

# State Of California Retiree Health Benefits Program

GASB Nos. 74 and 75 Actuarial Valuation Report  
As of June 30, 2017



January 31, 2018

The Honorable Betty T. Yee  
California State Controller  
300 Capitol Mall, Suite 1850  
Sacramento, California 95814

Dear Controller Yee:

Submitted in this report are the results of our actuarial valuation as of June 30, 2017, of the liabilities associated with Other Postemployment Benefits (OPEB), including retiree healthcare benefits, provided to statewide employees through the programs sponsored by the State of California as administered by the California Public Employees Retirement System (CalPERS) and the California Department of Human Resource (CalHR). This report was prepared at the request of the State Controller's Office (SCO) for the purpose of satisfying the State of California's financial reporting requirements.

The actuarial calculations were prepared for purposes of complying with the requirements of Statements No. 74 and 75 of the Governmental Accounting Standards Board (GASB). The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. This report also provides actuarial funding costs assuming a full-funding policy and a full-funding interest rate of 7.28 percent.

Determinations of the liability associated with the benefits described in this report for purposes other than those stated may produce significantly different results. This report may be provided to parties other than the SCO only in its entirety and only with the permission of the SCO. GRS is not responsible for unauthorized use of this report.

The actuarial valuation report provides the following information:

- An actuarial valuation of plan liabilities as of June 30, 2017, using census data as of June 30, 2017;
- A reconciliation of Total OPEB Liability from June 30, 2016, to June 30, 2017;
- The development of OPEB expense for the State's fiscal year end June 30, 2018, using a measurement date of June 30, 2017;
- The deferred inflows and outflows applicable to year end June 30, 2017;
- Disclosure of certain Required Supplementary Information such as the impact of a percentage point change on the discount rate or the ultimate healthcare trend rate;
- Support of the discount rate used to develop the Total OPEB Liability; and
- Development of the Actuarially Determined Contribution, actuarial accrued liability and normal cost assuming a full-funding interest rate of 7.28 percent.

The actuarial valuation was based on information furnished by the SCO, CalPERS and CalHR concerning retiree healthcare benefits, members' census and financial data. Data was reviewed for reasonableness and internal consistency but was not audited. We are not responsible for the accuracy or completeness of the information received to produce this actuarial valuation. The actuarial assumptions and methods used in this actuarial valuation are consistent with the CalPERS OPEB assumption model and with the pension assumptions that will be used in the 2017 actuarial valuations of the CalPERS statewide pension programs. The actuarial assumptions and methods were approved by the SCO.

To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Retiree Healthcare Benefit Program sponsored by the State of California as of June 30, 2017. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Future actuarial measurements may differ significantly from the current measurements presented in this report 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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

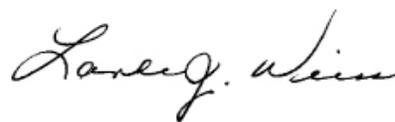
Alex Rivera and Lance J. Weiss are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Alex Rivera, FSA, EA, MAAA, FCA  
Senior Consultant



Lance J. Weiss, EA, MAAA, FCA  
Senior Consultant



# Table of Contents

---

<b>SECTION</b>	<b>PAGE NUMBER</b>	
		<b>TRANSMITTAL LETTER</b>
	<b>1</b>	<b>EXECUTIVE SUMMARY</b>
<b>A</b>	<b>8</b>	<b>CURRENT OVERVIEW</b>
<b>B</b>	<b>16</b>	<b>SUMMARY OF ACTUARIAL VALUATION RESULTS</b>
<b>C</b>	<b>22</b>	<b>SUMMARY OF CURRENT SUBSTANTIVE PLAN PROVISIONS</b>
<b>D</b>	<b>44</b>	<b>SUMMARY OF THE PARTICIPANT DATA</b>
<b>E</b>	<b>55</b>	<b>SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS</b>
<b>F</b>	<b>65</b>	<b>PENSION-RELATED ASSUMPTIONS</b>
<b>APPENDIX A</b>	<b>88</b>	<b>GLOSSARY</b>

# Table of Contents

---

<b>SECTION</b>	<b>PAGE NUMBER</b>	
<b>APPENDIX B</b>		<b>INDIVIDUAL ACTUARIAL VALUATION RESULTS</b>
	<b>92</b>	<b>PROFESSIONAL, ADMINISTRATIVE, FINANCIAL AND STAFF SERVICES (BU 1)</b>
	<b>98</b>	<b>ATTORNEYS AND HEARING OFFICERS (BU 2)</b>
	<b>104</b>	<b>PROFESSIONAL EDUCATORS AND LIBRARIANS (BU 3)</b>
	<b>110</b>	<b>OFFICE AND ALLIED (BU 4)</b>
	<b>116</b>	<b>HIGHWAY PATROL (BU 5)</b>
	<b>122</b>	<b>CORRECTIONS (BU 6)</b>
	<b>128</b>	<b>PROTECTIVE SERVICES AND PUBLIC SAFETY (BU 7)</b>
	<b>134</b>	<b>FIREFIGHTERS (BU 8)</b>
	<b>140</b>	<b>PROFESSIONAL ENGINEERS (BU 9)</b>
	<b>146</b>	<b>PROFESSIONAL SCIENTIFIC (BU 10)</b>
	<b>152</b>	<b>ENGINEERING AND SCIENTIFIC TECHNICIANS (BU 11)</b>
	<b>158</b>	<b>CRAFT AND MAINTENANCE (BU 12)</b>
	<b>164</b>	<b>STATIONARY ENGINEERS (BU 13)</b>
	<b>170</b>	<b>PRINTING AND ALLIED TRADES (BU 14)</b>
	<b>176</b>	<b>ALLIED SERVICES (BU 15)</b>
	<b>182</b>	<b>PHYSICIANS, DENTISTS AND PODIATRISTS (BU 16)</b>
	<b>188</b>	<b>REGISTERED NURSES (BU 17)</b>
	<b>194</b>	<b>PSYCHIATRIC TECHNICIANS (BU 18)</b>
	<b>200</b>	<b>HEALTH AND SOCIAL SERVICES/PROFESSIONAL (BU 19)</b>
	<b>206</b>	<b>MEDICAL AND SOCIAL SERVICES (BU 20)</b>
	<b>212</b>	<b>EDUCATIONAL CONSULTANT AND LIBRARY (BU 21)</b>
	<b>218</b>	<b>CALIFORNIA STATE UNIVERSITY</b>
	<b>224</b>	<b>JUDICIAL BRANCH</b>
	<b>230</b>	<b>EXEMPT/EXCLUDED/EXECUTIVE</b>
	<b>236</b>	<b>OTHER</b>

---

## **EXECUTIVE SUMMARY**

# Executive Summary

---

## Introduction

The Governmental Accounting Standards Board (GASB) issued accounting standards, Statements No. 43 and 45, relating to Other Postemployment Benefits (OPEB). Under these statements, public employers sponsoring and subsidizing retiree healthcare benefit programs recognized the cost of such benefits on an accrual basis. GASB No. 45 first became effective for the State's fiscal year end June 30, 2008, and required:

- Recognition of the cumulative difference between the annual expense and employer contributions; i.e., Net OPEB Obligation, on the balance sheet.
- Disclosure of the unfunded actuarial liability off the balance sheet as part of Required Supplementary Information.
- Development of an actuarial liability and normal cost using a discount rate based on the funding policy and expected return on assets. Since the State financed retiree benefits primarily on a pay-as-you-go basis (PayGO), the discount rate assumption was set to 4.25 percent for the most recent GASB Statements No. 43 and 45 actuarial valuations.
- Development of annual expense, or Annual OPEB Cost, based on the normal cost plus a 30-year amortization of the unfunded actuarial liability, with certain adjustment for changes in the Net OPEB Obligation.

GASB Statements Nos. 43 and 45 are being replaced with GASB Statements No. 74 and 75. GASB No. 74 first applies to plan reporting for the plan year end June 30, 2017. GASB No. 75 first applies to the State's reporting for the fiscal year end June 30, 2018. GASB No. 75 requires:

- Recognition of the unfunded actuarial liability; i.e. Net OPEB Liability, on the balance sheet.
- Development of an actuarial liability and normal cost using a blended discount rate which is based on a 20-year general obligation bond index if benefits are financed on a pay-as-you-go basis, and the expected return on trust assets if pre-funding assets are available to pay benefits.
- Development of an Annual OPEB Expense based on the normal cost plus an amortization of changes in the unfunded actuarial liability due to demographic experience, assumption changes, plan changes and investment experience. Demographic experience and assumptions changes are amortized over the average remaining working lifetime of all participants, investment experience is amortized over five years, and plan changes are recognized immediately.

GASB Statement No. 75 is expected to increase the balance sheet liability because the entire unfunded actuarial liability is recognized on the balance sheet. In addition, the balance sheet liability is projected to be more volatile because the unfunded actuarial liability will be based on a blended discount rate that changes at each measurement date as the 20-year general obligation bond index changes.

The following section contains more background information on GASB Nos. 74 and 75.

## GASB Statements No. 74 and 75

On June 2, 2015, the GASB released two new accounting standards applicable to OPEB. GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, addresses

# Executive Summary

---

reporting by OPEB plans that administer benefits on behalf of governments. GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, addresses reporting by governments that provide OPEB to their employees and for governments that finance OPEB for employees of other governments.

## **Statement No. 74**

Statement No. 74 replaces GASB Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. Statement No. 74 addresses the financial reports of defined benefit OPEB plans that are administered through trusts that meet specified criteria.

The Statement requires a statement of fiduciary net position and a statement of changes in fiduciary net position. The Statement also requires more extensive note disclosures and Required Supplementary Information (RSI) relating to the measurement of the OPEB liabilities for which assets have been accumulated, including information about the annual money-weighted rates of return on plan investments.

Statement No. 74 is first effective for the plan year beginning July 1, 2016.

## **Statement No. 75**

Statement No. 75 replaces GASB Statement No. 45. Statement No. 75 requires governments to recognize an OPEB liability on the face of the financial statements.

Statement No. 75 requires governments to present more extensive note disclosures and Required Supplementary Information (RSI) about their OPEB liabilities. Among the new note disclosures is a description of the effect on the reported OPEB liability of using a discount rate and a healthcare cost trend rate that are one percentage point higher and one percentage point lower than assumed by the government. Also, the Statement changes the way in which the discount rate for a Plan that is being pre-funded is calculated. The new RSI includes a schedule showing the causes of increases and decreases in the Total OPEB liability and a schedule comparing a government's actual OPEB contributions to its contribution requirements.

Statement No. 75 is first effective for the fiscal year beginning July 1, 2017.

## **Impact of New Accounting Standards**

Under the new accounting standards, the annual expense and OPEB liability for plans funded on a pay-as-you-go basis will be more volatile because the discount rate used to develop the normal costs and actuarial accrued liability is based on a municipal bond index.

The municipal bond index rate is 2.85 percent as of June 30, 2016, and 3.56 percent as of June 30, 2017. Plan sponsors who partially pre-fund benefits must discount liabilities using a "blended discount rate" that reflects the municipal bond rate index if pre-funding assets are not available to pay benefits and the long-term expected return on assets if pre-funding assets are available to pay benefits.

## Executive Summary

---

The State and employees in all bargaining units and Judicial employees have agreed to pre-fund retiree healthcare benefits. The State and all active members make contributions into separate accounts for each respective bargaining unit and Judicial employee group. Contributions are based on a percentage of pensionable compensation with the ultimate goal of contributing 100 percent of the actuarially determined normal cost shared equally between the State and employees. Pre-funding contributions and investment income are not available to pay plan benefits until the earlier of 2046 or the year that actuarial accrued liabilities are fully funded.

Plan assets are currently held in the California Employees Retiree Benefit Trust (CERBT) and the State has adopted investment Strategy 1. Based on information provided on CalPERS' website, the CERBT Strategy 1 investment portfolio is expected to earn approximately 7.28 percent per year over the long term.

As of June 30, 2017, total assets in the CERBT accounts, for six bargaining units and Judicial employees, are approximately \$500 million and include a one-time extraordinary contribution of \$240 million made by the State in October of 2016.

The sponsor also makes pay-as-you-go contributions for benefits paid to current retirees and the portion of benefits paid to future retirees that are not pre-funded.

### Plan Benefits

The State of California provides medical, prescription drug and dental benefits (healthcare benefits) to retired statewide employees through a single-employer defined benefit plan.

The State also offers life insurance, long-term care and vision benefits to retirees; however, because these benefits are completely paid for by retirees, there is no GASB Statements No. 74 or 75 liability to the State on behalf of such benefits.

We are not aware of any other OPEB offered to statewide employees that are subsidized by the State of California, and subject to GASB Statements No. 74 and 75.

The State and employees in most bargaining units and Judicial employees have recently agreed to changes in benefits if an employee is hired after certain effective dates. The key benefit changes include:

- Reducing the "100/90" State contribution formula to "80/80";
- Grading the State contribution if the member has less than 25 years of Credited Service at retirement;
- For Medicare eligible members, eliminating the Medicare Part B subsidy; and
- For Medicare eligible members, developing the "80/80" State contribution based on the premium rates for only Medicare members.

# Executive Summary

---

## Key Definitions

Following is a list of key terms used for the GASB Statements No. 74 and 75 actuarial valuations:

- 1) **Present value of future healthcare benefits** is the present value of benefits expected to be paid to current and future retirees.
- 2) **Actuarial Accrued Liability** or **Total OPEB Liability** is the present value of future retiree healthcare benefits attributable to employee service earned in prior fiscal years using the **Entry Age Normal Cost Method**.
- 3) **Normal Cost** or **Service Cost** is the present value of future benefits earned by employees during the current fiscal year.
- 4) **Actuarially Determined Contribution** or **ADC** equals the Normal Cost plus an amortization of the difference between the Actuarial Accrued Liability and any assets available to pay benefits.
- 5) **Plan Fiduciary Net Position** equals the market value of plan assets available to pay plan benefits.
- 6) **Net OPEB Liability** equals the difference between **Total OPEB Liability** and the **Plan Fiduciary Net Position**. The **Net OPEB Liability** is recognized directly on the plan sponsor's balance sheet.
- 7) **Annual OPEB Expense** equals:
  - a. **Service Cost**
  - b. Plus administrative costs
  - c. Plus interest on the **Total OPEB Liability**
  - d. Less member contributions
  - e. Less expected investment income
  - f. Plus the change in **Total OPEB Liability** due to changes in benefit provisions
  - g. Plus the amortization of the change in **Total OPEB Liability** due to non-investment experience
  - h. Plus the amortization of the change in **Total OPEB Liability** due to changes in assumptions
  - i. Plus the amortization of investment gains and losses
  - j. Plus other changes in the **Plan Fiduciary Net Position**
- 8) Changes in **Total OPEB Liability** due to non-investment experience or change in assumptions are amortized on a straight-line basis using the expected future working years including members who are inactive or retired.
- 9) Investment gains and losses are amortized using a five-year straight line period.
- 10) Changes in **Total OPEB Liability** due to plan changes are recognized immediately as a component of the **Annual OPEB Expense**.
- 11) **Deferred Inflows or Outflows** are based on the changes in **Net OPEB Liability** due to demographic experience, investment experience or changes in assumptions that have not yet been recognized as a component of the **Annual OPEB Expense**.
- 12) **Blended Discount Rate** is based on a long-term municipal bond rate if assets are not available to pay benefits and the portfolio's long-term expected return on assets if assets are available to pay benefits.
- 13) The **Individual Entry Age Normal Cost Method** spreads costs as a level percentage of payroll.
- 14) Under a **Closed Group** actuarial cost method, actuarial present values associated with future entrants are not considered.

Please note that the Actuarially Determined Contribution (ADC) represents the annual employer contribution that along with member contributions and investment income is projected to fully fund the

## Executive Summary

---

program over a reasonable period such as 30 years. The ADC is developed assuming the sponsor will: (i) make the targeted pre-funding contributions on a timely basis (ii) contributions are deposited in an irrevocable qualified trust for the exclusive benefit of plan members, (iii) contributions in excess of the pay-as-you-go amount are invested in a diversified investment portfolio with a defined investment policy, and (iv) the discount rate used to develop the **Actuarial Accrued Liability** and **Normal Cost** recognizes the expected return of the entire portfolio.

The **Annual OPEB Expense** is used solely for accounting under GASB No. 75 and is not appropriate for developing the employer's pre-funding contribution amount such as the ADC. The **Annual OPEB Expense** is not a good proxy for the ADC because the GASB Statement No. 75 amortization and **Blended Discount Rate** requirements will produce too much volatility.

Based on the State's funding policy, we understand the goal is to make additional normal cost contributions in excess of the pay-as-you-go contributions, for each respective actuarial valuation group, such that the program is projected to be fully funded in approximately 30 years. As of June 30, 2017, 22 out of 25 membership groups or approximately 75 percent of the active covered members have entered into pre-funding arrangements with the State.

For GASB Statements No. 74 and 75 reporting purposes, if the membership group has not entered into a pre-funding arrangement with the State, we assumed a discount rate of 3.56 percent, which is equal to municipal bond rate at June 30, 2017. For membership groups with pre-funding arrangements, we assumed a blended discount reflecting the municipal bond rate of 3.56 percent if pre-funding assets are not available to pay benefits and 7.28 percent if pre-funding assets are available to pay benefits.

Other key assumptions such as healthcare inflation, projected healthcare claims, the likelihood an employee retires, elects healthcare coverage and survives after retirement will also have an impact on costs. The Current Overview section of the report provides more details on other actuarial valuation assumptions.

## Executive Summary

The following table shows key valuation results as of June 30, 2017.

KEY VALUATION RESULTS (\$ IN 000'S)	
GASB No. 75	June 30, 2017
Total OPEB Liability	\$ 91,507,618
Net Fiduciary Position	500,035
Net OPEB Liability	\$ 91,007,583
Balance Sheet Liability - Net OPEB Liability	\$ 91,007,583
Service Cost	\$ 4,009,501
Annual OPEB Expense	\$ 5,658,249
Contribution	\$ 2,429,171
Actuarially Determined Contribution (ADC)	\$ 4,561,908

### Basis of Actuarial Valuation

The preceding actuarial valuation results were based on:

- The provisions of GASB Statements No. 74 and 75.
- The provisions of Actuarial Standard of Practice No. 6, *Measuring Retiree Group Benefit Obligations*.
- Census information as of June 30, 2017, provided by the California Public Employees Retirement System (CalPERS) and the California Department of Human Resource (CalHR).
- Claims, enrollment data and average costs provided by CalPERS and CalHR for the period from January 1, 2014, to May 31, 2017.
- Premium data through calendar year 2018, provided by CalPERS and CalHR.
- Employer Group Waiver Plan (EGWP) information provided by CalPERS.
- Medicare Advantage design and premium rate information provided by CalPERS.
- Plan information provided by CalPERS and CalHR.
- Demographic actuarial assumptions consistent with those that will be used in the 2017 actuarial valuations of the CalPERS statewide pension programs.
- Retiree healthcare actuarial valuation assumptions and methods consistent with the CalPERS OPEB assumption model.
- Healthcare related actuarial valuation assumptions such as healthcare plan participation, coverage and continuance, aging factors, adjustments for disabled members and adjustments for children of current retirees and survivors are based on the experience study for the period from July, 1, 2007, to June 30, 2014, first effective with the actuarial valuation as of June 30, 2015.

## Executive Summary

---

- Other healthcare, economic and demographic assumptions such as the discount rate, healthcare inflation, healthcare claim costs and healthcare plan participation as recommended by Gabriel, Roeder, Smith & Company and approved by the SCO.
- The latest developments in Federal healthcare reform.
- For purposes of developing the ADC, the Unfunded Actuarial Accrued Liability (UAAL) is amortized over a 30-year closed period from June 30, 2017, as a level percent of pay.

The actuarial valuation was prepared under the supervision of Members of the American Academy of Actuaries who satisfy the Qualification Standards of the American Academy of Actuaries to render an actuarial opinion on the actuarial valuation of retiree healthcare benefits.

The remainder of the report is an integral component of the actuarial valuation and includes:

- An overview of the current GASB Statements No. 74 and 75 requirements in effect on June 30, 2017.
- The basis of the actuarial assumptions and methods used in this actuarial valuation.
- Development of the ADC by actuarial valuation group using a full-funding rate of 7.28 percent.
- GASB No. 74 information applicable to the plan's fiscal year end June 30, 2017.
- GASB No. 75 information applicable to the sponsor's fiscal year end June 30, 2018.
- Additional details on the census, plan provisions, assumptions and methods used to prepare the actuarial valuation.

## SECTION A

---

### CURRENT OVERVIEW

### Summary of GASB Accounting Standards

#### Accounting Standard

For other postemployment benefit (OPEB) plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 74, “Financial Reporting for Postemployment Benefit Plans other than Pension Plans,” replaces the requirements of GASB Statement No. 43, “Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans.” GASB Statement No. 74 establishes standards of financial reporting for separately issued financial reports of state and local government OPEB plans.

GASB Statement No. 75 replaces the requirements of Statements No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, as amended, and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB.

GASB Statements No. 74 and 75 are effective for fiscal years beginning after June 15, 2016, and June 15, 2017, respectively.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain non-actuarial information, such as notes regarding accounting policies and investments, is not included in this report. As a result, the plan sponsor will be responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

#### Plan Financial Statements

GASB Statement No. 74 requires defined benefit OPEB plans which are administered as trusts or equivalent arrangements to present two financial statements: a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position presents the assets and liabilities of the OPEB plan at the end of the OPEB plan’s reporting period. The statement of changes in fiduciary net position presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expense, and net increase or decrease in the fiduciary net position.

GASB Statement No. 75 requires state and local government employers to recognize the Net OPEB Liability and the Annual OPEB Expense on their financial statements, and disclose deferred outflows and inflows for changes in Net OPEB Liability not recognized in the Annual OPEB Expense. The Net OPEB Liability is the difference between the Total OPEB Liability and the plan’s fiduciary net position. In traditional actuarial terms, this is analogous to the actuarial accrued liability less the market value of assets.

The Annual OPEB Expense equals the Service Cost, less member contributions less the expected return on assets plus an amortization of changes in the Net OPEB liability due to demographic experience, investment performance, assumption changes and plan changes.

## Current Overview

---

The GASB Statement No. 74 information contained in this report is based on an actuarial valuation date of June 30, 2017, and a measurement date of June 30, 2017.

For GASB Statement No. 75 reporting purposes, the plan sponsor's financial reporting for fiscal year end June 30, 2018, will be based on a measurement date of June 30, 2017.

GASB Statement No. 75 requires that employer contributions made to the OPEB plan subsequent to the measurement date and before the end of the employer's reporting period should be reported as a deferred outflow of resources.

The information contained in this report does not incorporate any employer contributions made subsequent to the measurement date of June 30, 2017.

### Notes to Financial Statements

GASB Statement No. 75 requires the notes of the employer's financial statements to disclose the annual OPEB expense, the OPEB plan's liabilities and assets, and deferred outflows and inflows of resources related to OPEB.

GASB Statement Nos. 74 and 75 require the notes of the financial statements for the Plan and Plan Sponsor to include certain additional information. The list of disclosure items should include:

- The name of the OPEB plan, the administrator of the OPEB plan and the identification of whether the OPEB plan is a single-employer, agent or cost-sharing OPEB plan;
- A description of the benefits provided by the plan;
- A brief description of changes in benefit terms or assumptions that affected the measurement of the total OPEB liability since the prior measurement date;
- The number of plan members by category and if the plan is closed;
- A description of the plan's funding policy, including member and employer contribution requirements;
- The OPEB plan's investment policies;
- The OPEB plan's fiduciary net position and the net OPEB liability;
- The impact to net OPEB liability of changing the discount rate by one percentage point;
- The impact to the net OPEB liability of changing the healthcare trend rate by one percentage point;
- Significant assumptions and methods used to calculate the total OPEB liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

OPEB plans that are administered through trusts or equivalent arrangements are required to disclose additional information in accordance with GASB Statement No. 74. This information includes:

- The composition of the OPEB plan's Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;

## Current Overview

---

- Information regarding certain reserves and investments, including concentrations of investments greater than or equal to 5%, receivables and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

### Required Supplementary Information

GASB Statement No. 74 requires a 10-year fiscal history of:

- Sources of changes in the net OPEB liability;
- Information about the components of the net OPEB liability and related ratios, including the OPEB plan's fiduciary net position as a percentage of the total OPEB liability, and the net OPEB liability as a percent of covered-employee payroll;
- Comparison of the actual employer contributions to the actuarially determined contributions, if applicable, based on the plan's funding policy; and
- For plans with an actuarially determined contribution, the schedule covering each of the 10 most recent fiscal years of the actuarially determined contribution, contributions to the OPEB plan and related ratios.

### Frequency and Timing of the Actuarial Valuation

An actuarial valuation to determine the total OPEB liability is required to be performed at least once every two years. For the employer's financial reporting purposes, the net OPEB liability and OPEB expense should be measured as of the employer's "measurement date," which may not be earlier than the employer's prior fiscal year end-date. If the actuarial valuation used to determine the total OPEB liability is not calculated as of the measurement date, the total OPEB liability is required to be rolled forward from the actuarial valuation date to the measurement date.

### Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits), and (2) a tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

The rate at the beginning of the year of 2.85 percent is the rate as of June 30, 2016, from the "20-Bond GO Index" which is the Bond Buyer Index, general obligation, 20 years to maturity, mixed quality. In describing this index, the Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.

The rate at the end of the year of 3.56 percent is the rate for fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2017. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax exempt securities.

# Current Overview

---

## Actuarial Assumptions

The actuarial assumptions used to value the actuarial liabilities are outlined in detail in Sections E and F. The actuarial assumptions include healthcare related assumptions such as: trend rates, participation rates and per capita claim costs, and pension related assumptions such as: termination rates, disability rates, retirement rates and mortality rates.

The healthcare related assumptions are based on an Experience Review for the period July 1, 2007 to June 30, 2014, performed by GRS and were first adopted beginning with the June 30, 2015, actuarial valuation. The pension related assumptions were based on an Experience Review performed by CalPERS and were first adopted beginning with the June 30, 2014, actuarial valuation.

## Future Uncertainty or Risk

Future results may differ from those anticipated in this actuarial valuation. Reasons include, but are not limited to:

- Claims experience differing from expected;
- Medical trend experience differing from expected;
- Changes in the healthcare plan designs offered to active and retired members;
- Changes in healthcare related costs due to recent experience; and
- Participant behavior differing from expected; e.g.,
  - Elections at retirement;
  - One-person versus two-person coverage elections; and
  - Timing of retirement or termination.

## Benefits Valued

The benefit provisions that were valued are described in Section C. The actuarial valuation is required to be performed on the current benefit terms and existing legal agreements. Consideration is to be given to the written plan document as well as other communications between the employer and plan members and an established pattern of practice for cost sharing. The summary of major plan provisions is designed to outline principal plan benefits.

# Current Overview

---

## Assumptions and Methods Impacting the Actuarial Valuation

### Healthcare Related Assumption Changes

GRS performed a review of the healthcare related actuarial assumptions used to value the actuarial liabilities associated with the retiree healthcare benefits provided to statewide employees through the programs sponsored by the State of California as administered by CalPERS and CalHR. The primary purpose of the study was to determine the continued appropriateness of certain healthcare related actuarial assumptions by comparing actual experience to expected experience. The study was based on healthcare census information; claims experience data and actuarial valuations for the period from July 1, 2007, to June 30, 2014. The actuarial assumptions determined by this study were first used for the GASB Nos. 43 and 45 actuarial valuations effective as of June 30, 2015. For the actuarial valuation as of June 30, 2017, assumptions, including per capita healthcare cost and healthcare trend rates, were updated based on experience through June 30, 2017.

### *Discount Rate Assumption*

The discount rate assumption depends on the purposes of the measurement.

The sponsor's funding policy provides for a 50 percent cost sharing of the normal cost, between active members and the plan sponsor, graded over several years since the adoption of the pre-funding policy. Pre-funding normal cost contributions are deposited into the CERBT and are expected to earn 7.28 percent per year. Pre-funding normal costs and investment income are not available to pay benefits until the earlier of 2046 or the year that the total actuarial liability is fully funded. The sponsor finances benefits on a pay-as-you-go basis prior to the year that pre-funding assets are available to pay benefits. For purposes of developing the full-funding normal cost, actuarial liability and actuarially determined contribution, a discount rate of 7.28 percent was used.

The discount rate used to develop the GASB Nos. 74 and 75 Total OPEB Liability and Service Cost was based on a blended rate for each respective actuarial valuation group comprised of 3.56 percent if pre-funding assets are not available to pay benefits and 7.28 percent if pre-funding assets are available to pay benefits.

### *Healthcare Trend Assumptions*

One of the key assumptions influencing costs is the assumed growth or trend in healthcare costs. The healthcare trend assumption for OPEB actuarial valuations spans over the lifetime of a covered retiree, which could extend to over 30 years. This is in contrast to the short-term healthcare inflation used to develop premiums for the next fiscal year. This long-term healthcare assumption is by far the most difficult to set.

Actuaries generally compare the growth in general inflation, wages, healthcare costs and other goods and services when setting the healthcare trend assumption. For example, the actuary may compare the historical experience of national healthcare expenditures to the Gross Domestic Product (GDP). Healthcare inflation may be expressed as general inflation plus a component for healthcare costs.

## Current Overview

---

The long-term healthcare trend is generally lower than the short-term healthcare trend used to update premiums and expected claims in the following fiscal year because such short-term increases are generally not sustainable in the long-term. That is, if healthcare benefit costs are assumed to increase by 9.00 percent per year in the long-term while the cost for other goods and services increase at a rate less than 3.00 percent per year, then in the long run the general economy would include a disproportionate share of expenditures allocated to healthcare benefits. Consequently, long-term retiree healthcare actuarial models generally assume that the initial trend rate will eventually grade down to a more sustainable level. For this valuation, the 2018 trend rates are based on actual premium increases from calendar 2017 to 2018. Based on a review of supporting documentation provided by CalPERS and a review of various publically available trend studies, the 2018 trend rate for the PPO per capita claims costs is assumed to be 5.00 percent for Pre-Medicare costs and 6.00 percent for Post-Medicare costs. For 2019 and beyond we assumed an initial healthcare trend rate of 8.00 percent for Pre-Medicare costs, decreasing each year over the next seven years until the ultimate rate of 4.50 percent is reached. For Post-Medicare costs, the 2019 healthcare trend rate is 8.50 percent, decreasing to the ultimate rate of 4.50 percent over the next eight years.

### ***Adjustments to Estimate the Potential Impact of the Employer Group Waiver Plan (EGWP)***

Effective January 1, 2013, prescription benefits for certain Medicare eligible members are provided through an Employer Group Waiver Plan (EGWP) with a “Wrap” feature. The EGWP design is based on a federally approved drug formulary and plan design. A sponsor may provide additional benefits through a supplementary “Wrap” plan that ensures members will receive benefits that are relatively equal to those of the plan that the sponsor currently offers. In most instances, the current plan benefit design can be replicated through the combination of an EGWP-Wrap plan at reduced costs. The key components which are expected to reduce costs include:

- 1) Fifty percent discount on brand name drugs while member is in the “donut hole” coverage gap. (Under a standard or model Medicare Part D program, a member is responsible for 100 percent of the prescription costs from the initial coverage limit (\$3,700 for 2017) to the catastrophic coverage limit (\$7,425 for 2017). This coverage gap is also known as the “donut hole.” The discount is also applied to the member’s true out of pocket costs which allows federal catastrophic coverage to be reached sooner.
- 2) The “donut hole” coverage gap is reduced ratably and completely eliminated by 2020.
- 3) As the coverage gap diminishes, the sponsor’s “Wrap” supplemental benefits within the “donut hole” decreases.
- 4) Federal prescription drug subsidies must be used to reduce the cost of providing benefits to Medicare eligible members, resulting in lower premium rates. This feature allows the sponsor to reflect certain EGWP-Wrap savings in the OPEB actuarial valuation.

Based on updated data from CalPERS, the remaining savings as of June 30, 2017, attributable to the EGWP-Wrap design feature is approximately 22 percent of average costs for PERSCare, 26 percent of average costs for PERS Choice, and 20 percent for HMO plans. In our actuarial valuation, EWGP based savings are assumed to gradually wear away over the next nine years to an ultimate savings level of seven percent of average costs for PERSCare, ten percent of average costs for PERSChoice, and five percent of average costs for HMO plans.

## Current Overview

### ***Adjustments to Estimate the Impact of Excise Tax under Healthcare Reform***

Beginning in 2020, the Patient Protection and Affordable Care Act (PPACA) imposes a 40 percent excise tax on healthcare plan costs over certain statutory limits. The annual statutory limits depend on the age and coverage tier as follows:

	Age less than 55 or greater than 64	Age greater than 54 or less than 65
Single person coverage	\$10,200	\$11,850
All other coverage types	\$27,500	\$30,950

Before the tax takes effect in 2020, the preceding statutory limits will be increased by the rate for the Consumer Price Index for all Urban Consumers (CPI-U) plus one percentage point, and after 2020 the statutory limits are increased by the CPI-U rate. The statutory limits do not recognize differences due to region, health status of the group or plan design. Healthcare plan costs may be blended among active members, pre-Medicare retirees and Medicare retirees if members are covered by the same plan, and similar benefits are provided. Healthcare plan costs subject to the excise tax include medical, prescription and employer Health Savings Accounts and Health Reimbursement Accounts.

For the actuarial valuation as of June 30, 2017, the impact of the excise tax was estimated by:

- 1) Aggregating average costs by the PPO plans and the HMO plans;
- 2) Projecting average plan costs based on the assumed actuarial valuation trend rate;
- 3) Projecting the statutory limits assuming a CPI-U rate of 3.0 percent;
- 4) Estimating the projected excise tax based on the projected average costs and statutory limits;
- 5) Assuming the plan sponsor would subsidize the excise tax and no additional costs would be passed to plan members; and
- 6) Developing an adjusted trend rate, applied to the explicit costs, to approximate the impact of the additional excise tax costs.

Based on the preceding method, the ultimate trend rate for future retirees was increased by an additional 0.14 of a percentage point to 4.64 percent on and after 2023.

### ***Participation Assumption***

Another key assumption influencing costs is the participation assumption, or the likelihood that an active member will retire and select healthcare coverage. This assumption generally depends on the subsidy provided by the employer. That is, the higher the level of employer benefits, and the lower the level of retiree-paid premium, the higher the likelihood the retired member will select healthcare coverage. For this actuarial valuation, we have defined participation rates that depend on the portion of the total premium paid by the State. On average, about 95 percent of all eligible retirees elect healthcare coverage.

## Current Overview

---

### ***Other Demographic Assumptions***

Demographic assumptions are used to determine the likelihood an active member will retire, survive and receive benefits. Assumptions relating to termination, disability, retirement and mortality were based on the same assumptions used by CalPERS to develop costs for pension benefits. We reviewed the CalPERS assumptions for reasonableness and consistency.

### ***Retiree Per Capita Claim Costs and the Implicit Rate Subsidy***

A retiree healthcare actuarial valuation depends on the retired member's expected healthcare claim at a given age indexed for healthcare inflation. Average healthcare costs are generally developed using the experience of the group, and are adjusted for the retired member's age based on standard morbidity tables or group specific morbidity for very large groups.

The employer's net cost for a given member in a given year equals the expected age-adjusted annual claims cost less the member's annual contribution. Retired members not eligible for Medicare who are charged a premium based on the experience of both active and retired members will be receiving a subsidy because the average healthcare costs of retired members is generally higher than the blended average costs of a group comprised of both active and retired members. This subsidy is referred to as the *implicit rate subsidy*, and is a major contributor to the OPEB costs. The portion of the blended average costs paid by the employer is referred to as the *explicit rate subsidy*, and also directly impacts OPEB costs.

### ***Actuarial Cost Method***

Actuarial valuation results, used for accounting purposes, such as the Total OPEB Liability and Service Cost were developed using the Entry Age Normal Actuarial Cost Method and the blended discount rates as required by GASB Statements No. 74 and 75. The Normal Cost and Actuarial Accrued Liability for purpose of calculating the Actuarially Determined Contribution were developed using the Entry Age Normal Actuarial Cost Method and a full-funding discount rate of 7.28 percent.

### ***Closed Versus Open Group Valuation***

The development of the Actuarially Determined Contribution and the measurement of the Actuarial Accrued Liability and Total OPEB Liability were based on a "closed group" valuation. A closed group valuation produces assets, liabilities and costs for the current and future fiscal years without considering how future new hires may influence costs. An open group valuation considers the impact of future new hires and is a useful tool to evaluate the impact of future potential changes in demographics, benefit design, assumptions, funding policies or the budgetary impact of the OPEB programs.

The following section contains a reconciliation of the actuarial accrued liability since the last actuarial valuation and a summary of key valuation results as of June 30, 2017.

## **SECTION B**

---

### **SUMMARY OF ACTUARIAL VALUATION RESULTS**

# Actuarial Valuation Results

---

## Reconciliation of Actuarial Accrued Liability

The following table shows a reconciliation of the actuarial accrued liability from June 30, 2016, to June 30, 2017, based on the GASB Statement No. 45 pay-as-you-go discount rate of 4.25 percent at June 30, 2016, and GASB Statement No. 75 blended discount rate at June 30, 2017.

The actuarial accrued liability increased from \$76.68 billion as of June 30, 2016, to \$86.68 billion as of June 30, 2017, based on a pay-as-you-go discount rate of 4.25 percent. If the plan's assumptions had been exactly realized during the year and no assumption changes were made, the actuarial liability would have increased to \$80.71 billion as of June 30, 2017. The key factors contributing to the unexpected increase in actuarial liabilities of \$5.97 billion include:

- Demographic experience increased the expected actuarial liabilities by 1.0 percent or \$0.78 billion. Examples of demographic experience losses include: more members retiring than assumed, members retiring earlier than assumed and members living longer than assumed. During the year the number of retirees increased by 2.7 percent from 178,110 to 182,866 at June 30, 2017, which is one of the key causes of the demographic loss.
- During the year, favorable healthcare claims experience and plan design changes decreased the expected actuarial accrued liability by approximately 0.9 percent or \$0.75 billion. This change in accrued liability is mainly driven by the relationship between the assumed trend rate used to project average member claims cost in 2017, used in last year's actuarial valuation, and the actual trend rate for 2017, used to update average per member claim costs. During plan year end June 30, 2017, average per member claim costs were lower than assumed.
- Each year, as part of the actuarial valuation process, the trend rates are evaluated and updated based on a review of supporting documentation provided by CalPERS and a review of various publically available trend studies. We continue to use a select and ultimate trend assumption and the most recent premium information available at the time of the actuarial valuation. Trend rates for the June 30, 2017, actuarial valuation were reviewed and updated since the last actuarial valuation. The trend rates are assumed to begin in plan year 2019 at 8.00 percent for pre-Medicare coverage and 8.50 percent for post-Medicare coverage and gradually decrease to 4.50 percent. This assumption change increased expected actuarial liabilities by approximately 7.36 percent or \$5.94 billion.
- Changing the GASB Statement No. 45 discount rate of 4.25 percent to the blended GASB Statement No. 75 discount rate which ranges from 3.56 percent to 4.22 percent, increased the actuarial accrued liability by \$4.83 billion to \$91.51 billion.

The following table shows the reconciliation of the actuarial accrued liability.

## Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES</b> <b>OPEB ACTUARIAL VALUATION RESULTS AS OF JUNE 30, 2017 (\$ in '000s)</b> <b>PAY-AS-YOU-GO FUNDING POLICY (4.250%)</b> <b>(GAIN)/LOSS ANALYSIS</b>	
Actuarial Accrued Liability as of July 1, 2016	\$76,680,877
Normal Cost for 16/17	2,768,020
Expected Benefit Payments for 16/17	(2,073,169)
Interest	<u>3,332,982</u>
Expected Actuarial Accrued Liability as of June 30, 2017	\$80,708,710
(Gain)/Loss Items	
Demographic Experience	\$781,598
Healthcare Claims Experience and Design Changes	(748,427)
Change in Healthcare Trend Assumptions	<u>5,937,134</u>
Total	\$5,970,305
Actuarial Accrued Liability as of June 30, 2017 at 4.25%	\$86,679,015
Impact of the GASB 45 to GASB 75 change in discount rate	<u>4,828,603</u>
Actuarial Accrued Liability as of June 30, 2017 at Single Discount Rate	\$91,507,618

The following tables compare GASB Statements No. 45 and 75 actuarial valuation results as of June 30, 2017.

ACTUARIAL ACCOUNTING COMPARISON (\$ IN 000's)			
GASB No. 45	June 30, 2017	GASB No. 75	June 30, 2017
Actuarial Accrued Liability	\$ 86,679,015	Total OPEB Liability	\$ 91,507,618
Actuarial Value of Assets	<u>500,035</u>	Net Fiduciary Position	<u>500,035</u>
Unfunded Actuarial Liability	\$ 86,178,980	Net OPEB Liability	\$ 91,007,583
Balance Sheet Liability - Net OPEB Obligation	\$ 29,495,455	Balance Sheet Liability - Net OPEB Liability	\$ 91,007,583
Normal Cost	\$ 2,758,412	Service Cost	\$ 4,009,501
Annual OPEB Cost	\$ 5,851,828	Annual OPEB Expense	\$ 5,658,249
Contribution	\$ 2,429,171	Contribution	\$ 2,429,171

The following table shows key actuarial valuation results by group.

# Actuarial Valuation Results

ACTUARIAL VALUATION SUMMARY (\$ IN 000's)											
Actuarial Valuation Group	FY 2017			Full-funding Discount Rate			GASB No. 74 and 75				
	Assets 6/30/2017	PAYGO Contributions	Pre-Fund Contributions	Normal Cost	Actuarial Liability	ADC	Blended Discount Rate	Service Cost	Total OPEB Liability	Net OPEB Liability	Annual OPEB Expense
Professional, Administrative, Financial and Staff Services (BU1)	\$ -	\$ 412,642	\$ -	\$ 283,218	\$ 12,096,932	\$ 968,681	3.910%	\$ 805,786	\$ 19,866,775	\$ 19,866,775	\$ 1,210,995
Attorneys and Hearing Officers (BU2)	-	26,821	-	21,769	777,450	63,093	3.996%	56,706	1,227,816	1,227,816	83,873
Professional Educators and Librarians (BU3)	-	23,795	-	10,574	515,092	39,777	3.825%	26,332	798,489	798,489	33,842
Office and Allied (BU4)	-	151,838	-	108,143	3,870,356	327,505	3.961%	283,067	6,125,628	6,125,628	414,834
Highway Patrol (BU5)	246,662	95,517	90,236	59,841	2,795,867	189,711	4.219%	168,057	4,542,103	4,295,441	250,737
Corrections (BU6)	185,155	325,344	170,113	227,389	9,296,601	686,688	4.074%	609,551	15,211,352	15,026,197	902,637
Protective Services and Public Safety (BU7)	-	70,074	-	44,113	1,916,064	147,160	3.947%	123,030	3,131,303	3,131,303	181,405
Firefighters (BU8)	-	49,073	-	42,157	1,403,776	116,417	4.108%	116,930	2,308,141	2,308,141	179,199
Professional Engineers (BU9)	38,829	82,449	35,210	56,930	2,687,939	199,883	3.866%	166,173	4,402,387	4,363,558	237,277
Professional Scientific (BU10)	8,954	20,533	8,119	16,751	635,054	50,128	3.993%	45,853	1,019,733	1,010,779	68,608
Engineering and Scientific Technicians (BU11)	-	22,048	-	10,612	541,516	41,306	3.859%	29,767	860,177	860,177	44,912
Craft and Maintenance (BU12)	10,206	110,860	2,152	64,017	2,724,726	207,165	3.920%	167,689	4,317,850	4,307,644	244,835
Stationary Engineers (BU13)	-	10,675	-	5,659	263,208	19,867	3.825%	14,669	421,647	421,647	19,231
Printing and Allied Trades (BU14)	-	5,117	-	1,936	113,550	8,373	3.809%	5,427	179,209	179,209	7,341
Allied Services (BU15)	-	28,919	-	27,191	781,358	71,472	3.974%	67,499	1,243,228	1,243,228	94,168
Physicians, Dentists and Podiatrists (BU16)	6,846	15,948	1,422	11,593	356,379	28,502	4.041%	25,410	531,340	524,494	32,801
Registered Nurses (BU17)	-	36,173	-	36,980	992,699	93,237	3.961%	89,221	1,586,484	1,586,484	121,186
Psychiatric Technicians (BU18)	-	49,553	-	33,513	1,285,790	102,181	3.991%	90,257	2,092,628	2,092,628	134,440
Health and Social Services/Professional (BU19)	-	34,938	-	32,207	944,747	81,710	4.066%	78,546	1,477,942	1,477,942	112,905
Medical and Social Services (BU20)	-	12,646	-	27,346	454,683	53,103	4.137%	63,734	742,335	742,335	83,884
Educational Consultant and Library (BU21)	-	7,779	-	3,075	171,838	12,817	3.822%	8,110	267,090	267,090	11,131
California State University	-	333,828	-	280,812	8,358,192	754,550	3.560%	795,696	13,918,525	13,918,525	989,828
Judicial Branch	3,383	10,339	3,224	8,601	310,244	23,114	4.043%	21,728	489,367	485,984	30,891
Exempt/Excluded/Executive	-	46,707	-	26,557	1,225,431	96,008	3.560%	85,390	2,091,045	2,091,045	113,489
Other	-	135,079	-	22,090	1,798,710	179,460	3.560%	64,873	2,655,024	2,655,024	53,800
<b>Total</b>	<b>\$ 500,035</b>	<b>\$ 2,118,695</b>	<b>\$ 310,476</b>	<b>\$ 1,463,074</b>	<b>\$ 56,318,202</b>	<b>\$ 4,561,908</b>		<b>\$ 4,009,501</b>	<b>\$ 91,507,618</b>	<b>\$ 91,007,583</b>	<b>\$ 5,658,249</b>

Detailed actuarial valuation results by group are provided in Appendix B of this report.

# Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S)  
TOTAL OF ALL ACTUARIAL VALUATION GROUPS**

Number of Participants Covered	
Active Participants	\$ 272,574
Retired Participants <sup>a</sup>	<u>182,866</u>
Total Participants	\$ 455,440
Actuarial Present Value of Projected Benefits	
Active Participants	\$ 37,209,686
Retired Participants	<u>32,020,996</u>
Total Participants	\$ 69,230,682
Actuarial Accrued Liability	
Active Participants	\$ 24,297,206
Retired Participants	<u>32,020,996</u>
Total Participants	\$ 56,318,202
Actuarial Value of Assets	\$ 500,035
Unfunded Actuarial Accrued Liability	\$ 55,818,167
ADC Based on June 30, 2017 Actuarial Valuation	
Normal Cost	\$ 1,463,074
Administrative Expenses	5,645
Amortization of UAAL	<u>3,213,162</u>
Total ADC	\$ 4,681,881
Estimated Member Contributions	<u>(119,973)</u>
Net Employer ADC for FY 2018	\$ 4,561,908
Employer Share of FY 2018 Claims Costs	
Explicit Costs	
Medical and Rx Claims	\$ 1,572,229
Part B Reimbursement	231,313
Dental Claims	<u>114,273</u>
Total	\$ 1,917,815
Implicit Costs	<u>\$ 300,261</u>
Total Employer Costs	\$ 2,218,076
Retiree Share of FY 2018 Claim Costs	
Medical and Rx Claims	\$ 47,502
Dental Claims	<u>30,045</u>
Total	\$ 77,547
Total Claims Costs	\$ 2,295,623

*<sup>a</sup>Excludes 11,231 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

## Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>GASB NOS. 74 AND 75 DISCLOSURES</b> <b>CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S)</b> <b>TOTAL OF ALL ACTUARIAL VALUATION GROUPS</b>	
<b>Fiscal Year Ending June 30, 2017</b>	
<b>Total OPEB Liability</b>	
Service Cost	\$ 4,009,501
Interest on Total OPEB Liability	3,249,843
Changes of Benefit Terms	-
Difference between Expected and Actual Experience	-
Changes of Assumptions	(9,830,478)
Benefit Payments	(2,118,695)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (4,689,829)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 96,197,447</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 91,507,618</b>
<b>Plan Fiduciary Net Position</b>	
Employer PayGO Contributions	\$ 2,118,695
Employer Pre Funding Contributions	271,114
Active Member Contributions	39,362
Net Investment Income	42,292
Benefit Payments	(2,118,695)
Administrative Expense	(165)
Other	(290)
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 352,313</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 147,722</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 500,035</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 91,007,583</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.546%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 4,506,153</b>
<b>Employer Contribution</b>	<b>\$ 2,389,810</b>
<b>Percentage of ADC made by Employer</b>	<b>53%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (2,116,343)</b>
<b>Expected Return on Assets</b>	<b>\$ 24,862</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (17,427)</b>
<b>Average Expected Remaining Service</b>	<b>From 2.607026 to 9.568629</b>
<b>Blended Discount Rate June 30, 2016</b>	<b>From 2.850% to 3.672%</b>
<b>Blended Discount Rate June 30, 2017</b>	<b>From 3.560% to 4.219%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>

## Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES	
OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S)	
TOTAL OF ALL ACTUARIAL VALUATION GROUPS	
<b>Fiscal Year Ending June 30, 2017</b>	
<b>OPEB Expense <sup>a</sup></b>	
Service Cost	\$ 4,009,501
Interest on the Total OPEB Liability	3,249,843
Current-Period Benefit Changes	-
Active Member Contributions	(39,363)
Projected Earnings on Plan Investments	(24,862)
Administrative Expense	165
Other Changes in Plan Fiduciary Net Position	290
Recognition of Outflow/(Inflow) due to Non-investment Experience	-
Recognition of Outflow/(Inflow) due to Assumption Changes	(1,533,837)
Recognition of Outflow/(Inflow) due to Investment Experience	(3,488)
<b>Net OPEB Expense</b>	<b>\$ 5,658,249</b>
<b>Reconciliation of Net OPEB Liability</b>	
<b>Net OPEB Liability beginning of year</b>	<b>\$ 96,049,724</b>
OPEB Expense	5,658,249
Employer Contributions	(2,389,810)
Change in Outflow/(Inflow) due to Non-investment Experience	-
Change in Outflow/(Inflow) due to Assumption Changes	(8,296,641)
Change in Outflow/(Inflow) due to Investment Experience	(13,939)
<b>Net OPEB Liability End of year</b>	<b>\$ 91,007,583</b>
<b>Deferred (Inflows)</b>	
Non-investment Experience	\$ -
Assumption Changes	\$ (8,296,641)
Investment Experience	\$ (13,939)
<b>Deferred Outflows</b>	
Non-investment Experience	\$ -
Assumption Changes	\$ -
Investment Experience	\$ -
<b>Net OPEB Liability Sensitivity</b>	
Baseline Discount Rate, ranging from 3.560% to 4.219%, and 4.5% Ultimate Trend	\$ 91,007,583
Increase Discount Rate by One Percentage Point	\$ 77,780,968
Decrease Discount Rate by One Percentage Point	\$ 107,697,362
Increase Trend Rate by One Percentage Point	\$ 109,161,074
Decrease Trend Rate by One Percentage Point	\$ 76,879,311

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

## **SECTION C**

---

### **SUMMARY OF THE CURRENT SUBSTANTIVE PLAN PROVISIONS**

# Summary of the Current Substantive Plan Provisions

---

## Eligibility Requirements

### Health Care Coverage

#### Retired Employees

A member is eligible to enroll in a CalPERS health plan if he or she retires within 120 days of separation from employment, was eligible for health benefits upon separation and receives a monthly retirement allowance. If the member meets this requirement, he or she may continue his or her enrollment at retirement, enroll within 60 days of retirement or enroll during any Open Enrollment period. If a member is currently enrolled in a CalPERS health plan and wants to continue enrollment into retirement, the employer will notify CalPERS and the member's coverage will continue into retirement.

#### Survivors of an Annuitant

If a CalPERS annuitant satisfied the requirement to retire within 120 days of separation, the survivor may be eligible to enroll within 60 days of the annuitant's death or during any future Open Enrollment period. *Note: A survivor cannot add any new dependents; only dependents that were enrolled or eligible to enroll at the time of the member's death qualify for benefits.*

Surviving registered domestic partners who are receiving a monthly annuity as a surviving beneficiary of a deceased employee or annuitant on or after January 1, 2002, are eligible to continue coverage if currently enrolled, enroll within 60 days of the domestic partner's death, or enroll during any future Open Enrollment period.

#### Eligibility Exceptions

Certain family members are **not** eligible for CalPERS health benefits:

- Children age 26 or older;
- Children who have been married;
- Children's spouses;
- Disabled children over age 26 who were never enrolled or who were deleted from coverage;
- Former spouses;
- Grandparents;
- Parents;
- Children of former spouses/ former registered domestic spouses; and
- Other relatives.

#### Death of a Member

Upon the death of an employee while in State service, the law requires the State employer to continue to pay contributions for the survivor's or registered domestic partner's health coverage for up to 120 days

## Summary of the Current Substantive Plan Provisions

---

after the employee's death. Surviving family members will be eligible for health benefit coverage, provided they:

- Qualify for a monthly survivor check from CalPERS;
- Were an eligible dependent at the time of the member's death; and
- Continue to qualify as eligible family members.

Surviving family members who do not meet the above qualifications may be eligible for COBRA.

Children of registered domestic partners may have continued eligibility if they were enrolled as family members at the time of a member's death.

### Coordination with Medicare

CalPERS retired members who qualify for premium-free Part A, either on their own or through a spouse (current, former or deceased), must sign up for Part B as soon as they qualify for Part A. A member must then enroll in a CalPERS sponsored Medicare plan. The CalPERS-sponsored Medicare plan will pay for costs not paid by Medicare, by coordinating benefits.

### Dental Benefits

#### Retired Employees

Retired State employees are eligible to continue enrollment in the State's Dental Program if they retire within 120 days after their date of separation and they receive a retirement allowance from CalPERS. Retired employees who did not continue dental coverage into retirement may enroll during the annual dental open enrollment period.

California Highway Patrol employees who retired on or after September 30, 1992, may elect to continue enrollment in the Union-sponsored indemnity plan or change to a State-sponsored dental plan. Under the terms of the Memorandum of Understanding between the California Highway Patrol and the California Department of Human Resource, this is an irrevocable one-time election.

California Correctional Peace Officers Association members who are enrolled in a Union-sponsored dental plan must change to a State-sponsored dental plan and retire within 120 days after their date of separation to continue their dental coverage.

#### Survivors of an Employee or Annuitant

Departments are required to continue paying the State Contributions for a covered employee's spouse, domestic partner and other eligible family members for up to 120 days following an employee's death. During this time, CalPERS will determine if the spouse or other family members are eligible for continuation coverage.

## Summary of the Current Substantive Plan Provisions

---

After 120 days, the surviving family member(s) will be eligible to continue their current coverage if they meet all of the following criteria:

- They were enrolled as dependents at the time of death;
- They qualify for a monthly survivor allowance from CalPERS; and
- They continue to qualify as family members.

Surviving enrolled family members who do not qualify to continue their current coverage are eligible for continuation coverage under COBRA.

### 2017 State Contribution

The 2017 maximum State Contribution amounts are as follows:

2017 State Contribution		
One-Party Coverage	Two-Party Coverage	Family Coverage
\$707.00	\$1,349.00	\$1,727.00

The preceding “100/90” State contributions rates are based on:

- 100 percent of the weighted average single premium for employees and annuitants participating in the four Basic plans with the highest enrollment of single coverage plus,
- An additional contribution for dependent coverage equal to 90 percent of the weighted average excess of the two-party or family premium over the single premium for employees and annuitants participating in the four Basic plans with the highest enrollment of two-party and family coverage.

If the State retiree is signed up for a CalPERS sponsored Medicare plan and the monthly State contribution is more than the plan’s monthly premium, CalPERS will credit the retiree the difference between the two amounts, up to the amount of the Part B premium.

The actual amount of the contribution varies based on the employee type as described below.

### State Contribution – Judge Elected or Appointed Prior to November 9, 1994

State Contributions are based upon the vesting schedule applicable to State Employees.

If a member is eligible for a deferred retirement benefit, the member must pay the full plan premium until he or she starts receiving benefits in order to have the State's contribution paid once he or she begins receiving retirement payments.

# Summary of the Current Substantive Plan Provisions

---

## State Contribution – Judge Elected or Appointed After November 9, 1994

To continue CalPERS health coverage into retirement if the member is under age 65, the member must:

- Have at least five years of service credit;
- Elect health coverage within 60 days after leaving judicial office; and
- Assume the cost of both the member's share and the employer's share of the monthly premiums - plus an additional 2 percent of the premium, until age 65.

When the member reaches age 65, the member is eligible for the employer's share of the premium. The State Contribution is determined by the member's years of service credit:

Years of Service	State Contribution
At Least 5 Years	50%
Between 5 to 10 Years	Pro-rated between 50% to 100%
10 or More Years	100%

## State Contribution – Legislator, Constitutional Officer or Statutory Officer

Members of the CalPERS Health Program can continue coverage into retirement. Members must have at least eight years of service for health benefits vesting. If the member took office after January 1, 1985, he or she will need 10 years to receive the full State Contribution towards the monthly premium.

## State and CSU Employees (includes Misc., Industrial, CHP, POFF and Safety)

For State Employees, the amount the State contributes toward health coverage depends on whether the employee is vested. The contribution amount is determined by a formula set by law and the date the employee was first employed by the State.

- **First hired by the State prior to January 1, 1985:** The member is eligible to receive 100 percent of the State's contribution toward the member's health premium upon the member's retirement.
- **First hired by the State between January 1, 1985 and January 1, 1989:** The member is subject to vesting requirements, as follows:
  - 10 years of service: Member is fully vested and qualifies for 100 percent of the State's contribution toward his or her health premium.
  - Less than 10 years of service: Members are eligible for health coverage; however, the State's contribution will be reduced by 10 percent for each year of service under 10 years. The member will be responsible for the additional cost.

## Summary of the Current Substantive Plan Provisions

---

- **First hired by the State after January 1, 1989:** The percentage of the State’s contribution is based on completed years of State credited service as follows:

Years of Credited Service	State Contribution
Less than 10	0%
10	50%
10 to 19	50%, plus 5% added for each year after the 10 <sup>th</sup> year
20 or more	100%

For California State University Employees and members on disability, the above vesting requirements do not apply and the employer pays 100 percent of the contribution provided the member is eligible for healthcare benefits at retirement.

### State Employees in Bargaining Units and Judicial Employees

The State and employees in most bargaining units and Judicial Employees have agreed to changes in benefits if an employee is hired after certain effective dates. The key benefit changes include:

- Reducing the “100/90” State contribution formula to “80/80”;
- Grading the State contribution if the member has less than 25 years of Credited Service at retirement;
- For Medicare eligible members, eliminating the Medicare Part B subsidy; and
- For Medicare eligible members, developing the “80/80” State contribution based on the premium rates for only Medicare members.

## Summary of the Current Substantive Plan Provisions

---

The following table shows the percentage of State contribution based on years of Credited Service at retirement:

Years of Credited Service	State Contribution
Less than 15	0%
15	50%
15 to 24	50%, plus 5% added for each year after the 15 <sup>th</sup> year
25 or more	100%

The following table shows the plan change effective date by employee type:

Employee Type	Plan Change Effective Date
BU 9 and 10	January 1, 2016
SEIU (BU 1,3,4,11,14,15,17,20, 21)	January 1, 2017
BU 2,6,7,8,12,13,18,19	January 1, 2017
Judicial Employees	January 1, 2017
BU 16	April 1, 2017

### Prefunding of Retiree Healthcare Benefits

The State and employees in all bargaining units and Judicial employees have agreed to pre-fund retiree healthcare benefits. The State and all active members make contributions into separate CERBT accounts that are based on a percentage of pensionable compensation with the ultimate goal of contributing 100 percent of the actuarially determined normal cost shared equally between the State and employees.

Assets in each respective CERBT account cannot be used to pay benefits until the earlier of 2046 or the year that actuarial accrued liability is fully funded.

## Summary of the Current Substantive Plan Provisions

The following table shows the Fiscal Year Beginning date of the Bargaining Unit’s goal to reach 50 percent of actuarially determined normal cost (“Fund Goal”) as well as the total employee contribution percentage of pensionable compensation (the State will make a matching contribution of the same amount, except for BU 5 <sup>a</sup>):

Bargaining Unit	Fiscal Year Beginning July 1,					
	2016	2017	2018	2019	2020	2021
SEIU (BU 1,3,4,11,14,15,17,20, 21)			1.2%	2.3%	3.5%	Fund Goal
BU 2		0.7%	1.3%	2.0%	Fund Goal	
BU 5 (Highway Patrol) <sup>a</sup>	1.90%	1.9%	1.9%	Fund Goal		
BU 6 (Corrections)		2.6%	4.0%	Fund Goal		
BU 7 (Protective Services and Public Safety)		1.3%	2.7%	4.0%	Fund Goal	
BU 8 (Firefighters)		1.5%	3.0%	4.4%	Fund Goal	
BU 9 (Professional Engineers)		0.5%	1.0%	2.0%	Fund Goal	
BU 10 (Professional Scientific)		0.7%	1.4%	2.8%	Fund Goal	
BU 12 (Crafts & Maintenance)	0.5%	1.5%	2.5%	3.5%	4.6%	Fund Goal
BU 13 (Stationary Engineers)		1.3%	2.6%	3.9%	Fund Goal	
BU 16 (Physicians and Dentists)	0.5%	1.0%	1.4%	Fund Goal		
BU 18 (Psychiatric Technicians)		1.3%	2.6%	4.0%	Fund Goal	
BU 19 (Health and Social Services)		1.0%	2.0%	3.0%	Fund Goal	
Judicial Employees	1.5%	3.0%	Fund Goal			

<sup>a</sup> For bargaining unit 5, the State contributes 5.9% of pensionable earnings for fiscal years 2017 and 2018 and employees contribute 1.9% of pensionable earnings for fiscal years 2017 and 2018.

## Summary of the Current Substantive Plan Provisions

EPO and HMO Basic Plans	
Kaiser Permanente, Blue Shield Access+ HMO, Blue Shield Access+ EPO, Anthem Blue Cross, Health Net, Sharp Performance Plus, and UnitedHealthcare SignatureValue Alliance HMO	
	Copay and/or Benefit Limit
<b>Hospital</b>	
Inpatient	No Charge
Outpatient	
Kaiser Permanente	\$15/Visit
Other HMO/EPO Plans	No Charge
<b>Physician Services</b>	
Office Visits	\$15/visit
<i>More than one copay may apply during an office visit if multiple services are provided.</i>	
Outpatient Visits	
Kaiser Permanente	\$15 outpatient surgery
Other HMO Plans	\$15/visit
Urgent Care Visits	\$15/visit
Allergy Testing/Treatment	
Kaiser Permanente	No Charge for Injections \$15/Visit (Testing Visits)
Other HMO Plans	No Charge
Vision Exam (Refraction)	
Kaiser Permanente	No Charge
Other HMO Plans	No Charge
<i>For age 17 and under. Varies by plan for age 18 and over and may be limited to one visit per calendar year.</i>	
Hearing Exam/Screening	No Charge
Inpatient Hospital Visits	No Charge
Surgery/Anesthesia	
Kaiser Permanente	No Charge for Inpatient, \$15 for Outpatient
Other HMO Plans	No Charge
<b>Ambulance Service</b>	
<i>Air/ground ambulance service</i>	No Charge
<b>Emergency Services</b>	
<i>Waived if admitted as an inpatient or for observations as an outpatient</i>	\$50/Visit
<b>Prescription Drug Benefit</b>	
<b>Other HMO Plans</b>	
Retail Pharmacy <i>(up to 30-day supply)</i>	\$5/generic \$20/formulary brand name \$50/non-formulary <i>(\$40 if medical necessity approved)</i>
Mail Order Program <i>(up to 90-day supply)</i> \$1,000 maximum copayment per person per calendar year.	\$10/generic \$40/formulary brand name \$100/non-formulary <i>(\$70 if medical necessity approved)</i>
Maximum Calendar Year Deductible	\$1,000
<b>Kaiser Permanente</b>	
<i>Up to 30-day supply</i>	\$5/generic / \$20/brand name
<i>31-100-day supply</i>	\$10/generic / \$40/brand name

## Summary of the Current Substantive Plan Provisions

PERS Select, PERS Choice, & PERSCare PPO Basic Plans						
	PERS Select		PERS Choice		PERSCare	
	Member's Cost		Member's Cost		Member's Cost	
	PPO	Non-PPO	PPO	Non-PPO	PPO	Non-PPO
<b>Calendar Year Deductible</b>						
Individual	\$500		\$500		\$500	
Family	\$1,000		\$1,000		\$1,000	
<b>Maximum Calendar Year Copay</b>						
Individual	\$3,000	None	\$3,000	None	\$2,000	None
Family	\$6,000	None	\$6,000	None	\$4,000	None
<b>Lifetime Maximum Benefit - Per Individual</b>	None		None		None	
<b>Hospital</b>						
Per Admission Deductible	None	None	None	None	\$250	\$250
Inpatient and Outpatient	20-30% (depending on the hospital)	40%	20%	40%	10%	40%
<b>Physician Services</b>						
Office Visits	\$20 copay	40%	\$20 copay	40%	\$20 copay	40%
Urgent Care Visits	\$20 copay	40%	\$20 copay	40%	\$20 copay	40%
Outpatient Visits	\$20 copay	40%	\$20 copay	40%	\$20 copay	40%
Inpatient Visits	20%	40%	20%	40%	10%	40%
Allergy Testing/Treatment	20%	40%	20%	40%	10%	40%
<b>Ambulance Service</b>	20%	20%	20%	20%	10%	10%
<b>Emergency Services</b> ((\$50 deductible per visit for covered ER charges - waived if admitted to Hospital)	20%	20%	20%	20%	10%	10%
<b>Prescription Drug Benefit</b> Applies to PERS Select, PERS Choice, and PERSCare	<b>Generic</b>		<b>Preferred Brand</b>		<b>Non-Preferred Brand</b>	
Retail Pharmacy* <i>*short-term use</i>	\$5		\$20		\$50 <i>(\$40 if partial waiver of Non-Preferred Brand copayment approved)</i>	
Retail Pharmacy Maintenance Medications filled after 2nd Fill** <i>** A maintenance medication taken longer than 60 days for chronic conditions.</i>	\$10		\$40		\$100 <i>(\$70 if partial waiver of Non-Preferred Brand copayment approved)</i>	
Mail Service Pharmacy <i>A \$1,000 maximum copayment per person per calendar year applies</i>	\$10		\$40		\$100 <i>(\$70 if partial waiver of Non-Preferred Brand copayment approved)</i>	

## Summary of the Current Substantive Plan Provisions

EPO and HMO Medicare Plans Kaiser Permanente and UnitedHealthcare		
	Medicare Managed Care Plan (Medicare Advantage)	Medicare Managed Care Plan (Group Medicare Advantage)
	Kaiser Permanente	UnitedHealthcare
	Copay and/or Benefit Limit	Copay and/or Benefit Limit
<b>Hospital</b>		
Inpatient	No Charge	No Charge
Outpatient	\$10/visit	No Charge
<b>Physician Services</b>		
Office Visits	\$10/visit	\$10/visit
Urgent Care Visits	\$10/visit	\$25/visit
Allergy Testing/Treatment	\$3/visit (injection visits) \$10/visit (testing visits)	\$10/visit (injection visits) \$10/visit (testing visits)
Vision Exam (Refraction)	\$10/visit	\$10 (limited to one visit)
Hearing Exam/Screening	\$10/visit	\$10/visit
Inpatient Hospital Visits	No Charge	No Charge
Surgery/Anesthesia	No Charge for Inpatient \$10/visit for Outpatient	No Charge
<b>Ambulance Service</b>		
<i>Air/ground ambulance service</i>	No Charge	No Charge
<b>Emergency Services</b>		
<i>Waived if admitted as an inpatient or for observations as an outpatient</i>	\$50/visit	\$50/visit
<b>Prescription Drug Benefit</b>		
Retail Pharmacy <i>(up to 30-day supply) (Does not apply to Kaiser)</i>	\$5/generic  \$20/brand name <i>Kaiser Permanente provides up to 100-day supply (or a 30-day supply for certain drugs) through its pharmacies or mail order program.</i>	\$5/generic  \$20/formulary brand name \$50/non-formulary <i>(\$40 if medical necessity approved)</i>
Mail Order Program <i>\$1,000 maximum copayment per person per calendar year (up to 90-day supply) (Does not apply to Kaiser)</i>	\$10/generic \$40/brand name <i>Kaiser Permanente provides up to 100-day supply (or a 30-day supply for certain drugs) through its pharmacies or mail order program.</i>	\$10/generic \$40/formulary brand name \$100/non-formulary <i>(\$70 if medical necessity approved)</i>

## Summary of the Current Substantive Plan Provisions

PERS Select, PERS Choice, & PERSCare Supplement Plans			
PPO Supplement to Original Medicare Plans			
	PERS Select	PERS Choice	PERSCare
	PPO	PPO	PPO
<b>Calendar Year Deductible</b>	None Plan pays Medicare Parts A and B deductible	None Plan pays Medicare Parts A and B deductible	None Plan pays Medicare Parts A and B deductible
<b>Lifetime Maximum Benefit - Per Individual</b>	None	None	None
<b>Hospital</b> Inpatient and Outpatient	No Charge	No Charge	No Charge
<b>Physician Services</b> Physician Office Visits Inpatient Visits Outpatient Visits Urgent Care Visits Allergy Testing/Treatment	No Charge No Charge No Charge No Charge No Charge	No Charge No Charge No Charge No Charge No Charge	No Charge No Charge No Charge No Charge No Charge
<b>Ambulance Service</b>	No Charge	No Charge	No Charge
<b>Emergency Services</b>	No Charge	No Charge	No Charge
<b>Prescription Drug Benefit</b> Applies to PERS Select, PERS Choice, and PERSCare	<b>Generic</b>	<b>Preferred Brand</b>	<b>Non-Preferred Brand</b>
Retail Pharmacy* <i>*short-term use</i>	\$5	\$20	\$50 <i>(\$40 if partial waiver of Non-Preferred Brand copayment approved)</i>
Retail Pharmacy Maintenance Medications filled after 2nd Fill** <i>** A maintenance medication taken longer than 60 days for chronic conditions.</i>	\$10	\$40	\$100 <i>(\$70 if partial waiver of Non-Preferred Brand copayment approved)</i>
Mail Service Pharmacy <i>A \$1,000 maximum copayment per person per calendar year applies</i>	\$10	\$40	\$100 <i>(\$70 if partial waiver of Non-Preferred Brand copayment approved)</i>

## Summary of the Current Substantive Plan Provisions

CCPOA Association Plans (HMO)	
Basic Plan – Regions North and South	
	Copay and/or Benefit Limit
<b>Hospital</b>	
Inpatient	\$100 per admission
Outpatient Facility/Surgery Services	\$50/visit
<b>Physician Services</b>	
Office Visits	\$15/visit
Outpatient Visits	\$15/visit
Urgent Care Visits	\$15/visit
Allergy Testing/Treatment	No Charge
Vision Exam (Refraction)	\$15
Hearing Exam/Screening	\$15
Inpatient Hospital Visits	No Charge
Surgery/Anesthesia	No Charge
<b>Ambulance Service</b>	No Charge
<b>Emergency Services</b>	\$75/visit
<i>Waived if hospitalized or kept for observation – if admitted, \$100 per admission fee will apply</i>	
<b>Prescription Drug Benefit</b>	
Deductible	\$50 calendar year brand name drug deductible per member, not to exceed \$150 per family
Retail Pharmacy	\$10/generic \$25/formulary brand name \$50/non-formulary
Mail Order Program <i>(up to 90-day supply)</i>	\$20/generic \$50/formulary brand name \$100/non-formulary

## Summary of the Current Substantive Plan Provisions

CCPOA Association Plans (HMO) Medicare Plan Supplement to Original Medicare	
	Copay and/or Benefit Limit
<b>Hospital</b> Inpatient Outpatient Surgery	\$100 per admission No Charge
<b>Physician Services</b> Office Visits Outpatient Visits Urgent Care Visits Allergy Testing/Treatment Vision Exam (Refraction) Hearing Exam/Screening Inpatient Hospital Visits Surgery/Anesthesia	\$10/visit \$10/visit \$10/visit No Charge \$10/visit Exam - No Charge / Physician Services \$15/visit No Charge No Charge
<b>Ambulance Service</b>	No Charge
<b>Emergency Services</b>	No Charge
<b>Prescription Drug Benefit</b> Retail Pharmacy   Mail Order Program <i>(up to 90-day supply)</i>	\$5/generic \$20/formulary brand name \$35/non-formulary  \$10/generic \$40/formulary brand name \$70/non-formulary

## Summary of the Current Substantive Plan Provisions

CAHP & PORAC Association Plans (PPOs)				
Basic Plans				
	CAHP Copay/Limits		PORAC Copay/Limits	
	PPO	Non-PPO	PPO	Non-PPO
<b>Calendar Year Deductible</b>				
Individual	None	None	\$300	\$600
Family	None	None	\$900	\$1,800
<b>Out-of-Pocket Maximum</b>	\$2,000/member \$4,000/family	None None	\$4,500/individual or \$9,000/family (Combined PPO and non-PPO)	
<b>Lifetime Maximum</b>	None	None	None	None
<b>Hospital</b>				
Inpatient	10%	Varies. See EOC	10%	10% (varies)
Outpatient	\$50 (exceptions may apply)	\$50 (exceptions may apply)	10%	10% (varies)
<b>Physician Services</b>				
Office Visits	\$15	40%	\$20	10%
Outpatient Visits	10%	40%	10%	10%
Urgent Care Visits	\$15	40%	10%	10%
Allergy Testing/Treatment	10%	40%	10%	10%
Vision Exam (Refraction)	Not Covered	Not Covered	Not Covered	Not Covered
Hearing Exam/Screening	10%	40%	20%	20%
Inpatient Hospital Visits	10%	40%	10%	10% (varies)
Surgery/Anesthesia	10%	40%	10%	10% (varies)
<b>Ambulance Service</b>	20%	20%	20%	20%
<b>Emergency Services</b>				
Emergency	\$50* + 10%	\$50* + 10%	10%	10%
Non-Emergency	\$50* + 10%	\$50* + 40%	50%	50%
<i>* If admitted to the hospital on an inpatient basis, the \$50 copayment will be reduced to \$25</i>				
<b>Prescription Drug Benefit</b>				
Retail Pharmacy	\$5/generic	\$5/generic	\$10/generic	\$10/generic
CAHP (up to 30-day supply)	\$20/single source	\$20/single source	\$25/ formulary brand name	\$25/ formulary brand name
PORAC (up to 34-day supply or 100 pills/units, whichever is more)	\$25/multi-source	\$25/multi-source	\$45/non-formulary brand	\$45/non-formulary brand
Retail Pharmacy	\$10/generic	\$10/generic	Not Applicable	Not Applicable
Maintenance Medications filled after 2nd Fill**	\$40/single source	\$40/single source		
CAHP (up to 30-day supply)	\$50/multi-source	\$50/multi-source		
<i>** A maintenance medication taken longer than 60 days for chronic conditions.</i>				
Mail Order Program	\$10/generic	\$10/generic	\$20/generic	Not Applicable
CAHP (up to 90-day supply)	\$40/single source	\$40/single source	\$40/ formulary brand name	
PORAC (up to 90-day supply or 100 pills/units, whichever is more)	\$50/multi-source	\$50/multi-source	\$75/non-formulary brand	

## Summary of the Current Substantive Plan Provisions

CAHP & PORAC Association Plans (PPOs)		
PPO Supplement to Original Medicare		
	CAHP Copays/Limits	PORAC Copays/Limits
<b>Deductibles</b>	\$100/individual \$200/family <i>(Major Medical deductible)</i>	\$100/individual \$200/family <i>(Major Medical deductible)</i>
<b>Hospital</b>		
Inpatient	No Charge	No charge. Plan pays after Medicare benefits are exhausted. See EOC
Outpatient	No Charge	No Charge
<b>Physician Services</b>		
Office Visits	\$10/visit	No Charge
Outpatient Visits	No Charge	No Charge
Urgent Care Visits	No Charge	No Charge
Allergy Testing/Treatment	No Charge	No Charge
Vision Exam (Refraction)	Not Covered	20%; one exam/ calendar year
Hearing Exam/Screening	No Charge	20%; \$50/exam in connection with hearing aid purchase
Inpatient Hospital Visits	No Charge	No Charge
Surgery/Anesthesia	No Charge	No Charge
<b>Ambulance Service</b>	No Charge if Medicare approved 20% if not Medicare approved	No Charge
<b>Emergency Services</b>	No Charge if Medicare approved 20% if not Medicare approved	No Charge
<b>Prescription Drug Benefit</b>		
Retail Pharmacy <i>(up to 30-day supply)</i> <i>CAHP: Diabetic supplies paid under medical benefit.</i> <i>PORAC: \$50 deductible/member for retail only</i>	\$5/generic \$20/single source \$25/multi-source	\$10/generic \$25/formulary brand name \$45/non-formulary brand name
Retail Pharmacy Maintenance Medications filled after 2nd fill* <i>CAHP (up to 30-day supply)</i> <i>* A maintenance medication taken longer than 60 days for chronic conditions.</i>	\$10/generic \$40/single source \$50/multi-source	
Mail Order Program <i>(90-day supply)</i>	\$10/generic \$40/single source \$50/multi-source	\$20/generic \$40/single source \$75/multi-source

## Summary of the Current Substantive Plan Provisions

State Sponsored Dental Plan			
BENEFITS	INDEMNITY	PREFERRED PROVIDER OPTION	PREPAID
<b>Type of Plan</b>	Fee-for-Service Plan, this plan provides reimbursement for services rendered	Preferred Provider Plan provides maximum benefit when enrollee visits an in-PPO	Plan pays enrollee's chosen dentist a monthly fixed rate to provide services as needed
<b>Dental Providers</b>	Any licensed dentist. However, out-of-pocket expenses may be lower when visiting a Delta Dental PPO dentist	Any licensed dentist, but maximum benefits when visiting a PPO network dentist. If an out-of-PPO network dentist is used, benefits are lower	Must select a dental provider affiliated with the enrollee's prepaid plan
<b>Orthodontic Providers</b>	May visit any orthodontist. However, out-of-pocket expenses may be lower when visiting a Delta Dental PPO dentist	Must visit an in-PPO network orthodontist to receive maximum benefit	Must use orthodontist affiliated with the enrollee's prepaid plan
<b>Changing Providers</b>	May change dentists at any time	May change at any time without pre-approval	May change to another dentist affiliated with the plan, with prior approval
<b>Deductibles</b>	<u>Basic</u> : \$50 per person, up to \$150 annual maximum per family <u>Enhanced</u> : \$25 per person, up to \$100 annual maximum per family	\$25 each, up to \$100 annual maximum per family, for in-PPO network dentists; \$75 per person up to \$200 annual maximum per family for out-of-PPO network dentists.	No deductible
<b>Co-payments</b>	Pay the difference between billed charges and plan payments	Pay the difference between billed charges and plan payments	Generally no charge, with minimal co-payments for certain covered procedures
<b>Plan Payments</b>	Delta dentist: payment based on fees filed with Delta; non-Delta dentist: payment not to exceed Delta's set fee schedule	Plan dentist: payment based on fee agreement with Delta; non-Plan dentist: payment not to exceed Delta's set fee schedule	For procedures with co-payment, may require payment at time of treatment
<b>Maximum Benefits per Calendar Year</b>	Basic: \$2,000 for employee/retiree, \$1,000 per dependent;  Enhanced: \$2,000 for employee and each eligible dependent	\$2,000 per employee, \$2,000 per eligible dependent when PPO network dentists are used	No maximum
<b>Maximum Lifetime Implant Benefit</b>	Not a covered benefit	\$2,500 for each employee/retiree and dependent, if using a Plan provider	Premier Access and Western Dental only

## Summary of the Current Substantive Plan Provisions

---

<b>California State University Sponsored Dental Plan</b>		
<b>BENEFITS</b>	<b>Delta Dental Basic</b>	<b>DeltaCare Basic</b>
<b>Diagnostic and preventive benefits</b>	75%, no deductible	No Cost
<b>Basic benefits</b>	75%, deductible applies	No Cost
<b>Crowns, inlays, inlays and cast restoration benefits</b>	50%, deductible applies	\$35 - \$50 per unit; plus additional cost for precious metals and porcelain on molars
<b>Prosthodontic Benefits</b>	50%, deductible applies	Full – \$60 each; Partials – \$70 each
<b>Orthodontic benefits</b>	50%, maximum lifetime of \$1,000	\$1,400 plus \$350 start-up costs, Covers up to 24 months of active treatment
<b>Annual Deductibles</b>	\$50 Per Person/\$150 Per Family	No Deductible
<b>Annual Maximum</b>	\$1,500 Per Person	No Maximum

## Summary of the Current Substantive Plan Provisions

2017 Health Plan Rates			
Basic Plans - HMO			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
Anthem Select HMO	\$740.23	\$1,480.46	\$1,924.60
Anthem Traditional HMO	\$872.91	\$1,745.82	\$2,269.57
Blue Shield	\$830.44	\$1,660.88	\$2,159.14
Health Net Salud y Más	\$475.46	\$950.92	\$1,236.20
Health Net SmartCare	\$692.89	\$1,385.78	\$1,801.51
Kaiser	\$662.92	\$1,325.84	\$1,723.59
Kaiser Out-of-State - Colorado	\$940.67	\$1,881.34	\$2,445.74
Kaiser Out-of-State - Georgia	\$940.67	\$1,881.34	\$2,445.74
Kaiser Out-of-State - Hawaii	\$940.67	\$1,881.34	\$2,445.74
Kaiser Out-of-State - Mid-Atlantic	\$940.67	\$1,881.34	\$2,445.74
Kaiser Out-of-State - Northwest	\$940.67	\$1,881.34	\$2,445.74
Sharp	\$616.49	\$1,232.98	\$1,602.87
UnitedHealthcare	\$686.17	\$1,372.34	\$1,784.04
Basic Plans - PPO			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
Anthem EPO Del Norte	\$740.88	\$1,481.76	\$1,926.29
Anthem EPO Monterey	\$740.88	\$1,481.76	\$1,926.29
PERS Choice	\$740.88	\$1,481.76	\$1,926.29
PERS Select	\$673.25	\$1,346.50	\$1,750.45
PERSCare	\$826.37	\$1,652.74	\$2,148.56
Basic Association Plans			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
CAHP	\$620.79	\$1,205.17	\$1,576.26
CCPOA - North	\$691.50	\$1,385.69	\$1,870.73
CCPOA - South	\$570.26	\$1,143.15	\$1,544.60
PORAC	\$699.00	\$1,467.00	\$1,876.00

## Summary of the Current Substantive Plan Provisions

2017 Health Plan Rates			
Supplement/Managed Medicare Plans - HMO			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
Kaiser	\$300.48	\$600.96	\$901.44
Kaiser Out-of-State - Colorado	\$300.48	\$600.96	\$901.44
Kaiser Out-of-State - Georgia	\$300.48	\$600.96	\$901.44
Kaiser Out-of-State - Hawaii	\$300.48	\$600.96	\$901.44
Kaiser Out-of-State - Mid-Atlantic	\$300.48	\$600.96	\$901.44
Kaiser Out-of-State - Northwest	\$300.48	\$600.96	\$901.44
UnitedHealthcare	\$324.21	\$648.42	\$972.63
Supplement/Managed Medicare Plans - PPO			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
PERS Choice	\$353.63	\$707.26	\$1,060.89
PERS Select	\$353.63	\$707.26	\$1,060.89
PERSCare	\$389.76	\$779.52	\$1,169.28
Supplement/Managed Medicare Association Plans			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
CAHP	\$372.00	\$688.00	\$874.00
CCPOA - North	\$426.09	\$853.95	\$1,277.05
CCPOA - South	\$426.09	\$853.95	\$1,277.05
PORAC	\$464.00	\$924.00	\$1,477.00

## Summary of the Current Substantive Plan Provisions

2017 Health Plan Rates			
Combination Plans (Employee in Basic Plan) - HMO			
Plan	1 Dep. In Supplement/ Managed Medicare	2+ Dep. In Supplement/ Managed Medicare	1 Dep. In Basic 1+ Dep. In Supplement/ Managed Medicare
Kaiser	\$963.40	\$1,263.88	\$1,361.15
Kaiser Out-of-State - Colorado	\$1,241.15	\$1,541.63	\$1,805.55
Kaiser Out-of-State - Georgia	\$1,241.15	\$1,541.63	\$1,805.55
Kaiser Out-of-State - Hawaii	\$1,241.15	\$1,541.63	\$1,805.55
Kaiser Out-of-State - Mid-Atlantic	\$1,241.15	\$1,541.63	\$1,805.55
Kaiser Out-of-State - Northwest	\$1,241.15	\$1,541.63	\$1,805.55
UnitedHealthcare	\$1,010.38	\$1,334.59	\$1,422.08
Combination Plans (Employee in Basic Plan) - PPO			
Plan	1 Dep. In Supplement/ Managed Medicare	2+ Dep. In Supplement/ Managed Medicare	1 Dep. In Basic 1+ Dep. In Supplement/ Managed Medicare
Anthem EPO Del Norte	\$1,094.51	\$1,448.14	\$1,539.04
Anthem EPO Monterey	\$1,094.51	\$1,448.14	\$1,539.04
PERS Choice	\$1,094.51	\$1,448.14	\$1,539.04
PERS Select	\$1,026.88	\$1,380.51	\$1,430.83
PERSCare	\$1,216.13	\$1,605.89	\$1,711.95
Combination (Employee in Basic Plan) Association Plans			
Plan	1 Dep. In Supplement/ Managed Medicare	2+ Dep. In Supplement/ Managed Medicare	1 Dep. In Basic 1+ Dep. In Supplement/ Managed Medicare
CAHP	\$936.79	\$1,122.79	\$1,307.88
CCPOA - North	\$1,119.36	\$1,542.46	\$1,604.40
CCPOA - South	\$998.12	\$1,421.22	\$1,399.57
PORAC	\$1,159.00	\$1,712.00	\$1,568.00

## Summary of the Current Substantive Plan Provisions

2017 Health Plan Rates			
Combination Plans (Employee in Supplement/Managed Medicare Plan) - HMO			
Plan	1 Dep. In Basic	2+ Dep. In Basic	1 Dep. In Supplement/ Managed Medicare 1+ Dep. In Basic
Kaiser	\$963.40	\$1,361.15	\$998.71
Kaiser Out-of-State - Colorado	\$1,241.15	\$1,805.55	\$1,165.36
Kaiser Out-of-State - Georgia	\$1,241.15	\$1,805.55	\$1,165.36
Kaiser Out-of-State - Hawaii	\$1,241.15	\$1,805.55	\$1,165.36
Kaiser Out-of-State - Mid-Atlantic	\$1,241.15	\$1,805.55	\$1,165.36
Kaiser Out-of-State - Northwest	\$1,241.15	\$1,805.55	\$1,165.36
UnitedHealthcare	\$1,010.38	\$1,422.08	\$1,060.12
Combination Plans (Employee in Supplement/Managed Medicare Plan) - PPO			
Plan	1 Dep. In Basic	2+ Dep. In Basic	1 Dep. In Supplement/ Managed Medicare 1+ Dep. In Basic
Anthem EPO Del Norte	\$1,094.51	\$1,539.04	\$1,151.79
Anthem EPO Monterey	\$1,094.51	\$1,539.04	\$1,151.79
PERS Choice	\$1,094.51	\$1,539.04	\$1,151.79
PERS Select	\$1,026.88	\$1,430.83	\$1,111.21
PERSCare	\$1,216.13	\$1,711.95	\$1,275.34
Combination (Employee in Supplement/Managed Medicare Plan) Association Plans			
Plan	1 Dep. In Basic	2+ Dep. In Basic	1 Dep. In Supplement/ Managed Medicare 1+ Dep. In Basic
CAHP	\$956.38	\$1,327.47	\$1,059.09
CCPOA - North	\$1,120.28	\$1,605.32	\$1,338.99
CCPOA - South	\$998.98	\$1,400.43	\$1,255.40
PORAC	\$1,232.00	\$1,641.00	\$1,333.00

## Summary of the Current Substantive Plan Provisions

2017 Dental Plan Rates - State Sponsored Plans			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
DeltaPremier <sup>1</sup>	\$51.63	\$90.14	\$130.29
Delta PPO <sup>2</sup>	\$47.18	\$91.72	\$138.01
Safeguard SOC Enhanced Plan <sup>3</sup>	\$16.92	\$28.63	\$35.27
Delta Care USA <sup>3</sup>	\$18.87	\$30.97	\$42.84
Premier Access <sup>3</sup>	\$15.80	\$25.59	\$35.84
Western Dental <sup>3</sup>	\$15.16	\$25.02	\$35.49

<sup>1</sup> Employee Share: 1 party - \$12.91 / 2 party - \$22.53 / 3 or more party - \$32.57

<sup>2</sup> Employee Share: 1 party - \$11.79 / 2 party - \$22.93 / 3 or more party - \$34.50

<sup>3</sup> Provided at no cost to the retiree

2017 Dental Plan Rates - California State University <sup>4</sup>			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
Delta Dental PPO - Basic	\$32.81	\$61.98	\$124.45
DeltaCare USA - Basic	\$19.84	\$32.72	\$48.39

<sup>4</sup> Provided at no cost to the retiree

## **SECTION D**

---

### **SUMMARY OF THE PARTICIPANT DATA**

## A1. Summary of the Participant Data

---

### A. Members Currently in Retired Status

1. Counts of Current Retirees by Medical/Rx Benefit Plan and Valuation Group
2. Counts of Current Retirees by Medical/Rx Benefit Plan and Coverage
3. Distribution of Current Retirees by Medical/Rx Benefit Plan and Coverage Type
4. Distribution of Retiree Medical/Rx Benefit by Age
5. Counts of Current Retirees by Dental Benefit Plan and Valuation Group
6. Counts of Current Retirees by Dental Benefit Plan and Coverage
7. Distribution of Current Retirees by Dental Benefit Plan and Coverage Type
8. Distribution of Retiree Dental Benefit Plan by Age

The members in the schedules referenced above include only those retirees who have elected to receive health care coverage or dental coverage through the State of California.

### B. Members Currently in Active Status

1. Distribution of All Active Members by Age and Service

### C. All Members

1. Counts of Current Active Participants and Retirees by Valuation Group

# A1. Summary of the Participant Data

California State Employees													
Counts of Current Retirees by Medical/Rx Benefit Plan and Valuation Group													
	Bargaining Unit 1	Bargaining Unit 2	Bargaining Unit 3	Bargaining Unit 4	Bargaining Unit 5	Bargaining Unit 6	Bargaining Unit 7	Bargaining Unit 8	Bargaining Unit 9	Bargaining Unit 10	Bargaining Unit 11	Bargaining Unit 12	Bargaining Unit 13
Anthem Blue Cross	336	12	8	78	10	197	36	33	35	10	14	60	-
Blue Shield	2,153	96	107	693	79	1,758	506	391	370	92	106	551	61
Health Net	460	7	4	108	6	147	32	12	42	8	13	35	2
Kaiser	16,532	749	651	6,875	767	6,568	1,843	543	2,214	590	555	2,955	290
Kaiser Out-of-State	215	10	23	79	16	104	32	13	35	14	10	32	4
Sharp	55	6	3	18	2	31	21	16	14	2	6	20	-
UnitedHealthcare	4,899	267	289	2,529	62	1,126	616	250	716	210	237	1,211	71
PERS Choice	6,219	542	668	2,895	961	7,083	1,415	1,493	1,551	435	556	2,931	271
PERS Select	209	12	23	103	2	335	44	44	46	12	24	130	19
PERSCare	6,036	641	418	2,493	220	1,916	897	501	1,305	349	342	1,521	110
CAHP	1	-	-	-	4,240	-	4	-	-	-	-	-	-
CCPOA	4	1	-	1	-	3,372	-	-	-	-	-	1	-
PORAC	<u>3</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>9</u>	<u>152</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>Total</b>	<b>37,122</b>	<b>2,343</b>	<b>2,194</b>	<b>15,873</b>	<b>6,365</b>	<b>22,646</b>	<b>5,598</b>	<b>3,297</b>	<b>6,328</b>	<b>1,722</b>	<b>1,863</b>	<b>9,447</b>	<b>828</b>
	Bargaining Unit 14	Bargaining Unit 15	Bargaining Unit 16	Bargaining Unit 17	Bargaining Unit 18	Bargaining Unit 19	Bargaining Unit 20	Bargaining Unit 21	CSU	Exempt Excluded Executive	Judicial	Other	Total
Anthem Blue Cross	4	6	4	16	25	16	15	6	116	36	5	18	1,096
Blue Shield	20	126	33	197	406	134	58	25	961	258	56	227	9,464
Health Net	8	14	1	5	29	6	17	6	62	33	8	9	1,074
Kaiser	248	1,403	275	1,289	1,795	1,156	506	329	8,666	1,504	247	3,836	62,386
Kaiser Out-of-State	2	14	4	25	31	17	6	5	245	27	4	84	1,051
Sharp	-	4	2	8	-	5	3	-	62	2	-	1	281
UnitedHealthcare	67	406	72	319	572	319	136	98	3,108	484	122	944	19,130
PERS Choice	66	587	499	841	1,187	907	272	142	8,839	825	218	2,868	44,271
PERS Select	1	21	15	34	25	25	15	3	201	20	8	34	1,405
PERSCare	77	295	507	622	675	689	100	134	7,722	743	190	5,502	34,005
CAHP	-	-	-	-	-	-	-	-	-	11	-	789	5,045
CCPOA	-	-	-	-	-	-	-	-	-	19	-	28	3,426
PORAC	<u>-</u>	<u>52</u>	<u>5</u>	<u>-</u>	<u>9</u>	<u>232</u>							
<b>Total</b>	<b>493</b>	<b>2,876</b>	<b>1,412</b>	<b>3,356</b>	<b>4,745</b>	<b>3,274</b>	<b>1,128</b>	<b>748</b>	<b>30,034</b>	<b>3,967</b>	<b>858</b>	<b>14,349</b>	<b>182,866</b>

## A2. Summary of the Participant Data

California State Employees								
Counts of Current Retirees by Medical/Rx Benefit Plan and Coverage								
	One Party		Two Party		Family		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Anthem Blue Cross	129	333	186	208	157	83	472	624
Blue Shield	1,574	3,048	1,725	1,212	1,342	563	4,641	4,823
Health Net	105	312	167	209	177	104	449	625
Kaiser	10,171	22,805	14,066	9,894	3,556	1,894	27,793	34,593
Kaiser Out-of-State	167	445	272	137	18	12	457	594
Sharp	36	54	52	61	54	24	142	139
UnitedHealthcare	3,144	6,778	4,759	3,294	756	399	8,659	10,471
PERS Choice	7,053	12,973	13,877	6,302	3,046	1,020	23,976	20,295
PERS Select	166	286	415	225	234	79	815	590
PERSCare	5,716	15,704	7,723	4,041	583	238	14,022	19,983
CAHP	605	799	2,473	117	937	114	4,015	1,030
CCPOA	409	426	1,173	260	987	171	2,569	857
PORAC	<u>19</u>	<u>28</u>	<u>107</u>	<u>13</u>	<u>53</u>	<u>12</u>	<u>179</u>	<u>53</u>
<b>Total</b>	<b>29,294</b>	<b>63,991</b>	<b>46,995</b>	<b>25,973</b>	<b>11,900</b>	<b>4,713</b>	<b>88,189</b>	<b>94,677</b>

### A3. Summary of the Participant Data

California State Employees			
Distribution of Current Retirees by Medical/Rx Benefit Plan			
	Under 65	At Least 65	Total
Anthem Blue Cross	1,068	28	1,096
Blue Shield	8,843	621	9,464
Health Net	1,058	16	1,074
Kaiser	19,749	42,637	62,386
Kaiser Out-of-State	166	885	1,051
Sharp	279	2	281
UnitedHealthcare	2,698	16,432	19,130
PERS Choice	14,041	30,230	44,271
PERS Select	930	475	1,405
PERSCare	3,099	30,906	34,005
CAHP	2,115	2,930	5,045
CCPOA	2,678	748	3,426
PORAC	<u>120</u>	<u>112</u>	<u>232</u>
<b>Total</b>	<b>56,844</b>	<b>126,022</b>	<b>182,866</b>
Distribution of Current Retirees by Coverage Type			
	Under 65	At Least 65	Total
One Party	22,278	71,007	93,285
Two Party	21,736	51,232	72,968
Family	<u>12,830</u>	<u>3,783</u>	<u>16,613</u>
<b>Total</b>	<b>56,844</b>	<b>126,022</b>	<b>182,866</b>

## A4. Summary of the Participant Data

---

California State Employees			
Distribution of Retiree Medical/Rx Benefit by Age			
Attained Age	Male	Female	Total
Under 40	296	242	538
40-44	362	287	649
45-49	738	724	1,462
50-54	3,988	2,738	6,726
55-59	8,678	8,530	17,208
60-64	13,673	16,588	30,261
65-69	18,571	19,829	38,400
70-74	16,378	15,786	32,164
75-79	11,237	11,045	22,282
80-84	7,326	7,884	15,210
85-89	4,567	6,008	10,575
90 & Over	2,375	5,016	7,391
<b>Totals</b>	<b>88,189</b>	<b>94,677</b>	<b>182,866</b>

## A5. Summary of the Participant Data

California State Employees													
Counts of Current Retirees by Dental Benefit Plan and Valuation Group													
	Bargaining Unit 1	Bargaining Unit 2	Bargaining Unit 3	Bargaining Unit 4	Bargaining Unit 5	Bargaining Unit 6	Bargaining Unit 7	Bargaining Unit 8	Bargaining Unit 9	Bargaining Unit 10	Bargaining Unit 11	Bargaining Unit 12	Bargaining Unit 13
Delta Dental PPO	5,182	293	327	2,361	480	3,638	893	379	1,118	221	251	1,416	168
Delta Dental	31,140	2,055	1,842	12,611	2,534	18,047	4,538	2,747	5,004	1,465	1,533	7,173	602
Safeguard	559	23	30	423	88	359	136	59	117	20	34	274	36
DeltaCare USA	1,007	21	56	813	32	292	100	27	86	24	48	513	19
CAHP/Blue Cross	-	-	-	-	3,130	-	2	-	-	-	-	-	-
Premier Access	29	-	1	10	2	24	2	4	-	1	-	7	1
Western Dental	<u>36</u>	<u>-</u>	<u>1</u>	<u>35</u>	<u>-</u>	<u>163</u>	<u>5</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>1</u>	<u>14</u>	<u>1</u>
<b>Total</b>	<b>37,953</b>	<b>2,392</b>	<b>2,257</b>	<b>16,253</b>	<b>6,266</b>	<b>22,523</b>	<b>5,676</b>	<b>3,218</b>	<b>6,327</b>	<b>1,731</b>	<b>1,867</b>	<b>9,397</b>	<b>827</b>
	Bargaining Unit 14	Bargaining Unit 15	Bargaining Unit 16	Bargaining Unit 17	Bargaining Unit 18	Bargaining Unit 19	Bargaining Unit 20	Bargaining Unit 21	CSU	Exempt Excluded Executive	Judicial	Other	Total
Delta Dental PPO	51	384	179	512	644	484	141	87	-	570	106	2,044	21,929
Delta Dental	405	2,056	1,225	2,731	3,545	2,665	904	660	28,662	3,354	740	11,332	149,570
Safeguard	7	148	12	67	314	61	42	2	-	51	14	698	3,574
DeltaCare USA	27	318	8	84	116	59	50	12	1,638	46	6	344	5,746
CAHP/Blue Cross	-	-	-	-	-	-	-	-	-	1	-	22	3,155
Premier Access	2	5	-	1	3	3	2	-	-	2	-	3	102
Western Dental	<u>-</u>	<u>13</u>	<u>-</u>	<u>4</u>	<u>20</u>	<u>6</u>	<u>6</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>6</u>	<u>315</u>
<b>Total</b>	<b>492</b>	<b>2,924</b>	<b>1,424</b>	<b>3,399</b>	<b>4,642</b>	<b>3,278</b>	<b>1,145</b>	<b>761</b>	<b>30,300</b>	<b>4,024</b>	<b>866</b>	<b>14,449</b>	<b>184,391</b>

## A6. Summary of the Participant Data

California State Employees								
Counts of Current Retirees by Dental Benefit Plan and Coverage								
	One Party		Two Party		Family		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Delta Dental PPO	2,865	6,843	6,158	3,419	1,902	742	10,925	11,004
Delta Dental	23,478	51,650	38,972	23,375	8,464	3,631	70,914	78,656
Safeguard	665	1,500	804	405	138	62	1,607	1,967
DeltaCare USA	1,058	2,403	1,169	776	216	124	2,443	3,303
CAHP/Blue Cross	360	273	1,675	102	668	77	2,703	452
Premier Access	13	29	30	14	13	3	56	46
Western Dental	<u>52</u>	<u>75</u>	<u>62</u>	<u>46</u>	<u>60</u>	<u>20</u>	<u>174</u>	<u>141</u>
<b>Total</b>	<b>28,491</b>	<b>62,773</b>	<b>48,870</b>	<b>28,137</b>	<b>11,461</b>	<b>4,659</b>	<b>88,822</b>	<b>95,569</b>

## A7. Summary of the Participant Data

California State Employees			
Distribution of Current Retirees by Dental Benefit Plan			
	Under 65	At Least 65	Total
Delta Dental PPO	7,639	14,290	21,929
Delta Dental	43,431	106,139	149,570
Safeguard	798	2,776	3,574
DeltaCare USA	1,462	4,284	5,746
CAHP/Blue Cross	1,589	1,566	3,155
Premier Access	66	36	102
Western Dental	<u>238</u>	<u>77</u>	<u>315</u>
<b>Total</b>	<b>55,223</b>	<b>129,168</b>	<b>184,391</b>
Distribution of Current Retirees by Dental Benefit Coverage Type			
	Under 65	At Least 65	Total
One Party	21,149	70,115	91,264
Two Party	21,776	55,231	77,007
Family	<u>12,298</u>	<u>3,822</u>	<u>16,120</u>
<b>Total</b>	<b>55,223</b>	<b>129,168</b>	<b>184,391</b>

## A8. Summary of the Participant Data

California State Employees			
Distribution of Retiree Dental Benefit Plan by Age			
Attained Age	Male	Female	Total
Under 40	258	200	458
40-44	325	249	574
45-49	677	665	1,342
50-54	3,757	2,544	6,301
55-59	8,380	8,311	16,691
60-64	13,456	16,401	29,857
65-69	18,754	20,121	38,875
70-74	16,809	16,243	33,052
75-79	11,556	11,302	22,858
80-84	7,587	8,163	15,750
85-89	4,781	6,230	11,011
90 & Over	2,482	5,140	7,622
<b>Totals</b>	<b>88,822</b>	<b>95,569</b>	<b>184,391</b>

## B1. Summary of the Participant Data

California State Employees								
Distribution of All Active Members by Age and Service								
Attained Age	Years of Service to Valuation Date							Totals
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 Plus	No.
Under 20	65	1	-	-	-	-	-	66
20-24	3,900	11	-	-	-	-	-	3,911
25-29	17,509	1,879	54	-	-	-	-	19,442
30-34	17,285	9,145	3,515	25	-	-	-	29,970
35-39	12,640	8,951	9,642	2,597	14	-	-	33,844
40-44	8,646	6,880	8,796	8,601	1,520	22	-	34,465
45-49	7,278	6,053	7,975	9,768	6,651	1,914	51	39,690
50-54	5,967	5,059	6,367	7,942	6,023	5,946	1,531	38,835
55-59	5,176	4,358	5,383	6,981	4,426	5,054	4,240	35,618
60-64	3,140	3,256	3,979	4,812	2,678	2,873	2,971	23,709
65 & Over	1,784	2,140	2,422	2,598	1,291	1,275	1,514	13,024
<b>Totals</b>	<b>83,390</b>	<b>47,733</b>	<b>48,133</b>	<b>43,324</b>	<b>22,603</b>	<b>17,084</b>	<b>10,307</b>	<b>272,574</b>

## C1. Summary of the Participant Data

California State Employees													
Counts of Current Active Participants and Retirees by Valuation Group													
	Bargaining Unit 1	Bargaining Unit 2	Bargaining Unit 3	Bargaining Unit 4	Bargaining Unit 5	Bargaining Unit 6	Bargaining Unit 7	Bargaining Unit 8	Bargaining Unit 9	Bargaining Unit 10	Bargaining Unit 11	Bargaining Unit 12	Bargaining Unit 13
Active Participants	65,124	4,291	1,727	23,777	7,745	31,408	7,590	6,770	12,222	3,760	2,545	12,535	950
Retired Participants	<u>37,122</u>	<u>2,343</u>	<u>2,194</u>	<u>15,873</u>	<u>6,365</u>	<u>22,646</u>	<u>5,598</u>	<u>3,297</u>	<u>6,328</u>	<u>1,722</u>	<u>1,863</u>	<u>9,447</u>	<u>828</u>
<b>Total Participants</b>	<b>102,246</b>	<b>6,634</b>	<b>3,921</b>	<b>39,650</b>	<b>14,110</b>	<b>54,054</b>	<b>13,188</b>	<b>10,067</b>	<b>18,550</b>	<b>5,482</b>	<b>4,408</b>	<b>21,982</b>	<b>1,778</b>
	Bargaining Unit 14	Bargaining Unit 15	Bargaining Unit 16	Bargaining Unit 17	Bargaining Unit 18	Bargaining Unit 19	Bargaining Unit 20	Bargaining Unit 21	CSU	Exempt Excluded Executive	Judicial	Other	Total
Active Participants	398	5,243	1,605	6,060	6,515	5,725	4,884	623	48,011	6,865	1,625	4,576	272,574
Retired Participants	<u>493</u>	<u>2,876</u>	<u>1,412</u>	<u>3,356</u>	<u>4,745</u>	<u>3,274</u>	<u>1,128</u>	<u>748</u>	<u>30,034</u>	<u>3,967</u>	<u>858</u>	<u>14,349</u>	<u>182,866</u>
<b>Total Participants</b>	<b>891</b>	<b>8,119</b>	<b>3,017</b>	<b>9,416</b>	<b>11,260</b>	<b>8,999</b>	<b>6,012</b>	<b>1,371</b>	<b>78,045</b>	<b>10,832</b>	<b>2,483</b>	<b>18,925</b>	<b>455,440</b>

## **SECTION E**

---

### **SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

## Summary of Actuarial Assumptions and Methods

---

**The actuarial assumptions used** in the actuarial valuation are shown in this Section. Actuarial assumptions that are specific to certain groups (i.e., State Miscellaneous, State Industrial, CHP, POFF, State Safety, JRS and LRS) are discussed under the Demographic and Certain Economic Assumptions subsection and were based on the most recent pension actuarial valuation reports produced by CalPERS. Assumptions that are common to all types of members and unique to the OPEB valuation are shown in the Healthcare and Other Economic Assumptions subsection. The pension related actuarial assumptions were updated by CalPERS, and were first recognized in the OPEB actuarial valuation as of June 30, 2015. The healthcare related assumptions are based on the recommendations from the 2015 experience review for the years July 1, 2007, to June 30, 2014, and were approved by the SCO.

### Actuarial Assumptions and Methods

An actuarial valuation measures the program's funded status and annual funding or accounting costs based on the actuarial assumptions and methods selected. The funded status compares assets to actuarial accrued liabilities, and the annual cost represents the normal cost plus an amortization of the unfunded actuarial accrued liability.

In the actuarial valuation process, certain economic and demographic assumptions are made relating to the projection of benefits and the timing and duration of benefits. The stream of expected projected benefits is discounted to a present value as of the actuarial valuation date. The present value is then spread over past service (actuarial accrued liability), and service for the current year (normal cost) based on the chosen actuarial cost method.

The Actuarial Valuation of the State's OPEB is similar to the Actuarial Valuations performed for the State's pension plans. The demographic assumptions (rates of retirement, termination, disability and mortality, etc.) used in this OPEB Actuarial Valuation were identical to those used in the most recent CalPERS Actuarial Valuations. The demographic assumptions are disclosed in Section F of this report.

In addition, the actuarial cost method (entry-age normal) is identical to the one used in the most recent CalPERS Actuarial Valuation for the State Plan of the California Public Employees' Retirement System.

The discount rate selected was 7.28 percent for the actuarial valuation of the fully funded policy. A discount rate of 7.28 percent can be supported provided the investment and contribution policy of the qualifying retiree healthcare benefit trust is consistent with Strategy 1 as disclosed in the CalPERS OPEB assumption model.

## Summary of Actuarial Assumptions and Methods

For purposes of GASB Nos. 74 and 75 financial reporting, liabilities are discounted using a blended discount rate. The blended discount rate is based on a (1) 20-year general obligation bond index if benefits are financed on a pay-as-you-go basis and (2) the expected return on trust assets if pre-funding assets are available to pay benefits. The following table shows the blended discount rates at June 30, 2016, and June 30, 2017, for each respective actuarial valuation group.

BLENDED DISCOUNT RATES		
Actuarial Valuation Group	June 30, 2016	June 30, 2017
Professional, Administrative, Financial and Staff Services (BU1)	3.297%	3.910%
Attorneys and Hearing Officers (BU2)	3.402%	3.996%
Professional Educators and Librarians (BU3)	3.192%	3.825%
Office and Allied (BU4)	3.361%	3.961%
Highway Patrol (BU5)	3.672%	4.219%
Corrections (BU6)	3.497%	4.074%
Protective Services and Public Safety (BU7)	3.344%	3.947%
Firefighters (BU8)	3.540%	4.108%
Professional Engineers (BU9)	3.242%	3.866%
Professional Scientific (BU10)	3.399%	3.993%
Engineering and Scientific Technicians (BU11)	3.237%	3.859%
Craft and Maintenance (BU12)	3.310%	3.920%
Stationary Engineers (BU13)	3.190%	3.825%
Printing and Allied Trades (BU14)	3.173%	3.809%
Allied Services (BU15)	3.376%	3.974%
Physicians, Dentists and Podiatrists (BU16)	3.454%	4.041%
Registered Nurses (BU17)	3.358%	3.961%
Psychiatric Technicians (BU18)	3.398%	3.991%
Health and Social Services/Professional (BU19)	3.487%	4.066%
Medical and Social Services (BU20)	3.570%	4.137%
Educational Consultant and Library (BU21)	3.187%	3.822%
California State University	2.850%	3.560%
Judicial Branch	3.457%	4.043%
Exempt/Excluded/Executive	2.850%	3.560%
Other	2.850%	3.560%

Other assumptions and methods unique to OPEB valuations are consistent with CalPERS OPEB assumption parameters, with the exception of the dental trend rates, as follows:

- Healthcare trend – Select and ultimate healthcare trend rates were developed separately for the PPO, prescription drug, HMO and dental plans. For the Pre-Medicare medical and drug plans, the select and ultimate trend rates were set at actual increases for 2018 and 8.00 percent in 2019 graded down over a seven year period until an ultimate trend rate of 4.50 percent is reached in 2026. For the Post-Medicare medical and drug plans, the select and ultimate trend rates were set at actual increases for 2018 and 8.50 percent in 2019 graded down over an eight year period until

## Summary of Actuarial Assumptions and Methods

---

an ultimate trend rate of 4.50 percent is reached in 2027. Based on a review of supporting documentation provided by CalPERS and a review of various publically available trend studies, the 2018 trend rate for the PPO per capita claims costs is assumed to be 5.00 percent for Pre-Medicare Medical and Pre-Medicare prescription drug, 6.00 percent for Post-Medicare medical and Post-Medicare prescription drug. Beginning in the year 2023 for Future Retirees, the ultimate trend rate on the Employer's explicit contribution includes an additional 0.14 percent to account for the Excise Tax under Federal Healthcare Reform. For the dental plans, select and ultimate trend rates were set at 0.00 percent for 2018 and 4.50 percent for 2019 and beyond. The trend rates are net of any increases due to the potential wear-away of the EGWP-Wrap design savings in 2026. Effective trend for the Post-Medicare plans affected by the EGWP-Wrap design would be higher until the year 2026. These higher effective trend rates gradually eliminate the approximately 22 percent savings for PERSCare, 26 percent savings for PERS Choice and 20 percent savings for the HMO plans remaining as of June 30, 2017, due to the EGWP-Wrap plan design. The dental trend rate assumption deviated slightly from the CalPERS OPEB assumption parameters in the sense that trend was not assumed to be flat.

- Per capita claim costs – Claims costs were developed separately for the PPO, prescription drug, HMO and dental plans. Costs were developed for pre-Medicare and post-Medicare coverage at each respective age and gender, using overall average costs adjusted for morbidity.
- Other healthcare assumptions – The proportion of members selecting a particular plan and coverage at retirement was based on the most current census and enrollment data.

# Summary of Actuarial Assumptions and Methods

## Healthcare and Other Economic Assumptions

**Health Cost and Premium Increases – See table below**

Year	Trend Assumption - Per Capita Costs						
	PPO Plans				HMO Plans		Dental
	Pre-Medicare		Post-Medicare		Pre-Medicare	Post-Medicare	
	Medical	Rx	Medical	Rx	Medical/Rx	Medical/Rx	
2018	5.00%	5.00%	6.00%	6.00%	3.44%	4.27%	0.00%
2019	8.00%	8.00%	8.50%	8.50%	8.00%	8.50%	4.50%
2020	7.50%	7.50%	8.00%	8.00%	7.50%	8.00%	4.50%
2021	7.00%	7.00%	7.50%	7.50%	7.00%	7.50%	4.50%
2022	6.50%	6.50%	7.00%	7.00%	6.50%	7.00%	4.50%
2023	6.00%	6.00%	6.50%	6.50%	6.00%	6.50%	4.50%
2024	5.50%	5.50%	6.00%	6.00%	5.50%	6.00%	4.50%
2025	5.00%	5.00%	5.50%	5.50%	5.00%	5.50%	4.50%
2026	4.50%	4.50%	5.00%	5.00%	4.50%	5.00%	4.50%
2027 and Beyond	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%

Year	Trend Assumption - Premiums and Statutory Cap						
	PPO Plans		HMO Plans		Dental	Part B	Statutory Cap
	Pre-Medicare	Post-Medicare	Pre-Medicare	Post-Medicare			
	Medical/Rx	Medical/Rx	Medical/Rx	Medical/Rx			
2018	-2.81%	-2.04%	3.44%	4.27%	0.00%	0.00%	2.33%
2019	8.00%	8.50%	8.00%	8.50%	4.50%	4.50%	8.00%
2020	7.50%	8.00%	7.50%	8.00%	4.50%	4.50%	7.50%
2021	7.00%	7.50%	7.00%	7.50%	4.50%	4.50%	7.00%
2022	6.50%	7.00%	6.50%	7.00%	4.50%	4.50%	6.50%
2023	6.00%	6.50%	6.00%	6.50%	4.50%	4.50%	6.00%*
2024	5.50%	6.00%	5.50%	6.00%	4.50%	4.50%	5.50%
2025	5.00%	5.50%	5.00%	5.50%	4.50%	4.50%	5.00%
2026	4.50%	5.00%	4.50%	5.00%	4.50%	4.50%	4.50%
2027 and Beyond	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%

\*For Future Retirees, the ultimate trend rate on the Employer's explicit contribution includes an additional 0.14 percent to account for the Excise Tax under Federal Healthcare Reform.

All increases are assumed to occur January 1<sup>st</sup> of each year beginning January 1, 2018.

The trend rates shown above are net of any increases due to the potential wear-away of the EGWP-Wrap design changes by 2026. Effective trend for the Post-Medicare plans affected by the EGWP-Wrap design changes would be higher until the year 2026. These higher effective trend rates gradually eliminate the approximately 22 percent savings for PERS Care, 26 percent savings for PERS Choice and 20 percent savings for the HMO plans remaining as of June 30, 2017, due to the EGWP-Wrap plan design.

Retired members as of June 30, 2017, are assumed to pay \$109.00 in 2017 and other members as of June 30, 2017, are assumed to pay \$134.00 in 2017.

## Summary of Actuarial Assumptions and Methods

---

**Participation percentage:** Participation in the health benefits program is based upon the percent of premium that the employer contribution covers at retirement. We have assumed the following election percentages:

Employer Contribution Percentage of Premium	Participation Rate for Retirees with Healthcare Coverage While Active	Participation Rate for Retirees without Healthcare Coverage While Active
less than 50%	75%	15%
50% to 75%	90%	15%
75% to 90%	95%	25%
90% to 100%	98%	50%

**Percent of Disabilities Treated as Post-Medicare:** Five percent of Public Safety disabilities and 35 percent of all other disabilities are assumed to be eligible for Medicare.

**Coverage and Continuance Assumptions:** It is assumed that 40 percent of participating members will elect one-party coverage, while 60 percent will elect two-party coverage. Of the members electing two-party coverage, we assumed that 100 percent of surviving spouses would continue coverage after the death of the retiree.

**Price Inflation:** Price inflation is assumed to be 2.75 percent.

**Wage inflation:** Wage inflation is assumed to be 3.00 percent.

## Summary of Actuarial Assumptions and Methods

**Aging Factors:** In any given year, the cost of medical and prescription drug benefits vary by age. As the ages of employees and retirees in the covered population increase so does the cost of benefits. Morbidity tables are employed to develop Per Capita Costs at every relevant age. The following table represents the percent by which the cost of benefits for non-disabled lives at one age is higher than the cost for the previous age. For example, according to the following table, the cost of benefits for a male in the PPO plan age 55 is 2.89 percent higher than for one age 54. These percentages below are separate from the annual Medical Trend, which operates to increase costs independent of and in addition to the Aging Factors shown below. These factors, with the exception of the Pre-Medicare HMO rates, were developed using actual experience.

Aging factors for the PPO and prescription drug plans were based on gross claim and enrollment experience data broken out by five-year age intervals, for calendar years 2010 through 2013. Average gross costs were developed by gender at each age interval for each respective calendar year. These costs were weighted, smoothed and the average increase at each age was estimated using interpolation formulas. Aging factors for the HMO were calculated by adjusting the PPO medical factors to account for relative differences between HMO and PPO plans.

Sample Ages	Cost Increase by Age					
	Medical - PPO		Rx - PPO		HMO	
	Male	Female	Male	Female	Male	Female
45	3.26%	1.48%	7.27%	6.56%	3.21%	1.58%
50	3.07%	1.61%	4.54%	4.20%	3.14%	1.67%
55	2.89%	1.69%	3.04%	2.84%	3.20%	1.90%
60	2.73%	1.75%	2.04%	1.92%	2.88%	1.98%
65	2.58%	1.78%	1.30%	1.22%	2.65%	1.89%
70	2.44%	1.80%	0.69%	0.64%	2.48%	1.85%
75	2.32%	1.79%	0.15%	0.11%	2.33%	1.82%
80	2.20%	1.78%	0.00%	0.00%	2.21%	1.79%
85	2.10%	1.75%	0.00%	0.00%	2.10%	1.76%
90	2.00%	1.72%	0.00%	0.00%	2.00%	1.73%

**Aged Per Capita Claim Cost – Medical and Prescription:** The following tables represent the assumed per capita claims costs for sample ages. Costs were developed separately for PERS Choice, PERSCare and the HMO plans. Costs for the PERS Choice and PERSCare plans were based on paid and incurred experience and enrollment information. Costs for the HMO plans were based on the aggregate premium and enrollment data for active and retired members. The per capita costs for PERS Select and the two association PPOs (CAHP and PORAC) were developed using costs for PERS Choice adjusted by the ratio of single premium for the association plan and PERS Choice. The average costs for each respective plan were age adjusted using the morbidity factors described above.

## Summary of Actuarial Assumptions and Methods

Costs for Retirees and Spouses Expected Monthly Per Capita Costs				
Age	PERS Choice - PPO			
	Medical		Prescription	
	Male	Female	Male	Female
50	\$546.12	\$546.12	\$165.22	\$165.22
55	635.22	591.42	206.32	202.95
60	732.56	643.22	239.64	233.45
65	141.90	118.76	208.56	201.91
70	161.17	129.74	222.50	214.50
75	181.84	141.81	230.32	221.40
80	203.91	154.99	232.01	222.61

Costs for Retirees and Spouses Expected Monthly Per Capita Costs				
Age	PERSCare - PPO			
	Medical		Prescription	
	Male	Female	Male	Female
50	\$795.83	\$795.83	\$204.12	\$204.12
55	925.67	861.84	254.90	250.74
60	1,067.52	937.33	296.06	288.42
65	159.74	133.70	234.54	227.06
70	181.44	146.05	250.23	241.23
75	204.71	159.65	259.02	248.99
80	229.55	174.48	260.92	250.34

Costs for Retirees and Spouses (Expected Monthly Per Capita Costs)		
Age	All HMO Plans	
	Medical/Rx	
	Male	Female
50	\$708.38	\$783.46
55	827.44	850.21
60	968.15	931.88
65	267.25	246.17
70	304.57	270.39
75	344.18	296.36
80	386.24	324.33

## Summary of Actuarial Assumptions and Methods

**PPO Per Capita Claim Cost Expense Load:** The following table shows the administrative expenses, per member per month, included in the PPO medical per capita claims costs before application of the aging factors.

Medical Plan	Per Member Per Month Expenses
PERS Choice - Pre-Medicare	\$30.69
PERS Choice - Post-Medicare	\$41.22
PERSCare - Pre-Medicare	\$26.17
PERSCare - Post-Medicare	\$42.08

**Per Capita Claim Cost – Dental:** The following table represents the assumed per capita claims costs for sample ages. Costs were developed separately for DPO/Indemnity and the Pre-Paid Plans, based on premium, claim and enrollment data for calendar 2017 and 2018. Dental costs do not vary by age or gender.

Costs for Retirees and Spouses Expected Monthly Per Capita Costs - Non CSU Retirees				
Age	Dental Plans			
	DPO/Indemnity		Pre-Paid Plans	
	First Person	Second Person	First Person	Second Person
50	\$52.71	\$39.27	\$19.56	\$11.73
55	52.71	39.27	19.56	11.73
60	52.71	39.27	19.56	11.73
65	52.71	39.27	19.56	11.73
70	52.71	39.27	19.56	11.73
75	52.71	39.27	19.56	11.73
80	52.71	39.27	19.56	11.73

Costs for Retirees and Spouses Expected Monthly Per Capita Costs - CSU Retirees				
Age	Dental Plans			
	DPO/Indemnity		Pre-Paid Plans	
	First Person	Second Person	First Person	Second Person
50	\$36.14	\$31.44	\$21.81	\$13.07
55	36.14	31.44	21.81	13.07
60	36.14	31.44	21.81	13.07
65	36.14	31.44	21.81	13.07
70	36.14	31.44	21.81	13.07
75	36.14	31.44	21.81	13.07
80	36.14	31.44	21.81	13.07

## Summary of Actuarial Assumptions and Methods

---

**Adjustments for Disabled Members:** Claims for disabled members were increased by 10 percent if not eligible for Medicare and 40 percent if eligible for Medicare.

**Adjustments for Children:** Claims for current retirees and survivors were increased by eight percent for medical claims and 10 percent for dental claims until the retiree or survivor reaches age 65. The composite claims were increased for future retirees and survivors of future retirees by two percent for medical claims and three percent for dental claims until the retiree or survivor reaches age 65.

**Medicare Part B Premiums:** Retired members as of June 30, 2017, are assumed to pay \$109.00 in 2017 and other members as of June 30, 2017, are assumed to pay \$134.00 in 2017. Our actuarial valuation assumes Social Security benefits increase at 3.0 percent per year and will be sufficient to cover projected increases in the Part B premium. Our actuarial valuation does not consider the member's income when estimating Part B premiums.

**Employer Group Waiver Plan:** The per capita costs include approximately 22 percent savings for PERSCare, 26 percent savings for PERS Choice and 20 percent savings for the other Medicare plans as of June 30, 2017, due to the EGWP-Wrap plan design. It was assumed that the EGWP savings would wear away ratably over the next eight years, and the trend rates for post-Medicare prescription benefits were adjusted accordingly.

**Projection Assumptions:** Operating expenses are assumed to be equal to 0.02 percent of CERBT assets at the beginning of the year plus 0.25 percent of expected employer benefit payments during the year. Pre-funding contributions are assumed to increase proportionately until the targeted year that 100 percent of normal costs are required to be made. Benefits are paid from each respective CERBT account when the full-funding actuarial accrued liability is fully financed.

**Closed Group Projections:** The development of the single equivalent discount rate for each respective valuation group was based on a closed group projection of assets and liabilities to determine the plan year that the valuation group is fully funded. For this purpose, we assumed: (i) invested assets would not be used to pay benefits until the valuation group is fully funded, (ii) invested assets would earn 7.28 percent per year and (iii) actuarial liabilities are discounted using a rate of 7.28 percent. The projections do not include liabilities or assets for future members because it is assumed that the normal costs for future members will be fully financed by the sponsor and active members resulting in no unfunded actuarial liability for future members. The total pre-funding contributions, based on the total normal costs for both current members and future members, are not included in this report.

**Actuarially Determined Contributions (ADC):** The fiscal year end 2017 ADC was estimated based on the fiscal year end 2018 ADC decreased by one year of wage inflation.

**Total OPEB Liability:** The Total OPEB Liability as June 30, 2016, was estimated using a roll back of actuarial liabilities from June 30, 2017, to June 30, 2016, based on the blended discount rate at June 30, 2016.

# Summary of Actuarial Assumptions and Methods

---

## Actuarial Method

***The individual entry-age normal actuarial cost method of valuation*** was used in determining liabilities and normal cost. Differences between assumed experience and actual experience (“actuarial gains and/or losses”) become part of actuarial accrued liabilities.

In performing the actuarial valuation using the Entry Age Normal (EAN) method, the same salary scale was used in this actuarial valuation as was used in the pension actuarial valuations for these groups. This results in normal cost dollars that increase at the same rate as the normal cost dollars in the pension actuarial valuation for this same group of people. Normal cost for actives hired after the valuation date was not included in this actuarial valuation and was not factored into the Actuarially Determined Contribution (ADC).

Unfunded actuarial accrued liabilities are amortized from June 30, 2017, for purposes of calculating the ADC to produce payments (principal & interest), which are a level percent of payroll, over a closed 30-year period.

## **SECTION F**

---

### **PENSION-RELATED ASSUMPTIONS**

# Pension-Related Assumptions

## Economic Assumptions:

### Salary Growth

Annual increases vary by entry age and service. See sample rates in table below.

Duration of Service	Annual Percentage Increase					
	State Miscellaneous Tier 1 & Tier 2			Industrial		
	Entry Age			Entry Age		
	20	30	40	20	30	40
0	9.50%	8.60%	7.30%	10.00%	10.00%	9.20%
3	7.50%	6.80%	5.60%	7.70%	7.40%	6.60%
5	6.90%	6.20%	5.20%	7.00%	6.60%	5.80%
10	5.20%	4.70%	4.10%	5.90%	5.30%	4.60%
15	4.30%	4.10%	3.70%	5.00%	4.70%	4.30%
20	3.80%	3.70%	3.50%	4.40%	4.30%	4.10%
25	3.50%	3.50%	3.40%	3.90%	3.90%	3.80%
30	3.50%	3.50%	3.40%	3.60%	3.60%	3.60%

Duration of Service	Safety			POFF		
	Entry Age			Entry Age		
	20	30	40	20	30	40
0	11.20%	10.00%	8.30%	17.30%	18.20%	18.60%
3	6.50%	6.10%	5.60%	9.70%	9.70%	9.40%
5	5.10%	4.90%	4.80%	7.50%	7.20%	6.70%
10	3.60%	3.60%	3.60%	4.20%	4.00%	3.70%
15	3.60%	3.50%	3.40%	4.20%	4.00%	3.70%
20	3.60%	3.50%	3.20%	4.20%	4.00%	3.70%
25	3.60%	3.50%	3.20%	4.20%	4.00%	3.70%
30	3.60%	3.50%	3.20%	4.20%	4.00%	3.70%

Duration of Service	CHP		
	Entry Age		
	20	30	40
0	8.00%	8.00%	8.00%
3	6.50%	6.50%	6.50%
5	5.40%	5.40%	5.40%
10	3.80%	3.80%	3.80%
15	3.80%	3.80%	3.80%
20	4.50%	4.50%	4.50%
25	4.50%	4.50%	4.50%
30	3.80%	3.80%	3.80%

## Pension-Related Assumptions

---

Annual increases for members of JRS I, JRS II and LRS are assumed to be 3.00% for all years of service and ages.

### Overall Payroll Growth

3.00% compounded annually (used in projecting the payroll over which the unfunded liability is amortized). For the State Miscellaneous plan, the payroll of the Second Tier members is assumed to decrease in accordance with actuarial assumptions based on the assumption that all new entrants will elect the State Miscellaneous First Tier. The payroll of the First Tier members is assumed to grow at the rate necessary for the overall payroll of the State Miscellaneous plan to grow annually at a rate of 3.00%.

### Inflation

2.75% compounded annually.

# Pension-Related Assumptions

---

## Demographic Assumptions:

### Marital Status

For active members, a percentage married upon retirement is assumed according to the following table.

<u>Plan</u>	<u>Percent Married</u>
State Miscellaneous, Tier 1	85%
State Miscellaneous, Tier 2	85%
State Industrial	85%
State Safety	90%
State Police Officers/Firefighters	90%
California Highway Patrol	90%
JRS I	90%
JRS II	90%
LRS	90%

### Age of Spouse

It is assumed that female spouses are three years younger than male spouses.

## Miscellaneous Assumptions:

### Tier 2 Members Electing Tier 1 Benefits

Tier 2 members of both the State Miscellaneous and State Industrial plans have the right to convert their Tier 2 service to Tier 1 service provided that they make up the shortfall in their accumulated contributions with interest. In this actuarial valuation, we have assumed that all Tier 2 members will elect to convert their Tier 2 service to Tier 1 service.

# Pension-Related Assumptions

## PLAN SPECIFIC ACTUARIAL ASSUMPTIONS

### STATE MISCELLANEOUS TIER 1 AND TIER 2

#### Service Retirement – Classic Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.002	0.008	0.014	0.017	0.024	0.036	0.041
52	0.002	0.009	0.013	0.016	0.024	0.036	0.040
54	0.007	0.022	0.031	0.038	0.052	0.068	0.077
56	0.014	0.039	0.057	0.070	0.090	0.113	0.129
58	0.017	0.048	0.069	0.086	0.108	0.134	0.155
60	0.027	0.074	0.105	0.130	0.163	0.198	0.228
62	0.050	0.136	0.192	0.238	0.295	0.353	0.406
65	0.054	0.146	0.207	0.255	0.316	0.378	0.435
70	0.047	0.128	0.181	0.223	0.278	0.332	0.383
75	1.000	1.000	1.000	1.000	1.000	1.000	1.000

#### Service Retirement – PEPRA Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	0.003	0.008	0.011	0.014	0.018	0.020	0.023
54	0.006	0.015	0.021	0.026	0.032	0.038	0.043
56	0.010	0.027	0.038	0.046	0.057	0.067	0.076
58	0.014	0.038	0.053	0.065	0.080	0.093	0.108
60	0.021	0.056	0.078	0.097	0.118	0.138	0.160
62	0.038	0.100	0.141	0.174	0.213	0.249	0.287
65	0.049	0.131	0.184	0.225	0.276	0.323	0.374
70	0.050	0.134	0.188	0.231	0.284	0.331	0.383
75	1.000	1.000	1.000	1.000	1.000	1.000	1.000

## Pension-Related Assumptions

### STATE MISCELLANEOUS TIER 1 AND TIER 2 (CONTINUED)

#### Termination with Refund

Rates vary by entry age and service. See sample rates in table below.

Duration of Service	Entry Age				
	20	25	30	35	40
0	0.1401	0.1340	0.1280	0.1220	0.1160
1	0.1249	0.1189	0.1128	0.1068	0.1009
2	0.1097	0.1037	0.0978	0.0917	0.0857
3	0.0945	0.0886	0.0826	0.0766	0.0705
4	0.0794	0.0734	0.0674	0.0614	0.0553
5	0.0104	0.0094	0.0084	0.0075	0.0065
10	0.0059	0.0051	0.0042	0.0034	0.0026
15	0.0040	0.0033	0.0025	0.0018	0.0011
20	0.0025	0.0019	0.0013	0.0007	0.0001
25	0.0013	0.0008	0.0003	0.0001	0.0001
30	0.0005	0.0001	0.0001	0.0001	0.0001

#### Terminations with Vested Deferred Benefits

Rates vary by entry age and service. See sample rates in table below.

Duration of Service	Entry Age				
	20	25	30	35	40
5	0.0556	0.0504	0.0452	0.0400	0.0349
6	0.0526	0.0472	0.0420	0.0368	0.0316
7	0.0495	0.0441	0.0389	0.0335	0.0280
8	0.0463	0.0409	0.0356	0.0299	0.0245
9	0.0430	0.0374	0.0321	0.0264	0.0209
10	0.0395	0.0340	0.0283	0.0226	-
14	0.0349	0.0289	0.0229	0.0171	-
15	0.0335	0.0275	0.0216	-	-
19	0.0277	0.0213	0.0150	-	-
20	0.0262	0.0198	-	-	-
24	0.0196	0.0130	-	-	-
25	0.0179	-	-	-	-
29	0.0103	-	-	-	-
30	-	-	-	-	-

## Pension-Related Assumptions

### STATE MISCELLANEOUS TIER 1 AND TIER 2 (CONTINUED)

#### Non-Industrial Death and Disability

Rates vary by age and gender. See sample rates in table below.

Attained Age	Male		Female	
	Non-Industrial Death	Non-Industrial Disability	Non-Industrial Death	Non-Industrial Disability
20	0.00031	0.00019	0.00020	0.00039
25	0.00040	0.00019	0.00023	0.00039
30	0.00049	0.00019	0.00025	0.00046
35	0.00057	0.00036	0.00035	0.00096
40	0.00075	0.00103	0.00050	0.00206
45	0.00106	0.00204	0.00071	0.00346
50	0.00155	0.00274	0.00100	0.00415
55	0.00228	0.00238	0.00138	0.00325
60	0.00308	0.00200	0.00182	0.00256

#### Postretirement Mortality

Rates vary by age and gender for healthy benefit recipients, for non-industrially disabled (disability not job-related) retirees and for retirees who are industrially disabled (disability is job-related). See sample rates in table below.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00501	0.00466	0.01680	0.01158	0.00501	0.00466
55	0.00599	0.00416	0.01973	0.01149	0.00599	0.00416
60	0.00710	0.00436	0.02289	0.01235	0.00754	0.00518
65	0.00829	0.00588	0.02451	0.01607	0.01122	0.00838
70	0.01305	0.00993	0.02875	0.02211	0.01635	0.01395
75	0.02205	0.01722	0.03990	0.03037	0.02834	0.02319
80	0.03899	0.02902	0.06083	0.04725	0.04899	0.03910
85	0.06969	0.05243	0.09731	0.07762	0.07679	0.06251
90	0.12974	0.09887	0.14804	0.12890	0.12974	0.09887
95	0.22444	0.18489	0.22444	0.21746	0.22444	0.18489
100	0.32536	0.30017	0.32536	0.30017	0.32536	0.30017

## Pension-Related Assumptions

### STATE INDUSTRIAL TIER 1 AND TIER 2 (CONTINUED)

#### Service Retirement – Classic Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.006	0.011	0.018	0.026	0.031	0.033	0.039
52	0.006	0.011	0.018	0.026	0.031	0.033	0.039
54	0.016	0.029	0.045	0.067	0.079	0.084	0.100
56	0.020	0.037	0.057	0.085	0.100	0.106	0.126
58	0.025	0.046	0.071	0.106	0.125	0.132	0.157
60	0.038	0.070	0.109	0.162	0.191	0.202	0.240
62	0.076	0.139	0.217	0.321	0.378	0.402	0.476
65	0.083	0.153	0.238	0.353	0.416	0.442	0.523
70	0.089	0.163	0.254	0.376	0.444	0.472	0.559
75	1.000	1.000	1.000	1.000	1.000	1.000	1.000

#### Service Retirement – PEPRA Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	0.004	0.008	0.013	0.018	0.022	0.023	0.027
54	0.011	0.020	0.032	0.047	0.055	0.059	0.070
56	0.014	0.026	0.040	0.060	0.070	0.074	0.088
58	0.019	0.035	0.053	0.080	0.094	0.099	0.118
60	0.030	0.056	0.087	0.130	0.153	0.162	0.192
62	0.061	0.111	0.174	0.257	0.302	0.322	0.381
65	0.075	0.138	0.214	0.318	0.374	0.398	0.471
70	0.089	0.163	0.254	0.376	0.444	0.472	0.559
75	1.000	1.000	1.000	1.000	1.000	1.000	1.000

## Pension-Related Assumptions

### STATE INDUSTRIAL TIER 1 AND TIER 2 (CONTINUED)

#### Termination with Refund

Rates vary by entry age and service. See sample rates in table below.

Duration of Service	Entry Age				
	20	25	30	35	40
0	0.0829	0.0794	0.0758	0.0723	0.0687
1	0.0740	0.0704	0.0669	0.0633	0.0598
2	0.0650	0.0615	0.0579	0.0544	0.0507
3	0.0560	0.0524	0.0489	0.0453	0.0418
4	0.0470	0.0435	0.0399	0.0364	0.0328
5	0.0095	0.0086	0.0077	0.0068	0.0059
10	0.0054	0.0046	0.0039	0.0031	0.0024
15	0.0036	0.0030	0.0023	0.0017	0.0010
20	0.0023	0.0017	0.0011	0.0006	0.0002
25	0.0011	0.0007	0.0003	0.0002	0.0002
30	0.0005	0.0002	0.0002	0.0002	0.0002

#### Terminations with Vested Deferred Benefits

Rates vary by entry age and service. See sample rates in table below.

Duration of Service	Entry Age				
	20	25	30	35	40
5	0.0496	0.0449	0.0405	0.0356	0.0311
6	0.0470	0.0421	0.0377	0.0328	0.0281
7	0.0442	0.0393	0.0346	0.0297	0.0250
8	0.0414	0.0365	0.0316	0.0267	0.0220
9	0.0384	0.0335	0.0285	0.0234	0.0187
10	0.0353	0.0302	0.0253	0.0201	-
14	0.0311	0.0257	0.0206	0.0152	-
15	0.0302	0.0246	0.0194	-	-
19	0.0248	0.0190	0.0136	-	-
20	0.0232	0.0176	-	-	-
24	0.0173	0.0115	-	-	-
25	0.0159	-	-	-	-
29	0.0091	-	-	-	-
30	-	-	-	-	-

## Pension-Related Assumptions

### STATE INDUSTRIAL TIER 1 AND TIER 2 (CONTINUED)

#### Non-Industrial Death, Non-Industrial Disability, Industrial Disability & Industrial Death

Non-Industrial Death rates vary by age and gender. Non-Industrial Disability, Industrial Disability and Industrial Death rates vary by age. See sample rates in table below.

Attained Age	Non-Industrial Death		Non-Industrial Disability	Industrial Disability	Industrial Death
	Male	Female	Male and Female	Male and Female	Male and Female
	20	0.00031	0.00020	0.00043	0.00015
25	0.00040	0.00023	0.00085	0.00015	0.00007
30	0.00049	0.00025	0.00136	0.00015	0.00010
35	0.00057	0.00035	0.00204	0.00029	0.00012
40	0.00075	0.00050	0.00315	0.00029	0.00013
45	0.00106	0.00071	0.00468	0.00044	0.00014
50	0.00155	0.00100	0.00621	0.00044	0.00015
55	0.00228	0.00138	0.00791	0.00058	0.00016
60	0.00308	0.00182	0.00918	0.00058	0.00017

#### Postretirement Mortality

Rates vary by age and gender for healthy benefit recipients, for non-industrially disabled (disability not job-related) retirees and for retirees who are industrially disabled (disability is job-related). See sample rates in table below.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00501	0.00466	0.01680	0.01158	0.00501	0.00466
55	0.00599	0.00416	0.01973	0.01149	0.00599	0.00416
60	0.00710	0.00436	0.02289	0.01235	0.00754	0.00518
65	0.00829	0.00588	0.02451	0.01607	0.01122	0.00838
70	0.01305	0.00993	0.02875	0.02211	0.01635	0.01395
75	0.02205	0.01722	0.03990	0.03037	0.02834	0.02319
80	0.03899	0.02902	0.06083	0.04725	0.04899	0.03910
85	0.06969	0.05243	0.09731	0.07762	0.07679	0.06251
90	0.12974	0.09887	0.14804	0.12890	0.12974	0.09887
95	0.22444	0.18489	0.22444	0.21746	0.22444	0.18489
100	0.32536	0.30017	0.32536	0.30017	0.32536	0.30017

## Pension-Related Assumptions

### STATE SAFETY

#### Service Retirement – Classic Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.005	0.012	0.018	0.035	0.039	0.067	0.075
52	0.003	0.009	0.014	0.032	0.034	0.061	0.067
54	0.017	0.032	0.046	0.067	0.075	0.113	0.131
56	0.031	0.056	0.077	0.105	0.117	0.167	0.195
58	0.035	0.062	0.087	0.115	0.128	0.182	0.212
60	0.042	0.073	0.102	0.134	0.148	0.208	0.243
62	0.067	0.115	0.158	0.199	0.222	0.305	0.357
65	0.086	0.148	0.203	0.252	0.281	0.382	0.448
70	0.083	0.143	0.196	0.244	0.271	0.368	0.433
75	1.000	1.000	1.000	1.000	1.000	1.000	1.000

#### Service Retirement – PEPRA Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.010	0.018	0.024	0.028	0.031	0.041	0.048
52	0.007	0.012	0.016	0.020	0.021	0.028	0.033
54	0.018	0.031	0.041	0.048	0.054	0.070	0.083
56	0.029	0.048	0.065	0.076	0.085	0.110	0.131
58	0.032	0.054	0.074	0.086	0.096	0.124	0.147
60	0.039	0.065	0.088	0.104	0.115	0.149	0.177
62	0.056	0.094	0.127	0.149	0.166	0.216	0.256
65	0.086	0.144	0.195	0.229	0.256	0.332	0.393
70	0.086	0.144	0.195	0.229	0.255	0.331	0.393
75	1.000	1.000	1.000	1.000	1.000	1.000	1.000

#### Termination with Refund

Rates vary by service. See sample rates in table below.

Service										
0	1	2	3	4	5	10	15	20	25	30
0.1313	0.0967	0.0622	0.0461	0.0374	0.0080	0.0058	0.0039	0.0025	0.0013	0.0009

## Pension-Related Assumptions

### STATE SAFETY (CONTINUED)

#### Terminations with Vested Deferred Benefits

Rates vary by entry age and service. See sample rates in table below.

Duration of Service	Entry Age				
	20	25	30	35	40
5	0.0369	0.0369	0.0369	0.0369	0.0369
6	0.0363	0.0363	0.0363	0.0363	0.0363
7	0.0357	0.0357	0.0357	0.0357	0.0357
8	0.0349	0.0349	0.0349	0.0349	0.0349
9	0.0341	0.0341	0.0341	0.0341	0.0341
10	0.0333	0.0333	0.0333	0.0333	-
14	0.0296	0.0296	0.0296	0.0296	-
15	0.0286	0.0286	0.0286	-	-
19	0.0239	0.0239	0.0239	-	-
20	0.0226	0.0226	-	-	-
24	0.0173	0.0173	-	-	-
25	0.0159	-	-	-	-
29	0.0131	-	-	-	-
30	0.0000	-	-	-	-

#### Non-Industrial Death, Non-Industrial Disability, Industrial Disability & Industrial Death

Non-Industrial Death rates vary by age and gender. Non-Industrial Disability, Industrial Disability and Industrial Death rates vary by age. See sample rates in table below.

Attained Age	Non-Industrial Death		Non-Industrial Disability	Industrial Disability	Industrial Death
	Male	Female	Male and Female	Male and Female	Male and Female
20	0.00031	0.00020	0.00036	0.00002	0.00003
25	0.00040	0.00023	0.00054	0.00076	0.00007
30	0.00049	0.00025	0.00063	0.00170	0.00010
35	0.00057	0.00035	0.00072	0.00264	0.00012
40	0.00075	0.00050	0.00072	0.00360	0.00013
45	0.00106	0.00071	0.00108	0.00457	0.00014
50	0.00155	0.00100	0.00216	0.00557	0.00015
55	0.00228	0.00138	0.00306	0.00658	0.00016
60	0.00308	0.00182	0.00387	0.00762	0.00017

## Pension-Related Assumptions

---

### STATE SAFETY (CONTINUED)

#### Postretirement Mortality

Rates vary by age and gender for healthy benefit recipients and for non-industrially disabled (disability not job-related) retirees. Rates vary by age for retirees who are industrially disabled (disability is job-related). See sample rates in table below.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00501	0.00466	0.01680	0.01158	0.00501	0.00466
55	0.00599	0.00416	0.01973	0.01149	0.00599	0.00416
60	0.00710	0.00436	0.02289	0.01235	0.00754	0.00518
65	0.00829	0.00588	0.02451	0.01607	0.01122	0.00838
70	0.01305	0.00993	0.02875	0.02211	0.01635	0.01395
75	0.02205	0.01722	0.03990	0.03037	0.02834	0.02319
80	0.03899	0.02902	0.06083	0.04725	0.04899	0.03910
85	0.06969	0.05243	0.09731	0.07762	0.07679	0.06251
90	0.12974	0.09887	0.14804	0.12890	0.12974	0.09887
95	0.22444	0.18489	0.22444	0.21746	0.22444	0.18489
100	0.32536	0.30017	0.32536	0.30017	0.32536	0.30017

## Pension-Related Assumptions

### STATE PEACE OFFICERS AND FIREFIGHTERS

#### Service Retirement – Classic Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.016	0.052	0.070	0.091	0.146	0.213	0.247
52	0.014	0.044	0.060	0.080	0.125	0.180	0.209
54	0.019	0.064	0.087	0.110	0.176	0.261	0.302
56	0.022	0.074	0.100	0.126	0.203	0.301	0.350
58	0.025	0.081	0.109	0.137	0.220	0.328	0.381
60	0.026	0.088	0.120	0.149	0.241	0.360	0.418
62	0.030	0.099	0.133	0.164	0.267	0.401	0.467
65	0.030	0.103	0.139	0.171	0.277	0.418	0.486
70	1.000	1.000	1.000	1.000	1.000	1.000	1.000

#### Service Retirement – PEPRA Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.011	0.036	0.049	0.064	0.102	0.149	0.173
52	0.010	0.031	0.042	0.056	0.088	0.126	0.146
54	0.014	0.048	0.065	0.083	0.132	0.196	0.227
56	0.018	0.059	0.080	0.101	0.162	0.241	0.280
58	0.023	0.073	0.098	0.123	0.198	0.295	0.343
60	0.025	0.084	0.114	0.142	0.229	0.342	0.397
62	0.030	0.099	0.133	0.164	0.267	0.401	0.467
65	0.030	0.103	0.139	0.171	0.277	0.418	0.486
70	1.000	1.000	1.000	1.000	1.000	1.000	1.000

#### Termination with Refund

Rates vary by service. See sample rates in table below.

Service										
0	1	2	3	4	5	10	15	20	25	30
0.1217	0.0779	0.0431	0.0353	0.0275	0.0056	0.0039	0.0025	0.0015	0.0006	0.0003

## Pension-Related Assumptions

### STATE PEACE OFFICERS AND FIREFIGHTERS (CONTINUED)

#### Terminations with Vested Deferred Benefits

Rates vary by entry age and service. See sample rates in table below.

Duration of Service	Entry Age				
	20	25	30	35	40
5	0.0173	0.0173	0.0173	0.0173	0.0173
6	0.0168	0.0168	0.0168	0.0168	0.0168
7	0.0164	0.0164	0.0164	0.0164	0.0164
8	0.0159	0.0159	0.0159	0.0159	0.0159
9	0.0155	0.0155	0.0155	0.0155	0.0155
10	0.0149	0.0149	0.0149	0.0149	-
14	0.0127	0.0127	0.0127	0.0127	-
15	0.0120	0.0120	0.0120	-	-
19	0.0093	0.0093	0.0093	-	-
20	0.0086	0.0086	-	-	-
24	0.0055	0.0055	-	-	-
25	0.0046	-	-	-	-
29	0.0030	-	-	-	-
30	0.0000	-	-	-	-

#### Non-Industrial Death, Non-Industrial Disability, Industrial Disability & Industrial Death

Non-Industrial Death rates vary by age and gender. Non-Industrial Disability, Industrial Disability and Industrial Death rates vary by age. See sample rates in table below.

Attained Age	Non-Industrial Death, Non-Industrial Disability, Industrial Disability & Industrial Death				
	Non-Industrial Death		Non-Industrial Disability	Industrial Disability	Industrial Death
	Male	Female	Male and Female	Male and Female	Male and Female
20	0.00031	0.00020	0.00010	0.00039	0.00003
25	0.00040	0.00023	0.00010	0.00087	0.00007
30	0.00049	0.00025	0.00010	0.00167	0.00010
35	0.00057	0.00035	0.00020	0.00289	0.00012
40	0.00075	0.00050	0.00040	0.00464	0.00013
45	0.00106	0.00071	0.00060	0.00706	0.00014
50	0.00155	0.00100	0.00098	0.01027	0.00015
55	0.00228	0.00138	0.00143	0.01442	0.00016
60	0.00308	0.00182	0.00188	0.01966	0.00017

## Pension-Related Assumptions

---

### STATE PEACE OFFICERS AND FIREFIGHTERS (CONTINUED)

#### Postretirement Mortality

Rates vary by age and gender for healthy benefit recipients, for non-industrially disabled (disability not job-related) retirees and for retirees who are industrially disabled (disability is job-related). See sample rates in table below.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00501	0.00466	0.01680	0.01158	0.00501	0.00466
55	0.00599	0.00416	0.01973	0.01149	0.00599	0.00416
60	0.00710	0.00436	0.02289	0.01235	0.00754	0.00518
65	0.00829	0.00588	0.02451	0.01607	0.01122	0.00838
70	0.01305	0.00993	0.02875	0.02211	0.01635	0.01395
75	0.02205	0.01722	0.03990	0.03037	0.02834	0.02319
80	0.03899	0.02902	0.06083	0.04725	0.04899	0.03910
85	0.06969	0.05243	0.09731	0.07762	0.07679	0.06251
90	0.12974	0.09887	0.14804	0.12890	0.12974	0.09887
95	0.22444	0.18489	0.22444	0.21746	0.22444	0.18489
100	0.32536	0.30017	0.32536	0.30017	0.32536	0.30017

## Pension-Related Assumptions

---

### CALIFORNIA HIGHWAY PATROL

#### Service Retirement – Classic Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.050	0.050	0.050	0.050	0.149	0.283	0.326
52	0.040	0.040	0.040	0.040	0.121	0.230	0.265
54	0.051	0.051	0.051	0.051	0.153	0.290	0.334
56	0.051	0.051	0.051	0.051	0.152	0.288	0.332
58	0.049	0.049	0.049	0.049	0.146	0.277	0.319
60	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

#### Service Retirement – PEPRA Members

Rates vary by age and service. See sample rates in table below.

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	0.035	0.035	0.035	0.035	0.104	0.198	0.228
52	0.030	0.030	0.030	0.030	0.091	0.173	0.199
54	0.041	0.041	0.041	0.041	0.122	0.232	0.267
56	0.043	0.043	0.043	0.043	0.129	0.245	0.282
58	0.044	0.044	0.044	0.044	0.131	0.249	0.287
60	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

#### Termination with Refund

Rates vary by service. See sample rates in table below.

Service										
0	1	2	3	4	5	10	15	20	25	30
0.0129	0.0124	0.0121	0.0116	0.0113	0.0040	0.0029	0.0019	0.0011	0.0006	0.0003

## Pension-Related Assumptions

### CALIFORNIA HIGHWAY PATROL (CONTINUED)

#### Terminations with Vested Deferred Benefits

Rates vary by entry age and service. See sample rates in table below.

Duration of Service	Entry Age				
	20	25	30	35	40
5	0.0093	0.0093	0.0093	0.0093	0.0093
6	0.0091	0.0091	0.0091	0.0091	0.0091
7	0.0090	0.0090	0.0090	0.0090	0.0090
8	0.0087	0.0087	0.0087	0.0087	0.0087
9	0.0085	0.0085	0.0085	0.0085	0.0085
10	0.0082	0.0082	0.0082	0.0082	-
14	0.0071	0.0071	0.0071	0.0071	-
15	0.0070	0.0070	0.0070	-	-
19	0.0056	0.0056	0.0056	-	-
20	0.0053	0.0053	-	-	-
24	0.0038	0.0038	-	-	-
25	0.0033	-	-	-	-
29	0.0026	-	-	-	-
30	0.0000	-	-	-	-

#### Non-Industrial Death and Disability & Industrial Death and Disability

Non-Industrial Death rates vary by age and gender. Non-Industrial Disability, Industrial Disability and Industrial Death rates vary by age. See sample rates in table below.

Attained Age	Non-Industrial Death and Disability & Industrial Death and Disability				
	Non-Industrial Death		Non-Industrial Disability	Industrial Disability	Industrial Death
	Male	Female	Male and Female	Male and Female	Male and Female
20	0.00031	0.00020	0.00014	0.00026	0.00003
25	0.00040	0.00023	0.00014	0.00058	0.00007
30	0.00049	0.00025	0.00014	0.00114	0.00010
35	0.00057	0.00035	0.00014	0.00204	0.00012
40	0.00075	0.00050	0.00014	0.00337	0.00013
45	0.00106	0.00071	0.00028	0.00527	0.00014
50	0.00155	0.00100	0.00028	0.02023	0.00015
55	0.00228	0.00138	0.00028	0.09011	0.00016
60	0.00308	0.00182	0.00028	0.34051	0.00017

## Pension-Related Assumptions

---

### CALIFORNIA HIGHWAY PATROL (CONTINUED)

#### Postretirement Mortality

Rates vary by age and gender for healthy benefit recipients, for non-industrially disabled (disability not job-related) retirees and for retirees who are industrially disabled (disability is job-related). See sample rates in table below.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00501	0.00466	0.01680	0.01158	0.00501	0.00466
55	0.00599	0.00416	0.01973	0.01149	0.00599	0.00416
60	0.00710	0.00436	0.02289	0.01235	0.00754	0.00518
65	0.00829	0.00588	0.02451	0.01607	0.01122	0.00838
70	0.01305	0.00993	0.02875	0.02211	0.01635	0.01395
75	0.02205	0.01722	0.03990	0.03037	0.02834	0.02319
80	0.03899	0.02902	0.06083	0.04725	0.04899	0.03910
85	0.06969	0.05243	0.09731	0.07762	0.07679	0.06251
90	0.12974	0.09887	0.14804	0.12890	0.12974	0.09887
95	0.22444	0.18489	0.22444	0.21746	0.22444	0.18489
100	0.32536	0.30017	0.32536	0.30017	0.32536	0.30017

# Pension-Related Assumptions

---

## JUDGES' RETIREMENT SYSTEM I

### Probability of Termination from Active Service

Probability of Service Retirement			
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
60	0.20	68	0.20
61	0.20	69	0.30
62	0.20	70	0.10
63	0.20	71	0.10
64	0.20	72-79	0.20
65	0.20	80-84	0.30
66	0.20	85-89	0.50
67	0.20	>89	1.00

No pre-retirement termination or disability rates were assumed.

### Mortality

The mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board. For purposes of the post-retirement mortality rates, the revised rates include 20 years of projected on-going mortality improvement using Scale BB published by the Society of Actuaries.

# Pension-Related Assumptions

---

## JUDGES' RETIREMENT SYSTEM II

### Service Retirement

Rates vary by age and service.

#### Service Greater than 20 Years

<u>Age</u>	<u>Rate</u>
Below 65	0.0000
65	0.7500
66	0.4000
67	0.3000
68	0.3500
69	0.5000
70*	1.0000

\* For Judges age 70 and older with 5 or more years of service the probability of retirement is 100%.

### Withdrawal

Rates vary by age and service.

<u>Entry Age</u>	<u>0-1</u>	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-5</u>	<u>5 or more</u>
35	0.0053	0.0053	0.0053	0.0053	0.0053	0.0023
40	0.0045	0.0045	0.0045	0.0045	0.0045	0.0038
45	0.0038	0.0038	0.0038	0.0038	0.0038	0.0075
50	0.0038	0.0038	0.0038	0.0038	0.0038	0.0090
55	0.0000	0.0000	0.0000	0.0000	0.0000	0.0083
60	0.0000	0.0000	0.0000	0.0000	0.0000	0.0075

### Pre-Retirement Non-Industrial Mortality

Rates vary by age.

## Pension-Related Assumptions

### JUDGES' RETIREMENT SYSTEM II (CONTINUED)

#### Non-Industrial Disability

Rates vary by age.

Attained Age	Pre- Retirement Mortality Male	Pre- Retirement Mortality Female	Non- Industrial Disability
35	0.0006	0.0004	0.0000
40	0.0008	0.0005	0.0010
45	0.0011	0.0007	0.0019
50	0.0016	0.0010	0.0032
55	0.0023	0.0014	0.0054
60	0.0031	0.0018	0.0085
65	0.0040	0.0026	0.0122
70	0.0052	0.0037	0.0000

#### Industrial Mortality

Rates are zero.

#### Industrial Disability

Rates are zero.

#### Post-Retirement Mortality:

Rates vary by age and sex.

Age	Healthy		Non-Industrial Disability		Age	Healthy		Non-Industrial Disability	
	Male	Female	Male	Female		Male	Female	Male	Female
35	0.0006	0.0005	0.0079	0.0049	75	0.0221	0.0172	0.0399	0.0304
40	0.0011	0.0009	0.0095	0.0061	80	0.0390	0.0290	0.0608	0.0473
45	0.0023	0.0020	0.0122	0.0080	85	0.0697	0.0524	0.0973	0.0776
50	0.0050	0.0047	0.0168	0.0116	90	0.1297	0.0989	0.1480	0.1289
55	0.0060	0.0042	0.0197	0.0115	95	0.2244	0.1849	0.2244	0.2175
60	0.0071	0.0044	0.0229	0.0124	100	0.3254	0.3002	0.3254	0.3002
65	0.0083	0.0059	0.0245	0.0161	105	0.5853	0.5609	0.5853	0.5609
70	0.0131	0.0099	0.0288	0.0221	110	1.0000	1.0000	1.0000	1.0000

# Pension-Related Assumptions

---

## Legislators' Retirement System

### Probabilities of Decrement for Active Participants

Vested Withdrawal – Sample vested withdrawal rates are shown in the following table.

Disability – Sample disability rates are shown in the following table.

Non-vested Withdrawal – Sample rates for non-vested withdrawal are shown in the following table.

For each 1,000 active participants at the age shown, the following number will leave within a year on account of:

<u>Age</u>	<u>Vested Withdrawal</u>	<u>Disability</u>	<u>Non-Vested Withdrawal</u>
30	50.0	0.1	25.0
35	50.0	0.2	25.0
40	50.0	0.7	20.0
41	50.0	0.8	15.0
42	40.0	0.9	15.0
43	40.0	1.0	15.0
44	40.0	1.1	15.0
45	40.0	1.2	15.0
46	40.0	1.3	15.0
47	40.0	1.5	15.0
48	40.0	1.7	15.0
49	40.0	1.9	15.0
50	40.0	2.2	10.0
51	40.0	2.5	5.0
52	40.0	3.0	0.0
53	40.0	3.6	0.0
54	40.0	4.3	0.0
55	40.0	5.0	0.0
56	40.0	5.8	0.0
57	40.0	6.7	0.0
58	40.0	7.5	0.0
59	40.0	8.4	0.0
60	40.0	9.5	0.0

## Pension-Related Assumptions

---

### Legislators' Retirement System (CONTINUED)

#### Pre-Retirement Non-Industrial Mortality

Rates vary by age and sex.

#### Mortality Rates after Leaving Active Participation

The mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board. For purposes of the post-retirement mortality rates, the revised rates include 20 years of projected on-going mortality improvement using Scale BB published by the Society of Actuaries.

<u>Age</u>	<u>Healthy Male</u>	<u>Healthy Female</u>	<u>Disability Male</u>	<u>Disability Female</u>	<u>Age</u>	<u>Healthy Male</u>	<u>Healthy Female</u>	<u>Disability Male</u>	<u>Disability Female</u>
35	0.0006	0.0005	0.0079	0.0049	75	0.0221	0.0172	0.0399	0.0304
40	0.0011	0.0009	0.0095	0.0061	80	0.0390	0.0290	0.0608	0.0473
45	0.0023	0.0020	0.0122	0.0080	85	0.0697	0.0524	0.0973	0.0776
50	0.0050	0.0047	0.0168	0.0116	90	0.1297	0.0989	0.1480	0.1289
55	0.0060	0.0042	0.0197	0.0115	95	0.2244	0.1849	0.2244	0.2175
60	0.0071	0.0044	0.0229	0.0124	100	0.3254	0.3002	0.3254	0.3002
65	0.0083	0.0059	0.0245	0.0161	105	0.5853	0.5609	0.5853	0.5609
70	0.0131	0.0099	0.0288	0.0221	110	1.0000	1.0000	1.0000	1.0000

## **APPENDIX A**

---

### **GLOSSARY**

## Glossary

---

<b>Accrued Service</b>	Service credited under the system that was rendered before the date of the actuarial valuation.
<b>Actuarial Accrued Liability (AAL)</b>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<b>Actuarial Assumptions</b>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the OPEB trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<b>Actuarial Equivalent</b>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<b>Actuarial Gain (Loss)</b>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<b>Actuarial Present Value (APV)</b>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<b>Actuarial Valuation</b>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total OPEB liability, and related actuarial present value of projected benefit payments for OPEB.
<b>Actuarial Valuation Date</b>	The date as of which an actuarial valuation is performed.
<b>Actuarially Determined Contribution (ADC)</b>	A calculated contribution into an OPEB plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.
<b>Amortization Method</b>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year).

# Glossary

---

<b>Amortization Payment</b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b>Cost-of-Living Adjustments</b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b>Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (cost-sharing OPEB plan)</b>	A multiple-employer defined benefit OPEB plan in which the OPEB obligations to the employees of more than one employer are pooled and OPEB plan assets can be used to pay the benefits of the employees of any employer that provides benefits through the OPEB plan.
<b>Covered-Employee Payroll</b>	The payroll of employees that are provided with benefits through the OPEB plan.
<b>Deferred Inflows and Outflows</b>	The deferred inflows and outflows of OPEB resources are amounts used under GASB Statement No. 74 in developing the annual OPEB expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in the OPEB expense should be included in the deferred inflows or outflows of resources.
<b>Discount Rate</b>	<p>For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically:</p> <ol style="list-style-type: none"><li>1. The benefit payments to be made while the OPEB plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and</li><li>2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.</li></ol>
<b>Entry Age Actuarial Cost Method (EAN)</b>	The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to an actuarial valuation year is the normal cost. The portion of this actuarial present value not provided for at an actuarial valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
<b>Fiduciary Net Position</b>	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
<b>GASB</b>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<b>Long-Term Expected Rate of Return</b>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

## Glossary

---

<b>Money-Weighted Rate of Return</b>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 74, the money-weighted rate of return is calculated as the internal rate of return on OPEB plan investments, net of OPEB plan investment expense.
<b>Multiple-Employer Defined Benefit OPEB Plan</b>	A multiple-employer plan is a defined benefit OPEB plan that is used to provide OPEB payments to the employees of more than one employer.
<b>Municipal Bond Rate</b>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<b>Net OPEB Liability (NOL)</b>	The NOL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit OPEB plan.
<b>Non-Employer Contributing Entities</b>	Non-employer contributing entities are entities that make contributions to an OPEB plan that is used to provide OPEB payments to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.
<b>Normal Cost</b>	The portion of the actuarial present value allocated to an actuarial valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.
<b>Other Postemployment Benefits (OPEB)</b>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability and long-term care) that are provided separately from a pension plan, as well as post-employment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<b>Real Rate of Return</b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b>Service Cost</b>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to an actuarial valuation year.

## Glossary

---

### **Total OPEB Expense**

The total OPEB expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

1. Service Cost
2. Interest on the Total OPEB Liability
3. Current-Period Benefit Changes
4. Employee Contributions (made negative for addition here)
5. Projected Earnings on Plan Investments (made negative for addition here)
6. OPEB Plan Administrative Expense
7. Other Changes in Plan Fiduciary Net Position
8. Recognition of Outflow (Inflow) of Resources due to Liabilities
9. Recognition of Outflow (Inflow) of Resources due to Assets

### **Total OPEB Liability (TOL)**

The TOL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

### **Unfunded Actuarial Accrued Liability (UAAL)**

The UAAL is the difference between actuarial accrued liability and actuarial valuation assets.

### **Actuarial Valuation Assets**

The actuarial valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 74 and 75, the actuarial valuation assets are equal to the market value of assets.

## **APPENDIX B**

---

### **INDIVIDUAL ACTUARIAL VALUATION RESULTS**

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S)</b> <b>BARGAINING UNIT NUMBER 1</b> <b>PROFESSIONAL, ADMINISTRATIVE, FINANCIAL AND STAFF SERVICES</b>		
Number of Participants Covered		
Active Participants	\$	65,124
Retired Participants <sup>a</sup>		37,122
Total Participants	\$	102,246
Actuarial Present Value of Projected Benefits		
Active Participants	\$	8,450,140
Retired Participants		6,164,981
Total Participants	\$	14,615,121
Actuarial Accrued Liability		
Active Participants	\$	5,931,951
Retired Participants		6,164,981
Total Participants	\$	12,096,932
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	12,096,932
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	283,218
Administrative Expenses		1,080
Amortization of UAAL		684,383
Total ADC	\$	968,681
Estimated Member Contributions		-
Net Employer ADC for FY 2018	\$	968,681
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	303,921
Part B Reimbursement		47,374
Dental Claims		23,359
Total	\$	374,654
Implicit Costs	\$	57,343
Total Employer Costs	\$	431,997
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	9,186
Dental Claims		7,328
Total	\$	16,514
Total Claims Costs	\$	448,511

*<sup>a</sup>Excludes 2,336 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)  
BARGAINING UNIT NUMBER 1  
PROFESSIONAL, ADMINISTRATIVE, FINANCIAL AND STAFF SERVICES**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2050**

FYE	Assets (bov)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eov)	Accrued Liability (eov)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,096,932	0.0%	\$ 283,218
2018	-	-	-	-	-	-	12,833,719	0.0%	274,533
2019	-	-	1,200	68,933	2,422	70,155	13,564,987	0.5%	266,050
2020	70,155	-	1,359	133,704	9,840	212,340	14,280,535	1.5%	257,500
2021	212,340	-	1,541	194,280	22,351	427,430	14,975,299	2.9%	248,692
2022	427,430	-	1,742	250,434	40,010	716,132	15,645,781	4.6%	239,531
2023	716,132	-	1,960	241,491	60,700	1,016,363	16,288,582	6.2%	230,008
2024	1,016,363	-	2,183	232,190	82,217	1,328,587	16,900,692	7.9%	220,106
2025	1,328,587	-	2,402	222,508	104,592	1,653,285	17,481,701	9.5%	209,889
2026	1,653,285	-	2,618	212,506	127,865	1,991,038	18,031,629	11.0%	199,447
2027	1,991,038	-	2,827	202,274	152,080	2,342,565	18,551,715	12.6%	188,867
2028	2,342,565	-	3,038	191,905	177,293	2,708,725	19,040,177	14.2%	178,357
2029	2,708,725	-	3,251	181,608	203,574	3,090,656	19,494,698	15.9%	167,991
2030	3,090,656	-	3,467	171,459	231,007	3,489,655	19,913,313	17.5%	157,731
2031	3,489,655	-	3,688	161,419	259,688	3,907,074	20,293,211	19.3%	147,634
2032	3,907,074	-	3,910	151,545	289,715	4,344,424	20,632,226	21.1%	137,748
2033	4,344,424	-	4,135	141,884	321,200	4,803,373	20,928,328	23.0%	128,084
2034	4,803,373	-	4,364	132,447	354,266	5,285,722	21,179,003	25.0%	118,700
2035	5,285,722	-	4,593	123,293	389,045	5,793,467	21,383,101	27.1%	109,592
2036	5,793,467	-	4,822	114,414	425,684	6,328,743	21,539,431	29.4%	100,709
2037	6,328,743	-	5,056	105,764	464,334	6,893,785	21,645,074	31.8%	92,056
2038	6,893,785	-	5,294	97,351	505,160	7,491,002	21,697,122	34.5%	83,681
2039	7,491,002	-	5,534	89,215	548,338	8,123,021	21,694,156	37.4%	75,563
2040	8,123,021	-	5,775	81,338	594,058	8,792,642	21,634,751	40.6%	67,690
2041	8,792,642	-	6,016	73,707	642,525	9,502,858	21,518,024	44.2%	60,090
2042	9,502,858	-	6,257	66,348	693,957	10,256,906	21,343,697	48.1%	52,760
2043	10,256,906	-	6,498	59,258	748,589	11,058,255	21,111,769	52.4%	45,757
2044	11,058,255	-	6,734	52,491	806,677	11,910,689	20,823,778	57.2%	39,171
2045	11,910,689	-	6,965	46,136	868,499	12,818,359	20,482,980	62.6%	33,066
2046	12,818,359	-	7,190	40,255	934,359	13,785,783	20,092,894	68.6%	27,489
2047	13,785,783	-	7,408	34,897	1,004,588	14,817,860	19,657,979	75.4%	22,479
2048	14,817,860	-	7,622	30,101	1,079,544	15,919,883	19,182,820	83.0%	18,045
2049	15,919,883	-	7,833	25,878	1,159,613	17,097,541	18,672,458	91.6%	14,169
2050	17,097,541	-	8,040	22,209	1,245,208	18,356,918	18,132,616	101.2%	10,845
2051	18,356,918	1,830,780	8,248	-	1,270,619	17,788,509	17,567,928	101.3%	8,074
2052	17,788,509	1,807,055	8,075	-	1,230,093	17,203,472	16,983,748	101.3%	5,824
2053	17,203,472	1,777,453	7,884	-	1,188,568	16,606,703	16,385,301	101.4%	4,063
2054	16,606,703	1,744,405	7,682	-	1,146,312	16,000,928	15,775,641	101.4%	2,749
2055	16,000,928	1,708,184	7,471	-	1,103,515	15,388,788	15,157,719	101.5%	1,812



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 1 PROFESSIONAL, ADMINISTRATIVE, FINANCIAL AND STAFF SERVICES		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	805,786
Interest on Total OPEB Liability		709,285
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(2,147,553)
Benefit Payments		(412,642)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(1,045,124)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>20,911,899</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>19,866,775</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	412,642
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(412,642)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>19,866,775</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>940,467</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>412,642</b>
<b>Percentage of ADC made by Employer</b>		<b>44%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(527,825)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>7.062551</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.297%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.910%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 1 PROFESSIONAL, ADMINISTRATIVE, FINANCIAL AND STAFF SERVICES		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	805,786
Interest on the Total OPEB Liability		709,285
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(304,076)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>1,210,995</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>20,911,899</b>
OPEB Expense		1,210,995
Employer Contributions		(412,642)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(1,843,477)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>19,866,775</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(1,843,477)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.91% Discount Rate and 4.5% Ultimate Trend	\$	19,866,775
Increase Discount Rate by One Percentage Point	\$	16,947,919
Decrease Discount Rate by One Percentage Point	\$	23,537,800
Increase Trend Rate by One Percentage Point	\$	23,920,356
Decrease Trend Rate by One Percentage Point	\$	16,718,145

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S) BARGAINING UNIT NUMBER 1 PROFESSIONAL, ADMINISTRATIVE, FINANCIAL AND STAFF SERVICES									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
Plan Year Beginning									
7/1/2016	\$ -	7.062551	\$ -	\$ (2,147,553)	7.062551	\$ (304,076)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (304,076)	\$ (304,076)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (304,076)	\$ (304,076)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(304,076)	(304,076)	-	-	-
6/30/2020	-	-	-	-	(304,076)	(304,076)	-	-	-
6/30/2021	-	-	-	-	(304,076)	(304,076)	-	-	-
6/30/2022	-	-	-	-	(304,076)	(304,076)	-	-	-
6/30/2023	-	-	-	-	(304,076)	(304,076)	-	-	-
6/30/2024	-	-	-	-	(19,021)	(19,021)	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (1,843,477)	\$ (1,843,477)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (1,843,477)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 2 ATTORNEYS AND HEARING OFFICERS		
Number of Participants Covered		
Active Participants	\$	4,291
Retired Participants <sup>a</sup>		2,343
Total Participants	\$	6,634
Actuarial Present Value of Projected Benefits		
Active Participants	\$	561,285
Retired Participants		401,866
Total Participants	\$	963,151
Actuarial Accrued Liability		
Active Participants	\$	375,584
Retired Participants		401,866
Total Participants	\$	777,450
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	777,450
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	21,769
Administrative Expenses		70
Amortization of UAAL		43,984
Total ADC	\$	65,823
Estimated Member Contributions		(2,730)
Net Employer ADC for FY 2018	\$	63,093
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	18,965
Part B Reimbursement		4,122
Dental Claims		1,561
Total	\$	24,648
Implicit Costs	\$	3,431
Total Employer Costs	\$	28,079
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	578
Dental Claims		496
Total	\$	1,074
Total Claims Costs	\$	29,153

*<sup>a</sup>Excludes 142 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 2**  
**ATTORNEYS AND HEARING OFFICERS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2047**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 777,450	0.0%	\$ 21,769
2018	-	-	70	5,460	193	5,583	828,303	0.7%	20,779
2019	5,583	-	81	10,430	776	16,708	877,936	1.9%	19,901
2020	16,708	-	93	14,996	1,749	33,360	925,891	3.6%	19,083
2021	33,360	-	108	19,191	3,111	55,554	971,734	5.7%	18,296
2022	55,554	-	124	18,420	4,699	78,549	1,015,465	7.7%	17,510
2023	78,549	-	139	17,649	6,345	102,404	1,056,984	9.7%	16,741
2024	102,404	-	155	16,896	8,054	127,199	1,096,018	11.6%	15,992
2025	127,199	-	171	16,163	9,832	153,023	1,132,517	13.5%	15,233
2026	153,023	-	187	15,420	11,685	179,941	1,166,521	15.4%	14,474
2027	179,941	-	202	14,676	13,617	208,032	1,198,093	17.4%	13,723
2028	208,032	-	217	13,941	15,635	237,391	1,227,229	19.3%	12,989
2029	237,391	-	232	13,221	17,746	268,126	1,253,874	21.4%	12,265
2030	268,126	-	248	12,513	19,958	300,349	1,277,784	23.5%	11,545
2031	300,349	-	263	11,808	22,278	334,172	1,298,889	25.7%	10,840
2032	334,172	-	279	11,120	24,715	369,728	1,317,109	28.1%	10,147
2033	369,728	-	295	10,442	27,279	407,154	1,332,268	30.6%	9,458
2034	407,154	-	311	9,769	29,979	446,591	1,344,244	33.2%	8,774
2035	446,591	-	327	9,100	32,826	488,190	1,353,104	36.1%	8,085
2036	488,190	-	343	8,428	35,829	532,104	1,358,800	39.2%	7,395
2037	532,104	-	359	7,754	39,002	578,501	1,361,011	42.5%	6,711
2038	578,501	-	376	7,087	42,355	627,567	1,359,530	46.2%	6,037
2039	627,567	-	392	6,430	45,903	679,508	1,354,412	50.2%	5,377
2040	679,508	-	409	5,786	49,660	734,545	1,345,767	54.6%	4,738
2041	734,545	-	425	5,163	53,644	792,927	1,333,749	59.5%	4,117
2042	792,927	-	441	4,558	57,872	854,916	1,318,362	64.8%	3,522
2043	854,916	-	457	3,979	62,364	920,802	1,299,705	70.8%	2,971
2044	920,802	-	472	3,443	67,141	990,914	1,278,162	77.5%	2,468
2045	990,914	-	487	2,955	72,227	1,065,609	1,254,109	85.0%	2,014
2046	1,065,609	-	502	2,516	77,648	1,145,271	1,227,818	93.3%	1,614
2047	1,145,271	-	517	2,132	83,433	1,230,319	1,199,474	102.6%	1,269
2048	1,230,319	114,704	533	-	85,446	1,200,528	1,169,342	102.7%	972
2049	1,200,528	113,728	524	-	83,313	1,169,589	1,137,710	102.8%	720
2050	1,169,589	112,565	515	-	81,102	1,137,611	1,104,710	103.0%	517
2051	1,137,611	111,315	506	-	78,819	1,104,609	1,070,385	103.2%	359
2052	1,104,609	109,740	495	-	76,473	1,070,847	1,035,025	103.5%	242
2053	1,070,847	107,966	484	-	74,079	1,036,476	998,802	103.8%	159
2054	1,036,476	106,182	473	-	71,641	1,001,462	961,703	104.1%	103
2055	1,001,462	104,373	461	-	69,157	965,785	923,717	104.6%	65



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 2 ATTORNEYS AND HEARING OFFICERS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	56,706
Interest on Total OPEB Liability		44,801
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(120,350)
Benefit Payments		(26,821)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(45,664)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>1,273,480</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>1,227,816</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	26,821
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(26,821)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>1,227,816</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>63,906</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>26,821</b>
<b>Percentage of ADC made by Employer</b>		<b>42%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(37,085)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.824846</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.402%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.996%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 2 ATTORNEYS AND HEARING OFFICERS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	56,706
Interest on the Total OPEB Liability		44,801
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(17,634)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>83,873</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>1,273,480</b>
OPEB Expense		83,873
Employer Contributions		(26,821)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(102,716)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>1,227,816</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(102,716)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.996% Discount Rate and 4.5% Ultimate Trend	\$	1,227,816
Increase Discount Rate by One Percentage Point	\$	1,057,258
Decrease Discount Rate by One Percentage Point	\$	1,440,137
Increase Trend Rate by One Percentage Point	\$	1,461,514
Decrease Trend Rate by One Percentage Point	\$	1,043,900

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 2									
ATTORNEYS AND HEARING OFFICERS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.824846	\$ -	\$ (120,350)	6.824846	\$ (17,634)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (17,634)	\$ (17,634)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (17,634)	\$ (17,634)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(17,634)	(17,634)	-	-	-
6/30/2020	-	-	-	-	(17,634)	(17,634)	-	-	-
6/30/2021	-	-	-	-	(17,634)	(17,634)	-	-	-
6/30/2022	-	-	-	-	(17,634)	(17,634)	-	-	-
6/30/2023	-	-	-	-	(14,546)	(14,546)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (102,716)	\$ (102,716)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (102,716)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 3 PROFESSIONAL EDUCATORS AND LIBRARIANS		
Number of Participants Covered		
Active Participants	\$	1,727
Retired Participants <sup>a</sup>		2,194
Total Participants	\$	3,921
Actuarial Present Value of Projected Benefits		
Active Participants	\$	228,256
Retired Participants		364,074
Total Participants	\$	592,330
Actuarial Accrued Liability		
Active Participants	\$	151,018
Retired Participants		364,074
Total Participants	\$	515,092
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	515,092
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	10,574
Administrative Expenses		62
Amortization of UAAL		29,141
Total ADC	\$	39,777
Estimated Member Contributions		-
Net Employer ADC for FY 2018	\$	39,777
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	17,201
Part B Reimbursement		3,030
Dental Claims		1,412
Total	\$	21,643
Implicit Costs	\$	3,269
Total Employer Costs	\$	24,912
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	497
Dental Claims		444
Total	\$	941
Total Claims Costs	\$	25,853

*<sup>a</sup>Excludes 203 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 3**  
**PROFESSIONAL EDUCATORS AND LIBRARIANS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2048**

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 515,092	0.0%	\$ 10,574
2018	-	-	-	-	-	-	538,117	0.0%	9,914
2019	-	-	68	2,495	87	2,514	559,849	0.4%	9,341
2020	2,514	-	75	4,708	349	7,496	579,922	1.3%	8,798
2021	7,496	-	82	6,660	781	14,855	598,149	2.5%	8,267
2022	14,855	-	90	8,357	1,377	24,499	614,524	4.0%	7,747
2023	24,499	-	99	7,845	2,061	34,306	628,751	5.5%	7,230
2024	34,306	-	107	7,337	2,756	44,292	640,771	6.9%	6,712
2025	44,292	-	115	6,827	3,464	54,468	650,599	8.4%	6,202
2026	54,468	-	123	6,325	4,187	64,857	658,348	9.9%	5,707
2027	64,857	-	129	5,837	4,926	75,491	664,103	11.4%	5,216
2028	75,491	-	136	5,352	5,682	86,389	667,809	12.9%	4,745
2029	86,389	-	142	4,888	6,459	97,594	669,622	14.6%	4,306
2030	97,594	-	148	4,455	7,259	109,160	669,555	16.3%	3,887
2031	109,160	-	154	4,041	8,086	121,133	667,534	18.1%	3,494
2032	121,133	-	160	3,654	8,943	133,570	663,595	20.1%	3,122
2033	133,570	-	165	3,287	9,835	146,527	657,797	22.3%	2,770
2034	146,527	-	171	2,941	10,766	160,063	650,126	24.6%	2,439
2035	160,063	-	175	2,614	11,740	174,242	640,706	27.2%	2,133
2036	174,242	-	180	2,313	12,761	189,136	629,632	30.0%	1,857
2037	189,136	-	184	2,040	13,835	204,827	617,086	33.2%	1,603
2038	204,827	-	187	1,790	14,969	221,399	603,194	36.7%	1,376
2039	221,399	-	191	1,567	16,167	238,942	587,975	40.6%	1,174
2040	238,942	-	193	1,367	17,437	257,553	571,695	45.1%	994
2041	257,553	-	196	1,190	18,785	277,332	554,423	50.0%	837
2042	277,332	-	199	1,035	20,220	298,388	536,294	55.6%	697
2043	298,388	-	201	898	21,748	320,833	517,531	62.0%	574
2044	320,833	-	203	777	23,377	344,784	498,240	69.2%	466
2045	344,784	-	205	671	25,117	370,367	478,655	77.4%	372
2046	370,367	-	207	579	26,976	397,715	458,897	86.7%	290
2047	397,715	-	209	499	28,964	426,969	439,035	97.3%	221
2048	426,969	-	211	432	31,091	458,281	419,137	109.3%	165
2049	458,281	48,785	214	-	31,611	440,893	399,290	110.4%	121
2050	440,893	47,137	206	-	30,404	423,954	379,659	111.7%	87
2051	423,954	45,465	198	-	29,231	407,522	360,294	113.1%	63
2052	407,522	43,857	191	-	28,092	391,566	341,160	114.8%	44
2053	391,566	42,190	184	-	26,991	376,183	322,340	116.7%	30
2054	376,183	40,530	177	-	25,930	361,406	303,856	118.9%	20
2055	361,406	38,928	170	-	24,912	347,220	285,674	121.5%	13

Revised December 11, 2018.



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 3 PROFESSIONAL EDUCATORS AND LIBRARIANS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	26,332
Interest on Total OPEB Liability		27,455
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(77,106)
Benefit Payments		(23,795)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(47,114)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>845,603</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>798,489</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	23,795
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(23,795)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>798,489</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>38,618</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>23,795</b>
<b>Percentage of ADC made by Employer</b>		<b>62%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(14,823)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>3.865859</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.192%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.825%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 3 PROFESSIONAL EDUCATORS AND LIBRARIANS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	26,332
Interest on the Total OPEB Liability		27,455
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(19,945)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>33,842</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>845,603</b>
OPEB Expense		33,842
Employer Contributions		(23,795)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(57,161)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>798,489</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(57,161)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.825% Discount Rate and 4.5% Ultimate Trend	\$	798,489
Increase Discount Rate by One Percentage Point	\$	695,786
Decrease Discount Rate by One Percentage Point	\$	925,399
Increase Trend Rate by One Percentage Point	\$	928,711
Decrease Trend Rate by One Percentage Point	\$	693,446

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 3									
PROFESSIONAL EDUCATORS AND LIBRARIANS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	3.865859	\$ -	\$ (77,106)	3.865859	\$ (19,945)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (19,945)	\$ (19,945)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (19,945)	\$ (19,945)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(19,945)	(19,945)	-	-	-
6/30/2020	-	-	-	-	(17,271)	(17,271)	-	-	-
6/30/2021	-	-	-	-	-	-	-	-	-
6/30/2022	-	-	-	-	-	-	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (57,161)	\$ (57,161)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (57,161)			\$ -

## Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S)  
BARGAINING UNIT NUMBER 4  
OFFICE AND ALLIED**

Number of Participants Covered	
Active Participants	\$ 23,777
Retired Participants <sup>a</sup>	<u>15,873</u>
Total Participants	\$ 39,650
Actuarial Present Value of Projected Benefits	
Active Participants	\$ 2,620,504
Retired Participants	<u>2,212,536</u>
Total Participants	\$ 4,833,040
Actuarial Accrued Liability	
Active Participants	\$ 1,657,820
Retired Participants	<u>2,212,536</u>
Total Participants	\$ 3,870,356
Actuarial Value of Assets	\$ -
Unfunded Actuarial Accrued Liability	\$ 3,870,356
ADC Based on June 30, 2017 Actuarial Valuation	
Normal Cost	\$ 108,143
Administrative Expenses	397
Amortization of UAAL	<u>218,965</u>
Total ADC	\$ 327,505
Estimated Member Contributions	<u>-</u>
Net Employer ADC for FY 2018	\$ 327,505
Employer Share of FY 2018 Claims Costs	
Explicit Costs	
Medical and Rx Claims	\$ 110,706
Part B Reimbursement	18,984
Dental Claims	<u>9,212</u>
Total	\$ 138,902
Implicit Costs	<u>20,059</u>
Total Employer Costs	\$ 158,961
Retiree Share of FY 2018 Claim Costs	
Medical and Rx Claims	\$ 2,634
Dental Claims	<u>2,834</u>
Total	\$ 5,468
Total Claims Costs	\$ 164,429

*<sup>a</sup>Excludes 1,374 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 4**  
**OFFICE AND ALLIED**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2049**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,870,356	0.0%	\$ 108,143
2018	-	-	-	-	-	-	4,103,391	0.0%	104,554
2019	-	-	438	26,248	923	26,733	4,332,834	0.6%	101,246
2020	26,733	-	491	50,869	3,748	80,859	4,555,473	1.8%	97,982
2021	80,859	-	552	73,900	8,509	162,716	4,770,109	3.4%	94,639
2022	162,716	-	619	95,258	15,230	272,585	4,975,873	5.5%	91,125
2023	272,585	-	690	91,815	23,103	386,813	5,172,339	7.5%	87,465
2024	386,813	-	762	88,227	31,288	505,566	5,358,885	9.4%	83,673
2025	505,566	-	833	84,505	39,797	629,035	5,535,516	11.4%	79,715
2026	629,035	-	902	80,618	48,644	757,395	5,702,168	13.3%	75,633
2027	757,395	-	970	76,603	57,843	890,871	5,859,186	15.2%	71,533
2028	890,871	-	1,037	72,570	67,413	1,029,817	6,006,460	17.1%	67,459
2029	1,029,817	-	1,106	68,565	77,383	1,174,659	6,143,223	19.1%	63,447
2030	1,174,659	-	1,176	64,623	87,784	1,325,890	6,268,615	21.2%	59,582
2031	1,325,890	-	1,246	60,828	98,656	1,484,128	6,382,387	23.3%	55,821
2032	1,484,128	-	1,317	57,138	110,041	1,649,990	6,484,185	25.4%	52,142
2033	1,649,990	-	1,389	53,531	121,984	1,824,116	6,573,395	27.7%	48,612
2034	1,824,116	-	1,462	50,074	134,534	2,007,262	6,649,305	30.2%	45,223
2035	2,007,262	-	1,537	46,760	147,746	2,200,231	6,711,495	32.8%	41,968
2036	2,200,231	-	1,611	43,579	161,678	2,403,877	6,759,795	35.6%	38,854
2037	2,403,877	-	1,687	40,541	176,392	2,619,123	6,793,784	38.6%	35,863
2038	2,619,123	-	1,764	37,628	191,955	2,846,942	6,812,725	41.8%	32,975
2039	2,846,942	-	1,843	34,818	208,436	3,088,353	6,816,232	45.3%	30,202
2040	3,088,353	-	1,923	32,125	225,912	3,344,467	6,803,822	49.2%	27,539
2041	3,344,467	-	2,004	29,543	244,462	3,616,468	6,775,364	53.4%	24,971
2042	3,616,468	-	2,085	27,057	264,172	3,905,612	6,731,004	58.0%	22,474
2043	3,905,612	-	2,168	24,642	285,132	4,213,218	6,670,582	63.2%	20,047
2044	4,213,218	-	2,250	22,297	307,439	4,540,704	6,594,460	68.9%	17,697
2045	4,540,704	-	2,333	20,030	331,196	4,889,597	6,503,140	75.2%	15,436
2046	4,889,597	-	2,417	17,853	356,514	5,261,547	6,396,831	82.3%	13,288
2047	5,261,547	-	2,502	15,790	383,516	5,658,351	6,276,110	90.2%	11,271
2048	5,658,351	-	2,587	13,858	412,331	6,081,953	6,141,948	99.0%	9,397
2049	6,081,953	-	2,673	12,070	443,102	6,534,452	5,995,840	109.0%	7,679
2050	6,534,452	580,394	2,758	-	454,854	6,406,154	5,839,380	109.7%	6,127
2051	6,406,154	576,393	2,722	-	445,658	6,272,697	5,674,015	110.6%	4,756
2052	6,272,697	570,284	2,680	-	436,163	6,135,896	5,501,473	111.5%	3,571
2053	6,135,896	561,977	2,632	-	426,502	5,997,789	5,323,706	112.7%	2,586
2054	5,997,789	552,165	2,580	-	416,801	5,859,845	5,142,109	114.0%	1,811
2055	5,859,845	540,857	2,524	-	407,165	5,723,629	4,958,176	115.4%	1,232



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 4 OFFICE AND ALLIED		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	283,067
Interest on Total OPEB Liability		221,443
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(607,874)
Benefit Payments		(151,838)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(255,202)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>6,380,830</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>6,125,628</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	151,838
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(151,838)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>6,125,628</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>317,966</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>151,838</b>
<b>Percentage of ADC made by Employer</b>		<b>48%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(166,128)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.778566</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.361%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.961%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 4 OFFICE AND ALLIED		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	283,067
Interest on the Total OPEB Liability		221,443
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(89,676)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>414,834</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>6,380,830</b>
OPEB Expense		414,834
Employer Contributions		(151,838)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(518,198)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>6,125,628</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(518,198)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.961% Discount Rate and 4.5% Ultimate Trend	\$	6,125,628
Increase Discount Rate by One Percentage Point	\$	5,275,532
Decrease Discount Rate by One Percentage Point	\$	7,187,354
Increase Trend Rate by One Percentage Point	\$	7,286,992
Decrease Trend Rate by One Percentage Point	\$	5,215,196

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 4									
OFFICE AND ALLIED									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.778566	\$ -	\$ (607,874)	6.778566	\$ (89,676)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (89,676)	\$ (89,676)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (89,676)	\$ (89,676)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(89,676)	(89,676)	-	-	-
6/30/2020	-	-	-	-	(89,676)	(89,676)	-	-	-
6/30/2021	-	-	-	-	(89,676)	(89,676)	-	-	-
6/30/2022	-	-	-	-	(89,676)	(89,676)	-	-	-
6/30/2023	-	-	-	-	(69,818)	(69,818)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (518,198)	\$ (518,198)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (518,198)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 5 HIGHWAY PATROL		
Number of Participants Covered		
Active Participants	\$	7,745
Retired Participants <sup>a</sup>		6,365
Total Participants	\$	14,110
Actuarial Present Value of Projected Benefits		
Active Participants	\$	1,690,857
Retired Participants		1,717,240
Total Participants	\$	3,408,097
Actuarial Accrued Liability		
Active Participants	\$	1,078,627
Retired Participants		1,717,240
Total Participants	\$	2,795,867
Actuarial Value of Assets	\$	246,662
Unfunded Actuarial Accrued Liability	\$	2,549,205
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	59,841
Administrative Expenses		299
Amortization of UAAL		144,221
Total ADC	\$	204,361
Estimated Member Contributions		(14,650)
Net Employer ADC for FY 2018	\$	189,711
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	75,217
Part B Reimbursement		6,686
Dental Claims		4,577
Total	\$	86,480
Implicit Costs	\$	13,519
Total Employer Costs	\$	99,999
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	1,373
Dental Claims		1,459
Total	\$	2,832
Total Claims Costs	\$	102,831

*<sup>a</sup>Excludes 60 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 5**  
**HIGHWAY PATROL**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2045**

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2017	\$ 135,701	\$ 290	\$ 95	\$ 90,237	\$ 21,109	\$ 246,662	\$ 2,795,867	8.8%	\$ 59,841
2018	246,662	-	299	60,141	20,097	326,601	2,959,975	11.0%	60,088
2019	326,601	-	338	60,426	25,925	412,614	3,126,898	13.2%	60,222
2020	412,614	-	383	60,605	32,192	505,028	3,294,647	15.3%	60,166
2021	505,028	-	430	60,596	38,918	604,112	3,462,742	17.4%	59,799
2022	604,112	-	478	60,277	46,118	710,029	3,630,725	19.6%	59,053
2023	710,029	-	530	59,583	53,802	822,884	3,797,705	21.7%	57,960
2024	822,884	-	584	58,544	61,979	942,823	3,962,476	23.8%	56,578
2025	942,823	-	640	57,218	70,661	1,070,062	4,124,585	25.9%	54,955
2026	1,070,062	-	696	55,651	79,866	1,204,883	4,284,073	28.1%	53,101
2027	1,204,883	-	752	53,854	89,614	1,347,599	4,440,907	30.3%	51,012
2028	1,347,599	-	813	51,824	99,929	1,498,539	4,593,730	32.6%	48,723
2029	1,498,539	-	877	49,600	110,836	1,658,098	4,741,308	35.0%	46,347
2030	1,658,098	-	943	47,290	122,367	1,826,812	4,882,860	37.4%	43,955
2031	1,826,812	-	1,010	44,966	134,564	2,005,332	5,018,127	40.0%	41,514
2032	2,005,332	-	1,081	42,596	147,473	2,194,320	5,146,105	42.6%	38,884
2033	2,194,320	-	1,155	40,039	161,137	2,394,341	5,265,638	45.5%	35,984
2034	2,394,341	-	1,232	37,215	175,594	2,605,918	5,375,580	48.5%	32,895
2035	2,605,918	-	1,311	34,207	190,887	2,829,701	5,474,717	51.7%	29,660
2036	2,829,701	-	1,393	31,053	207,063	3,066,424	5,562,277	55.1%	26,376
2037	3,066,424	-	1,477	27,852	224,179	3,316,978	5,637,753	58.8%	23,152
2038	3,316,978	-	1,562	24,715	242,304	3,582,435	5,700,430	62.8%	20,133
2039	3,582,435	-	1,649	21,783	261,521	3,864,090	5,750,394	67.2%	17,359
2040	3,864,090	-	1,738	19,097	281,926	4,163,375	5,787,675	71.9%	14,771
2041	4,163,375	-	1,830	16,600	303,622	4,481,767	5,811,784	77.1%	12,349
2042	4,481,767	-	1,924	14,272	326,714	4,820,829	5,822,467	82.8%	10,081
2043	4,820,829	-	2,020	12,101	351,317	5,182,227	5,819,659	89.0%	8,026
2044	5,182,227	-	2,119	10,145	377,553	5,567,806	5,803,211	95.9%	6,209
2045	5,567,806	-	2,222	8,431	405,558	5,979,573	5,773,205	103.6%	4,681
2046	5,979,573	452,124	2,326	-	419,061	5,944,184	5,730,145	103.7%	3,444
2047	5,944,184	459,910	2,339	-	416,206	5,898,141	5,674,562	103.9%	2,464
2048	5,898,141	466,136	2,345	-	412,631	5,842,291	5,607,435	104.2%	1,714
2049	5,842,291	470,852	2,346	-	408,397	5,777,490	5,529,735	104.5%	1,165
2050	5,777,490	474,681	2,342	-	403,542	5,704,009	5,441,826	104.8%	783
2051	5,704,009	477,140	2,334	-	398,105	5,622,640	5,344,565	105.2%	529
2052	5,622,640	477,953	2,319	-	392,153	5,534,521	5,239,112	105.6%	363
2053	5,534,521	478,316	2,303	-	385,726	5,439,628	5,125,433	106.1%	255
2054	5,439,628	478,540	2,284	-	378,810	5,337,614	5,003,135	106.7%	184
2055	5,337,614	477,836	2,262	-	371,409	5,228,925	4,872,590	107.3%	133



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 5 HIGHWAY PATROL		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	168,057
Interest on Total OPEB Liability		179,397
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(474,646)
Benefit Payments		(95,517)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(222,709)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>4,764,812</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>4,542,103</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	95,517
Employer Pre Funding Contributions		77,454
Active Member Contributions		12,783
Net Investment Income		21,109
Benefit Payments		(95,517)
Administrative Expense		(95)
Other		(290)
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>110,961</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>135,701</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>246,662</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>4,295,441</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>5.431%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>185,626</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>172,971</b>
<b>Percentage of ADC made by Employer</b>		<b>93%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(12,655)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>13,649</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>(7,460)</b>
<b>Average Expected Remaining Service</b>		<b>6.861227</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.672%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>4.219%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 5 HIGHWAY PATROL		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	168,057
Interest on the Total OPEB Liability		179,397
Current-Period Benefit Changes		-
Active Member Contributions		(12,783)
Projected Earnings on Plan Investments		(13,649)
Administrative Expense		95
Other Changes in Plan Fiduciary Net Position		290
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(69,178)
Recognition of Outflow/(Inflow) due to Investment Experience		(1,492)
<b>Net OPEB Expense</b>	<b>\$</b>	<b>250,737</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>4,629,111</b>
OPEB Expense		250,737
Employer Contributions		(172,971)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(405,468)
Change in Outflow/(Inflow) due to Investment Experience		(5,968)
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>4,295,441</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(405,468)
Investment Experience	\$	(5,968)
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 4.219% Discount Rate and 4.5% Ultimate Trend	\$	4,295,441
Increase Discount Rate by One Percentage Point	\$	3,580,665
Decrease Discount Rate by One Percentage Point	\$	5,218,068
Increase Trend Rate by One Percentage Point	\$	5,281,792
Decrease Trend Rate by One Percentage Point	\$	3,541,740

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 5									
HIGHWAY PATROL									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.861227	\$ -	\$ (474,646)	6.861227	\$ (69,178)	\$ (7,460)	5.000000	\$ (1,492)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (69,178)	\$ (69,178)	\$ -	\$ (1,492)	\$ (1,492)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (69,178)	\$ (69,178)	\$ -	\$ (1,492)	\$ (1,492)
6/30/2019	-	-	-	-	(69,178)	(69,178)	-	(1,492)	(1,492)
6/30/2020	-	-	-	-	(69,178)	(69,178)	-	(1,492)	(1,492)
6/30/2021	-	-	-	-	(69,178)	(69,178)	-	(1,492)	(1,492)
6/30/2022	-	-	-	-	(69,178)	(69,178)	-	-	-
6/30/2023	-	-	-	-	(59,578)	(59,578)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (405,468)	\$ (405,468)	\$ -	\$ (5,968)	\$ (5,968)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (405,468)			\$ (5,968)

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 6 CORRECTIONS		
Number of Participants Covered		
Active Participants	\$	31,408
Retired Participants <sup>a</sup>		22,646
Total Participants	\$	54,054
Actuarial Present Value of Projected Benefits		
Active Participants	\$	5,777,456
Retired Participants		5,654,096
Total Participants	\$	11,431,552
Actuarial Accrued Liability		
Active Participants	\$	3,642,505
Retired Participants		5,654,096
Total Participants	\$	9,296,601
Actuarial Value of Assets	\$	185,155
Unfunded Actuarial Accrued Liability	\$	9,111,446
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	227,389
Administrative Expenses		889
Amortization of UAAL		515,479
Total ADC	\$	743,757
Estimated Member Contributions		(57,069)
Net Employer ADC for FY 2018	\$	686,688
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	272,245
Part B Reimbursement		15,444
Dental Claims		15,138
Total	\$	302,827
Implicit Costs	\$	37,777
Total Employer Costs	\$	340,604
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	11,118
Dental Claims		4,750
Total	\$	15,868
Total Claims Costs	\$	356,472

*<sup>a</sup>Excludes 1,226 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 6**  
**CORRECTIONS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2047**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ 48	\$ 170,114	\$ 15,089	\$ 185,155	\$ 9,296,601	2.0%	\$ 227,389
2018	185,155	-	889	114,139	17,529	315,934	9,864,337	3.2%	224,584
2019	315,934	-	999	169,187	29,014	513,136	10,435,396	4.9%	221,245
2020	513,136	-	1,143	222,388	45,268	779,649	11,001,067	7.1%	217,005
2021	779,649	-	1,308	218,313	64,519	1,061,173	11,557,232	9.2%	211,858
2022	1,061,173	-	1,478	213,336	84,830	1,357,861	12,101,204	11.2%	205,760
2023	1,357,861	-	1,655	207,415	106,210	1,669,831	12,629,503	13.2%	198,754
2024	1,669,831	-	1,836	200,590	128,671	1,997,256	13,139,476	15.2%	191,172
2025	1,997,256	-	2,017	193,189	152,237	2,340,665	13,630,541	17.2%	183,204
2026	2,340,665	-	2,194	185,398	176,952	2,700,821	14,104,088	19.1%	174,917
2027	2,700,821	-	2,368	177,285	202,875	3,078,613	14,560,930	21.1%	166,315
2028	3,078,613	-	2,547	168,862	230,071	3,474,999	14,999,073	23.2%	157,566
2029	3,474,999	-	2,731	160,297	258,615	3,891,180	15,416,234	25.2%	148,813
2030	3,891,180	-	2,921	151,734	288,599	4,328,592	15,810,307	27.4%	139,983
2031	4,328,592	-	3,120	143,102	320,127	4,788,701	16,177,403	29.6%	131,061
2032	4,788,701	-	3,327	134,388	353,304	5,273,066	16,513,764	31.9%	122,065
2033	5,273,066	-	3,541	125,606	388,244	5,783,375	16,816,626	34.4%	113,107
2034	5,783,375	-	3,758	116,865	425,075	6,321,557	17,084,108	37.0%	104,184
2035	6,321,557	-	3,977	108,161	463,935	6,889,676	17,315,228	39.8%	95,352
2036	6,889,676	-	4,198	99,550	504,978	7,490,006	17,509,265	42.8%	86,884
2037	7,490,006	-	4,421	91,305	548,379	8,125,269	17,665,906	46.0%	78,934
2038	8,125,269	-	4,647	83,580	594,342	8,798,544	17,784,548	49.5%	71,411
2039	8,798,544	-	4,875	76,286	643,088	9,513,043	17,864,844	53.3%	64,133
2040	9,513,043	-	5,108	69,241	694,843	10,272,019	17,905,906	57.4%	56,927
2041	10,272,019	-	5,348	62,275	749,839	11,078,785	17,905,765	61.9%	49,704
2042	11,078,785	-	5,592	55,296	808,313	11,936,802	17,863,442	66.8%	42,439
2043	11,936,802	-	5,842	48,281	870,517	12,849,758	17,777,855	72.3%	35,220
2044	12,849,758	-	6,102	41,323	936,722	13,821,701	17,646,089	78.3%	28,341
2045	13,821,701	-	6,367	34,707	1,007,233	14,857,274	17,468,353	85.1%	22,062
2046	14,857,274	-	6,632	28,693	1,082,399	15,961,734	17,246,890	92.5%	16,512
2047	15,961,734	-	6,902	23,414	1,162,605	17,140,851	16,982,959	100.9%	11,806
2048	17,140,851	1,499,032	7,176	-	1,193,991	16,828,634	16,679,083	100.9%	8,043
2049	16,828,634	1,508,731	7,138	-	1,170,916	16,483,681	16,339,014	100.9%	5,248
2050	16,483,681	1,511,665	7,076	-	1,145,701	16,110,641	15,968,160	100.9%	3,301
2051	16,110,641	1,509,762	6,997	-	1,118,615	15,712,497	15,570,203	100.9%	2,000
2052	15,712,497	1,504,484	6,904	-	1,089,822	15,290,931	15,147,359	100.9%	1,166
2053	15,290,931	1,494,256	6,794	-	1,059,502	14,849,383	14,703,443	101.0%	658
2054	14,849,383	1,479,217	6,668	-	1,027,899	14,391,397	14,242,255	101.0%	360
2055	14,391,397	1,458,932	6,526	-	995,289	13,921,228	13,768,199	101.1%	192



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 6 CORRECTIONS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	609,551
Interest on Total OPEB Liability		574,853
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(1,637,897)
Benefit Payments		(325,344)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(778,837)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>15,990,189</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>15,211,352</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	325,344
Employer Pre Funding Contributions		146,933
Active Member Contributions		23,181
Net Investment Income		15,089
Benefit Payments		(325,344)
Administrative Expense		(48)
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>185,155</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>185,155</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>15,026,197</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>1.217%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>698,913</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>472,277</b>
<b>Percentage of ADC made by Employer</b>		<b>68%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(226,636)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>7,907</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>(7,182)</b>
<b>Average Expected Remaining Service</b>		<b>6.570241</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.497%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>4.074%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 6 CORRECTIONS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	609,551
Interest on the Total OPEB Liability		574,853
Current-Period Benefit Changes		-
Active Member Contributions		(23,181)
Projected Earnings on Plan Investments		(7,907)
Administrative Expense		48
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(249,290)
Recognition of Outflow/(Inflow) due to Investment Experience		(1,437)
<b>Net OPEB Expense</b>	<b>\$</b>	<b>902,637</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>15,990,189</b>
OPEB Expense		902,637
Employer Contributions		(472,277)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(1,388,607)
Change in Outflow/(Inflow) due to Investment Experience		(5,745)
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>15,026,197</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(1,388,607)
Investment Experience	\$	(5,745)
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 4.074% Discount Rate and 4.5% Ultimate Trend	\$	15,026,197
Increase Discount Rate by One Percentage Point	\$	12,689,574
Decrease Discount Rate by One Percentage Point	\$	18,029,523
Increase Trend Rate by One Percentage Point	\$	18,237,804
Decrease Trend Rate by One Percentage Point	\$	12,553,881

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 6									
CORRECTIONS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.570241	\$ -	\$ (1,637,897)	6.570241	\$ (249,290)	\$ (7,182)	5.000000	\$ (1,437)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (249,290)	\$ (249,290)	\$ -	\$ (1,437)	\$ (1,437)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (249,290)	\$ (249,290)	\$ -	\$ (1,437)	\$ (1,437)
6/30/2019	-	-	-	-	(249,290)	(249,290)	-	(1,437)	(1,437)
6/30/2020	-	-	-	-	(249,290)	(249,290)	-	(1,437)	(1,437)
6/30/2021	-	-	-	-	(249,290)	(249,290)	-	(1,434)	(1,434)
6/30/2022	-	-	-	-	(249,290)	(249,290)	-	-	-
6/30/2023	-	-	-	-	(142,157)	(142,157)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (1,388,607)	\$ (1,388,607)	\$ -	\$ (5,745)	\$ (5,745)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (1,388,607)			\$ (5,745)

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 7 PROTECTIVE SERVICES AND PUBLIC SAFETY		
Number of Participants Covered		
Active Participants	\$	7,590
Retired Participants <sup>a</sup>		5,598
Total Participants	\$	13,188
Actuarial Present Value of Projected Benefits		
Active Participants	\$	1,186,276
Retired Participants		1,110,147
Total Participants	\$	2,296,423
Actuarial Accrued Liability		
Active Participants	\$	805,917
Retired Participants		1,110,147
Total Participants	\$	1,916,064
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	1,916,064
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	44,113
Administrative Expenses		183
Amortization of UAAL		108,401
Total ADC	\$	152,697
Estimated Member Contributions		(5,537)
Net Employer ADC for FY 2018	\$	147,160
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	53,465
Part B Reimbursement		6,585
Dental Claims		3,691
Total	\$	63,741
Implicit Costs	\$	9,619
Total Employer Costs	\$	73,360
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	2,056
Dental Claims		1,159
Total	\$	3,215
Total Claims Costs	\$	76,575

*<sup>a</sup>Excludes 366 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 7**  
**PROTECTIVE SERVICES AND PUBLIC SAFETY**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2049**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,916,064	0.0%	\$ 44,113
2018	-	-	183	11,074	389	11,280	2,026,848	0.6%	42,763
2019	11,280	-	204	21,484	1,582	34,142	2,136,463	1.6%	41,445
2020	34,142	-	231	31,257	3,595	68,763	2,243,350	3.1%	40,079
2021	68,763	-	262	40,341	6,439	115,281	2,346,715	4.9%	38,621
2022	115,281	-	296	38,917	9,774	163,676	2,445,972	6.7%	37,089
2023	163,676	-	330	37,418	13,242	214,006	2,540,804	8.4%	35,497
2024	214,006	-	364	35,861	16,849	266,352	2,630,834	10.1%	33,839
2025	266,352	-	398	34,237	20,600	320,791	2,715,942	11.8%	32,131
2026	320,791	-	430	32,561	24,503	377,425	2,796,403	13.5%	30,388
2027	377,425	-	462	30,850	28,563	436,376	2,872,452	15.2%	28,623
2028	436,376	-	494	29,117	32,792	497,791	2,943,612	16.9%	26,845
2029	497,791	-	527	27,373	37,199	561,836	3,009,369	18.7%	25,064
2030	561,836	-	561	25,625	41,798	628,698	3,069,343	20.5%	23,298
2031	628,698	-	596	23,895	46,602	698,599	3,122,735	22.4%	21,550
2032	698,599	-	632	22,182	51,629	771,778	3,169,134	24.4%	19,825
2033	771,778	-	668	20,493	56,894	848,497	3,208,192	26.4%	18,142
2034	848,497	-	704	18,847	62,419	929,059	3,239,627	28.7%	16,489
2035	929,059	-	741	17,230	68,225	1,013,773	3,263,053	31.1%	14,876
2036	1,013,773	-	777	15,653	74,334	1,102,983	3,278,526	33.6%	13,324
2037	1,102,983	-	813	14,137	80,773	1,197,080	3,286,008	36.4%	11,844
2038	1,197,080	-	849	12,693	87,571	1,296,495	3,285,441	39.5%	10,445
2039	1,296,495	-	884	11,329	94,758	1,401,698	3,277,060	42.8%	9,130
2040	1,401,698	-	919	10,049	102,370	1,513,198	3,260,821	46.4%	7,903
2041	1,513,198	-	954	8,857	110,443	1,631,544	3,236,840	50.4%	6,765
2042	1,631,544	-	988	7,753	119,018	1,757,327	3,205,675	54.8%	5,720
2043	1,757,327	-	1,022	6,742	128,138	1,891,185	3,167,349	59.7%	4,772
2044	1,891,185	-	1,057	5,828	137,849	2,033,805	3,121,950	65.1%	3,925
2045	2,033,805	-	1,090	5,016	148,201	2,185,932	3,070,240	71.2%	3,176
2046	2,185,932	-	1,124	4,300	159,249	2,348,357	3,012,625	78.0%	2,523
2047	2,348,357	-	1,157	3,679	171,051	2,521,930	2,949,916	85.5%	1,968
2048	2,521,930	-	1,190	3,158	183,667	2,707,565	2,882,593	93.9%	1,508
2049	2,707,565	-	1,225	2,733	197,165	2,906,238	2,810,961	103.4%	1,140
2050	2,906,238	271,087	1,259	-	201,835	2,835,727	2,736,009	103.6%	851
2051	2,835,727	268,285	1,238	-	196,802	2,763,006	2,658,195	103.9%	630
2052	2,763,006	265,369	1,216	-	191,613	2,688,034	2,577,501	104.3%	460
2053	2,688,034	261,792	1,192	-	186,284	2,611,334	2,494,460	104.7%	333
2054	2,611,334	257,780	1,167	-	180,845	2,533,232	2,409,394	105.1%	238
2055	2,533,232	253,534	1,140	-	175,312	2,453,870	2,322,433	105.7%	166



## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>GASB NOS. 74 AND 75 DISCLOSURES</b> <b>CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S)</b> <b>BARGAINING UNIT NUMBER 7</b> <b>PROTECTIVE SERVICES AND PUBLIC SAFETY</b>		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	123,030
Interest on Total OPEB Liability		113,364
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(336,806)
Benefit Payments		(70,074)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(170,486)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>3,301,789</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>3,131,303</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	70,074
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(70,074)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>3,131,303</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>148,250</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>70,074</b>
<b>Percentage of ADC made by Employer</b>		<b>47%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(78,176)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.124944</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.344%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.947%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 7 PROTECTIVE SERVICES AND PUBLIC SAFETY		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	123,030
Interest on the Total OPEB Liability		113,364
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(54,989)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>181,405</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>3,301,789</b>
OPEB Expense		181,405
Employer Contributions		(70,074)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(281,817)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>3,131,303</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(281,817)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.947% Discount Rate and 4.5% Ultimate Trend	\$	3,131,303
Increase Discount Rate by One Percentage Point	\$	2,668,473
Decrease Discount Rate by One Percentage Point	\$	3,718,491
Increase Trend Rate by One Percentage Point	\$	3,767,330
Decrease Trend Rate by One Percentage Point	\$	2,638,225

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 7									
PROTECTIVE SERVICES AND PUBLIC SAFETY									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.124944	\$ -	\$ (336,806)	6.124944	\$ (54,989)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (54,989)	\$ (54,989)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (54,989)	\$ (54,989)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(54,989)	(54,989)	-	-	-
6/30/2020	-	-	-	-	(54,989)	(54,989)	-	-	-
6/30/2021	-	-	-	-	(54,989)	(54,989)	-	-	-
6/30/2022	-	-	-	-	(54,989)	(54,989)	-	-	-
6/30/2023	-	-	-	-	(6,872)	(6,872)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (281,817)	\$ (281,817)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (281,817)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 8 FIREFIGHTERS		
Number of Participants Covered		
Active Participants	\$	6,770
Retired Participants <sup>a</sup>		3,297
Total Participants	\$	10,067
Actuarial Present Value of Projected Benefits		
Active Participants	\$	1,044,880
Retired Participants		831,424
Total Participants	\$	1,876,304
Actuarial Accrued Liability		
Active Participants	\$	572,352
Retired Participants		831,424
Total Participants	\$	1,403,776
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	1,403,776
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	42,157
Administrative Expenses		128
Amortization of UAAL		79,418
Total ADC	\$	121,703
Estimated Member Contributions		(5,286)
Net Employer ADC for FY 2018	\$	116,417
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	38,245
Part B Reimbursement		3,446
Dental Claims		2,310
Total	\$	44,001
Implicit Costs	\$	7,374
Total Employer Costs	\$	51,375
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	1,735
Dental Claims		733
Total	\$	2,468
Total Claims Costs	\$	53,843

*<sup>a</sup>Excludes 56 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)  
BARGAINING UNIT NUMBER 8  
FIREFIGHTERS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2049**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,403,776	0.0%	\$ 42,157
2018	-	-	128	10,571	373	10,816	1,497,955	0.7%	42,407
2019	10,816	-	141	21,274	1,543	33,492	1,595,023	2.1%	42,625
2020	33,492	-	159	32,088	3,580	69,001	1,693,651	4.1%	42,722
2021	69,001	-	180	42,902	6,551	118,274	1,793,742	6.6%	42,684
2022	118,274	-	205	42,889	10,137	171,095	1,894,982	9.0%	42,498
2023	171,095	-	231	42,730	13,976	227,570	1,996,780	11.4%	42,144
2024	227,570	-	259	42,403	18,074	287,788	2,098,857	13.7%	41,656
2025	287,788	-	288	41,944	22,441	351,885	2,200,855	16.0%	41,046
2026	351,885	-	317	41,362	27,085	420,015	2,303,082	18.2%	40,320
2027	420,015	-	345	40,666	32,019	492,355	2,405,645	20.5%	39,493
2028	492,355	-	376	39,869	37,256	569,104	2,508,271	22.7%	38,556
2029	569,104	-	408	38,964	42,809	650,469	2,610,262	24.9%	37,503
2030	650,469	-	442	37,944	48,695	736,666	2,711,426	27.2%	36,346
2031	736,666	-	478	36,823	54,929	827,940	2,810,855	29.5%	35,074
2032	827,940	-	517	35,590	61,528	924,541	2,907,675	31.8%	33,669
2033	924,541	-	557	34,226	68,511	1,026,721	3,001,286	34.2%	32,138
2034	1,026,721	-	599	32,737	75,895	1,134,754	3,090,996	36.7%	30,456
2035	1,134,754	-	643	31,099	83,699	1,248,909	3,176,153	39.3%	28,624
2036	1,248,909	-	690	29,314	91,944	1,369,477	3,255,834	42.1%	26,689
2037	1,369,477	-	737	27,426	100,652	1,496,818	3,329,456	45.0%	24,671
2038	1,496,818	-	787	25,458	109,851	1,631,340	3,396,312	48.0%	22,584
2039	1,631,340	-	838	23,422	119,569	1,773,493	3,455,562	51.3%	20,434
2040	1,773,493	-	892	21,326	129,841	1,923,768	3,506,431	54.9%	18,230
2041	1,923,768	-	947	19,177	140,702	2,082,700	3,548,187	58.7%	16,013
2042	2,082,700	-	1,004	17,017	152,193	2,250,906	3,580,392	62.9%	13,845
2043	2,250,906	-	1,061	14,906	164,361	2,429,112	3,602,698	67.4%	11,728
2044	2,429,112	-	1,120	12,848	177,259	2,618,099	3,614,823	72.4%	9,707
2045	2,618,099	-	1,179	10,886	190,945	2,818,751	3,617,004	77.9%	7,843
2046	2,818,751	-	1,238	9,081	205,486	3,032,080	3,609,535	84.0%	6,174
2047	3,032,080	-	1,296	7,470	220,956	3,259,210	3,593,045	90.7%	4,722
2048	3,259,210	-	1,355	6,078	237,440	3,501,373	3,568,190	98.1%	3,494
2049	3,501,373	-	1,415	4,909	255,025	3,759,892	3,535,721	106.3%	2,500
2050	3,759,892	288,638	1,474	-	263,346	3,733,126	3,496,815	106.8%	1,735
2051	3,733,126	290,725	1,473	-	261,323	3,702,251	3,452,097	107.2%	1,169
2052	3,702,251	292,160	1,471	-	259,024	3,667,644	3,402,032	107.8%	764
2053	3,667,644	292,445	1,465	-	256,494	3,630,228	3,347,595	108.4%	486
2054	3,630,228	291,955	1,456	-	253,788	3,590,605	3,289,405	109.2%	300
2055	3,590,605	290,684	1,445	-	250,950	3,549,426	3,228,097	110.0%	179



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 8 FIREFIGHTERS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	116,930
Interest on Total OPEB Liability		88,265
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(248,744)
Benefit Payments		(49,073)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(92,622)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>2,400,763</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>2,308,141</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	49,073
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(49,073)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>2,308,141</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>118,158</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>49,073</b>
<b>Percentage of ADC made by Employer</b>		<b>42%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(69,085)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>9.568629</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.540%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>4.108%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 8 FIREFIGHTERS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	116,930
Interest on the Total OPEB Liability		88,265
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(25,996)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>179,199</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>2,400,763</b>
OPEB Expense		179,199
Employer Contributions		(49,073)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(222,748)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>2,308,141</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(222,748)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 4.108% Discount Rate and 4.5% Ultimate Trend	\$	2,308,141
Increase Discount Rate by One Percentage Point	\$	1,947,685
Decrease Discount Rate by One Percentage Point	\$	2,772,181
Increase Trend Rate by One Percentage Point	\$	2,821,963
Decrease Trend Rate by One Percentage Point	\$	1,918,336

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 8									
FIREFIGHTERS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	9.568629	\$ -	\$ (248,744)	9.568629	\$ (25,996)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (25,996)	\$ (25,996)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (25,996)	\$ (25,996)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(25,996)	(25,996)	-	-	-
6/30/2020	-	-	-	-	(25,996)	(25,996)	-	-	-
6/30/2021	-	-	-	-	(25,996)	(25,996)	-	-	-
6/30/2022	-	-	-	-	(25,996)	(25,996)	-	-	-
6/30/2023	-	-	-	-	(25,996)	(25,996)	-	-	-
6/30/2024	-	-	-	-	(25,996)	(25,996)	-	-	-
6/30/2025	-	-	-	-	(25,996)	(25,996)	-	-	-
6/30/2026	-	-	-	-	(14,780)	(14,780)	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (222,748)	\$ (222,748)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (222,748)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 9 PROFESSIONAL ENGINEERS		
Number of Participants Covered		
Active Participants	\$	12,222
Retired Participants <sup>a</sup>		6,328
Total Participants	\$	18,550
Actuarial Present Value of Projected Benefits		
Active Participants	\$	2,014,743
Retired Participants		1,090,479
Total Participants	\$	3,105,222
Actuarial Accrued Liability		
Active Participants	\$	1,597,460
Retired Participants		1,090,479
Total Participants	\$	2,687,939
Actuarial Value of Assets	\$	38,829
Unfunded Actuarial Accrued Liability	\$	2,649,110
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	56,930
Administrative Expenses		224
Amortization of UAAL		149,873
Total ADC	\$	207,027
Estimated Member Contributions		(7,144)
Net Employer ADC for FY 2018	\$	199,883
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	58,152
Part B Reimbursement		9,596
Dental Claims		4,350
Total	\$	72,098
Implicit Costs	\$	14,219
Total Employer Costs	\$	86,317
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	1,962
Dental Claims		1,377
Total	\$	3,339
Total Claims Costs	\$	89,656

*<sup>a</sup>Excludes 278 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 9**  
**PROFESSIONAL ENGINEERS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2049**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ 11	\$ 35,210	\$ 3,630	\$ 38,829	\$ 2,687,939	1.4%	\$ 56,930
2018	38,829	-	224	14,288	3,330	56,223	2,855,241	2.0%	53,579
2019	56,223	-	266	26,922	5,046	87,925	3,015,045	2.9%	50,416
2020	87,925	-	315	38,049	7,750	133,409	3,165,237	4.2%	47,299
2021	133,409	-	368	47,667	11,404	192,112	3,304,920	5.8%	44,260
2022	192,112	-	423	44,683	15,569	251,941	3,433,723	7.3%	41,283
2023	251,941	-	476	41,759	19,818	313,042	3,551,717	8.8%	38,365
2024	313,042	-	528	38,893	24,161	375,568	3,658,552	10.3%	35,537
2025	375,568	-	578	36,115	28,612	439,717	3,754,510	11.7%	32,842
2026	439,717	-	625	33,467	33,186	505,745	3,840,597	13.2%	30,259
2027	505,745	-	667	30,926	37,900	573,904	3,917,975	14.6%	27,778
2028	573,904	-	709	28,487	42,774	644,456	3,986,867	16.2%	25,417
2029	644,456	-	750	26,167	47,825	717,698	4,046,921	17.7%	23,171
2030	717,698	-	791	23,962	53,077	793,946	4,098,274	19.4%	21,046
2031	793,946	-	831	21,877	58,552	873,544	4,140,711	21.1%	19,049
2032	873,544	-	872	19,921	64,275	956,868	4,173,663	22.9%	17,179
2033	956,868	-	913	18,093	70,275	1,044,323	4,196,762	24.9%	15,444
2034	1,044,323	-	954	16,398	76,579	1,136,346	4,210,053	27.0%	13,835
2035	1,136,346	-	995	14,830	83,221	1,233,402	4,213,411	29.3%	12,350
2036	1,233,402	-	1,036	13,386	90,233	1,335,985	4,206,487	31.8%	10,991
2037	1,335,985	-	1,076	12,067	97,653	1,444,629	4,189,400	34.5%	9,732
2038	1,444,629	-	1,115	10,848	105,517	1,559,879	4,162,425	37.5%	8,561
2039	1,559,879	-	1,155	9,716	113,866	1,682,306	4,125,369	40.8%	7,474
2040	1,682,306	-	1,195	8,669	122,739	1,812,519	4,077,927	44.4%	6,477
2041	1,812,519	-	1,234	7,711	132,183	1,951,179	4,020,585	48.5%	5,564
2042	1,951,179	-	1,273	6,837	142,245	2,098,988	3,953,448	53.1%	4,732
2043	2,098,988	-	1,313	6,045	152,976	2,256,696	3,876,157	58.2%	3,979
2044	2,256,696	-	1,353	5,332	164,430	2,425,105	3,788,950	64.0%	3,295
2045	2,425,105	-	1,393	4,688	176,666	2,605,066	3,692,236	70.6%	2,688
2046	2,605,066	-	1,432	4,120	189,745	2,797,499	3,586,367	78.0%	2,157
2047	2,797,499	-	1,471	3,627	203,735	3,003,390	3,472,293	86.5%	1,700
2048	3,003,390	-	1,507	3,208	218,708	3,223,799	3,351,223	96.2%	1,321
2049	3,223,799	-	1,544	2,865	234,740	3,459,860	3,224,134	107.3%	1,010
2050	3,459,860	355,008	1,579	-	239,126	3,342,399	3,092,209	108.1%	756
2051	3,342,399	348,879	1,541	-	230,796	3,222,775	2,956,759	109.0%	551
2052	3,222,775	341,690	1,499	-	222,346	3,101,932	2,818,676	110.0%	392
2053	3,101,932	333,552	1,454	-	213,841	2,980,767	2,678,801	111.3%	271
2054	2,980,767	324,424	1,407	-	205,348	2,860,284	2,538,070	112.7%	182
2055	2,860,284	314,607	1,359	-	196,930	2,741,248	2,397,168	114.4%	120



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 9 PROFESSIONAL ENGINEERS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	166,173
Interest on Total OPEB Liability		154,495
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(475,991)
Benefit Payments		(82,449)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(237,772)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>4,640,159</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>4,402,387</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	82,449
Employer Pre Funding Contributions		35,210
Active Member Contributions		-
Net Investment Income		3,630
Benefit Payments		(82,449)
Administrative Expense		(11)
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>38,829</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>38,829</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>4,363,558</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.882%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>200,997</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>117,659</b>
<b>Percentage of ADC made by Employer</b>		<b>59%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(83,338)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>1,778</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>(1,852)</b>
<b>Average Expected Remaining Service</b>		<b>5.858108</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.242%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.866%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

<b>GASB NOS. 74 AND 75 DISCLOSURES</b> <b>OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S)</b> <b>BARGAINING UNIT NUMBER 9</b> <b>PROFESSIONAL ENGINEERS</b>	
<b>Fiscal Year Ending June 30, 2017</b>	
<b>OPEB Expense <sup>a</sup></b>	
Service Cost	\$ 166,173
Interest on the Total OPEB Liability	154,495
Current-Period Benefit Changes	-
Active Member Contributions	-
Projected Earnings on Plan Investments	(1,778)
Administrative Expense	11
Other Changes in Plan Fiduciary Net Position	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	-
Recognition of Outflow/(Inflow) due to Assumption Changes	(81,253)
Recognition of Outflow/(Inflow) due to Investment Experience	(371)
<b>Net OPEB Expense</b>	<b>\$ 237,277</b>
<b>Reconciliation of Net OPEB Liability</b>	
<b>Net OPEB Liability beginning of year</b>	<b>\$ 4,640,159</b>
OPEB Expense	237,277
Employer Contributions	(117,659)
Change in Outflow/(Inflow) due to Non-investment Experience	-
Change in Outflow/(Inflow) due to Assumption Changes	(394,738)
Change in Outflow/(Inflow) due to Investment Experience	(1,481)
<b>Net OPEB Liability End of year</b>	<b>\$ 4,363,558</b>
<b>Deferred (Inflows)</b>	
Non-investment Experience	\$ -
Assumption Changes	\$ (394,738)
Investment Experience	\$ (1,481)
<b>Deferred Outflows</b>	
Non-investment Experience	\$ -
Assumption Changes	\$ -
Investment Experience	\$ -
<b>Net OPEB Liability Sensitivity</b>	
Baseline at 3.866% Discount Rate and 4.5% Ultimate Trend	\$ 4,363,558
Increase Discount Rate by One Percentage Point	\$ 3,727,267
Decrease Discount Rate by One Percentage Point	\$ 5,161,339
Increase Trend Rate by One Percentage Point	\$ 5,241,071
Decrease Trend Rate by One Percentage Point	\$ 3,676,765

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 9									
PROFESSIONAL ENGINEERS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	5.858108	\$ -	\$ (475,991)	5.858108	\$ (81,253)	\$ (1,852)	5.000000	\$ (371)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (81,253)	\$ (81,253)	\$ -	\$ (371)	\$ (371)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (81,253)	\$ (81,253)	\$ -	\$ (371)	\$ (371)
6/30/2019	-	-	-	-	(81,253)	(81,253)	-	(371)	(371)
6/30/2020	-	-	-	-	(81,253)	(81,253)	-	(371)	(371)
6/30/2021	-	-	-	-	(81,253)	(81,253)	-	(368)	(368)
6/30/2022	-	-	-	-	(69,726)	(69,726)	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (394,738)	\$ (394,738)	\$ -	\$ (1,481)	\$ (1,481)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (394,738)			\$ (1,481)

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 10 PROFESSIONAL SCIENTIFIC		
Number of Participants Covered		
Active Participants	\$	3,760
Retired Participants <sup>a</sup>		<u>1,722</u>
Total Participants	\$	5,482
Actuarial Present Value of Projected Benefits		
Active Participants	\$	479,766
Retired Participants		<u>299,574</u>
Total Participants	\$	779,340
Actuarial Accrued Liability		
Active Participants	\$	335,480
Retired Participants		<u>299,574</u>
Total Participants	\$	635,054
Actuarial Value of Assets	\$	8,954
Unfunded Actuarial Accrued Liability	\$	626,100
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	16,751
Administrative Expenses		56
Amortization of UAAL		<u>35,422</u>
Total ADC	\$	52,229
Estimated Member Contributions		<u>(2,101)</u>
Net Employer ADC for FY 2018	\$	50,128
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	14,821
Part B Reimbursement		2,601
Dental Claims		<u>1,159</u>
Total	\$	18,581
Implicit Costs	\$	<u>2,915</u>
Total Employer Costs	\$	21,496
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	462
Dental Claims		<u>368</u>
Total	\$	830
Total Claims Costs	\$	22,326

*<sup>a</sup>Excludes 88 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 10**  
**PROFESSIONAL SCIENTIFIC**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2048**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ 3	\$ 8,119	\$ 838	\$ 8,954	\$ 635,054	1.4%	\$ 16,751
2018	8,954	-	56	4,202	800	13,900	676,979	2.1%	15,954
2019	13,900	-	65	8,010	1,296	23,141	717,478	3.2%	15,245
2020	23,141	-	76	11,491	2,093	36,649	756,394	4.8%	14,594
2021	36,649	-	88	14,682	3,190	54,433	793,573	6.9%	13,979
2022	54,433	-	101	14,080	4,463	72,875	828,919	8.8%	13,390
2023	72,875	-	114	13,503	5,784	92,048	862,523	10.7%	12,815
2024	92,048	-	126	12,941	7,159	112,022	894,486	12.5%	12,245
2025	112,022	-	138	12,383	8,593	132,860	924,875	14.4%	11,691
2026	132,860	-	150	11,841	10,090	154,641	953,683	16.2%	11,145
2027	154,641	-	161	11,306	11,656	177,442	981,170	18.1%	10,615
2028	177,442	-	172	10,788	13,297	201,355	1,007,347	20.0%	10,105
2029	201,355	-	184	10,289	15,020	226,480	1,032,002	21.9%	9,595
2030	226,480	-	196	9,791	16,831	252,906	1,054,971	24.0%	9,083
2031	252,906	-	209	9,292	18,736	280,725	1,075,925	26.1%	8,571
2032	280,725	-	222	8,793	20,743	310,039	1,094,693	28.3%	8,052
2033	310,039	-	236	8,288	22,859	340,950	1,111,080	30.7%	7,535
2034	340,950	-	250	7,784	25,091	373,575	1,124,862	33.2%	7,026
2035	373,575	-	264	7,290	27,448	408,049	1,135,991	35.9%	6,524
2036	408,049	-	278	6,802	29,939	444,512	1,144,480	38.8%	6,023
2037	444,512	-	292	6,315	32,576	483,111	1,150,195	42.0%	5,527
2038	483,111	-	306	5,833	35,368	524,006	1,153,045	45.4%	5,041
2039	524,006	-	320	5,361	38,328	567,375	1,153,103	49.2%	4,566
2040	567,375	-	335	4,901	41,468	613,409	1,150,355	53.3%	4,101
2041	613,409	-	349	4,450	44,803	662,313	1,144,635	57.9%	3,649
2042	662,313	-	363	4,013	48,347	714,310	1,136,169	62.9%	3,215
2043	714,310	-	378	3,592	52,117	769,641	1,125,079	68.4%	2,797
2044	769,641	-	392	3,189	56,130	828,568	1,111,257	74.6%	2,404
2045	828,568	-	407	2,810	60,406	891,377	1,094,921	81.4%	2,041
2046	891,377	-	421	2,462	64,966	958,384	1,076,244	89.0%	1,708
2047	958,384	-	436	2,144	69,832	1,029,924	1,055,383	97.6%	1,407
2048	1,029,924	-	450	1,858	75,029	1,106,361	1,032,445	107.2%	1,136
2049	1,106,361	97,715	466	-	77,032	1,085,212	1,007,609	107.7%	895
2050	1,085,212	97,334	460	-	75,507	1,062,925	981,103	108.3%	686
2051	1,062,925	96,655	454	-	73,909	1,039,725	953,146	109.1%	509
2052	1,039,725	95,507	447	-	72,261	1,016,032	924,154	109.9%	364
2053	1,016,032	94,114	438	-	70,586	992,066	894,340	110.9%	251
2054	992,066	92,486	430	-	68,900	968,050	863,921	112.1%	168
2055	968,050	90,665	420	-	67,217	944,182	833,085	113.3%	110



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 10 PROFESSIONAL SCIENTIFIC		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	45,853
Interest on Total OPEB Liability		37,273
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(103,789)
Benefit Payments		(20,533)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(41,196)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>1,060,929</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>1,019,733</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	20,533
Employer Pre Funding Contributions		8,119
Active Member Contributions		-
Net Investment Income		838
Benefit Payments		(20,533)
Administrative Expense		(3)
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>8,954</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>8,954</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>1,010,779</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.878%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>50,708</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>28,652</b>
<b>Percentage of ADC made by Employer</b>		<b>57%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(22,056)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>410</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>(428)</b>
<b>Average Expected Remaining Service</b>		<b>7.400512</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.399%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.993%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 10 PROFESSIONAL SCIENTIFIC		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	45,853
Interest on the Total OPEB Liability		37,273
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		(410)
Administrative Expense		3
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(14,025)
Recognition of Outflow/(Inflow) due to Investment Experience		(86)
<b>Net OPEB Expense</b>	<b>\$</b>	<b>68,608</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>1,060,929</b>
OPEB Expense		68,608
Employer Contributions		(28,652)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(89,764)
Change in Outflow/(Inflow) due to Investment Experience		(342)
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>1,010,779</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(89,764)
Investment Experience	\$	(342)
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.993% Discount Rate and 4.5% Ultimate Trend	\$	1,010,779
Increase Discount Rate by One Percentage Point	\$	864,367
Decrease Discount Rate by One Percentage Point	\$	1,194,115
Increase Trend Rate by One Percentage Point	\$	1,214,192
Decrease Trend Rate by One Percentage Point	\$	852,161

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 10									
PROFESSIONAL SCIENTIFIC									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	7.400512	\$ -	\$ (103,789)	7.400512	\$ (14,025)	\$ (428)	5.000000	\$ (86)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (14,025)	\$ (14,025)	\$ -	\$ (86)	\$ (86)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (14,025)	\$ (14,025)	\$ -	\$ (86)	\$ (86)
6/30/2019	-	-	-	-	(14,025)	(14,025)	-	(86)	(86)
6/30/2020	-	-	-	-	(14,025)	(14,025)	-	(86)	(86)
6/30/2021	-	-	-	-	(14,025)	(14,025)	-	(84)	(84)
6/30/2022	-	-	-	-	(14,025)	(14,025)	-	-	-
6/30/2023	-	-	-	-	(14,025)	(14,025)	-	-	-
6/30/2024	-	-	-	-	(5,614)	(5,614)	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (89,764)	\$ (89,764)	\$ -	\$ (342)	\$ (342)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (89,764)			\$ (342)

## Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S)  
BARGAINING UNIT NUMBER 11  
ENGINEERING AND SCIENTIFIC TECHNICIANS**

Number of Participants Covered	
Active Participants	\$ 2,545
Retired Participants <sup>a</sup>	<u>1,863</u>
Total Participants	\$ 4,408
Actuarial Present Value of Projected Benefits	
Active Participants	\$ 309,808
Retired Participants	<u>314,473</u>
Total Participants	\$ 624,281
Actuarial Accrued Liability	
Active Participants	\$ 227,043
Retired Participants	<u>314,473</u>
Total Participants	\$ 541,516
Actuarial Value of Assets	\$ -
Unfunded Actuarial Accrued Liability	\$ 541,516
ADC Based on June 30, 2017 Actuarial Valuation	
Normal Cost	\$ 10,612
Administrative Expenses	58
Amortization of UAAL	<u>30,636</u>
Total ADC	\$ 41,306
Estimated Member Contributions	<u>-</u>
Net Employer ADC for FY 2018	\$ 41,306
Employer Share of FY 2018 Claims Costs	
Explicit Costs	
Medical and Rx Claims	\$ 15,684
Part B Reimbursement	2,440
Dental Claims	<u>1,197</u>
Total	\$ 19,321
Implicit Costs	<u>3,760</u>
Total Employer Costs	\$ 23,081
Retiree Share of FY 2018 Claim Costs	
Medical and Rx Claims	\$ 518
Dental Claims	<u>376</u>
Total	\$ 894
Total Claims Costs	\$ 23,975

*<sup>a</sup>Excludes 107 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 11**  
**ENGINEERING AND SCIENTIFIC TECHNICIANS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2050**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 541,516	0.0%	\$ 10,612
2018	-	-	-	-	-	-	568,401	0.0%	10,037
2019	-	-	64	2,525	88	2,549	594,107	0.4%	9,501
2020	2,549	-	72	4,786	354	7,617	618,041	1.2%	8,968
2021	7,617	-	80	6,786	794	15,117	640,021	2.4%	8,447
2022	15,117	-	89	8,536	1,403	24,967	659,950	3.8%	7,939
2023	24,967	-	98	8,037	2,102	35,008	677,904	5.2%	7,436
2024	35,008	-	107	7,543	2,815	45,259	693,775	6.5%	6,946
2025	45,259	-	115	7,062	3,543	55,749	707,681	7.9%	6,476
2026	55,749	-	123	6,599	4,290	66,515	719,926	9.2%	6,020
2027	66,515	-	130	6,149	5,058	77,592	730,548	10.6%	5,589
2028	77,592	-	136	5,726	5,849	89,031	739,677	12.0%	5,181
2029	89,031	-	143	5,323	6,667	100,878	747,364	13.5%	4,793
2030	100,878	-	149	4,942	7,515	113,186	753,519	15.0%	4,437
2031	113,186	-	155	4,592	8,399	126,022	758,141	16.6%	4,111
2032	126,022	-	161	4,273	9,321	139,455	761,336	18.3%	3,808
2033	139,455	-	168	3,975	10,288	153,550	762,988	20.1%	3,527
2034	153,550	-	174	3,700	11,305	168,381	763,134	22.1%	3,264
2035	168,381	-	179	3,443	12,375	184,020	761,761	24.2%	3,012
2036	184,020	-	186	3,197	13,504	200,535	758,806	26.4%	2,777
2037	200,535	-	192	2,969	14,698	218,010	754,220	28.9%	2,558
2038	218,010	-	198	2,756	15,963	236,531	748,037	31.6%	2,351
2039	236,531	-	203	2,555	17,304	256,187	740,336	34.6%	2,155
2040	256,187	-	209	2,365	18,728	277,071	731,004	37.9%	1,968
2041	277,071	-	215	2,183	20,241	299,280	720,152	41.6%	1,785
2042	299,280	-	221	2,005	21,851	322,915	707,902	45.6%	1,609
2043	322,915	-	226	1,835	23,566	348,090	694,153	50.1%	1,438
2044	348,090	-	232	1,670	25,392	374,920	678,989	55.2%	1,273
2045	374,920	-	237	1,510	27,340	403,533	662,506	60.9%	1,116
2046	403,533	-	243	1,359	29,417	434,066	644,809	67.3%	969
2047	434,066	-	248	1,217	31,635	466,670	626,022	74.5%	830
2048	466,670	-	253	1,083	34,003	501,503	606,201	82.7%	700
2049	501,503	-	259	959	36,535	538,738	585,483	92.0%	579
2050	538,738	-	264	842	39,241	578,557	564,071	102.6%	467
2051	578,557	61,357	269	-	39,915	556,846	542,080	102.7%	368
2052	556,846	60,140	262	-	38,379	534,823	519,641	102.9%	281
2053	534,823	58,553	253	-	36,832	512,849	497,122	103.2%	209
2054	512,849	56,736	244	-	35,298	491,167	474,768	103.5%	150
2055	491,167	54,841	235	-	33,788	469,879	452,686	103.8%	104



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 11 ENGINEERING AND SCIENTIFIC TECHNICIANS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	29,767
Interest on Total OPEB Liability		30,053
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(87,170)
Benefit Payments		(22,048)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(49,398)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>909,575</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>860,177</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	22,048
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(22,048)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>860,177</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>40,103</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>22,048</b>
<b>Percentage of ADC made by Employer</b>		<b>55%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(18,055)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>5.847336</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.237%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.859%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 11 ENGINEERING AND SCIENTIFIC TECHNICIANS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	29,767
Interest on the Total OPEB Liability		30,053
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(14,908)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>44,912</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>909,575</b>
OPEB Expense		44,912
Employer Contributions		(22,048)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(72,262)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>860,177</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(72,262)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.859% Discount Rate and 4.5% Ultimate Trend	\$	860,177
Increase Discount Rate by One Percentage Point	\$	742,771
Decrease Discount Rate by One Percentage Point	\$	1,006,647
Increase Trend Rate by One Percentage Point	\$	1,015,300
Decrease Trend Rate by One Percentage Point	\$	737,293

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 11									
ENGINEERING AND SCIENTIFIC TECHNICIANS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	5.847336	\$ -	\$ (87,170)	5.847336	\$ (14,908)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (14,908)	\$ (14,908)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (14,908)	\$ (14,908)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(14,908)	(14,908)	-	-	-
6/30/2020	-	-	-	-	(14,908)	(14,908)	-	-	-
6/30/2021	-	-	-	-	(14,908)	(14,908)	-	-	-
6/30/2022	-	-	-	-	(12,630)	(12,630)	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (72,262)	\$ (72,262)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (72,262)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 12 CRAFT AND MAINTENANCE		
Number of Participants Covered		
Active Participants	\$	12,535
Retired Participants <sup>a</sup>		9,447
Total Participants	\$	21,982
Actuarial Present Value of Projected Benefits		
Active Participants	\$	1,572,836
Retired Participants		1,671,379
Total Participants	\$	3,244,215
Actuarial Accrued Liability		
Active Participants	\$	1,053,347
Retired Participants		1,671,379
Total Participants	\$	2,724,726
Actuarial Value of Assets	\$	10,206
Unfunded Actuarial Accrued Liability	\$	2,714,520
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	64,017
Administrative Expenses		292
Amortization of UAAL		153,574
Total ADC	\$	217,883
Estimated Member Contributions		(10,718)
Net Employer ADC for FY 2018	\$	207,165
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	80,885
Part B Reimbursement		12,009
Dental Claims		5,927
Total	\$	98,821
Implicit Costs	\$	17,239
Total Employer Costs	\$	116,060
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	2,808
Dental Claims		1,827
Total	\$	4,635
Total Claims Costs	\$	120,695

*<sup>a</sup>Excludes 587 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 12**  
**CRAFT AND MAINTENANCE**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2048**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ 7,186	\$ -	\$ 4	\$ 2,152	\$ 872	\$ 10,206	\$ 2,724,726	0.4%	\$ 64,017
2018	10,206	-	292	21,436	1,499	32,849	2,871,482	1.1%	61,455
2019	32,849	-	325	30,890	3,484	66,898	3,014,411	2.2%	58,943
2020	66,898	-	366	39,539	6,271	112,342	3,150,816	3.6%	56,415
2021	112,342	-	411	47,355	9,857	169,143	3,279,642	5.2%	53,840
2022	169,143	-	458	54,297	14,239	237,221	3,400,455	7.0%	51,176
2023	237,221	-	507	51,682	19,100	307,496	3,512,614	8.8%	48,435
2024	307,496	-	554	48,989	24,118	380,049	3,616,041	10.5%	45,647
2025	380,049	-	600	46,247	29,300	454,996	3,711,076	12.3%	42,805
2026	454,996	-	644	43,449	34,655	532,456	3,797,790	14.0%	39,926
2027	532,456	-	687	40,613	40,191	612,573	3,876,464	15.8%	37,077
2028	612,573	-	729	37,807	45,921	695,572	3,946,926	17.6%	34,311
2029	695,572	-	772	35,082	51,865	781,747	4,008,959	19.5%	31,638
2030	781,747	-	815	32,453	58,043	871,428	4,061,964	21.5%	29,083
2031	871,428	-	858	29,941	64,480	964,991	4,105,439	23.5%	26,641
2032	964,991	-	901	27,542	71,204	1,062,836	4,139,279	25.7%	24,318
2033	1,062,836	-	945	25,263	78,244	1,165,398	4,163,128	28.0%	22,140
2034	1,165,398	-	989	23,128	85,633	1,273,170	4,176,763	30.5%	20,109
2035	1,273,170	-	1,032	21,141	93,406	1,386,685	4,180,324	33.2%	18,182
2036	1,386,685	-	1,074	19,256	101,601	1,506,468	4,173,818	36.1%	16,357
2037	1,506,468	-	1,118	17,474	110,256	1,633,080	4,156,958	39.3%	14,659
2038	1,633,080	-	1,161	15,820	119,413	1,767,152	4,129,690	42.8%	13,078
2039	1,767,152	-	1,203	14,282	129,117	1,909,348	4,092,130	46.7%	11,607
2040	1,909,348	-	1,246	12,853	139,416	2,060,371	4,044,455	50.9%	10,246
2041	2,060,371	-	1,288	11,535	150,362	2,220,980	3,986,714	55.7%	8,996
2042	2,220,980	-	1,330	10,326	162,009	2,391,985	3,919,644	61.0%	7,836
2043	2,391,985	-	1,371	9,207	174,417	2,574,238	3,843,648	67.0%	6,754
2044	2,574,238	-	1,412	8,166	187,646	2,768,638	3,758,901	73.7%	5,761
2045	2,768,638	-	1,452	7,214	201,763	2,976,163	3,666,332	81.2%	4,852
2046	2,976,163	-	1,492	6,345	216,838	3,197,854	3,566,652	89.7%	4,029
2047	3,197,854	-	1,533	5,563	232,948	3,434,832	3,460,327	99.3%	3,294
2048	3,434,832	-	1,574	4,868	250,173	3,688,299	3,348,353	110.2%	2,651
2049	3,688,299	350,683	1,614	-	255,910	3,591,912	3,231,691	111.1%	2,099
2050	3,591,912	345,560	1,582	-	249,077	3,493,847	3,111,254	112.3%	1,632
2051	3,493,847	339,329	1,547	-	242,162	3,395,133	2,988,007	113.6%	1,246
2052	3,395,133	331,968	1,509	-	235,240	3,296,896	2,863,000	115.2%	928
2053	3,296,896	323,544	1,468	-	228,391	3,200,275	2,737,281	116.9%	675
2054	3,200,275	314,470	1,426	-	221,683	3,106,062	2,611,539	118.9%	480
2055	3,106,062	304,859	1,383	-	215,170	3,014,990	2,486,392	121.3%	333



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 12 CRAFT AND MAINTENANCE		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	167,689
Interest on Total OPEB Liability		154,036
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(433,966)
Benefit Payments		(110,860)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(223,101)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>4,540,951</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>4,317,850</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	110,860
Employer Pre Funding Contributions		1,076
Active Member Contributions		1,076
Net Investment Income		872
Benefit Payments		(110,860)
Administrative Expense		(4)
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>3,020</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>7,186</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>10,206</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>4,307,644</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.236%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>210,461</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>111,936</b>
<b>Percentage of ADC made by Employer</b>		<b>53%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(98,525)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>600</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>(272)</b>
<b>Average Expected Remaining Service</b>		<b>5.773655</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.310%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.920%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 12 CRAFT AND MAINTENANCE	
<b>Fiscal Year Ending June 30, 2017</b>	
<b>OPEB Expense <sup>a</sup></b>	
Service Cost	\$ 167,689
Interest on the Total OPEB Liability	154,036
Current-Period Benefit Changes	-
Active Member Contributions	(1,076)
Projected Earnings on Plan Investments	(600)
Administrative Expense	4
Other Changes in Plan Fiduciary Net Position	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	-
Recognition of Outflow/(Inflow) due to Assumption Changes	(75,163)
Recognition of Outflow/(Inflow) due to Investment Experience	(55)
<b>Net OPEB Expense</b>	<b>\$ 244,835</b>
<b>Reconciliation of Net OPEB Liability</b>	
<b>Net OPEB Liability beginning of year</b>	<b>\$ 4,533,765</b>
OPEB Expense	244,835
Employer Contributions	(111,936)
Change in Outflow/(Inflow) due to Non-investment Experience	-
Change in Outflow/(Inflow) due to Assumption Changes	(358,803)
Change in Outflow/(Inflow) due to Investment Experience	(217)
<b>Net OPEB Liability End of year</b>	<b>\$ 4,307,644</b>
<b>Deferred (Inflows)</b>	
Non-investment Experience	\$ -
Assumption Changes	\$ (358,803)
Investment Experience	\$ (217)
<b>Deferred Outflows</b>	
Non-investment Experience	\$ -
Assumption Changes	\$ -
Investment Experience	\$ -
<b>Net OPEB Liability Sensitivity</b>	
Baseline at 3.92% Discount Rate and 4.5% Ultimate Trend	\$ 4,307,644
Increase Discount Rate by One Percentage Point	\$ 3,711,953
Decrease Discount Rate by One Percentage Point	\$ 5,052,582
Increase Trend Rate by One Percentage Point	\$ 5,097,332
Decrease Trend Rate by One Percentage Point	\$ 3,683,452

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 12									
CRAFT AND MAINTENANCE									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	5.773655	\$ -	\$ (433,966)	5.773655	\$ (75,163)	\$ (272)	5.000000	\$ (55)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (75,163)	\$ (75,163)	\$ -	\$ (55)	\$ (55)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (75,163)	\$ (75,163)	\$ -	\$ (55)	\$ (55)
6/30/2019	-	-	-	-	(75,163)	(75,163)	-	(55)	(55)
6/30/2020	-	-	-	-	(75,163)	(75,163)	-	(55)	(55)
6/30/2021	-	-	-	-	(75,163)	(75,163)	-	(52)	(52)
6/30/2022	-	-	-	-	(58,151)	(58,151)	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (358,803)	\$ (358,803)	\$ -	\$ (217)	\$ (217)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (358,803)			\$ (217)

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 13 STATIONARY ENGINEERS		
Number of Participants Covered		
Active Participants	\$	950
Retired Participants <sup>a</sup>		828
Total Participants	\$	1,778
Actuarial Present Value of Projected Benefits		
Active Participants	\$	140,258
Retired Participants		162,766
Total Participants	\$	303,024
Actuarial Accrued Liability		
Active Participants	\$	100,442
Retired Participants		162,766
Total Participants	\$	263,208
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	263,208
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	5,659
Administrative Expenses		28
Amortization of UAAL		14,891
Total ADC	\$	20,578
Estimated Member Contributions		(711)
Net Employer ADC for FY 2018	\$	19,867
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	7,892
Part B Reimbursement		917
Dental Claims		540
Total	\$	9,349
Implicit Costs	\$	1,827
Total Employer Costs	\$	11,176
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	325
Dental Claims		168
Total	\$	493
Total Claims Costs	\$	11,669

*<sup>a</sup>Excludes 61 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 13**  
**STATIONARY ENGINEERS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2048**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 263,208	0.0%	\$ 5,659
2018	-	-	28	1,422	50	1,444	276,858	0.5%	5,344
2019	1,444	-	31	2,688	200	4,301	290,014	1.5%	5,038
2020	4,301	-	35	3,805	448	8,519	302,384	2.8%	4,728
2021	8,519	-	39	4,768	789	14,037	313,841	4.5%	4,411
2022	14,037	-	44	4,455	1,180	19,628	324,402	6.0%	4,088
2023	19,628	-	48	4,136	1,575	25,291	333,974	7.6%	3,766
2024	25,291	-	53	3,819	1,976	31,033	342,475	9.1%	3,453
2025	31,033	-	57	3,511	2,382	36,869	349,955	10.5%	3,144
2026	36,869	-	62	3,206	2,796	42,809	356,315	12.0%	2,836
2027	42,809	-	66	2,902	3,218	48,863	361,658	13.5%	2,539
2028	48,863	-	69	2,608	3,648	55,050	365,995	15.0%	2,265
2029	55,050	-	73	2,338	4,088	61,403	369,200	16.6%	2,012
2030	61,403	-	77	2,089	4,542	67,957	371,364	18.3%	1,781
2031	67,957	-	80	1,862	5,011	74,750	372,585	20.1%	1,577
2032	74,750	-	84	1,661	5,498	81,825	372,710	22.0%	1,390
2033	81,825	-	88	1,478	6,006	89,221	371,736	24.0%	1,217
2034	89,221	-	91	1,308	6,538	96,976	369,730	26.2%	1,060
2035	96,976	-	94	1,154	7,097	105,133	366,686	28.7%	919
2036	105,133	-	98	1,017	7,686	113,738	362,563	31.4%	793
2037	113,738	-	101	894	8,308	122,839	357,402	34.4%	683
2038	122,839	-	104	787	8,967	132,489	351,245	37.7%	583
2039	132,489	-	107	690	9,666	142,738	344,131	41.5%	496
2040	142,738	-	110	606	10,409	153,643	336,009	45.7%	419
2041	153,643	-	113	531	11,200	165,261	326,940	50.5%	350
2042	165,261	-	115	465	12,043	177,654	317,043	56.0%	290
2043	177,654	-	118	408	12,943	190,887	306,334	62.3%	238
2044	190,887	-	120	358	13,905	205,030	294,951	69.5%	192
2045	205,030	-	122	314	14,933	220,155	283,054	77.8%	151
2046	220,155	-	124	275	16,032	236,338	270,720	87.3%	116
2047	236,338	-	126	242	17,209	253,663	258,036	98.3%	87
2048	253,663	-	127	214	18,470	272,220	245,140	111.0%	63
2049	272,220	29,863	129	-	18,745	260,973	232,118	112.4%	46
2050	260,973	28,945	125	-	17,959	249,862	219,080	114.0%	33
2051	249,862	27,905	120	-	17,188	239,025	206,157	115.9%	23
2052	239,025	26,797	115	-	16,438	228,551	193,432	118.2%	16
2053	228,551	25,667	110	-	15,717	218,491	180,943	120.8%	11
2054	218,491	24,469	105	-	15,027	208,944	168,781	123.8%	7
2055	208,944	23,252	100	-	14,376	199,968	156,990	127.4%	5



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 13 STATIONARY ENGINEERS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	14,669
Interest on Total OPEB Liability		14,564
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(44,093)
Benefit Payments		(10,675)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(25,535)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>447,182</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>421,647</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	10,675
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(10,675)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>421,647</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>19,979</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>10,675</b>
<b>Percentage of ADC made by Employer</b>		<b>53%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(9,304)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>4.408263</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.190%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.825%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 13 STATIONARY ENGINEERS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	14,669
Interest on the Total OPEB Liability		14,564
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(10,002)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>19,231</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>447,182</b>
OPEB Expense		19,231
Employer Contributions		(10,675)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(34,091)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>421,647</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(34,091)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.825% Discount Rate and 4.5% Ultimate Trend	\$	421,647
Increase Discount Rate by One Percentage Point	\$	363,611
Decrease Discount Rate by One Percentage Point	\$	494,123
Increase Trend Rate by One Percentage Point	\$	496,934
Decrease Trend Rate by One Percentage Point	\$	361,574

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S) BARGAINING UNIT NUMBER 13 STATIONARY ENGINEERS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
Plan Year Beginning									
7/1/2016	\$ -	4.408263	\$ -	\$ (44,093)	4.408263	\$ (10,002)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (10,002)	\$ (10,002)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (10,002)	\$ (10,002)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(10,002)	(10,002)	-	-	-
6/30/2020	-	-	-	-	(10,002)	(10,002)	-	-	-
6/30/2021	-	-	-	-	(4,085)	(4,085)	-	-	-
6/30/2022	-	-	-	-	-	-	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (34,091)	\$ (34,091)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (34,091)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 14 PRINTING AND ALLIED TRADES		
Number of Participants Covered		
Active Participants	\$	398
Retired Participants <sup>a</sup>		493
Total Participants	\$	891
Actuarial Present Value of Projected Benefits		
Active Participants	\$	55,892
Retired Participants		72,915
Total Participants	\$	128,807
Actuarial Accrued Liability		
Active Participants	\$	40,635
Retired Participants		72,915
Total Participants	\$	113,550
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	113,550
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	1,936
Administrative Expenses		13
Amortization of UAAL		6,424
Total ADC	\$	8,373
Estimated Member Contributions		-
Net Employer ADC for FY 2018	\$	8,373
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	3,617
Part B Reimbursement		648
Dental Claims		287
Total	\$	4,552
Implicit Costs	\$	804
Total Employer Costs	\$	5,356
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	96
Dental Claims		89
Total	\$	185
Total Claims Costs	\$	5,541

*<sup>a</sup>Excludes 20 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 14**  
**PRINTING AND ALLIED TRADES**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2050**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 113,550	0.0%	\$ 1,936
2018	-	-	-	-	-	-	118,342	0.0%	1,855
2019	-	-	15	467	16	468	122,902	0.4%	1,774
2020	468	-	16	895	66	1,413	127,090	1.1%	1,693
2021	1,413	-	18	1,283	148	2,826	130,928	2.2%	1,610
2022	2,826	-	19	1,630	263	4,700	134,408	3.5%	1,524
2023	4,700	-	21	1,545	397	6,621	137,536	4.8%	1,434
2024	6,621	-	23	1,457	533	8,588	140,306	6.1%	1,345
2025	8,588	-	24	1,368	673	10,605	142,776	7.4%	1,256
2026	10,605	-	25	1,282	817	12,679	144,928	8.7%	1,165
2027	12,679	-	27	1,191	965	14,808	146,781	10.1%	1,073
2028	14,808	-	28	1,101	1,117	16,998	148,298	11.5%	987
2029	16,998	-	29	1,017	1,273	19,259	149,463	12.9%	904
2030	19,259	-	30	934	1,434	21,597	150,282	14.4%	822
2031	21,597	-	32	853	1,602	24,020	150,727	15.9%	745
2032	24,020	-	33	778	1,775	26,540	150,764	17.6%	670
2033	26,540	-	34	704	1,956	29,166	150,461	19.4%	599
2034	29,166	-	35	634	2,145	31,910	149,773	21.3%	538
2035	31,910	-	37	575	2,342	34,790	148,669	23.4%	485
2036	34,790	-	38	523	2,550	37,825	147,246	25.7%	435
2037	37,825	-	39	474	2,769	41,029	145,503	28.2%	390
2038	41,029	-	40	429	3,001	44,419	143,388	31.0%	346
2039	44,419	-	41	387	3,246	48,011	140,968	34.1%	303
2040	48,011	-	42	344	3,506	51,819	138,305	37.5%	263
2041	51,819	-	43	306	3,782	55,864	135,336	41.3%	227
2042	55,864	-	43	271	4,075	60,167	132,070	45.6%	195
2043	60,167	-	44	239	4,387	64,749	128,535	50.4%	165
2044	64,749	-	45	210	4,720	69,634	124,786	55.8%	137
2045	69,634	-	46	183	5,074	74,845	120,853	61.9%	111
2046	74,845	-	47	158	5,453	80,409	116,682	68.9%	88
2047	80,409	-	47	136	5,857	86,355	112,329	76.9%	69
2048	86,355	-	48	117	6,289	92,713	107,849	86.0%	52
2049	92,713	-	49	101	6,752	99,517	103,237	96.4%	38
2050	99,517	-	49	88	7,246	106,802	98,557	108.4%	27
2051	106,802	11,480	50	-	7,363	102,635	93,868	109.3%	18
2052	102,635	11,134	48	-	7,072	98,525	89,188	110.5%	12
2053	98,525	10,743	47	-	6,787	94,522	84,566	111.8%	7
2054	94,522	10,318	45	-	6,511	90,670	80,042	113.3%	5
2055	90,670	9,885	43	-	6,246	86,988	75,635	115.0%	3



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 14 PRINTING AND ALLIED TRADES		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	5,427
Interest on Total OPEB Liability		6,147
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(18,093)
Benefit Payments		(5,117)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(11,636)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>190,845</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>179,209</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	5,117
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(5,117)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>179,209</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>8,129</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>5,117</b>
<b>Percentage of ADC made by Employer</b>		<b>63%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(3,012)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>4.274357</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.173%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.809%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

<b>GASB NOS. 74 AND 75 DISCLOSURES</b> <b>OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S)</b> <b>BARGAINING UNIT NUMBER 14</b> <b>PRINTING AND ALLIED TRADES</b>	
<b>Fiscal Year Ending June 30, 2017</b>	
<b>OPEB Expense <sup>a</sup></b>	
Service Cost	\$ 5,427
Interest on the Total OPEB Liability	6,147
Current-Period Benefit Changes	-
Active Member Contributions	-
Projected Earnings on Plan Investments	-
Administrative Expense	-
Other Changes in Plan Fiduciary Net Position	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	-
Recognition of Outflow/(Inflow) due to Assumption Changes	(4,233)
Recognition of Outflow/(Inflow) due to Investment Experience	-
<b>Net OPEB Expense</b>	<b>\$ 7,341</b>
<b>Reconciliation of Net OPEB Liability</b>	
<b>Net OPEB Liability beginning of year</b>	<b>\$ 190,845</b>
OPEB Expense	7,341
Employer Contributions	(5,117)
Change in Outflow/(Inflow) due to Non-investment Experience	-
Change in Outflow/(Inflow) due to Assumption Changes	(13,860)
Change in Outflow/(Inflow) due to Investment Experience	-
<b>Net OPEB Liability End of year</b>	<b>\$ 179,209</b>
<b>Deferred (Inflows)</b>	
Non-investment Experience	\$ -
Assumption Changes	\$ (13,860)
Investment Experience	\$ -
<b>Deferred Outflows</b>	
Non-investment Experience	\$ -
Assumption Changes	\$ -
Investment Experience	\$ -
<b>Net OPEB Liability Sensitivity</b>	
Baseline at 3.809% Discount Rate and 4.5% Ultimate Trend	\$ 179,209
Increase Discount Rate by One Percentage Point	\$ 155,344
Decrease Discount Rate by One Percentage Point	\$ 208,870
Increase Trend Rate by One Percentage Point	\$ 210,389
Decrease Trend Rate by One Percentage Point	\$ 154,397

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 14									
PRINTING AND ALLIED TRADES									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	4.274357	\$ -	\$ (18,093)	4.274357	\$ (4,233)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (4,233)	\$ (4,233)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (4,233)	\$ (4,233)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(4,233)	(4,233)	-	-	-
6/30/2020	-	-	-	-	(4,233)	(4,233)	-	-	-
6/30/2021	-	-	-	-	(1,161)	(1,161)	-	-	-
6/30/2022	-	-	-	-	-	-	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (13,860)	\$ (13,860)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (13,860)			\$ -

## Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S)  
BARGAINING UNIT NUMBER 15  
ALLIED SERVICES**

Number of Participants Covered	
Active Participants	\$ 5,243
Retired Participants <sup>a</sup>	<u>2,876</u>
Total Participants	\$ 8,119
Actuarial Present Value of Projected Benefits	
Active Participants	\$ 582,726
Retired Participants	<u>422,145</u>
Total Participants	\$ 1,004,871
Actuarial Accrued Liability	
Active Participants	\$ 359,213
Retired Participants	<u>422,145</u>
Total Participants	\$ 781,358
Actuarial Value of Assets	\$ -
Unfunded Actuarial Accrued Liability	\$ 781,358
ADC Based on June 30, 2017 Actuarial Valuation	
Normal Cost	\$ 27,191
Administrative Expenses	76
Amortization of UAAL	<u>44,205</u>
Total ADC	\$ 71,472
Estimated Member Contributions	<u>-</u>
Net Employer ADC for FY 2018	\$ 71,472
Employer Share of FY 2018 Claims Costs	
Explicit Costs	
Medical and Rx Claims	\$ 21,581
Part B Reimbursement	3,183
Dental Claims	<u>1,617</u>
Total	\$ 26,381
Implicit Costs	<u>3,894</u>
Total Employer Costs	\$ 30,275
Retiree Share of FY 2018 Claim Costs	
Medical and Rx Claims	\$ 700
Dental Claims	<u>475</u>
Total	\$ 1,175
Total Claims Costs	\$ 31,450

*<sup>a</sup>Excludes 391 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 15**  
**ALLIED SERVICES**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2048**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 781,358	0.0%	\$ 27,191
2018	-	-	-	-	-	-	836,033	0.0%	26,183
2019	-	-	84	6,567	232	6,715	889,966	0.8%	25,249
2020	6,715	-	96	12,672	939	20,230	942,677	2.1%	24,266
2021	20,230	-	110	18,282	2,123	40,525	993,594	4.1%	23,220
2022	40,525	-	125	23,344	3,780	67,524	1,042,426	6.5%	22,119
2023	67,524	-	142	22,260	5,707	95,349	1,088,985	8.8%	20,947
2024	95,349	-	158	21,105	7,691	123,987	1,133,145	10.9%	19,720
2025	123,987	-	175	19,895	9,731	153,438	1,174,719	13.1%	18,474
2026	153,438	-	191	18,665	11,831	183,743	1,213,678	15.1%	17,210
2027	183,743	-	207	17,417	13,992	214,945	1,250,057	17.2%	15,928
2028	214,945	-	223	16,151	16,218	247,091	1,283,723	19.2%	14,675
2029	247,091	-	239	14,914	18,513	280,279	1,314,353	21.3%	13,500
2030	280,279	-	255	13,755	20,887	314,666	1,341,992	23.4%	12,392
2031	314,666	-	271	12,663	23,351	350,409	1,366,736	25.6%	11,339
2032	350,409	-	287	11,626	25,915	387,663	1,388,367	27.9%	10,350
2033	387,663	-	304	10,654	28,592	426,605	1,406,658	30.3%	9,418
2034	426,605	-	321	9,739	31,394	467,417	1,421,574	32.9%	8,555
2035	467,417	-	337	8,892	34,334	510,306	1,433,176	35.6%	7,770
2036	510,306	-	354	8,125	37,428	555,505	1,441,334	38.5%	7,055
2037	555,505	-	372	7,426	40,693	603,252	1,445,862	41.7%	6,393
2038	603,252	-	389	6,782	44,145	653,790	1,446,856	45.2%	5,771
2039	653,790	-	407	6,177	47,802	707,362	1,444,049	49.0%	5,194
2040	707,362	-	424	5,618	51,682	764,238	1,437,508	53.2%	4,667
2041	764,238	-	442	5,109	55,804	824,709	1,427,364	57.8%	4,175
2042	824,709	-	460	4,635	60,188	889,072	1,413,445	62.9%	3,717
2043	889,072	-	478	4,195	64,858	957,647	1,395,934	68.6%	3,288
2044	957,647	-	496	3,784	69,834	1,030,769	1,375,045	75.0%	2,883
2045	1,030,769	-	514	3,397	75,143	1,108,795	1,350,775	82.1%	2,497
2046	1,108,795	-	532	3,028	80,810	1,192,101	1,323,366	90.1%	2,133
2047	1,192,101	-	550	2,682	86,861	1,281,094	1,292,972	99.1%	1,800
2048	1,281,094	-	568	2,368	93,328	1,376,222	1,259,718	109.2%	1,500
2049	1,376,222	124,545	587	-	95,714	1,346,804	1,224,024	110.0%	1,230
2050	1,346,804	123,743	579	-	93,602	1,316,084	1,186,275	110.9%	990
2051	1,316,084	122,628	570	-	91,406	1,284,292	1,146,677	112.0%	783
2052	1,284,292	120,953	559	-	89,151	1,251,931	1,105,708	113.2%	605
2053	1,251,931	118,753	547	-	86,875	1,219,506	1,063,845	114.6%	455
2054	1,219,506	116,308	535	-	84,602	1,187,265	1,021,307	116.2%	334
2055	1,187,265	113,403	521	-	82,359	1,155,700	978,552	118.1%	239



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 15 ALLIED SERVICES		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	67,499
Interest on Total OPEB Liability		45,164
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(125,145)
Benefit Payments		(28,919)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(41,401)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>1,284,629</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>1,243,228</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	28,919
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(28,919)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>1,243,228</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>69,390</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>28,919</b>
<b>Percentage of ADC made by Employer</b>		<b>42%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(40,471)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.766527</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.376%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.974%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 15 ALLIED SERVICES		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	67,499
Interest on the Total OPEB Liability		45,164
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(18,495)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>94,168</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>1,284,629</b>
OPEB Expense		94,168
Employer Contributions		(28,919)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(106,650)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>1,243,228</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(106,650)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.974% Discount Rate and 4.5% Ultimate Trend	\$	1,243,228
Increase Discount Rate by One Percentage Point	\$	1,068,119
Decrease Discount Rate by One Percentage Point	\$	1,462,792
Increase Trend Rate by One Percentage Point	\$	1,483,855
Decrease Trend Rate by One Percentage Point	\$	1,054,875

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 15									
ALLIED SERVICES									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.766527	\$ -	\$ (125,145)	6.766527	\$ (18,495)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (18,495)	\$ (18,495)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (18,495)	\$ (18,495)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(18,495)	(18,495)	-	-	-
6/30/2020	-	-	-	-	(18,495)	(18,495)	-	-	-
6/30/2021	-	-	-	-	(18,495)	(18,495)	-	-	-
6/30/2022	-	-	-	-	(18,495)	(18,495)	-	-	-
6/30/2023	-	-	-	-	(14,175)	(14,175)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (106,650)	\$ (106,650)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (106,650)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 16 PHYSICIANS, DENTISTS AND PODIATRISTS		
Number of Participants Covered		
Active Participants	\$	1,605
Retired Participants <sup>a</sup>		1,412
Total Participants	\$	3,017
Actuarial Present Value of Projected Benefits		
Active Participants	\$	212,496
Retired Participants		223,293
Total Participants	\$	435,789
Actuarial Accrued Liability		
Active Participants	\$	133,086
Retired Participants		223,293
Total Participants	\$	356,379
Actuarial Value of Assets	\$	6,846
Unfunded Actuarial Accrued Liability	\$	349,533
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	11,593
Administrative Expenses		43
Amortization of UAAL		19,775
Total ADC	\$	31,411
Estimated Member Contributions		(2,909)
Net Employer ADC for FY 2018	\$	28,502
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	11,129
Part B Reimbursement		2,182
Dental Claims		934
Total	\$	14,245
Implicit Costs	\$	2,451
Total Employer Costs	\$	16,696
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	371
Dental Claims		298
Total	\$	669
Total Claims Costs	\$	17,365

*<sup>a</sup>Excludes 144 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 16**  
**PHYSICIANS, DENTISTS AND PODIATRISTS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2042**

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2017	\$ 4,836	\$ -	\$ 3	\$ 1,422	\$ 591	\$ 6,846	\$ 356,379	1.9%	\$ 11,593
2018	6,846	-	43	5,818	705	13,326	377,458	3.5%	10,834
2019	13,326	-	49	8,162	1,260	22,699	397,351	5.7%	10,185
2020	22,699	-	56	10,241	2,017	34,901	415,880	8.4%	9,531
2021	34,901	-	64	9,595	2,882	47,314	432,866	10.9%	8,865
2022	47,314	-	72	8,937	3,762	59,941	448,131	13.4%	8,185
2023	59,941	-	79	8,265	4,656	72,783	461,566	15.8%	7,520
2024	72,783	-	87	7,607	5,568	85,871	473,192	18.1%	6,885
2025	85,871	-	94	6,980	6,498	99,255	483,075	20.5%	6,274
2026	99,255	-	101	6,375	7,450	112,979	491,254	23.0%	5,674
2027	112,979	-	108	5,782	8,428	127,081	497,789	25.5%	5,099
2028	127,081	-	114	5,213	9,434	141,614	502,688	28.2%	4,541
2029	141,614	-	121	4,662	10,472	156,627	505,887	31.0%	4,013
2030	156,627	-	127	4,140	11,546	172,186	507,312	33.9%	3,524
2031	172,186	-	133	3,657	12,661	188,371	507,013	37.2%	3,069
2032	188,371	-	140	3,209	13,823	205,263	505,002	40.6%	2,657
2033	205,263	-	146	2,803	15,038	222,958	501,323	44.5%	2,278
2034	222,958	-	151	2,430	16,313	241,550	495,976	48.7%	1,928
2035	241,550	-	157	2,085	17,654	261,132	489,076	53.4%	1,615
2036	261,132	-	162	1,778	19,068	281,816	480,787	58.6%	1,340
2037	281,816	-	167	1,507	20,564	303,720	471,197	64.5%	1,096
2038	303,720	-	172	1,269	22,150	326,967	460,441	71.0%	884
2039	326,967	-	177	1,061	23,834	351,685	448,763	78.4%	703
2040	351,685	-	181	884	25,627	378,015	436,320	86.6%	554
2041	378,015	-	185	740	27,539	406,109	423,208	96.0%	432
2042	406,109	-	190	622	29,580	436,121	409,576	106.5%	336
2043	436,121	42,717	194	-	30,215	423,425	395,502	107.1%	258
2044	423,425	42,028	190	-	29,315	410,522	381,033	107.7%	194
2045	410,522	41,304	185	-	28,402	397,435	366,194	108.5%	143
2046	397,435	40,507	181	-	27,478	384,225	351,045	109.4%	101
2047	384,225	39,613	176	-	26,548	370,984	335,676	110.5%	69
2048	370,984	38,695	171	-	25,617	357,735	320,104	111.8%	46
2049	357,735	37,744	166	-	24,687	344,512	304,360	113.2%	30
2050	344,512	36,698	161	-	23,762	331,415	288,535	114.9%	19
2051	331,415	35,598	155	-	22,848	318,510	272,687	116.8%	12
2052	318,510	34,455	150	-	21,949	305,854	256,861	119.1%	7
2053	305,854	33,263	144	-	21,071	293,518	241,113	121.7%	4
2054	293,518	32,041	139	-	20,217	281,555	225,481	124.9%	3
2055	281,555	30,777	133	-	19,391	270,036	210,019	128.6%	2



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 16 PHYSICIANS, DENTISTS AND PODIATRISTS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	25,410
Interest on Total OPEB Liability		19,529
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(45,549)
Benefit Payments		(15,948)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(16,558)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>547,898</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>531,340</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	15,948
Employer Pre Funding Contributions		711
Active Member Contributions		711
Net Investment Income		591
Benefit Payments		(15,948)
Administrative Expense		(3)
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>2,010</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>4,836</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>6,846</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>524,494</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>1.288%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>29,785</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>16,659</b>
<b>Percentage of ADC made by Employer</b>		<b>56%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(13,126)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>403</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>(188)</b>
<b>Average Expected Remaining Service</b>		<b>4.144907</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.454%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>4.041%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 16 PHYSICIANS, DENTISTS AND PODIATRISTS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	25,410
Interest on the Total OPEB Liability		19,529
Current-Period Benefit Changes		-
Active Member Contributions		(711)
Projected Earnings on Plan Investments		(403)
Administrative Expense		3
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(10,989)
Recognition of Outflow/(Inflow) due to Investment Experience		(38)
<b>Net OPEB Expense</b>	<b>\$</b>	<b>32,801</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>543,062</b>
OPEB Expense		32,801
Employer Contributions		(16,659)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(34,560)
Change in Outflow/(Inflow) due to Investment Experience		(150)
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>524,494</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(34,560)
Investment Experience	\$	(150)
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 4.041% Discount Rate and 4.5% Ultimate Trend	\$	524,494
Increase Discount Rate by One Percentage Point	\$	458,449
Decrease Discount Rate by One Percentage Point	\$	605,651
Increase Trend Rate by One Percentage Point	\$	610,092
Decrease Trend Rate by One Percentage Point	\$	455,309

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 16									
PHYSICIANS, DENTISTS AND PODIATRISTS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	4.144907	\$ -	\$ (45,549)	4.144907	\$ (10,989)	\$ (188)	5.000000	\$ (38)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (10,989)	\$ (10,989)	\$ -	\$ (38)	\$ (38)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (10,989)	\$ (10,989)	\$ -	\$ (38)	\$ (38)
6/30/2019	-	-	-	-	(10,989)	(10,989)	-	(38)	(38)
6/30/2020	-	-	-	-	(10,989)	(10,989)	-	(38)	(38)
6/30/2021	-	-	-	-	(1,593)	(1,593)	-	(36)	(36)
6/30/2022	-	-	-	-	-	-	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (34,560)	\$ (34,560)	\$ -	\$ (150)	\$ (150)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (34,560)			\$ (150)

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 17 REGISTERED NURSES		
Number of Participants Covered		
Active Participants	\$	6,060
Retired Participants <sup>a</sup>		3,356
Total Participants	\$	9,416
Actuarial Present Value of Projected Benefits		
Active Participants	\$	744,156
Retired Participants		544,651
Total Participants	\$	1,288,807
Actuarial Accrued Liability		
Active Participants	\$	448,048
Retired Participants		544,651
Total Participants	\$	992,699
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	992,699
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	36,980
Administrative Expenses		95
Amortization of UAAL		56,162
Total ADC	\$	93,237
Estimated Member Contributions		-
Net Employer ADC for FY 2018	\$	93,237
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	26,982
Part B Reimbursement		3,752
Dental Claims		2,051
Total	\$	32,785
Implicit Costs	\$	5,084
Total Employer Costs	\$	37,869
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	896
Dental Claims		642
Total	\$	1,538
Total Claims Costs	\$	39,407

*<sup>a</sup>Excludes 295 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 17**  
**REGISTERED NURSES**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2047**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 992,699	0.0%	\$ 36,980
2018	-	-	-	-	-	-	1,065,393	0.0%	35,526
2019	-	-	105	8,908	315	9,118	1,137,363	0.8%	34,115
2020	9,118	-	120	17,117	1,272	27,387	1,207,947	2.3%	32,681
2021	27,387	-	136	24,613	2,869	54,733	1,276,768	4.3%	31,189
2022	54,733	-	155	31,344	5,100	91,022	1,343,484	6.8%	29,628
2023	91,022	-	176	29,804	7,686	128,336	1,407,643	9.1%	28,019
2024	128,336	-	198	28,217	10,345	166,700	1,468,749	11.3%	26,379
2025	166,700	-	220	26,599	13,079	206,158	1,526,572	13.5%	24,714
2026	206,158	-	243	24,957	15,892	246,764	1,580,741	15.6%	23,013
2027	246,764	-	265	23,278	18,787	288,564	1,630,958	17.7%	21,311
2028	288,564	-	289	21,599	21,769	331,643	1,676,884	19.8%	19,627
2029	331,643	-	313	19,940	24,846	376,116	1,717,957	21.9%	17,980
2030	376,116	-	337	18,317	28,024	422,120	1,754,019	24.1%	16,384
2031	422,120	-	361	16,745	31,316	469,820	1,784,709	26.3%	14,840
2032	469,820	-	385	15,225	34,734	519,394	1,809,816	28.7%	13,381
2033	519,394	-	410	13,790	38,290	571,064	1,829,269	31.2%	12,016
2034	571,064	-	433	12,449	42,003	625,083	1,843,181	33.9%	10,741
2035	625,083	-	456	11,197	45,890	681,714	1,851,545	36.8%	9,549
2036	681,714	-	480	10,028	49,970	741,232	1,854,368	40.0%	8,427
2037	741,232	-	502	8,929	54,263	803,922	1,851,810	43.4%	7,385
2038	803,922	-	524	7,909	58,790	870,097	1,844,090	47.2%	6,430
2039	870,097	-	546	6,976	63,573	940,100	1,831,205	51.3%	5,557
2040	940,100	-	567	6,124	68,638	1,014,295	1,813,236	55.9%	4,768
2041	1,014,295	-	589	5,357	74,011	1,093,074	1,790,386	61.1%	4,060
2042	1,093,074	-	610	4,670	79,721	1,176,855	1,762,846	66.8%	3,429
2043	1,176,855	-	631	4,060	85,798	1,266,082	1,730,848	73.1%	2,867
2044	1,266,082	-	652	3,519	92,274	1,361,223	1,694,695	80.3%	2,363
2045	1,361,223	-	673	3,036	99,182	1,462,768	1,654,546	88.4%	1,912
2046	1,462,768	-	694	2,606	106,558	1,571,238	1,610,635	97.6%	1,514
2047	1,571,238	-	715	2,230	114,440	1,687,193	1,563,438	107.9%	1,173
2048	1,687,193	159,253	736	-	117,106	1,644,310	1,513,550	108.6%	891
2049	1,644,310	157,578	723	-	114,045	1,600,054	1,461,464	109.5%	661
2050	1,600,054	155,341	708	-	110,904	1,554,909	1,407,658	110.5%	479
2051	1,554,909	152,555	692	-	107,717	1,509,379	1,352,627	111.6%	339
2052	1,509,379	149,478	676	-	104,513	1,463,738	1,296,627	112.9%	235
2053	1,463,738	146,140	658	-	101,311	1,418,251	1,239,898	114.4%	159
2054	1,418,251	142,472	640	-	98,131	1,373,270	1,182,758	116.1%	105
2055	1,373,270	138,707	621	-	94,992	1,328,934	1,125,300	118.1%	68



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 17 REGISTERED NURSES		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	89,221
Interest on Total OPEB Liability		57,382
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(161,478)
Benefit Payments		(36,173)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(51,048)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>1,637,532</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>1,586,484</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	36,173
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(36,173)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>1,586,484</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>90,521</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>36,173</b>
<b>Percentage of ADC made by Employer</b>		<b>40%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(54,348)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.353194</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.358%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.961%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 17 REGISTERED NURSES		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	89,221
Interest on the Total OPEB Liability		57,382
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(25,417)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>121,186</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>1,637,532</b>
OPEB Expense		121,186
Employer Contributions		(36,173)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(136,061)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>1,586,484</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(136,061)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.961% Discount Rate and 4.5% Ultimate Trend	\$	1,586,484
Increase Discount Rate by One Percentage Point	\$	1,362,240
Decrease Discount Rate by One Percentage Point	\$	1,867,154
Increase Trend Rate by One Percentage Point	\$	1,894,187
Decrease Trend Rate by One Percentage Point	\$	1,344,691

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S) BARGAINING UNIT NUMBER 17 REGISTERED NURSES									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
Plan Year Beginning									
7/1/2016	\$ -	6.353194	\$ -	\$ (161,478)	6.353194	\$ (25,417)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (25,417)	\$ (25,417)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (25,417)	\$ (25,417)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(25,417)	(25,417)	-	-	-
6/30/2020	-	-	-	-	(25,417)	(25,417)	-	-	-
6/30/2021	-	-	-	-	(25,417)	(25,417)	-	-	-
6/30/2022	-	-	-	-	(25,417)	(25,417)	-	-	-
6/30/2023	-	-	-	-	(8,976)	(8,976)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (136,061)	\$ (136,061)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (136,061)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 18 PSYCHIATRIC TECHNICIANS		
Number of Participants Covered		
Active Participants	\$	6,515
Retired Participants <sup>a</sup>		4,745
Total Participants	\$	11,260
Actuarial Present Value of Projected Benefits		
Active Participants	\$	805,322
Retired Participants		780,662
Total Participants	\$	1,585,984
Actuarial Accrued Liability		
Active Participants	\$	505,128
Retired Participants		780,662
Total Participants	\$	1,285,790
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	1,285,790
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	33,513
Administrative Expenses		130
Amortization of UAAL		72,743
Total ADC	\$	106,386
Estimated Member Contributions		(4,205)
Net Employer ADC for FY 2018	\$	102,181
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	37,991
Part B Reimbursement		4,750
Dental Claims		2,613
Total	\$	45,354
Implicit Costs	\$	6,524
Total Employer Costs	\$	51,878
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	1,218
Dental Claims		794
Total	\$	2,012
Total Claims Costs	\$	53,890

*<sup>a</sup>Excludes 277 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 18**  
**PSYCHIATRIC TECHNICIANS**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2049**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,285,790	0.0%	\$ 33,513
2018	-	-	130	8,411	296	8,577	1,361,582	0.6%	32,525
2019	8,577	-	143	16,334	1,203	25,971	1,436,968	1.8%	31,550
2020	25,971	-	161	23,783	2,735	52,328	1,510,859	3.5%	30,528
2021	52,328	-	181	30,709	4,901	87,757	1,582,961	5.5%	29,434
2022	87,757	-	203	29,637	7,441	124,632	1,652,983	7.5%	28,290
2023	124,632	-	225	28,515	10,085	163,007	1,720,726	9.5%	27,113
2024	163,007	-	248	27,360	12,837	202,956	1,785,975	11.4%	25,928
2025	202,956	-	270	26,198	15,703	244,587	1,848,567	13.2%	24,744
2026	244,587	-	293	25,037	18,691	288,022	1,908,569	15.1%	23,559
2027	288,022	-	315	23,874	21,811	333,392	1,966,235	17.0%	22,380
2028	333,392	-	336	22,717	25,071	380,844	2,021,559	18.8%	21,213
2029	380,844	-	359	21,572	28,484	430,541	2,074,230	20.8%	20,062
2030	430,541	-	383	20,445	32,061	482,664	2,123,911	22.7%	18,927
2031	482,664	-	406	19,333	35,815	537,406	2,170,382	24.8%	17,812
2032	537,406	-	432	18,244	39,760	594,978	2,213,121	26.9%	16,714
2033	594,978	-	457	17,172	43,912	655,605	2,251,980	29.1%	15,625
2034	655,605	-	483	16,109	48,287	719,518	2,286,718	31.5%	14,546
2035	719,518	-	511	15,057	52,901	786,965	2,316,775	34.0%	13,492
2036	786,965	-	538	14,030	57,774	858,231	2,342,018	36.6%	12,467
2037	858,231	-	566	13,033	62,925	933,623	2,362,431	39.5%	11,460
2038	933,623	-	595	12,055	68,378	1,013,461	2,377,580	42.6%	10,473
2039	1,013,461	-	625	11,098	74,154	1,098,088	2,387,007	46.0%	9,510
2040	1,098,088	-	655	10,165	80,281	1,187,879	2,390,507	49.7%	8,572
2041	1,187,879	-	686	9,258	86,784	1,283,235	2,387,923	53.7%	7,664
2042	1,283,235	-	717	8,381	93,694	1,384,593	2,379,329	58.2%	6,785
2043	1,384,593	-	748	7,533	101,041	1,492,419	2,364,781	63.1%	5,935
2044	1,492,419	-	779	6,714	108,860	1,607,214	2,344,384	68.6%	5,124
2045	1,607,214	-	809	5,932	117,188	1,729,525	2,318,541	74.6%	4,356
2046	1,729,525	-	840	5,196	126,065	1,859,946	2,287,393	81.3%	3,646
2047	1,859,946	-	870	4,516	135,535	1,999,127	2,251,403	88.8%	3,005
2048	1,999,127	-	901	3,906	145,644	2,147,776	2,210,933	97.1%	2,440
2049	2,147,776	-	931	3,371	156,445	2,306,661	2,166,724	106.5%	1,954
2050	2,306,661	200,021	961	-	160,738	2,266,417	2,119,361	106.9%	1,540
2051	2,266,417	198,884	950	-	157,849	2,224,432	2,069,287	107.5%	1,196
2052	2,224,432	197,429	938	-	154,845	2,180,910	2,016,706	108.1%	915
2053	2,180,910	195,478	925	-	151,747	2,136,254	1,962,018	108.9%	686
2054	2,136,254	192,948	910	-	148,587	2,090,983	1,905,726	109.7%	504
2055	2,090,983	190,090	893	-	145,394	2,045,394	1,848,102	110.7%	363



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 18 PSYCHIATRIC TECHNICIANS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	90,257
Interest on Total OPEB Liability		76,899
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(222,349)
Benefit Payments		(49,553)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(104,746)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>2,197,374</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>2,092,628</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	49,553
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(49,553)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>2,092,628</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>103,287</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>49,553</b>
<b>Percentage of ADC made by Employer</b>		<b>48%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(53,734)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.796418</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.398%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.991%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 18 PSYCHIATRIC TECHNICIANS		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	90,257
Interest on the Total OPEB Liability		76,899
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(32,716)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>134,440</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>2,197,374</b>
OPEB Expense		134,440
Employer Contributions		(49,553)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(189,633)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>2,092,628</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(189,633)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.991% Discount Rate and 4.5% Ultimate Trend	\$	2,092,628
Increase Discount Rate by One Percentage Point	\$	1,781,996
Decrease Discount Rate by One Percentage Point	\$	2,487,465
Increase Trend Rate by One Percentage Point	\$	2,523,950
Decrease Trend Rate by One Percentage Point	\$	1,760,274

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S) BARGAINING UNIT NUMBER 18 PSYCHIATRIC TECHNICIANS									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
Plan Year Beginning									
7/1/2016	\$ -	6.796418	\$ -	\$ (222,349)	6.796418	\$ (32,716)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (32,716)	\$ (32,716)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (32,716)	\$ (32,716)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(32,716)	(32,716)	-	-	-
6/30/2020	-	-	-	-	(32,716)	(32,716)	-	-	-
6/30/2021	-	-	-	-	(32,716)	(32,716)	-	-	-
6/30/2022	-	-	-	-	(32,716)	(32,716)	-	-	-
6/30/2023	-	-	-	-	(26,053)	(26,053)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (189,633)	\$ (189,633)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (189,633)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) BARGAINING UNIT NUMBER 19 HEALTH AND SOCIAL SERVICES/PROFESSIONAL		
Number of Participants Covered		
Active Participants	\$	5,725
Retired Participants <sup>a</sup>		3,274
Total Participants	\$	8,999
Actuarial Present Value of Projected Benefits		
Active Participants	\$	690,090
Retired Participants		527,520
Total Participants	\$	1,217,610
Actuarial Accrued Liability		
Active Participants	\$	417,227
Retired Participants		527,520
Total Participants	\$	944,747
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	944,747
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	32,207
Administrative Expenses		91
Amortization of UAAL		53,449
Total ADC	\$	85,747
Estimated Member Contributions		(4,037)
Net Employer ADC for FY 2018	\$	81,710
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	25,579
Part B Reimbursement		4,281
Dental Claims		2,033
Total	\$	31,893
Implicit Costs	\$	4,684
Total Employer Costs	\$	36,577
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	793
Dental Claims		640
Total	\$	1,433
Total Claims Costs	\$	38,010

*<sup>a</sup>Excludes 211 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 19**  
**HEALTH AND SOCIAL SERVICES/PROFESSIONAL**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2046**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 944,747	0.0%	\$ 32,207
2018	-	-	91	8,075	285	8,269	1,010,167	0.8%	30,853
2019	8,269	-	103	15,478	1,152	24,796	1,074,613	2.3%	29,651
2020	24,796	-	119	22,327	2,599	49,603	1,137,350	4.4%	28,476
2021	49,603	-	137	28,613	4,629	82,708	1,198,170	6.9%	27,296
2022	82,708	-	156	27,452	6,997	117,001	1,256,838	9.3%	26,080
2023	117,001	-	176	26,257	9,450	152,532	1,312,927	11.6%	24,839
2024	152,532	-	197	25,036	11,993	189,364	1,366,082	13.9%	23,612
2025	189,364	-	218	23,830	14,630	227,606	1,416,285	16.1%	22,389
2026	227,606	-	238	22,627	17,370	267,365	1,463,698	18.3%	21,167
2027	267,365	-	258	21,425	20,221	308,753	1,508,135	20.5%	19,955
2028	308,753	-	278	20,233	23,191	351,899	1,549,556	22.7%	18,765
2029	351,899	-	299	19,064	26,289	396,953	1,587,917	25.0%	17,599
2030	396,953	-	319	17,919	29,528	444,081	1,622,894	27.4%	16,455
2031	444,081	-	341	16,796	32,918	493,454	1,654,203	29.8%	15,353
2032	493,454	-	363	15,716	36,472	545,279	1,681,721	32.4%	14,285
2033	545,279	-	385	14,670	40,207	599,771	1,705,327	35.2%	13,232
2034	599,771	-	407	13,639	44,137	657,140	1,724,832	38.1%	12,206
2035	657,140	-	429	12,635	48,276	717,622	1,740,111	41.2%	11,208
2036	717,622	-	452	11,660	52,644	781,474	1,751,033	44.6%	10,233
2037	781,474	-	475	10,708	57,257	848,964	1,757,527	48.3%	9,292
2038	848,964	-	498	9,790	62,137	920,393	1,759,443	52.3%	8,387
2039	920,393	-	521	8,908	67,305	996,085	1,756,800	56.7%	7,518
2040	996,085	-	544	8,062	72,784	1,076,387	1,749,791	61.5%	6,688
2041	1,076,387	-	567	7,255	78,600	1,161,675	1,738,469	66.8%	5,905
2042	1,161,675	-	591	6,496	84,781	1,252,361	1,722,836	72.7%	5,173
2043	1,252,361	-	614	5,786	91,357	1,348,890	1,703,279	79.2%	4,480
2044	1,348,890	-	636	5,116	98,359	1,451,729	1,680,176	86.4%	3,825
2045	1,451,729	-	660	4,485	105,823	1,561,377	1,653,596	94.4%	3,217
2046	1,561,377	-	683	3,900	113,783	1,678,377	1,623,682	103.4%	2,659
2047	1,678,377	148,653	707	-	116,845	1,645,862	1,590,755	103.5%	2,149
2048	1,645,862	148,291	700	-	114,491	1,611,362	1,555,260	103.6%	1,695
2049	1,611,362	147,737	692	-	111,999	1,574,932	1,517,269	103.8%	1,310
2050	1,574,932	146,651	682	-	109,386	1,536,985	1,477,226	104.0%	993
2051	1,536,985	144,909	670	-	106,687	1,498,093	1,435,733	104.3%	734
2052	1,498,093	143,046	657	-	103,922	1,458,312	1,392,872	104.7%	530
2053	1,458,312	140,853	644	-	101,105	1,417,920	1,348,945	105.1%	372
2054	1,417,920	138,626	630	-	98,245	1,376,909	1,303,958	105.6%	255
2055	1,376,909	136,461	617	-	95,337	1,335,168	1,257,814	106.2%	171



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 19 HEALTH AND SOCIAL SERVICES/PROFESSIONAL		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	78,546
Interest on Total OPEB Liability		55,156
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(141,348)
Benefit Payments		(34,938)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(42,584)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>1,520,526</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>1,477,942</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	34,938
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(34,938)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>1,477,942</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>83,250</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>34,938</b>
<b>Percentage of ADC made by Employer</b>		<b>42%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(48,312)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.796642</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.487%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>4.066%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 19 HEALTH AND SOCIAL SERVICES/PROFESSIONAL		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	78,546
Interest on the Total OPEB Liability		55,156
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(20,797)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>112,905</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>1,520,526</b>
OPEB Expense		112,905
Employer Contributions		(34,938)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(120,551)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>1,477,942</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(120,551)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 4.066% Discount Rate and 4.5% Ultimate Trend	\$	1,477,942
Increase Discount Rate by One Percentage Point	\$	1,272,485
Decrease Discount Rate by One Percentage Point	\$	1,734,355
Increase Trend Rate by One Percentage Point	\$	1,759,591
Decrease Trend Rate by One Percentage Point	\$	1,256,847

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 19									
HEALTH AND SOCIAL SERVICES/PROFESSIONAL									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.796642	\$ -	\$ (141,348)	6.796642	\$ (20,797)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (20,797)	\$ (20,797)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (20,797)	\$ (20,797)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(20,797)	(20,797)	-	-	-
6/30/2020	-	-	-	-	(20,797)	(20,797)	-	-	-
6/30/2021	-	-	-	-	(20,797)	(20,797)	-	-	-
6/30/2022	-	-	-	-	(20,797)	(20,797)	-	-	-
6/30/2023	-	-	-	-	(16,566)	(16,566)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (120,551)	\$ (120,551)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (120,551)			\$ -

## Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S)  
BARGAINING UNIT NUMBER 20  
MEDICAL AND SOCIAL SERVICES**

Number of Participants Covered	
Active Participants	\$ 4,884
Retired Participants <sup>a</sup>	<u>1,128</u>
Total Participants	\$ 6,012
Actuarial Present Value of Projected Benefits	
Active Participants	\$ 506,303
Retired Participants	<u>194,533</u>
Total Participants	\$ 700,836
Actuarial Accrued Liability	
Active Participants	\$ 260,150
Retired Participants	<u>194,533</u>
Total Participants	\$ 454,683
Actuarial Value of Assets	\$ -
Unfunded Actuarial Accrued Liability	\$ 454,683
ADC Based on June 30, 2017 Actuarial Valuation	
Normal Cost	\$ 27,346
Administrative Expenses	33
Amortization of UAAL	<u>25,724</u>
Total ADC	\$ 53,103
Estimated Member Contributions	<u>-</u>
Net Employer ADC for FY 2018	\$ 53,103
Employer Share of FY 2018 Claims Costs	
Explicit Costs	
Medical and Rx Claims	\$ 9,669
Part B Reimbursement	1,193
Dental Claims	<u>697</u>
Total	\$ 11,559
Implicit Costs	<u>1,681</u>
Total Employer Costs	\$ 13,240
Retiree Share of FY 2018 Claim Costs	
Medical and Rx Claims	\$ 414
Dental Claims	<u>213</u>
Total	\$ 627
Total Claims Costs	\$ 13,867

*<sup>a</sup>Excludes 114 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 20**  
**MEDICAL AND SOCIAL SERVICES**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2046**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 454,683	0.0%	\$ 27,346
2018	-	-	-	-	-	-	503,399	0.0%	26,695
2019	-	-	38	6,683	238	6,883	553,072	1.2%	26,066
2020	6,883	-	44	13,055	966	20,860	603,515	3.5%	25,403
2021	20,860	-	53	19,092	2,200	42,099	654,466	6.4%	24,687
2022	42,099	-	64	24,751	3,948	70,734	705,637	10.0%	23,904
2023	70,734	-	76	23,980	6,004	100,642	756,864	13.3%	23,052
2024	100,642	-	90	23,142	8,151	131,845	807,874	16.3%	22,127
2025	131,845	-	104	22,231	10,390	164,362	858,433	19.1%	21,135
2026	164,362	-	119	21,253	12,721	198,217	908,095	21.8%	20,094
2027	198,217	-	134	20,228	15,149	233,460	956,634	24.4%	19,000
2028	233,460	-	151	19,151	17,675	270,135	1,003,535	26.9%	17,865
2029	270,135	-	168	18,033	20,305	308,305	1,048,390	29.4%	16,712
2030	308,305	-	186	16,898	23,042	348,059	1,091,083	31.9%	15,563
2031	348,059	-	204	15,767	25,895	389,517	1,131,398	34.4%	14,414
2032	389,517	-	223	14,637	28,872	432,803	1,169,031	37.0%	13,276
2033	432,803	-	243	13,518	31,983	478,061	1,203,629	39.7%	12,185
2034	478,061	-	263	12,448	35,239	525,485	1,234,958	42.6%	11,130
2035	525,485	-	284	11,414	38,654	575,269	1,262,875	45.6%	10,108
2036	575,269	-	304	10,412	42,241	627,618	1,287,289	48.8%	9,121
2037	627,618	-	325	9,446	46,017	682,756	1,308,020	52.2%	8,177
2038	682,756	-	347	8,524	49,997	740,930	1,324,904	55.9%	7,289
2039	740,930	-	369	7,657	54,201	802,419	1,337,809	60.0%	6,447
2040	802,419	-	391	6,838	58,647	867,513	1,346,674	64.4%	5,655
2041	867,513	-	413	6,068	63,357	936,525	1,351,453	69.3%	4,926
2042	936,525	-	436	5,362	68,355	1,009,806	1,352,170	74.7%	4,251
2043	1,009,806	-	458	4,709	73,666	1,087,723	1,348,877	80.6%	3,626
2044	1,087,723	-	482	4,108	79,316	1,170,665	1,341,381	87.3%	3,059
2045	1,170,665	-	506	3,564	85,334	1,259,057	1,329,812	94.7%	2,545
2046	1,259,057	-	529	3,074	91,751	1,353,353	1,314,478	103.0%	2,082
2047	1,353,353	112,812	553	-	94,470	1,334,458	1,295,553	103.0%	1,679
2048	1,334,458	114,323	553	-	93,041	1,312,623	1,273,253	103.1%	1,334
2049	1,312,623	115,439	551	-	91,412	1,288,045	1,247,803	103.2%	1,039
2050	1,288,045	116,019	548	-	89,602	1,261,080	1,219,584	103.4%	791
2051	1,261,080	116,164	543	-	87,634	1,232,007	1,188,895	103.6%	589
2052	1,232,007	115,884	536	-	85,527	1,201,114	1,156,045	103.9%	428
2053	1,201,114	115,282	528	-	83,300	1,168,604	1,121,255	104.2%	302
2054	1,168,604	114,382	520	-	80,966	1,134,668	1,084,731	104.6%	206
2055	1,134,668	113,157	510	-	78,539	1,099,540	1,046,714	105.0%	138



## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>GASB NOS. 74 AND 75 DISCLOSURES</b> <b>CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S)</b> <b>BARGAINING UNIT NUMBER 20</b> <b>MEDICAL AND SOCIAL SERVICES</b>		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	63,734
Interest on Total OPEB Liability		28,486
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(77,695)
Benefit Payments		(12,646)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>1,879</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>740,456</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>742,335</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	12,646
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(12,646)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>742,335</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>51,556</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>12,646</b>
<b>Percentage of ADC made by Employer</b>		<b>25%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(38,910)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>9.320799</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.570%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>4.137%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 20 MEDICAL AND SOCIAL SERVICES		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	63,734
Interest on the Total OPEB Liability		28,486
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(8,336)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>83,884</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>740,456</b>
OPEB Expense		83,884
Employer Contributions		(12,646)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(69,359)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>742,335</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(69,359)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 4.137% Discount Rate and 4.5% Ultimate Trend	\$	742,335
Increase Discount Rate by One Percentage Point	\$	628,191
Decrease Discount Rate by One Percentage Point	\$	886,969
Increase Trend Rate by One Percentage Point	\$	910,403
Decrease Trend Rate by One Percentage Point	\$	613,703

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S) BARGAINING UNIT NUMBER 20 MEDICAL AND SOCIAL SERVICES									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
Plan Year Beginning									
7/1/2016	\$ -	9.320799	\$ -	\$ (77,695)	9.320799	\$ (8,336)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (8,336)	\$ (8,336)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (8,336)	\$ (8,336)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(8,336)	(8,336)	-	-	-
6/30/2020	-	-	-	-	(8,336)	(8,336)	-	-	-
6/30/2021	-	-	-	-	(8,336)	(8,336)	-	-	-
6/30/2022	-	-	-	-	(8,336)	(8,336)	-	-	-
6/30/2023	-	-	-	-	(8,336)	(8,336)	-	-	-
6/30/2024	-	-	-	-	(8,336)	(8,336)	-	-	-
6/30/2025	-	-	-	-	(8,336)	(8,336)	-	-	-
6/30/2026	-	-	-	-	(2,671)	(2,671)	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (69,359)	\$ (69,359)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (69,359)			\$ -

## Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S)  
BARGAINING UNIT NUMBER 21  
EDUCATIONAL CONSULTANT AND LIBRARY**

Number of Participants Covered	
Active Participants	\$ 623
Retired Participants <sup>a</sup>	<u>748</u>
Total Participants	\$ 1,371
Actuarial Present Value of Projected Benefits	
Active Participants	\$ 80,706
Retired Participants	<u>115,198</u>
Total Participants	\$ 195,904
Actuarial Accrued Liability	
Active Participants	\$ 56,640
Retired Participants	<u>115,198</u>
Total Participants	\$ 171,838
Actuarial Value of Assets	\$ -
Unfunded Actuarial Accrued Liability	\$ 171,838
ADC Based on June 30, 2017 Actuarial Valuation	
Normal Cost	\$ 3,075
Administrative Expenses	20
Amortization of UAAL	<u>9,722</u>
Total ADC	\$ 12,817
Estimated Member Contributions	<u>-</u>
Net Employer ADC for FY 2018	\$ 12,817
Employer Share of FY 2018 Claims Costs	
Explicit Costs	
Medical and Rx Claims	\$ 5,566
Part B Reimbursement	1,136
Dental Claims	<u>476</u>
Total	\$ 7,178
Implicit Costs	<u>\$ 965</u>
Total Employer Costs	\$ 8,143
Retiree Share of FY 2018 Claim Costs	
Medical and Rx Claims	\$ 137
Dental Claims	<u>152</u>
Total	\$ 289
Total Claims Costs	\$ 8,432

*<sup>a</sup>Excludes 37 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 21**  
**EDUCATIONAL CONSULTANT AND LIBRARY**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2048**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 171,838	0.0%	\$ 3,075
2018	-	-	-	-	-	-	179,207	0.0%	2,929
2019	-	-	22	738	26	742	186,356	0.4%	2,793
2020	742	-	24	1,409	104	2,231	193,104	1.2%	2,662
2021	2,231	-	26	2,016	233	4,454	199,300	2.2%	2,532
2022	4,454	-	29	2,561	415	7,401	204,810	3.6%	2,405
2023	7,401	-	32	2,437	625	10,431	209,706	5.0%	2,278
2024	10,431	-	35	2,313	841	13,550	213,934	6.3%	2,142
2025	13,550	-	37	2,179	1,063	16,755	217,518	7.7%	1,999
2026	16,755	-	40	2,038	1,291	20,044	220,417	9.1%	1,856
2027	20,044	-	42	1,898	1,525	23,425	222,681	10.5%	1,719
2028	23,425	-	44	1,763	1,767	26,911	224,390	12.0%	1,582
2029	26,911	-	46	1,628	2,016	30,509	225,449	13.5%	1,441
2030	30,509	-	49	1,489	2,272	34,221	225,821	15.2%	1,315
2031	34,221	-	50	1,366	2,538	38,075	225,611	16.9%	1,202
2032	38,075	-	52	1,255	2,815	42,093	224,759	18.7%	1,089
2033	42,093	-	54	1,143	3,103	46,285	223,220	20.7%	979
2034	46,285	-	56	1,035	3,404	50,668	221,104	22.9%	876
2035	50,668	-	58	934	3,720	55,264	218,326	25.3%	781
2036	55,264	-	60	841	4,051	60,096	214,902	28.0%	690
2037	60,096	-	61	751	4,399	65,185	210,936	30.9%	598
2038	65,185	-	63	661	4,767	70,550	206,403	34.2%	508
2039	70,550	-	64	572	5,154	76,212	201,287	37.9%	424
2040	76,212	-	65	490	5,563	82,200	195,671	42.0%	348
2041	82,200	-	66	414	5,996	88,544	189,609	46.7%	279
2042	88,544	-	67	346	6,456	95,279	183,154	52.0%	220
2043	95,279	-	68	288	6,944	102,443	176,439	58.1%	171
2044	102,443	-	68	240	7,464	110,079	169,616	64.9%	132
2045	110,079	-	69	201	8,018	118,229	162,719	72.7%	100
2046	118,229	-	69	170	8,610	126,940	155,749	81.5%	74
2047	126,940	-	70	144	9,243	136,257	148,802	91.6%	54
2048	136,257	-	70	124	9,921	146,232	141,903	103.0%	39
2049	146,232	16,658	71	-	10,047	139,550	135,020	103.4%	27
2050	139,550	16,103	68	-	9,580	132,959	128,198	103.7%	19
2051	132,959	15,499	65	-	9,122	126,517	121,496	104.1%	12
2052	126,517	14,925	63	-	8,674	120,203	114,893	104.6%	7
2053	120,203	14,347	60	-	8,235	114,031	108,404	105.2%	5
2054	114,031	13,752	57	-	7,807	108,029	102,056	105.8%	3
2055	108,029	13,188	55	-	7,390	102,176	95,828	106.6%	2



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) BARGAINING UNIT NUMBER 21 EDUCATIONAL CONSULTANT AND LIBRARY		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	8,110
Interest on Total OPEB Liability		9,169
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(25,848)
Benefit Payments		(7,779)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(16,348)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>283,438</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>267,090</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	7,779
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(7,779)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>267,090</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>12,444</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>7,779</b>
<b>Percentage of ADC made by Employer</b>		<b>63%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(4,665)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>4.204481</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.187%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.822%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) BARGAINING UNIT NUMBER 21 EDUCATIONAL CONSULTANT AND LIBRARY		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	8,110
Interest on the Total OPEB Liability		9,169
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(6,148)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>11,131</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>283,438</b>
OPEB Expense		11,131
Employer Contributions		(7,779)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(19,700)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>267,090</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(19,700)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.822% Discount Rate and 4.5% Ultimate Trend	\$	267,090
Increase Discount Rate by One Percentage Point	\$	232,677
Decrease Discount Rate by One Percentage Point	\$	309,455
Increase Trend Rate by One Percentage Point	\$	311,081
Decrease Trend Rate by One Percentage Point	\$	231,615

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
BARGAINING UNIT NUMBER 21									
EDUCATIONAL CONSULTANT AND LIBRARY									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	4.204481	\$ -	\$ (25,848)	4.204481	\$ (6,148)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (6,148)	\$ (6,148)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (6,148)	\$ (6,148)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(6,148)	(6,148)	-	-	-
6/30/2020	-	-	-	-	(6,148)	(6,148)	-	-	-
6/30/2021	-	-	-	-	(1,256)	(1,256)	-	-	-
6/30/2022	-	-	-	-	-	-	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (19,700)	\$ (19,700)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (19,700)			\$ -

## Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S)  
CALIFORNIA STATE UNIVERSITY**

Number of Participants Covered	
Active Participants	\$ 48,011
Retired Participants <sup>a</sup>	<u>30,034</u>
Total Participants	\$ 78,045
Actuarial Present Value of Projected Benefits	
Active Participants	\$ 5,965,480
Retired Participants	<u>4,808,860</u>
Total Participants	\$ 10,774,340
Actuarial Accrued Liability	
Active Participants	\$ 3,549,332
Retired Participants	<u>4,808,860</u>
Total Participants	\$ 8,358,192
Actuarial Value of Assets	\$ -
Unfunded Actuarial Accrued Liability	\$ 8,358,192
ADC Based on June 30, 2017 Actuarial Valuation	
Normal Cost	\$ 280,812
Administrative Expenses	874
Amortization of UAAL	<u>472,864</u>
Total ADC	\$ 754,550
Estimated Member Contributions	<u>-</u>
Net Employer ADC for FY 2018	\$ 754,550
Employer Share of FY 2018 Claims Costs	
Explicit Costs	
Medical and Rx Claims	\$ 235,436
Part B Reimbursement	48,325
Dental Claims	<u>18,157</u>
Total	\$ 301,918
Implicit Costs	<u>\$ 47,569</u>
Total Employer Costs	\$ 349,487
Retiree Share of FY 2018 Claim Costs	
Medical and Rx Claims	\$ 5,197
Dental Claims	<u>-</u>
Total	\$ 5,197
Total Claims Costs	\$ 354,684

*<sup>a</sup>Excludes 1,588 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)  
CALIFORNIA STATE UNIVERSITY**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **N/A**

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,358,192	0.0%	\$ 280,812
2018	-	-	-	-	-	-	8,905,722	0.0%	268,718
2019	-	-	-	-	-	-	9,438,929	0.0%	258,838
2020	-	-	-	-	-	-	9,954,161	0.0%	249,628
2021	-	-	-	-	-	-	10,450,234	0.0%	240,551
2022	-	-	-	-	-	-	10,925,447	0.0%	231,120
2023	-	-	-	-	-	-	11,377,473	0.0%	221,472
2024	-	-	-	-	-	-	11,805,133	0.0%	211,510
2025	-	-	-	-	-	-	12,207,697	0.0%	201,145
2026	-	-	-	-	-	-	12,585,679	0.0%	190,674
2027	-	-	-	-	-	-	12,941,114	0.0%	179,976
2028	-	-	-	-	-	-	13,273,657	0.0%	169,087
2029	-	-	-	-	-	-	13,580,906	0.0%	158,347
2030	-	-	-	-	-	-	13,860,824	0.0%	147,966
2031	-	-	-	-	-	-	14,111,798	0.0%	137,758
2032	-	-	-	-	-	-	14,332,054	0.0%	127,741
2033	-	-	-	-	-	-	14,519,975	0.0%	118,091
2034	-	-	-	-	-	-	14,675,701	0.0%	108,809
2035	-	-	-	-	-	-	14,799,307	0.0%	99,793
2036	-	-	-	-	-	-	14,890,284	0.0%	91,083
2037	-	-	-	-	-	-	14,947,923	0.0%	82,731
2038	-	-	-	-	-	-	14,971,660	0.0%	74,731
2039	-	-	-	-	-	-	14,961,025	0.0%	67,112
2040	-	-	-	-	-	-	14,915,581	0.0%	59,865
2041	-	-	-	-	-	-	14,835,622	0.0%	52,983
2042	-	-	-	-	-	-	14,721,953	0.0%	46,463
2043	-	-	-	-	-	-	14,574,945	0.0%	40,304
2044	-	-	-	-	-	-	14,395,207	0.0%	34,535
2045	-	-	-	-	-	-	14,184,224	0.0%	29,190
2046	-	-	-	-	-	-	13,943,732	0.0%	24,306
2047	-	-	-	-	-	-	13,675,680	0.0%	19,920
2048	-	-	-	-	-	-	13,381,665	0.0%	16,048
2049	-	-	-	-	-	-	13,063,996	0.0%	12,694
2050	-	-	-	-	-	-	12,724,907	0.0%	9,831
2051	-	-	-	-	-	-	12,366,924	0.0%	7,427
2052	-	-	-	-	-	-	11,992,546	0.0%	5,453
2053	-	-	-	-	-	-	11,603,445	0.0%	3,876
2054	-	-	-	-	-	-	11,201,951	0.0%	2,669
2055	-	-	-	-	-	-	10,791,014	0.0%	1,784



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) CALIFORNIA STATE UNIVERSITY		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	795,696
Interest on Total OPEB Liability		436,431
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(1,663,194)
Benefit Payments		(333,828)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(764,895)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>14,683,420</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>13,918,525</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	333,828
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(333,828)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>13,918,525</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>732,573</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>333,828</b>
<b>Percentage of ADC made by Employer</b>		<b>46%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(398,745)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.864209</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>2.850%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.560%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) CALIFORNIA STATE UNIVERSITY		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	795,696
Interest on the Total OPEB Liability		436,431
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(242,299)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>989,828</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>14,683,420</b>
OPEB Expense		989,828
Employer Contributions		(333,828)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(1,420,895)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>13,918,525</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(1,420,895)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.56% Discount Rate and 4.5% Ultimate Trend	\$	13,918,525
Increase Discount Rate by One Percentage Point	\$	11,979,359
Decrease Discount Rate by One Percentage Point	\$	16,342,689
Increase Trend Rate by One Percentage Point	\$	16,591,308
Decrease Trend Rate by One Percentage Point	\$	11,827,140

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S) CALIFORNIA STATE UNIVERSITY									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.864209	\$ -	\$ (1,663,194)	6.864209	\$ (242,299)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (242,299)	\$ (242,299)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (242,299)	\$ (242,299)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(242,299)	(242,299)	-	-	-
6/30/2020	-	-	-	-	(242,299)	(242,299)	-	-	-
6/30/2021	-	-	-	-	(242,299)	(242,299)	-	-	-
6/30/2022	-	-	-	-	(242,299)	(242,299)	-	-	-
6/30/2023	-	-	-	-	(209,400)	(209,400)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (1,420,895)	\$ (1,420,895)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (1,420,895)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) JUDICIAL BRANCH		
Number of Participants Covered		
Active Participants	\$	1,625
Retired Participants <sup>a</sup>		858
Total Participants	\$	2,483
Actuarial Present Value of Projected Benefits		
Active Participants	\$	223,083
Retired Participants		158,090
Total Participants	\$	381,173
Actuarial Accrued Liability		
Active Participants	\$	152,154
Retired Participants		158,090
Total Participants	\$	310,244
Actuarial Value of Assets	\$	3,383
Unfunded Actuarial Accrued Liability	\$	306,861
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	8,601
Administrative Expenses		28
Amortization of UAAL		17,361
Total ADC	\$	25,990
Estimated Member Contributions		(2,876)
Net Employer ADC for FY 2018	\$	23,114
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	7,523
Part B Reimbursement		1,302
Dental Claims		572
Total	\$	9,397
Implicit Costs	\$	1,428
Total Employer Costs	\$	10,825
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	258
Dental Claims		181
Total	\$	439
Total Claims Costs	\$	11,264

*<sup>a</sup>Excludes 43 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)**  
**JUDICIAL BRANCH**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **2045**

FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ 1	\$ 3,224	\$ 160	\$ 3,383	\$ 310,244	1.1%	\$ 8,601
2018	3,383	-	28	5,752	451	9,558	330,838	2.9%	8,214
2019	9,558	-	33	8,246	990	18,761	351,029	5.3%	7,865
2020	18,761	-	39	7,903	1,647	28,272	370,528	7.6%	7,535
2021	28,272	-	45	7,580	2,328	38,135	389,240	9.8%	7,210
2022	38,135	-	52	7,262	3,034	48,379	407,051	11.9%	6,881
2023	48,379	-	58	6,939	3,768	59,028	423,920	13.9%	6,548
2024	59,028	-	65	6,613	4,531	70,107	439,767	15.9%	6,214
2025	70,107	-	72	6,285	5,326	81,646	454,621	18.0%	5,881
2026	81,646	-	78	5,959	6,154	93,681	468,379	20.0%	5,536
2027	93,681	-	85	5,621	7,018	106,235	481,089	22.1%	5,180
2028	106,235	-	91	5,271	7,919	119,334	492,816	24.2%	4,836
2029	119,334	-	97	4,934	8,861	133,032	503,374	26.4%	4,501
2030	133,032	-	104	4,605	9,846	147,379	512,596	28.8%	4,166
2031	147,379	-	111	4,277	10,878	162,423	520,435	31.2%	3,841
2032	162,423	-	118	3,960	11,962	178,227	526,867	33.8%	3,526
2033	178,227	-	125	3,652	13,101	194,855	531,898	36.6%	3,217
2034	194,855	-	132	3,349	14,301	212,373	535,461	39.7%	2,929
2035	212,373	-	139	3,068	15,565	230,867	537,448	43.0%	2,662
2036	230,867	-	146	2,808	16,902	250,431	538,015	46.5%	2,408
2037	250,431	-	153	2,561	18,318	271,157	537,209	50.5%	2,161
2038	271,157	-	160	2,321	19,818	293,136	534,841	54.8%	1,923
2039	293,136	-	167	2,090	21,409	316,468	530,882	59.6%	1,702
2040	316,468	-	174	1,876	23,100	341,270	525,438	64.9%	1,496
2041	341,270	-	181	1,677	24,898	367,664	518,562	70.9%	1,301
2042	367,664	-	188	1,489	26,812	395,777	510,327	77.6%	1,119
2043	395,777	-	195	1,313	28,853	425,748	500,814	85.0%	950
2044	425,748	-	201	1,152	31,028	457,727	490,101	93.4%	796
2045	457,727	-	208	1,004	33,351	491,874	478,299	102.8%	657
2046	491,874	46,647	215	-	34,133	479,145	465,503	102.9%	536
2047	479,145	46,457	212	-	33,213	465,689	451,843	103.1%	432
2048	465,689	46,029	208	-	32,249	451,701	437,521	103.2%	342
2049	451,701	45,555	204	-	31,247	437,189	422,551	103.5%	265
2050	437,189	44,973	200	-	30,212	422,228	407,011	103.7%	200
2051	422,228	44,243	195	-	29,149	406,939	391,028	104.1%	148
2052	406,939	43,413	190	-	28,066	391,402	374,685	104.5%	106
2053	391,402	42,427	184	-	26,970	375,761	358,129	104.9%	74
2054	375,761	41,378	179	-	25,869	360,073	341,420	105.5%	50
2055	360,073	40,294	173	-	24,766	344,372	324,592	106.1%	34



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) JUDICIAL BRANCH		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	21,728
Interest on Total OPEB Liability		18,121
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(47,721)
Benefit Payments		(10,339)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(18,211)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>507,578</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>489,367</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	10,339
Employer Pre Funding Contributions		1,612
Active Member Contributions		1,612
Net Investment Income		160
Benefit Payments		(10,339)
Administrative Expense		(1)
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>3,383</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>3,383</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>485,984</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.691%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>23,621</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>11,951</b>
<b>Percentage of ADC made by Employer</b>		<b>51%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(11,670)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>115</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>(45)</b>
<b>Average Expected Remaining Service</b>		<b>6.606982</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>3.457%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>4.043%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) JUDICIAL BRANCH		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	21,728
Interest on the Total OPEB Liability		18,121
Current-Period Benefit Changes		-
Active Member Contributions		(1,612)
Projected Earnings on Plan Investments		(115)
Administrative Expense		1
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(7,223)
Recognition of Outflow/(Inflow) due to Investment Experience		(9)
<b>Net OPEB Expense</b>	<b>\$</b>	<b>30,891</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>507,578</b>
OPEB Expense		30,891
Employer Contributions		(11,951)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(40,498)
Change in Outflow/(Inflow) due to Investment Experience		(36)
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>485,984</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(40,498)
Investment Experience	\$	(36)
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 4.043% Discount Rate and 4.5% Ultimate Trend	\$	485,984
Increase Discount Rate by One Percentage Point	\$	417,396
Decrease Discount Rate by One Percentage Point	\$	571,406
Increase Trend Rate by One Percentage Point	\$	579,023
Decrease Trend Rate by One Percentage Point	\$	412,481

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
JUDICIAL BRANCH									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.606982	\$ -	\$ (47,721)	6.606982	\$ (7,223)	\$ (45)	5.000000	\$ (9)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (7,223)	\$ (7,223)	\$ -	\$ (9)	\$ (9)
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (7,223)	\$ (7,223)	\$ -	\$ (9)	\$ (9)
6/30/2019	-	-	-	-	(7,223)	(7,223)	-	(9)	(9)
6/30/2020	-	-	-	-	(7,223)	(7,223)	-	(9)	(9)
6/30/2021	-	-	-	-	(7,223)	(7,223)	-	(9)	(9)
6/30/2022	-	-	-	-	(7,223)	(7,223)	-	-	-
6/30/2023	-	-	-	-	(4,383)	(4,383)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (40,498)	\$ (40,498)	\$ -	\$ (36)	\$ (36)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (40,498)			\$ (36)

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) EXEMPT/EXCLUDED/EXECUTIVE		
Number of Participants Covered		
Active Participants	\$	6,865
Retired Participants <sup>a</sup>		3,967
Total Participants	\$	10,832
Actuarial Present Value of Projected Benefits		
Active Participants	\$	748,681
Retired Participants		709,135
Total Participants	\$	1,457,816
Actuarial Accrued Liability		
Active Participants	\$	516,296
Retired Participants		709,135
Total Participants	\$	1,225,431
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	1,225,431
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	26,557
Administrative Expenses		122
Amortization of UAAL		69,329
Total ADC	\$	96,008
Estimated Member Contributions		-
Net Employer ADC for FY 2018	\$	96,008
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	34,327
Part B Reimbursement		5,642
Dental Claims		2,584
Total	\$	42,553
Implicit Costs	\$	6,344
Total Employer Costs	\$	48,897
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	1,105
Dental Claims		820
Total	\$	1,925
Total Claims Costs	\$	50,822

*<sup>a</sup>Excludes 260 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)  
EXEMPT/EXCLUDED/EXECUTIVE**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **N/A**

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,225,431	0.0%	\$ 26,557
2018	-	-	-	-	-	-	1,292,457	0.0%	25,586
2019	-	-	-	-	-	-	1,358,199	0.0%	24,715
2020	-	-	-	-	-	-	1,421,553	0.0%	23,873
2021	-	-	-	-	-	-	1,482,223	0.0%	23,005
2022	-	-	-	-	-	-	1,539,792	0.0%	22,113
2023	-	-	-	-	-	-	1,594,206	0.0%	21,197
2024	-	-	-	-	-	-	1,645,142	0.0%	20,233
2025	-	-	-	-	-	-	1,692,531	0.0%	19,229
2026	-	-	-	-	-	-	1,736,593	0.0%	18,198
2027	-	-	-	-	-	-	1,777,611	0.0%	17,171
2028	-	-	-	-	-	-	1,815,578	0.0%	16,168
2029	-	-	-	-	-	-	1,850,383	0.0%	15,164
2030	-	-	-	-	-	-	1,881,696	0.0%	14,194
2031	-	-	-	-	-	-	1,909,220	0.0%	13,271
2032	-	-	-	-	-	-	1,932,930	0.0%	12,377
2033	-	-	-	-	-	-	1,952,490	0.0%	11,508
2034	-	-	-	-	-	-	1,967,841	0.0%	10,671
2035	-	-	-	-	-	-	1,979,243	0.0%	9,870
2036	-	-	-	-	-	-	1,986,586	0.0%	9,090
2037	-	-	-	-	-	-	1,989,739	0.0%	8,338
2038	-	-	-	-	-	-	1,988,715	0.0%	7,612
2039	-	-	-	-	-	-	1,983,567	0.0%	6,910
2040	-	-	-	-	-	-	1,974,018	0.0%	6,233
2041	-	-	-	-	-	-	1,959,981	0.0%	5,590
2042	-	-	-	-	-	-	1,941,734	0.0%	4,982
2043	-	-	-	-	-	-	1,919,259	0.0%	4,406
2044	-	-	-	-	-	-	1,892,690	0.0%	3,862
2045	-	-	-	-	-	-	1,862,315	0.0%	3,352
2046	-	-	-	-	-	-	1,828,160	0.0%	2,884
2047	-	-	-	-	-	-	1,790,501	0.0%	2,456
2048	-	-	-	-	-	-	1,749,881	0.0%	2,068
2049	-	-	-	-	-	-	1,706,393	0.0%	1,719
2050	-	-	-	-	-	-	1,660,299	0.0%	1,407
2051	-	-	-	-	-	-	1,611,957	0.0%	1,133
2052	-	-	-	-	-	-	1,561,677	0.0%	894
2053	-	-	-	-	-	-	1,509,798	0.0%	691
2054	-	-	-	-	-	-	1,456,363	0.0%	524
2055	-	-	-	-	-	-	1,401,727	0.0%	388



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) EXEMPT/EXCLUDED/EXECUTIVE		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	85,390
Interest on Total OPEB Liability		65,881
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(262,923)
Benefit Payments		(46,707)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(158,359)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>2,249,404</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>2,091,045</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	46,707
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(46,707)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>2,091,045</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>93,212</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>46,707</b>
<b>Percentage of ADC made by Employer</b>		<b>50%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(46,505)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>6.958847</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>2.850%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.560%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S) EXEMPT/EXCLUDED/EXECUTIVE		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	85,390
Interest on the Total OPEB Liability		65,881
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(37,782)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>113,489</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>2,249,404</b>
OPEB Expense		113,489
Employer Contributions		(46,707)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(225,141)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>2,091,045</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(225,141)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.56% Discount Rate and 4.5% Ultimate Trend	\$	2,091,045
Increase Discount Rate by One Percentage Point	\$	1,786,556
Decrease Discount Rate by One Percentage Point	\$	2,474,746
Increase Trend Rate by One Percentage Point	\$	2,505,811
Decrease Trend Rate by One Percentage Point	\$	1,768,007

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM									
GASB NOS. 74 AND 75 DISCLOSURES									
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)									
EXEMPT/EXCLUDED/EXECUTIVE									
Valuation Date	6/30/2017								
Measurement Date	6/30/2017								
	Non-Investment Experience			Assumption Changes			Investment Experience		
Plan Year Beginning	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
7/1/2016	\$ -	6.958847	\$ -	\$ (262,923)	6.958847	\$ (37,782)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (37,782)	\$ (37,782)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (37,782)	\$ (37,782)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(37,782)	(37,782)	-	-	-
6/30/2020	-	-	-	-	(37,782)	(37,782)	-	-	-
6/30/2021	-	-	-	-	(37,782)	(37,782)	-	-	-
6/30/2022	-	-	-	-	(37,782)	(37,782)	-	-	-
6/30/2023	-	-	-	-	(36,231)	(36,231)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (225,141)	\$ (225,141)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (225,141)			\$ -

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING ACTUARIAL VALUATION AS OF JULY 1, 2017, AT 7.28% (\$ IN 000'S) OTHER		
Number of Participants Covered		
Active Participants	\$	4,576
Retired Participants <sup>a</sup>		14,349
Total Participants	\$	18,925
Actuarial Present Value of Projected Benefits		
Active Participants	\$	517,686
Retired Participants		1,468,959
Total Participants	\$	1,986,645
Actuarial Accrued Liability		
Active Participants	\$	329,751
Retired Participants		1,468,959
Total Participants	\$	1,798,710
Actuarial Value of Assets	\$	-
Unfunded Actuarial Accrued Liability	\$	1,798,710
ADC Based on June 30, 2017 Actuarial Valuation		
Normal Cost	\$	22,090
Administrative Expenses		354
Amortization of UAAL		157,016
Total ADC	\$	179,460
Estimated Member Contributions		-
Net Employer ADC for FY 2018	\$	179,460
Employer Share of FY 2018 Claims Costs		
Explicit Costs		
Medical and Rx Claims	\$	85,430
Part B Reimbursement		21,685
Dental Claims		7,819
Total	\$	114,934
Implicit Costs	\$	26,482
Total Employer Costs	\$	141,416
Retiree Share of FY 2018 Claim Costs		
Medical and Rx Claims	\$	1,065
Dental Claims		2,422
Total	\$	3,487
Total Claims Costs	\$	144,903

*<sup>a</sup>Excludes 967 retired participants with dental only coverage. Actuarial valuation results include dental liabilities for retired members electing dental only coverage.*

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2017, ACTUARIAL VALUATION (\$ IN 000'S)  
OTHER**

Fiscal Year Beginning **7/1/2017**  
 Long-term Asset Return **7.280%**  
 Discount Rate **7.280%**  
 Year Plan is Fully Funded **N/A**

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,798,710	0.0%	\$ 22,090
2018	-	-	-	-	-	-	1,806,792	0.0%	21,044
2019	-	-	-	-	-	-	1,811,203	0.0%	20,287
2020	-	-	-	-	-	-	1,810,886	0.0%	19,552
2021	-	-	-	-	-	-	1,806,399	0.0%	18,847
2022	-	-	-	-	-	-	1,798,265	0.0%	18,058
2023	-	-	-	-	-	-	1,787,072	0.0%	17,187
2024	-	-	-	-	-	-	1,773,221	0.0%	16,337
2025	-	-	-	-	-	-	1,757,643	0.0%	15,535
2026	-	-	-	-	-	-	1,741,229	0.0%	14,681
2027	-	-	-	-	-	-	1,724,649	0.0%	13,767
2028	-	-	-	-	-	-	1,707,823	0.0%	12,886
2029	-	-	-	-	-	-	1,690,490	0.0%	12,007
2030	-	-	-	-	-	-	1,672,397	0.0%	11,127
2031	-	-	-	-	-	-	1,653,194	0.0%	10,297
2032	-	-	-	-	-	-	1,632,688	0.0%	9,576
2033	-	-	-	-	-	-	1,611,174	0.0%	8,874
2034	-	-	-	-	-	-	1,588,584	0.0%	8,154
2035	-	-	-	-	-	-	1,564,709	0.0%	7,471
2036	-	-	-	-	-	-	1,539,635	0.0%	6,810
2037	-	-	-	-	-	-	1,513,167	0.0%	6,177
2038	-	-	-	-	-	-	1,485,416	0.0%	5,617
2039	-	-	-	-	-	-	1,456,588	0.0%	5,129
2040	-	-	-	-	-	-	1,426,854	0.0%	4,703
2041	-	-	-	-	-	-	1,396,378	0.0%	4,300
2042	-	-	-	-	-	-	1,365,263	0.0%	3,900
2043	-	-	-	-	-	-	1,333,640	0.0%	3,521
2044	-	-	-	-	-	-	1,301,334	0.0%	3,159
2045	-	-	-	-	-	-	1,268,387	0.0%	2,807
2046	-	-	-	-	-	-	1,234,826	0.0%	2,460
2047	-	-	-	-	-	-	1,200,753	0.0%	2,123
2048	-	-	-	-	-	-	1,166,156	0.0%	1,805
2049	-	-	-	-	-	-	1,130,906	0.0%	1,509
2050	-	-	-	-	-	-	1,095,145	0.0%	1,236
2051	-	-	-	-	-	-	1,059,061	0.0%	988
2052	-	-	-	-	-	-	1,022,717	0.0%	766
2053	-	-	-	-	-	-	986,251	0.0%	575
2054	-	-	-	-	-	-	949,928	0.0%	415
2055	-	-	-	-	-	-	913,934	0.0%	289



## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES CHANGE IN NET OPEB LIABILITY AND CONTRIBUTIONS MADE BY EMPLOYER, (\$ IN 000'S) OTHER		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>Total OPEB Liability</b>		
Service Cost	\$	64,873
Interest on Total OPEB Liability		82,194
Changes of Benefit Terms		-
Difference between Expected and Actual Experience		-
Changes of Assumptions		(243,150)
Benefit Payments		(135,079)
<b>Net Change in Total OPEB Liability</b>	<b>\$</b>	<b>(231,162)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$</b>	<b>2,886,186</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$</b>	<b>2,655,024</b>
<b>Plan Fiduciary Net Position</b>		
Employer PayGO Contributions	\$	135,079
Employer Pre Funding Contributions		-
Active Member Contributions		-
Net Investment Income		-
Benefit Payments		(135,079)
Administrative Expense		-
Other		-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$</b>	<b>-</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$</b>	<b>-</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$</b>	<b>2,655,024</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>		<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$</b>	<b>174,233</b>
<b>Employer Contribution</b>	<b>\$</b>	<b>135,079</b>
<b>Percentage of ADC made by Employer</b>		<b>78%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$</b>	<b>(39,154)</b>
<b>Expected Return on Assets</b>	<b>\$</b>	<b>-</b>
<b>Investment (Gain)/Loss</b>	<b>\$</b>	<b>-</b>
<b>Average Expected Remaining Service</b>		<b>2.607026</b>
<b>Blended Discount Rate June 30, 2016</b>		<b>2.850%</b>
<b>Blended Discount Rate June 30, 2017</b>		<b>3.560%</b>
<b>Long-term Expected Return on Assets</b>		<b>7.280%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES		
OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S)		
OTHER		
<b>Fiscal Year Ending June 30, 2017</b>		
<b>OPEB Expense <sup>a</sup></b>		
Service Cost	\$	64,873
Interest on the Total OPEB Liability		82,194
Current-Period Benefit Changes		-
Active Member Contributions		-
Projected Earnings on Plan Investments		-
Administrative Expense		-
Other Changes in Plan Fiduciary Net Position		-
Recognition of Outflow/(Inflow) due to Non-investment Experience		-
Recognition of Outflow/(Inflow) due to Assumption Changes		(93,267)
Recognition of Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Expense</b>	<b>\$</b>	<b>53,800</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability beginning of year</b>	<b>\$</b>	<b>2,886,186</b>
OPEB Expense		53,800
Employer Contributions		(135,079)
Change in Outflow/(Inflow) due to Non-investment Experience		-
Change in Outflow/(Inflow) due to Assumption Changes		(149,883)
Change in Outflow/(Inflow) due to Investment Experience		-
<b>Net OPEB Liability End of year</b>	<b>\$</b>	<b>2,655,024</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	(149,883)
Investment Experience	\$	-
<b>Deferred Outflows</b>		
Non-investment Experience	\$	-
Assumption Changes	\$	-
Investment Experience	\$	-
<b>Net OPEB Liability Sensitivity</b>		
Baseline at 3.56% Discount Rate and 4.5% Ultimate Trend	\$	2,655,024
Increase Discount Rate by One Percentage Point	\$	2,365,295
Decrease Discount Rate by One Percentage Point	\$	3,008,051
Increase Trend Rate by One Percentage Point	\$	3,010,093
Decrease Trend Rate by One Percentage Point	\$	2,365,858

<sup>a</sup> Measured for the plan's fiscal year end June 30, 2017, and applicable for the sponsor's fiscal year end June 30, 2018.

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
GASB NOS. 74 AND 75 DISCLOSURES  
DEFERRED INFLOWS AND OUTFLOWS, (\$ IN 000'S)  
OTHER**

**Valuation Date** 6/30/2017  
**Measurement Date** 6/30/2017

	Non-Investment Experience			Assumption Changes			Investment Experience		
	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization	(Gain)/Loss	Amortization Factor	Initial Amortization
Plan Year Beginning									
7/1/2016	\$ -	2.607026	\$ -	\$ (243,150)	2.607026	\$ (93,267)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2017	\$ -	\$ -	\$ -	\$ -	\$ (93,267)	\$ (93,267)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2018	\$ -	\$ -	\$ -	\$ -	\$ (93,267)	\$ (93,267)	\$ -	\$ -	\$ -
6/30/2019	-	-	-	-	(56,616)	(56,616)	-	-	-
6/30/2020	-	-	-	-	-	-	-	-	-
6/30/2021	-	-	-	-	-	-	-	-	-
6/30/2022	-	-	-	-	-	-	-	-	-
6/30/2023	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
6/30/2025	-	-	-	-	-	-	-	-	-
6/30/2026	-	-	-	-	-	-	-	-	-
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ (149,883)	\$ (149,883)	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2017			\$ -			\$ (149,883)			\$ -