATION | TOTAL |
| **TIER I** | | | | | | |
| *For General Members* | | | | | | |
| Paying Basic Rate Only (G.C. 31621.3) | 18.44% | 20.86% | 39.30% | 17.21% | 20.09% | 37.30% |
| Paying Basic Rate with COLA Cost Share | 16.03% | 20.86% | 36.89% | 15.02% | 20.09% | 35.11% |
| Paying 114% of Basic Rate with COLA Cost Share | 15.51% | 20.86% | 36.37% | 14.55% | 20.09% | 34.64% |
| *For Safety Members* | | | | | | |
| Paying Basic Rate Only (G.C. 31639.5) | 32.70% | 39.58% | 72.28% | 30.40% | 38.40% | 68.80% |
| Paying Basic Rate with COLA Cost Share | 28.24% | 39.58% | 67.82% | 26.20% | 38.40% | 64.60% |
| Paying 133% of Basic Rate with COLA Cost Share | 26.67% | 39.58% | 66.25% | 24.72% | 38.40% | 63.12% |
| *Composite Total for General and Safety Combined* | | | | | | |
| Paying Basic Rate Only (G.C. 31621.3) | 21.17% | 24.41% | 45.58% | 19.64% | 23.42% | 43.06% |
| Paying Basic Rate with COLA Cost Share | 18.37% | 24.41% | 42.78% | 17.08% | 23.42% | 40.50% |
| Paying 114%/133% of Basic Rate with COLA Cost Share | 17.65% | 24.41% | 42.06% | 16.42% | 23.42% | 39.84% |
| **TIER II** | | | | | | |
| For General Members | 9.15% | 20.86% | 30.01% | 9.38% | 20.09% | 29.47% |
| For Safety Members | 15.22% | 39.58% | 54.80% | 15.59% | 38.40% | 53.99% |
| Composite Total for General and Safety Combined | 9.63% | 22.32% | 31.95% | 9.60% | 20.74% | 30.34% |

## NOTES TO THE FINANCIAL STATEMENTS

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 six years are as follows.

| CONTRIBUTION YEAR | TIER I | TIER II |
|---|---|---|
| 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% | - |
| 2011 | 31.92% | - |

#### MEMBER CONTRIBUTIONS

Employee contributions are deducted from the employee's salary on a biweekly basis.

Tier I members pay contributions based upon their membership category, General or Safety, and age at entry into membership. All Safety members of Tier I, and General members of Tier I employed prior to March 7, 1973, 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 II members pay contributions based upon their membership category equal to one-half of the normal cost of the applicable benefits.

In 2016, member contributions totaled $30,117,408, and employer contributions totaled $159,122,523. For 2015, member contributions totaled $29,026,901, and employer contributions totaled $150,371,556. Employee contributions increased by $1.1 million, or 3.76 percent, over the prior year, and employer contributions increased by $8.8 million, or 5.82 percent, over the prior year.

### NOTE 7 – TEN-YEAR HISTORICAL TREND INFORMATION

The ten-year historical trend information is designed to provide information about SJCERA's progress made in accumulating sufficient assets to pay pension benefits when due.

### NOTE 8 – FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS

As required by the County Employees Retirement Law 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 assumption rate for all of the reserves except for active and deferred members' reserve in 2016 and 2015. In addition, there were no excess earnings to fund the Contingency Reserve in 2016 and 2015.

### A. ACTIVE AND DEFERRED MEMBER 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. For 2015 and 2014, the assumption rates were 7.5 percent compounded semi-annually, for each year. Earnings are credited to all appropriate active and deferred member accounts semi-annually. Upon retirement, a member's accumulated contributions are transferred from this reserve to the Retired Members' Annuity Reserve.

### B. EMPLOYER ADVANCE RESERVE

This reserve represents the cumulative contributions made by the County and certain special districts for the active members. Interest earnings are credited semi-annually to the reserve at assumption rates determined by the actuary if sufficient unappropriated earnings reserve funds exist. Upon a member's retirement, an actuarially determined amount of the member's vested interest is transferred from the Employer Advance Reserve to the Retired Members' Pension Reserve.

### C. RETIRED MEMBER RESERVES

These reserves are established to account for the retirees' unpaid pension benefits. Upon a member's retirement, the member's accumulated contributions are transferred from the Active and Deferred Member Reserve to the Retired Member Annuity Reserve. In addition, the actuarially determined amount of the member's vested interest is transferred from the Employer Advance Reserve to the Retired Member Pension Reserve.

From these reserves, SJCERA pays benefits in amounts computed in accordance with the County Employees Retirement Law. Interest earnings are also credited to the reserves semi-annually at the assumed nominal rate of return adopted by the Board, if sufficient Unappropriated Earnings Reserve funds exist.

The reserves at December 31, 2016 and 2015, include the authorized "Purchasing Power" benefit reserve of $4.8 million and $3.6 million, respectively, and additional pension benefits specified in the pre-April 1, 1982 class-action lawsuit settlement agreement. These benefits are explained in Note 1b. In November 2012, the Board adopted a revised Statement of Reserve Policy to classify the post-April 1, 1982 Settlement Reserve as a Special Reserve, which is not included in valuation assets.

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# Financial

## NOTES TO THE FINANCIAL STATEMENTS

### D. 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 County Employees Retirement Law 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. By policy, the SJCERA Board has set the Contingency Reserve target at three percent of total assets. The Contingency Reserve is 0.00 percent of the fair value of total assets at both December 31, 2016 and 2015.

### E. MARKET STABILIZATION DESIGNATION RESERVE

The Market Stabilization Designation Reserve 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.

### F. 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 Contribution (ADC), and to fund the market stabilization and contingency reserves accounts.

### G. A SUMMARY OF RESERVED AND DESIGNATED NET POSITION AT DECEMBER 31, 2016, AND DECEMBER 31, 2015, IS AS FOLLOWS:

| RESERVES | 2016 | 2015 |
|---|---|---|
| Active and Deferred Members | $ 323,352,267 | $ 300,964,754 |
| Employer Advance | 1,111,236,994 | 1,011,284,355 |
| Retired Members | 1,299,326,905 | 1,292,518,422 |
| Class Action Settlement - Post-4/1/82 | 915,393 | 3,644,507 |
| Contingency | - | - |
| Market Stabilization Designation | (180,029,435) | (195,169,491) |
| TOTAL RESERVES | $ 2,554,802,124 | $ 2,413,242,547 |

## NOTE 9 – 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, 2016 and 2015. Measurements as of the reporting date are based on the fair value of assets as of December 31, 2016 and 2015, and the Total Pension Liability as of the valuation date, January 1, 2016 and 2015, updated to December 31, 2016 and 2015, respectively. There were no significant events between the valuation date and the measurement date so the updated procedures only include the addition of service cost and interest cost offset by benefit payments. Beginning of the year measurements are also based on the actuarial valuation as of January 1, 2016 and 2015, respectively. Because the beginning and ending values are based on the same actuarial valuation and there were no significant events, no liability gains or losses due to experience are reported this year.

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.

### CHANGE IN COLLECTIVE NET PENSION LIABILITY

| | INCREASE (DECREASE) | | |
|---|---|---|---|
| | TOTAL PENSION LIABILITY | PENSION PLAN FIDUCIARY NET POSITION | NET PENSION LIABILITY |
| PLAN | (A) | (B) | (A-B) |
| BALANCE AT DECEMBER 31, 2015 | $ 3,951,582,395 | $ 2,413,242,547 | $ 1,538,339,848 |
| **CHANGES FOR THE YEAR** | | | |
| Service Cost | 92,857,369 | - | 92,857,369 |
| Interest | 295,197,992 | - | 295,197,992 |
| Changes of Benefits | - | - | - |
| Changes of Assumptions | 87,601,669 | - | 87,601,669 |
| Differences Between Expected and Actual Experience | (10,171,368) | - | (10,171,368) |
| Contributions - Employer | - | 159,122,523 | (159,122,523) |
| Contributions - Employee | - | 30,117,408 | (30,117,408) |
| Net Investment Income | - | 151,114,788 | (151,114,788) |
| Transfer Between Plans | - | 293,779 | (293,779) |
| Benefit Payments, Including Refunds of Employee Contributions | (194,719,177) | (194,719,177) | - |
| Administrative Expenses | - | (4,369,744) | 4,369,744 |
| Net Changes | 270,766,485 | 141,559,577 | 129,206,908 |
| BALANCE AT DECEMBER 31, 2016 | $ 4,222,348,880 | $ 2,554,802,124 | $ 1,667,546,756 |

## NOTES TO THE FINANCIAL STATEMENTS

| | INCREASE (DECREASE) | | |
|---|---|---|---|
| | TOTAL PENSION LIABILITY | PENSION PLAN FIDUCIARY NET POSITION | NET PENSION LIABILITY |
| PLAN | (A) | (B) | (A-B) |
| BALANCE AT DECEMBER 31, 2014 | $ 3,783,844,864 | $ 2,466,349,529 | $ 1,317,495,335 |
| **CHANGES FOR THE YEAR** | | | |
| Service Cost | 94,377,630 | - | 94,377,630 |
| Interest | 280,581,484 | - | 280,581,484 |
| Changes of Benefits | - | - | - |
| Changes of Assumptions | - | - | - |
| Differences Between Expected and Actual Experience | (25,752,670) | - | (25,752,670) |
| Contributions - Employer | - | 150,371,556 | (150,371,556) |
| Contributions - Employee | - | 29,026,901 | (29,026,901) |
| Net Investment Income | - | (47,339,750) | 47,339,750 |
| Transfer Between Plans | - | 378,969 | (378,969) |
| Benefit Payments, Including Refunds of Employee Contributions | (181,468,913) | (181,468,913) | - |
| Administrative Expenses | - | (4,075,745) | 4,075,745 |
| Net Changes | 167,737,531 | (53,106,982) | 220,844,513 |
| BALANCE AT DECEMBER 31, 2015 | $ 3,951,582,395 | $ 2,413,242,547 | $ 1,538,339,848 |

The Net Pension Liability was measured as of December 31, 2016 and 2015, and determined based upon rolling forward the Total Pension Liability from actuarial valuations as of January 1, 2016 and 2015, respectively.

### B. ACTUARIAL ASSUMPTIONS AND SIGNIFICANT ASSUMPTIONS

SJCERA retains an independent actuarial firm to conduct actuarial valuations of the pension plan to monitor SJCERA's funding status and to 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 substantive plan (the plan as understood by the employers and plan members) 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 actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations. The total pension liabilities were determined by an actuarial valuation as of January 1, 2016 and 2015, respectively, 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, 2016 and 2015 actuarial valuations, the Entry Age Normal Funding Method (Cost Method) was used. The actuarial assumptions include a 7.40 percent and 7.50 percent investment rate of returns, annual inflation rates of 2.90 percent and 3.00 percent per year, and projected salary increases at 3.15 percent and 3.25 percent per year, respectively, for the years ended 2016 and 2015. 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 result is a set of three amortization bases as of January 1, 2016: The 2008 Extraordinary Actuarial Loss being amortized over a closed 30-year period, with 23 years remaining as of January 1, 2016; the remaining UAL as of December 31, 2014, being amortized over a closed 19-year period with 17 years remaining as of January 1, 2016; and new additions to the UAL on and after January 1, 2014, being amortized over 15 years. The single amortization period for these streams of payments is 19 years as of January 1, 2016. The amortization period for each unfunded actuarial liability layer will decrease each year.

The total pension liabilities were determined by actuarial valuations as of January 1, 2016 and 2015, and accepted actuarial procedures were applied to roll-forward the total pension liability to December 31, 2016 and 2015, respectively.

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## NOTES TO THE FINANCIAL STATEMENTS

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

| | |
|---|---|
| Valuation Date | January 1, 2016 |
| 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 - 23 years<br>Remaining UAL as of January 1, 2014 - 17 years<br>Subsequent Unexpected Changes in UAL after January 1, 2016 - 15 years<br>Single Equivalent Period as of January 1, 2016 - 19 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 | 2.60% 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.<br><br>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.<br><br>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.<br><br>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. |

### 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, 2016 and 2015, the pension plan's actuarial accrued liabilities were $4 billion and $3.7 billion; the actuarial value of assets were $2.6 billion and $2.5 billion, resulting in an unfunded accrued liabilities (UAL) of $1.4 billion and $1.2 billion, respectively. The covered payroll (annual payroll of active employees covered by the plan) was $413 million and $398 million, and the ratio of the UAL to the covered payroll was 339 percent and 317 percent, respectively.

As of the annual actuarial valuation January 1, 2016, the funded status decreased to 65 percent from 66.2 percent as of the annual actuarial valuation January 1, 2015. The Extraordinary Actuarial Loss of 2008 adversely affected the funded ratio from 2009 to 2013. In addition, for January 1, 2016 valuation assumption changes were made that reflects lower expected future returns on assets and improved mortality, lessening the impact of recent asset gains on the funded ratio.

SJCERA's funding policy provides for regular employer and employee 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 2016 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% | 9.65% |
| Stable Fixed Income | 10.00% | 3.70% |
| Credit | 14.00% | 6.20% |
| Risk Parity | 14.00% | 7.85% |
| Private Appreciation/Real Estate-Private Manager | 12.00% | 10.85% |
| Crisis Risk Offset (CRO) | 20.00% | 7.75% |
| Short Term Investments/Cash/Cash Equivalents | 0.00% | 2.90% |
| TOTAL | 100.00% | |

## NOTES TO THE FINANCIAL STATEMENTS

### E. DISCOUNT RATE

The discount rate used to measure the total pension liability was 7.40 percent and 7.50 percent as of December 31, 2016 and 2015, respectively. 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 both December 31, 2016 and 2015.

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

The following tables present the net pension liabilities of SJCERA as of December 31, 2016 and 2015, calculated using the discount rate of 7.40 percent and 7.50 percent, respectively, 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:

| 2016 | 1% DECREASE (6.40%) | CURRENT DISCOUNT RATE (7.40%) | 1% INCREASE (8.40%) |
|---|---|---|---|
| TOTAL PENSION LIABILITY | $4,792,872,436 | $4,222,348,880 | $3,753,517,894 |
| Pension Plan Fiduciary Net Position | 2,554,802,124 | 2,554,802,124 | 2,554,802,124 |
| Collective Net Pension Liability | $2,238,070,312 | $1,667,546,756 | $1,198,715,770 |
| Fiduciary Net Position as a Percentage of the Total Pension Liability | 53.3% | 60.5% | 68.1% |

| 2015 | 1% DECREASE (6.50%) | CURRENT DISCOUNT RATE (7.50%) | 1% INCREASE (8.50%) |
|---|---|---|---|
| TOTAL PENSION LIABILITY | $4,479,606,003 | $3,951,582,395 | $3,516,662,896 |
| Pension Plan Fiduciary Net Position | 2,413,242,547 | 2,413,242,547 | 2,413,242,547 |
| Collective Net Pension Liability | $2,066,363,456 | $1,538,339,848 | $1,103,420,349 |
| Fiduciary Net Position as a Percentage of the Total Pension Liability | 53.9% | 61.1% | 68.6% |

### G. RATE OF RETURN

For the years ended December 31, 2016 and 2015, the annual money-weighted rate of return on investments, gross of investment expense, was 6.2 percent and -2.1 percent, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

## NOTE 10 – 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 11 – 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 actuarial accrued liability. The actual administration expense for years 2016 and 2015 was 0.10 percent of the actuarial accrued liability for both years. SJCERA was in compliance with this requirement during 2016 and 2015.

## NOTE 12 – PENDING LITIGATION

In the normal course of its activities, SJCERA may be named in various claims and legal actions. On May 27, 2016, SJCERA received a demand letter on behalf of the San Joaquin County Correctional Officers Association (SJCCOA) stating intent to initiate legal action against SJCERA related to pensionable compensation.

On February 2017, a petition for Writ of Mandate was filed by the San Joaquin County Correctional Officers' Association and various individuals (collectively "SJCCOA") against SJCERA and San Joaquin County (collectively "Respondents"), commencing San Joaquin County Superior Court Case No. STK-CV-UWM-2017-0001713 ("Petition"). The Petition challenges Respondents' exclusion of certain overtime pay from the calculation of retirement allowances. Responses to the Petition were submitted in late March 2017. SJCERA will vigorously defend itself in the litigation. Based upon counsel and management's opinion, the outcome of this matter is not expected to have a material adverse effecton SJCERA's financial position or change in fiduciary net position.

## NOTE 13 – 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 $291.7 million and $329.4 million at December 31, 2016 and 2015, respectively.

## NOTE 14 – SUBSEQUENT EVENTS

SJCERA has evaluated subsequent events through June 2, 2017, the date on which the financial statements were available to be issued. There are no pending subsequent events.

# Financial

## REQUIRED SUPPLEMENTARY INFORMATION

### SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

*For the Year Ended December 31, 2016 (with Comparative Totals)*

| | DECEMBER 31, 2016* | DECEMBER 31, 2015* | DECEMBER 31, 2014* |
|---|---|---|---|
| **TOTAL PENSION LIABILITY** | | | |
| Service Cost | $ 92,857,369 | $ 94,377,630 | $ 90,429,416 |
| Interest (Includes Interest on Service Cost) | 295,197,992 | 280,581,484 | 266,668,435 |
| Change of Benefit Terms | - | - | - |
| Differences Between Expected and Actual Experience | (10,171,368) | (25,752,670) | - |
| Changes of Assumptions | 87,601,669 | - | - |
| Benefit Payments, Including Refunds of Employee Contributions | (194,719,177) | (181,468,913) | (165,870,971) |
| NET CHANGE IN TOTAL PENSION LIABILITY | 270,766,485 | 167,737,531 | 191,226,880 |
| TOTAL PENSION LIABILITY - BEGINNING | 3,951,582,395 | 3,783,844,864 | 3,592,617,984 |
| TOTAL PENSION LIABILITY - ENDING (A) | $4,222,348,880 | $3,951,582,395 | $3,783,844,864 |
| **FIDUCIARY NET POSITION** | | | |
| Contributions - Employer | $ 159,122,523 | $ 150,371,556 | $ 136,686,133 |
| Contributions - Employee | 30,117,408 | 29,026,901 | 27,367,908 |
| Net Investment Income (Loss) | 151,114,788 | (47,449,240) | 110,651,111 |
| Miscellaneous Income | | 109,490 | 77,192 |
| Transfer Between Plans | 293,779 | 378,969 | 19,968,779 |
| Benefit Payments, Including Refunds of Employee Contributions | (194,719,177) | (181,468,913) | (165,870,971) |
| Administrative Expenses and Other Expenses | (4,369,744) | (4,075,745) | (4,042,986) |
| NET CHANGE IN FIDUCIARY NET POSITION | 141,559,577 | (53,106,982) | 124,837,166 |
| FIDUCIARY NET POSITION - BEGINNING | 2,413,242,547 | 2,466,349,529 | 2,341,512,363 |
| FIDUCIARY NET POSITION - ENDING (B) | $2,554,802,124 | $2,413,242,547 | $2,466,349,529 |
| FIDUCIARY NET PENSION LIABILITY - ENDING (A)-(B) | $1,667,546,756 | $1,538,339,848 | $1,317,495,335 |
| FIDUCIARY NET POSITION AS A PERCENTAGE OF THE TOTAL PENSION LIABILITY | 60.51% | 61.07% | 65.18% |
| COVERED EMPLOYEE PAYROLL** | $ 392,227,314 | $ 396,136,470 | $ 376,030,944 |
| FIDUCIARY NET POSITION LIABILITY AS A PERCENTAGE OF COVERED EMPLOYEE PAYROLL | 425.15% | 388.34% | 350.37% |

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

** Covered Employee Payroll reported by plan sponsors for 2016, 2015 and 2014.

REQUIRED SUPPLEMENTARY INFORMATION

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

*For the Ten Years Ending December 31, 2016*

### 2016-2012

| | 2016 | 2015 | 2014 | 2013 | 2012 |
|---|---|---|---|---|---|
| Actuarially Determined Contributions | $159,122,523 | $150,371,556 | $136,686,133 | $119,494,319 | $108,062,510 |
| Contributions in Relation to the Actuarially Determined Contribution | 159,122,523 | 150,371,556 | 136,686,133 | 119,494,319 | 108,062,510 |
| Contribution Deficiency / (Excess) | $ - | $ - | $ - | $ - | $ - |
| Covered Employee Payroll* | $392,227,314 | $396,136,470 | $376,030,944 | $362,650,568 | $356,419,000 |
| Contributions as a Percentage of Covered Employee Payroll | 40.57% | 37.96% | 36.35% | 32.95% | 30.32% |

### 2011-2007

| | 2011 | 2010 | 2009 | 2008 | 2007 |
|---|---|---|---|---|---|
| Actuarially Determined Contributions | $112,891,701 | $104,451,673 | $ 97,805,585 | $ 94,162,866 | $ 85,686,698 |
| Contributions in Relation to the Actuarially Determined Contribution | 112,891,701 | 104,451,673 | 97,805,585 | 94,162,866 | 85,686,698 |
| Contribution Deficiency / (Excess) | $ - | $ - | $ - | $ - | $ - |
| Covered Employee Payroll* | $367,344,000 | $384,442,000 | $377,559,000 | $367,561,000 | $340,828,000 |
| Contributions as a Percentage of Covered Employee Payroll | 30.73% | 27.10% | 25.90% | 25.62% | 25.14% |

* Covered Employee Payroll reported by plan sponsors for 2016, 2015 and 2014. Previous years' amounts are based on projected payroll from the actuarial valuation reports.

# Financial

## REQUIRED SUPPLEMENTARY INFORMATION

### SCHEDULE OF INVESTMENT RETURNS

*For the Ten Years Ending December 31, 2016 (with Comparative Totals)*

| | DECEMBER 31, 2016* | DECEMBER 31, 2015* | DECEMBER 31, 2014* |
|---|---|---|---|
| Annual Money-Weighted Rate of Return, Net of Investment Expense | 6.20% | -2.06% | 4.29% |

* 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).

Time-weighted rate of return is assumed 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 in the Schedule of Employer Contributions.

| | |
|---|---|
| **Valuation Date** | January 1, 2015 |
| **Timing** | Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year. |
| **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** | 24 Years for 2008 Extraordinary Loss,<br>18 Years for Remaining UAL<br>(20 Year Single Equivalent Period) |
| **Asset Valuation Method** | Excessive Earnings Smoothed Actuarial Value (5 years) 80%-120% Asset Corridor |
| ACTUARIAL ASSUMPTIONS: | |
| **Discount Rate** | 7.50% |
| **Projected Salary Increases** | 3.25%, plus merit component based on employee classification and years of service |
| **General Inflation Rate** | 3.00% |
| **Cost-of-Living Adjustments** | 2.60% |
| **Healthy Mortality** | Sex distinct Retired Pensioner (RP) 2000 Combined Healthy Tables, published by the Society of Actuaries, with Generational Projection using Projection Scale BB. |
| **Disabled Mortality** | Sex distinct Retired Pensioner (RP) 2000 Combined Healthy Tables, published by the Society of Actuaries, with Generational Projection using Projection Scale BB, set-forward eight years for males and females. |

A complete description of the methods and assumptions used to determine contribution rates for the year ending December 31, 2016, can be found in the January 1, 2015, actuarial valuation report.

## NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

### NOTE 2 - CHANGES OF ASSUMPTIONS

In 2015, the SJCERA Board of Retirement 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 result is a set of three amortization bases as of January 1, 2016: The 2008 Extraordinary Actuarial Loss being amortized over a closed 30-year period, with 23 years remaining as of January 1, 2016; the remaining UAL as of December 31, 2014, being amortized over a closed 19-year period with 17 years remaining as of January 1, 2016; and new additions to the UAL on and after January 1, 2015, being amortized over 15 years. The single amortization period for these streams of payments is 19 years as of January 1, 2016. The amortization period for each unfunded actuarial liability layer will decrease each year.

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 member 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 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.

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## SCHEDULE OF ADMINISTRATIVE EXPENSES

*For the Year Ended December 31, 2016 (with Comparative Totals)*

| | 2016 | 2015 |
|---|---|---|
| **PERSONNEL SERVICES** | | |
| Staff Salaries | $ 1,346,645 | $ 1,320,146 |
| Cafeteria Benefits | 230,131 | 157,579 |
| Insurance | 204,452 | 226,066 |
| Social Security | 98,783 | 98,718 |
| Retirement | 519,402 | 547,967 |
| TOTAL PERSONNEL SERVICES | 2,399,413 | 2,350,476 |
| **PROFESSIONAL SERVICES** | | |
| Professional and Specialized Services | 664,055 | 585,247 |
| Allocated Department Costs | 41,136 | 19,339 |
| TOTAL PROFESSIONAL SERVICES | 705,191 | 604,586 |
| **COMMUNICATIONS** | | |
| Postage | 33,645 | 25,357 |
| Telephone | 13,923 | 16,420 |
| Travel | 61,905 | 66,878 |
| TOTAL COMMUNICATIONS | 109,473 | 108,655 |
| **RENTALS/EQUIPMENT** | | |
| Office Space and Equipment | 241,290 | 272,831 |
| Equipment | 8,402 | 6,440 |
| Depreciation-Equipment | 94,241 | 145,548 |
| Equipment Leasing | 15,000 | 17,530 |
| TOTAL RENTALS/EQUIPMENT | 358,933 | 442,349 |
| **MISCELLANEOUS** | | |
| Office Supplies/Expense | 106,125 | 76,131 |
| Subscriptions and Periodicals | 2,281 | 4,365 |
| Memberships | 6,182 | 9,584 |
| Maintenance | 905 | 1,930 |
| Insurance | 141,795 | 111,971 |
| TOTAL MISCELLANEOUS | 257,288 | 203,981 |
| TOTAL ADMINISTRATIVE EXPENSE | $ 3,830,298 | $ 3,710,047 |

# Financial

## OTHER SUPPLEMENTARY INFORMATION

### SCHEDULE OF INVESTMENT EXPENSES

*For the Year Ended December 31, 2016 (with Comparative Totals)*

| | 2016 | 2015 |
|---|---|---|
| **INVESTMENT MANAGEMENT FEES** | | |
| Global Public Equities | $ 2,294,295 | $ 2,664,414 |
| Stable Fixed Income | 945,202 | 1,343,249 |
| Credit | 5,101,366 | 4,154,422 |
| Risk Parity | 1,243,541 | 1,850,159 |
| Private Appreciation | 4,516,909 | 4,362,519 |
| Credit Risk Offset | 3,962,245 | 4,679,991 |
| Short-Term Investments/Cash/Cash Equivalents | 185,928 | 195,012 |
| TOTAL INVESTMENT MANAGEMENT FEES | 18,249,486 | 19,249,766 |
| **OTHER INVESTMENT FEES AND EXPENSES** | | |
| Custodian Fees | 262,030 | 282,059 |
| Investment Consultant Fees | 417,431 | 564,646 |
| Miscellaneous Investment Expense | 86,308 | 70,520 |
| Notional Interest Expense | - | 53,402 |
| TOTAL INVESTMENT FEES AND INTEREST EXPENSES | 765,769 | 970,627 |
| TOTAL INVESTMENT EXPENSES | $ 19,015,255 | $ 20,220,393 |

### SCHEDULE OF PAYMENTS TO CONSULTANTS

*For the Year Ended December 31, 2016 (with Comparative Totals)*

| | 2016 | 2015 |
|---|---|---|
| **NATURE OF SERVICE** | | |
| Actuarial-Retainer and Valuation* | $ 251,775 | $ 151,893 |
| Audit | 60,705 | 60,705 |
| Legal Counsel-Processing of Disabilities | 287,671 | 213,805 |
| Business Technology Services | 117,250 | 109,900 |
| TOTAL PAYMENTS TO CONSULTANTS | $ 717,401 | $ 536,303 |

* For 2016, includes triennial experience study.

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

*For the Year ended December 31, 2016*

| | BALANCE JANUARY 1, 2016 | ADDITIONS | DELETIONS | BALANCE DECEMBER 31, 2016 |
|---|---|---|---|---|
| **ASSETS** | | | | |
| Cash and Cash Equivalents | $ - | $ 4,195,814 | $ (4,179,709) | $ 16,105 |
| Cash Collateral - Securities Lending | - | - | - | - |
| Receivables | 3,929 | - | (3,929) | - |
| Investments | - | - | - | - |
| TOTAL ASSETS | $ 3,929 | $ 4,195,814 | $ (4,183,638) | $ 16,105 |
| **LIABILITIES** | | | | |
| Securities Lending - Cash Collateral | $ - | $ - | $ - | $ - |
| Securities Purchased, Not Paid | - | - | - | - |
| Accrued Expense and Other Payables | - | - | - | - |
| Securities Lending Interest and Other Expense | - | - | - | - |
| Retiree Sick Leave Bank Benefits Payable | 3,929 | 4,195,814 | (4,183,638) | 16,105 |
| TOTAL LIABILITIES | $ 3,929 | $ 4,195,814 | $ (4,183,638) | $ 16,105 |

## OTHER INFORMATION

### SCHEDULE OF COST SHARING EMPLOYER ALLOCATIONS

*For the Years Ended December 31, 2016 (with Comparative Totals)*

| | DECEMBER 31, 2016 | | DECEMBER 31, 2015 | |
|---|---|---|---|---|
| EMPLOYER | PROPORTIONATE SHARE [1] | NET PENSION LIABILITY [2] | PROPORTIONATE SHARE [1] | NET PENSION LIABILITY [2] |
| County of San Joaquin | 93.5831% | $1,560,541,948 | 93.9134% | $1,444,707,255 |
| Superior Courts | 3.8881% | 64,835,885 | 3.7061% | 57,012,413 |
| Lathrop-Manteca Rural Fire Protection District | 1.1424% | 19,050,054 | 1.0494% | 16,143,338 |
| Waterloo-Morada Rural Fire Protection District | 0.4333% | 7,225,480 | 0.4405% | 6,776,387 |
| Tracy Public Cemetery District | 0.0520% | 867,124 | 0.0382% | 587,646 |
| SJC Mosquito and Vector Control District | 0.5243% | 8,742,948 | 0.5265% | 8,099,359 |
| SJC Historical Society and Museum | 0.0286% | 476,918 | 0.0287% | 441,504 |
| Mountain House Community Services Dist | 0.3385% | 5,644,646 | 0.2869% | 4,413,497 |
| Local Agency Formation Commission | 0.0000% | - | 0.0000% | - |
| San Joaquin County Law Library | 0.0097% | 161,752 | 0.0103% | 158,449 |
| TOTAL | 100.0000% | $1,667,546,755 | 100.0000% | $1,538,339,848 |

[1] As SJCERA is a cost-sharing multiple-employer pension plan, each employer participating in SJCERA must reflect a portion the collective net pension liability and pension expense in their financial statement. 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.

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

## SCHEDULE OF EMPLOYER PENSION AMOUNTS ALLOCATED BY COST SHARING PLAN

*As of and For the Year Ended December 31, 2016*

| | | DEFERRED OUTFLOWS OF RESOURCES | | | | | DEFERRED INFLOWS OF RESOURCES | | | | | PENSION EXPENSE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EMPLOYER | NET PENSION LIABILITY | DIFFERENCES BETWEEN EXPECTED AND ACTUAL EXPERIENCE | DIFFERENCES BETWEEN PROJECTED AND ACTUAL INVESTMENT EARNINGS | CHANGES OF ASSUMPTIONS | CHANGES IN PROPORTION AND DIFFERENCES BETWEEN CONTRIBUTIONS AND PROPORTIONATE SHARE OF PENSION EXPENSE | TOTAL DEFERRED OUTFLOWS OF RESOURCES | DIFFERENCES BETWEEN EXPECTED AND ACTUAL ECONOMIC EXPERIENCE | DIFFERENCES BETWEEN PROJECTED AND ACTUAL INVESTMENT EARNINGS | CHANGES OF ASSUMPTIONS | CHANGES IN PROPORTION AND DIFFERENCES BETWEEN CONTRIBUTIONS AND PROPORTIONATE SHARE OF PENSION EXPENSE | TOTAL DEFERRED INFLOWS OF RESOURCES | PROPORTIONAL SHARE OF PLAN PENSION EXPENSE | NET AMORTIZATION OF DEFERRED AMOUNTS FROM CHANGES IN PROPORTION AND PROPORTIONATE SHARE OF PENSION EXPENSE | TOTAL PENSION EXPENSE |
| County of San Joaquin | $1,560,541,948 | $ - | $175,111,163 | $65,584,286 | $ - | $240,695,449 | $22,075,033 | $- | $ - | $ 6,469,322 | $28,544,355 | $242,419,499 | $ (1,922,958) | $240,496,541 |
| Superior Courts | 64,835,885 | - | 7,275,349 | 2,724,832 | 4,908,667 | 14,908,848 | 917,152 | - | - | - | 917,152 | 10,071,811 | 1,529,578 | 11,601,389 |
| Manteca-Lathrop Rural Fire Protection District | 19,050,054 | - | 2,137,640 | 800,609- | 1,312,780 | 4,251,029 | 269,477 | - | - | 110,601 | 380,078 | 2,959,295 | 326,999 | 3,286,294 |
| Waterloo-Morada Rural Fire Protection District | 7,225,480 | - | 810,784 | 303,662- | 68,949 | 1,183,395 | 102,210 | - | - | 137,434 | 239,644 | 1,122,429 | (4,472) | 1,117,957 |
| Tracy Public Cemetery District | 867,124 | - | 97,302 | 36,442- | 172,036 | 305,780 | 12,266 | - | - | 45,244 | 57,510 | 134,702 | 34,301 | 169,003 |
| SJC Mosquito and Vector Control District | 8,742,948 | - | 981,062 | 367,436- | 60,736 | 1,409,234 | 123,676 | - | - | 28,613 | 152,289 | 1,358,157 | 14,112 | 1,372,269 |
| SJC Historical Society and Museum | 476,918 | - | 53,516 | 20,043 | 7,304 | 80,863 | 6,746 | - | - | 1,547 | 8,293 | 74,086 | 1,775 | 75,861 |
| Mountain House Community Services District | 5,644,646 | - | 633,396 | 237,225- | 550,682 | 1,421,303 | 79,848 | - | - | 185,947 | 265,795 | 876,857 | 57,482 | 934,339 |
| Local Agency Formation Commission | - | - | - | - | 44,292 | 44,292 | - | - | - | 145,992 | 145,992 | - | (43,046) | (43,046) |
| San Joaquin County Law Library | 161,752 | - | 18,149 | 6,800- | 30,708 | 55,657 | 2,288 | - | - | 31,454 | 33,742 | 25,127 | 6,229 | 31,356 |
| TOTALS | $1,667,546,755 | $ - | $187,118,361 | $70,081,335 | $ 7,156,154 | $264,355,850 | $23,588,696 | $ - | $ - | $ 7,156,154 | $30,744,850 | $259,041,963 | $ - | $259,041,963 |

SAN JOAQUIN
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# Comprehensive Annual Financial Report For the Year Ended December 31, 2016

*"The bird dares to break the shell, then the shell breaks open and the bird can fly openly. This is the simplest principle of success. You dream, you dare and you fly."*
~ ISRAELMORE AYIVOR

# Investment

## Dedication to the Course

PCA | PENSION CONSULTING ALLIANCE

MEMORANDUM

April 17, 2017

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, 2016.

**SJCERA - Total Fund Performance**

As of December 31, 2016, the SJCERA Portfolio had approximately $2.5 billion in total assets, an increase of roughly $130 million for the fiscal year due to cash flows and investment results. The SJCERA Total Fund generated a net of fees return of 6.1% for the year, underperforming its policy benchmark. Performance for the year was primarily driven by strong returns within the Global Equity and Risk Parity portfolios as both strategic classes provided double digit returns and outpaced their respective benchmarks. Performance from the more illiquid classes (Private Appreciation and Credit) produced positive returns but trailed their respective benchmarks over the 1-year period. The new CRO℠ strategic class produced negative absolute results during the year. This was within expectations for the CRO℠ strategic class given the strong equity returns during the period and the classes role as being an equity (growth) risk diversifier. 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 2016, SJCERA met its primary goal of ensuring sufficient funds available to make scheduled benefit payments.

**Market Review**

Despite a slow start to the year, BREXIT, and the U.S. Presidential Election, global equities ended the year with high single digit returns. Within global equities, U.S. equities significantly outperformed non-U.S. equities as valuations became even more extended by year-end. Broad U.S. and international bond markets also had a good year as high yield bonds produced high double digit returns. As of year-end, fundamental momentum remained positive in most U.S. markets. Inflation indicators moved up at year-end, off decade low levels. The federal funds rate reached 0.75% by the end of the year and is expected to have three additional rate hikes in 2017. Real yields moved into positive territory indicating growth concerns easing somewhat in the U.S., while the yield curve slope steepened potentially indicating higher levels of uncertainty concerning rates, growth, and inflation. Fiscal policy, monetary policy, and economic fundamentals were all drivers of returns within the global capital markets during the fiscal 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**

After performing an extensive review of its strategic allocation during 2015, SJCERA reached its new policy targets by the end of 2016. The new strategic asset allocation reduces 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. 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.

PCA PENSION CONSULTING ALLIANCE

**Gross of Fees Investment Performance as of December 31, 2016:**

| | Annualized | | | |
|---|---|---|---|---|
| Asset Class | 1-Year | 3-Year | 5-Year | 10-Year |
| **Global Equity** | **12.0** | **3.1** | **10.0** | **3.3** |
| MSCI World Index | 8.5 | 3.7 | 10.0 | 4.1 |
| **Private Appreciation** | **6.0** | **12.0** | **13.6** | **2.2** |
| MSCI ACWI +2% (lagged) | 15.1 | 7.9 | 13.7 | 7.3 |
| **Stable Fixed Income** | **5.0** | **5.0** | **5.5** | **6.3** |
| Bloomberg BC US Aggregate Index | 2.6 | 3.0 | 2.2 | 4.3 |
| **Credit** | **6.7** | **4.8** | **7.5** | **4.4** |
| Custom Credit Benchmark[1] | 9.1 | 4.4 | 6.8 | 6.2 |
| **Risk Parity** | **10.6** | **1.0** | **-0.9** | **---** |
| BofA Merrill Lynch 3 Month T-Bill +4% | 4.3 | 4.1 | 4.1 | --- |
| **CRO℠** | **-3.8** | **11.6** | **9.2** | **17.6** |
| CRO℠ Benchmark[2] | 0.7 | 5.1 | 3.0 | 4.8 |
| **Cash** | **0.6** | **0.2** | **0.2** | **0.9** |
| BofA Merrill Lynch 3 Month T-Bill | 0.3 | 0.1 | 0.1 | 0.8 |
| **Total Fund, Gross of Fees** | **7.0** | **3.4** | **6.6** | **3.9** |
| Total Fund, Net of Fees | 6.1 | 2.6 | 5.8 | 3.2 |
| Policy Benchmark[3] | 6.9 | 4.5 | 6.3 | 3.8 |

[1] 50% Bloomberg Barclays High Yield, 50% S&P Leveraged Loans
[2] (1/3) BC Long Duration Treasuries, (1/3) BTOP50 Index, (1/3) 5% Annual
[3]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

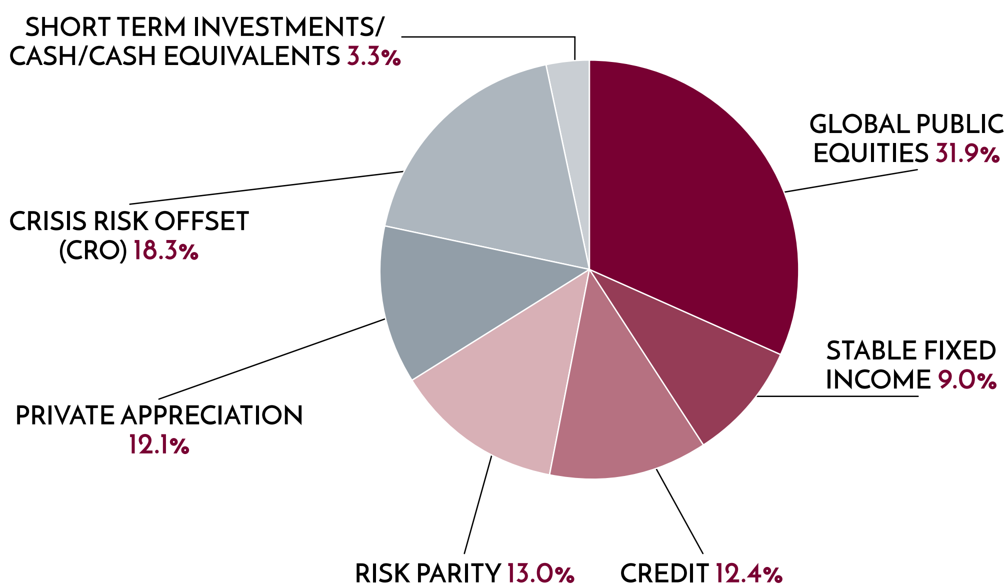
Sincerely,

*Pension Consulting Alliance, LLC*

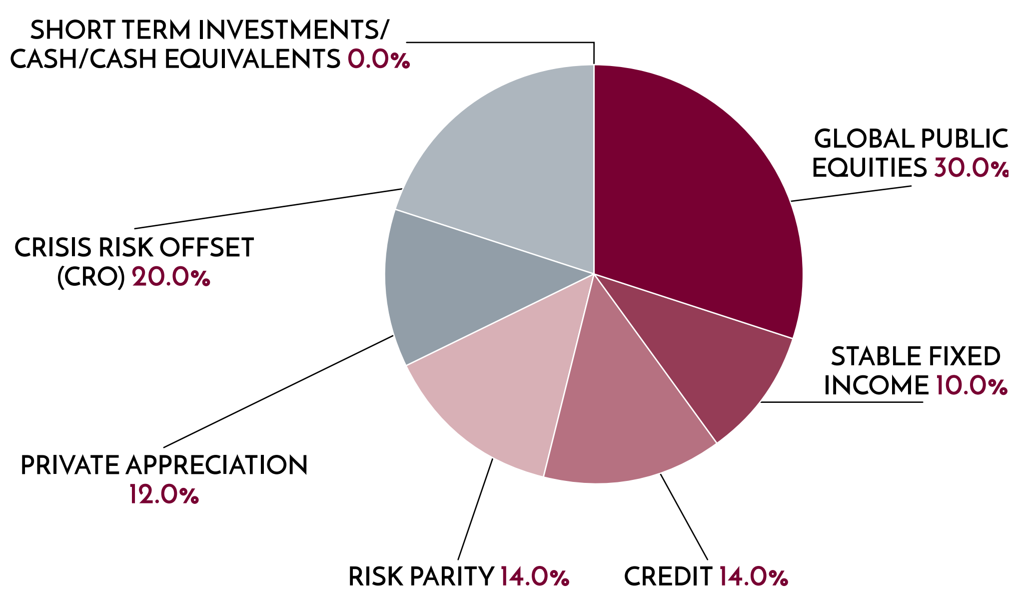
## ASSET ALLOCATION AS OF DECEMBER 31, 2016

| | INVESTMENT | ACTUAL ALLOCATION | TARGET ALLOCATION |
|---|---|---|---|
| Global Public Equities | $ 811,746,374 | 31.9% | 30.0% |
| Stable Fixed Income | 230,000,201 | 9.0% | 10.0% |
| Credit | 314,318,602 | 12.4% | 14.0% |
| Risk Parity | 330,517,689 | 13.0% | 14.0% |
| Private Appreciation | 308,327,211 | 12.1% | 12.0% |
| Crisis Risk Offset (CRO) | 468,905,794 | 18.3% | 20.0% |
| Short Term Investments/Cash/ Cash Equivalents | 84,010,254 | 3.3% | 0.0% |
| TOTAL | $2,547,826,125 | 100.0% | 100.0% |

ACTUAL ALLOCATION




TARGET ALLOCATION



# Investment

## LIST OF LARGEST ASSETS HELD

### LARGEST STOCK HOLDINGS (BY FAIR VALUE)

*December 31, 2016*

| | SHARES | STOCKS | FAIR VALUE |
|---|---|---|---|
| 1 | 15,860 | Stamps Com Inc Com New | $ 1,818,349.00 |
| 2 | 14,089 | Ligand Pharmaceuticals Incorporated Cl Bcommon Tock | 1,431,583.29 |
| 3 | 25,755 | Inc Resh Hldgs Inc Cl A Cl A | 1,354,713.00 |
| 4 | 52,627 | Echo Global Logistics Inc Com | 1,318,306.35 |
| 5 | 7,988 | Littelfuse Inc Com | 1,212,338.76 |
| 6 | 22,363 | Microsemi Corp Com | 1,206,931.11 |
| 7 | 18,873 | Nexstar Media Group Inc Cl A Cl A | 1,194,660.90 |
| 8 | 20,639 | Dave & Busters Entmt Inc Com | 1,161,975.70 |
| 9 | 24,428 | Mb Finl Inc New Com | 1,153,734.44 |
| 10 | 29,131 | Synchronoss Technologies Inc Com Stk | 1,115,717.30 |

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

### Largest Bond Holdings (By Fair Value)

*December 31, 2016*

| | PAR | BONDS | FAIR VALUE |
|---|---|---|---|
| 1 | 25,000,000.00 | United States Treas Bds Dtd 00246 3% Due 11-15-2045 Reg | $ 24,658,200.00 |
| 2 | 25,000,000.00 | United States Treas Nts Dtd 683 1.625% Due 02-15-2026 Reg | 23,359,375.00 |
| 3 | 25,500,000.00 | United States Treas Bds Dtd 00247 2.5% Due 02-15-2046 Reg | 22,659,147.00 |
| 4 | 15,900,000.00 | United States Treas Bds 3.125% Due 11-15-2041 Reg | 16,136,639.70 |
| 5 | 16,250,000.00 | United States Treas Nts Dtd 11/15/2015 2.25% Due 11-15-2025 Reg | 16,041,805.00 |
| 6 | 35,200,000.00 | United States Treas Bd Stripped Prin Pmt 02-15-2044 Reg | 15,095,344.00 |
| 7 | 9,850,000.00 | United States Treas Bds 5.500 Due 08-15-2028 Reg | 12,752,676.80 |
| 8 | 7,500,000.00 | United States Treas Bds 00202 4.75% Due 02-15-2037 Reg | 9,761,422.50 |
| 9 | 4,750,000.00 | United States Treas Nts Dtd .5% Due 03-31-2017 Reg | 4,750,218.50 |
| 10 | 465,390.62 | Mfo Stone Hbr Invt Fds Emerging Mkts Debt Fd Instl Cl | 4,709,753.09 |

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

## SCHEDULE OF INVESTMENT FEES

| | 2016 | 2015 |
|---|---|---|
| **INVESTMENT MANAGEMENT FEES** | | |
| Global Public Equities | $ 2,294,295 | $ 2,664,414 |
| Stable Fixed Income | 945,202 | 1,343,249 |
| Credit | 5,101,365 | 4,154,422 |
| Risk Parity | 1,243,541 | 1,850,159 |
| Private Appreciation | 4,516,909 | 4,362,518 |
| Credit Risk Offset | 3,962,245 | 4,679,992 |
| Short Term Investments/Cash/Cash Equivalents | 185,928 | 195,012 |
| | $ 18,249,485 | $ 19,249,766 |
| **OTHER INVESTMENT FEES** | | |
| Custodian Fees | 262,031 | 282,059 |
| Investment Consultant Fees | 417,431 | 564,646 |
| Miscellaneous Investment Expense | 86,308 | 70,520 |
| Notional Investment Expense | 0 | 53,402 |
| | $ 765,770 | $ 970,627 |
| TOTAL INVESTMENT EXPENSES | $ 19,015,255 | $ 20,220,393 |
| **SECURITY LENDING FEES** | | |
| Security Lending Fees and Interest Expense | 529,846 | 160,288 |
| TOTAL INVESTMENT FEES AND EXPENSES | $ 19,545,101 | $ 20,380,681 |

# Investment

## SCHEDULE OF FEES AND COMMISSIONS

**FOR THE YEAR ENDED DECEMBER 31, 2016**

| | BROKER | TOTAL COMMISSIONS | PERCENTAGE OF TOTAL COMMISSIONS |
|---|---|---|---|
| 1 | Tourmaline Partners LLC | $ 20,524 | 7.45% |
| 2 | Northern Trust CO | 13,794 | 5.00% |
| 3 | Instinet | 11,295 | 4.10% |
| 4 | Merrill Lynch Pierce Fenner & Smith | 10,847 | 3.93% |
| 5 | Cap Institutional Services Inc | 10,419 | 3.78% |
| 6 | Knight Equity Markets LP | 9,961 | 3.61% |
| 7 | Goldman Sachs & Company | 9,635 | 3.49% |
| 8 | Credit Suisse First Boston Corporation | 9,267 | 3.36% |
| 9 | Barclays Capital | 8,676 | 3.15% |
| 10 | Stifel Nicolaus and Company | 8,670 | 3.14% |
| 11 | Others* | 162,618 | 58.99% |
| | | $ 275,706 | 100.00% |

* Includes additional firms, each with less than 2% of total commissions.

## INVESTMENT SUMMARY

| | FAIR VALUE DECEMBER 31, 2016 | PERCENTAGE OF FAIR VALUE |
|---|---|---|
| **GLOBAL PUBLIC EQUITIES** | | |
| BlackRock MSCI World Ex-US | $ 114,069,183 | 4.5% |
| BlackRock R1000 Index | 266,054,497 | 10.5% |
| Blackrock Developed Ex-U.S. RE Index Fund | 23,558,686 | 0.9% |
| Capital Prospects | 87,912,591 | 3.5% |
| Invesco U.S. RE Securities | 33,140,186 | 1.3% |
| Legato Capital Management | 78,736,440 | 3.1% |
| PIMCO RAE Fundamental Emerging Markets | 82,403,580 | 3.2% |
| PIMCO RAE Fundamental International Markets | 125,871,211 | 4.9% |
| TOTAL GLOBAL PUBLIC EQUITIES | $ 811,746,374 | 31.9% |
| **STABLE FIXED INCOME** | | |
| Dodge & Cox | 70,930,895 | 2.8% |
| Double Line Capital | 62,335,301 | 2.4% |
| Prima Capital Advisors | 96,734,005 | 3.8% |
| TOTAL STABLE FIXED INCOME | $ 230,000,201 | 9.0% |
| **CREDIT** | | |
| Crestline Opportunity Fund II | 37,162,619 | 1.5% |
| Marinus Opportunities Domestic Fund | 42,203,680 | 1.7% |
| Medley Opportunity Fund II | 41,065,765 | 1.6% |
| Mesa West Real Estate Income II | 34,170 | 0.0% |
| Mesa West Real Estate Income III | 27,458,872 | 1.1% |
| Raven Asset-Based Opportunity Fund II | 23,409,763 | 0.9% |
| Raven Asset-Based Opportunity Fund III | 11,736,674 | 0.5% |
| Stone Harbor Leveraged Loan Fund | 54,556,551 | 2.1% |
| Stone Harbor Emerging Market Debt | 57,593,587 | 2.3% |
| White Oak Summit | 19,096,921 | 0.7% |
| TOTAL CREDIT | $ 314,318,602 | 12.4% |
| **RISK PARITY** | | |
| Bridgewater All-Weather | 163,090,608 | 6.4% |
| PanAgora Diversified Risk | 167,427,081 | 6.6% |
| TOTAL RISK PARITY | $ 330,517,689 | 13.0% |
| **PRIVATE APPRECIATION** | | |
| Almanac Realty Securities VI | $ 11,126,725 | 0.4% |
| Angelo Gordon & Co. | 12,876,557 | 0.5% |
| Colony Realty Parners III | 15,507,401 | 0.6% |
| Colony Realty Parners IV | 25,471,514 | 1.0% |
| Greenfield Acquisition Partners V | 1,672,063 | 0.1% |

(Continued on page 76)

# Investment

## INVESTMENT SUMMARY

| | FAIR VALUE DECEMBER 31, 2016 | PERCENTAGE OF FAIR VALUE |
|---|---|---|
| **PRIVATE APPRECIATION** | | |
| Greenfield Acquisition Partner VI | 10,268,299 | 0.4% |
| Greenfield Acquisition Partner VII | 17,705,822 | 0.7% |
| Legacy Partners Realty Fund II | 1,000 | 0.0% |
| Legacy Partners Realty Fund III | 220,161 | 0.0% |
| Miller Global Fund V | 5,393,911 | 0.2% |
| Miller Global Fund VI | 15,864,000 | 0.6% |
| Miller Global Fund VII | 5,674,040 | 0.2% |
| Principal US Property | 22,551,259 | 0.9% |
| Prologis Targeted US Logistics Fund | 43,687,845 | 1.7% |
| Deutsche Asset & Wealth Mgt (RREEF America REIT II) | 46,658,919 | 1.8% |
| Deutsche Asset & Wealth Mgt (RREEF America REIT III) | 243,062 | 0.0% |
| Sarofim MultiFamily Partners II | 182,981 | 0.0% |
| Walton Street Fund V | 11,596,346 | 0.5% |
| Walton Street Fund VI | 6,951,587 | 0.3% |
| Ocean Avenue II | 22,344,545 | 0.9% |
| Ocean Avenue III | 4,620,428 | 0.2% |
| Morgan Creek Partners III | 8,549,984 | 0.3% |
| Morgan Creek Partners V | 9,076,715 | 0.4% |
| Morgan Creek Partners VI | 10,082,047 | 0.4% |
| TOTAL PRIVATE APPRECIATION | $ 308,327,211 | 12.1% |
| **CRISIS RISK OFFSET (CRO)** | | |
| AQR Style Premia | 38,384,088 | 1.5% |
| Bridgewater Pure Alpha Fund II | 76,075,782 | 3.0% |
| Dodge & Cox Long Duration | 140,464,610 | 5.5% |
| Graham Tactical Trend | 76,764,207 | 3.0% |
| Mount Lucas Managed Futures | 72,310,160 | 2.8% |
| PE Diversified Global Macro | 64,906,947 | 2.5% |
| TOTAL CRISIS RISK OFFSET (CRO) | $ 468,905,794 | 18.3% |
| TOTAL INVESTMENT AT FAIR VALUE | $2,463,815,871 | |
| **SHORT TERM INVESTMENTS/CASH/CASH EQUIVALENTS** | | |
| Parametric Policy Implementation Overlay Service | 8,187,393 | 0.3% |
| STIF – Northern Trust | 75,822,861 | 3.0% |
| TOTAL SHORT TERM INVESTMENTS | $ 84,010,254 | 3.3% |
| TOTAL | $2,547,826,125 | 100.0% |

SAN JOAQUIN
C▲E▲R▲A

Comprehensive Annual
Financial Report
For the Year Ended
December 31, 2016

*"When we are motivated by
goals that have deep meaning,
by dreams that need completion,
by pure love that needs expressing,
then we truly live."*
~ GREG ANDERSON

# Actuarial

## Making a Safe Landing

CHEIRON *Classic Values, Innovative Advice*

June 5, 2017

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, 2016. This letter includes references to two documents produced by Cheiron for the Plan: the Actuarial Valuation Report as of January 1, 2016 (November 7, 2016) and the GASB 67/68 Report as of December 31, 2016 (May 11, 2017).

## Actuarial Valuation Report as of January 1, 2016

The purpose of the annual Actuarial Valuation Report as of January 1, 2016 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 2017. The prior review was conducted as of January 1, 2015, and included recommended contribution rates for the year 2016.

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, 2016), the amortization period is 23 years for half of the 2008 investment loss and 17 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)

Board Members
June 5, 2017
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, 2016 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.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. 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, 2016

The purpose of GASB 67/68 Report as of December 31, 2016, 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, 2016, actuarial valuation updated to the measurement date of December 31, 2016. There was an update to the actuarial assumptions as a result of the experience study performed by Cheiron for the period covering experience from January 1, 2013 through December 31, 2015. There were no other significant events between the valuation date and the measurement date so the update procedures only included updated actuarial assumptions, plus 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, 2015. The December 31, 2015, 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, 2015. The December 31, 2016, Total Pension

CHEIRON

Board Members
June 5, 2017
Page 3

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, 2016.

Please refer to our GASB 67 report as of December 31, 2016, 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, 2016, 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

We certify that the report was performed in accordance with generally accepted actuarial principles and practices. 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.

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.

CHEIRON

## ACTUARY'S CERTIFICATION LETTER

Board Members
June 5, 2017
Page 4

Respectfully Submitted,
Cheiron

Graham Schmidt, ASA, EA, MAAA
Consulting Actuary
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gschmidt@cheiron.us

Anne Harper, FSA, EA, MAAA
Consulting Actuary
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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, 2016 for the period ending December 31, 2015.

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 23 years remaining as of January 1, 2016. The remainder of the Plan's UAL as of January 1, 2014 is being amortized over a closed 19 year period (17 years remaining as of January 1, 2016), 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 7.40%, net of investment expenses. |
| **INFLATION ASSUMPTION** | 2.90% per annum |
| **ADMINISTRATIVE EXPENSES** | Administrative expenses are assumed to be $4,370,908 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 83*)

## 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.<br><br>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.<br><br>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.<br><br>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.<br><br>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. |

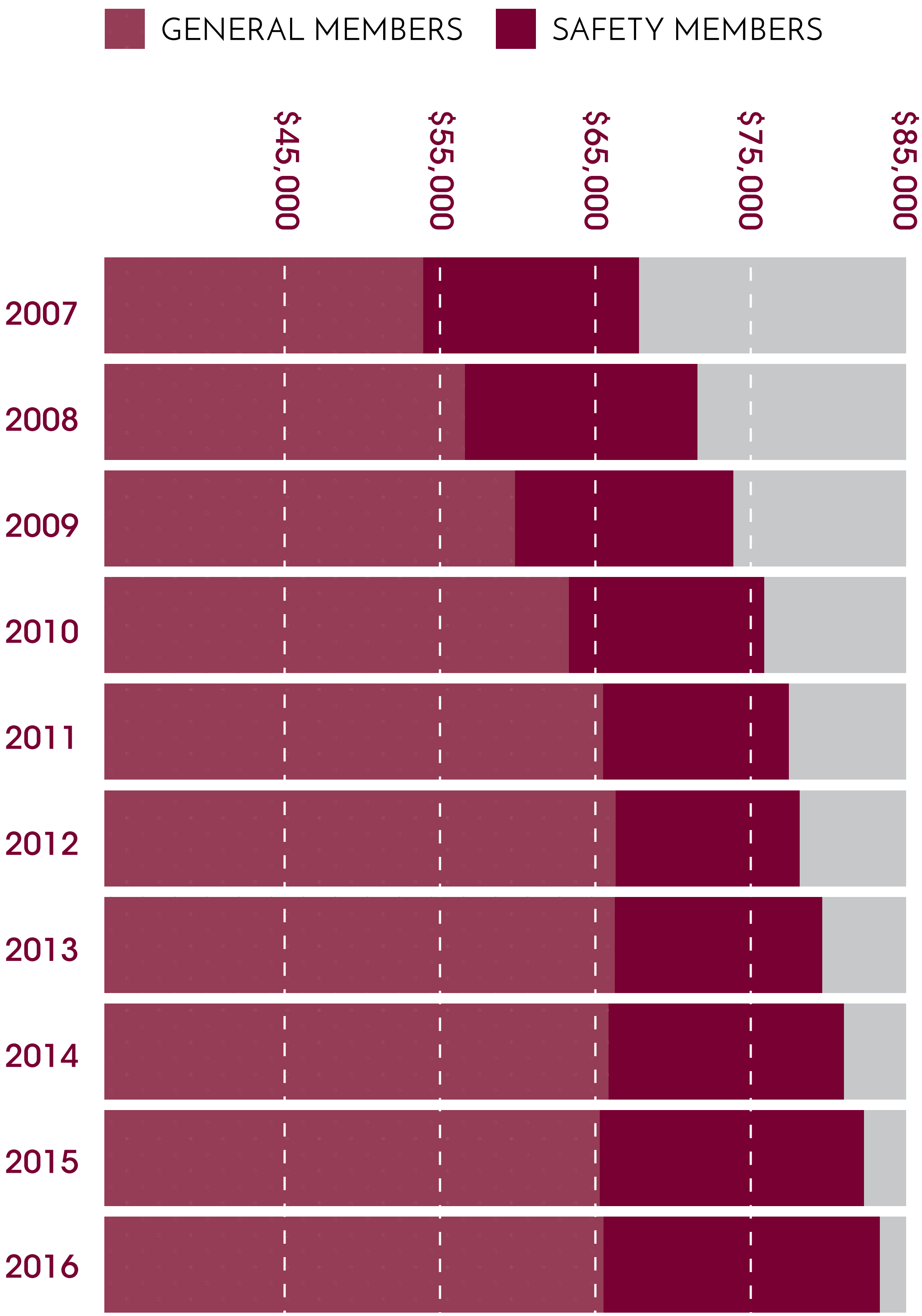
## SCHEDULE OF ACTIVE MEMBER VALUATION DATA

| ACTUARIAL VALUATION DATE | PLAN TYPE | MEMBERS | ANNUAL PAYROLL | AVERAGE ANNUAL SALARY | AVERAGE SALARY INCREASE |
|---|---|---|---|---|---|
| | General | 5,234 | $ 288,178,806 | $ 5,059 | 18.22% |
| | Safety | 820 | 56,293,820 | 68,651 | 15.52% |
| 01/01/2007 | TOTAL | 6,054 | $ 344,472,626 | $ 56,900 | 17.68% |
| | General | 5,353 | $ 308,773,122 | $ 57,682 | 4.76% |
| | Safety | 871 | 62,988,014 | 72,317 | 5.34% |
| 01/01/2008 | TOTAL | 6,224 | $ 371,761,136 | $ 59,730 | 4.97% |
| | 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% |

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, 2016 for the period ending December 31, 2015. The information in subsequent years is currently not available.

# Actuarial

## CHART OF ACTIVE MEMBER AVERAGE ANNUAL SALARY



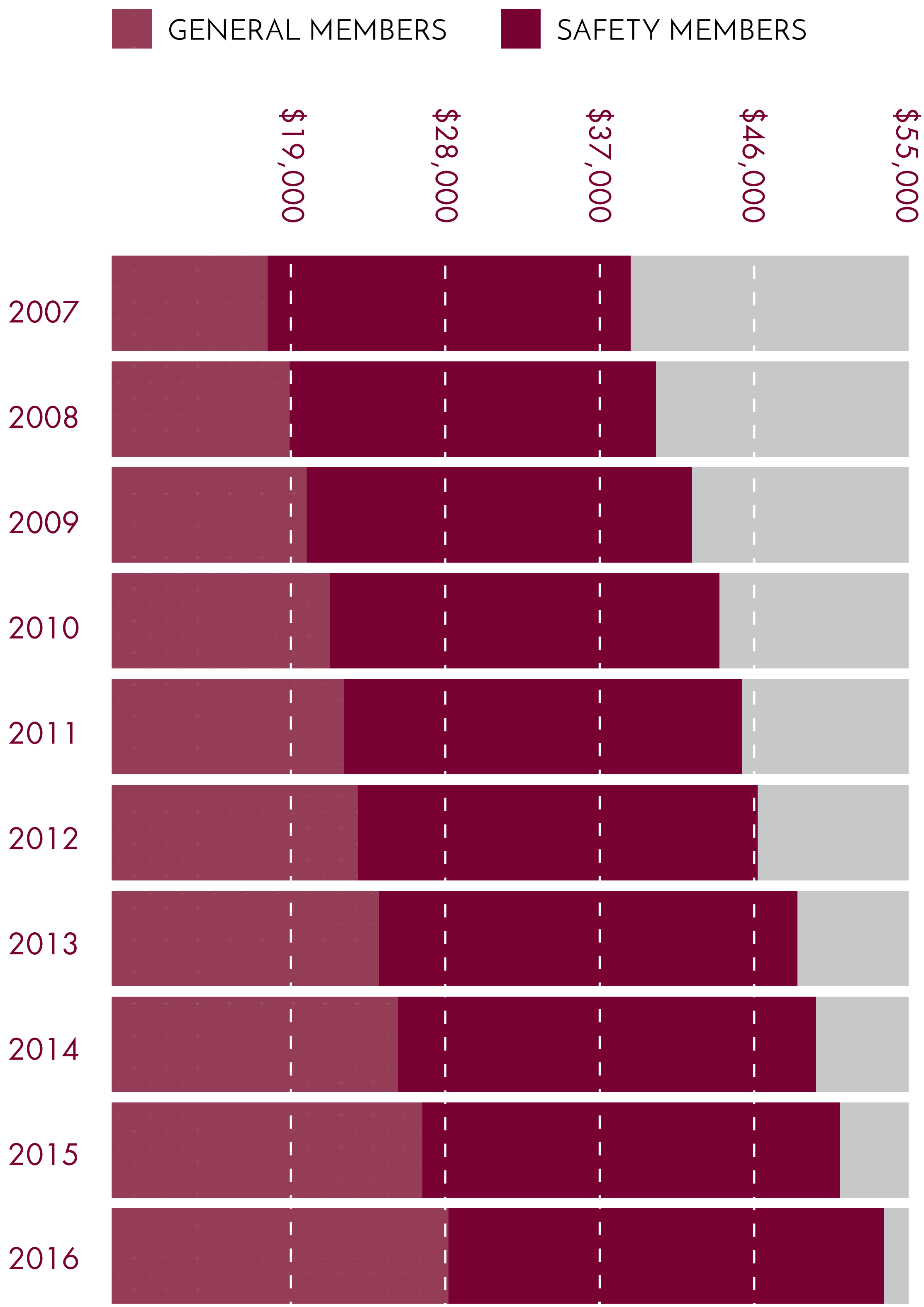
## SCHEDULE OF RETIREES AND BENEFICIARIES VALUATION DATA

| 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 | 190 | 41 | 102 | 3,107 | $ 58,634,478 | $18,872 | 4.0% |
| | Safety | 31 | 8 | 11 | 632 | 25,003,422 | 39,562 | 2.1% |
| 01/01/2007 | TOTAL | 221 | 49 | 113 | 3,739 | $ 83,637,900 | $22,369 | 3.5% |
| | General | 199 | 31 | 99 | 3,238 | $ 65,213,731 | $20,140 | 6.7% |
| | Safety | 38 | 6 | 8 | 668 | 27,396,329 | 41,012 | 3.7% |
| 01/01/2008 | TOTAL | 237 | 37 | 107 | 3,906 | $ 92,610,060 | $23,710 | 6.0% |
| | 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 | $144,034,172 | $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 | $166,611,711 | $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% |

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, 2016 for the period ending December 31, 2015. The information in subsequent years is currently not available.

# Actuarial

## CHART OF RETIREES AND BENEFICIARIES AVERAGE ANNUAL ALLOWANCE



## 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 | 16,223 | 132 | 3,029 | 5,249 | 166,606 | 4.30% | 31,741 |
| 2015 | 340 | 17,766 | 155 | 3,651 | 5,434 | 180,721 | 4.78% | 33,258 |
| 2016 | 344 | 17,602 | (150) | (3,867) | 5,628 | 194,456 | 3.89% | 34,551 |

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

# Actuarial
## SOLVENCY TEST

| (DOLLARS IN THOUSANDS) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ACTUARIAL ACCRUED LIABILITY | | | | | PORTION OF ACCRUED LIABILITIES COVERED BY REPORTED ASSETS | | |
| ACTUARIAL VALUATION DATE | (1) ACTIVE MEMBER CONTRIBUTIONS | (2) RETIREES AND BENEFICIARIES | (3) ACTIVE MEMBERS (EMPLOYER FINANCED PORTION) | TOTAL ACTUARIAL ACCRUED LIABILITY | ACTUARIAL VALUE OF ASSETS | (1) | (2) | (3) |
| 1/1/2007 | $ 159,100 | $1,023,296 | $ 967,542 | $2,149,938 | $1,869,717 | 100% | 100% | 71.0% |
| 1/1/2008 | 166,804 | 1,119,690 | 1,048,027 | 2,334,521 | 2,029,949 | 100% | 100% | 71.0% |
| 1/1/2009 | 176,236 | 1,231,648 | 1,103,042 | 2,510,925 | 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% |

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, 2016 for the period ending December 31, 2015. 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) |
| 1/1/2016 | $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% |
| 1/1/2008 | 2,029,949 | 2,334,521 | 304,572 | 87.0% | 367,361 | 82.9% |
| 1/1/2007 | 1,869,717 | 2,149,938 | 280,221 | 87.0% | 340,828 | 82.2% |

NOTE:

[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.

# Actuarial

## 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% 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 2016.

# 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% of active safety members are expected to separate from service during the year.

# Actuarial

## 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 | 0.0831 | 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 the volatile results, which could develop due to short-term fluctuations in the fair 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 fair value of assets is determined using the actual contributions, administrative expense (beginning in 2013), 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 fair 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, 2016

| | (A) | (B) | (C) | (D) | (E) | (F) | (G)=(F)-(E) | (H) | (I)=(G)X(H) |
|---|---|---|---|---|---|---|---|---|---|
| YEAR | CONTRIBUTIONS | BENEFITS | ADMIN. EXPENSE | HEALTHCARE FUND TRANSFER | EXPECTED RETURN | ACTUAL RETURN | ADDITIONAL EARNINGS | NOT RECOGNIZED | UNRECOGNIZED EARNINGS |
| 2012 | $ 127,962,598 | $ 44,978,040 | $ 0 | $ 0 | $150,473,721 | $227,485,527 | $ 77,011,806 | 20% | $ 15,402,361 |
| 2013 | 142,184,201 | 155,401,819 | 4,134,716 | 0 | 161,392,211 | 198,449,237 | 37,057,026 | 40% | 14,822,811 |
| 2014 | 164,054,041 | 165,870,971 | 4,042,986 | 19,968,779 | 176,895,311 | 110,728,303 | (66,167,008) | 60% | (39,700,205) |
| 2015 | 179,398,457 | 181,468,912 | 4,075,745 | 378,969 | 184,778,322 | (47,339,751) | (232,118,073) | 80% | (185,694,458) |

| | | |
|---|---|---|
| (1) | TOTAL UNRECOGNIZED DOLLARS | (195,169,491) |
| (2) | FAIR VALUE OF ASSETS AS OF DECEMBER 31, 2015 | 2,413,242,547 |
| (3) | PRELIMINARY ACTUARIAL VALUE OF ASSETS AS OF DECEMBER 31, 2015: [(2) - (1)] | 2,608,412,038 |
| (4) | CORRIDOR LIMITS | |
| | A. 80% OF NET FAIR VALUE | 1,930,594,038 |
| | B. 120% OF NET FAIR VALUE | 2,895,891,056 |
| (5) | ACTUARIAL VALUE OF ASSETS AFTER CORRIDOR | 2,608,412,038 |
| (6) | RATIO OF ACTUARIAL VALUE TO FAIR VALUE [(5) ÷ (2)] | 108.09% |
| (7) | MARKET STABILIZATION DESIGNATION [(2) - (5)] | (195,169,491) |
| (8) | SPECIAL (NON VALUATION) RESERVES: | |
| | CLASS ACTION SETTLEMENT - POST 4/1/1982 | 3,644,507 |
| | CONTINGENCY | 0 |
| | UNDISTRIBUTED EARNINGS RESERVE | 0 |
| | TOTAL SPECIAL RESERVES | 3,644,507 |
| (9) | PENSION RESERVES AT ACTUARIAL VALUE (VALUATION ASSETS) [(5) - (8)*(6)] | $ 2,604,472,784 |

## 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 I –** 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 I."

**Tier II –** 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," participatein the defined benefit formula prescribed by PEPRA for these employees, termed "SJCERA Tier II."

### FINAL AVERAGE SALARY

For Tier I 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 II 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 I members pay contributions also based upon the age at which the employee entered SJCERA membership. Members of Tier I employed prior to March 7, 1973, and all Safety members of Tier I 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 II 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 5 years of retirement service credit is vested in the plan as long as accumulated member contributions remain on deposit with SJCERA.

*(Continued on page 96)*

## SUMMARY OF MAJOR PLAN PROVISIONS

### SERVICE RETIREMENT

#### TIER I 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 I 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 I provides a 2.0% of final compensation for each year of service credit at age 55 ½ benefit formula for General Members, and a 3.0% of final compensation for each year of service credit at age 50 benefit formula for safety members of Tier I. 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% of final average salary or the federal annual compensation limit under Internal Revenue Code Section 401(a)(17), if applicable.

#### TIER II MEMBERS:

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

A Tier II 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 II provides a 2% of final compensation for each year of service credit at age 62 benefit formula for General Members, and a 2.7% 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 5 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 ⅓% 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.

*(Continued on page 97)*

# Actuarial

## SUMMARY OF MAJOR PLAN PROVISIONS

### 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 optional settlement 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%.

SAN JOAQUIN C▲E▲R▲A

Comprehensive Annual
Financial Report
For the Year Ended
December 31, 2016

*"In order to arrive at knowledge of the motions of birds in the air, it is first necessary to acquire knowledge of the winds..."*
~ LEONARDO DA VINCI

# Statiscal

## Arriving at the Destination

# 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).


- *Schedule of Fiduciary Net Position* (page 100)
- *Schedule of Changes in Fiduciary Net Position* (page 101)
- *Schedule of Revenues by Source and Schedule of Expense by Type* (page 102)
- *Schedule of Benefit Expenses by Type* (page 103)
- *Schedule of Retired Members by Type* (page 104)


## 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 Average Monthly Benefit Payments by Number of Years of Credited Service* (pages 105-107)
- *Schedule of Average Monthly Benefit Payments by Number of Years since Retirement* (pages 108-110)
- *Schedule of Participating Employers for Last Ten Years* (page 111)

# Statistical

## SCHEDULE OF FIDUCIARY NET POSITION

*For the last ten fiscal years ended December 31*

| | (DOLLARS IN THOUSANDS) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 |
| **ASSETS** | | | | | | | | | | |
| Cash and Cash Equivalents | $225,343 | $226,912 | $250,500 | $169,701 | $208,032 | $195,648 | $183,531 | $233,929 | $242,165 | $318,666 |
| Receivables | 10,524 | 8,930 | 12,081 | 28,491 | 11,152 | 9,587 | 34,581 | 14,516 | 22,770 | 19,977 |
| Investments | 2,463,816 | 2,328,265 | 2,371,380 | 2,256,908 | 2,054,715 | 1,851,212 | 1,842,483 | 1,588,186 | 1,374,011 | 2,077,174 |
| Prepaid Expenses | 127 | 112 | 86 | 82 | 101 | 91 | 75 | 70 | 76 | 73 |
| Equipment and Fixtures, Net | 116 | 192 | 315 | 427 | 487 | 572 | 635 | 729 | 83 | 130 |
| TOTAL ASSETS | $2,699,926 | $2,564,411 | $2,634,362 | $2,455,610 | $2,274,487 | $2,057,110 | $2,061,305 | $1,837,430 | $1,639,105 | $2,416,020 |
| **LIABILITY** | | | | | | | | | | |
| Securitites Lending - Cash Collateral | $141,349 | $147,106 | $164,195 | $107,127 | $108,958 | $104,691 | $113,171 | $108,791 | $ 78,631 | $189,426 |
| Securities Purchased, Not Paid | 2,542 | 2,739 | 1,671 | 5,433 | 3,783 | 1,455 | 16,858 | 5,878 | 11,640 | 10,489 |
| Accrued Expenses and Other Payables | 1,170 | 1,306 | 2,138 | 1,538 | 1,329 | 1,019 | 1,278 | 1,080 | 1,785 | 1,981 |
| Securities Lending Interest and Other Payables | 63 | 17 | 8 | | 2 | | 12 | 7 | | 736 |
| FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS | $2,554,802 | $2,413,243 | $2,466,350 | $2,341,513 | $2,160,415 | $1,949,945 | $1,929,986 | $1,721,674 | $1,547,049 | $2,213,388 |

# SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION

## FOR THE LAST TEN FISCAL YEARS ENDED DECEMBER 31

| | (DOLLARS IN THOUSANDS) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 |
| **CONTRIBUTIONS** | | | | | | | | | | |
| Member Contributions | $30,117 | $29,027 | $27,368 | $22,690 | $19,900 | $14,041 | $13,098 | $13,013 | $13,051 | $11,366 |
| Employer Contributions: | | | | | | | | | | |
| Retirement Plan | 159,123 | 150,372 | 136,686 | 119,494 | 108,063 | 112,892 | 104,452 | 97,806 | 94,163 | 73,612 |
| Post-Employment Health Plan | | | | | | 0 | 0 | 4,202 | 4,083 | 650 |
| Investment Income | 151,031 | -47,449 | 110,651 | 198,173 | 230,954 | 29,262 | 217,123 | 182,006 | -666,774 | 237,072 |
| Miscellaneous | 84 | 109 | 77 | 72 | 62 | 68 | 46 | 12 | 14 | 26 |
| Transfers Between Plan | 294 | 379 | 19,969 | 204 | 339 | 154 | 166 | 84 | 106 | 112 |
| TOTAL ADDITIONS | $340,648 | $132,438 | $294,751 | $340,633 | $359,317 | $156,417 | $334,885 | $297,123 | $-555,357 | $322,838 |
| | | | | | | | | | | |
| Benefits | $192,732 | $179,585 | $164,335 | $154,233 | $143,669 | $131,642 | $121,641 | $112,647 | $104,068 | $84,863 |
| Post-Employment Health Benefits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,431 | 3,679 | 3,811 |
| Administrative Expenses | 4,370 | 4,076 | 4,043 | 4,135 | 3,869 | 3,749 | 3,682 | 3,527 | 3,458 | 3,066 |
| Refunds | 1,987 | 1,884 | 1,536 | 1,169 | 1,309 | 1,068 | 1,251 | 1,038 | 1,254 | 1,036 |
| Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Transfers Between Plan | 0 | 0 | 0 | | | | | 84 | 106 | 112 |
| TOTAL DEDUCTIONS | $199,089 | $185,545 | $169,914 | $159,537 | $148,848 | $136,459 | $126,573 | $120,727 | $112,565 | $92,890 |
| | | | | | | | | | | |
| CHANGE IN FIDUCIARY NET POSITION | $141,560 | $-53,107 | $124,836 | $181,097 | $210,469 | $19,958 | $208,312 | $176,396 | $-667,922 | $229,949 |

# Statistical

## SCHEDULE OF REVENUE BY SOURCE AND EXPENSES BY TYPE

### SCHEDULE OF REVENUE BY SOURCE

| | | EMPLOYER CONTRIBUTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| YEAR ENDED | MEMBER CONTRIBUTIONS | RETIREMENT PLAN | POST-EMPLOYMENT HEALTH PLAN | INVESTMENT INCOME | MISC | TRANSFER BETWEEN PLANS | TOTAL |
| 2007 | $ 12,312,247 | $ 85,868,698 | $ 2,780,505 | $147,346,205 | $ 8,596 | $ 123,808 | $248,440,059 |
| 2008 | 13,050,906 | 94,162,866 | 4,083,235 | (666,774,282) | 14,156 | 105,663 | (555,357,456) |
| 2009 | 13,012,755 | 97,805,585 | 4,202,490 | 182,006,435 | 12,091 | 84,032 | 297,123,388 |
| 2010 | 104,451,673 | 0 | 217,123,404 | 46,407 | 165,625 | 334,885,152 | 297,123,388 |
| 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 |

### SCHEDULE OF EXPENSES BY TYPE

| | | EMPLOYER CONTRIBUTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| YEAR ENDED | BENEFITS | POST-EMPLOYMENT HEALTH BENEFITS | ADMINISTRATIVE EXPENSES | REFUNDS | MISC | TRANSFER BETWEEN PLANS | TOTAL |
| 2007 | $ 91,115,158 | $ 3,764,679 | $ 3,555,503 | $ 1,042,459 | $ 0 | $ 123,808 | $ 99,601,607 |
| 2008 | 104,068,212 | 3,679,325 | 3,458,096 | 1,253,610 | 0 | 105,663 | 112,564,906 |
| 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 |

## 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 | $ 53,749,170 | $ 5,700,707 | $ 5,763,247 | $ 915,087 | $ 441,474 | $ 66,569,685 |
| | Safety | 18,756,413 | 6,277,380 | 2,362,634 | 127,372 | 30,000 | 27,553,799 |
| 2007 | TOTAL | $ 72,505,583 | $ 11,978,087 | $ 8,125,881 | $ 1,042,459 | $ 471,474 | $ 94,123,484 |
| | General | 58,899,375 | 6,149,648 | 6,399,648 | 1,091,876 | 398,092 | 72,938,639 |
| | Safety | 20,666,770 | 6,913,845 | 2,994,840 | 161,734 | 55,000 | 30,792,189 |
| 2008 | TOTAL | $ 79,566,145 | $ 13,063,493 | $ 9,394,488 | $ 1,253,610 | $ 453,092 | $103,730,828 |
| | 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 | 140,511,231 |
| | 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 |

# Statistical

## SCHEDULE OF RETIRED MEMBERS BY TYPE

| ACTUARIAL VALUATION DATE | PLAN TYPE | MEMBERS WITH SERVICE RETIREMENTS | MEMBERS WITH DISABILITY RETIREMENTS | SURVIVORS AND BENEFICIARIES | TOTAL |
|---|---|---|---|---|---|
| | General | 2,323 | 328 | 456 | 3,107 |
| | Safety | 365 | 167 | 100 | 632 |
| 01/01/2007 | TOTAL | 2,688 | 495 | 556 | 3,739 |
| | General | 2,430 | 341 | 467 | 3,238 |
| | Safety | 389 | 173 | 106 | 668 |
| 01/01/2008 | TOTAL | 2,819 | 514 | 573 | 3,906 |
| | 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 |

Figures are extracted from actuarial reports which include individuals receiving divorce settlement payments.
The most current Actuarial Valuation was conducted as of January 1, 2016 for the period ending December 31, 2015.
The information in subsequent years is currently not available.

## 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 |
|---|---|---|---|---|---|---|---|
| **2011** | | | | | | | |
| *Retirees* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 470 | $ 1,205 | $ 1,464 | $ 2,615 | $ 3,302 | $ 3,968 | $ 4,670 |
| Average Final Compensation | $ 5,518 | $ 5,903 | $ 4,928 | $ 6,463 | $ 6,110 | $ 5,541 | $ 5,570 |
| Count | 12 | 26 | 56 | 27 | 41 | 16 | 39 |
| **Safety Members** | | | | | | | |
| Average Benefit | $ 922 | $ 1,112 | $ 2,551 | $ 3,970 | $ 7,499 | $ 7,790 | $10,586 |
| Average Final Compensation | $ 9,746 | $ 4,483 | $ 5,290 | $ 7,767 | $10,430 | $ 9,162 | $10,797 |
| Count | 2 | 6 | 3 | 3 | 4 | 5 | 3 |
| *Survivors/QDROs* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 622 | $ 890 | $ 773 | $ 1,367 | $ 1,838 | $ 2,039 | $ 3,281 |
| Average Final Compensation | $ 9,807 | $ 4,816 | $ 3,578 | $ 4,371 | $ 4,108 | $ 3,364 | $ 5,366 |
| Count | 5 | 9 | 11 | 10 | 5 | 5 | 5 |
| **Safety Members** | | | | | | | |
| Average Benefit | $ 825 | $ 859 | $ 1,591 | $ 3,334 | $ 0 | $ 0 | $ 3,829 |
| Average Final Compensation | $ 9,779 | $ 4,960 | $ 2,795 | $ 9,010 | $ 0 | $ 0 | $ 5,257 |
| Count | 1 | 1 | 2 | 1 | 0 | 0 | 1 |
| **2012** | | | | | | | |
| *Retirees* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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/QDROs* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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 |

# Statistical

## 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 |
| **2013** | | | | | | | |
| *Retirees* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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/QDROs* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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 |
| **2014** | | | | | | | |
| *Retirees* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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/QDROs* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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 |

# 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 |
|---|---|---|---|---|---|---|---|
| **2015** | | | | | | | |
| *Retirees* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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/QDROs* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 530 | $ 2,019 | $ 2,184 | $ 1,970 | $ 2,767 | $ 5,547 | $ 5,026 |
| Average Final Compensation | $ 6,053 | $ 1,396 | $ 9,909 | $ 3,888 | $ 3,983 | $ 8,256 | $ 5,406 |
| Count | 2 | 1 | 2 | 1 | 3 | 3 | 3 |
| **2016** | | | | | | | |
| *Retirees* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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/QDROs* | | | | | | | |
| **General Members** | | | | | | | |
| Average Benefit | $ 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 Benefit | $ 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 |

Average Final Compensation is not available prior to 2011 on a historical basis due to system constraints.

# Statistical

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

GENERAL AND SAFETY MEMBERS

| YEAR END | | NUMBER OF YEARS SINCE RETIREMENT 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 & OVER |
|---|---|---|---|---|---|---|---|---|
| 2007 | Average Benefit | $2,321 | $2,168 | $1,826 | $1,578 | $1,639 | $1,191 | $ 930 |
| | Number of Retirees | 1,253 | 1,017 | 626 | 423 | 282 | 181 | 124 |
| 2008 | Average Benefit | $2,458 | $2,294 | $1,802 | $1,785 | $1,653 | $1,294 | $ 952 |
| | Number of Retirees | 1,285 | 1,073 | 659 | 479 | 303 | 168 | 131 |
| 2009 | Average Benefit | $2,549 | $2,408 | $1,959 | $1,846 | $1,723 | $1,527 | $1,339 |
| | Number of Retirees | 1,312 | 1,083 | 729 | 506 | 307 | 170 | 145 |
| 2010 | Average Benefit | $2,569 | $2,565 | $2,052 | $1,972 | $1,764 | $1,602 | $1,329 |
| | Number of Retirees | 1,384 | 1,153 | 790 | 502 | 319 | 185 | 156 |
| 2011 | Average Benefit | $2,639 | $2,564 | $2,199 | $2,006 | $1,870 | $1,743 | $1,364 |
| | Number of Retirees | 1,430 | 1,190 | 838 | 522 | 333 | 196 | 176 |
| 2012 | Average Benefit | $2,798 | $2,591 | $2,473 | $2,075 | $1,839 | $1,874 | $1,376 |
| | Number of Retirees | 1,515 | 1,185 | 947 | 545 | 334 | 194 | 177 |
| 2013 | Average Benefit | $2,840 | $2,755 | $2,609 | $2,049 | $2,029 | $1,881 | $1,348 |
| | Number of Retirees | 1,520 | 1,211 | 990 | 577 | 372 | 208 | 163 |
| 2014 | Average Benefit | $2,961 | $2,873 | $2,706 | $2,223 | $2,106 | $1,899 | $1,477 |
| | Number of Retirees | 1,609 | 1,224 | 987 | 642 | 404 | 209 | 174 |
| 2015 | Average Benefit | $3,139 | $2,918 | $2,921 | $2,333 | $2,221 | $1,995 | $1,566 |
| | Number of Retirees | 1,587 | 1,291 | 1,046 | 692 | 412 | 212 | 194 |
| 2016 | Average Benefit | $3,254 | $3,057 | $2,960 | $2,532 | $2,285 | $2,022 | $1,765 |
| | Number of Retirees | 1,606 | 1,351 | 1073 | 742 | 428 | 234 | 194 |

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

## GENERAL MEMBERS

| YEAR END | | NUMBER OF YEARS SINCE RETIREMENT | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 & OVER |
| | Average Benefit | $2,063 | $1,675 | $1,615 | $1,389 | $1,403 | $ 974 | $ 803 |
| 2007 | Number of Retirees | 1,055 | 786 | 535 | 365 | 243 | 152 | 102 |
| | Average Benefit | $2,133 | $1,835 | $1,557 | $1,586 | $1,474 | $1,004 | $ 830 |
| 2008 | Number of Retirees | 1,068 | 839 | 555 | 414 | 265 | 135 | 112 |
| | 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 |

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

### SAFETY MEMBERS

| YEAR END | | NUMBER OF YEARS SINCE RETIREMENT | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 & OVER |
| | Average Benefit | $3,698 | $3,848 | $3,068 | $2,766 | $3,110 | $2,333 | $1,522 |
| 2007 | Number of Retirees | 198 | 231 | 91 | 58 | 39 | 29 | 22 |
| | Average Benefit | $4,056 | $3,940 | $3,109 | $3,055 | $2,904 | $2,481 | $1,673 |
| 2008 | Number of Retirees | 217 | 234 | 104 | 65 | 38 | 33 | 19 |
| | 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 |

## SCHEDULE OF PARTICIPATING EMPLOYERS

FOR THE LAST TEN FISCAL YEARS ENDED DECEMBER 31

| | 2016 | | 2015 | | 2014 | | 2013 | | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tier I | Tier II | Tier I | Tier II | Tier I | Tier II | Tier I | Tier II | | | | | | | |
| **COUNTY OF SAN JOAQUIN** | | | | | | | | | | | | | | | |
| General Members | 3,205 | 1717 | 4,614 | 1,416 | 4,864 | 918 | 5,138 | 507 | 5,379 | 5,308 | 5,476 | 5,712 | 5,970 | 5,964 | 5,797 |
| Safety Members | 622 | 138 | 800 | 85 | 861 | 59 | 881 | 12 | 901 | 920 | 945 | 1,026 | 1,005 | 960 | 902 |
| TOTAL | 3,827 | 1855 | 5,414 | 1,501 | 5,725 | 977 | 6,019 | 519 | 6,280 | 6,228 | 6,421 | 6,738 | 6,975 | 6,924 | 6,699 |
| **SUPERIOR COURT** | | | | | | | | | | | | | | | |
| General Members | 202 | 101 | 255 | 66 | 263 | 38 | 269 | 20 | 289 | 326 | 357 | 375 | 369 | 334 | 301 |
| Safety Members | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTAL | 202 | 101 | 255 | 66 | 263 | 38 | 269 | 20 | 289 | 326 | 357 | 375 | 369 | 334 | 302 |
| **MANTECA-LATHROP RURAL FIRE PROTECTION DISTRICT** | | | | | | | | | | | | | | | |
| General Members | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 1 |
| Safety Members | 25 | 8 | 41 | 8 | 42 | 7 | 43 | 3 | 45 | 39 | 41 | 43 | 44 | 48 | 50 |
| TOTAL | 26 | 10 | 42 | 9 | 43 | 8 | 44 | 3 | 46 | 39 | 41 | 44 | 46 | 50 | 51 |
| **WATERLOO-MORADA RURAL FIRE PROTECTION DISTRICT** | | | | | | | | | | | | | | | |
| General Members | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| Safety Members | 12 | 6 | 14 | 7 | 12 | 6 | 13 | 5 | 15 | 15 | 17 | 17 | 17 | 19 | 20 |
| TOTAL | 12 | 6 | 14 | 7 | 12 | 6 | 13 | 5 | 15 | 15 | 18 | 18 | 18 | 20 | 21 |
| **OTHER SPECIAL DISTRICTS (GENERAL MEMBERS)** | | | | | | | | | | | | | | | |
| Tracy Public Cemetery District | 2 | 4 | 5 | 5 | 5 | 4 | 6 | 3 | 6 | 8 | 7 | 8 | 7 | 6 | 4 |
| SJC Mosquito & Vector Control District | 26 | 9 | 30 | 8 | 32 | 7 | 38 | 2 | 38 | 38 | 37 | 39 | 36 | 36 | 36 |
| SJC Historical Society & Museum | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 6 | 6 |
| Mountain House Community Services District | 6 | 13 | 10 | 11 | 9 | 9 | 13 | 5 | 16 | 14 | 14 | 16 | 23 | 17 | 14 |
| Local Agency Formation Commission | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 2 | 3 | 2 | 3 |
| San Joaquin County Law Library | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| TOTAL | 37 | 26 | 48 | 24 | 49 | 20 | 62 | 10 | 65 | 64 | 63 | 68 | 72 | 68 | 64 |
| GRAND TOTAL | 4,104 | 1,998 | 5,773 | 1,607 | 6,092 | 1,049 | 6,407 | 557 | 6,695 | 6,672 | 6,900 | 7,243 | 7,480 | 7,396 | 7,137 |

# Acknowledgments

**COMPILATION, EDITING AND REVIEW**

Lily Cherng, Felipa Maliwat, and Stephanie Conner

**DESIGN AND LAYOUT**

Design Forge

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# Comprehensive Annual Financial Report 2016

For the Year Ended December 31, 2016