

# State Of California Retiree Health Benefits Program

GASB Nos. 74 and 75 Actuarial Valuation Report  
As of June 30, 2020





September 24, 2021

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, 2020, 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 6.75 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, 2020, using census data as of June 30, 2020;
- A reconciliation of Total OPEB Liability from June 30, 2019, to June 30, 2020;
- The development of OPEB expense for the State's fiscal year end June 30, 2021, using a measurement date of June 30, 2020;
- The deferred inflows and outflows applicable to year end June 30, 2020;
- 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 6.75 percent.

The actuarial valuation was based on information furnished by the SCO, CalPERS, and CalHR concerning retiree healthcare benefits, members' census data, 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. OPEB-related actuarial valuation assumptions are based on an Experience Review Study for the period from July 1, 2014, to June 30, 2018. Certain OPEB related assumptions were updated based on available information as of the actuarial valuation date. Pension-related actuarial valuation assumptions are based on assumptions used for the 2020 actuarial valuations of CalPERS statewide pension plans.

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, 2020. 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.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

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, James E. Pranschke, and Abra D. Hill 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



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## EXECUTIVE SUMMARY

# Executive Summary

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## 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 No. 43 and 45 were replaced by GASB Statements No. 74 and 75. GASB No. 74 first applied to plan reporting for the plan year end June 30, 2017. GASB No. 75 first applied 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 reporting by OPEB plans that administer benefits on behalf of governments. GASB Statement No. 75,

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*Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, addresses reporting by governments who provide OPEB to their employees and for governments who 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 GASB Statements No. 74 and 75**

Under GASB Statements No. 74 and 75, 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 3.13 percent as of June 30, 2019, and 2.45 percent as of June 30, 2020. 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.

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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 Employers' 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 6.75 percent per year over the long term.

As of June 30, 2020, total assets in the CERBT accounts, for SEIU, 12 bargaining units, Judicial employees, and Exempt/Excluded/Executive employees, are approximately \$2.69 billion.

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.

The Personal Leave Program (PLP 2020) resulted in a suspension of active member pre-funding contributions for plan years end June 30, 2021, and June 30, 2022, for the bargaining units and Judicial employees groups with pre-funding agreements. Subsequent to the adoption of PLP 2020, member contributions for plan year end June 30, 2022, were reinstated for the SEIU and BU 12 groups.

Effective after June 30, 2021, we understand the plan sponsor will "pick-up" missed member contributions for plan year end June 30, 2021, and member contributions for plan year end June 30, 2022, will be reinstated for all actuarial valuation groups with pre-funding policies.

This valuation considers the funding policy in effect as of June 1, 2021, and does not reflect plan year end 2021 picked-up contributions or plan year end 2022 reinstated member contributions which were adopted after June 1, 2021.

### **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 participates in the CERBT, an agent multiple-employer plan consisting of an aggregation of single-employer plans, including over 557 contributing employers.

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.

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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.

### 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**.

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- 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 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, 2020, 15 out of 17 membership groups or approximately 80 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 2.45 percent, which is equal to municipal bond rate at June 30, 2020. For membership groups with pre-funding arrangements, we assumed a blended discount rate reflecting the municipal bond rate of 2.45 percent if pre-funding assets are not available to pay benefits and 6.75 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.

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The following table shows key valuation results as of June 30, 2020, and June 30, 2019.

KEY VALUATION RESULTS (\$ IN 000'S)		
GASB No. 75	June 30, 2020	June 30, 2019
Total OPEB Liability	\$ 97,880,693	\$ 93,511,969
Net Fiduciary Position	\$ 2,689,328	\$ 1,583,373
Net OPEB Liability	\$ 95,191,365	\$ 91,928,596
Service Cost	\$ 3,325,446	\$ 3,158,693
Annual OPEB Expense	\$ 3,602,840	\$ 3,726,301
Employer Contribution	\$ 3,502,203	\$ 2,965,538
Total Actuarially Determined Contribution (ADC)	\$ 4,714,742	\$ 4,905,408

### 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, 2020, 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, 2017, to May 31, 2020.
- Premium data through calendar year 2021, 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 2020 actuarial valuations of the CalPERS statewide pension programs.
- 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, 2014, to June 30, 2018, first effective with the actuarial valuation as of June 30, 2019.
- Effective as of June 30, 2019, the full-funding discount rate and long-term expected return on assets was changed from 7.00 percent to 6.75 percent, the general inflation assumption was changed from 2.50 percent to 2.25 percent, and the wage inflation assumption was changed from 2.75 percent to 2.50 percent.

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- Other healthcare, economic, and demographic assumptions such as the discount rate, healthcare inflation, healthcare claim costs, and healthcare plan participation are based on recommendations from Gabriel, Roeder, Smith & Company as approved by the SCO.
- Effective as of July 1, 2018, actuarial costs for members in the Service Employee International Union (bargaining units 1, 3, 4, 11, 14, 15, 17, 20, and 21) are based on one combined actuarial valuation group.
- Effective as of July 1, 2018, the actuarial valuation reflects a pre-funding policy for the Exempt, Excluded and Executive actuarial valuation group.
- Effective as of June 30, 2018, the basis used to allocate total pay-as-you-go employer contribution by actuarial valuation group was changed from an expected benefit payments to number of retirees.
- PLP 2020 temporary suspension of active member pre-funding contributions for plan year end 2021 and 2022, as applicable and effective as of June 1, 2021.
- 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, 2020.
- 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 6.75 percent.
- GASB No. 74 information applicable to the plan's fiscal year end June 30, 2020.
- GASB No. 75 information applicable to the sponsor's fiscal year end June 30, 2021.
- 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,” replaced 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 replaced the requirements of Statements No. 45, Accounting and Financial Reporting by Employers for Postemployments 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

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The GASB Statement No. 74 information contained in this report is based on an actuarial valuation date of June 30, 2020, and a measurement date of June 30, 2020.

For GASB Statement No. 75 reporting purposes, the plan sponsor's financial reporting for fiscal year end June 30, 2021, will be based on a measurement date of June 30, 2020.

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, 2020.

### 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

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- Information regarding certain reserves and investments, including concentrations of investments greater than or equal to 5 percent, 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 tax-exempt municipal bond rate was based on Fidelity's "20-Year Municipal GO AA Index" as of each measurement date. This index represents fixed-income municipal bonds with 20 years to maturity and is constructed using option-adjusted analytics for a diverse group of 10,000 tax-exempt securities. The Fidelity Index rates are 3.13 percent as of June 30, 2019, and 2.45 percent as of June 30, 2020.

### 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

## Current Overview

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rates, and per capita claim costs, and pension related assumptions such as: termination rates, disability rates, retirement rates, and mortality rates.

The following OPEB and healthcare related assumptions were first used beginning with the actuarial valuation as of June 30 2019, and are based on an Experience Review for the period from July 1, 2014, to June 30, 2018. Assumptions were modified as described below:

- **Full-funding discount rate** – Decrease the full-funding discount rate from 7.00 percent to 6.75 percent. We recommend that full-funding policy discount rates be reviewed each year in relation to the rate expected to be earned under Strategy 1 as disclosed by CERBT.
- **General inflation and wage inflation** – Decrease the price inflation assumption from 2.50 percent to 2.25 percent and decrease the wage inflation assumption from 2.75 percent to 2.50 percent.
- **Aging factors** – Update factors based recent gross claims experience data.
- **Percentage of disabled members eligible for Medicare benefits** – Update based on plan experience.
- **Adjustments for disabled members** – Slightly decrease the load applied to the expected claims for disabled members.
- **Adjustments for children of current retirees and survivors** – Update the load applied to the expected claims to account for children of current retirees and survivors.

The following OPEB and healthcare assumptions are revised during each actuarial valuation and are based on available information as of the actuarial valuation date:

- **Health cost and premium increases** – Use select and ultimate trend assumption based on available premium increases and trend surveys as of the actuarial valuation date.
- **Participation election percentage** – Update based on experience through the end of the year.
- **Coverage and continuance assumptions** – Update based on experience through the end of the year.
- **Per capita claim costs for medical, prescription and dental benefits** – Update per capita claims costs based on historical claims experience and premium rates.
- **Medicare Part B premiums** – Update based on available information.
- **Employer Group Waiver Plan** – Decrease the EGWP trend adjustment factors applied to Medicare claims based on experience and future expectation.

The pension related assumptions are based on an Experience Review performed by CalPERS and were first adopted beginning with the actuarial valuation as of June 30, 2018. Key assumptions include: salary increase rates, termination rates, disability rates, retirement rates, and mortality rates.

### 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.

### 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, 2014, to June 30, 2018. The actuarial assumptions determined by this study were first used for the GASB Statements No. 74 and 75 actuarial valuations effective as of June 30, 2019. This study impacted the full-funding discount rate, general inflation, wage inflation, aging factors, percentage of members eligible for Medicare benefits, claim adjustment factors for disabled members, and claim load to account for children of retirees and survivors.

Certain OPEB and healthcare assumptions are updated during each valuation including: healthcare costs and premium increases, participation election percentages, coverage and continuance assumptions, per capita costs for medical, prescription and dental benefits, Medicare Part B premiums, Employer Group Waiver Plan adjustments, and data processing adjustments.

For the actuarial valuation as of June 30, 2020, assumptions, including per capita healthcare cost and healthcare trend rates, were updated based on experience through June 30, 2020.

#### ***Discount Rate Assumption***

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

The sponsor's pre-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 6.75 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 6.75 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 2.45 percent if pre-funding assets are not available to pay benefits and 6.75 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,

## Current Overview

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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.

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 2021 trend rates are based on actual premium increases from calendar 2020 to 2021. Based on a review of supporting documentation provided by CalPERS and a review of various publicly available trend studies, the 2021 trend rate for the PPO per capita claims costs is assumed to be 6.00 percent for Pre-Medicare costs and 3.00 percent for Post-Medicare costs. For 2022 and beyond we assumed an initial healthcare trend rate of 7.50 percent for Pre-Medicare and Post-Medicare costs, decreasing each year over the next five years to a rate of 4.50 percent, remains at 4.50 percent for ten years until the ultimate rate of 4.25 percent is reached in 2037.

### ***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) Seventy-five 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 (\$4,020 for 2020) to the catastrophic coverage limit (\$9,039 for 2020). 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 2019.
- 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.

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Based on updated data from CalPERS, the remaining savings as of June 30, 2020, attributable to the EGWP-Wrap design feature is approximately 25 percent of average costs for PERSCare, 29 percent of average costs for PERS Choice, and 13 percent for HMO plans. In our actuarial valuation, EGWP based savings are assumed to gradually wear away over the next 11 years to an ultimate savings level of 17 percent of average costs for PERSCare, 21 percent of average costs for PERS Choice, and 10 percent of average costs for HMO plans. We will continue to monitor experience in future actuarial valuations and evaluate if the gap between current savings and projected ultimate savings should be reduced.

### ***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, approximately 95 percent of all eligible retirees elect healthcare coverage.

### ***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 and gender 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.

The employer's estimated explicit and implicit costs are shown on page 20 of the actuarial valuation report and are based on first year projected costs generated from the actuarial valuation. For purposes of financial reporting, estimated explicit and implicit costs will be updated based on actual premium and claim experience. These estimates could change primarily due to (i) differences between expected and actual number of non-Medicare retirees and dependents, (ii) changes in age and gender profile of non-Medicare retiree and dependents, (iii) differences between expected and actual trend during the year on premiums and claims, (iv) migration between non-Medicare plans, and (v) updates to the age and gender factors.

## Current Overview

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### ***Elimination of Excise Tax Assumption***

The Excise Tax, also known as the Cadillac Tax, was originally scheduled to take effect in 2018. It was delayed twice, most recently until 2022, and is now permanently repealed. The repeal is effective for taxable years beginning after December 31, 2019. Consequently, assumptions which estimate the impact of the Excise Tax have been removed for the actuarial valuation as of June 30, 2020.

### ***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 6.75 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, 2020.

## **SECTION B**

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

# Actuarial Valuation Results

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## Reconciliation of the Total OPEB Liability

The table on the following page shows a reconciliation of the total OPEB liability from June 30, 2019, to June 30, 2020, based on the GASB Statements No. 74 and 75.

The total OPEB liability increased from \$93.51 billion as of June 30, 2019, to \$97.88 billion as of June 30, 2020. If the plan's assumptions had been exactly realized during the year and no assumption changes were made, the total OPEB liability would have increased to \$97.78 billion as of June 30, 2020. The key factors contributing to the unexpected increase in total OPEB liability of \$0.10 billion include:

- Demographic experience increased the expected actuarial liabilities by 1.1 percent or \$1.06 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 2.8 percent from 192,701 at June 30, 2019, to 198,150 at June 30, 2020, and the number of active members increased by 1.0 percent from 276,317 to 278,986, which are key reasons for the demographic loss.
- During the year, favorable healthcare claims experience and plan design changes decreased the expected total OPEB liability by approximately 3.7 percent or \$3.59 billion. This change in total OPEB liability is mainly driven by the relationship between the assumed trend rate used to project average member claims cost in 2020 (used in last year's actuarial valuation) and the actual trend rate for 2020 (used to update average per member claim costs). During plan year end June 30, 2020, average per member claim costs were lower than assumed, which was primarily driven by favorable Medicare claims and premiums.
- 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 publicly 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, 2020, actuarial valuation were reviewed and updated since the last actuarial valuation. The trend rates are assumed to begin in plan year 2022 at 7.50 percent for pre-Medicare and post-Medicare coverage and gradually decrease to 4.50 percent in 2036 and then decrease to an ultimate rate of 4.25 percent beginning in 2037. In addition, the assumed gap between initial EGWP savings and projected EGWP savings was reduced. These assumption change decreased the expected total OPEB liability by approximately 5.7 percent or \$5.58 billion. For future actuarial valuations, we will continue to monitor trend experience and the EGWP savings gap.
- Changing the GASB Statements No. 74 and 75 blended discount rate as of June 30, 2019, which ranged from 3.13 percent to 3.85 percent, to the blended discount rate as of June 30, 2020, which ranges from 2.45 percent to 3.38 percent, increased the total OPEB liability by 8.3 percent or \$8.16 billion.

## Actuarial Valuation Results

The table below shows the reconciliation of the total OPEB liability.

<b>CALIFORNIA STATE EMPLOYEES</b> <b>OPEB ACTUARIAL VALUATION RESULTS AS OF JUNE 30, 2020 (\$ in '000s)</b> <b>BASED on GASB Statements No. 74 and 75 Discount Rate</b> <b>(GAIN)/LOSS ANALYSIS</b>	
Total OPEB Liability as of June 30, 2019	\$ 93,511,969
Service Cost for 19/20	3,325,446
Actual Benefit Payments	(2,465,508)
Interest	<u>3,408,518</u>
Expected Total OPEB Liability as of June 30, 2020	\$ 97,780,425
(Gain)/Loss Items	
Demographic Experience	1,061,892
Healthcare Claims Experience	(3,588,394)
Change in Healthcare Related Assumptions	(5,576,303)
Change in other Assumptions and Methods	46,640
Change in GASB 74/75 Blended Discount Rate	<u>8,156,433</u>
Total	\$ 100,268
Total OPEB Liability as of June 30, 2020	\$ 97,880,693

The following table shows key actuarial valuation results by group.

# Actuarial Valuation Results

JUNE 30, 2020 ACTUARIAL VALUATION SUMMARY (\$ IN 000's)											
Actuarial Valuation Group	FY 2020			Full-funding Discount Rate			GASB No. 74 and 75				
	Assets 6/30/2020	PAYGO Contributions	Pre-Fund Contributions	Normal Cost	Actuarial Liability	Net Employer ADC	Blended Discount Rate	Service Cost	Total OPEB Liability	Net OPEB Liability	Annual OPEB Expense
Attorneys and Hearing Officers (BU2)	59,938	32,283	24,640	19,521	785,802	62,946	3.213%	46,162	1,280,678	1,220,740	41,471
Highway Patrol (BU5)	495,528	84,544	63,357	67,070	3,398,654	240,749	3.380%	159,410	5,862,843	5,367,315	342,252
Corrections (BU6)	862,035	357,726	259,080	225,216	10,013,057	772,683	3.217%	535,696	17,091,273	16,229,238	633,135
Protective Services and Public Safety (BU7)	123,135	75,835	47,622	44,825	1,955,573	154,453	3.134%	107,888	3,311,174	3,188,039	97,511
Firefighters (BU8)	91,885	57,840	47,676	42,970	1,536,570	129,392	3.236%	98,851	2,680,362	2,588,477	133,638
Professional Engineers (BU9)	151,824	100,777	63,298	57,051	2,742,025	212,002	3.084%	136,522	4,597,247	4,445,423	105,487
Professional Scientific (BU10)	46,271	29,452	21,522	17,637	659,777	54,339	3.229%	38,429	1,097,342	1,051,071	40,772
Craft and Maintenance (BU12)	119,456	127,671	52,658	54,545	2,606,586	203,358	3.130%	134,649	4,254,764	4,135,308	84,602
Stationary Engineers (BU13)	11,919	11,913	6,212	5,011	260,231	19,868	2.971%	11,873	431,606	419,687	4,708
Physicians, Dentists, and Podiatrists (BU16)	40,493	20,132	12,706	9,228	348,757	27,676	3.286%	20,111	532,993	492,500	4,978
Psychiatric Technicians (BU18)	58,657	45,071	30,500	32,004	1,300,406	106,295	3.136%	76,706	2,217,513	2,158,856	78,573
Health and Social Services/Professional (BU19)	64,169	41,947	32,978	28,200	950,176	81,207	3.261%	65,666	1,542,527	1,478,358	57,437
California State University	-	400,600	-	266,956	8,427,538	771,153	2.450%	643,745	15,323,276	15,323,276	747,972
Judicial Branch	29,841	10,841	8,846	7,967	322,217	25,459	3.252%	17,458	521,657	491,816	16,456
Exempt/Excluded/Executive	24,455	46,009	17,130	25,773	1,187,154	95,330	3.050%	63,622	2,022,965	1,998,510	43,437
Other	-	112,102	-	19,153	1,494,436	173,501	2.450%	52,139	2,385,666	2,385,666	58,557
Service Employees International Union (SEIU)	509,722	910,765	348,470	453,699	19,408,841	1,584,331	3.077%	1,116,519	32,726,807	32,217,085	1,111,854
<b>Total</b>	<b>\$ 2,689,328</b>	<b>\$ 2,465,508</b>	<b>\$ 1,036,695</b>	<b>\$ 1,376,826</b>	<b>\$ 57,397,800</b>	<b>\$ 4,714,742</b>		<b>\$ 3,325,446</b>	<b>\$ 97,880,693</b>	<b>\$ 95,191,365</b>	<b>\$ 3,602,840</b>

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

# Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>TOTAL OF ALL ACTUARIAL VALUATION GROUPS</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	276,317	278,986
Retired Participants <sup>a</sup>	<u>192,701</u>	<u>198,150</u>
Total Participants	469,018	477,136
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 37,370,952	\$ 35,857,437
Retired Participants	<u>35,546,649</u>	<u>34,447,811</u>
Total Participants	\$ 72,917,601	\$ 70,305,248
Actuarial Accrued Liability		
Active Participants	\$ 23,883,511	\$ 22,949,989
Retired Participants	<u>35,546,649</u>	<u>34,447,811</u>
Total Participants	\$ 59,430,160	\$ 57,397,800
Actuarial Value of Assets	\$ 1,583,373	\$ 2,689,330
Unfunded Actuarial Accrued Liability	\$ 57,846,787	\$ 54,708,470
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 1,441,924	\$ 1,376,826
Administrative Expenses	6,252	3,146
Amortization of UAAL	<u>3,457,232</u>	<u>3,334,770</u>
Total ADC	\$ 4,905,408	\$ 4,714,742
Estimated Member Contributions	<u>(378,912)</u>	<u>-</u>
Net Employer ADC	\$ 4,526,496	\$ 4,714,742
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 1,642,670	\$ 1,714,217
Part B Reimbursement	306,360	340,883
Dental Claims	<u>120,371</u>	<u>122,502</u>
Total	\$ 2,069,401	\$ 2,177,602
Employer Implicit Costs	<u>432,398</u>	<u>336,379</u>
Total Employer Costs	\$ 2,501,799	\$ 2,513,981
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 91,499	\$ 96,835
Dental Claims	<u>31,211</u>	<u>33,657</u>
Total	\$ 122,710	\$ 130,492
Total Claims Costs	\$ 2,624,509	\$ 2,644,473

<sup>a</sup>Retired participants with dental only coverage, 11,819 as of July 1, 2019, and 12,092 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience during each respective reporting period.



# 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) TOTAL OF ALL ACTUARIAL VALUATION GROUPS				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 4,009,501	\$ 3,477,466	\$ 3,158,693	\$ 3,325,446
Interest on Total OPEB Liability	3,249,843	3,659,659	3,510,048	3,408,518
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(7,189,638)	(1,393,426)	(2,526,502)
Changes of Assumptions	(9,830,478)	(2,739,427)	4,112,927	2,626,770
Benefit Payments	(2,118,695)	(2,246,439)	(2,345,512)	(2,465,508)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (4,689,829)</b>	<b>\$ (5,038,379)</b>	<b>\$ 7,042,730</b>	<b>\$ 4,368,724</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 96,197,447</b>	<b>\$ 91,507,618</b>	<b>\$ 86,469,239</b>	<b>\$ 93,511,969</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 91,507,618</b>	<b>\$ 86,469,239</b>	<b>\$ 93,511,969</b>	<b>\$ 97,880,693</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 2,118,695	\$ 2,246,439	\$ 2,345,512	\$ 2,465,508
Employer Pre-Funding Contributions	271,114	171,669	336,826	545,965
Active Member Contributions	39,362	116,061	283,202	490,730
Net Investment Income	42,292	48,098	89,940	70,259
Benefit Payments	(2,118,695)	(2,246,439)	(2,345,512)	(2,465,508)
Administrative Expense	(165)	(350)	(251)	(999)
Other	(290)	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 352,313</b>	<b>\$ 335,478</b>	<b>\$ 709,717</b>	<b>\$ 1,105,955</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 147,722</b>	<b>\$ 538,808</b>	<b>\$ 873,656</b>	<b>\$ 1,583,373</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 500,035</b>	<b>\$ 874,286</b>	<b>\$ 1,583,373</b>	<b>\$ 2,689,328</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 91,007,583</b>	<b>\$ 85,594,953</b>	<b>\$ 91,928,596</b>	<b>\$ 95,191,365</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.546%</b>	<b>1.011%</b>	<b>1.693%</b>	<b>2.748%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 4,506,153</b>	<b>\$ 4,565,820</b>	<b>\$ 4,389,585</b>	<b>\$ 4,414,678</b>
<b>Employer Contribution</b>	<b>\$ 2,389,810</b>	<b>\$ 2,418,108</b>	<b>\$ 2,682,338</b>	<b>\$ 3,011,473</b>
<b>Percentage of ADC made by Employer</b>	<b>53%</b>	<b>53%</b>	<b>61%</b>	<b>68%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (2,116,343)</b>	<b>\$ (2,147,712)</b>	<b>\$ (1,707,247)</b>	<b>\$ (1,403,205)</b>
<b>Expected Return on Assets</b>	<b>\$ 24,862</b>	<b>\$ 49,503</b>	<b>\$ 82,480</b>	<b>\$ 141,262</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (17,427)</b>	<b>\$ 1,405</b>	<b>\$ (7,460)</b>	<b>\$ 71,003</b>
<b>Average Expected Remaining Service</b>	<b>From 2.607026 to 9.568629</b>	<b>From 2.749775 to 9.781090</b>	<b>From 2.965309 to 8.815624</b>	<b>From 3.141965 to 9.486386</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>From 2.850% to 3.672%</b>	<b>From 3.560% to 4.219%</b>	<b>From 3.620% to 4.282%</b>	<b>From 3.130% to 3.851%</b>
<b>Blended Discount Rate End of Year</b>	<b>From 3.560% to 4.219%</b>	<b>From 3.620% to 4.282%</b>	<b>From 3.130% to 3.851%</b>	<b>From 2.450% to 3.380%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</b>



# Actuarial Valuation Results

<b>GASB NOS. 74 AND 75 DISCLOSURES</b> <b>OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S)</b> <b>TOTAL OF ALL ACTUARIAL VALUATION GROUPS</b>		
<b>Measured for the Plan's Fiscal Year Ending</b> <b>Applicable for the Sponsor's Fiscal Year Ending</b>	<b>June 30, 2019</b> <b>June 30, 2020</b>	<b>June 30, 2020</b> <b>June 30, 2021</b>
<b>OPEB Expense</b>		
Service Cost	\$ 3,158,693	\$ 3,325,446
Interest on the Total OPEB Liability	3,510,048	3,408,518
Current-Period Benefit Changes	-	-
Active Member Contributions	(283,202)	(490,730)
Projected Earnings on Plan Investments	(82,480)	(141,262)
Operating Expenses	251	999
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(1,283,896)	(1,663,303)
Recognition of Outflow/(Inflow) due to Assumption Changes	(1,288,417)	(846,333)
Recognition of Outflow/(Inflow) due to Investment Experience	(4,696)	9,505
<b>Net OPEB Expense</b>	<b>\$ 3,726,301</b>	<b>\$ 3,602,840</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 85,595,583</b>	<b>\$ 91,928,596</b>
OPEB Expense	3,726,301	3,602,840
Employer Contributions	(2,682,338)	(3,011,473)
Change in Outflow/(Inflow) due to Non-investment Experience	(109,530)	(863,199)
Change in Outflow/(Inflow) due to Assumption Changes	5,401,344	3,473,103
Change in Outflow/(Inflow) due to Investment Experience	(2,764)	61,498
<b>Net OPEB Liability End of Year</b>	<b>\$ 91,928,596</b>	<b>\$ 95,191,365</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (6,302,117)	\$ (7,136,906)
Assumption Changes	\$ (7,224,812)	\$ (5,384,336)
Investment Experience	\$ (14,561)	\$ (9,138)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ 94,943	\$ 66,533
Assumption Changes	\$ 3,532,192	\$ 5,164,819
Investment Experience	\$ 2,463	\$ 58,538
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate and Trend Rates	\$ 91,928,596	\$ 95,191,365
Increase Discount Rate by One Percentage Point	\$ 78,577,547	\$ 80,885,679
Decrease Discount Rate by One Percentage Point	\$ 108,767,242	\$ 113,311,673
Increase Trend Rate by One Percentage Point	\$ 110,170,617	\$ 111,256,752
Decrease Trend Rate by One Percentage Point	\$ 77,734,902	\$ 82,722,789

## SECTION C

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### SUMMARY OF THE CURRENT SUBSTANTIVE PLAN PROVISIONS

# Summary of the Current Substantive Plan Provisions

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## 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

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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 Resources, 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

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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.

### 2020 State Contribution

The 2020 maximum State Contribution amounts are as follows:

2020 State Contribution		
One-Party Coverage	Two-Party Coverage	Family Coverage
\$767.00	\$1,461.00	\$1,868.00

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

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### 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.

California State University Employees hired after the following effective dates, must have at least 10 years of credited service to be eligible for healthcare benefits at retirement.

Employee Type	Vesting Effective Date
BU 3	July 1, 2017
BU 1,2,4,5,6,7,9, and 10	July 1, 2018
Non-Represented Employees (Executives, Management, Confidential, Excluded)	July 1, 2018
BU 11 (Teaching Associates)	July 1, 2019

## Summary of the Current Substantive Plan Provisions

### 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.

The 80/80 State Contribution amounts for 2020 are as follows:

2020 State Contribution			
Plan Type	One-Party Coverage	Two-Party Coverage	Family Coverage
Basic	\$609.00	\$1,223.00	\$1,585.00
Medicare	\$282.00	\$ 562.00	\$ 845.00

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%

## Summary of the Current Substantive Plan Provisions

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

Employee Type	Plan Change Effective Date
BU 9 <sup>a</sup> and 10 <sup>a</sup>	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
Exempt/Excluded/Executive Employees	July 1, 2018
BU 5	January 1, 2020

<sup>a</sup> The effective date of the 25-year graded State contribution formula was changed from January 1, 2016, to January 1, 2019.

### 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 the actuarial accrued liability is fully funded, and then only for the members of those bargaining units. GASB 75 requires discrete plan reporting for the portion of asset amounts accumulated solely for the payment of benefits of certain groups of employees. The State's comprehensive annual financial report will include these plan amounts.

The Personal Leave Program of 2020 ("PLP 2020") suspended employee pre-funding contributions for fiscal years 2020-21 and 2021-22 for all employee groups directly or indirectly associated with a bargaining agreement and all exempt/excluded/executive employees. For BU 12, employee pre-funding contributions were suspended for FY 2020-21. Employer pre-funding contributions were not suspended. SEIU employee pre-funding contributions were subsequently reinstated effective for fiscal year 2021-22.

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>. PLP 2020 suspended employee pre-funding contribution for fiscal years 2020-21 and 2021-22 <sup>b</sup>.



## Summary of the Current Substantive Plan Provisions

Bargaining Unit	Fiscal Year Beginning July 1,					
	2016	2017	2018	2019	2020 <sup>b</sup>	2021 <sup>b,c</sup>
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,d</sup>	0.5%	0.5%	0.5%	Fund Goal		
BU 6 (Corrections)	1.3%	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) <sup>d</sup>		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) <sup>d</sup>		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%	2.3%	Fund Goal			
Exempt/Excluded/Executive Employees		0.8%	1.6%	2.4%	Fund Goal	

<sup>a</sup> For bargaining unit 5, the State contributes 7.3% of base pay and the member contributes 0.5% of base pay in fiscal years 2017, 2018, and 2019. Effective July 1, 2020, contributions are based on a percentage of pensionable compensation. Contributions have been updated to: effective July 1, 2022, 1.7% for employees and 5.1% for employer; effective July 1, 2023, 2.6% for employees and 4.2% for employer; and effective July 1, 2024, 3.4% for employees and 3.4% for employer.

<sup>b</sup> Employee pre-funding contributions for FYs 2020-21 and 2021-22 have been suspended for members directly or indirectly associated with a bargaining unit and all exempt/excluded/executive employees. For BU 12, employee pre-funding contributions were suspended for FY 2020-21. SEIU employee pre-funding contributions were reinstated for FY 2021-22.

<sup>c</sup> FY 2021-22 contribution rate of 3.5% for SEIU.

<sup>d</sup> Future contribution rates for BU's 5, 10, 12, and 18 cannot increase by more than 0.5 percentage point per year.

## Summary of the Current Substantive Plan Provisions

EPO and HMO Basic Plans	
Kaiser Permanente, Blue Shield Access+ HMO, Blue Shield Access+ EPO, Blue Shield Trio, Anthem Blue Cross, Health Net, Sharp Performance Plus, UnitedHealthcare SignatureValue Alliance HMO, Western Health Advantage 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/visit
Other HMO Plans	\$15/visit
Urgent Care Visits	
Other HMO Plans	\$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	
Kaiser Permanente	\$15/visit
Other HMO Plans	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>	
Air/ground ambulance service	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	\$5/generic \$20/formulary brand name \$50/non-formulary <i>(\$40 if medical necessity approved)</i>
<i>(up to 30-day supply)</i>	
Mail Order Program	\$10/generic \$40/formulary brand name \$100/non-formulary <i>(\$70 if medical necessity approved)</i>
<i>(up to 90-day supply)</i>	
\$1,000 maximum copayment per person per calendar year.	
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 Family	\$1,000 \$2,000		\$500 \$1,000		\$500 \$1,000	
<b>Maximum Calendar Year Copay</b> Individual Family	\$3,000 \$6,000	None None	\$3,000 \$6,000	None None	\$2,000 \$4,000	None None
<b>Lifetime Maximum Benefit - Per Individual</b>	None		None		None	
<b>Hospital</b> Per Admission Deductible Inpatient and Outpatient	None 20%	None 40%	None 20%	None 40%	\$250 10%	\$250 40%
<b>Physician Services</b> Office Visits Urgent Care Visits Outpatient Visits Inpatient Visits Allergy Testing/Treatment	\$35 copay <sup>1,2</sup> \$35 copay \$20 copay 20% 20%	40% 40% 40% 40% 40%	\$20 copay <sup>2</sup> \$35 copay \$20 copay 20% 20%	40% 40% 40% 40% 40%	\$20 copay <sup>2</sup> \$35 copay \$20 copay 10% 10%	40% 40% 40% 40% 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	Generic		Preferred Brand		Non-Preferred Brand	
Retail Pharmacy* *short-term use	\$5		\$20		\$50 (\$40 if partial waiver of Non-Preferred Brand copayment approved)	
Retail Pharmacy Maintenance Medications filled after 2nd Fill** ** A maintenance medication taken longer than 60 days for chronic conditions.	\$10		\$40		\$100 (\$70 if partial waiver of Non-Preferred Brand copayment approved)	
Mail Service Pharmacy A \$1,000 maximum copayment per person per calendar year applies	\$10		\$40		\$100 (\$70 if partial waiver of Non-Preferred Brand copayment approved)	

<sup>1</sup> Reduced to \$10 if enrolled with personal doctor

<sup>2</sup> \$35 for specialist

## Summary of the Current Substantive Plan Provisions

### EPO and HMO Medicare Plans

Kaiser Permanente, UnitedHealthcare, and Anthem Preferred

	Medicare Managed Care Plan (Medicare Advantage)	Medicare Managed Care Plan (Group Medicare Advantage)
	Kaiser Permanente	UnitedHealthcare, Anthem Preferred
	Copay and/or Benefit Limit	Copay and/or Benefit Limit
<b>Hospital</b> Inpatient Outpatient	No Charge \$10/visit	No Charge No Charge
<b>Physician Services</b> Office Visits Urgent Care Visits Allergy Testing/Treatment  Vision Exam (Refraction) Hearing Exam/Screening Inpatient Hospital Visits Surgery/Anesthesia	\$10/visit \$10/visit \$3/visit (injection visits) \$10/visit (testing visits) \$10/visit \$10/visit No Charge No Charge for Inpatient \$10/visit for Outpatient	\$10/visit \$25/visit \$10/visit (injection visits) \$10/visit (testing visits) \$10 (limited to one visit) \$10/visit No Charge 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)</i> <i>(Does not apply to Kaiser)</i>  Mail Order Program <i>\$1,000 maximum copayment per person per calendar year (up to 90-day supply)</i> <i>(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>  \$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>	\$5/generic  \$20/formulary brand name \$50/non-formulary  \$10/generic \$40/formulary brand name \$100/non-formulary

## 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/visit
Hearing Exam/Screening	\$15/visit
Inpatient Hospital Visits	No Charge
Surgery/Anesthesia	No Charge
<b>Ambulance Service</b>	No Charge
<b>Emergency Services</b>	
<i>Waived if hospitalized or kept for observation – if admitted, \$100 per admission fee will apply</i>	\$75/visit
<b>Prescription Drug Benefit</b>	
Deductible	\$50 calendar year Tier 2, 3, 4 deductible per member, not to exceed \$150 per family
Retail Pharmacy	\$10/Tier 1 \$25/Tier 2 \$50/Tier 3 and 4
Mail Order Program (up to 90-day supply)	\$20/Tier 1 \$50/Tier 2 \$100/Tier 3 and 4

## 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 \$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 (up to 30-day supply)  Mail Order Program (up to 90-day supply)	\$5/Tier 1 \$20/Tier 2 \$35/Tier 3 \$50/Tier 4 and 5  \$10/Tier 1 \$40/Tier 2 \$70/Tier 3 \$150/Tier 4

# 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>	\$3,000/member \$6,000/family	None None	\$2,000/individual or \$4,000/family (Combined PPO and non-PPO)	
<b>Lifetime Maximum</b>	None	None	None	None
<b>Hospital</b>				
Inpatient	10%	Varies. See EOC	20%	20% (varies)
Outpatient	10%	40%	20%	20% (varies)
<b>Physician Services</b>				
Office Visits	\$20	40%	\$10 Non-specialist \$35 Specialist	20%
Outpatient Visits	10%	40%	20%	20%
Urgent Care Visits	\$20	40%	\$35	20%
Allergy Testing/Treatment	10%	40%	20%	20%
Vision Exam (Refraction)	Not Covered	Not Covered	Not Covered	Not Covered
Hearing Exam/Screening	10%	40%	20%	20%
Inpatient Visits	10%	40%	20%	20%
Surgery/Anesthesia	10%	40%	20%	20%
<b>Ambulance Service</b>	20%	20%	20%	20%
<b>Emergency Services</b>				
Emergency	\$50* + 10%	\$50* + 10%	20%	20%
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 CAHP (up to 30-day supply) PORAC (up to 34-day supply or 100 pills/units, whichever is more)	\$5/generic \$20/formulary brand name \$50/non-formulary brand ***	\$5/generic \$20/formulary brand name \$50/non-formulary brand ***	\$10/generic \$25/ formulary brand name \$45/non-formulary brand	\$10/generic \$25/ formulary brand name \$45/non-formulary brand
Retail Pharmacy Maintenance Medications filled after 2nd Fill** CAHP (up to 30-day supply) ** A maintenance medication taken longer than 60 days for chronic conditions.	\$10/generic \$40/formulary \$100/non-formulary ***	\$10/generic \$40/formulary \$100/non-formulary ***	Not Applicable	Not Applicable
Mail Order Program CAHP (up to 90-day supply) PORAC (up to 90-day supply or 100 pills/units, whichever is more) *** In addition to the copay, the member is responsible for the cost between the brand name drug and its generic equivalent	\$10/generic \$40/formulary brand name \$100/non-formulary brand ***	\$10/generic \$40/formulary brand name \$100/non-formulary brand ***	\$20/generic \$40/ formulary brand name \$75/non-formulary brand	Not Applicable

## 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 (Major Medical deductible)	\$100/individual \$200/family (Major Medical deductible)
<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	10%	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 (up to 30-day supply) CAHP: Diabetic supplies paid under medical benefit. PORAC: \$50 deductible/member for retail only	\$5/generic \$20/preferred \$50/non-preferred	\$10/generic \$25/formulary brand name \$45/non-formulary brand name
Retail Pharmacy Maintenance Medications filled after 2nd fill* CAHP (up to 30-day supply) * A maintenance medication taken longer than 60 days for chronic conditions.	\$5/generic \$50/preferred \$50/non-preferred	
Mail Order Program (90-day supply)	\$10/generic \$40/preferred \$100/non-preferred	\$20/generic \$40/preferred \$75/non-preferred

## 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.	Plan provides maximum benefit when you visit an in-network PPO dentist.	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-network PPO 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-network PPO orthodontist to receive maximum benefit.	Must use orthodontist affiliated with the enrollee's prepaid plan.
<b>Changing Providers</b>	May change dentist at any time.	May change at any time.	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.	\$25 per person, up to \$100 annual maximum per family, for PPO network dentists.  \$75 per person up to \$200 annual maximum per family for non-PPO network dentists.	No deductible.
<b>Co-payments</b>	Member pays the co-payment and any deductibles and charges above the annual maximum for covered services when visiting a Delta Dental dentist.  When visiting a non-Delta Dental dentist, member pays the difference between the dentist's submitted charges and Delta Dental's approved fees.	Member pays the co-payment and any deductibles and charges above the annual maximum for covered services when visiting a Delta Dental dentist.  When visiting a non-Delta Dental dentist, member pays the difference between the dentist's submitted charges and Delta Dental's approved fees.	Co-payments for certain covered procedures. May require payment at time of treatment.
<b>Plan Payments</b>	Payments based on Delta Dental contracted fees or the maximum plan allowance when non-Delta Dental dentists are used.	Payments based on Delta Dental contracted fees or the maximum plan allowance when non-Delta Dental dentists are used.	Plan pays dentist monthly contract fee.
<b>Maximum Benefits per Calendar Year</b>	<u>Basic</u> : \$2,000 for employee, \$1,000 per dependent	\$2,000 for employee, \$2,000 per eligible dependent when PPO network dentists are used.	No maximum.
<b>Maximum Lifetime Implant Benefit</b>	Not a covered benefit.	Maximum lifetime benefit of \$2,500 for each employee and dependent, if using a PPO Plan provider.	Premier Access and Western Dental only.

## Summary of the Current Substantive Plan Provisions

California State University Sponsored Dental Plan				
BENEFITS	Delta Dental Basic	Delta Dental Enhanced	DeltaCare Basic	DeltaCare Enhanced
Diagnostic and preventive benefits	75%, no deductible	100%, no deductible	No Cost	No Cost
Basic benefits	75%, deductible applies	100%, deductible applies	No Cost	No Cost
Crowns, inlays, inlays and cast restoration benefits	50%, deductible applies	80%, deductible applies	\$35 - \$50 per unit; plus additional cost for precious metals and porcelain on molars	No Cost; however additional cost for precious metals and porcelain on molars is applicable
Dentures	50%, deductible applies	80%, deductible applies	Full – \$60 each; Partial – \$70 each	No Cost
Annual Deductibles	\$50 Per Person \$150 Per Family	\$50 Per Person \$150 Per Family	No Deductible	No Deductible
Annual Maximum	\$1,500 Per Person	\$2,000 Per Person	No Maximum	No Maximum

## Summary of the Current Substantive Plan Provisions

2020 Health Plan Rates			
Basic Plans - HMO			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
Anthem Select HMO	\$787.79	\$1,575.58	\$2,048.25
Anthem Traditional HMO	\$1,115.75	\$2,231.50	\$2,900.95
Blue Shield Access +	\$910.16	\$1,820.32	\$2,366.42
Blue Shield Access + EPO	\$910.16	\$1,820.32	\$2,366.42
Blue Shield Trio	\$701.06	\$1,402.12	\$1,822.76
Health Net Salud y Más	\$403.55	\$807.10	\$1,049.23
Health Net SmartCare	\$860.96	\$1,721.92	\$2,238.50
Kaiser	\$730.05	\$1,460.10	\$1,898.13
Kaiser Out-of-State - Colorado	\$995.19	\$1,990.38	\$2,587.49
Kaiser Out-of-State - Georgia	\$995.19	\$1,990.38	\$2,587.49
Kaiser Out-of-State - Hawaii	\$995.19	\$1,990.38	\$2,587.49
Kaiser Out-of-State - Mid-Atlantic	\$995.19	\$1,990.38	\$2,587.49
Kaiser Out-of-State - Northwest	\$995.19	\$1,990.38	\$2,587.49
Sharp	\$606.02	\$1,212.04	\$1,575.65
UnitedHealthcare	\$726.95	\$1,453.90	\$1,890.07
Western Health Advantage	\$731.96	\$1,463.92	\$1,903.10
Basic Plans - PPO			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
Anthem EPO Del Norte	\$787.00	\$1,574.00	\$2,046.20
PERS Choice	\$787.00	\$1,574.00	\$2,046.20
PERS Select	\$492.24	\$984.48	\$1,279.82
PERSCare	\$989.88	\$1,979.76	\$2,573.69
Basic Association Plans			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
CAHP	\$718.38	\$1,394.63	\$1,824.05
CCPOA - North	\$804.44	\$1,612.51	\$2,177.10
CCPOA - South	\$663.31	\$1,330.19	\$1,797.48
PORAC	\$724.00	\$1,449.00	\$1,927.00

## Summary of the Current Substantive Plan Provisions

2020 Health Plan Rates			
Supplement/Managed Medicare Plans - HMO			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
Anthem Select HMO	\$388.15	\$776.30	\$1,164.45
Anthem Traditional HMO	\$388.15	\$776.30	\$1,164.45
Kaiser	\$339.43	\$678.86	\$1,018.29
Kaiser Out-of-State - Colorado	\$339.43	\$678.86	\$1,018.29
Kaiser Out-of-State - Georgia	\$339.43	\$678.86	\$1,018.29
Kaiser Out-of-State - Hawaii	\$339.43	\$678.86	\$1,018.29
Kaiser Out-of-State - Mid-Atlantic	\$339.43	\$678.86	\$1,018.29
Kaiser Out-of-State - Northwest	\$339.43	\$678.86	\$1,018.29
UnitedHealthcare	\$327.03	\$654.06	\$981.09
Supplement/Managed Medicare Plans - PPO			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
PERS Choice	\$351.39	\$702.78	\$1,054.17
PERS Select	\$351.39	\$702.78	\$1,054.17
PERSCare	\$384.78	\$769.56	\$1,154.34
Supplement/Managed Medicare Association Plans			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
CAHP	\$476.11	\$879.15	\$1,117.81
CCPOA - North	\$486.60	\$975.66	\$1,459.27
CCPOA - South	\$486.60	\$975.66	\$1,459.21
PORAC	\$513.00	\$1,022.00	\$1,635.00

## Summary of the Current Substantive Plan Provisions

2020 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
Anthem Select	\$1,175.94	\$1,564.09	\$1,648.61
Anthem Traditional	\$1,503.90	\$1,892.05	\$2,173.35
Kaiser	\$1,069.48	\$1,408.91	\$1,507.51
Kaiser Out-of-State - Colorado	\$1,334.62	\$1,674.05	\$1,931.73
Kaiser Out-of-State - Georgia	\$1,334.62	\$1,674.05	\$1,931.73
Kaiser Out-of-State - Hawaii	\$1,334.62	\$1,674.05	\$1,931.73
Kaiser Out-of-State - Mid-Atlantic	\$1,334.62	\$1,674.05	\$1,931.73
Kaiser Out-of-State - Northwest	\$1,334.62	\$1,674.05	\$1,931.73
UnitedHealthcare	\$1,053.98	\$1,381.01	\$1,490.15
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	\$1,138.39	\$1,489.78	\$1,610.59
PERS Choice	\$1,138.39	\$1,489.78	\$1,610.59
PERS Select	\$843.63	\$1,195.02	\$1,138.97
PERSCare	\$1,374.66	\$1,759.44	\$1,968.59
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	\$1,121.42	\$1,360.08	\$1,550.84
CCPOA - North	\$1,293.50	\$1,777.11	\$1,858.09
CCPOA - South	\$1,152.37	\$1,635.98	\$1,619.66
PORAC	\$1,233.00	\$1,846.00	\$1,711.00

## Summary of the Current Substantive Plan Provisions

2020 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
Anthem Select	\$1,175.94	\$1,648.61	\$1,248.97
Anthem Traditional	\$1,503.90	\$2,173.35	\$1,445.75
Kaiser	\$1,069.48	\$1,507.51	\$1,116.89
Kaiser Out-of-State - Colorado	\$1,334.62	\$1,931.73	\$1,275.97
Kaiser Out-of-State - Georgia	\$1,334.62	\$1,931.73	\$1,275.97
Kaiser Out-of-State - Hawaii	\$1,334.62	\$1,931.73	\$1,275.97
Kaiser Out-of-State - Mid-Atlantic	\$1,334.62	\$1,931.73	\$1,275.97
Kaiser Out-of-State - Northwest	\$1,334.62	\$1,931.73	\$1,275.97
UnitedHealthcare	\$1,053.98	\$1,490.15	\$1,090.23
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	\$1,138.39	\$1,610.59	\$1,174.98
PERS Choice	\$1,138.39	\$1,610.59	\$1,174.98
PERS Select	\$843.63	\$1,138.97	\$998.12
PERSCare	\$1,374.66	\$1,968.59	\$1,363.49
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	\$1,152.36	\$1,581.78	\$1,308.57
CCPOA - North	\$1,294.67	\$1,859.26	\$1,540.25
CCPOA - South	\$1,153.48	\$1,620.77	\$1,442.95
PORAC	\$1,238.00	\$1,716.00	\$1,500.00

## Summary of the Current Substantive Plan Provisions

2020 Dental Plan Rates - State Sponsored Plans			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
DeltaPremier <sup>1</sup>	\$50.83	\$88.75	\$128.28
Delta PPO <sup>2</sup>	\$46.45	\$90.31	\$135.88
Safeguard SOC Enhanced Plan <sup>3</sup>	\$16.06	\$27.18	\$33.48
Delta Care USA <sup>3</sup>	\$19.44	\$31.90	\$44.13
Premier Access <sup>3</sup>	\$15.48	\$25.08	\$35.12
Western Dental <sup>3</sup>	\$15.77	\$26.02	\$36.91

<sup>1</sup> Employee Share: 1 party - \$12.71 / 2 party - \$22.19 / 3 or more party - \$32.07

<sup>2</sup> Employee Share: 1 party - \$11.61 / 2 party - \$22.58 / 3 or more party - \$33.97

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

2020 Dental Plan Rates - California State University			
Plan	Employee Only	Employee & 1 Dep.	Employee & 2+ Dep.
Delta Dental PPO - Basic <sup>4</sup>	\$30.45	\$57.52	\$115.49
DeltaCare USA - Basic <sup>4</sup>	\$18.85	\$31.08	\$45.97
Delta Dental PPO - Enhanced <sup>5</sup>	\$46.15	\$86.82	\$169.33
DeltaCare USA - Enhanced <sup>6</sup>	\$25.34	\$41.63	\$61.62

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

<sup>5</sup> Employee Share: 1 party - \$15.70 / 2 party - \$29.30 / 3 or more party - \$53.84

<sup>6</sup> Employee Share: 1 party - \$6.49 / 2 party - \$10.55 / 3 or more party - \$15.65

**SECTION D**

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**SUMMARY OF THE PARTICIPANT DATA**

## A1. Summary of the Participant Data

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### 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 2	Bargaining Unit 5	Bargaining Unit 6	Bargaining Unit 7	Bargaining Unit 8	Bargaining Unit 9	Bargaining Unit 10	Bargaining Unit 12	Bargaining Unit 13
Anthem Blue Cross	39	13	405	101	56	184	33	142	19
Blue Shield	59	53	1,371	322	360	294	72	372	44
Health Net	8	10	80	34	11	37	5	29	1
Kaiser	822	797	7,358	2,058	600	2,694	700	3,224	301
Kaiser Out-of-State	15	22	139	42	18	52	20	39	8
Sharp	6	3	39	26	22	27	2	20	-
UnitedHealthcare	308	70	1,548	770	295	1,027	284	1,384	93
PERS Choice	629	1,142	7,916	1,524	1,651	1,831	525	3,071	296
PERS Select	14	5	509	72	74	85	19	208	23
PERSCare	769	295	2,462	1,063	600	1,529	428	1,667	140
CAHP	-	4,634	-	5	-	-	-	1	-
CCPOA	1	1	4,114	-	-	-	-	2	-
PORAC	-	-	9	176	11	-	-	-	-
Western Health	<u>3</u>	<u>4</u>	<u>55</u>	<u>20</u>	<u>3</u>	<u>27</u>	<u>6</u>	<u>7</u>	<u>3</u>
<b>Total</b>	<b>2,673</b>	<b>7,049</b>	<b>26,005</b>	<b>6,213</b>	<b>3,701</b>	<b>7,787</b>	<b>2,094</b>	<b>10,166</b>	<b>928</b>
	Bargaining Unit 16	Bargaining Unit 18	Bargaining Unit 19	CSU	Judicial	Exempt Excluded Executive	Other	SEIU	Total
Anthem Blue Cross	10	76	60	323	27	55	35	1,126	2,704
Blue Shield	16	277	69	539	18	207	126	2,448	6,647
Health Net	4	40	6	73	15	5	9	235	602
Kaiser	299	1,991	1,294	9,245	310	1,426	2,883	31,554	67,556
Kaiser Out-of-State	5	37	19	306	7	33	66	472	1,300
Sharp	3	1	8	83	-	2	2	136	380
UnitedHealthcare	91	716	402	3,672	174	536	805	11,092	23,267
PERS Choice	553	1,188	992	9,401	252	779	2,454	13,049	47,253
PERS Select	23	38	39	258	11	28	28	621	2,055
PERSCare	518	708	805	8,229	251	741	4,058	11,799	36,062
CAHP	-	-	-	-	-	8	645	1	5,294
CCPOA	-	-	-	-	-	25	20	5	4,168
PORAC	-	-	-	58	-	4	7	5	270
Western Health	<u>2</u>	<u>15</u>	<u>5</u>	<u>17</u>	<u>1</u>	<u>24</u>	<u>8</u>	<u>392</u>	<u>592</u>
<b>Total</b>	<b>1,524</b>	<b>5,087</b>	<b>3,699</b>	<b>32,204</b>	<b>1,066</b>	<b>3,873</b>	<b>11,146</b>	<b>72,935</b>	<b>198,150</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	322	730	660	549	295	148	1,277	1,427
Blue Shield	1,095	2,132	1,266	792	970	392	3,331	3,316
Health Net	92	180	100	91	89	50	281	321
Kaiser	11,214	25,068	14,975	10,988	3,530	1,781	29,719	37,837
Kaiser Out-of-State	217	552	303	172	38	18	558	742
Sharp	48	85	60	80	67	40	175	205
UnitedHealthcare	3,759	8,504	5,392	4,009	1,012	591	10,163	13,104
PERS Choice	7,829	14,531	14,448	6,561	2,915	969	25,192	22,061
PERS Select	274	376	617	325	343	120	1,234	821
PERSCare	6,081	15,958	8,499	4,778	535	211	15,115	20,947
CAHP	665	881	2,512	151	967	118	4,144	1,150
CCPOA	547	580	1,464	279	1,121	177	3,132	1,036
PORAC	29	39	119	10	60	13	208	62
Western Health	<u>53</u>	<u>209</u>	<u>79</u>	<u>136</u>	<u>69</u>	<u>46</u>	<u>201</u>	<u>391</u>
<b>Total</b>	<b>32,225</b>	<b>69,825</b>	<b>50,494</b>	<b>28,921</b>	<b>12,011</b>	<b>4,674</b>	<b>94,730</b>	<b>103,420</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	1,563	1,141	2,704
Blue Shield	6,192	455	6,647
Health Net	560	42	602
Kaiser	19,249	48,307	67,556
Kaiser Out-of-State	219	1,081	1,300
Sharp	372	8	380
UnitedHealthcare	4,039	19,228	23,267
PERS Choice	13,395	33,858	47,253
PERS Select	1,311	744	2,055
PERSCare	2,755	33,307	36,062
CAHP	2,270	3,024	5,294
CCPOA	3,109	1,059	4,168
PORAC	132	138	270
Western Health	<u>587</u>	<u>5</u>	<u>592</u>
<b>Total</b>	<b>55,753</b>	<b>142,397</b>	<b>198,150</b>
Distribution of Current Retirees by Coverage Type			
	Under 65	At Least 65	Total
One Party	21,610	80,440	102,050
Two Party	21,411	58,004	79,415
Family	<u>12,732</u>	<u>3,953</u>	<u>16,685</u>
<b>Total</b>	<b>55,753</b>	<b>142,397</b>	<b>198,150</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	255	212	467
40-44	347	270	617
45-49	675	580	1,255
50-54	3,723	2,341	6,064
55-59	9,069	8,053	17,122
60-64	13,864	16,364	30,228
65-69	18,280	21,810	40,090
70-74	19,521	19,812	39,333
75-79	13,146	13,371	26,517
80-84	8,368	9,102	17,470
85-89	4,818	6,277	11,095
90 & Over	2,664	5,228	7,892
<b>Totals</b>	<b>94,730</b>	<b>103,420</b>	<b>198,150</b>

## A5. Summary of the Participant Data

California State Employees									
Counts of Current Retirees by Dental Benefit Plan and Valuation Group									
	Bargaining Unit 2	Bargaining Unit 5	Bargaining Unit 6	Bargaining Unit 7	Bargaining Unit 8	Bargaining Unit 9	Bargaining Unit 10	Bargaining Unit 12	Bargaining Unit 13
Delta Dental PPO	408	655	5,086	1,099	501	1,651	316	1,734	204
Delta Dental	2,259	2,639	19,753	4,913	3,023	5,873	1,744	7,547	675
Safeguard/Metlife	23	80	331	135	56	125	17	249	36
DeltaCare USA	27	32	314	115	30	107	25	488	17
CAHP/Blue Cross	-	3,519	-	2	-	-	-	1	-
Premier Access	1	2	38	3	4	1	1	9	1
Western Dental	-	<u>3</u>	<u>194</u>	<u>6</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>17</u>	-
<b>Total</b>	<b>2,718</b>	<b>6,930</b>	<b>25,716</b>	<b>6,273</b>	<b>3,616</b>	<b>7,758</b>	<b>2,104</b>	<b>10,045</b>	<b>933</b>
	Bargaining Unit 16	Bargaining Unit 18	Bargaining Unit 19	CSU	Judicial	Exempt Excluded Executive	Other	SEIU	Total
Delta Dental PPO	223	763	618	-	169	644	1,724	12,037	27,832
Delta Dental	1,280	3,766	2,947	31,007	877	3,211	8,838	58,427	158,779
Safeguard/Metlife	12	288	66	-	17	37	465	1,245	3,182
DeltaCare USA	8	120	58	1,520	7	30	208	2,403	5,509
CAHP/Blue Cross	-	-	-	-	-	1	22	-	3,545
Premier Access	-	6	6	-	-	1	1	62	136
Western Dental	-	<u>19</u>	<u>6</u>	-	<u>1</u>	-	<u>6</u>	<u>117</u>	<u>373</u>
<b>Total</b>	<b>1,523</b>	<b>4,962</b>	<b>3,701</b>	<b>32,527</b>	<b>1,071</b>	<b>3,924</b>	<b>11,264</b>	<b>74,291</b>	<b>199,356</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	3,618	8,294	7,872	4,607	2,478	963	13,968	13,864
Delta Dental	26,162	56,705	40,045	24,781	7,771	3,315	73,978	84,801
Safeguard/MetLife	616	1,434	655	321	105	51	1,376	1,806
DeltaCare USA	1,101	2,364	1,033	705	189	117	2,323	3,186
CAHP/Blue Cross	429	359	1,826	115	741	75	2,996	549
Premier Access	23	39	30	25	14	5	67	69
Western Dental	<u>75</u>	<u>98</u>	<u>83</u>	<u>43</u>	<u>56</u>	<u>18</u>	<u>214</u>	<u>159</u>
<b>Total</b>	<b>32,024</b>	<b>69,293</b>	<b>51,544</b>	<b>30,597</b>	<b>11,354</b>	<b>4,544</b>	<b>94,922</b>	<b>104,434</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	9,919	17,913	27,832
Delta Dental	39,697	119,082	158,779
Safeguard/MetLife	655	2,527	3,182
DeltaCare USA	1,271	4,238	5,509
CAHP/Blue Cross	1,729	1,816	3,545
Premier Access	78	58	136
Western Dental	<u>246</u>	<u>127</u>	<u>373</u>
<b>Total</b>	<b>53,595</b>	<b>145,761</b>	<b>199,356</b>
Distribution of Current Retirees by Dental Benefit Coverage Type			
	Under 65	At Least 65	Total
One Party	20,612	80,705	101,317
Two Party	21,058	61,083	82,141
Family	<u>11,925</u>	<u>3,973</u>	<u>15,898</u>
<b>Total</b>	<b>53,595</b>	<b>145,761</b>	<b>199,356</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	209	197	406
40-44	322	235	557
45-49	621	530	1,151
50-54	3,332	2,124	5,456
55-59	8,625	7,713	16,338
60-64	13,518	16,169	29,687
65-69	18,396	21,909	40,305
70-74	19,883	20,364	40,247
75-79	13,550	13,815	27,365
80-84	8,633	9,396	18,029
85-89	5,027	6,566	11,593
90 & Over	2,806	5,416	8,222
<b>Totals</b>	<b>94,922</b>	<b>104,434</b>	<b>199,356</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	109	-	-	-	-	-	-	109
20-24	5,169	16	-	-	-	-	-	5,185
25-29	19,578	2,905	11	-	-	-	-	22,494
30-34	20,216	10,264	2,728	20	-	-	-	33,228
35-39	15,196	9,988	10,559	1,852	29	-	-	37,624
40-44	10,620	7,275	9,859	6,915	2,276	27	-	36,972
45-49	8,166	5,749	8,285	7,435	7,483	1,825	64	39,007
50-54	6,587	4,766	6,726	6,418	6,745	4,751	1,640	37,633
55-59	5,386	4,200	5,518	5,048	5,066	3,795	3,885	32,898
60-64	3,312	3,069	3,894	3,504	3,191	2,078	2,576	21,624
65 & Over	2,082	1,775	2,423	2,011	1,550	908	1,463	12,212
<b>Totals</b>	<b>96,421</b>	<b>50,007</b>	<b>50,003</b>	<b>33,203</b>	<b>26,340</b>	<b>13,384</b>	<b>9,628</b>	<b>278,986</b>

## C1. Summary of the Participant Data

California State Employees									
Counts of Current Active Participants and Retirees by Valuation Group									
	Bargaining Unit 2	Bargaining Unit 5	Bargaining Unit 6	Bargaining Unit 7	Bargaining Unit 8	Bargaining Unit 9	Bargaining Unit 10	Bargaining Unit 12	Bargaining Unit 13
Active Participants	4,594	7,226	30,979	7,819	7,096	13,298	4,320	12,801	979
Retired Participants	<u>2,673</u>	<u>7,049</u>	<u>26,005</u>	<u>6,213</u>	<u>3,701</u>	<u>7,787</u>	<u>2,094</u>	<u>10,166</u>	<u>928</u>
<b>Total Participants</b>	<b>7,267</b>	<b>14,275</b>	<b>56,984</b>	<b>14,032</b>	<b>10,797</b>	<b>21,085</b>	<b>6,414</b>	<b>22,967</b>	<b>1,907</b>
	Bargaining Unit 16	Bargaining Unit 18	Bargaining Unit 19	CSU	Judicial	Exempt Excluded Executive	Other	SEIU	Total
Active Participants	1,612	6,158	5,733	50,271	1,662	6,630	4,283	113,525	278,986
Retired Participants	<u>1,524</u>	<u>5,087</u>	<u>3,699</u>	<u>32,204</u>	<u>1,066</u>	<u>3,873</u>	<u>11,146</u>	<u>72,935</u>	<u>198,150</u>
<b>Total Participants</b>	<b>3,136</b>	<b>11,245</b>	<b>9,432</b>	<b>82,475</b>	<b>2,728</b>	<b>10,503</b>	<b>15,429</b>	<b>186,460</b>	<b>477,136</b>

## SECTION E

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### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

## Summary of Actuarial Assumptions and Methods

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***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, 2018. The healthcare related assumptions are based on the recommendations from the 2018 experience review for the years July 1, 2014, to June 30, 2018, 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 6.75 percent for the actuarial valuation of the fully funded policy. A discount rate of 6.75 percent can be supported for the actuarial valuation as of June 30, 2020, provided the sponsor makes pre-funding contributions as defined by statute and pre-funding contributions are invested in CalPERS CERBT Strategy 1.

## 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, 2019, and June 30, 2020, for each respective actuarial valuation group.

BLENDED DISCOUNT RATES		
Actuarial Valuation Group	June 30, 2019	June 30, 2020
Attorneys and Hearing Officers (BU2)	3.711%	3.213%
Highway Patrol (BU5)	3.851%	3.380%
Corrections (BU6)	3.726%	3.217%
Protective Services and Public Safety (BU7)	3.654%	3.134%
Firefighters (BU8)	3.776%	3.236%
Professional Engineers (BU9)	3.586%	3.084%
Professional Scientific (BU10)	3.690%	3.229%
Craft and Maintenance (BU12)	3.604%	3.130%
Stationary Engineers (BU13)	3.516%	2.971%
Physicians, Dentists, and Podiatrists (BU16)	3.772%	3.286%
Psychiatric Technicians (BU18)	3.705%	3.136%
Health and Social Services/Professional (BU19)	3.757%	3.261%
California State University	3.130%	2.450%
Judicial Branch	3.724%	3.252%
Exempt/Excluded/Executive	3.568%	3.050%
Other	3.130%	2.450%
Service Employees International Union (SEIU)	3.604%	3.077%

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 and Post-Medicare medical and drug plans, the select and ultimate trend rates were set at actual increases for 2021 and 7.50 percent in 2022 graded down over a six-year period until to a trend rate of 4.50 percent in 2028, remains at 4.50 percent for nine years until the ultimate rate of 4.25 percent is reached in 2037. Based on a review of supporting documentation provided by CalPERS and a review of various publicly available trend studies, the 2021 trend rate for the PPO per capita claims costs is assumed to be 6.00 percent for Pre-Medicare medical and Pre-Medicare prescription drug, and 3.00 percent for Post-Medicare medical and Post-Medicare prescription drug. For the dental plans, select and ultimate trend rates were set at 0.00 percent for 2021, 2.00 percent for 2022, 3.00 percent for 2023, 4.00 percent for 2024, and 4.25 percent for 2025 and beyond. The trend rates are net of any increases due to the potential wear-away of the EGWP-Wrap design savings

## Summary of Actuarial Assumptions and Methods

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in 2032. Effective trend for the Post-Medicare plans affected by the EGWP-Wrap design would be higher until the year 2032. These higher effective trend rates gradually reduce the approximately 25 percent savings for PERSCare, 29 percent savings for PERS Choice and 13 percent savings for the HMO plans remaining as of June 30, 2020, due to the EGWP-Wrap plan design. After 11 years, the ultimate savings are assumed to equal 17 percent for PERSCare, 21 percent for PERS Choice, and 10 percent for HMO plans.

- 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	
2021	6.00%	6.00%	3.00%	3.00%	4.30%	-4.44%	0.00%
2022	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	2.00%
2023	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	3.00%
2024	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	4.00%
2025	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	4.25%
2026	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	4.25%
2027	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	4.25%
2028	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.25%
2029-2036	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.25%
2037 and Beyond	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%

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			
2021	7.64%	-0.09%	4.04%	-4.46%	0.00%	2.70%	1.30%
2022	7.50%	7.50%	7.50%	7.50%	2.00%	4.50%	7.50%
2023	7.00%	7.00%	7.00%	7.00%	3.00%	4.50%	7.00%
2024	6.50%	6.50%	6.50%	6.50%	4.00%	4.50%	6.50%
2025	6.00%	6.00%	6.00%	6.00%	4.25%	4.50%	6.00%
2026	5.50%	5.50%	5.50%	5.50%	4.25%	4.50%	5.50%
2027	5.00%	5.00%	5.00%	5.00%	4.25%	4.50%	5.00%
2028	4.50%	4.50%	4.50%	4.50%	4.25%	4.50%	4.50%
2028-2036	4.50%	4.50%	4.50%	4.50%	4.25%	4.50%	4.50%
2037 and Beyond	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%

All increases are assumed to occur January 1<sup>st</sup> of each year beginning January 1, 2020.

The trend rates shown above are net of any increases due to the potential wear-away of the EGWP-Wrap design changes by 2032. Effective trend for the Post-Medicare plans affected by the EGWP-Wrap design changes would be higher until the year 2032. These higher effective trend rates gradually reduce the approximately 25 percent savings for PERSCare, 29 percent savings for PERS Choice and 13 percent savings for the HMO plans remaining as of June 30, 2020, due to the EGWP-Wrap plan design. After 11 years, the ultimate savings are assumed to equal 17 percent for PERSCare, 21 percent for PERS Choice, and 10 percent for HMO plans.

Retired members as of June 30, 2020, are assumed to pay \$144.60 in 2020 and other members as of June 30, 2020, are assumed to pay \$144.60 in 2020 for Medicare Part B premiums.

## 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%	67%	12%
50% to 75%	91%	15%
75% to 90%	96%	20%
90% to 100%	98%	40%

**Percent of Disabilities Treated as Post-Medicare:** Four percent of Public Safety disabilities and 33 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 2.25 percent.

**Wage inflation:** Wage inflation is assumed to be 2.50 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 2.58 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 bands, for calendar years 2014 through 2018. 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	2.65%	2.24%	3.58%	3.83%	3.21%	1.58%
50	2.63%	2.18%	2.85%	2.96%	3.14%	1.67%
55	2.58%	2.12%	2.32%	2.35%	3.20%	1.90%
60	2.51%	2.06%	1.93%	1.90%	2.88%	1.98%
65	2.43%	1.99%	1.62%	1.55%	2.65%	1.89%
70	2.35%	1.92%	1.36%	1.26%	2.48%	1.85%
75	2.26%	1.86%	1.15%	1.02%	2.33%	1.82%
80	2.17%	1.79%	0.97%	0.81%	2.21%	1.79%
85	2.09%	1.73%	0.81%	0.62%	2.10%	1.76%
90	2.01%	1.67%	0.67%	0.45%	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	\$627.27	\$627.27	\$187.49	\$187.49
55	714.20	698.82	215.74	216.92
60	811.25	776.16	241.98	243.66
65	144.85	135.52	208.35	209.51
70	163.35	149.55	225.74	226.22
75	183.44	164.48	241.57	240.81
80	205.13	180.33	255.82	253.30

Costs for Retirees and Spouses Expected Monthly Per Capita Costs				
Age	PERSCare - PPO			
	Medical		Prescription	
	Male	Female	Male	Female
50	\$719.80	\$719.80	\$228.29	\$228.29
55	819.55	801.91	262.67	264.12
60	930.92	890.65	294.62	296.67
65	157.96	147.79	227.44	228.71
70	178.13	163.08	246.43	246.95
75	200.04	179.37	263.70	262.88
80	223.70	196.65	279.26	276.51

Costs for Retirees and Spouses (Expected Monthly Per Capita Costs)		
Age	All HMO Plans	
	Medical/Rx	
	Male	Female
50	\$731.01	\$808.49
55	853.88	877.38
60	999.09	961.66
65	294.54	271.30
70	335.67	297.99
75	379.31	326.61
80	425.67	357.44

## 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	\$24.76
PERS Choice - Post-Medicare	\$33.14
PERSCare - Pre-Medicare	\$28.44
PERSCare - Post-Medicare	\$34.47

**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 years 2020 and 2021. 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	\$51.86	\$38.79	\$19.51	\$11.66
55	51.86	38.79	19.51	11.66
60	51.86	38.79	19.51	11.66
65	51.86	38.79	19.51	11.66
70	51.86	38.79	19.51	11.66
75	51.86	38.79	19.51	11.66
80	51.86	38.79	19.51	11.66

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	\$34.80	\$30.50	\$21.13	\$13.54
55	34.80	30.50	21.13	13.54
60	34.80	30.50	21.13	13.54
65	34.80	30.50	21.13	13.54
70	34.80	30.50	21.13	13.54
75	34.80	30.50	21.13	13.54
80	34.80	30.50	21.13	13.54

## Summary of Actuarial Assumptions and Methods

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**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 general retirees and survivors were increased by 7.5 percent for medical claims and prescription drug claims and 10.5 percent for dental claims until the retiree or survivor reaches age 65. Claims for current public safety retirees and survivors were increased by 8.0 percent for medical claims and prescription drug claims and 11.5 percent for dental claims until the retiree or survivor reaches age 65. The composite claims were increased for future general retirees and survivors of future general retirees by 2.5 percent for medical claims and prescription drug claims and 2.0 percent for dental claims until the retiree or survivor reaches age 65. The composite claims were increased for future public safety retirees and survivors of future public safety retirees by 3.0 percent for medical claims and prescription drug claims and 2.5 percent for dental claims until the retiree or survivor reaches age 65.

**Medicare Part B Premiums:** Retired members as of June 30, 2020, are assumed to pay \$144.60 in 2020 and other members as of June 30, 2020, are assumed to pay \$144.60 in 2020. Our actuarial valuation assumes Social Security benefits increase at 4.5 percent per year through 2036 and 4.25 percent per year beginning in 2037 and thereafter 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 initial per capita costs include EGWP-Wrap plan design savings of approximately 25 percent for PERSCare, 29 percent for PERS Choice and 13 percent savings for the other Medicare plans. It was assumed that the EGWP savings would wear away ratably over the next 11 years, and the trend rates for post-Medicare prescription benefits were adjusted accordingly. After 11 years, the ultimate savings are assumed to equal 17 percent for PERSCare, 21 percent for PERS Choice, and 10 percent for HMO plans.

**Projection Assumptions:** Operating expenses are assumed to be equal to 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 6.75 percent per year and (iii) actuarial liabilities are discounted using a rate of 6.75 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.

## Summary of Actuarial Assumptions and Methods

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### **Data Processing:**

- An assumption for active dental plan participation was made for all active employees because we are unable to match records between the medical and dental data files. Active members are assumed to have the following dental coverage: 90 percent DPO/Indemnity, 5 percent Pre-paid Plans, and 5 percent waived.

### **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, 2020, for purposes of calculating the ADC to produce payments (principal & interest), which are a level percent of payroll, over a closed 30-year period effective as of June 30, 2017, with 27 years remaining as of June 30, 2020.

## SECTION F

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### PENSION-RELATED ASSUMPTIONS

## Pension-Related Assumptions

### Economic Assumptions:

#### Salary Growth

Annual increases vary by entry age and service. See sample rates in table below. Wage inflation assumption is added to these factors for total salary growth.

Annual Percentage Increase						
Duration of Service	State Miscellaneous Tier 1 & Tier 2			Industrial		
	Entry Age			Entry Age		
	20	30	40	20	30	40
0	6.4%	5.6%	4.4%	7.3%	7.0%	6.4%
3	5.3%	4.4%	3.1%	5.1%	4.7%	3.9%
5	4.3%	3.6%	2.4%	4.0%	3.6%	2.8%
10	2.3%	1.8%	1.2%	2.7%	2.2%	1.4%
15	1.5%	1.2%	0.8%	1.8%	1.5%	1.1%
20	1.0%	0.9%	0.6%	1.2%	1.0%	0.8%
25	0.7%	0.6%	0.4%	0.8%	0.7%	0.6%
30	0.5%	0.4%	0.3%	0.5%	0.5%	0.4%

  

Duration of Service	Safety			POFF		
	Entry Age			Entry Age		
	20	30	40	20	30	40
0	5.0%	5.0%	5.0%	14.7%	14.7%	14.7%
3	3.1%	3.1%	3.1%	6.7%	6.7%	6.7%
5	2.1%	2.1%	2.1%	4.0%	4.0%	4.0%
10	0.8%	0.8%	0.8%	1.2%	1.2%	1.2%
15	0.7%	0.7%	0.7%	0.5%	0.5%	0.5%
20	0.6%	0.6%	0.6%	1.4%	1.4%	1.4%
25	0.5%	0.5%	0.5%	1.5%	1.5%	1.5%
30	0.5%	0.5%	0.5%	1.0%	1.0%	1.0%

  

Duration of Service	CHP		
	Entry Age		
	20	30	40
0	6.8%	6.8%	6.8%
3	4.0%	4.0%	4.0%
5	2.4%	2.4%	2.4%
10	1.0%	1.0%	1.0%
15	1.0%	1.0%	1.0%
20	1.8%	1.8%	1.8%
25	2.0%	2.0%	2.0%
30	1.0%	1.0%	1.0%

## Pension-Related Assumptions

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Annual increases for members of JRS I, JRS II, and LRS are assumed to be 2.5% for all years of service and ages.

### Overall Payroll Growth

2.50% compounded annually for all members (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 2.50%.

### Inflation

2.25% compounded annually.

## Pension-Related Assumptions

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### Demographic Assumptions:

#### 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	0.007	0.010	0.014	0.019	0.019	0.022	0.029
52	0.013	0.012	0.013	0.018	0.020	0.023	0.031
54	0.011	0.017	0.020	0.030	0.035	0.039	0.049
56	0.023	0.035	0.043	0.062	0.083	0.106	0.165
58	0.027	0.043	0.047	0.074	0.089	0.121	0.170
60	0.037	0.062	0.075	0.119	0.141	0.175	0.246
62	0.087	0.127	0.152	0.221	0.263	0.310	0.356
65	0.090	0.158	0.175	0.245	0.249	0.301	0.344
70	0.140	0.176	0.184	0.223	0.276	0.299	0.299
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	0.009	0.008	0.009	0.013	0.014	0.016	0.022
54	0.008	0.012	0.014	0.021	0.025	0.027	0.034
56	0.016	0.025	0.030	0.043	0.058	0.074	0.116
58	0.020	0.032	0.035	0.056	0.067	0.091	0.128
60	0.030	0.050	0.060	0.095	0.113	0.140	0.197
62	0.070	0.102	0.122	0.177	0.210	0.248	0.285
65	0.081	0.142	0.158	0.221	0.224	0.271	0.310
70	0.140	0.176	0.184	0.223	0.276	0.299	0.299
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	0.1657	0.1657	0.1512	0.1366	0.1292
1	0.1366	0.1366	0.1216	0.1066	0.0965
2	0.1106	0.1106	0.0965	0.0825	0.0719
3	0.0877	0.0877	0.0760	0.0643	0.0554
4	0.0679	0.0679	0.0600	0.0520	0.0468
5	0.0272	0.0272	0.0223	0.0174	0.0160
10	0.0048	0.0048	0.0043	0.0037	0.0027
15	0.0016	0.0016	0.0012	0.0008	0.0007
20	0.0011	0.0011	0.0008	0.0005	0.0005
25	0.0008	0.0008	0.0006	0.0004	0.0003
30	0.0006	0.0006	0.0004	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	0.0441	0.0441	0.0394	0.0346	0.0289
6	0.0397	0.0397	0.0357	0.0318	0.0261
7	0.0355	0.0355	0.0322	0.0289	0.0233
8	0.0317	0.0317	0.0288	0.0260	0.0206
9	0.0282	0.0282	0.0257	0.0232	0.0180
10	0.0251	0.0251	0.0227	0.0204	0.0156
14	0.0161	0.0161	0.0137	0.0113	0.0085
15	0.0146	0.0146	0.0122	0.0097	0.0074
19	0.0104	0.0104	0.0079	0.0054	0.0043
20	0.0095	0.0095	0.0071	0.0047	0.0038
24	0.0058	0.0058	0.0037	0.0017	0.0013
25	0.0050	0.0050	0.0029	0.0008	0.0007
29	0.0029	0.0029	0.0015	-	-
30	0.0026	0.0026	0.0013	-	-

## 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	0.00022	0.00019	0.00007	0.00039
25	0.00029	0.00019	0.00011	0.00039
30	0.00038	0.00019	0.00016	0.00046
35	0.00049	0.00036	0.00027	0.00096
40	0.00064	0.00103	0.00037	0.00186
45	0.00080	0.00204	0.00054	0.00326
50	0.00116	0.00274	0.00079	0.00405
55	0.00172	0.00238	0.00120	0.00310
60	0.00255	0.00200	0.00166	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	0.00372	0.00346	0.01183	0.01083	0.00372	0.00346
55	0.00437	0.00410	0.01613	0.01178	0.00437	0.00410
60	0.00671	0.00476	0.02166	0.01404	0.00671	0.00476
65	0.00928	0.00637	0.02733	0.01757	0.01113	0.00765
70	0.01339	0.00926	0.03358	0.02183	0.01607	0.01111
75	0.02316	0.01635	0.04277	0.02969	0.02779	0.01962
80	0.03977	0.03007	0.06272	0.04641	0.04773	0.03609
85	0.07122	0.05418	0.09793	0.07847	0.08547	0.06501
90	0.13044	0.10089	0.14616	0.13220	0.14348	0.11098
95	0.21658	0.17698	0.21658	0.21015	0.21658	0.17698
100	0.32222	0.28151	0.32222	0.32226	0.32222	0.28151
105	0.46691	0.43491	0.46691	0.43491	0.46691	0.43491
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The postretirement mortality rates above include 15 years of projected ongoing mortality improvement using 90 percent scale MP-2016 published by the Society of Actuaries.

## 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	0.008	0.013	0.019	0.026	0.029	0.036
52	0.007	0.009	0.015	0.023	0.031	0.034	0.043
54	0.014	0.020	0.030	0.046	0.062	0.069	0.086
56	0.028	0.040	0.062	0.094	0.126	0.140	0.174
58	0.029	0.041	0.064	0.098	0.131	0.145	0.181
60	0.042	0.060	0.093	0.142	0.191	0.211	0.262
62	0.079	0.113	0.176	0.266	0.357	0.398	0.493
65	0.081	0.117	0.182	0.276	0.371	0.413	0.511
70	0.097	0.139	0.217	0.329	0.443	0.493	0.611
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	0.005	0.006	0.011	0.016	0.022	0.024	0.030
54	0.010	0.014	0.021	0.032	0.043	0.048	0.060
56	0.020	0.028	0.043	0.066	0.088	0.098	0.122
58	0.022	0.031	0.048	0.074	0.098	0.109	0.136
60	0.034	0.048	0.074	0.114	0.153	0.169	0.210
62	0.063	0.090	0.141	0.213	0.286	0.318	0.394
65	0.073	0.105	0.164	0.248	0.334	0.372	0.460
70	0.097	0.139	0.217	0.329	0.443	0.493	0.611
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 service. See sample rates in table below.

Service									
<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0.0912	0.0190	0.0029	0.0016	0.0010	0.0006	0.0004	0.0002	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				
	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>
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, and 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	0.00022	0.00007	0.00043	0.00015	0.00004
25	0.00029	0.00011	0.00043	0.00015	0.00006
30	0.00038	0.00016	0.00106	0.00015	0.00007
35	0.00049	0.00027	0.00184	0.00029	0.00009
40	0.00064	0.00037	0.00295	0.00029	0.00010
45	0.00080	0.00054	0.00448	0.00044	0.00012
50	0.00116	0.00079	0.00601	0.00044	0.00013
55	0.00172	0.00120	0.00771	0.00058	0.00015
60	0.00255	0.00166	0.00771	0.00058	0.00016

#### 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	0.00372	0.00346	0.01183	0.01083	0.00372	0.00346
55	0.00437	0.00410	0.01613	0.01178	0.00437	0.00410
60	0.00671	0.00476	0.02166	0.01404	0.00671	0.00476
65	0.00928	0.00637	0.02733	0.01757	0.01113	0.00765
70	0.01339	0.00926	0.03358	0.02184	0.01607	0.01112
75	0.02316	0.01635	0.04277	0.02969	0.02779	0.01962
80	0.03977	0.03007	0.06272	0.04641	0.04773	0.03609
85	0.07122	0.05418	0.09793	0.07847	0.08547	0.06501
90	0.13044	0.10089	0.14616	0.13220	0.14348	0.11098
95	0.21658	0.17698	0.21658	0.21015	0.21658	0.17698
100	0.32222	0.28151	0.32222	0.32226	0.32222	0.28151
105	0.46691	0.43491	0.46691	0.43491	0.46691	0.43491
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The postretirement mortality rates above include 15 years of projected ongoing mortality improvement using 90 percent scale MP-2016 published by the Society of Actuaries.

## 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	0.008	0.013	0.020	0.030	0.032	0.039	0.045
52	0.008	0.017	0.017	0.030	0.030	0.035	0.044
54	0.016	0.023	0.023	0.034	0.041	0.054	0.099
56	0.032	0.039	0.058	0.109	0.138	0.171	0.231
58	0.035	0.047	0.069	0.109	0.132	0.179	0.256
60	0.048	0.056	0.090	0.154	0.158	0.201	0.257
62	0.084	0.095	0.140	0.239	0.253	0.308	0.356
65	0.111	0.138	0.172	0.249	0.257	0.311	0.359
70	0.137	0.167	0.214	0.281	0.309	0.373	0.401
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	0.007	0.011	0.017	0.026	0.027	0.033	0.038
52	0.007	0.014	0.014	0.026	0.026	0.030	0.037
54	0.012	0.017	0.017	0.026	0.031	0.041	0.074
56	0.024	0.029	0.044	0.082	0.104	0.128	0.173
58	0.028	0.038	0.055	0.087	0.106	0.143	0.205
60	0.043	0.050	0.081	0.139	0.142	0.181	0.231
62	0.067	0.076	0.112	0.191	0.202	0.246	0.285
65	0.100	0.124	0.155	0.224	0.231	0.280	0.323
70	0.137	0.167	0.214	0.281	0.309	0.373	0.401
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
0.1408	0.1014	0.0723	0.0533	0.0444	0.0155	0.0033	0.0019	0.0011	0.0006	0.0004

## Pension-Related Assumptions

### STATE SAFETY (CONTINUED)

#### Terminations with Vested Deferred Benefits

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

Service										
<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>
0.0246	0.0218	0.0194	0.0173	0.0155	0.0141	0.0097	0.0073	0.0050	0.0034	0.0000

#### Non-Industrial Death, Non-Industrial Disability, Industrial Disability, and 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 and Female	Male and Female	Male and Female
	Male	Female	Male and Female	Male and Female	Male and Female
20	0.00022	0.00007	0.00036	0.00002	0.00004
25	0.00029	0.00011	0.00054	0.00076	0.00006
30	0.00038	0.00016	0.00063	0.00170	0.00007
35	0.00049	0.00027	0.00072	0.00264	0.00009
40	0.00064	0.00037	0.00072	0.00360	0.00010
45	0.00080	0.00054	0.00108	0.00457	0.00012
50	0.00116	0.00079	0.00201	0.00557	0.00013
55	0.00172	0.00120	0.00240	0.00658	0.00015
60	0.00255	0.00166	0.00320	0.00762	0.00016

## 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	0.00372	0.00346	0.01183	0.01083	0.00372	0.00346
55	0.00437	0.00410	0.01613	0.01178	0.00437	0.00410
60	0.00671	0.00476	0.02166	0.01404	0.00671	0.00476
65	0.00928	0.00637	0.02733	0.01757	0.01113	0.00765
70	0.01339	0.00926	0.03358	0.02184	0.01607	0.01112
75	0.02316	0.01635	0.04277	0.02969	0.02779	0.01962
80	0.03977	0.03007	0.06272	0.04641	0.04773	0.03609
85	0.07122	0.05418	0.09793	0.07847	0.08547	0.06501
90	0.13044	0.10089	0.14616	0.13220	0.14348	0.11098
95	0.21658	0.17698	0.21658	0.21015	0.21658	0.17698
100	0.32222	0.28151	0.32222	0.32226	0.32222	0.28151
105	0.46691	0.43491	0.46691	0.43491	0.46691	0.43491
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The postretirement mortality rates above include 15 years of projected ongoing mortality improvement using 90 percent scale MP-2016 published by the Society of Actuaries.

## 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	0.012	0.030	0.044	0.109	0.224	0.449	0.467
52	0.012	0.026	0.041	0.096	0.145	0.255	0.257
54	0.021	0.042	0.053	0.118	0.162	0.292	0.306
56	0.031	0.044	0.057	0.135	0.213	0.335	0.345
58	0.020	0.065	0.070	0.158	0.224	0.354	0.354
60	0.035	0.066	0.094	0.179	0.276	0.360	0.367
62	0.067	0.104	0.130	0.221	0.324	0.415	0.440
65	0.065	0.081	0.127	0.231	0.342	0.427	0.453
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	0.008	0.021	0.031	0.076	0.157	0.314	0.327
52	0.008	0.018	0.029	0.067	0.102	0.179	0.180
54	0.016	0.032	0.040	0.089	0.122	0.219	0.230
56	0.025	0.035	0.046	0.108	0.170	0.268	0.276
58	0.018	0.059	0.063	0.142	0.202	0.319	0.319
60	0.033	0.063	0.089	0.170	0.262	0.342	0.349
62	0.067	0.104	0.130	0.221	0.324	0.415	0.440
65	0.065	0.081	0.127	0.231	0.342	0.427	0.453
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 service. See sample rates in table below.

Service										
5	6	7	8	9	10	15	20	25	30	35
0.0117	0.0115	0.0112	0.0108	0.0103	0.0098	0.0069	0.0049	0.0031	0.0020	0.0000

#### Non-Industrial Death, Non-Industrial Disability, Industrial Disability, and 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 and Female	Male and Female	Male and Female
	Male	Female	Male and Female	Male and Female	Male and Female
20	0.00022	0.00007	0.00030	0.00039	0.00004
25	0.00029	0.00011	0.00030	0.00087	0.00006
30	0.00038	0.00016	0.00030	0.00167	0.00007
35	0.00049	0.00027	0.00030	0.00289	0.00009
40	0.00064	0.00037	0.00040	0.00464	0.00010
45	0.00080	0.00054	0.00060	0.00706	0.00012
50	0.00116	0.00079	0.00098	0.01027	0.00013
55	0.00172	0.00120	0.00143	0.01442	0.00015
60	0.00255	0.00166	0.00188	0.01966	0.00016

## 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	0.00372	0.00346	0.01183	0.01083	0.00372	0.00346
55	0.00437	0.00410	0.01613	0.01178	0.00437	0.00410
60	0.00671	0.00476	0.02166	0.01404	0.00671	0.00476
65	0.00928	0.00637	0.02733	0.01757	0.01113	0.00765
70	0.01339	0.00926	0.03358	0.02184	0.01607	0.01112
75	0.02316	0.01635	0.04277	0.02969	0.02779	0.01962
80	0.03977	0.03007	0.06272	0.04641	0.04773	0.03609
85	0.07122	0.05418	0.09793	0.07847	0.08547	0.06501
90	0.13044	0.10089	0.14616	0.13220	0.14348	0.11098
95	0.21658	0.17698	0.21658	0.21015	0.21658	0.17698
100	0.32222	0.28151	0.32222	0.32226	0.32222	0.28151
105	0.46691	0.43491	0.46691	0.43491	0.46691	0.43491
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The postretirement mortality rates above include 15 years of projected ongoing mortality improvement using 90 percent scale MP-2016 published by the Society of Actuaries.

## 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	0.038	0.038	0.038	0.049	0.107	0.418	0.453
52	0.027	0.027	0.027	0.027	0.093	0.315	0.383
54	0.038	0.038	0.038	0.038	0.124	0.309	0.404
56	0.051	0.051	0.051	0.084	0.139	0.350	0.380
58	0.049	0.049	0.049	0.049	0.171	0.338	0.350
60	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	0.027	0.027	0.027	0.034	0.075	0.293	0.317
52	0.020	0.020	0.020	0.020	0.070	0.236	0.287
54	0.030	0.030	0.030	0.030	0.099	0.247	0.323
56	0.043	0.043	0.043	0.071	0.118	0.298	0.323
58	0.044	0.044	0.044	0.044	0.154	0.304	0.315
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										
<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>
0.1050	0.0243	0.0152	0.0091	0.0054	0.0029	0.0005	0.0003	0.0002	0.0002	0.0002

## Pension-Related Assumptions

### CALIFORNIA HIGHWAY PATROL (CONTINUED)

#### Terminations with Vested Deferred Benefits

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

Service										
<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>
0.0090	0.0084	0.0079	0.0075	0.0071	0.0067	0.0049	0.0034	0.0023	0.0010	0.0000

When a member is eligible to retire, the termination with vested benefits probability is set to zero.

#### 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		Non-Industrial Disability	Industrial Disability	Industrial Death
			Male and Female	Male and Female	Male and Female
	Male	Female	Male and Female	Male and Female	Male and Female
20	0.00022	0.00007	0.00010	0.00016	0.00004
25	0.00029	0.00011	0.00010	0.00035	0.00006
30	0.00038	0.00016	0.00010	0.00068	0.00007
35	0.00049	0.00027	0.00010	0.00122	0.00009
40	0.00064	0.00037	0.00010	0.00202	0.00010
45	0.00080	0.00054	0.00020	0.00316	0.00012
50	0.00116	0.00079	0.00020	0.01214	0.00013
55	0.00172	0.00120	0.00020	0.05407	0.00015
60	0.00255	0.00166	0.00020	0.20431	0.00016

## 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	0.00372	0.00346	0.01183	0.01083	0.00372	0.00346
55	0.00437	0.00410	0.01613	0.01178	0.00437	0.00410
60	0.00671	0.00476	0.02166	0.01404	0.00671	0.00476
65	0.00928	0.00637	0.02733	0.01757	0.01113	0.00765
70	0.01339	0.00926	0.03358	0.02184	0.01607	0.01112
75	0.02316	0.01635	0.04277	0.02969	0.02779	0.01962
80	0.03977	0.03007	0.06272	0.04641	0.04773	0.03609
85	0.07122	0.05418	0.09793	0.07847	0.08547	0.06501
90	0.13044	0.10089	0.14616	0.13220	0.14348	0.11098
95	0.21658	0.17698	0.21658	0.21015	0.21658	0.17698
100	0.32222	0.28151	0.32222	0.32226	0.32222	0.28151
105	0.46691	0.43491	0.46691	0.43491	0.46691	0.43491
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The postretirement mortality rates above include 15 years of projected ongoing mortality improvement using 90 percent scale MP-2016 published by the Society of Actuaries.

## Pension-Related Assumptions

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### JUDGES' RETIREMENT SYSTEM I

#### Probability of Termination from Active Service

No pre-retirement termination or disability rates were assumed.

#### 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

#### 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 mortality rates, the revised rates include 15 years of projected ongoing mortality improvement using 90 percent of Scale MP 2016 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 percent.

#### 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 and Pre-Retirement Mortality

Rates vary by age.

Attained	Pre-Retirement Mortality	Pre-Retirement Mortality	Non-Industrial
Age	Male	Female	Disability
35	0.0005	0.0003	0.0000
40	0.0006	0.0004	0.0010
45	0.0008	0.0005	0.0019
50	0.0012	0.0008	0.0032
55	0.0017	0.0012	0.0054
60	0.0026	0.0017	0.0085
65	0.0036	0.0023	0.0122
70	0.0062	0.0039	0.0000

#### Industrial Mortality

Rates are zero.

#### Industrial Disability

Rates are zero.

#### Post-Retirement Mortality:

Rates vary by age and sex.

		Non-Industrial Disability	Non-Industrial Disability			Non-Industrial Disability	Non-Industrial Disability
Age	Healthy Male	Healthy Female	Healthy Male	Age	Healthy Male	Healthy Female	Healthy Male
35	0.0005	0.0003	0.0005	75	0.0232	0.0164	0.0428
40	0.0006	0.0004	0.0006	80	0.0398	0.0301	0.0627
45	0.0008	0.0005	0.0008	85	0.0712	0.0542	0.0979
50	0.0037	0.0035	0.0118	90	0.1304	0.1009	0.1462
55	0.0044	0.0041	0.0161	95	0.2166	0.1770	0.2166
60	0.0067	0.0048	0.0217	100	0.3222	0.2815	0.3222
65	0.0093	0.0064	0.0273	105	0.4669	0.4349	0.4669
70	0.0134	0.0093	0.0336	110	1.0000	1.0000	1.0000

The postretirement mortality rates above include 15 years of projected ongoing mortality improvement using 90 percent scale MP-2016 published by the Society of Actuaries.



## 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 postretirement mortality rates, the revised rates include 20 years of projected ongoing mortality improvement using Scale BB published by the Society of Actuaries.

	Healthy	Healthy	Disability	Disability		Healthy	Healthy	Disability	Disability
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
35	0.0005	0.0003	0.0005	0.0003	75	0.0232	0.0164	0.0428	0.0297
40	0.0006	0.0004	0.0006	0.0004	80	0.0398	0.0301	0.0627	0.0464
45	0.0008	0.0005	0.0008	0.0005	85	0.0712	0.0542	0.0979	0.0785
50	0.0037	0.0035	0.0118	0.0108	90	0.1304	0.1009	0.1462	0.1322
55	0.0044	0.0041	0.0161	0.0112	95	0.2166	0.1770	0.2166	0.2102
60	0.0067	0.0048	0.0217	0.0140	100	0.3222	0.2815	0.3222	0.3223
65	0.0093	0.0064	0.0273	0.0176	105	0.4669	0.4349	0.4669	0.4349
70	0.0134	0.0093	0.0336	0.0218	110	1.0000	1.0000	1.0000	1.0000

The postretirement mortality rates above include 15 years of projected ongoing mortality improvement using 90 percent scale MP-2016 published by the Society of Actuaries.

# APPENDIX A

## GLOSSARY

## Glossary

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<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 Assets</b>	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.
<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.

## Glossary

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<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).
<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.

## Glossary

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<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.
<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 postemployment healthcare benefits regardless of the manner in which they are provided. Other postemployment 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

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### **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

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### INDIVIDUAL ACTUARIAL VALUATION RESULTS

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 2</b> <b>ATTORNEYS AND HEARING OFFICERS</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	4,488	4,594
Retired Participants <sup>a</sup>	<u>2,560</u>	<u>2,673</u>
Total Participants	7,048	7,267
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 559,423	\$ 527,696
Retired Participants	<u>460,531</u>	<u>437,824</u>
Total Participants	\$ 1,019,954	\$ 965,520
Actuarial Accrued Liability		
Active Participants	\$ 365,667	\$ 347,978
Retired Participants	<u>460,531</u>	<u>437,824</u>
Total Participants	\$ 826,198	\$ 785,802
Actuarial Value of Assets	\$ 33,800	\$ 59,938
Unfunded Actuarial Accrued Liability	\$ 792,398	\$ 725,864
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 21,055	\$ 19,521
Administrative Expenses	81	40
Amortization of UAAL	<u>46,435</u>	<u>43,385</u>
Total ADC	\$ 67,571	\$ 62,946
Estimated Member Contributions	<u>(7,926)</u>	<u>-</u>
Net Employer ADC	\$ 59,645	\$ 62,946
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 19,607	\$ 20,660
Part B Reimbursement	5,580	6,403
Dental Claims	<u>1,664</u>	<u>1,738</u>
Total	\$ 26,851	\$ 28,801
Employer Implicit Costs	<u>5,487</u>	<u>3,530</u>
Total Employer Costs	\$ 32,338	\$ 32,331
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 1,549	\$ 1,447
Dental Claims	<u>522</u>	<u>545</u>
Total	\$ 2,071	\$ 1,992
Total Claims Costs	\$ 34,409	\$ 34,323

<sup>a</sup>Retired participants with dental only coverage, 157 as of July 1, 2019, and 168 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S)  
BARGAINING UNIT NUMBER 2  
ATTORNEYS AND HEARING OFFICERS

Fiscal Year Beginning 7/1/2020  
Long-term Asset Return 6.750%  
Discount Rate 6.750%  
Year Plan is Fully Funded 2046

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 33,800	\$ -	\$ 22	\$ 24,640	\$ 1,520	\$ 59,938	\$ 785,802	7.6%	\$ 19,521
2021	59,938	-	40	9,781	4,369	74,048	826,262	9.0%	18,755
2022	74,048	-	44	9,399	5,309	88,712	865,852	10.2%	18,050
2023	88,712	-	48	18,098	6,587	113,349	903,774	12.5%	17,374
2024	113,349	-	53	17,427	8,228	138,951	939,748	14.8%	16,719
2025	138,951	-	57	16,777	9,934	165,605	973,621	17.0%	16,084
2026	165,605	-	62	16,146	11,712	193,401	1,005,412	19.2%	15,468
2027	193,401	-	66	15,534	13,568	222,437	1,035,025	21.5%	14,860
2028	222,437	-	70	14,930	15,508	252,805	1,062,515	23.8%	14,270
2029	252,805	-	74	14,344	17,538	284,613	1,087,987	26.2%	13,691
2030	284,613	-	78	13,770	19,666	317,971	1,111,282	28.6%	13,111
2031	317,971	-	82	13,193	21,898	352,980	1,132,394	31.2%	12,538
2032	352,980	-	86	12,624	24,242	389,760	1,151,296	33.9%	11,964
2033	389,760	-	89	12,053	26,706	428,430	1,167,842	36.7%	11,380
2034	428,430	-	93	11,473	29,297	469,107	1,181,930	39.7%	10,792
2035	469,107	-	96	10,888	32,023	511,922	1,193,588	42.9%	10,184
2036	511,922	-	100	10,284	34,893	556,999	1,202,700	46.3%	9,557
2037	556,999	-	103	9,660	37,915	604,471	1,209,073	50.0%	8,915
2038	604,471	-	106	9,021	41,098	654,484	1,212,553	54.0%	8,262
2039	654,484	-	109	8,372	44,452	707,199	1,213,099	58.3%	7,602
2040	707,199	-	112	7,713	47,988	762,788	1,210,673	63.0%	6,929
2041	762,788	-	114	7,044	51,718	821,436	1,205,336	68.1%	6,250
2042	821,436	-	117	6,367	55,654	883,340	1,197,028	73.8%	5,575
2043	883,340	-	119	5,694	59,811	948,726	1,185,669	80.0%	4,915
2044	948,726	-	120	5,035	64,202	1,017,843	1,171,495	86.9%	4,275
2045	1,017,843	-	121	4,397	68,846	1,090,965	1,154,718	94.5%	3,664
2046	1,090,965	19,235	122	3,786	73,123	1,148,517	1,135,369	101.2%	3,091
2047	1,148,517	98,286	123	-	74,258	1,124,366	1,113,746	101.0%	2,558
2048	1,124,366	98,353	123	-	72,625	1,098,515	1,090,028	100.8%	2,073
2049	1,098,515	98,192	123	-	70,886	1,071,086	1,064,357	100.6%	1,642
2050	1,071,086	97,538	122	-	69,056	1,042,482	1,037,170	100.5%	1,271
2051	1,042,482	96,680	121	-	67,154	1,012,835	1,008,639	100.4%	964
2052	1,012,835	95,547	119	-	65,190	982,359	979,026	100.3%	715
2053	982,359	94,016	118	-	63,184	951,409	948,731	100.3%	520
2054	951,409	92,465	116	-	61,147	919,975	917,787	100.2%	373
2055	919,975	90,929	114	-	59,076	888,008	886,184	100.2%	263
2056	888,008	89,321	112	-	56,972	855,547	853,993	100.2%	183
2057	855,547	87,774	110	-	54,832	822,495	821,142	100.2%	126
2058	822,495	86,238	108	-	52,652	788,801	787,601	100.2%	87

## Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM							
DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S)							
BARGAINING UNIT NUMBER 2							
ATTORNEYS AND HEARING OFFICERS							
20-Year GO Municipal Bond Rate at June 30, 2020		2.450%					
Long-Term Investment Return		6.750%					
Year Plan is Fully Funded		2046					
Single Equivalent Rate		3.213%					
Present Value of Benefits		\$ 1,882,277				\$ 1,882,277	
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 32,331	2.450%	0.98797	\$ 31,942	3.213%	0.98431	\$ 31,823
2022	35,023	2.450%	0.96434	33,774	3.213%	0.95367	33,400
2023	38,496	2.450%	0.94128	36,235	3.213%	0.92398	35,569
2024	42,160	2.450%	0.91877	38,736	3.213%	0.89521	37,742
2025	45,866	2.450%	0.89680	41,133	3.213%	0.86734	39,782
2026	49,439	2.450%	0.87535	43,276	3.213%	0.84034	41,545
2027	52,986	2.450%	0.85442	45,272	3.213%	0.81418	43,140
2028	56,347	2.450%	0.83399	46,993	3.213%	0.78883	44,448
2029	59,485	2.450%	0.81404	48,423	3.213%	0.76427	45,462
2030	62,659	2.450%	0.79458	49,788	3.213%	0.74048	46,398
2031	65,694	2.450%	0.77558	50,951	3.213%	0.71743	47,131
2032	68,621	2.450%	0.75703	51,948	3.213%	0.69509	47,698
2033	71,542	2.450%	0.73893	52,864	3.213%	0.67345	48,180
2034	74,399	2.450%	0.72125	53,661	3.213%	0.65249	48,544
2035	77,065	2.450%	0.70401	54,254	3.213%	0.63217	48,718
2036	79,662	2.450%	0.68717	54,742	3.213%	0.61249	48,792
2037	82,262	2.450%	0.67074	55,176	3.213%	0.59342	48,816
2038	84,815	2.450%	0.65470	55,528	3.213%	0.57495	48,764
2039	87,209	2.450%	0.63904	55,730	3.213%	0.55705	48,580
2040	89,438	2.450%	0.62376	55,788	3.213%	0.53971	48,270
2041	91,403	2.450%	0.60884	55,650	3.213%	0.52290	47,795
2042	93,230	2.450%	0.59428	55,405	3.213%	0.50663	47,232
2043	94,943	2.450%	0.58007	55,073	3.213%	0.49085	46,603
2044	96,245	2.450%	0.56620	54,494	3.213%	0.47557	45,771
2045	97,178	2.450%	0.55266	53,706	3.213%	0.46077	44,776
2046	97,941	2.450%	0.53944	52,833	3.213%	0.44642	43,723
2047	98,286	6.750%	0.50533	49,667	3.213%	0.43252	42,511
2048	98,353	6.750%	0.47338	46,558	3.213%	0.41906	41,216
2049	98,192	6.750%	0.44345	43,543	3.213%	0.40601	39,867
2050	97,538	6.750%	0.41541	40,518	3.213%	0.39337	38,369
2051	96,680	6.750%	0.38914	37,622	3.213%	0.38113	36,847
2052	95,547	6.750%	0.36453	34,830	3.213%	0.36926	35,282
2053	94,016	6.750%	0.34148	32,105	3.213%	0.35776	33,636
2054	92,465	6.750%	0.31989	29,579	3.213%	0.34663	32,051
2055	90,929	6.750%	0.29966	27,248	3.213%	0.33583	30,537
2056	89,321	6.750%	0.28072	25,074	3.213%	0.32538	29,063
2057	87,774	6.750%	0.26297	23,082	3.213%	0.31525	27,671
2067	68,589	6.750%	0.13684	9,386	3.213%	0.22977	15,760
2077	34,079	6.750%	0.07121	2,427	3.213%	0.16747	5,707
2087	6,574	6.750%	0.03706	244	3.213%	0.12206	803
2097	276	6.750%	0.01928	5	3.213%	0.08897	25
2107	11	6.750%	0.01003	-	3.213%	0.06485	1
2117	-	6.750%	0.00522	-	3.213%	0.04726	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 56,706	\$ 49,771	\$ 44,164	\$ 46,162
Interest on Total OPEB Liability	44,801	50,488	48,322	47,687
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(91,108)	(923)	(32,506)
Changes of Assumptions	(120,350)	(50,429)	36,206	(3,224)
Benefit Payments	(26,821)	(28,844)	(30,621)	(32,283)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (45,664)</b>	<b>\$ (70,122)</b>	<b>\$ 97,148</b>	<b>\$ 25,836</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 1,273,480</b>	<b>\$ 1,227,816</b>	<b>\$ 1,157,694</b>	<b>\$ 1,254,842</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 1,227,816</b>	<b>\$ 1,157,694</b>	<b>\$ 1,254,842</b>	<b>\$ 1,280,678</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 26,821	\$ 28,844	\$ 30,621	\$ 32,283
Employer Pre-Funding Contributions	-	3,165	6,889	12,320
Active Member Contributions	-	3,165	6,889	12,320
Net Investment Income	-	951	1,897	1,520
Benefit Payments	(26,821)	(28,844)	(30,621)	(32,283)
Administrative Expense	-	(7)	(5)	(22)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ 7,274</b>	<b>\$ 15,670</b>	<b>\$ 26,138</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ 10,869</b>	<b>\$ 18,130</b>	<b>\$ 33,800</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ 18,143</b>	<b>\$ 33,800</b>	<b>\$ 59,938</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 1,227,816</b>	<b>\$ 1,139,551</b>	<b>\$ 1,221,042</b>	<b>\$ 1,220,740</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>1.567%</b>	<b>2.694%</b>	<b>4.680%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 63,906</b>	<b>\$ 62,658</b>	<b>\$ 57,409</b>	<b>\$ 55,251</b>
<b>Employer Contribution</b>	<b>\$ 26,821</b>	<b>\$ 32,009</b>	<b>\$ 37,510</b>	<b>\$ 44,603</b>
<b>Percentage of ADC made by Employer</b>	<b>42%</b>	<b>51%</b>	<b>65%</b>	<b>81%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (37,085)</b>	<b>\$ (30,649)</b>	<b>\$ (19,899)</b>	<b>\$ (10,648)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ 1,017</b>	<b>\$ 1,743</b>	<b>\$ 3,099</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ 66</b>	<b>\$ (154)</b>	<b>\$ 1,579</b>
<b>Average Expected Remaining Service</b>	<b>6.824846</b>	<b>7.207062</b>	<b>7.249983</b>	<b>7.331627</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.402%</b>	<b>3.996%</b>	<b>4.072%</b>	<b>3.711%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.996%</b>	<b>4.072%</b>	<b>3.711%</b>	<b>3.213%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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 2</b> <b>ATTORNEYS AND HEARING OFFICERS</b>		
Measured for the Plan's Fiscal Year Ending	June 30, 2019	June 30, 2020
Applicable for the Sponsor's Fiscal Year Ending	June 30, 2020	June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 44,164	\$ 46,162
Interest on the Total OPEB Liability	48,322	47,687
Current-Period Benefit Changes	-	-
Active Member Contributions	(6,889)	(12,320)
Projected Earnings on Plan Investments	(1,743)	(3,099)
Operating Expenses	5	22
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(12,768)	(17,202)
Recognition of Outflow/(Inflow) due to Assumption Changes	(19,637)	(20,077)
Recognition of Outflow/(Inflow) due to Investment Experience	(18)	298
<b>Net OPEB Expense</b>	<b>\$ 51,436</b>	<b>\$ 41,471</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 1,139,564</b>	<b>\$ 1,221,042</b>
OPEB Expense	51,436	41,471
Employer Contributions	(37,510)	(44,603)
Change in Outflow/(Inflow) due to Non-investment Experience	11,845	(15,304)
Change in Outflow/(Inflow) due to Assumption Changes	55,843	16,853
Change in Outflow/(Inflow) due to Investment Experience	(136)	1,281
<b>Net OPEB Liability End of Year</b>	<b>\$ 1,221,042</b>	<b>\$ 1,220,740</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (66,622)	\$ (81,926)
Assumption Changes	\$ (103,883)	\$ (82,036)
Investment Experience	\$ (123)	\$ (92)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 31,212	\$ 26,218
Investment Experience	\$ 40	\$ 1,290
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.711%	3.213%
Baseline Discount Rate and Trend Rates	\$ 1,221,042	\$ 1,220,740
Increase Discount Rate by One Percentage Point	\$ 1,049,735	\$ 1,042,617
Decrease Discount Rate by One Percentage Point	\$ 1,433,811	\$ 1,442,691
Increase Trend Rate by One Percentage Point	\$ 1,454,585	\$ 1,418,139
Decrease Trend Rate by One Percentage Point	\$ 1,037,195	\$ 1,065,534

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	6.824846	\$ -	\$ (120,350)	6.824846	\$ (17,634)	\$ -	5.000000	\$ -
7/1/2017	\$ (91,108)	7.207062	\$ (12,641)	\$ (50,429)	7.207062	\$ (6,997)	\$ 66	5.000000	\$ 13
7/1/2018	\$ (923)	7.249983	\$ (127)	\$ 36,206	7.249983	\$ 4,994	\$ (154)	5.000000	\$ (31)
7/1/2019	\$ (32,506)	7.331627	\$ (4,434)	\$ (3,224)	7.331627	\$ (440)	\$ 1,579	5.000000	\$ 316
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (17,202)	\$ (17,202)	\$ 4,994	\$ (25,071)	\$ (20,077)	\$ 329	\$ (31)	\$ 298
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (17,202)	\$ (17,202)	\$ 4,994	\$ (25,071)	\$ (20,077)	\$ 329	\$ (31)	\$ 298
6/30/2022	\$ -	\$ (17,202)	\$ (17,202)	\$ 4,994	\$ (25,071)	\$ (20,077)	\$ 330	\$ (31)	\$ 299
6/30/2023	\$ -	\$ (17,202)	\$ (17,202)	\$ 4,994	\$ (21,983)	\$ (16,989)	\$ 316	\$ (30)	\$ 286
6/30/2024	\$ -	\$ (17,202)	\$ (17,202)	\$ 4,994	\$ (7,437)	\$ (2,443)	\$ 315	\$ -	\$ 315
6/30/2025	\$ -	\$ (7,182)	\$ (7,182)	\$ 4,994	\$ (1,890)	\$ 3,104	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (4,468)	\$ (4,468)	\$ 1,248	\$ (440)	\$ 808	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ (1,468)	\$ (1,468)	\$ -	\$ (144)	\$ (144)	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (81,926)	\$ (81,926)	\$ 26,218	\$ (82,036)	\$ (55,818)	\$ 1,290	\$ (92)	\$ 1,198
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (15,304)			\$ 16,853			\$ 1,281

# Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 5</b> <b>HIGHWAY PATROL</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	7,392	7,226
Retired Participants <sup>a</sup>	<u>6,776</u>	<u>7,049</u>
Total Participants	14,168	14,275
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 1,940,074	\$ 1,950,185
Retired Participants	<u>2,027,966</u>	<u>2,151,755</u>
Total Participants	\$ 3,968,040	\$ 4,101,940
Actuarial Accrued Liability		
Active Participants	\$ 1,222,227	\$ 1,246,899
Retired Participants	<u>2,027,966</u>	<u>2,151,755</u>
Total Participants	\$ 3,250,193	\$ 3,398,654
Actuarial Value of Assets	\$ 416,319	\$ 495,528
Unfunded Actuarial Accrued Liability	\$ 2,833,874	\$ 2,903,126
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 67,142	\$ 67,070
Administrative Expenses	299	161
Amortization of UAAL	<u>166,065</u>	<u>173,518</u>
Total ADC	\$ 233,506	\$ 240,749
Estimated Member Contributions	<u>(4,323)</u>	<u>-</u>
Net Employer ADC	\$ 229,183	\$ 240,749
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 84,922	\$ 93,721
Part B Reimbursement	8,937	9,871
Dental Claims	<u>5,044</u>	<u>5,214</u>
Total	\$ 98,903	\$ 108,806
Employer Implicit Costs	<u>20,816</u>	<u>20,340</u>
Total Employer Costs	\$ 119,719	\$ 129,146
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 2,307	\$ 2,772
Dental Claims	<u>1,513</u>	<u>1,566</u>
Total	\$ 3,820	\$ 4,338
Total Claims Costs	\$ 123,539	\$ 133,484

<sup>a</sup>Retired participants with dental only coverage, 67 as of July 1, 2019, and 74 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S)  
BARGAINING UNIT NUMBER 5  
HIGHWAY PATROL

Fiscal Year Beginning 7/1/2020  
Long-term Asset Return 6.750%  
Discount Rate 6.750%  
Year Plan is Fully Funded 2046

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 416,319	\$ -	\$ 217	\$ 63,357	\$ 16,069	\$ 495,528	\$ 3,398,654	14.6%	\$ 67,070
2021	495,528	-	161	67,231	35,675	598,273	3,566,157	16.8%	67,566
2022	598,273	-	172	67,738	42,626	708,465	3,736,847	19.0%	67,617
2023	708,465	-	185	67,803	50,066	826,149	3,908,028	21.1%	67,190
2024	826,149	-	200	67,390	57,996	951,335	4,078,123	23.3%	66,338
2025	951,335	-	215	66,553	66,417	1,084,090	4,246,268	25.5%	65,162
2026	1,084,090	-	230	65,392	75,339	1,224,591	4,411,894	27.8%	63,769
2027	1,224,591	-	245	64,014	84,777	1,373,137	4,575,066	30.0%	62,148
2028	1,373,137	-	260	62,408	94,750	1,530,035	4,735,003	32.3%	60,244
2029	1,530,035	-	276	60,520	105,277	1,695,556	4,890,842	34.7%	58,104
2030	1,695,556	-	292	58,396	116,379	1,870,039	5,041,536	37.1%	55,822
2031	1,870,039	-	308	56,130	128,081	2,053,942	5,186,834	39.6%	53,495
2032	2,053,942	-	324	53,820	140,417	2,247,855	5,325,760	42.2%	51,076
2033	2,247,855	-	341	51,417	153,426	2,452,357	5,457,817	44.9%	48,467
2034	2,452,357	-	358	48,825	167,143	2,667,967	5,582,144	47.8%	45,649
2035	2,667,967	-	375	46,024	181,603	2,895,219	5,697,404	50.8%	42,516
2036	2,895,219	-	393	42,909	196,838	3,134,573	5,802,074	54.0%	39,112
2037	3,134,573	-	411	39,523	212,882	3,386,567	5,895,369	57.4%	35,609
2038	3,386,567	-	429	36,038	229,775	3,651,951	5,976,463	61.1%	32,264
2039	3,651,951	-	446	32,710	247,578	3,931,793	6,045,606	65.0%	29,254
2040	3,931,793	-	462	29,715	266,367	4,227,413	6,103,272	69.3%	26,466
2041	4,227,413	-	477	26,943	286,229	4,540,108	6,149,102	73.8%	23,747
2042	4,540,108	-	492	24,239	307,245	4,871,100	6,182,595	78.8%	20,935
2043	4,871,100	-	507	21,442	329,494	5,221,529	6,202,993	84.2%	18,003
2044	5,221,529	-	522	18,525	353,051	5,592,583	6,209,160	90.1%	14,966
2045	5,592,583	-	537	15,503	377,996	5,985,545	6,199,975	96.5%	11,927
2046	5,985,545	187,165	552	12,479	398,206	6,208,513	6,174,793	100.5%	9,085
2047	6,208,513	452,794	566	-	404,023	6,159,176	6,133,382	100.4%	6,622
2048	6,159,176	462,368	578	-	400,375	6,096,605	6,076,656	100.3%	4,658
2049	6,096,605	469,898	587	-	395,901	6,022,021	6,006,227	100.3%	3,197
2050	6,022,021	476,056	595	-	390,662	5,936,032	5,923,126	100.2%	2,156
2051	5,936,032	480,449	601	-	384,712	5,839,694	5,828,768	100.2%	1,440
2052	5,839,694	482,774	603	-	378,132	5,734,449	5,724,878	100.2%	965
2053	5,734,449	484,443	606	-	370,972	5,620,372	5,611,748	100.2%	655
2054	5,620,372	485,748	607	-	363,229	5,497,246	5,489,306	100.1%	457
2055	5,497,246	485,689	607	-	354,920	5,365,870	5,358,453	100.1%	329
2056	5,365,870	484,428	606	-	346,094	5,226,930	5,219,937	100.1%	241
2057	5,226,930	482,566	603	-	336,777	5,080,538	5,073,906	100.1%	177
2058	5,080,538	479,442	599	-	326,999	4,927,496	4,921,181	100.1%	129

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S)  
BARGAINING UNIT NUMBER 5  
HIGHWAY PATROL

Present Value of Benefits	\$ 8,347,657	\$ 8,347,657
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## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 168,057	\$ 146,042	\$ 140,545	\$ 159,410
Interest on Total OPEB Liability	179,397	195,713	199,637	204,078
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(108,271)	41,288	(64,174)
Changes of Assumptions	(474,646)	(137,150)	318,292	466,272
Benefit Payments	(95,517)	(77,897)	(78,501)	(84,544)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (222,709)</b>	<b>\$ 18,437</b>	<b>\$ 621,261</b>	<b>\$ 681,042</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 4,764,812</b>	<b>\$ 4,542,103</b>	<b>\$ 4,560,540</b>	<b>\$ 5,181,801</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 4,542,103</b>	<b>\$ 4,560,540</b>	<b>\$ 5,181,801</b>	<b>\$ 5,862,843</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 95,517	\$ 77,897	\$ 78,501	\$ 84,544
Employer Pre-Funding Contributions	77,454	59,697	57,567	59,296
Active Member Contributions	12,783	4,089	3,943	4,061
Net Investment Income	21,109	20,988	23,834	16,069
Benefit Payments	(95,517)	(77,897)	(78,501)	(84,544)
Administrative Expense	(95)	(144)	(77)	(217)
Other	(290)	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 110,961</b>	<b>\$ 84,630</b>	<b>\$ 85,267</b>	<b>\$ 79,209</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 135,701</b>	<b>\$ 246,662</b>	<b>\$ 331,052</b>	<b>\$ 416,319</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 246,662</b>	<b>\$ 331,292</b>	<b>\$ 416,319</b>	<b>\$ 495,528</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 4,295,441</b>	<b>\$ 4,229,248</b>	<b>\$ 4,765,482</b>	<b>\$ 5,367,315</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>5.431%</b>	<b>7.264%</b>	<b>8.034%</b>	<b>8.452%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 185,626</b>	<b>\$ 200,272</b>	<b>\$ 210,747</b>	<b>\$ 229,445</b>
<b>Employer Contribution</b>	<b>\$ 172,971</b>	<b>\$ 137,594</b>	<b>\$ 136,068</b>	<b>\$ 143,840</b>
<b>Percentage of ADC made by Employer</b>	<b>93%</b>	<b>69%</b>	<b>65%</b>	<b>63%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (12,655)</b>	<b>\$ (62,678)</b>	<b>\$ (74,679)</b>	<b>\$ (85,605)</b>
<b>Expected Return on Assets</b>	<b>\$ 13,649</b>	<b>\$ 20,233</b>	<b>\$ 25,287</b>	<b>\$ 30,198</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (7,460)</b>	<b>\$ (755)</b>	<b>\$ 1,453</b>	<b>\$ 14,129</b>
<b>Average Expected Remaining Service</b>	<b>6.861227</b>	<b>6.957379</b>	<b>6.730568</b>	<b>6.447981</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.672%</b>	<b>4.219%</b>	<b>4.282%</b>	<b>3.851%</b>
<b>Blended Discount Rate End of Year</b>	<b>4.219%</b>	<b>4.282%</b>	<b>3.851%</b>	<b>3.380%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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 5</b> <b>HIGHWAY PATROL</b>		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 140,545	\$ 159,410
Interest on the Total OPEB Liability	199,637	204,078
Current-Period Benefit Changes	-	-
Active Member Contributions	(3,943)	(4,061)
Projected Earnings on Plan Investments	(25,287)	(30,198)
Operating Expenses	77	217
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(9,428)	(19,381)
Recognition of Outflow/(Inflow) due to Assumption Changes	(41,600)	30,713
Recognition of Outflow/(Inflow) due to Investment Experience	(1,352)	1,474
<b>Net OPEB Expense</b>	<b>\$ 258,649</b>	<b>\$ 342,252</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 4,229,488</b>	<b>\$ 4,765,482</b>
OPEB Expense	258,649	342,252
Employer Contributions	(136,068)	(143,840)
Change in Outflow/(Inflow) due to Non-investment Experience	50,716	(44,793)
Change in Outflow/(Inflow) due to Assumption Changes	359,892	435,559
Change in Outflow/(Inflow) due to Investment Experience	2,805	12,655
<b>Net OPEB Liability End of Year</b>	<b>\$ 4,765,482</b>	<b>\$ 5,367,315</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (77,147)	\$ (115,806)
Assumption Changes	\$ (364,836)	\$ (275,945)
Investment Experience	\$ (3,437)	\$ (1,794)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ 35,154	\$ 29,020
Assumption Changes	\$ 271,001	\$ 617,669
Investment Experience	\$ 1,162	\$ 12,174
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.851%	3.380%
Baseline Discount Rate and Trend Rates	\$ 4,765,482	\$ 5,367,315
Increase Discount Rate by One Percentage Point	\$ 3,942,154	\$ 4,415,312
Decrease Discount Rate by One Percentage Point	\$ 5,832,270	\$ 6,606,563
Increase Trend Rate by One Percentage Point	\$ 5,900,167	\$ 6,512,118
Decrease Trend Rate by One Percentage Point	\$ 3,901,073	\$ 4,495,740

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	6.861227	\$ -	\$ (474,646)	6.861227	\$ (69,178)	\$ (7,460)	5.000000	\$ (1,492)
7/1/2017	\$ (108,271)	6.957379	\$ (15,562)	\$ (137,150)	6.957379	\$ (19,713)	\$ (755)	5.000000	\$ (151)
7/1/2018	\$ 41,288	6.730568	\$ 6,134	\$ 318,292	6.730568	\$ 47,291	\$ 1,453	5.000000	\$ 291
7/1/2019	\$ (64,174)	6.447981	\$ (9,953)	\$ 466,272	6.447981	\$ 72,313	\$ 14,129	5.000000	\$ 2,826
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ 6,134	\$ (25,515)	\$ (19,381)	\$ 119,604	\$ (88,891)	\$ 30,713	\$ 3,117	\$ (1,643)	\$ 1,474
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ 6,134	\$ (25,515)	\$ (19,381)	\$ 119,604	\$ (88,891)	\$ 30,713	\$ 3,117	\$ (1,643)	\$ 1,474
6/30/2022	\$ 6,134	\$ (25,515)	\$ (19,381)	\$ 119,604	\$ (88,891)	\$ 30,713	\$ 3,117	\$ (151)	\$ 2,966
6/30/2023	\$ 6,134	\$ (25,515)	\$ (19,381)	\$ 119,604	\$ (79,291)	\$ 40,313	\$ 3,115	\$ -	\$ 3,115
6/30/2024	\$ 6,134	\$ (24,852)	\$ (18,718)	\$ 119,604	\$ (18,872)	\$ 100,732	\$ 2,825	\$ -	\$ 2,825
6/30/2025	\$ 4,484	\$ (9,953)	\$ (5,469)	\$ 106,859	\$ -	\$ 106,859	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (4,456)	\$ (4,456)	\$ 32,394	\$ -	\$ 32,394	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ 29,020	\$ (115,806)	\$ (86,786)	\$ 617,669	\$ (275,945)	\$ 341,724	\$ 12,174	\$ (1,794)	\$ 10,380
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (44,793)			\$ 435,559			\$ 12,655

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 6</b> <b>CORRECTIONS</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	31,412	30,979
Retired Participants <sup>a</sup>	<u>24,717</u>	<u>26,005</u>
Total Participants	56,129	56,984
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 6,059,038	\$ 5,762,569
Retired Participants	<u>6,300,634</u>	<u>6,398,318</u>
Total Participants	\$ 12,359,672	\$ 12,160,887
Actuarial Accrued Liability		
Active Participants	\$ 3,782,279	\$ 3,614,739
Retired Participants	<u>6,300,634</u>	<u>6,398,318</u>
Total Participants	\$ 10,082,913	\$ 10,013,057
Actuarial Value of Assets	\$ 579,048	\$ 862,035
Unfunded Actuarial Accrued Liability	\$ 9,503,865	\$ 9,151,022
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 237,663	\$ 225,216
Administrative Expenses	967	516
Amortization of UAAL	<u>556,926</u>	<u>546,951</u>
Total ADC	\$ 795,556	\$ 772,683
Estimated Member Contributions	<u>(119,315)</u>	<u>-</u>
Net Employer ADC	\$ 676,241	\$ 772,683
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 295,304	\$ 318,667
Part B Reimbursement	22,400	25,921
Dental Claims	<u>17,246</u>	<u>17,911</u>
Total	\$ 334,950	\$ 362,499
Employer Implicit Costs	<u>51,711</u>	<u>49,948</u>
Total Employer Costs	\$ 386,661	\$ 412,447
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 19,584	\$ 22,199
Dental Claims	<u>5,106</u>	<u>5,315</u>
Total	\$ 24,690	\$ 27,514
Total Claims Costs	\$ 411,351	\$ 439,961

<sup>a</sup>Retired participants with dental only coverage, 1,329 as of July 1, 2019, and 1,406 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S)  
BARGAINING UNIT NUMBER 6  
CORRECTIONS

Fiscal Year Beginning 7/1/2020  
Long-term Asset Return 6.750%  
Discount Rate 6.750%  
Year Plan is Fully Funded 2047

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 579,048	\$ -	\$ 342	\$ 259,080	\$ 24,249	\$ 862,035	\$ 10,013,057	8.6%	\$ 225,216
2021	862,035	-	516	112,866	61,917	1,036,302	10,503,002	9.9%	221,516
2022	1,036,302	-	557	111,036	73,618	1,220,399	10,988,091	11.1%	217,060
2023	1,220,399	-	608	217,668	89,583	1,527,042	11,458,821	13.3%	211,784
2024	1,527,042	-	660	212,444	110,106	1,848,932	11,912,423	15.5%	205,963
2025	1,848,932	-	711	206,674	131,641	2,186,536	12,348,292	17.7%	199,563
2026	2,186,536	-	760	200,322	154,217	2,540,315	12,766,696	19.9%	192,552
2027	2,540,315	-	806	193,358	177,864	2,910,731	13,167,911	22.1%	184,912
2028	2,910,731	-	850	185,762	202,613	3,298,256	13,551,277	24.3%	176,867
2029	3,298,256	-	893	177,760	228,504	3,703,627	13,916,261	26.6%	168,707
2030	3,703,627	-	937	169,644	255,596	4,127,930	14,261,084	28.9%	160,453
2031	4,127,930	-	983	161,436	283,962	4,572,345	14,582,383	31.4%	152,116
2032	4,572,345	-	1,030	153,147	313,684	5,038,146	14,877,140	33.9%	143,752
2033	5,038,146	-	1,077	144,830	344,848	5,526,747	15,143,999	36.5%	135,438
2034	5,526,747	-	1,124	136,563	377,552	6,039,738	15,381,193	39.3%	127,085
2035	6,039,738	-	1,169	128,254	411,902	6,578,725	15,588,869	42.2%	118,640
2036	6,578,725	-	1,214	119,854	448,003	7,145,368	15,764,043	45.3%	110,417
2037	7,145,368	-	1,257	111,675	485,978	7,741,764	15,906,357	48.7%	102,699
2038	7,741,764	-	1,297	103,996	525,979	8,370,442	16,017,528	52.3%	95,322
2039	8,370,442	-	1,333	96,655	568,169	9,033,933	16,098,258	56.1%	87,998
2040	9,033,933	-	1,367	89,365	612,712	9,734,643	16,148,357	60.3%	80,381
2041	9,734,643	-	1,402	81,783	659,757	10,474,781	16,164,970	64.8%	72,192
2042	10,474,781	-	1,437	73,629	709,444	11,256,417	16,145,447	69.7%	63,293
2043	11,256,417	-	1,471	64,764	761,909	12,081,619	16,086,515	75.1%	53,807
2044	12,081,619	-	1,509	55,316	817,296	12,952,722	15,982,335	81.0%	44,243
2045	12,952,722	-	1,545	45,789	875,778	13,872,744	15,830,713	87.6%	35,234
2046	13,872,744	-	1,577	36,811	937,580	14,845,558	15,632,790	95.0%	27,174
2047	14,845,558	397,592	1,605	28,779	989,778	15,464,918	15,390,267	100.5%	20,219
2048	15,464,918	1,301,632	1,627	-	1,000,615	15,162,274	15,105,614	100.4%	14,511
2049	15,162,274	1,314,224	1,643	-	979,768	14,826,175	14,782,654	100.3%	10,114
2050	14,826,175	1,319,380	1,649	-	956,910	14,462,056	14,427,882	100.2%	6,881
2051	14,462,056	1,318,884	1,649	-	932,348	14,073,871	14,046,235	100.2%	4,582
2052	14,073,871	1,314,366	1,643	-	906,296	13,664,158	13,641,051	100.2%	2,988
2053	13,664,158	1,304,335	1,630	-	878,974	13,237,167	13,217,190	100.2%	1,912
2054	13,237,167	1,288,396	1,610	-	850,682	12,797,843	12,780,047	100.1%	1,204
2055	12,797,843	1,265,929	1,582	-	821,774	12,352,106	12,335,866	100.1%	745
2056	12,352,106	1,237,928	1,547	-	792,618	11,905,249	11,890,155	100.1%	455
2057	11,905,249	1,204,966	1,506	-	763,551	11,462,328	11,448,117	100.1%	274
2058	11,462,328	1,168,391	1,460	-	734,869	11,027,346	11,013,849	100.1%	163



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) BARGAINING UNIT NUMBER 6 CORRECTIONS								
20-Year GO Municipal Bond Rate at June 30, 2020			2.450%					
Long-Term Investment Return			6.750%					
Year Plan is Fully Funded			2047					
Single Equivalent Rate			3.217%					
Present Value of Benefits			\$ 24,323,602			\$ 24,323,602		
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment	
2021	\$ 412,447	2.450%	0.98797	\$ 407,485	3.217%	0.98429	\$ 405,968	
2022	445,324	2.450%	0.96434	429,446	3.217%	0.95361	424,668	
2023	486,279	2.450%	0.94128	457,726	3.217%	0.92389	449,269	
2024	528,167	2.450%	0.91877	485,266	3.217%	0.89510	472,761	
2025	568,953	2.450%	0.89680	510,238	3.217%	0.86720	493,395	
2026	607,704	2.450%	0.87535	531,957	3.217%	0.84017	510,575	
2027	644,422	2.450%	0.85442	550,608	3.217%	0.81398	524,549	
2028	680,035	2.450%	0.83399	567,142	3.217%	0.78861	536,286	
2029	714,546	2.450%	0.81404	581,673	3.217%	0.76403	545,938	
2030	749,478	2.450%	0.79458	595,518	3.217%	0.74022	554,780	
2031	786,237	2.450%	0.77558	609,787	3.217%	0.71715	563,850	
2032	824,318	2.450%	0.75703	624,032	3.217%	0.69480	572,735	
2033	861,924	2.450%	0.73893	636,898	3.217%	0.67314	580,199	
2034	899,484	2.450%	0.72125	648,757	3.217%	0.65216	586,610	
2035	934,919	2.450%	0.70401	658,189	3.217%	0.63184	590,716	
2036	971,217	2.450%	0.68717	667,392	3.217%	0.61214	594,524	
2037	1,005,973	2.450%	0.67074	674,744	3.217%	0.59306	596,607	
2038	1,037,433	2.450%	0.65470	679,205	3.217%	0.57458	596,088	
2039	1,066,540	2.450%	0.63904	681,562	3.217%	0.55667	593,713	
2040	1,093,891	2.450%	0.62376	682,324	3.217%	0.53932	589,959	
2041	1,121,708	2.450%	0.60884	682,943	3.217%	0.52251	586,106	
2042	1,149,305	2.450%	0.59428	683,012	3.217%	0.50623	581,809	
2043	1,176,983	2.450%	0.58007	682,733	3.217%	0.49045	577,250	
2044	1,207,129	2.450%	0.56620	683,475	3.217%	0.47516	573,583	
2045	1,236,363	2.450%	0.55266	683,287	3.217%	0.46035	569,163	
2046	1,261,969	2.450%	0.53944	680,759	3.217%	0.44600	562,844	
2047	1,283,882	2.450%	0.52654	676,017	3.217%	0.43210	554,770	
2048	1,301,632	6.750%	0.49325	642,027	3.217%	0.41864	544,910	
2049	1,314,224	6.750%	0.46206	607,249	3.217%	0.40559	533,034	
2050	1,319,380	6.750%	0.43284	571,083	3.217%	0.39295	518,446	
2051	1,318,884	6.750%	0.40547	534,771	3.217%	0.38070	502,099	
2052	1,314,366	6.750%	0.37983	499,240	3.217%	0.36883	484,783	
2053	1,304,335	6.750%	0.35582	464,103	3.217%	0.35734	466,089	
2054	1,288,396	6.750%	0.33332	429,445	3.217%	0.34620	446,044	
2055	1,265,929	6.750%	0.31224	395,275	3.217%	0.33541	424,606	
2056	1,237,928	6.750%	0.29250	362,091	3.217%	0.32496	402,273	
2057	1,204,966	6.750%	0.27400	330,163	3.217%	0.31483	379,358	
2067	912,868	6.750%	0.14259	130,162	3.217%	0.22938	209,396	
2077	578,948	6.750%	0.07420	42,957	3.217%	0.16713	96,758	
2087	204,353	6.750%	0.03861	7,890	3.217%	0.12177	24,884	
2097	21,305	6.750%	0.02009	428	3.217%	0.08872	1,890	
2107	541	6.750%	0.01046	6	3.217%	0.06464	35	
2117	64	6.750%	0.00544	-	3.217%	0.04710	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 6 CORRECTIONS				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 609,551	\$ 531,916	\$ 503,829	\$ 535,696
Interest on Total OPEB Liability	574,853	634,360	622,325	608,903
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(1,186,530)	(460,414)	(354,942)
Changes of Assumptions	(1,637,897)	(164,236)	912,754	675,803
Benefit Payments	(325,344)	(327,604)	(294,213)	(357,726)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (778,837)</b>	<b>\$ (512,094)</b>	<b>\$ 1,284,281</b>	<b>\$ 1,107,734</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 15,990,189</b>	<b>\$ 15,211,352</b>	<b>\$ 14,699,258</b>	<b>\$ 15,983,539</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 15,211,352</b>	<b>\$ 14,699,258</b>	<b>\$ 15,983,539</b>	<b>\$ 17,091,273</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 325,344	\$ 327,604	\$ 294,213	\$ 357,726
Employer Pre-Funding Contributions	146,933	65,245	106,592	129,540
Active Member Contributions	23,181	65,245	106,592	129,540
Net Investment Income	15,089	17,235	33,447	24,249
Benefit Payments	(325,344)	(327,604)	(294,213)	(357,726)
Administrative Expense	(48)	(128)	(94)	(342)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 185,155</b>	<b>\$ 147,597</b>	<b>\$ 246,537</b>	<b>\$ 282,987</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ 185,155</b>	<b>\$ 332,511</b>	<b>\$ 579,048</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 185,155</b>	<b>\$ 332,752</b>	<b>\$ 579,048</b>	<b>\$ 862,035</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 15,026,197</b>	<b>\$ 14,366,506</b>	<b>\$ 15,404,491</b>	<b>\$ 16,229,238</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>1.217%</b>	<b>2.264%</b>	<b>3.623%</b>	<b>5.044%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 698,913</b>	<b>\$ 678,512</b>	<b>\$ 652,630</b>	<b>\$ 666,016</b>
<b>Employer Contribution</b>	<b>\$ 472,277</b>	<b>\$ 392,849</b>	<b>\$ 400,805</b>	<b>\$ 487,266</b>
<b>Percentage of ADC made by Employer</b>	<b>68%</b>	<b>58%</b>	<b>61%</b>	<b>73%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (226,636)</b>	<b>\$ (285,663)</b>	<b>\$ (251,825)</b>	<b>\$ (178,750)</b>
<b>Expected Return on Assets</b>	<b>\$ 7,907</b>	<b>\$ 18,141</b>	<b>\$ 30,608</b>	<b>\$ 47,676</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (7,182)</b>	<b>\$ 906</b>	<b>\$ (2,839)</b>	<b>\$ 23,427</b>
<b>Average Expected Remaining Service</b>	<b>6.570241</b>	<b>6.456823</b>	<b>6.426717</b>	<b>6.334401</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.497%</b>	<b>4.074%</b>	<b>4.133%</b>	<b>3.726%</b>
<b>Blended Discount Rate End of Year</b>	<b>4.074%</b>	<b>4.133%</b>	<b>3.726%</b>	<b>3.217%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 503,829	\$ 535,696
Interest on the Total OPEB Liability	622,325	608,903
Current-Period Benefit Changes	-	-
Active Member Contributions	(106,592)	(129,540)
Projected Earnings on Plan Investments	(30,608)	(47,676)
Operating Expenses	94	342
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(255,405)	(311,439)
Recognition of Outflow/(Inflow) due to Assumption Changes	(132,701)	(26,013)
Recognition of Outflow/(Inflow) due to Investment Experience	(1,823)	2,862
<b>Net OPEB Expense</b>	<b>\$ 599,119</b>	<b>\$ 633,135</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 14,366,747</b>	<b>\$ 15,404,491</b>
OPEB Expense	599,119	633,135
Employer Contributions	(400,805)	(487,266)
Change in Outflow/(Inflow) due to Non-investment Experience	(205,009)	(43,503)
Change in Outflow/(Inflow) due to Assumption Changes	1,045,455	701,816
Change in Outflow/(Inflow) due to Investment Experience	(1,016)	20,565
<b>Net OPEB Liability End of Year</b>	<b>\$ 15,404,491</b>	<b>\$ 16,229,238</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (1,207,775)	\$ (1,251,278)
Assumption Changes	\$ (1,003,391)	\$ (728,665)
Investment Experience	\$ (5,145)	\$ (3,141)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 770,729	\$ 1,197,819
Investment Experience	\$ 544	\$ 19,105
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.726%	3.217%
Baseline Discount Rate and Trend Rates	\$ 15,404,491	\$ 16,229,238
Increase Discount Rate by One Percentage Point	\$ 12,978,078	\$ 13,602,144
Decrease Discount Rate by One Percentage Point	\$ 18,523,905	\$ 19,618,629
Increase Trend Rate by One Percentage Point	\$ 18,699,103	\$ 19,179,689
Decrease Trend Rate by One Percentage Point	\$ 12,863,462	\$ 13,949,803

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	6.570241	\$ -	\$ (1,637,897)	6.570241	\$ (249,290)	\$ (7,182)	5.000000	\$ (1,436)
7/1/2017	\$ (1,186,530)	6.456823	\$ (183,764)	\$ (164,236)	6.456823	\$ (25,436)	\$ 906	5.000000	\$ 181
7/1/2018	\$ (460,414)	6.426717	\$ (71,641)	\$ 912,754	6.426717	\$ 142,025	\$ (2,839)	5.000000	\$ (568)
7/1/2019	\$ (354,942)	6.334401	\$ (56,034)	\$ 675,803	6.334401	\$ 106,688	\$ 23,427	5.000000	\$ 4,685
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (311,439)	\$ (311,439)	\$ 248,713	\$ (274,726)	\$ (26,013)	\$ 4,866	\$ (2,004)	\$ 2,862
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (311,439)	\$ (311,439)	\$ 248,713	\$ (274,726)	\$ (26,013)	\$ 4,866	\$ (2,006)	\$ 2,860
6/30/2022	\$ -	\$ (311,439)	\$ (311,439)	\$ 248,713	\$ (274,726)	\$ (26,013)	\$ 4,867	\$ (568)	\$ 4,299
6/30/2023	\$ -	\$ (311,439)	\$ (311,439)	\$ 248,713	\$ (167,593)	\$ 81,120	\$ 4,685	\$ (567)	\$ 4,118
6/30/2024	\$ -	\$ (211,621)	\$ (211,621)	\$ 248,713	\$ (11,620)	\$ 237,093	\$ 4,687	\$ -	\$ 4,687
6/30/2025	\$ -	\$ (86,602)	\$ (86,602)	\$ 167,292	\$ -	\$ 167,292	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (18,738)	\$ (18,738)	\$ 35,675	\$ -	\$ 35,675	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (1,251,278)	\$ (1,251,278)	\$ 1,197,819	\$ (728,665)	\$ 469,154	\$ 19,105	\$ (3,141)	\$ 15,964
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (43,503)			\$ 701,816			\$ 20,565

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 7</b> <b>PROTECTIVE SERVICES AND PUBLIC SAFETY</b>		
	July 1, 2019	July 1, 2020
Number of Participants Covered		
Active Participants	7,717	7,819
Retired Participants <sup>a</sup>	<u>6,052</u>	<u>6,213</u>
Total Participants	13,769	14,032
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 1,238,968	\$ 1,187,389
Retired Participants	<u>1,235,978</u>	<u>1,179,654</u>
Total Participants	\$ 2,474,946	\$ 2,367,043
Actuarial Accrued Liability		
Active Participants	\$ 800,897	\$ 775,919
Retired Participants	<u>1,235,978</u>	<u>1,179,654</u>
Total Participants	\$ 2,036,875	\$ 1,955,573
Actuarial Value of Assets	\$ 72,366	\$ 123,136
Unfunded Actuarial Accrued Liability	\$ 1,964,509	\$ 1,832,437
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 47,137	\$ 44,825
Administrative Expenses	206	104
Amortization of UAAL	<u>115,120</u>	<u>109,524</u>
Total ADC	\$ 162,463	\$ 154,453
Estimated Member Contributions	<u>(17,754)</u>	-
Net Employer ADC	\$ 144,709	\$ 154,453
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 56,097	\$ 58,197
Part B Reimbursement	8,999	10,091
Dental Claims	<u>4,007</u>	<u>4,091</u>
Total	\$ 69,103	\$ 72,379
Employer Implicit Costs	<u>13,310</u>	<u>10,493</u>
Total Employer Costs	\$ 82,413	\$ 82,872
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 4,219	\$ 4,177
Dental Claims	<u>1,218</u>	<u>1,247</u>
Total	\$ 5,437	\$ 5,424
Total Claims Costs	\$ 87,850	\$ 88,296

<sup>a</sup>Retired participants with dental only coverage, 380 as of July 1, 2019, and 388 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S)  
BARGAINING UNIT NUMBER 7  
PROTECTIVE SERVICES AND PUBLIC SAFETY

Fiscal Year Beginning 7/1/2020  
Long-term Asset Return 6.750%  
Discount Rate 6.750%  
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
2020	\$ 72,366	\$ -	\$ 45	\$ 47,622	\$ 3,192	\$ 123,135	\$ 1,955,573	6.3%	\$ 44,825
2021	123,135	-	104	22,464	9,054	154,549	2,049,756	7.5%	43,492
2022	154,549	-	112	21,802	11,152	187,391	2,142,312	8.7%	42,220
2023	187,391	-	121	42,342	14,051	243,663	2,231,591	10.9%	40,912
2024	243,663	-	132	41,043	17,806	302,380	2,317,093	13.1%	39,539
2025	302,380	-	142	39,681	21,723	363,642	2,398,629	15.2%	38,123
2026	363,642	-	151	38,274	25,812	427,577	2,476,083	17.3%	36,634
2027	427,577	-	161	36,795	30,078	494,289	2,549,596	19.4%	35,072
2028	494,289	-	170	35,242	34,529	563,890	2,618,885	21.5%	33,479
2029	563,890	-	178	33,657	39,174	636,543	2,683,834	23.7%	31,869
2030	636,543	-	187	32,056	44,025	712,437	2,744,084	26.0%	30,240
2031	712,437	-	197	30,437	49,093	791,770	2,798,940	28.3%	28,589
2032	791,770	-	206	28,795	54,394	874,753	2,848,074	30.7%	26,935
2033	874,753	-	215	27,150	59,940	961,628	2,891,110	33.3%	25,303
2034	961,628	-	224	25,527	65,750	1,052,681	2,927,904	36.0%	23,666
2035	1,052,681	-	233	23,899	71,842	1,148,189	2,958,038	38.8%	22,011
2036	1,148,189	-	242	22,253	78,233	1,248,433	2,981,303	41.9%	20,368
2037	1,248,433	-	250	20,618	84,945	1,353,746	2,997,602	45.2%	18,770
2038	1,353,746	-	257	19,027	92,001	1,464,517	3,007,155	48.7%	17,213
2039	1,464,517	-	264	17,477	99,426	1,581,156	3,010,400	52.5%	15,689
2040	1,581,156	-	270	15,959	107,249	1,704,094	3,007,174	56.7%	14,196
2041	1,704,094	-	276	14,472	115,498	1,833,788	2,997,441	61.2%	12,713
2042	1,833,788	-	280	12,994	124,203	1,970,705	2,981,489	66.1%	11,231
2043	1,970,705	-	286	11,517	133,395	2,115,331	2,958,630	71.5%	9,781
2044	2,115,331	-	291	10,072	143,109	2,268,221	2,928,300	77.5%	8,387
2045	2,268,221	-	295	8,682	153,383	2,429,991	2,891,075	84.1%	7,058
2046	2,429,991	-	298	7,356	164,259	2,601,308	2,847,140	91.4%	5,840
2047	2,601,308	-	301	6,141	175,782	2,782,930	2,797,075	99.5%	4,744
2048	2,782,930	210,936	302	5,046	181,002	2,757,740	2,741,441	100.6%	3,781
2049	2,757,740	242,095	303	-	178,100	2,693,442	2,680,359	100.5%	2,967
2050	2,693,442	241,558	302	-	173,778	2,625,360	2,614,843	100.4%	2,294
2051	2,625,360	239,972	300	-	169,235	2,554,323	2,545,827	100.3%	1,747
2052	2,554,323	238,085	298	-	164,503	2,480,443	2,473,521	100.3%	1,311
2053	2,480,443	235,316	294	-	159,608	2,404,441	2,398,731	100.2%	968
2054	2,404,441	231,966	290	-	154,589	2,326,774	2,321,990	100.2%	702
2055	2,326,774	228,018	285	-	149,478	2,247,949	2,243,867	100.2%	501
2056	2,247,949	223,039	279	-	144,323	2,168,954	2,165,401	100.2%	351
2057	2,168,954	217,691	272	-	139,168	2,090,159	2,087,006	100.2%	240
2058	2,090,159	212,257	265	-	134,030	2,011,667	2,008,819	100.1%	161



# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S)  
BARGAINING UNIT NUMBER 7  
PROTECTIVE SERVICES AND PUBLIC SAFETY**

**20-Year GO Municipal Bond Rate at June 30, 2020**                      **2.450%**  
**Long-Term Investment Return**    **6.750%**  
**Year Plan is Fully Funded**    **2048**  
**Single Equivalent Rate**    **3.134%**

**Present Value of Benefits**    \$                      **4,739,841**    \$                      **4,739,841**

FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 82,872	2.450%	0.98797	\$ 81,876	3.134%	0.98469	\$ 81,604
2022	89,225	2.450%	0.96434	86,043	3.134%	0.95477	85,189
2023	97,125	2.450%	0.94128	91,422	3.134%	0.92576	89,914
2024	105,261	2.450%	0.91877	96,711	3.134%	0.89763	94,486
2025	113,268	2.450%	0.89680	101,579	3.134%	0.87036	98,584
2026	121,080	2.450%	0.87535	105,988	3.134%	0.84391	102,181
2027	128,416	2.450%	0.85442	109,721	3.134%	0.81827	105,079
2028	135,693	2.450%	0.83399	113,167	3.134%	0.79341	107,660
2029	142,773	2.450%	0.81404	116,224	3.134%	0.76930	109,835
2030	149,902	2.450%	0.79458	119,109	3.134%	0.74592	111,815
2031	157,375	2.450%	0.77558	122,056	3.134%	0.72326	113,823
2032	164,792	2.450%	0.75703	124,752	3.134%	0.70128	115,566
2033	172,194	2.450%	0.73893	127,239	3.134%	0.67998	117,088
2034	179,361	2.450%	0.72125	129,365	3.134%	0.65931	118,255
2035	186,521	2.450%	0.70401	131,312	3.134%	0.63928	119,239
2036	193,427	2.450%	0.68717	132,917	3.134%	0.61986	119,897
2037	199,993	2.450%	0.67074	134,143	3.134%	0.60102	120,200
2038	205,936	2.450%	0.65470	134,826	3.134%	0.58276	120,011
2039	211,058	2.450%	0.63904	134,875	3.134%	0.56505	119,259
2040	215,958	2.450%	0.62376	134,706	3.134%	0.54789	118,320
2041	220,504	2.450%	0.60884	134,252	3.134%	0.53124	117,140
2042	224,356	2.450%	0.59428	133,331	3.134%	0.51510	115,565
2043	228,471	2.450%	0.58007	132,529	3.134%	0.49945	114,109
2044	232,711	2.450%	0.56620	131,761	3.134%	0.48427	112,695
2045	235,965	2.450%	0.55266	130,408	3.134%	0.46956	110,798
2046	238,654	2.450%	0.53944	128,740	3.134%	0.45529	108,656
2047	240,462	2.450%	0.52654	126,613	3.134%	0.44145	106,153
2048	241,451	2.450%	0.51395	124,094	3.134%	0.42804	103,351
2049	242,095	6.750%	0.48145	116,557	3.134%	0.41504	100,478
2050	241,558	6.750%	0.45101	108,945	3.134%	0.40242	97,209
2051	239,972	6.750%	0.42249	101,386	3.134%	0.39020	93,636
2052	238,085	6.750%	0.39578	94,228	3.134%	0.37834	90,077
2053	235,316	6.750%	0.37075	87,244	3.134%	0.36685	86,325
2054	231,966	6.750%	0.34731	80,564	3.134%	0.35570	82,510
2055	228,018	6.750%	0.32535	74,185	3.134%	0.34489	78,641
2056	223,039	6.750%	0.30477	67,977	3.134%	0.33441	74,587
2057	217,691	6.750%	0.28550	62,151	3.134%	0.32425	70,587
2067	169,128	6.750%	0.14857	25,127	3.134%	0.23816	40,280
2077	102,307	6.750%	0.07731	7,910	3.134%	0.17493	17,897
2087	31,905	6.750%	0.04023	1,284	3.134%	0.12849	4,099
2097	2,748	6.750%	0.02094	58	3.134%	0.09438	259
2107	15	6.750%	0.01089	-	3.134%	0.06932	1
2117	-	6.750%	0.00567	-	3.134%	0.05092	-



## 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 7 PROTECTIVE SERVICES AND PUBLIC SAFETY				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 123,030	\$ 106,547	\$ 101,132	\$ 107,888
Interest on Total OPEB Liability	113,364	126,344	123,285	119,455
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(256,809)	(69,226)	(104,839)
Changes of Assumptions	(336,806)	(73,969)	149,728	65,659
Benefit Payments	(70,074)	(66,136)	(73,353)	(75,835)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (170,486)</b>	<b>\$ (164,023)</b>	<b>\$ 231,566</b>	<b>\$ 112,328</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 3,301,789</b>	<b>\$ 3,131,303</b>	<b>\$ 2,967,280</b>	<b>\$ 3,198,846</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 3,131,303</b>	<b>\$ 2,967,280</b>	<b>\$ 3,198,846</b>	<b>\$ 3,311,174</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 70,074	\$ 66,136	\$ 73,353	\$ 75,835
Employer Pre-Funding Contributions	-	5,716	13,316	23,811
Active Member Contributions	-	5,716	13,316	23,811
Net Investment Income	-	2,376	4,081	3,192
Benefit Payments	(70,074)	(66,136)	(73,353)	(75,835)
Administrative Expense	-	(17)	(12)	(45)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ 13,791</b>	<b>\$ 30,701</b>	<b>\$ 50,769</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ 27,904</b>	<b>\$ 41,665</b>	<b>\$ 72,366</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ 41,695</b>	<b>\$ 72,366</b>	<b>\$ 123,135</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 3,131,303</b>	<b>\$ 2,925,585</b>	<b>\$ 3,126,480</b>	<b>\$ 3,188,039</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>1.405%</b>	<b>2.262%</b>	<b>3.719%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 148,250</b>	<b>\$ 146,981</b>	<b>\$ 141,591</b>	<b>\$ 138,652</b>
<b>Employer Contribution</b>	<b>\$ 70,074</b>	<b>\$ 71,852</b>	<b>\$ 86,669</b>	<b>\$ 99,646</b>
<b>Percentage of ADC made by Employer</b>	<b>47%</b>	<b>49%</b>	<b>61%</b>	<b>72%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (78,176)</b>	<b>\$ (75,129)</b>	<b>\$ (54,922)</b>	<b>\$ (39,006)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ 2,440</b>	<b>\$ 3,832</b>	<b>\$ 6,464</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ 64</b>	<b>\$ (249)</b>	<b>\$ 3,272</b>
<b>Average Expected Remaining Service</b>	<b>6.124944</b>	<b>6.407090</b>	<b>6.458821</b>	<b>6.458567</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.344%</b>	<b>3.947%</b>	<b>4.066%</b>	<b>3.654%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.947%</b>	<b>4.066%</b>	<b>3.654%</b>	<b>3.134%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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		
Measured for the Plan's Fiscal Year Ending	June 30, 2019	June 30, 2020
Applicable for the Sponsor's Fiscal Year Ending	June 30, 2020	June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 101,132	\$ 107,888
Interest on the Total OPEB Liability	123,285	119,455
Current-Period Benefit Changes	-	-
Active Member Contributions	(13,316)	(23,811)
Projected Earnings on Plan Investments	(3,832)	(6,464)
Operating Expenses	12	45
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(50,800)	(67,033)
Recognition of Outflow/(Inflow) due to Assumption Changes	(43,352)	(33,186)
Recognition of Outflow/(Inflow) due to Investment Experience	(37)	617
<b>Net OPEB Expense</b>	<b>\$ 113,092</b>	<b>\$ 97,511</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 2,925,615</b>	<b>\$ 3,126,480</b>
OPEB Expense	113,092	97,511
Employer Contributions	(86,669)	(99,646)
Change in Outflow/(Inflow) due to Non-investment Experience	(18,426)	(37,806)
Change in Outflow/(Inflow) due to Assumption Changes	193,080	98,845
Change in Outflow/(Inflow) due to Investment Experience	(212)	2,655
<b>Net OPEB Liability End of Year</b>	<b>\$ 3,126,480</b>	<b>\$ 3,188,039</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (235,153)	\$ (272,959)
Assumption Changes	\$ (222,718)	\$ (156,184)
Investment Experience	\$ (199)	\$ (149)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 126,546	\$ 158,857
Investment Experience	\$ 38	\$ 2,643
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.654%	3.134%
Baseline Discount Rate and Trend Rates	\$ 3,126,480	\$ 3,188,039
Increase Discount Rate by One Percentage Point	\$ 2,661,092	\$ 2,698,377
Decrease Discount Rate by One Percentage Point	\$ 3,716,688	\$ 3,811,094
Increase Trend Rate by One Percentage Point	\$ 3,762,731	\$ 3,741,346
Decrease Trend Rate by One Percentage Point	\$ 2,632,967	\$ 2,759,066

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	6.124944	\$ -	\$ (336,806)	6.124944	\$ (54,989)	\$ -	5.000000	\$ -
7/1/2017	\$ (256,809)	6.407090	\$ (40,082)	\$ (73,969)	6.407090	\$ (11,545)	\$ 64	5.000000	\$ 13
7/1/2018	\$ (69,226)	6.458821	\$ (10,718)	\$ 149,728	6.458821	\$ 23,182	\$ (249)	5.000000	\$ (50)
7/1/2019	\$ (104,839)	6.458567	\$ (16,233)	\$ 65,659	6.458567	\$ 10,166	\$ 3,272	5.000000	\$ 654
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (67,033)	\$ (67,033)	\$ 33,348	\$ (66,534)	\$ (33,186)	\$ 667	\$ (50)	\$ 617
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (67,033)	\$ (67,033)	\$ 33,348	\$ (66,534)	\$ (33,186)	\$ 667	\$ (50)	\$ 617
6/30/2022	\$ -	\$ (67,033)	\$ (67,033)	\$ 33,348	\$ (66,534)	\$ (33,186)	\$ 666	\$ (50)	\$ 616
6/30/2023	\$ -	\$ (67,033)	\$ (67,033)	\$ 33,348	\$ (18,417)	\$ 14,931	\$ 654	\$ (49)	\$ 605
6/30/2024	\$ -	\$ (43,268)	\$ (43,268)	\$ 33,348	\$ (4,699)	\$ 28,649	\$ 656	\$ -	\$ 656
6/30/2025	\$ -	\$ (21,151)	\$ (21,151)	\$ 20,802	\$ -	\$ 20,802	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (7,441)	\$ (7,441)	\$ 4,663	\$ -	\$ 4,663	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (272,959)	\$ (272,959)	\$ 158,857	\$ (156,184)	\$ 2,673	\$ 2,643	\$ (149)	\$ 2,494
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (37,806)			\$ 98,845			\$ 2,655

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 8</b> <b>FIREFIGHTERS</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	6,178	7,096
Retired Participants <sup>a</sup>	<u>3,563</u>	<u>3,701</u>
Total Participants	9,741	10,797
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 1,085,986	\$ 1,083,791
Retired Participants	<u>927,485</u>	<u>923,749</u>
Total Participants	\$ 2,013,471	\$ 2,007,540
Actuarial Accrued Liability		
Active Participants	\$ 616,679	\$ 612,821
Retired Participants	<u>927,485</u>	<u>923,749</u>
Total Participants	\$ 1,544,164	\$ 1,536,570
Actuarial Value of Assets	\$ 42,232	\$ 91,885
Unfunded Actuarial Accrued Liability	\$ 1,501,932	\$ 1,444,685
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 42,921	\$ 42,970
Administrative Expenses	143	74
Amortization of UAAL	<u>88,013</u>	<u>86,348</u>
Total ADC	\$ 131,077	\$ 129,392
Estimated Member Contributions	<u>(16,149)</u>	<u>-</u>
Net Employer ADC	\$ 114,928	\$ 129,392
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 40,872	\$ 43,586
Part B Reimbursement	4,741	5,422
Dental Claims	<u>2,583</u>	<u>2,665</u>
Total	\$ 48,196	\$ 51,673
Employer Implicit Costs	<u>9,093</u>	<u>7,221</u>
Total Employer Costs	\$ 57,289	\$ 58,894
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 3,790	\$ 4,391
Dental Claims	<u>778</u>	<u>804</u>
Total	\$ 4,568	\$ 5,195
Total Claims Costs	\$ 61,857	\$ 64,089

<sup>a</sup>Retired participants with dental only coverage, 68 as of July 1, 2019, and 73 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S)  
BARGAINING UNIT NUMBER 8  
FIREFIGHTERS

Fiscal Year Beginning 7/1/2020  
Long-term Asset Return 6.750%  
Discount Rate 6.750%  
Year Plan is Fully Funded 2049

FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 42,232	\$ -	\$ 31	\$ 47,676	\$ 2,008	\$ 91,885	\$ 1,536,570	6.0%	\$ 42,970
2021	91,885	-	74	21,522	6,914	120,247	1,625,275	7.4%	43,061
2022	120,247	-	79	21,570	8,830	150,568	1,715,858	8.8%	43,066
2023	150,568	-	86	43,151	11,593	205,226	1,806,942	11.4%	42,930
2024	205,226	-	93	43,023	15,278	263,434	1,898,210	13.9%	42,670
2025	263,434	-	100	42,770	19,199	325,303	1,989,274	16.4%	42,270
2026	325,303	-	107	42,377	23,361	390,934	2,080,169	18.8%	41,704
2027	390,934	-	114	41,818	27,773	460,411	2,170,866	21.2%	40,973
2028	460,411	-	121	41,094	32,438	533,822	2,261,165	23.6%	40,079
2029	533,822	-	128	40,208	37,364	611,266	2,350,630	26.0%	39,030
2030	611,266	-	135	39,165	42,556	692,852	2,438,940	28.4%	37,854
2031	692,852	-	144	37,998	48,024	778,730	2,525,149	30.8%	36,554
2032	778,730	-	152	36,706	53,778	869,062	2,608,532	33.3%	35,116
2033	869,062	-	161	35,277	59,828	964,006	2,688,685	35.9%	33,565
2034	964,006	-	171	33,735	66,185	1,063,755	2,764,815	38.5%	31,884
2035	1,063,755	-	180	32,064	72,862	1,168,501	2,836,417	41.2%	30,093
2036	1,168,501	-	190	30,283	79,873	1,278,467	2,902,564	44.0%	28,244
2037	1,278,467	-	200	28,444	87,234	1,393,945	2,963,071	47.0%	26,344
2038	1,393,945	-	210	26,554	94,966	1,515,255	3,017,608	50.2%	24,411
2039	1,515,255	-	220	24,630	103,090	1,642,755	3,065,762	53.6%	22,449
2040	1,642,755	-	229	22,678	111,631	1,776,835	3,107,070	57.2%	20,451
2041	1,776,835	-	239	20,690	120,615	1,917,901	3,141,017	61.1%	18,454
2042	1,917,901	-	248	18,702	130,071	2,066,426	3,167,318	65.2%	16,476
2043	2,066,426	-	258	16,733	140,031	2,222,932	3,185,681	69.8%	14,434
2044	2,222,932	-	267	14,701	150,527	2,387,893	3,195,594	74.7%	12,356
2045	2,387,893	-	275	12,631	161,593	2,561,842	3,196,821	80.1%	10,333
2046	2,561,842	-	283	10,616	173,268	2,745,443	3,189,315	86.1%	8,419
2047	2,745,443	-	291	8,710	185,597	2,939,459	3,173,132	92.6%	6,649
2048	2,939,459	-	297	6,946	198,634	3,144,742	3,148,496	99.9%	5,066
2049	3,144,742	224,321	303	5,369	204,991	3,130,478	3,116,107	100.5%	3,734
2050	3,130,478	245,373	307	-	203,151	3,087,949	3,076,884	100.4%	2,682
2051	3,087,949	247,960	310	-	200,194	3,039,873	3,031,219	100.3%	1,886
2052	3,039,873	249,695	312	-	196,892	2,986,758	2,979,832	100.2%	1,297
2053	2,986,758	250,281	313	-	193,287	2,929,451	2,923,743	100.2%	875
2054	2,929,451	250,345	313	-	189,417	2,868,210	2,863,352	100.2%	578
2055	2,868,210	249,484	312	-	185,311	2,803,725	2,799,460	100.2%	373
2056	2,803,725	247,529	309	-	181,024	2,736,911	2,733,057	100.1%	236
2057	2,736,911	245,449	307	-	176,583	2,667,738	2,664,175	100.1%	146
2058	2,667,738	242,617	303	-	172,008	2,596,826	2,593,476	100.1%	88

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) BARGAINING UNIT NUMBER 8 FIREFIGHTERS								
20-Year GO Municipal Bond Rate at June 30, 2020		2.450%						
Long-Term Investment Return		6.750%						
Year Plan is Fully Funded		2049						
Single Equivalent Rate		3.236%						
Present Value of Benefits		\$ 4,355,390				\$ 4,355,390		
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment		Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 58,894	2.450%	0.98797	\$ 58,186		3.236%	0.98420	\$ 57,965
2022	62,970	2.450%	0.96434	60,724		3.236%	0.95336	60,033
2023	68,404	2.450%	0.94128	64,387		3.236%	0.92348	63,170
2024	74,036	2.450%	0.91877	68,023		3.236%	0.89454	66,228
2025	79,928	2.450%	0.89680	71,679		3.236%	0.86650	69,257
2026	85,622	2.450%	0.87535	74,950		3.236%	0.83934	71,866
2027	91,168	2.450%	0.85442	77,896		3.236%	0.81304	74,123
2028	96,727	2.450%	0.83399	80,669		3.236%	0.78756	76,178
2029	102,505	2.450%	0.81404	83,443		3.236%	0.76287	78,198
2030	108,385	2.450%	0.79458	86,121		3.236%	0.73896	80,093
2031	114,970	2.450%	0.77558	89,168		3.236%	0.71580	82,296
2032	121,994	2.450%	0.75703	92,353		3.236%	0.69337	84,587
2033	129,085	2.450%	0.73893	95,384		3.236%	0.67164	86,699
2034	136,612	2.450%	0.72125	98,532		3.236%	0.65059	88,878
2035	144,231	2.450%	0.70401	101,540		3.236%	0.63020	90,894
2036	152,338	2.450%	0.68717	104,682		3.236%	0.61045	92,995
2037	160,209	2.450%	0.67074	107,458		3.236%	0.59132	94,734
2038	167,976	2.450%	0.65470	109,973		3.236%	0.57278	96,214
2039	175,721	2.450%	0.63904	112,293		3.236%	0.55483	97,496
2040	183,465	2.450%	0.62376	114,438		3.236%	0.53744	98,602
2041	191,227	2.450%	0.60884	116,427		3.236%	0.52060	99,552
2042	198,781	2.450%	0.59428	118,132		3.236%	0.50428	100,242
2043	206,138	2.450%	0.58007	119,575		3.236%	0.48848	100,694
2044	213,410	2.450%	0.56620	120,833		3.236%	0.47317	100,979
2045	220,318	2.450%	0.55266	121,761		3.236%	0.45834	100,980
2046	226,761	2.450%	0.53944	122,324		3.236%	0.44397	100,676
2047	232,693	2.450%	0.52654	122,522		3.236%	0.43006	100,072
2048	237,989	2.450%	0.51395	122,315		3.236%	0.41658	99,142
2049	242,249	2.450%	0.50166	121,527		3.236%	0.40352	97,753
2050	245,373	6.750%	0.46994	115,310		3.236%	0.39088	95,911
2051	247,960	6.750%	0.44022	109,158		3.236%	0.37863	93,884
2052	249,695	6.750%	0.41239	102,971		3.236%	0.36676	91,578
2053	250,281	6.750%	0.38631	96,686		3.236%	0.35527	88,916
2054	250,345	6.750%	0.36188	90,596		3.236%	0.34413	86,152
2055	249,484	6.750%	0.33900	84,575		3.236%	0.33335	83,164
2056	247,529	6.750%	0.31757	78,607		3.236%	0.32290	79,927
2057	245,449	6.750%	0.29749	73,018		3.236%	0.31278	76,771
2067	212,880	6.750%	0.15481	32,955		3.236%	0.22748	48,426
2077	157,961	6.750%	0.08056	12,725		3.236%	0.16545	26,134
2087	64,738	6.750%	0.04192	2,714		3.236%	0.12033	7,790
2097	9,448	6.750%	0.02181	206		3.236%	0.08751	827
2107	267	6.750%	0.01135	3		3.236%	0.06365	17
2117	4	6.750%	0.00591	-		3.236%	0.04629	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 116,930	\$ 101,638	\$ 95,936	\$ 98,851
Interest on Total OPEB Liability	88,265	97,944	97,316	95,719
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(195,606)	(80,403)	(40,772)
Changes of Assumptions	(248,744)	4,237	124,662	119,679
Benefit Payments	(49,073)	(48,175)	(40,965)	(57,840)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (92,622)</b>	<b>\$ (39,962)</b>	<b>\$ 196,546</b>	<b>\$ 215,637</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 2,400,763</b>	<b>\$ 2,308,141</b>	<b>\$ 2,268,179</b>	<b>\$ 2,464,725</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 2,308,141</b>	<b>\$ 2,268,179</b>	<b>\$ 2,464,725</b>	<b>\$ 2,680,362</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 49,073	\$ 48,175	\$ 40,965	\$ 57,840
Employer Pre-Funding Contributions	-	6,066	13,772	23,838
Active Member Contributions	-	6,066	13,772	23,838
Net Investment Income	-	176	2,397	2,008
Benefit Payments	(49,073)	(48,175)	(40,965)	(57,840)
Administrative Expense	-	(3)	(6)	(31)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ 12,305</b>	<b>\$ 29,935</b>	<b>\$ 49,653</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 12,297</b>	<b>\$ 42,232</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ 12,305</b>	<b>\$ 42,232</b>	<b>\$ 91,885</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 2,308,141</b>	<b>\$ 2,255,874</b>	<b>\$ 2,422,493</b>	<b>\$ 2,588,477</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>0.543%</b>	<b>1.713%</b>	<b>3.428%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 118,158</b>	<b>\$ 115,637</b>	<b>\$ 111,963</b>	<b>\$ 107,239</b>
<b>Employer Contribution</b>	<b>\$ 49,073</b>	<b>\$ 54,241</b>	<b>\$ 54,737</b>	<b>\$ 81,678</b>
<b>Percentage of ADC made by Employer</b>	<b>42%</b>	<b>47%</b>	<b>49%</b>	<b>76%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (69,085)</b>	<b>\$ (61,396)</b>	<b>\$ (57,226)</b>	<b>\$ (25,561)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ 434</b>	<b>\$ 1,808</b>	<b>\$ 4,432</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ 258</b>	<b>\$ (589)</b>	<b>\$ 2,424</b>
<b>Average Expected Remaining Service</b>	<b>9.568629</b>	<b>9.356156</b>	<b>8.815624</b>	<b>9.486386</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.540%</b>	<b>4.108%</b>	<b>4.152%</b>	<b>3.776%</b>
<b>Blended Discount Rate End of Year</b>	<b>4.108%</b>	<b>4.152%</b>	<b>3.776%</b>	<b>3.236%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 95,936	\$ 98,851
Interest on the Total OPEB Liability	97,316	95,719
Current-Period Benefit Changes	-	-
Active Member Contributions	(13,772)	(23,838)
Projected Earnings on Plan Investments	(1,808)	(4,432)
Operating Expenses	6	31
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(30,028)	(34,326)
Recognition of Outflow/(Inflow) due to Assumption Changes	(11,402)	1,214
Recognition of Outflow/(Inflow) due to Investment Experience	(66)	419
<b>Net OPEB Expense</b>	<b>\$ 136,182</b>	<b>\$ 133,638</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 2,255,882</b>	<b>\$ 2,422,493</b>
OPEB Expense	136,182	133,638
Employer Contributions	(54,737)	(81,678)
Change in Outflow/(Inflow) due to Non-investment Experience	(50,375)	(6,446)
Change in Outflow/(Inflow) due to Assumption Changes	136,064	118,465
Change in Outflow/(Inflow) due to Investment Experience	(523)	2,005
<b>Net OPEB Liability End of Year</b>	<b>\$ 2,422,493</b>	<b>\$ 2,588,477</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (225,074)	\$ (231,520)
Assumption Changes	\$ (170,756)	\$ (144,760)
Investment Experience	\$ (471)	\$ (353)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 113,852	\$ 206,321
Investment Experience	\$ 154	\$ 2,041
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.776%	3.236%
Baseline Discount Rate and Trend Rates	\$ 2,422,493	\$ 2,588,477
Increase Discount Rate by One Percentage Point	\$ 2,038,226	\$ 2,159,827
Decrease Discount Rate by One Percentage Point	\$ 2,918,656	\$ 3,144,982
Increase Trend Rate by One Percentage Point	\$ 2,964,208	\$ 3,099,071
Decrease Trend Rate by One Percentage Point	\$ 2,011,163	\$ 2,201,208

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	9.568629	\$ -	\$ (248,744)	9.568629	\$ (25,996)	\$ -	5.000000	\$ -
7/1/2017	\$ (195,606)	9.356156	\$ (20,907)	\$ 4,237	9.356156	\$ 453	\$ 258	5.000000	\$ 52
7/1/2018	\$ (80,403)	8.815624	\$ (9,121)	\$ 124,662	8.815624	\$ 14,141	\$ (589)	5.000000	\$ (118)
7/1/2019	\$ (40,772)	9.486386	\$ (4,298)	\$ 119,679	9.486386	\$ 12,616	\$ 2,424	5.000000	\$ 485
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (34,326)	\$ (34,326)	\$ 27,210	\$ (25,996)	\$ 1,214	\$ 537	\$ (118)	\$ 419
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (34,326)	\$ (34,326)	\$ 27,210	\$ (25,996)	\$ 1,214	\$ 537	\$ (118)	\$ 419
6/30/2022	\$ -	\$ (34,326)	\$ (34,326)	\$ 27,210	\$ (25,996)	\$ 1,214	\$ 535	\$ (118)	\$ 417
6/30/2023	\$ -	\$ (34,326)	\$ (34,326)	\$ 27,210	\$ (25,996)	\$ 1,214	\$ 485	\$ (117)	\$ 368
6/30/2024	\$ -	\$ (34,326)	\$ (34,326)	\$ 27,210	\$ (25,996)	\$ 1,214	\$ 484	\$ -	\$ 484
6/30/2025	\$ -	\$ (34,326)	\$ (34,326)	\$ 27,210	\$ (25,996)	\$ 1,214	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (34,326)	\$ (34,326)	\$ 27,210	\$ (14,780)	\$ 12,430	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ (19,176)	\$ (19,176)	\$ 24,310	\$ -	\$ 24,310	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ (4,298)	\$ (4,298)	\$ 12,616	\$ -	\$ 12,616	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ (2,090)	\$ (2,090)	\$ 6,135	\$ -	\$ 6,135	\$ -	\$ -	\$ -
Total	\$ -	\$ (231,520)	\$ (231,520)	\$ 206,321	\$ (144,760)	\$ 61,561	\$ 2,041	\$ (353)	\$ 1,688
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (6,446)			\$ 118,465			\$ 2,005

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 9</b> <b>PROFESSIONAL ENGINEERS</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	13,265	13,298
Retired Participants <sup>a</sup>	<u>7,137</u>	<u>7,787</u>
Total Participants	20,402	21,085
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 1,949,343	\$ 1,892,553
Retired Participants	<u>1,306,505</u>	<u>1,326,879</u>
Total Participants	\$ 3,255,848	\$ 3,219,432
Actuarial Accrued Liability		
Active Participants	\$ 1,482,463	\$ 1,415,146
Retired Participants	<u>1,306,505</u>	<u>1,326,879</u>
Total Participants	\$ 2,788,968	\$ 2,742,025
Actuarial Value of Assets	\$ 84,788	\$ 151,824
Unfunded Actuarial Accrued Liability	\$ 2,704,180	\$ 2,590,201
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 57,163	\$ 57,051
Administrative Expenses	257	136
Amortization of UAAL	<u>158,465</u>	<u>154,815</u>
Total ADC	\$ 215,885	\$ 212,002
Estimated Member Contributions	<u>(21,532)</u>	<u>-</u>
Net Employer ADC	\$ 194,353	\$ 212,002
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 65,523	\$ 72,186
Part B Reimbursement	13,053	15,345
Dental Claims	<u>4,892</u>	<u>5,272</u>
Total	\$ 83,468	\$ 92,803
Employer Implicit Costs	<u>19,309</u>	<u>15,813</u>
Total Employer Costs	\$ 102,777	\$ 108,616
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 4,153	\$ 4,488
Dental Claims	<u>1,513</u>	<u>1,633</u>
Total	\$ 5,666	\$ 6,121
Total Claims Costs	\$ 108,443	\$ 114,737

<sup>a</sup>Retired participants with dental only coverage, 313 as of July 1, 2019, and 330 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) BARGAINING UNIT NUMBER 9 PROFESSIONAL ENGINEERS									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
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
2020	\$ 84,788	\$ -	\$ 55	\$ 63,298	\$ 3,793	\$ 151,824	\$ 2,742,025	5.5%	\$ 57,051
2021	151,824	-	136	28,593	11,193	191,474	2,875,739	6.7%	53,821
2022	191,474	-	152	26,986	13,815	232,123	3,001,969	7.7%	50,930
2023	232,123	-	169	51,099	17,359	300,412	3,119,051	9.6%	48,150
2024	300,412	-	187	48,337	21,876	370,438	3,226,382	11.5%	45,474
2025	370,438	-	204	45,678	26,514	442,426	3,323,977	13.3%	42,945
2026	442,426	-	220	43,165	31,290	516,661	3,412,504	15.1%	40,545
2027	516,661	-	233	40,779	36,221	593,428	3,493,241	17.0%	38,257
2028	593,428	-	246	38,502	41,327	673,011	3,566,710	18.9%	36,088
2029	673,011	-	258	36,345	46,626	755,724	3,633,023	20.8%	34,036
2030	755,724	-	269	34,304	52,141	841,900	3,692,402	22.8%	32,086
2031	841,900	-	279	32,365	57,894	931,880	3,744,964	24.9%	30,230
2032	931,880	-	290	30,520	63,906	1,026,016	3,790,221	27.1%	28,460
2033	1,026,016	-	301	28,761	70,201	1,124,677	3,827,783	29.4%	26,773
2034	1,124,677	-	311	27,084	76,805	1,228,255	3,857,748	31.8%	25,162
2035	1,228,255	-	320	25,482	83,743	1,337,160	3,880,050	34.5%	23,622
2036	1,337,160	-	330	23,952	91,043	1,451,825	3,894,271	37.3%	22,150
2037	1,451,825	-	339	22,489	98,734	1,572,709	3,900,642	40.3%	20,723
2038	1,572,709	-	346	21,069	106,846	1,700,278	3,899,659	43.6%	19,320
2039	1,700,278	-	354	19,674	115,410	1,835,008	3,890,978	47.2%	17,947
2040	1,835,008	-	361	18,308	124,459	1,977,414	3,874,140	51.0%	16,612
2041	1,977,414	-	368	16,980	134,027	2,128,053	3,849,521	55.3%	15,319
2042	2,128,053	-	373	15,692	144,152	2,287,524	3,817,105	59.9%	14,061
2043	2,287,524	-	379	14,440	154,875	2,456,460	3,776,220	65.1%	12,835
2044	2,456,460	-	385	13,220	166,237	2,635,532	3,726,861	70.7%	11,645
2045	2,635,532	-	389	12,034	178,285	2,825,462	3,669,247	77.0%	10,494
2046	2,825,462	-	393	10,887	191,067	3,027,023	3,603,261	84.0%	9,384
2047	3,027,023	-	396	9,779	204,636	3,241,042	3,529,345	91.8%	8,306
2048	3,241,042	-	397	8,703	219,046	3,468,394	3,448,304	100.6%	7,262
2049	3,468,394	302,475	397	-	224,062	3,389,584	3,360,419	100.9%	6,257
2050	3,389,584	317,218	397	-	218,252	3,290,221	3,266,149	100.7%	5,297
2051	3,290,221	315,414	394	-	211,605	3,186,018	3,166,357	100.6%	4,397
2052	3,186,018	312,815	391	-	204,658	3,077,470	3,061,557	100.5%	3,578
2053	3,077,470	309,292	387	-	197,448	2,965,239	2,952,451	100.4%	2,841
2054	2,965,239	304,835	381	-	190,021	2,850,044	2,839,800	100.4%	2,193
2055	2,850,044	299,622	375	-	182,419	2,732,466	2,724,243	100.3%	1,643
2056	2,732,466	293,328	367	-	174,691	2,613,462	2,606,803	100.3%	1,196
2057	2,613,462	285,802	357	-	166,909	2,494,212	2,488,737	100.2%	851
2058	2,494,212	277,215	347	-	159,145	2,375,795	2,371,206	100.2%	593

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) BARGAINING UNIT NUMBER 9 PROFESSIONAL ENGINEERS								
20-Year GO Municipal Bond Rate at June 30, 2020			2.450%					
Long-Term Investment Return			6.750%					
Year Plan is Fully Funded			2048					
Single Equivalent Rate			3.084%					
Present Value of Benefits			\$ 6,352,658			\$ 6,352,658		
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment	
2021	\$ 108,616	2.450%	0.98797	\$ 107,309	3.084%	0.98493	\$ 106,979	
2022	121,253	2.450%	0.96434	116,930	3.084%	0.95547	115,853	
2023	135,368	2.450%	0.94128	127,419	3.084%	0.92688	125,470	
2024	149,582	2.450%	0.91877	137,432	3.084%	0.89916	134,497	
2025	163,253	2.450%	0.89680	146,405	3.084%	0.87226	142,399	
2026	175,793	2.450%	0.87535	153,881	3.084%	0.84617	148,750	
2027	186,633	2.450%	0.85442	159,463	3.084%	0.82086	153,199	
2028	196,579	2.450%	0.83399	163,945	3.084%	0.79630	156,536	
2029	206,065	2.450%	0.81404	167,746	3.084%	0.77248	159,181	
2030	214,987	2.450%	0.79458	170,824	3.084%	0.74937	161,105	
2031	223,452	2.450%	0.77558	173,304	3.084%	0.72696	162,440	
2032	232,039	2.450%	0.75703	175,660	3.084%	0.70521	163,636	
2033	240,614	2.450%	0.73893	177,796	3.084%	0.68411	164,607	
2034	248,680	2.450%	0.72125	179,362	3.084%	0.66365	165,036	
2035	256,387	2.450%	0.70401	180,498	3.084%	0.64380	165,061	
2036	264,077	2.450%	0.68717	181,466	3.084%	0.62454	164,926	
2037	271,084	2.450%	0.67074	181,826	3.084%	0.60586	164,237	
2038	277,145	2.450%	0.65470	181,446	3.084%	0.58773	162,887	
2039	283,081	2.450%	0.63904	180,901	3.084%	0.57015	161,399	
2040	288,994	2.450%	0.62376	180,262	3.084%	0.55310	159,841	
2041	294,046	2.450%	0.60884	179,028	3.084%	0.53655	157,771	
2042	298,650	2.450%	0.59428	177,482	3.084%	0.52050	155,447	
2043	303,430	2.450%	0.58007	176,011	3.084%	0.50493	153,211	
2044	307,698	2.450%	0.56620	174,218	3.084%	0.48982	150,718	
2045	311,235	2.450%	0.55266	172,007	3.084%	0.47517	147,890	
2046	314,386	2.450%	0.53944	169,593	3.084%	0.46096	144,919	
2047	316,606	2.450%	0.52654	166,706	3.084%	0.44717	141,576	
2048	317,563	2.450%	0.51395	163,211	3.084%	0.43379	137,756	
2049	317,816	6.750%	0.48145	153,013	3.084%	0.42082	133,742	
2050	317,218	6.750%	0.45101	143,068	3.084%	0.40823	129,497	
2051	315,414	6.750%	0.42249	133,260	3.084%	0.39602	124,909	
2052	312,815	6.750%	0.39578	123,805	3.084%	0.38417	120,174	
2053	309,292	6.750%	0.37075	114,670	3.084%	0.37268	115,266	
2054	304,835	6.750%	0.34731	105,872	3.084%	0.36153	110,207	
2055	299,622	6.750%	0.32535	97,481	3.084%	0.35071	105,082	
2056	293,328	6.750%	0.30477	89,399	3.084%	0.34022	99,797	
2057	285,802	6.750%	0.28550	81,597	3.084%	0.33005	94,328	
2067	193,806	6.750%	0.14857	28,794	3.084%	0.24360	47,211	
2077	108,250	6.750%	0.07731	8,369	3.084%	0.17980	19,463	
2087	35,367	6.750%	0.04023	1,423	3.084%	0.13270	4,693	
2097	3,424	6.750%	0.02094	72	3.084%	0.09795	335	
2107	18	6.750%	0.01089	-	3.084%	0.07229	1	
2117	-	6.750%	0.00567	-	3.084%	0.05336	-	

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 166,173	\$ 142,954	\$ 127,060	\$ 136,522
Interest on Total OPEB Liability	154,495	174,062	165,399	159,587
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(334,650)	(88,806)	(55,316)
Changes of Assumptions	(475,991)	(200,549)	145,634	93,540
Benefit Payments	(82,449)	(85,278)	(84,522)	(100,777)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (237,772)</b>	<b>\$ (303,461)</b>	<b>\$ 264,765</b>	<b>\$ 233,556</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 4,640,159</b>	<b>\$ 4,402,387</b>	<b>\$ 4,098,926</b>	<b>\$ 4,363,691</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 4,402,387</b>	<b>\$ 4,098,926</b>	<b>\$ 4,363,691</b>	<b>\$ 4,597,247</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 82,449	\$ 85,278	\$ 84,522	\$ 100,777
Employer Pre-Funding Contributions	35,210	5,688	13,311	31,649
Active Member Contributions	-	5,688	13,311	31,649
Net Investment Income	3,630	3,246	4,789	3,793
Benefit Payments	(82,449)	(85,278)	(84,522)	(100,777)
Administrative Expense	(11)	(22)	(14)	(55)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 38,829</b>	<b>\$ 14,600</b>	<b>\$ 31,397</b>	<b>\$ 67,036</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ 38,829</b>	<b>\$ 53,391</b>	<b>\$ 84,788</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 38,829</b>	<b>\$ 53,429</b>	<b>\$ 84,788</b>	<b>\$ 151,824</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 4,363,558</b>	<b>\$ 4,045,497</b>	<b>\$ 4,278,903</b>	<b>\$ 4,445,423</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.882%</b>	<b>1.304%</b>	<b>1.943%</b>	<b>3.302%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 200,997</b>	<b>\$ 201,339</b>	<b>\$ 191,677</b>	<b>\$ 184,236</b>
<b>Employer Contribution</b>	<b>\$ 117,659</b>	<b>\$ 90,966</b>	<b>\$ 97,833</b>	<b>\$ 132,426</b>
<b>Percentage of ADC made by Employer</b>	<b>59%</b>	<b>45%</b>	<b>51%</b>	<b>72%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (83,338)</b>	<b>\$ (110,373)</b>	<b>\$ (93,844)</b>	<b>\$ (51,810)</b>
<b>Expected Return on Assets</b>	<b>\$ 1,778</b>	<b>\$ 3,233</b>	<b>\$ 4,653</b>	<b>\$ 7,823</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (1,852)</b>	<b>\$ (13)</b>	<b>\$ (136)</b>	<b>\$ 4,030</b>
<b>Average Expected Remaining Service</b>	<b>5.858108</b>	<b>6.293618</b>	<b>6.507386</b>	<b>6.426984</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.242%</b>	<b>3.866%</b>	<b>3.953%</b>	<b>3.586%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.866%</b>	<b>3.953%</b>	<b>3.586%</b>	<b>3.084%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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>		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 127,060	\$ 136,522
Interest on the Total OPEB Liability	165,399	159,587
Current-Period Benefit Changes	-	-
Active Member Contributions	(13,311)	(31,649)
Projected Earnings on Plan Investments	(4,653)	(7,823)
Operating Expenses	14	55
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(66,820)	(75,427)
Recognition of Outflow/(Inflow) due to Assumption Changes	(90,738)	(76,184)
Recognition of Outflow/(Inflow) due to Investment Experience	(400)	406
<b>Net OPEB Expense</b>	<b>\$ 116,551</b>	<b>\$ 105,487</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 4,045,535</b>	<b>\$ 4,278,903</b>
OPEB Expense	116,551	105,487
Employer Contributions	(97,833)	(132,426)
Change in Outflow/(Inflow) due to Non-investment Experience	(21,986)	20,111
Change in Outflow/(Inflow) due to Assumption Changes	236,372	169,724
Change in Outflow/(Inflow) due to Investment Experience	264	3,624
<b>Net OPEB Liability End of Year</b>	<b>\$ 4,278,903</b>	<b>\$ 4,445,423</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (303,463)	\$ (283,352)
Assumption Changes	\$ (369,051)	\$ (255,933)
Investment Experience	\$ (858)	\$ (458)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 123,254	\$ 179,860
Investment Experience	\$ -	\$ 3,224
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.586%	3.084%
Baseline Discount Rate and Trend Rates	\$ 4,278,903	\$ 4,445,423
Increase Discount Rate by One Percentage Point	\$ 3,664,301	\$ 3,790,011
Decrease Discount Rate by One Percentage Point	\$ 5,047,122	\$ 5,266,761
Increase Trend Rate by One Percentage Point	\$ 5,117,036	\$ 5,166,950
Decrease Trend Rate by One Percentage Point	\$ 3,620,852	\$ 3,879,642

# 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	6/30/2020								
Measurement Date	6/30/2020								
	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	\$ -	5.858108	\$ -	\$ (475,991)	5.858108	\$ (81,253)	\$ (1,852)	5.000000	\$ (370)
7/1/2017	\$ (334,650)	6.293618	\$ (53,173)	\$ (200,549)	6.293618	\$ (31,865)	\$ (13)	5.000000	\$ (3)
7/1/2018	\$ (88,806)	6.507386	\$ (13,647)	\$ 145,634	6.507386	\$ 22,380	\$ (136)	5.000000	\$ (27)
7/1/2019	\$ (55,316)	6.426984	\$ (8,607)	\$ 93,540	6.426984	\$ 14,554	\$ 4,030	5.000000	\$ 806
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (75,427)	\$ (75,427)	\$ 36,934	\$ (113,118)	\$ (76,184)	\$ 806	\$ (400)	\$ 406
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (75,427)	\$ (75,427)	\$ 36,934	\$ (113,118)	\$ (76,184)	\$ 806	\$ (402)	\$ 404
6/30/2022	\$ -	\$ (75,427)	\$ (75,427)	\$ 36,934	\$ (101,591)	\$ (64,657)	\$ 806	\$ (28)	\$ 778
6/30/2023	\$ -	\$ (75,427)	\$ (75,427)	\$ 36,934	\$ (31,865)	\$ 5,069	\$ 806	\$ (28)	\$ 778
6/30/2024	\$ -	\$ (37,866)	\$ (37,866)	\$ 36,934	\$ (9,359)	\$ 27,575	\$ 806	\$ -	\$ 806
6/30/2025	\$ -	\$ (15,531)	\$ (15,531)	\$ 25,908	\$ -	\$ 25,908	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (3,674)	\$ (3,674)	\$ 6,216	\$ -	\$ 6,216	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (283,352)	\$ (283,352)	\$ 179,860	\$ (255,933)	\$ (76,073)	\$ 3,224	\$ (458)	\$ 2,766
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ 20,111			\$ 169,724			\$ 3,624

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 10</b> <b>PROFESSIONAL SCIENTIFIC</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	4,048	4,320
Retired Participants <sup>a</sup>	<u>1,973</u>	<u>2,094</u>
Total Participants	6,021	6,414
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 477,405	\$ 483,379
Retired Participants	<u>358,428</u>	<u>352,359</u>
Total Participants	\$ 835,833	\$ 835,738
Actuarial Accrued Liability		
Active Participants	\$ 315,416	\$ 307,418
Retired Participants	<u>358,428</u>	<u>352,359</u>
Total Participants	\$ 673,844	\$ 659,777
Actuarial Value of Assets	\$ 23,658	\$ 46,271
Unfunded Actuarial Accrued Liability	\$ 650,186	\$ 613,506
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 16,753	\$ 17,637
Administrative Expenses	64	33
Amortization of UAAL	<u>38,101</u>	<u>36,669</u>
Total ADC	\$ 54,918	\$ 54,339
Estimated Member Contributions	<u>(6,307)</u>	<u>-</u>
Net Employer ADC	\$ 48,611	\$ 54,339
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 16,376	\$ 17,334
Part B Reimbursement	3,710	4,358
Dental Claims	<u>1,299</u>	<u>1,384</u>
Total	\$ 21,385	\$ 23,076
Employer Implicit Costs	<u>4,404</u>	<u>3,289</u>
Total Employer Costs	\$ 25,789	\$ 26,365
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 942	\$ 1,037
Dental Claims	<u>405</u>	<u>433</u>
Total	\$ 1,347	\$ 1,470
Total Claims Costs	\$ 27,136	\$ 27,835

<sup>a</sup>Retired participants with dental only coverage, 92 as of July 1, 2019, and 99 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) BARGAINING UNIT NUMBER 10 PROFESSIONAL SCIENTIFIC									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
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
2020	\$ 23,658	\$ -	\$ 16	\$ 21,522	\$ 1,107	\$ 46,271	\$ 659,777	7.0%	\$ 17,637
2021	46,271	-	33	8,835	3,415	58,488	695,886	8.4%	16,983
2022	58,488	-	36	8,509	4,229	71,190	731,169	9.7%	16,427
2023	71,190	-	40	16,466	5,351	92,967	765,234	12.1%	15,912
2024	92,967	-	43	15,955	6,804	115,683	798,241	14.5%	15,428
2025	115,683	-	46	15,474	8,321	139,432	830,215	16.8%	14,974
2026	139,432	-	50	15,024	9,909	164,315	861,203	19.1%	14,547
2027	164,315	-	53	14,599	11,574	190,435	891,283	21.4%	14,136
2028	190,435	-	56	14,192	13,324	217,895	920,516	23.7%	13,733
2029	217,895	-	59	13,792	15,164	246,792	948,853	26.0%	13,333
2030	246,792	-	62	13,395	17,101	277,226	976,156	28.4%	12,940
2031	277,226	-	65	13,005	19,142	309,308	1,002,210	30.9%	12,539
2032	309,308	-	68	12,607	21,295	343,142	1,026,917	33.4%	12,123
2033	343,142	-	71	12,195	23,565	378,831	1,050,165	36.1%	11,697
2034	378,831	-	75	11,772	25,960	416,488	1,071,730	38.9%	11,259
2035	416,488	-	78	11,337	28,487	456,234	1,091,477	41.8%	10,804
2036	456,234	-	81	10,886	31,155	498,194	1,109,324	44.9%	10,328
2037	498,194	-	85	10,412	33,971	542,492	1,125,257	48.2%	9,833
2038	542,492	-	88	9,921	36,945	589,270	1,139,219	51.7%	9,320
2039	589,270	-	91	9,411	40,085	638,675	1,151,197	55.5%	8,790
2040	638,675	-	93	8,884	43,402	690,868	1,161,021	59.5%	8,252
2041	690,868	-	96	8,349	46,908	746,029	1,168,496	63.8%	7,703
2042	746,029	-	99	7,802	50,613	804,345	1,173,821	68.5%	7,142
2043	804,345	-	101	7,243	54,530	866,017	1,176,923	73.6%	6,568
2044	866,017	-	104	6,672	58,674	931,259	1,177,449	79.1%	5,986
2045	931,259	-	106	6,092	63,059	1,000,304	1,175,430	85.1%	5,405
2046	1,000,304	-	109	5,513	67,700	1,073,408	1,170,798	91.7%	4,824
2047	1,073,408	-	111	4,935	72,615	1,150,847	1,163,450	98.9%	4,250
2048	1,150,847	61,213	113	4,363	75,791	1,169,675	1,153,291	101.4%	3,685
2049	1,169,675	91,810	115	-	75,901	1,153,651	1,140,206	101.2%	3,139
2050	1,153,651	93,213	117	-	74,773	1,135,094	1,124,205	101.0%	2,621
2051	1,135,094	94,335	118	-	73,483	1,114,124	1,105,413	100.8%	2,137
2052	1,114,124	95,053	119	-	72,044	1,090,996	1,084,096	100.6%	1,700
2053	1,090,996	95,432	119	-	70,470	1,065,915	1,060,482	100.5%	1,318
2054	1,065,915	95,175	119	-	68,786	1,039,407	1,035,132	100.4%	993
2055	1,039,407	94,465	118	-	67,020	1,011,844	1,008,458	100.3%	727
2056	1,011,844	93,512	117	-	65,191	983,406	980,686	100.3%	521
2057	983,406	92,084	115	-	63,319	954,526	952,295	100.2%	368
2058	954,526	90,560	113	-	61,420	925,273	923,398	100.2%	257

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) BARGAINING UNIT NUMBER 10 PROFESSIONAL SCIENTIFIC							
20-Year GO Municipal Bond Rate at June 30, 2020		2.450%					
Long-Term Investment Return		6.750%					
Year Plan is Fully Funded		2048					
Single Equivalent Rate		3.229%					
Present Value of Benefits		\$ 1,729,990			\$ 1,729,990		
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 26,365	2.450%	0.98797	\$ 26,048	3.229%	0.98423	\$ 25,949
2022	28,846	2.450%	0.96434	27,818	3.229%	0.95344	27,503
2023	31,755	2.450%	0.94128	29,891	3.229%	0.92362	29,330
2024	34,473	2.450%	0.91877	31,673	3.229%	0.89472	30,844
2025	37,130	2.450%	0.89680	33,298	3.229%	0.86673	32,182
2026	39,704	2.450%	0.87535	34,755	3.229%	0.83962	33,336
2027	42,164	2.450%	0.85442	36,026	3.229%	0.81335	34,294
2028	44,526	2.450%	0.83399	37,134	3.229%	0.78791	35,083
2029	46,885	2.450%	0.81404	38,167	3.229%	0.76326	35,786
2030	49,325	2.450%	0.79458	39,192	3.229%	0.73938	36,470
2031	51,910	2.450%	0.77558	40,260	3.229%	0.71625	37,181
2032	54,503	2.450%	0.75703	41,260	3.229%	0.69385	37,817
2033	57,099	2.450%	0.73893	42,192	3.229%	0.67214	38,379
2034	59,806	2.450%	0.72125	43,135	3.229%	0.65111	38,940
2035	62,521	2.450%	0.70401	44,016	3.229%	0.63075	39,435
2036	65,182	2.450%	0.68717	44,791	3.229%	0.61101	39,827
2037	67,709	2.450%	0.67074	45,415	3.229%	0.59190	40,077
2038	70,146	2.450%	0.65470	45,924	3.229%	0.57338	40,221
2039	72,448	2.450%	0.63904	46,298	3.229%	0.55545	40,241
2040	74,769	2.450%	0.62376	46,638	3.229%	0.53807	40,231
2041	77,129	2.450%	0.60884	46,959	3.229%	0.52124	40,203
2042	79,131	2.450%	0.59428	47,026	3.229%	0.50493	39,956
2043	81,051	2.450%	0.58007	47,015	3.229%	0.48914	39,645
2044	83,156	2.450%	0.56620	47,083	3.229%	0.47383	39,402
2045	85,053	2.450%	0.55266	47,005	3.229%	0.45901	39,040
2046	86,850	2.450%	0.53944	46,850	3.229%	0.44465	38,618
2047	88,576	2.450%	0.52654	46,639	3.229%	0.43074	38,154
2048	90,225	2.450%	0.51395	46,371	3.229%	0.41727	37,648
2049	91,810	6.750%	0.48145	44,202	3.229%	0.40421	37,111
2050	93,213	6.750%	0.45101	42,040	3.229%	0.39157	36,499
2051	94,335	6.750%	0.42249	39,856	3.229%	0.37932	35,783
2052	95,053	6.750%	0.39578	37,620	3.229%	0.36745	34,927
2053	95,432	6.750%	0.37075	35,382	3.229%	0.35596	33,970
2054	95,175	6.750%	0.34731	33,055	3.229%	0.34482	32,818
2055	94,465	6.750%	0.32535	30,734	3.229%	0.33403	31,555
2056	93,512	6.750%	0.30477	28,500	3.229%	0.32359	30,259
2057	92,084	6.750%	0.28550	26,290	3.229%	0.31346	28,865
2067	78,679	6.750%	0.14857	11,689	3.229%	0.22811	17,948
2077	51,027	6.750%	0.07731	3,945	3.229%	0.16601	8,471
2087	15,927	6.750%	0.04023	641	3.229%	0.12081	1,924
2097	1,179	6.750%	0.02094	25	3.229%	0.08791	104
2107	9	6.750%	0.01089	-	3.229%	0.06398	1
2117	-	6.750%	0.00567	-	3.229%	0.04656	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 45,853	\$ 39,944	\$ 35,836	\$ 38,429
Interest on Total OPEB Liability	37,273	41,883	40,598	39,387
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(61,856)	(15,887)	(9,886)
Changes of Assumptions	(103,789)	(43,731)	36,442	15,296
Benefit Payments	(20,533)	(26,302)	(23,092)	(29,452)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (41,196)</b>	<b>\$ (50,062)</b>	<b>\$ 73,897</b>	<b>\$ 53,774</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 1,060,929</b>	<b>\$ 1,019,733</b>	<b>\$ 969,671</b>	<b>\$ 1,043,568</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 1,019,733</b>	<b>\$ 969,671</b>	<b>\$ 1,043,568</b>	<b>\$ 1,097,342</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 20,533	\$ 26,302	\$ 23,092	\$ 29,452
Employer Pre-Funding Contributions	8,119	1,872	4,443	10,761
Active Member Contributions	-	1,872	4,443	10,761
Net Investment Income	838	763	1,330	1,107
Benefit Payments	(20,533)	(26,302)	(23,092)	(29,452)
Administrative Expense	(3)	(6)	(4)	(16)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 8,954</b>	<b>\$ 4,501</b>	<b>\$ 10,212</b>	<b>\$ 22,613</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ 8,954</b>	<b>\$ 13,446</b>	<b>\$ 23,658</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 8,954</b>	<b>\$ 13,455</b>	<b>\$ 23,658</b>	<b>\$ 46,271</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 1,010,779</b>	<b>\$ 956,216</b>	<b>\$ 1,019,910</b>	<b>\$ 1,051,071</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.878%</b>	<b>1.388%</b>	<b>2.267%</b>	<b>4.217%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 50,708</b>	<b>\$ 50,357</b>	<b>\$ 47,883</b>	<b>\$ 44,157</b>
<b>Employer Contribution</b>	<b>\$ 28,652</b>	<b>\$ 28,174</b>	<b>\$ 27,535</b>	<b>\$ 40,213</b>
<b>Percentage of ADC made by Employer</b>	<b>57%</b>	<b>56%</b>	<b>58%</b>	<b>91%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (22,056)</b>	<b>\$ (22,183)</b>	<b>\$ (20,348)</b>	<b>\$ (3,944)</b>
<b>Expected Return on Assets</b>	<b>\$ 410</b>	<b>\$ 786</b>	<b>\$ 1,247</b>	<b>\$ 2,311</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (428)</b>	<b>\$ 23</b>	<b>\$ (83)</b>	<b>\$ 1,204</b>
<b>Average Expected Remaining Service</b>	<b>7.400512</b>	<b>7.965646</b>	<b>8.186229</b>	<b>8.472565</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.399%</b>	<b>3.993%</b>	<b>4.084%</b>	<b>3.690%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.993%</b>	<b>4.084%</b>	<b>3.690%</b>	<b>3.229%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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 10</b> <b>PROFESSIONAL SCIENTIFIC</b>		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 35,836	\$ 38,429
Interest on the Total OPEB Liability	40,598	39,387
Current-Period Benefit Changes	-	-
Active Member Contributions	(4,443)	(10,761)
Projected Earnings on Plan Investments	(1,247)	(2,311)
Operating Expenses	4	16
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(9,706)	(10,873)
Recognition of Outflow/(Inflow) due to Assumption Changes	(15,063)	(13,258)
Recognition of Outflow/(Inflow) due to Investment Experience	(98)	143
<b>Net OPEB Expense</b>	<b>\$ 45,881</b>	<b>\$ 40,772</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 956,225</b>	<b>\$ 1,019,910</b>
OPEB Expense	45,881	40,772
Employer Contributions	(27,535)	(40,213)
Change in Outflow/(Inflow) due to Non-investment Experience	(6,181)	987
Change in Outflow/(Inflow) due to Assumption Changes	51,505	28,554
Change in Outflow/(Inflow) due to Investment Experience	15	1,061
<b>Net OPEB Liability End of Year</b>	<b>\$ 1,019,910</b>	<b>\$ 1,051,071</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (60,272)	\$ (59,285)
Assumption Changes	\$ (94,465)	\$ (74,950)
Investment Experience	\$ (236)	\$ (133)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 31,990	\$ 41,029
Investment Experience	\$ 13	\$ 971
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.690%	3.229%
Baseline Discount Rate and Trend Rates	\$ 1,019,910	\$ 1,051,071
Increase Discount Rate by One Percentage Point	\$ 871,959	\$ 891,729
Decrease Discount Rate by One Percentage Point	\$ 1,205,051	\$ 1,251,310
Increase Trend Rate by One Percentage Point	\$ 1,225,771	\$ 1,232,247
Decrease Trend Rate by One Percentage Point	\$ 859,876	\$ 910,998

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	7.400512	\$ -	\$ (103,789)	7.400512	\$ (14,025)	\$ (428)	5.000000	\$ (86)
7/1/2017	\$ (61,856)	7.965646	\$ (7,765)	\$ (43,731)	7.965646	\$ (5,490)	\$ 23	5.000000	\$ 5
7/1/2018	\$ (15,887)	8.186229	\$ (1,941)	\$ 36,442	8.186229	\$ 4,452	\$ (83)	5.000000	\$ (17)
7/1/2019	\$ (9,886)	8.472565	\$ (1,167)	\$ 15,296	8.472565	\$ 1,805	\$ 1,204	5.000000	\$ 241
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (10,873)	\$ (10,873)	\$ 6,257	\$ (19,515)	\$ (13,258)	\$ 246	\$ (103)	\$ 143
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (10,873)	\$ (10,873)	\$ 6,257	\$ (19,515)	\$ (13,258)	\$ 246	\$ (101)	\$ 145
6/30/2022	\$ -	\$ (10,873)	\$ (10,873)	\$ 6,257	\$ (19,515)	\$ (13,258)	\$ 244	\$ (17)	\$ 227
6/30/2023	\$ -	\$ (10,873)	\$ (10,873)	\$ 6,257	\$ (19,515)	\$ (13,258)	\$ 241	\$ (15)	\$ 226
6/30/2024	\$ -	\$ (10,873)	\$ (10,873)	\$ 6,257	\$ (11,104)	\$ (4,847)	\$ 240	\$ -	\$ 240
6/30/2025	\$ -	\$ (10,609)	\$ (10,609)	\$ 6,257	\$ (5,301)	\$ 956	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (3,108)	\$ (3,108)	\$ 6,257	\$ -	\$ 6,257	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ (1,526)	\$ (1,526)	\$ 2,631	\$ -	\$ 2,631	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ (550)	\$ (550)	\$ 856	\$ -	\$ 856	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (59,285)	\$ (59,285)	\$ 41,029	\$ (74,950)	\$ (33,921)	\$ 971	\$ (133)	\$ 838
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ 987			\$ 28,554			\$ 1,061

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 12</b> <b>CRAFT AND MAINTENANCE</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	13,053	12,801
Retired Participants <sup>a</sup>	<u>9,920</u>	<u>10,166</u>
Total Participants	22,973	22,967
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 1,495,331	\$ 1,376,035
Retired Participants	<u>1,795,983</u>	<u>1,711,948</u>
Total Participants	\$ 3,291,314	\$ 3,087,983
Actuarial Accrued Liability		
Active Participants	\$ 961,795	\$ 894,638
Retired Participants	<u>1,795,983</u>	<u>1,711,948</u>
Total Participants	\$ 2,757,778	\$ 2,606,586
Actuarial Value of Assets	\$ 63,867	\$ 119,456
Unfunded Actuarial Accrued Liability	\$ 2,693,911	\$ 2,487,130
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 60,360	\$ 54,545
Administrative Expenses	319	159
Amortization of UAAL	<u>157,863</u>	<u>148,654</u>
Total ADC	\$ 218,542	\$ 203,358
Estimated Member Contributions	<u>(20,226)</u>	<u>-</u>
Net Employer ADC	\$ 198,316	\$ 203,358
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 82,196	\$ 84,527
Part B Reimbursement	15,940	17,634
Dental Claims	<u>6,226</u>	<u>6,337</u>
Total	\$ 104,362	\$ 108,498
Employer Implicit Costs	<u>23,265</u>	<u>18,539</u>
Total Employer Costs	\$ 127,627	\$ 127,037
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 4,998	\$ 5,282
Dental Claims	<u>1,880</u>	<u>1,919</u>
Total	\$ 6,878	\$ 7,201
Total Claims Costs	\$ 134,505	\$ 134,238

<sup>a</sup>Retired participants with dental only coverage, 600 as of July 1, 2019, and 635 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) BARGAINING UNIT NUMBER 12 CRAFT AND MAINTENANCE									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
Year Plan is Fully Funded		2047							
FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 63,867	\$ -	\$ 43	\$ 52,658	\$ 2,974	\$ 119,456	\$ 2,606,586	4.6%	\$ 54,545
2021	119,456	-	159	27,352	8,966	155,615	2,709,436	5.7%	52,342
2022	155,615	-	168	52,510	12,242	220,199	2,809,302	7.8%	50,207
2023	220,199	-	181	50,387	16,530	286,935	2,903,176	9.9%	48,080
2024	286,935	-	193	48,273	20,964	355,979	2,990,856	11.9%	45,960
2025	355,979	-	205	46,165	25,554	427,493	3,072,474	13.9%	43,836
2026	427,493	-	216	44,052	30,311	501,640	3,147,771	15.9%	41,721
2027	501,640	-	227	41,949	35,246	578,608	3,216,726	18.0%	39,637
2028	578,608	-	238	39,875	40,372	658,617	3,279,340	20.1%	37,601
2029	658,617	-	248	37,849	45,705	741,923	3,335,950	22.2%	35,632
2030	741,923	-	257	35,890	51,263	828,819	3,386,362	24.5%	33,729
2031	828,819	-	267	33,996	57,065	919,613	3,430,182	26.8%	31,874
2032	919,613	-	276	32,150	63,132	1,014,619	3,467,297	29.3%	30,061
2033	1,014,619	-	285	30,346	69,485	1,114,165	3,497,586	31.9%	28,303
2034	1,114,165	-	294	28,597	76,146	1,218,614	3,520,636	34.6%	26,593
2035	1,218,614	-	303	26,895	83,139	1,328,345	3,536,426	37.6%	24,901
2036	1,328,345	-	311	25,212	90,490	1,443,736	3,544,858	40.7%	23,242
2037	1,443,736	-	318	23,560	98,224	1,565,202	3,545,901	44.1%	21,626
2038	1,565,202	-	325	21,951	106,369	1,693,197	3,539,477	47.8%	20,045
2039	1,693,197	-	332	20,377	114,956	1,828,198	3,525,537	51.9%	18,504
2040	1,828,198	-	338	18,841	124,017	1,970,718	3,504,100	56.2%	17,001
2041	1,970,718	-	343	17,345	133,588	2,121,308	3,474,855	61.0%	15,545
2042	2,121,308	-	348	15,893	143,704	2,280,557	3,438,202	66.3%	14,121
2043	2,280,557	-	352	14,474	154,406	2,449,085	3,394,152	72.2%	12,719
2044	2,449,085	-	356	13,075	165,735	2,627,539	3,342,566	78.6%	11,353
2045	2,627,539	-	358	11,711	177,736	2,816,628	3,283,960	85.8%	10,028
2046	2,816,628	-	360	10,388	190,455	3,017,111	3,218,510	93.7%	8,758
2047	3,017,111	46,443	361	9,119	202,404	3,181,830	3,146,471	101.1%	7,553
2048	3,181,830	288,601	361	-	205,180	3,098,048	3,068,694	101.0%	6,428
2049	3,098,048	287,472	359	-	199,562	3,009,779	2,985,636	100.8%	5,392
2050	3,009,779	285,431	357	-	193,672	2,917,663	2,897,978	100.7%	4,449
2051	2,917,663	282,488	353	-	187,552	2,822,374	2,806,441	100.6%	3,606
2052	2,822,374	278,867	349	-	181,240	2,724,398	2,711,570	100.5%	2,866
2053	2,724,398	273,947	342	-	174,791	2,624,900	2,614,592	100.4%	2,230
2054	2,624,900	268,204	335	-	168,265	2,524,626	2,516,326	100.3%	1,696
2055	2,524,626	262,057	328	-	161,701	2,423,942	2,417,211	100.3%	1,263
2056	2,423,942	254,759	318	-	155,148	2,324,013	2,318,485	100.2%	924
2057	2,324,013	246,858	309	-	148,665	2,225,511	2,220,900	100.2%	664
2058	2,225,511	238,876	299	-	142,281	2,128,617	2,124,700	100.2%	470

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) BARGAINING UNIT NUMBER 12 CRAFT AND MAINTENANCE							
20-Year GO Municipal Bond Rate at June 30, 2020		2.450%					
Long-Term Investment Return		6.750%					
Year Plan is Fully Funded		2047					
Single Equivalent Rate		3.130%					
Present Value of Benefits		\$ 5,905,410			\$ 5,905,410		
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 127,037	2.450%	0.98797	\$ 125,509	3.130%	0.98471	\$ 125,094
2022	134,366	2.450%	0.96434	129,575	3.130%	0.95482	128,295
2023	144,482	2.450%	0.94128	135,999	3.130%	0.92584	133,768
2024	154,412	2.450%	0.91877	141,870	3.130%	0.89774	138,622
2025	163,816	2.450%	0.89680	146,910	3.130%	0.87050	142,601
2026	173,072	2.450%	0.87535	151,500	3.130%	0.84408	146,086
2027	181,942	2.450%	0.85442	155,455	3.130%	0.81846	148,912
2028	190,430	2.450%	0.83399	158,817	3.130%	0.79362	151,129
2029	198,226	2.450%	0.81404	161,365	3.130%	0.76953	152,541
2030	205,894	2.450%	0.79458	163,598	3.130%	0.74617	153,633
2031	213,598	2.450%	0.77558	165,661	3.130%	0.72353	154,544
2032	221,037	2.450%	0.75703	167,331	3.130%	0.70157	155,072
2033	228,192	2.450%	0.73893	168,617	3.130%	0.68028	155,233
2034	235,361	2.450%	0.72125	169,755	3.130%	0.65963	155,251
2035	242,128	2.450%	0.70401	170,459	3.130%	0.63961	154,867
2036	248,534	2.450%	0.68717	170,785	3.130%	0.62020	154,140
2037	254,522	2.450%	0.67074	170,717	3.130%	0.60137	153,063
2038	260,151	2.450%	0.65470	170,320	3.130%	0.58312	151,699
2039	265,371	2.450%	0.63904	169,583	3.130%	0.56542	150,047
2040	270,127	2.450%	0.62376	168,494	3.130%	0.54826	148,101
2041	274,735	2.450%	0.60884	167,270	3.130%	0.53162	146,055
2042	278,491	2.450%	0.59428	165,502	3.130%	0.51549	143,558
2043	281,787	2.450%	0.58007	163,456	3.130%	0.49984	140,849
2044	284,757	2.450%	0.56620	161,229	3.130%	0.48467	138,014
2045	286,774	2.450%	0.55266	158,488	3.130%	0.46996	134,773
2046	288,202	2.450%	0.53944	155,468	3.130%	0.45570	131,333
2047	288,995	2.450%	0.52654	152,168	3.130%	0.44187	127,698
2048	288,601	6.750%	0.49325	142,352	3.130%	0.42846	123,653
2049	287,472	6.750%	0.46206	132,829	3.130%	0.41545	119,431
2050	285,431	6.750%	0.43284	123,546	3.130%	0.40284	114,984
2051	282,488	6.750%	0.40547	114,541	3.130%	0.39062	110,345
2052	278,867	6.750%	0.37983	105,923	3.130%	0.37876	105,624
2053	273,947	6.750%	0.35582	97,475	3.130%	0.36727	100,611
2054	268,204	6.750%	0.33332	89,397	3.130%	0.35612	95,513
2055	262,057	6.750%	0.31224	81,825	3.130%	0.34531	90,491
2056	254,759	6.750%	0.29250	74,516	3.130%	0.33483	85,301
2057	246,858	6.750%	0.27400	67,640	3.130%	0.32467	80,147
2067	174,060	6.750%	0.14259	24,818	3.130%	0.23855	41,523
2077	104,372	6.750%	0.07420	7,744	3.130%	0.17528	18,294
2087	34,720	6.750%	0.03861	1,341	3.130%	0.12879	4,472
2097	3,717	6.750%	0.02009	75	3.130%	0.09463	352
2107	64	6.750%	0.01046	1	3.130%	0.06953	4
2117	-	6.750%	0.00544	-	3.130%	0.05109	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 167,689	\$ 146,732	\$ 129,311	\$ 134,649
Interest on Total OPEB Liability	154,036	172,744	162,948	154,691
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(362,455)	(97,510)	(149,086)
Changes of Assumptions	(433,966)	(166,573)	152,849	21,353
Benefit Payments	(110,860)	(114,235)	(120,833)	(127,671)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (223,101)</b>	<b>\$ (323,787)</b>	<b>\$ 226,765</b>	<b>\$ 33,936</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 4,540,951</b>	<b>\$ 4,317,850</b>	<b>\$ 3,994,063</b>	<b>\$ 4,220,828</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 4,317,850</b>	<b>\$ 3,994,063</b>	<b>\$ 4,220,828</b>	<b>\$ 4,254,764</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 110,860	\$ 114,235	\$ 120,833	\$ 127,671
Employer Pre-Funding Contributions	1,076	8,280	16,268	26,329
Active Member Contributions	1,076	8,280	16,268	26,329
Net Investment Income	872	1,051	3,552	2,974
Benefit Payments	(110,860)	(114,235)	(120,833)	(127,671)
Administrative Expense	(4)	(9)	(9)	(43)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 3,020</b>	<b>\$ 17,602</b>	<b>\$ 36,079</b>	<b>\$ 55,589</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 7,186</b>	<b>\$ 10,206</b>	<b>\$ 27,788</b>	<b>\$ 63,867</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 10,206</b>	<b>\$ 27,808</b>	<b>\$ 63,867</b>	<b>\$ 119,456</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 4,307,644</b>	<b>\$ 3,966,255</b>	<b>\$ 4,156,961</b>	<b>\$ 4,135,308</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.236%</b>	<b>0.696%</b>	<b>1.513%</b>	<b>2.808%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 210,461</b>	<b>\$ 209,603</b>	<b>\$ 196,209</b>	<b>\$ 192,213</b>
<b>Employer Contribution</b>	<b>\$ 111,936</b>	<b>\$ 122,515</b>	<b>\$ 137,101</b>	<b>\$ 154,000</b>
<b>Percentage of ADC made by Employer</b>	<b>53%</b>	<b>58%</b>	<b>70%</b>	<b>80%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (98,525)</b>	<b>\$ (87,088)</b>	<b>\$ (59,108)</b>	<b>\$ (38,213)</b>
<b>Expected Return on Assets</b>	<b>\$ 600</b>	<b>\$ 1,335</b>	<b>\$ 3,064</b>	<b>\$ 6,058</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (272)</b>	<b>\$ 284</b>	<b>\$ (488)</b>	<b>\$ 3,084</b>
<b>Average Expected Remaining Service</b>	<b>5.773655</b>	<b>6.134782</b>	<b>6.307925</b>	<b>6.294814</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.310%</b>	<b>3.920%</b>	<b>4.010%</b>	<b>3.604%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.920%</b>	<b>4.010%</b>	<b>3.604%</b>	<b>3.130%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 129,311	\$ 134,649
Interest on the Total OPEB Liability	162,948	154,691
Current-Period Benefit Changes	-	-
Active Member Contributions	(16,268)	(26,329)
Projected Earnings on Plan Investments	(3,064)	(6,058)
Operating Expenses	9	43
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(74,540)	(98,224)
Recognition of Outflow/(Inflow) due to Assumption Changes	(78,084)	(74,692)
Recognition of Outflow/(Inflow) due to Investment Experience	(95)	522
<b>Net OPEB Expense</b>	<b>\$ 120,217</b>	<b>\$ 84,602</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 3,966,275</b>	<b>\$ 4,156,961</b>
OPEB Expense	120,217	84,602
Employer Contributions	(137,101)	(154,000)
Change in Outflow/(Inflow) due to Non-investment Experience	(22,970)	(50,862)
Change in Outflow/(Inflow) due to Assumption Changes	230,933	96,045
Change in Outflow/(Inflow) due to Investment Experience	(393)	2,562
<b>Net OPEB Liability End of Year</b>	<b>\$ 4,156,961</b>	<b>\$ 4,135,308</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (326,343)	\$ (377,205)
Assumption Changes	\$ (320,746)	\$ (218,431)
Investment Experience	\$ (500)	\$ (348)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 128,618	\$ 122,348
Investment Experience	\$ 170	\$ 2,580
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.604%	3.130%
Baseline Discount Rate and Trend Rates	\$ 4,156,961	\$ 4,135,308
Increase Discount Rate by One Percentage Point	\$ 3,584,831	\$ 3,549,455
Decrease Discount Rate by One Percentage Point	\$ 4,871,048	\$ 4,868,571
Increase Trend Rate by One Percentage Point	\$ 4,912,788	\$ 4,771,995
Decrease Trend Rate by One Percentage Point	\$ 3,559,767	\$ 3,633,220

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	5.773655	\$ -	\$ (433,966)	5.773655	\$ (75,163)	\$ (272)	5.000000	\$ (54)
7/1/2017	\$ (362,455)	6.134782	\$ (59,082)	\$ (166,573)	6.134782	\$ (27,152)	\$ 284	5.000000	\$ 57
7/1/2018	\$ (97,510)	6.307925	\$ (15,458)	\$ 152,849	6.307925	\$ 24,231	\$ (488)	5.000000	\$ (98)
7/1/2019	\$ (149,086)	6.294814	\$ (23,684)	\$ 21,353	6.294814	\$ 3,392	\$ 3,084	5.000000	\$ 617
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (98,224)	\$ (98,224)	\$ 27,623	\$ (102,315)	\$ (74,692)	\$ 674	\$ (152)	\$ 522
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (98,224)	\$ (98,224)	\$ 27,623	\$ (102,315)	\$ (74,692)	\$ 674	\$ (154)	\$ 520
6/30/2022	\$ -	\$ (98,224)	\$ (98,224)	\$ 27,623	\$ (85,303)	\$ (57,680)	\$ 673	\$ (98)	\$ 575
6/30/2023	\$ -	\$ (98,224)	\$ (98,224)	\$ 27,623	\$ (27,152)	\$ 471	\$ 617	\$ (96)	\$ 521
6/30/2024	\$ -	\$ (47,105)	\$ (47,105)	\$ 27,623	\$ (3,661)	\$ 23,962	\$ 616	\$ -	\$ 616
6/30/2025	\$ -	\$ (28,446)	\$ (28,446)	\$ 10,855	\$ -	\$ 10,855	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (6,982)	\$ (6,982)	\$ 1,001	\$ -	\$ 1,001	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ -	\$ (377,205)	\$ (377,205)	\$ 122,348	\$ (218,431)	\$ (96,083)	\$ 2,580	\$ (348)	\$ 2,232
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (50,862)			\$ 96,045			\$ 2,562

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 13</b> <b>STATIONARY ENGINEERS</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	975	979
Retired Participants <sup>a</sup>	<u>906</u>	<u>928</u>
Total Participants	1,881	1,907
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 133,692	\$ 124,955
Retired Participants	<u>181,782</u>	<u>172,620</u>
Total Participants	\$ 315,474	\$ 297,575
Actuarial Accrued Liability		
Active Participants	\$ 93,116	\$ 87,611
Retired Participants	<u>181,782</u>	<u>172,620</u>
Total Participants	\$ 274,898	\$ 260,231
Actuarial Value of Assets	\$ 5,437	\$ 11,920
Unfunded Actuarial Accrued Liability	\$ 269,461	\$ 248,311
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 5,409	\$ 5,011
Administrative Expenses	31	16
Amortization of UAAL	<u>15,790</u>	<u>14,841</u>
Total ADC	\$ 21,230	\$ 19,868
Estimated Member Contributions	<u>(2,040)</u>	<u>-</u>
Net Employer ADC	\$ 19,190	\$ 19,868
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 8,320	\$ 8,490
Part B Reimbursement	1,322	1,514
Dental Claims	<u>598</u>	<u>617</u>
Total	\$ 10,240	\$ 10,621
Employer Implicit Costs	<u>2,299</u>	<u>1,892</u>
Total Employer Costs	\$ 12,539	\$ 12,513
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 643	\$ 724
Dental Claims	<u>180</u>	<u>187</u>
Total	\$ 823	\$ 911
Total Claims Costs	\$ 13,362	\$ 13,424

<sup>a</sup>Retired participants with dental only coverage, 69 as of July 1, 2019, and 76 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) BARGAINING UNIT NUMBER 13 STATIONARY ENGINEERS									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
Year Plan is Fully Funded		2047							
FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 5,437	\$ -	\$ 4	\$ 6,212	\$ 274	\$ 11,919	\$ 260,231	4.6%	\$ 5,011
2021	11,919	-	16	2,514	887	15,304	270,211	5.7%	4,716
2022	15,304	-	17	2,366	1,111	18,764	279,723	6.7%	4,428
2023	18,764	-	18	4,446	1,414	24,606	288,485	8.5%	4,150
2024	24,606	-	19	4,169	1,799	30,555	296,412	10.3%	3,877
2025	30,555	-	21	3,897	2,191	36,622	303,478	12.1%	3,602
2026	36,622	-	22	3,624	2,592	42,816	309,588	13.8%	3,330
2027	42,816	-	23	3,353	3,001	49,147	314,797	15.6%	3,070
2028	49,147	-	24	3,094	3,419	55,636	319,147	17.4%	2,827
2029	55,636	-	26	2,852	3,849	62,311	322,578	19.3%	2,597
2030	62,311	-	27	2,624	4,292	69,200	325,161	21.3%	2,381
2031	69,200	-	27	2,408	4,750	76,331	327,000	23.3%	2,184
2032	76,331	-	28	2,212	5,225	83,740	328,002	25.5%	2,000
2033	83,740	-	29	2,030	5,719	91,460	328,127	27.9%	1,823
2034	91,460	-	30	1,853	6,234	99,517	327,373	30.4%	1,654
2035	99,517	-	31	1,685	6,773	107,944	325,715	33.1%	1,492
2036	107,944	-	32	1,524	7,336	116,772	323,074	36.1%	1,338
2037	116,772	-	32	1,371	7,927	126,038	319,471	39.5%	1,196
2038	126,038	-	33	1,229	8,547	135,781	315,009	43.1%	1,063
2039	135,781	-	33	1,096	9,201	146,045	309,723	47.2%	938
2040	146,045	-	34	972	9,889	156,872	303,541	51.7%	822
2041	156,872	-	34	856	10,616	168,310	296,531	56.8%	715
2042	168,310	-	34	749	11,385	180,410	288,821	62.5%	617
2043	180,410	-	35	651	12,198	193,224	280,393	68.9%	527
2044	193,224	-	34	561	13,060	206,811	271,370	76.2%	446
2045	206,811	-	34	480	13,975	221,232	261,895	84.5%	372
2046	221,232	-	34	406	14,946	236,550	252,018	93.9%	306
2047	236,550	9,533	33	339	15,661	242,984	241,849	100.5%	247
2048	242,984	26,075	33	-	15,535	232,411	231,492	100.4%	195
2049	232,411	25,504	32	-	14,840	221,715	220,971	100.3%	151
2050	221,715	24,836	31	-	14,141	210,989	210,384	100.3%	116
2051	210,989	24,014	30	-	13,444	200,389	199,894	100.2%	87
2052	200,389	23,181	29	-	12,756	189,935	189,525	100.2%	64
2053	189,935	22,339	28	-	12,078	179,646	179,303	100.2%	47
2054	179,646	21,396	27	-	11,415	169,638	169,348	100.2%	34
2055	169,638	20,462	26	-	10,771	159,921	159,671	100.2%	24
2056	159,921	19,565	24	-	10,145	150,477	150,258	100.1%	17
2057	150,477	18,677	23	-	9,537	141,314	141,120	100.1%	11
2058	141,314	17,773	22	-	8,948	132,467	132,293	100.1%	7

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM  
DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S)  
BARGAINING UNIT NUMBER 13  
STATIONARY ENGINEERS**

**20-Year GO Municipal Bond Rate at June 30, 2020**                      **2.450%**  
**Long-Term Investment Return**    **6.750%**  
**Year Plan is Fully Funded**    **2047**  
**Single Equivalent Rate**    **2.971%**

**Present Value of Benefits**    \$                      **553,401**    \$                      **553,401**

FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 12,513	2.450%	0.98797	\$ 12,363	2.971%	0.98547	\$ 12,332
2022	13,313	2.450%	0.96434	12,839	2.971%	0.95703	12,741
2023	14,363	2.450%	0.94128	13,520	2.971%	0.92942	13,349
2024	15,455	2.450%	0.91877	14,199	2.971%	0.90260	13,949
2025	16,526	2.450%	0.89680	14,820	2.971%	0.87655	14,486
2026	17,627	2.450%	0.87535	15,430	2.971%	0.85126	15,005
2027	18,618	2.450%	0.85442	15,908	2.971%	0.82670	15,392
2028	19,520	2.450%	0.83399	16,279	2.971%	0.80284	15,671
2029	20,443	2.450%	0.81404	16,641	2.971%	0.77968	15,939
2030	21,251	2.450%	0.79458	16,885	2.971%	0.75718	16,091
2031	21,916	2.450%	0.77558	16,997	2.971%	0.73533	16,115
2032	22,643	2.450%	0.75703	17,141	2.971%	0.71411	16,170
2033	23,366	2.450%	0.73893	17,266	2.971%	0.69351	16,205
2034	24,043	2.450%	0.72125	17,341	2.971%	0.67350	16,193
2035	24,693	2.450%	0.70401	17,384	2.971%	0.65406	16,151
2036	25,369	2.450%	0.68717	17,433	2.971%	0.63519	16,114
2037	25,970	2.450%	0.67074	17,419	2.971%	0.61686	16,020
2038	26,419	2.450%	0.65470	17,296	2.971%	0.59906	15,826
2039	26,788	2.450%	0.63904	17,118	2.971%	0.58177	15,584
2040	27,180	2.450%	0.62376	16,954	2.971%	0.56499	15,356
2041	27,457	2.450%	0.60884	16,717	2.971%	0.54869	15,065
2042	27,567	2.450%	0.59428	16,383	2.971%	0.53285	14,689
2043	27,657	2.450%	0.58007	16,043	2.971%	0.51748	14,312
2044	27,589	2.450%	0.56620	15,621	2.971%	0.50255	13,865
2045	27,355	2.450%	0.55266	15,118	2.971%	0.48804	13,350
2046	27,049	2.450%	0.53944	14,591	2.971%	0.47396	12,820
2047	26,617	2.450%	0.52654	14,015	2.971%	0.46029	12,252
2048	26,075	6.750%	0.49325	12,862	2.971%	0.44700	11,656
2049	25,504	6.750%	0.46206	11,784	2.971%	0.43411	11,071
2050	24,836	6.750%	0.43284	10,750	2.971%	0.42158	10,470
2051	24,014	6.750%	0.40547	9,737	2.971%	0.40941	9,832
2052	23,181	6.750%	0.37983	8,805	2.971%	0.39760	9,217
2053	22,339	6.750%	0.35582	7,948	2.971%	0.38613	8,626
2054	21,396	6.750%	0.33332	7,132	2.971%	0.37499	8,023
2055	20,462	6.750%	0.31224	6,389	2.971%	0.36417	7,452
2056	19,565	6.750%	0.29250	5,723	2.971%	0.35366	6,919
2057	18,677	6.750%	0.27400	5,117	2.971%	0.34345	6,415
2067	10,716	6.750%	0.14259	1,528	2.971%	0.25628	2,746
2077	4,702	6.750%	0.07420	349	2.971%	0.19123	899
2087	1,013	6.750%	0.03861	39	2.971%	0.14269	145
2097	62	6.750%	0.02009	1	2.971%	0.10647	7
2107	-	6.750%	0.01046	-	2.971%	0.07945	-
2117	-	6.750%	0.00544	-	2.971%	0.05928	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 14,669	\$ 12,821	\$ 11,434	\$ 11,873
Interest on Total OPEB Liability	14,564	16,406	15,722	15,123
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(27,555)	(3,013)	(13,872)
Changes of Assumptions	(44,093)	(15,965)	14,480	6,238
Benefit Payments	(10,675)	(10,863)	(10,957)	(11,913)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (25,535)</b>	<b>\$ (25,156)</b>	<b>\$ 27,666</b>	<b>\$ 7,449</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 447,182</b>	<b>\$ 421,647</b>	<b>\$ 396,491</b>	<b>\$ 424,157</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 421,647</b>	<b>\$ 396,491</b>	<b>\$ 424,157</b>	<b>\$ 431,606</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 10,675	\$ 10,863	\$ 10,957	\$ 11,913
Employer Pre-Funding Contributions	-	768	1,792	3,106
Active Member Contributions	-	768	1,792	3,106
Net Investment Income	-	21	299	274
Benefit Payments	(10,675)	(10,863)	(10,957)	(11,913)
Administrative Expense	-	(1)	(1)	(4)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ 1,556</b>	<b>\$ 3,882</b>	<b>\$ 6,482</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,555</b>	<b>\$ 5,437</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ 1,556</b>	<b>\$ 5,437</b>	<b>\$ 11,919</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 421,647</b>	<b>\$ 394,935</b>	<b>\$ 418,720</b>	<b>\$ 419,687</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>0.392%</b>	<b>1.282%</b>	<b>2.762%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 19,979</b>	<b>\$ 19,810</b>	<b>\$ 18,598</b>	<b>\$ 18,124</b>
<b>Employer Contribution</b>	<b>\$ 10,675</b>	<b>\$ 11,631</b>	<b>\$ 12,749</b>	<b>\$ 15,019</b>
<b>Percentage of ADC made by Employer</b>	<b>53%</b>	<b>59%</b>	<b>69%</b>	<b>83%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (9,304)</b>	<b>\$ (8,179)</b>	<b>\$ (5,849)</b>	<b>\$ (3,105)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ 55</b>	<b>\$ 232</b>	<b>\$ 573</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ 34</b>	<b>\$ (67)</b>	<b>\$ 299</b>
<b>Average Expected Remaining Service</b>	<b>4.408263</b>	<b>4.574619</b>	<b>4.587420</b>	<b>4.623290</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.190%</b>	<b>3.825%</b>	<b>3.906%</b>	<b>3.516%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.825%</b>	<b>3.906%</b>	<b>3.516%</b>	<b>2.971%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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 13</b> <b>STATIONARY ENGINEERS</b>		
Measured for the Plan's Fiscal Year Ending	June 30, 2019	June 30, 2020
Applicable for the Sponsor's Fiscal Year Ending	June 30, 2020	June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 11,434	\$ 11,873
Interest on the Total OPEB Liability	15,722	15,123
Current-Period Benefit Changes	-	-
Active Member Contributions	(1,792)	(3,106)
Projected Earnings on Plan Investments	(232)	(573)
Operating Expenses	1	4
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(6,680)	(9,680)
Recognition of Outflow/(Inflow) due to Assumption Changes	(10,336)	(8,987)
Recognition of Outflow/(Inflow) due to Investment Experience	(6)	54
<b>Net OPEB Expense</b>	<b>\$ 8,111</b>	<b>\$ 4,708</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 394,936</b>	<b>\$ 418,720</b>
OPEB Expense	8,111	4,708
Employer Contributions	(12,749)	(15,019)
Change in Outflow/(Inflow) due to Non-investment Experience	3,667	(4,192)
Change in Outflow/(Inflow) due to Assumption Changes	24,816	15,225
Change in Outflow/(Inflow) due to Investment Experience	(61)	245
<b>Net OPEB Liability End of Year</b>	<b>\$ 418,720</b>	<b>\$ 419,687</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (17,865)	\$ (22,057)
Assumption Changes	\$ (23,072)	\$ (9,580)
Investment Experience	\$ (54)	\$ (41)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 11,324	\$ 13,057
Investment Experience	\$ 20	\$ 252
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.516%	2.971%
Baseline Discount Rate and Trend Rates	\$ 418,720	\$ 419,687
Increase Discount Rate by One Percentage Point	\$ 361,599	\$ 360,662
Decrease Discount Rate by One Percentage Point	\$ 489,857	\$ 493,369
Increase Trend Rate by One Percentage Point	\$ 492,060	\$ 482,064
Decrease Trend Rate by One Percentage Point	\$ 360,052	\$ 369,838

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -
7/1/2017	\$ (27,555)	4.574619	\$ (6,023)	\$ (15,965)	4.574619	\$ (3,490)	\$ 34	5.000000	\$ 7
7/1/2018	\$ (3,013)	4.587420	\$ (657)	\$ 14,480	4.587420	\$ 3,156	\$ (67)	5.000000	\$ (13)
7/1/2019	\$ (13,872)	4.623290	\$ (3,000)	\$ 6,238	4.623290	\$ 1,349	\$ 299	5.000000	\$ 60
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (9,680)	\$ (9,680)	\$ 4,505	\$ (13,492)	\$ (8,987)	\$ 67	\$ (13)	\$ 54
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (9,680)	\$ (9,680)	\$ 4,505	\$ (7,575)	\$ (3,070)	\$ 67	\$ (13)	\$ 54
6/30/2022	\$ -	\$ (7,120)	\$ (7,120)	\$ 4,505	\$ (2,005)	\$ 2,500	\$ 66	\$ (13)	\$ 53
6/30/2023	\$ -	\$ (3,385)	\$ (3,385)	\$ 3,205	\$ -	\$ 3,205	\$ 60	\$ (15)	\$ 45
6/30/2024	\$ -	\$ (1,872)	\$ (1,872)	\$ 842	\$ -	\$ 842	\$ 59	\$ -	\$ 59
6/30/2025	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (22,057)	\$ (22,057)	\$ 13,057	\$ (9,580)	\$ 3,477	\$ 252	\$ (41)	\$ 211
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (4,192)			\$ 15,225			\$ 245

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 16</b> <b>PHYSICIANS, DENTISTS AND PODIATRISTS</b>		
	July 1, 2019	July 1, 2020
Number of Participants Covered		
Active Participants	1,621	1,612
Retired Participants <sup>a</sup>	<u>1,473</u>	<u>1,524</u>
Total Participants	3,094	3,136
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 206,348	\$ 186,047
Retired Participants	<u>240,837</u>	<u>226,588</u>
Total Participants	\$ 447,185	\$ 412,635
Actuarial Accrued Liability		
Active Participants	\$ 132,602	\$ 122,169
Retired Participants	<u>240,837</u>	<u>226,588</u>
Total Participants	\$ 373,439	\$ 348,757
Actuarial Value of Assets	\$ 26,676	\$ 40,493
Unfunded Actuarial Accrued Liability	\$ 346,763	\$ 308,264
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 10,528	\$ 9,228
Administrative Expenses	47	23
Amortization of UAAL	<u>20,320</u>	<u>18,425</u>
Total ADC	\$ 30,895	\$ 27,676
Estimated Member Contributions	<u>(5,287)</u>	<u>-</u>
Net Employer ADC	\$ 25,608	\$ 27,676
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 10,600	\$ 11,240
Part B Reimbursement	2,765	3,098
Dental Claims	<u>967</u>	<u>992</u>
Total	\$ 14,332	\$ 15,330
Employer Implicit Costs	<u>4,406</u>	<u>2,710</u>
Total Employer Costs	\$ 18,738	\$ 18,040
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 1,423	\$ 1,466
Dental Claims	<u>304</u>	<u>312</u>
Total	\$ 1,727	\$ 1,778
Total Claims Costs	\$ 20,465	\$ 19,818

<sup>a</sup>Retired participants with dental only coverage, 151 as of July 1, 2019, and 148 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) BARGAINING UNIT NUMBER 16 PHYSICIANS, DENTISTS AND PODIATRISTS									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
Year Plan is Fully Funded		2041							
FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 26,676	\$ -	\$ 16	\$ 12,706	\$ 1,127	\$ 40,493	\$ 348,757	11.6%	\$ 9,228
2021	40,493	-	23	4,625	2,886	47,981	363,500	13.2%	8,554
2022	47,981	-	24	4,289	3,380	55,626	377,040	14.8%	7,970
2023	55,626	-	26	7,997	4,019	67,616	389,142	17.4%	7,413
2024	67,616	-	28	7,442	4,810	79,840	399,848	20.0%	6,872
2025	79,840	-	30	6,902	5,617	92,329	409,131	22.6%	6,352
2026	92,329	-	32	6,384	6,443	105,124	416,962	25.2%	5,851
2027	105,124	-	34	5,885	7,290	118,265	423,305	27.9%	5,354
2028	118,265	-	36	5,389	8,161	131,779	428,148	30.8%	4,866
2029	131,779	-	37	4,903	9,057	145,702	431,505	33.8%	4,398
2030	145,702	-	39	4,437	9,981	160,081	433,342	36.9%	3,952
2031	160,081	-	40	3,992	10,937	174,970	433,676	40.3%	3,532
2032	174,970	-	41	3,574	11,928	190,431	432,534	44.0%	3,138
2033	190,431	-	42	3,181	12,958	206,528	429,952	48.0%	2,767
2034	206,528	-	44	2,810	14,033	223,327	425,942	52.4%	2,419
2035	223,327	-	44	2,463	15,155	240,901	420,559	57.3%	2,098
2036	240,901	-	45	2,143	16,331	259,330	413,962	62.6%	1,806
2037	259,330	-	45	1,852	17,565	278,702	406,270	68.6%	1,542
2038	278,702	-	46	1,587	18,864	299,107	397,570	75.2%	1,305
2039	299,107	-	46	1,351	20,233	320,645	388,043	82.6%	1,097
2040	320,645	-	45	1,142	21,680	343,422	377,874	90.9%	915
2041	343,422	-	45	960	23,212	367,549	367,140	100.1%	758
2042	367,549	32,564	44	-	23,727	358,668	355,961	100.8%	623
2043	358,668	35,070	44	-	23,044	346,598	344,412	100.6%	506
2044	346,598	34,505	43	-	22,249	334,299	332,543	100.5%	406
2045	334,299	33,950	42	-	21,437	321,744	320,340	100.4%	320
2046	321,744	33,393	42	-	20,608	308,917	307,799	100.4%	249
2047	308,917	32,676	41	-	19,766	295,966	295,076	100.3%	188
2048	295,966	31,907	40	-	18,917	282,936	282,224	100.3%	139
2049	282,936	31,140	39	-	18,063	269,820	269,244	100.2%	99
2050	269,820	30,320	38	-	17,205	256,667	256,194	100.2%	69
2051	256,667	29,417	37	-	16,347	243,560	243,163	100.2%	46
2052	243,560	28,414	36	-	15,496	230,606	230,266	100.1%	30
2053	230,606	27,397	34	-	14,655	217,830	217,532	100.1%	19
2054	217,830	26,448	33	-	13,825	205,174	204,908	100.1%	11
2055	205,174	25,461	32	-	13,003	192,684	192,442	100.1%	7
2056	192,684	24,455	31	-	12,194	180,392	180,170	100.1%	4
2057	180,392	23,438	29	-	11,398	168,323	168,119	100.1%	2
2058	168,323	22,434	28	-	10,616	156,477	156,289	100.1%	1

# Individual Actuarial Valuation Results

**CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM**  
**DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S)**  
**BARGAINING UNIT NUMBER 16**  
**PHYSICIANS, DENTISTS AND PODIATRISTS**

20-Year GO Municipal Bond Rate at June 30, 2020      2.450%  
 Long-Term Investment Return      6.750%  
 Year Plan is Fully Funded      2041  
 Single Equivalent Rate      3.286%

Present Value of Benefits      \$      701,514      \$      701,514

FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 18,040	2.450%	0.98797	\$ 17,823	3.286%	0.98397	\$ 17,750
2022	19,472	2.450%	0.96434	18,778	3.286%	0.95266	18,551
2023	21,145	2.450%	0.94128	19,903	3.286%	0.92236	19,503
2024	22,710	2.450%	0.91877	20,866	3.286%	0.89302	20,281
2025	24,228	2.450%	0.89680	21,728	3.286%	0.86461	20,948
2026	25,702	2.450%	0.87535	22,499	3.286%	0.83710	21,516
2027	27,137	2.450%	0.85442	23,186	3.286%	0.81047	21,994
2028	28,489	2.450%	0.83399	23,760	3.286%	0.78469	22,355
2029	29,739	2.450%	0.81404	24,209	3.286%	0.75973	22,594
2030	30,948	2.450%	0.79458	24,591	3.286%	0.73556	22,764
2031	32,060	2.450%	0.77558	24,865	3.286%	0.71216	22,832
2032	33,079	2.450%	0.75703	25,042	3.286%	0.68951	22,808
2033	33,989	2.450%	0.73893	25,115	3.286%	0.66757	22,690
2034	34,820	2.450%	0.72125	25,114	3.286%	0.64634	22,506
2035	35,527	2.450%	0.70401	25,011	3.286%	0.62578	22,232
2036	36,020	2.450%	0.68717	24,752	3.286%	0.60587	21,823
2037	36,347	2.450%	0.67074	24,379	3.286%	0.58660	21,321
2038	36,547	2.450%	0.65470	23,927	3.286%	0.56793	20,756
2039	36,534	2.450%	0.63904	23,347	3.286%	0.54987	20,089
2040	36,319	2.450%	0.62376	22,654	3.286%	0.53238	19,335
2041	36,015	2.450%	0.60884	21,927	3.286%	0.51544	18,563
2042	35,582	6.750%	0.57034	20,294	3.286%	0.49904	17,757
2043	35,070	6.750%	0.53428	18,737	3.286%	0.48317	16,945
2044	34,505	6.750%	0.50050	17,270	3.286%	0.46780	16,142
2045	33,950	6.750%	0.46885	15,917	3.286%	0.45292	15,376
2046	33,393	6.750%	0.43920	14,666	3.286%	0.43851	14,643
2047	32,676	6.750%	0.41143	13,444	3.286%	0.42456	13,873
2048	31,907	6.750%	0.38542	12,298	3.286%	0.41105	13,116
2049	31,140	6.750%	0.36105	11,243	3.286%	0.39798	12,393
2050	30,320	6.750%	0.33822	10,255	3.286%	0.38532	11,683
2051	29,417	6.750%	0.31683	9,320	3.286%	0.37306	10,974
2052	28,414	6.750%	0.29680	8,433	3.286%	0.36119	10,263
2053	27,397	6.750%	0.27803	7,617	3.286%	0.34970	9,581
2054	26,448	6.750%	0.26045	6,888	3.286%	0.33858	8,955
2055	25,461	6.750%	0.24398	6,212	3.286%	0.32781	8,346
2056	24,455	6.750%	0.22855	5,589	3.286%	0.31738	7,762
2057	23,438	6.750%	0.21410	5,018	3.286%	0.30728	7,202
2067	12,817	6.750%	0.11141	1,428	3.286%	0.22240	2,851
2077	3,836	6.750%	0.05798	222	3.286%	0.16097	617
2087	524	6.750%	0.03017	16	3.286%	0.11650	61
2097	46	6.750%	0.01570	1	3.286%	0.08432	4
2107	3	6.750%	0.00817	-	3.286%	0.06103	-
2117	-	6.750%	0.00425	-	3.286%	0.04417	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 25,410	\$ 22,878	\$ 19,868	\$ 20,111
Interest on Total OPEB Liability	19,529	22,062	20,854	20,601
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(43,849)	3,825	(15,678)
Changes of Assumptions	(45,549)	(17,270)	13,636	(7,932)
Benefit Payments	(15,948)	(18,647)	(18,674)	(20,132)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (16,558)</b>	<b>\$ (34,826)</b>	<b>\$ 39,509</b>	<b>\$ (3,030)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 547,898</b>	<b>\$ 531,340</b>	<b>\$ 496,514</b>	<b>\$ 536,023</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 531,340</b>	<b>\$ 496,514</b>	<b>\$ 536,023</b>	<b>\$ 532,993</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 15,948	\$ 18,647	\$ 18,674	\$ 20,132
Employer Pre-Funding Contributions	711	3,373	5,481	6,353
Active Member Contributions	711	3,373	5,481	6,353
Net Investment Income	591	645	1,496	1,127
Benefit Payments	(15,948)	(18,647)	(18,674)	(20,132)
Administrative Expense	(3)	(5)	(4)	(16)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 2,010</b>	<b>\$ 7,386</b>	<b>\$ 12,454</b>	<b>\$ 13,817</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 4,836</b>	<b>\$ 6,846</b>	<b>\$ 14,222</b>	<b>\$ 26,676</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 6,846</b>	<b>\$ 14,232</b>	<b>\$ 26,676</b>	<b>\$ 40,493</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 524,494</b>	<b>\$ 482,282</b>	<b>\$ 509,347</b>	<b>\$ 492,500</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>1.288%</b>	<b>2.866%</b>	<b>4.977%</b>	<b>7.597%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 29,785</b>	<b>\$ 28,038</b>	<b>\$ 24,481</b>	<b>\$ 24,542</b>
<b>Employer Contribution</b>	<b>\$ 16,659</b>	<b>\$ 22,020</b>	<b>\$ 24,155</b>	<b>\$ 26,485</b>
<b>Percentage of ADC made by Employer</b>	<b>56%</b>	<b>79%</b>	<b>99%</b>	<b>108%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (13,126)</b>	<b>\$ (6,018)</b>	<b>\$ (326)</b>	<b>\$ 1,943</b>
<b>Expected Return on Assets</b>	<b>\$ 403</b>	<b>\$ 739</b>	<b>\$ 1,373</b>	<b>\$ 2,222</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (188)</b>	<b>\$ 94</b>	<b>\$ (123)</b>	<b>\$ 1,095</b>
<b>Average Expected Remaining Service</b>	<b>4.144907</b>	<b>4.131138</b>	<b>4.126132</b>	<b>4.071405</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.454%</b>	<b>4.041%</b>	<b>4.112%</b>	<b>3.772%</b>
<b>Blended Discount Rate End of Year</b>	<b>4.041%</b>	<b>4.112%</b>	<b>3.772%</b>	<b>3.286%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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		
Measured for the Plan's Fiscal Year Ending	June 30, 2019	June 30, 2020
Applicable for the Sponsor's Fiscal Year Ending	June 30, 2020	June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 19,868	\$ 20,111
Interest on the Total OPEB Liability	20,854	20,601
Current-Period Benefit Changes	-	-
Active Member Contributions	(5,481)	(6,353)
Projected Earnings on Plan Investments	(1,373)	(2,222)
Operating Expenses	4	16
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(9,687)	(13,538)
Recognition of Outflow/(Inflow) due to Assumption Changes	(11,864)	(13,812)
Recognition of Outflow/(Inflow) due to Investment Experience	(44)	175
<b>Net OPEB Expense</b>	<b>\$ 12,277</b>	<b>\$ 4,978</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 482,292</b>	<b>\$ 509,347</b>
OPEB Expense	12,277	4,978
Employer Contributions	(24,155)	(26,485)
Change in Outflow/(Inflow) due to Non-investment Experience	13,512	(2,140)
Change in Outflow/(Inflow) due to Assumption Changes	25,500	5,880
Change in Outflow/(Inflow) due to Investment Experience	(79)	920
<b>Net OPEB Liability End of Year</b>	<b>\$ 509,347</b>	<b>\$ 492,500</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (22,621)	\$ (23,834)
Assumption Changes	\$ (21,492)	\$ (12,307)
Investment Experience	\$ (172)	\$ (109)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ 2,898	\$ 1,971
Assumption Changes	\$ 10,331	\$ 7,026
Investment Experience	\$ 56	\$ 913
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.772%	3.286%
Baseline Discount Rate and Trend Rates	\$ 509,347	\$ 492,500
Increase Discount Rate by One Percentage Point	\$ 444,156	\$ 426,107
Decrease Discount Rate by One Percentage Point	\$ 589,306	\$ 574,281
Increase Trend Rate by One Percentage Point	\$ 592,667	\$ 562,755
Decrease Trend Rate by One Percentage Point	\$ 441,790	\$ 435,318

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	4.144907	\$ -	\$ (45,549)	4.144907	\$ (10,989)	\$ (188)	\$ 5.000000	\$ (38)
7/1/2017	\$ (43,849)	4.131138	\$ (10,614)	\$ (17,270)	4.131138	\$ (4,180)	\$ 94	5.000000	\$ 19
7/1/2018	\$ 3,825	4.126132	\$ 927	\$ 13,636	4.126132	\$ 3,305	\$ (123)	5.000000	\$ (25)
7/1/2019	\$ (15,678)	4.071405	\$ (3,851)	\$ (7,932)	4.071405	\$ (1,948)	\$ 1,095	5.000000	\$ 219
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ 927	\$ (14,465)	\$ (13,538)	\$ 3,305	\$ (17,117)	\$ (13,812)	\$ 238	\$ (63)	\$ 175
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ 927	\$ (14,465)	\$ (13,538)	\$ 3,305	\$ (7,721)	\$ (4,416)	\$ 238	\$ (61)	\$ 177
6/30/2022	\$ 927	\$ (5,244)	\$ (4,317)	\$ 3,305	\$ (2,498)	\$ 807	\$ 237	\$ (25)	\$ 212
6/30/2023	\$ 117	\$ (3,851)	\$ (3,734)	\$ 416	\$ (1,948)	\$ (1,532)	\$ 219	\$ (23)	\$ 196
6/30/2024	\$ -	\$ (274)	\$ (274)	\$ -	\$ (140)	\$ (140)	\$ 219	\$ -	\$ 219
6/30/2025	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ 1,971	\$ (23,834)	\$ (21,863)	\$ 7,026	\$ (12,307)	\$ (5,281)	\$ 913	\$ (109)	\$ 804
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (2,140)			\$ 5,880			\$ 920

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 18</b> <b>PSYCHIATRIC TECHNICIANS</b>		
	July 1, 2019	July 1, 2020
Number of Participants Covered		
Active Participants	6,228	6,158
Retired Participants <sup>a</sup>	4,979	5,087
Total Participants	11,207	11,245
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 847,223	\$ 799,875
Retired Participants	846,234	817,834
Total Participants	\$ 1,693,457	\$ 1,617,709
Actuarial Accrued Liability		
Active Participants	\$ 503,474	\$ 482,572
Retired Participants	846,234	817,834
Total Participants	\$ 1,349,708	\$ 1,300,406
Actuarial Value of Assets	\$ 26,827	\$ 58,657
Unfunded Actuarial Accrued Liability	\$ 1,322,881	\$ 1,241,749
Net Employer ADC for FYE	June 30, 2020	June 30, 2021
Normal Cost	\$ 34,393	\$ 32,004
Administrative Expenses	142	72
Amortization of UAAL	77,521	74,219
Total ADC	\$ 112,056	\$ 106,295
Estimated Member Contributions	(12,950)	-
Net Employer ADC	\$ 99,106	\$ 106,295
Expected Claim Costs for FYE <sup>b</sup>	June 30, 2020	June 30, 2021
Employer Explicit Costs		
Medical and Rx Claims	\$ 39,286	\$ 40,682
Part B Reimbursement	6,231	6,939
Dental Claims	2,759	2,820
Total	\$ 48,276	\$ 50,441
Employer Implicit Costs	8,566	6,802
Total Employer Costs	\$ 56,842	\$ 57,243
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 2,632	\$ 2,482
Dental Claims	822	842
Total	\$ 3,454	\$ 3,324
Total Claims Costs	\$ 60,296	\$ 60,567

<sup>a</sup>Retired participants with dental only coverage, 292 as of July 1, 2019, and 293 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) BARGAINING UNIT NUMBER 18 PSYCHIATRIC TECHNICIANS									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
Year Plan is Fully Funded		2049							
FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 26,827	\$ -	\$ 19	\$ 30,500	\$ 1,349	\$ 58,657	\$ 1,300,406	4.5%	\$ 32,004
2021	58,657	-	72	16,038	4,489	79,112	1,363,173	5.8%	31,160
2022	79,112	-	76	15,618	5,856	100,510	1,425,722	7.0%	30,355
2023	100,510	-	82	30,436	7,792	138,656	1,486,870	9.3%	29,566
2024	138,656	-	87	29,654	10,341	178,564	1,546,442	11.5%	28,784
2025	178,564	-	93	28,877	13,009	220,357	1,604,304	13.7%	28,001
2026	220,357	-	99	28,100	15,804	264,162	1,660,418	15.9%	27,212
2027	264,162	-	105	27,317	18,734	310,108	1,714,833	18.1%	26,425
2028	310,108	-	110	26,535	21,810	358,343	1,767,739	20.3%	25,627
2029	358,343	-	115	25,742	25,039	409,009	1,819,146	22.5%	24,810
2030	409,009	-	121	24,930	28,432	462,250	1,868,733	24.7%	23,969
2031	462,250	-	126	24,095	31,998	518,217	1,916,335	27.0%	23,100
2032	518,217	-	132	23,232	35,746	577,063	1,961,374	29.4%	22,198
2033	577,063	-	138	22,335	39,689	638,949	2,003,632	31.9%	21,247
2034	638,949	-	144	21,390	43,834	704,029	2,042,795	34.5%	20,236
2035	704,029	-	150	20,386	48,194	772,459	2,078,295	37.2%	19,172
2036	772,459	-	156	19,329	52,778	844,410	2,109,767	40.0%	18,069
2037	844,410	-	163	18,232	57,598	920,077	2,137,112	43.1%	16,930
2038	920,077	-	169	17,099	62,667	999,674	2,159,930	46.3%	15,762
2039	999,674	-	175	15,938	68,001	1,083,438	2,177,676	49.8%	14,584
2040	1,083,438	-	182	14,766	73,616	1,171,638	2,190,073	53.5%	13,388
2041	1,171,638	-	188	13,576	79,530	1,264,556	2,196,797	57.6%	12,179
2042	1,264,556	-	194	12,373	85,762	1,362,497	2,197,695	62.0%	10,966
2043	1,362,497	-	200	11,165	92,333	1,465,795	2,192,718	66.8%	9,755
2044	1,465,795	-	205	9,959	99,265	1,574,814	2,181,821	72.2%	8,585
2045	1,574,814	-	209	8,794	106,585	1,689,984	2,165,394	78.0%	7,458
2046	1,689,984	-	213	7,671	114,321	1,811,763	2,143,421	84.5%	6,375
2047	1,811,763	-	216	6,592	122,506	1,940,645	2,116,051	91.7%	5,361
2048	1,940,645	-	219	5,580	131,171	2,077,177	2,083,651	99.7%	4,429
2049	2,077,177	154,990	220	4,649	135,211	2,061,827	2,046,792	100.7%	3,593
2050	2,061,827	176,706	221	-	133,300	2,018,200	2,006,193	100.6%	2,859
2051	2,018,200	176,239	220	-	130,370	1,972,111	1,962,555	100.5%	2,234
2052	1,972,111	175,580	219	-	127,281	1,923,593	1,915,985	100.4%	1,714
2053	1,923,593	174,200	218	-	124,052	1,873,227	1,867,143	100.3%	1,289
2054	1,873,227	171,797	215	-	120,732	1,821,947	1,817,036	100.3%	949
2055	1,821,947	169,186	211	-	117,358	1,769,908	1,765,883	100.2%	684
2056	1,769,908	166,458	208	-	113,936	1,717,178	1,713,813	100.2%	484
2057	1,717,178	163,241	204	-	110,483	1,664,216	1,661,340	100.2%	334
2058	1,664,216	159,969	200	-	107,017	1,611,064	1,608,547	100.2%	226

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) BARGAINING UNIT NUMBER 18 PSYCHIATRIC TECHNICIANS							
20-Year GO Municipal Bond Rate at June 30, 2020		2.450%					
Long-Term Investment Return		6.750%					
Year Plan is Fully Funded		2049					
Single Equivalent Rate		3.136%					
Present Value of Benefits		\$ 3,345,663			\$ 3,345,663		
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 57,243	2.450%	0.98797	\$ 56,554	3.136%	0.98468	\$ 56,366
2022	60,683	2.450%	0.96434	58,520	3.136%	0.95474	57,936
2023	65,291	2.450%	0.94128	61,457	3.136%	0.92570	60,440
2024	69,998	2.450%	0.91877	64,312	3.136%	0.89755	62,827
2025	74,734	2.450%	0.89680	67,022	3.136%	0.87026	65,038
2026	79,398	2.450%	0.87535	69,501	3.136%	0.84380	66,996
2027	83,891	2.450%	0.85442	71,678	3.136%	0.81814	68,634
2028	88,096	2.450%	0.83399	73,471	3.136%	0.79326	69,883
2029	92,176	2.450%	0.81404	75,035	3.136%	0.76914	70,896
2030	96,453	2.450%	0.79458	76,639	3.136%	0.74575	71,930
2031	100,745	2.450%	0.77558	78,136	3.136%	0.72307	72,846
2032	105,438	2.450%	0.75703	79,820	3.136%	0.70108	73,921
2033	110,138	2.450%	0.73893	81,384	3.136%	0.67976	74,868
2034	114,912	2.450%	0.72125	82,881	3.136%	0.65909	75,738
2035	119,973	2.450%	0.70401	84,461	3.136%	0.63905	76,669
2036	125,092	2.450%	0.68717	85,959	3.136%	0.61962	77,509
2037	130,003	2.450%	0.67074	87,198	3.136%	0.60078	78,103
2038	134,993	2.450%	0.65470	88,380	3.136%	0.58251	78,635
2039	140,188	2.450%	0.63904	89,586	3.136%	0.56479	79,177
2040	145,308	2.450%	0.62376	90,637	3.136%	0.54762	79,573
2041	150,373	2.450%	0.60884	91,553	3.136%	0.53097	79,843
2042	155,204	2.450%	0.59428	92,235	3.136%	0.51482	79,902
2043	159,695	2.450%	0.58007	92,635	3.136%	0.49917	79,714
2044	163,850	2.450%	0.56620	92,772	3.136%	0.48399	79,301
2045	167,283	2.450%	0.55266	92,451	3.136%	0.46927	78,501
2046	170,414	2.450%	0.53944	91,929	3.136%	0.45500	77,538
2047	173,086	2.450%	0.52654	91,137	3.136%	0.44116	76,359
2048	175,120	2.450%	0.51395	90,003	3.136%	0.42775	74,907
2049	176,355	2.450%	0.50166	88,470	3.136%	0.41474	73,142
2050	176,706	6.750%	0.46994	83,041	3.136%	0.40213	71,059
2051	176,239	6.750%	0.44022	77,584	3.136%	0.38990	68,716
2052	175,580	6.750%	0.41239	72,407	3.136%	0.37804	66,377
2053	174,200	6.750%	0.38631	67,296	3.136%	0.36655	63,853
2054	171,797	6.750%	0.36188	62,171	3.136%	0.35540	61,057
2055	169,186	6.750%	0.33900	57,354	3.136%	0.34459	58,300
2056	166,458	6.750%	0.31757	52,861	3.136%	0.33412	55,616
2057	163,241	6.750%	0.29749	48,562	3.136%	0.32396	52,883
2067	136,724	6.750%	0.15481	21,166	3.136%	0.23789	32,525
2077	87,538	6.750%	0.08056	7,052	3.136%	0.17469	15,292
2087	27,051	6.750%	0.04192	1,134	3.136%	0.12828	3,470
2097	2,446	6.750%	0.02181	53	3.136%	0.09420	230
2107	60	6.750%	0.01135	1	3.136%	0.06917	4
2117	1	6.750%	0.00591	-	3.136%	0.05079	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 90,257	\$ 78,668	\$ 75,099	\$ 76,706
Interest on Total OPEB Liability	76,899	85,613	82,679	80,313
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(191,777)	(57,811)	(79,988)
Changes of Assumptions	(222,349)	(40,755)	92,553	72,228
Benefit Payments	(49,553)	(43,073)	(60,499)	(45,071)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (104,746)</b>	<b>\$ (111,324)</b>	<b>\$ 132,021</b>	<b>\$ 104,188</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 2,197,374</b>	<b>\$ 2,092,628</b>	<b>\$ 1,981,304</b>	<b>\$ 2,113,325</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 2,092,628</b>	<b>\$ 1,981,304</b>	<b>\$ 2,113,325</b>	<b>\$ 2,217,513</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 49,553	\$ 43,073	\$ 60,499	\$ 45,071
Employer Pre-Funding Contributions	-	3,799	8,826	15,250
Active Member Contributions	-	3,799	8,826	15,250
Net Investment Income	-	108	1,480	1,349
Benefit Payments	(49,553)	(43,073)	(60,499)	(45,071)
Administrative Expense	-	(2)	(3)	(19)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ 7,704</b>	<b>\$ 19,129</b>	<b>\$ 31,830</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 7,698</b>	<b>\$ 26,827</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ 7,704</b>	<b>\$ 26,827</b>	<b>\$ 58,657</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 2,092,628</b>	<b>\$ 1,973,600</b>	<b>\$ 2,086,498</b>	<b>\$ 2,158,856</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>0.389%</b>	<b>1.269%</b>	<b>2.645%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 103,287</b>	<b>\$ 102,587</b>	<b>\$ 99,746</b>	<b>\$ 96,806</b>
<b>Employer Contribution</b>	<b>\$ 49,553</b>	<b>\$ 46,872</b>	<b>\$ 69,325</b>	<b>\$ 60,321</b>
<b>Percentage of ADC made by Employer</b>	<b>48%</b>	<b>46%</b>	<b>70%</b>	<b>62%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (53,734)</b>	<b>\$ (55,715)</b>	<b>\$ (30,421)</b>	<b>\$ (36,485)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ 272</b>	<b>\$ 1,146</b>	<b>\$ 2,823</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ 164</b>	<b>\$ (334)</b>	<b>\$ 1,474</b>
<b>Average Expected Remaining Service</b>	<b>6.796418</b>	<b>7.343741</b>	<b>7.212367</b>	<b>7.115662</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.398%</b>	<b>3.991%</b>	<b>4.080%</b>	<b>3.705%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.991%</b>	<b>4.080%</b>	<b>3.705%</b>	<b>3.136%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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 18</b> <b>PSYCHIATRIC TECHNICIANS</b>		
Measured for the Plan's Fiscal Year Ending	June 30, 2019	June 30, 2020
Applicable for the Sponsor's Fiscal Year Ending	June 30, 2020	June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 75,099	\$ 76,706
Interest on the Total OPEB Liability	82,679	80,313
Current-Period Benefit Changes	-	-
Active Member Contributions	(8,826)	(15,250)
Projected Earnings on Plan Investments	(1,146)	(2,823)
Operating Expenses	3	19
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(34,130)	(45,371)
Recognition of Outflow/(Inflow) due to Assumption Changes	(25,433)	(15,282)
Recognition of Outflow/(Inflow) due to Investment Experience	(34)	261
<b>Net OPEB Expense</b>	<b>\$ 88,212</b>	<b>\$ 78,573</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 1,973,606</b>	<b>\$ 2,086,498</b>
OPEB Expense	88,212	78,573
Employer Contributions	(69,325)	(60,321)
Change in Outflow/(Inflow) due to Non-investment Experience	(23,681)	(34,617)
Change in Outflow/(Inflow) due to Assumption Changes	117,986	87,510
Change in Outflow/(Inflow) due to Investment Experience	(300)	1,213
<b>Net OPEB Liability End of Year</b>	<b>\$ 2,086,498</b>	<b>\$ 2,158,856</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (189,344)	\$ (223,961)
Assumption Changes	\$ (153,856)	\$ (115,590)
Investment Experience	\$ (267)	\$ (200)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 79,720	\$ 128,964
Investment Experience	\$ 98	\$ 1,244
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.705%	3.136%
Baseline Discount Rate and Trend Rates	\$ 2,086,498	\$ 2,158,856
Increase Discount Rate by One Percentage Point	\$ 1,776,680	\$ 1,826,750
Decrease Discount Rate by One Percentage Point	\$ 2,479,902	\$ 2,582,228
Increase Trend Rate by One Percentage Point	\$ 2,520,036	\$ 2,540,847
Decrease Trend Rate by One Percentage Point	\$ 1,753,262	\$ 1,865,575



# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -
7/1/2017	\$ (191,777)	7.343741	\$ (26,114)	\$ (40,755)	7.343741	\$ (5,550)	\$ 164	5.000000	\$ 33
7/1/2018	\$ (57,811)	7.212367	\$ (8,016)	\$ 92,553	7.212367	\$ 12,833	\$ (334)	5.000000	\$ (67)
7/1/2019	\$ (79,988)	7.115662	\$ (11,241)	\$ 72,228	7.115662	\$ 10,151	\$ 1,474	5.000000	\$ 295
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (45,371)	\$ (45,371)	\$ 22,984	\$ (38,266)	\$ (15,282)	\$ 328	\$ (67)	\$ 261
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (45,371)	\$ (45,371)	\$ 22,984	\$ (38,266)	\$ (15,282)	\$ 328	\$ (67)	\$ 261
6/30/2022	\$ -	\$ (45,371)	\$ (45,371)	\$ 22,984	\$ (38,266)	\$ (15,282)	\$ 327	\$ (67)	\$ 260
6/30/2023	\$ -	\$ (45,371)	\$ (45,371)	\$ 22,984	\$ (31,603)	\$ (8,619)	\$ 295	\$ (66)	\$ 229
6/30/2024	\$ -	\$ (45,371)	\$ (45,371)	\$ 22,984	\$ (5,550)	\$ 17,434	\$ 294	\$ -	\$ 294
6/30/2025	\$ -	\$ (28,236)	\$ (28,236)	\$ 22,984	\$ (1,905)	\$ 21,079	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (12,940)	\$ (12,940)	\$ 12,873	\$ -	\$ 12,873	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ (1,301)	\$ (1,301)	\$ 1,171	\$ -	\$ 1,171	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (223,961)	\$ (223,961)	\$ 128,964	\$ (115,590)	\$ 13,374	\$ 1,244	\$ (200)	\$ 1,044
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (34,617)			\$ 87,510			\$ 1,213

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>BARGAINING UNIT NUMBER 19</b> <b>HEALTH AND SOCIAL SERVICES/PROFESSIONAL</b>		
	July 1, 2019	July 1, 2020
Number of Participants Covered		
Active Participants	5,744	5,733
Retired Participants <sup>a</sup>	<u>3,571</u>	<u>3,699</u>
Total Participants	9,315	9,432
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 704,843	\$ 653,978
Retired Participants	<u>587,931</u>	<u>559,259</u>
Total Participants	\$ 1,292,774	\$ 1,213,237
Actuarial Accrued Liability		
Active Participants	\$ 412,809	\$ 390,917
Retired Participants	<u>587,931</u>	<u>559,259</u>
Total Participants	\$ 1,000,740	\$ 950,176
Actuarial Value of Assets	\$ 29,723	\$ 64,169
Unfunded Actuarial Accrued Liability	\$ 971,017	\$ 886,007
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 31,247	\$ 28,200
Administrative Expenses	103	51
Amortization of UAAL	<u>56,902</u>	<u>52,956</u>
Total ADC	\$ 88,252	\$ 81,207
Estimated Member Contributions	<u>(11,756)</u>	-
Net Employer ADC	\$ 76,496	\$ 81,207
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 25,986	\$ 27,112
Part B Reimbursement	5,840	6,559
Dental Claims	<u>2,191</u>	<u>2,260</u>
Total	\$ 34,017	\$ 35,931
Employer Implicit Costs	<u>7,316</u>	<u>4,977</u>
Total Employer Costs	\$ 41,333	\$ 40,908
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 2,545	\$ 2,270
Dental Claims	<u>679</u>	<u>701</u>
Total	\$ 3,224	\$ 2,971
Total Claims Costs	\$ 44,557	\$ 43,879

<sup>a</sup>Retired participants with dental only coverage, 241 as of July 1, 2019, and 248 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) BARGAINING UNIT NUMBER 19 HEALTH AND SOCIAL SERVICES/PROFESSIONAL									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
Year Plan is Fully Funded		2046							
FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 29,723	\$ -	\$ 22	\$ 32,978	\$ 1,490	\$ 64,169	\$ 950,176	6.8%	\$ 28,200
2021	64,169	-	51	14,126	4,799	83,043	1,002,129	8.3%	27,118
2022	83,043	-	55	13,587	6,055	102,630	1,053,215	9.7%	26,177
2023	102,630	-	60	26,237	7,796	136,603	1,102,489	12.4%	25,277
2024	136,603	-	65	25,342	10,060	171,940	1,149,937	15.0%	24,412
2025	171,940	-	70	24,483	12,416	208,769	1,195,355	17.5%	23,554
2026	208,769	-	75	23,629	14,874	247,197	1,238,780	20.0%	22,704
2027	247,197	-	81	22,784	17,439	287,339	1,280,015	22.4%	21,866
2028	287,339	-	85	21,952	20,121	329,327	1,319,161	25.0%	21,034
2029	329,327	-	90	21,124	22,928	373,289	1,356,356	27.5%	20,200
2030	373,289	-	95	20,295	25,867	419,356	1,391,298	30.1%	19,356
2031	419,356	-	99	19,455	28,949	467,661	1,423,748	32.8%	18,508
2032	467,661	-	104	18,612	32,181	518,350	1,453,667	35.7%	17,652
2033	518,350	-	109	17,761	35,575	571,577	1,480,880	38.6%	16,760
2034	571,577	-	113	16,874	39,138	627,476	1,505,032	41.7%	15,843
2035	627,476	-	118	15,961	42,880	686,199	1,525,852	45.0%	14,912
2036	686,199	-	123	15,035	46,813	747,924	1,543,150	48.5%	13,967
2037	747,924	-	127	14,094	50,948	812,839	1,556,835	52.2%	13,016
2038	812,839	-	132	13,148	55,299	881,154	1,566,738	56.2%	12,064
2039	881,154	-	136	12,200	59,878	953,096	1,572,762	60.6%	11,115
2040	953,096	-	140	11,255	64,703	1,028,914	1,575,114	65.3%	10,162
2041	1,028,914	-	143	10,306	69,789	1,108,866	1,573,666	70.5%	9,211
2042	1,108,866	-	147	9,358	75,154	1,193,231	1,568,141	76.1%	8,283
2043	1,193,231	-	150	8,433	80,818	1,282,332	1,558,842	82.3%	7,373
2044	1,282,332	-	152	7,526	86,802	1,376,508	1,546,066	89.0%	6,492
2045	1,376,508	-	155	6,646	93,129	1,476,128	1,529,609	96.5%	5,640
2046	1,476,128	49,673	157	5,796	98,177	1,530,271	1,509,432	101.4%	4,818
2047	1,530,271	126,520	158	-	99,087	1,502,680	1,485,726	101.1%	4,043
2048	1,502,680	127,321	159	-	97,198	1,472,398	1,458,768	100.9%	3,326
2049	1,472,398	127,796	160	-	95,139	1,439,581	1,428,734	100.8%	2,679
2050	1,439,581	127,674	160	-	92,928	1,404,675	1,396,110	100.6%	2,116
2051	1,404,675	126,955	159	-	90,595	1,368,156	1,361,426	100.5%	1,635
2052	1,368,156	125,855	157	-	88,167	1,330,311	1,325,026	100.4%	1,233
2053	1,330,311	124,222	155	-	85,666	1,291,600	1,287,427	100.3%	907
2054	1,291,600	122,374	153	-	83,115	1,252,188	1,248,854	100.3%	652
2055	1,252,188	120,444	151	-	80,519	1,212,112	1,209,399	100.2%	457
2056	1,212,112	118,114	148	-	77,891	1,171,741	1,169,482	100.2%	314
2057	1,171,741	115,514	144	-	75,253	1,131,336	1,129,403	100.2%	211
2058	1,131,336	113,032	141	-	72,608	1,090,771	1,089,075	100.2%	139

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) BARGAINING UNIT NUMBER 19 HEALTH AND SOCIAL SERVICES/PROFESSIONAL							
20-Year GO Municipal Bond Rate at June 30, 2020		2.450%					
Long-Term Investment Return		6.750%					
Year Plan is Fully Funded		2046					
Single Equivalent Rate		3.261%					
Present Value of Benefits		\$ 2,387,654			\$ 2,387,654		
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 40,908	2.450%	0.98797	\$ 40,416	3.261%	0.98408	\$ 40,257
2022	44,024	2.450%	0.96434	42,454	3.261%	0.95301	41,955
2023	48,140	2.450%	0.94128	45,313	3.261%	0.92291	44,429
2024	52,197	2.450%	0.91877	47,957	3.261%	0.89377	46,652
2025	56,368	2.450%	0.89680	50,551	3.261%	0.86554	48,789
2026	60,376	2.450%	0.87535	52,850	3.261%	0.83821	50,608
2027	64,455	2.450%	0.85442	55,072	3.261%	0.81174	52,321
2028	68,305	2.450%	0.83399	56,966	3.261%	0.78611	53,695
2029	71,890	2.450%	0.81404	58,521	3.261%	0.76128	54,728
2030	75,639	2.450%	0.79458	60,101	3.261%	0.73724	55,764
2031	79,462	2.450%	0.77558	61,629	3.261%	0.71396	56,732
2032	83,156	2.450%	0.75703	62,951	3.261%	0.69141	57,495
2033	86,844	2.450%	0.73893	64,171	3.261%	0.66958	58,149
2034	90,665	2.450%	0.72125	65,392	3.261%	0.64843	58,790
2035	94,518	2.450%	0.70401	66,542	3.261%	0.62796	59,354
2036	98,326	2.450%	0.68717	67,567	3.261%	0.60813	59,795
2037	101,979	2.450%	0.67074	68,401	3.261%	0.58892	60,058
2038	105,550	2.450%	0.65470	69,103	3.261%	0.57032	60,198
2039	108,968	2.450%	0.63904	69,635	3.261%	0.55231	60,184
2040	111,937	2.450%	0.62376	69,822	3.261%	0.53487	59,872
2041	114,784	2.450%	0.60884	69,885	3.261%	0.51798	59,456
2042	117,655	2.450%	0.59428	69,920	3.261%	0.50162	59,018
2043	119,989	2.450%	0.58007	69,602	3.261%	0.48578	58,289
2044	121,806	2.450%	0.56620	68,967	3.261%	0.47044	57,303
2045	123,625	2.450%	0.55266	68,323	3.261%	0.45559	56,322
2046	125,271	2.450%	0.53944	67,577	3.261%	0.44120	55,270
2047	126,520	6.750%	0.50533	63,935	3.261%	0.42727	54,058
2048	127,321	6.750%	0.47338	60,271	3.261%	0.41377	52,682
2049	127,796	6.750%	0.44345	56,671	3.261%	0.40071	51,209
2050	127,674	6.750%	0.41541	53,037	3.261%	0.38805	49,545
2051	126,955	6.750%	0.38914	49,403	3.261%	0.37580	47,710
2052	125,855	6.750%	0.36453	45,878	3.261%	0.36393	45,803
2053	124,222	6.750%	0.34148	42,420	3.261%	0.35244	43,781
2054	122,374	6.750%	0.31989	39,146	3.261%	0.34131	41,767
2055	120,444	6.750%	0.29966	36,093	3.261%	0.33053	39,810
2056	118,114	6.750%	0.28072	33,156	3.261%	0.32009	37,807
2057	115,514	6.750%	0.26297	30,376	3.261%	0.30998	35,807
2067	93,665	6.750%	0.13684	12,817	3.261%	0.22490	21,065
2077	54,308	6.750%	0.07121	3,867	3.261%	0.16316	8,861
2087	14,086	6.750%	0.03706	522	3.261%	0.11838	1,667
2097	939	6.750%	0.01928	18	3.261%	0.08588	81
2107	102	6.750%	0.01003	1	3.261%	0.06231	6
2117	28	6.750%	0.00522	-	3.261%	0.04521	1

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 78,546	\$ 69,599	\$ 63,722	\$ 65,666
Interest on Total OPEB Liability	55,156	62,178	59,961	58,590
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(128,625)	(23,634)	(55,515)
Changes of Assumptions	(141,348)	(44,590)	58,150	1,121
Benefit Payments	(34,938)	(37,371)	(42,720)	(41,947)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (42,584)</b>	<b>\$ (78,809)</b>	<b>\$ 115,479</b>	<b>\$ 27,915</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 1,520,526</b>	<b>\$ 1,477,942</b>	<b>\$ 1,399,133</b>	<b>\$ 1,514,612</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 1,477,942</b>	<b>\$ 1,399,133</b>	<b>\$ 1,514,612</b>	<b>\$ 1,542,527</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 34,938	\$ 37,371	\$ 42,720	\$ 41,947
Employer Pre-Funding Contributions	-	4,311	9,680	16,489
Active Member Contributions	-	4,311	9,680	16,489
Net Investment Income	-	117	1,636	1,490
Benefit Payments	(34,938)	(37,371)	(42,720)	(41,947)
Administrative Expense	-	(2)	(4)	(22)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ 8,737</b>	<b>\$ 20,992</b>	<b>\$ 34,446</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 8,731</b>	<b>\$ 29,723</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ 8,737</b>	<b>\$ 29,723</b>	<b>\$ 64,169</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 1,477,942</b>	<b>\$ 1,390,396</b>	<b>\$ 1,484,889</b>	<b>\$ 1,478,358</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>0.624%</b>	<b>1.962%</b>	<b>4.160%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 83,250</b>	<b>\$ 81,436</b>	<b>\$ 75,827</b>	<b>\$ 71,763</b>
<b>Employer Contribution</b>	<b>\$ 34,938</b>	<b>\$ 41,682</b>	<b>\$ 52,400</b>	<b>\$ 58,436</b>
<b>Percentage of ADC made by Employer</b>	<b>42%</b>	<b>51%</b>	<b>69%</b>	<b>81%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (48,312)</b>	<b>\$ (39,754)</b>	<b>\$ (23,427)</b>	<b>\$ (13,327)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ 308</b>	<b>\$ 1,277</b>	<b>\$ 3,100</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ 191</b>	<b>\$ (359)</b>	<b>\$ 1,610</b>
<b>Average Expected Remaining Service</b>	<b>6.796642</b>	<b>7.229237</b>	<b>7.182353</b>	<b>7.168799</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.487%</b>	<b>4.066%</b>	<b>4.159%</b>	<b>3.757%</b>
<b>Blended Discount Rate End of Year</b>	<b>4.066%</b>	<b>4.159%</b>	<b>3.757%</b>	<b>3.261%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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		
Measured for the Plan's Fiscal Year Ending	June 30, 2019	June 30, 2020
Applicable for the Sponsor's Fiscal Year Ending	June 30, 2020	June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 63,722	\$ 65,666
Interest on the Total OPEB Liability	59,961	58,590
Current-Period Benefit Changes	-	-
Active Member Contributions	(9,680)	(16,489)
Projected Earnings on Plan Investments	(1,277)	(3,100)
Operating Expenses	4	22
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(21,083)	(28,827)
Recognition of Outflow/(Inflow) due to Assumption Changes	(18,869)	(18,713)
Recognition of Outflow/(Inflow) due to Investment Experience	(34)	288
<b>Net OPEB Expense</b>	<b>\$ 72,744</b>	<b>\$ 57,437</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 1,390,402</b>	<b>\$ 1,484,889</b>
OPEB Expense	72,744	57,437
Employer Contributions	(52,400)	(58,436)
Change in Outflow/(Inflow) due to Non-investment Experience	(2,551)	(26,688)
Change in Outflow/(Inflow) due to Assumption Changes	77,019	19,834
Change in Outflow/(Inflow) due to Investment Experience	(325)	1,322
<b>Net OPEB Liability End of Year</b>	<b>\$ 1,484,889</b>	<b>\$ 1,478,358</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (113,384)	\$ (140,072)
Assumption Changes	\$ (111,211)	\$ (84,246)
Investment Experience	\$ (287)	\$ (215)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 50,054	\$ 42,923
Investment Experience	\$ 115	\$ 1,365
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.757%	3.261%
Baseline Discount Rate and Trend Rates	\$ 1,484,889	\$ 1,478,358
Increase Discount Rate by One Percentage Point	\$ 1,276,565	\$ 1,262,334
Decrease Discount Rate by One Percentage Point	\$ 1,744,800	\$ 1,748,771
Increase Trend Rate by One Percentage Point	\$ 1,771,690	\$ 1,723,455
Decrease Trend Rate by One Percentage Point	\$ 1,260,452	\$ 1,286,836

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	6.796642	\$ -	\$ (141,348)	6.796642	\$ (20,797)	\$ -	5.000000	\$ -
7/1/2017	\$ (128,625)	7.229237	\$ (17,792)	\$ (44,590)	7.229237	\$ (6,168)	\$ 191	5.000000	\$ 38
7/1/2018	\$ (23,634)	7.182353	\$ (3,291)	\$ 58,150	7.182353	\$ 8,096	\$ (359)	5.000000	\$ (72)
7/1/2019	\$ (55,515)	7.168799	\$ (7,744)	\$ 1,121	7.168799	\$ 156	\$ 1,610	5.000000	\$ 322
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (28,827)	\$ (28,827)	\$ 8,252	\$ (26,965)	\$ (18,713)	\$ 360	\$ (72)	\$ 288
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (28,827)	\$ (28,827)	\$ 8,252	\$ (26,965)	\$ (18,713)	\$ 360	\$ (72)	\$ 288
6/30/2022	\$ -	\$ (28,827)	\$ (28,827)	\$ 8,252	\$ (26,965)	\$ (18,713)	\$ 361	\$ (72)	\$ 289
6/30/2023	\$ -	\$ (28,827)	\$ (28,827)	\$ 8,252	\$ (22,734)	\$ (14,482)	\$ 322	\$ (71)	\$ 251
6/30/2024	\$ -	\$ (28,827)	\$ (28,827)	\$ 8,252	\$ (6,168)	\$ 2,084	\$ 322	\$ -	\$ 322
6/30/2025	\$ -	\$ (15,116)	\$ (15,116)	\$ 8,252	\$ (1,414)	\$ 6,838	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (8,341)	\$ (8,341)	\$ 1,634	\$ -	\$ 1,634	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ (1,307)	\$ (1,307)	\$ 29	\$ -	\$ 29	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (140,072)	\$ (140,072)	\$ 42,923	\$ (84,246)	\$ (41,323)	\$ 1,365	\$ (215)	\$ 1,150
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (26,688)			\$ 19,834			\$ 1,322

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>CALIFORNIA STATE UNIVERSITY</b>		
	July 1, 2019	July 1, 2020
Number of Participants Covered		
Active Participants	49,249	50,271
Retired Participants <sup>a</sup>	<u>31,483</u>	<u>32,204</u>
Total Participants	80,732	82,475
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 5,844,100	\$ 5,833,095
Retired Participants	<u>5,414,274</u>	<u>5,040,966</u>
Total Participants	\$ 11,258,374	\$ 10,874,061
Actuarial Accrued Liability		
Active Participants	\$ 3,444,530	\$ 3,386,572
Retired Participants	<u>5,414,274</u>	<u>5,040,966</u>
Total Participants	\$ 8,858,804	\$ 8,427,538
Actuarial Value of Assets	\$ -	\$ -
Unfunded Actuarial Accrued Liability	\$ 8,858,804	\$ 8,427,538
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 266,289	\$ 266,956
Administrative Expenses	1,011	488
Amortization of UAAL	<u>519,126</u>	<u>503,709</u>
Total ADC	\$ 786,426	\$ 771,153
Estimated Member Contributions	<u>-</u>	<u>-</u>
Net Employer ADC	\$ 786,426	\$ 771,153
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 245,394	\$ 249,864
Part B Reimbursement	63,358	70,458
Dental Claims	<u>17,822</u>	<u>17,332</u>
Total	\$ 326,574	\$ 337,654
Employer Implicit Costs	<u>77,815</u>	<u>52,354</u>
Total Employer Costs	\$ 404,389	\$ 390,008
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 8,237	\$ 9,517
Dental Claims	<u>-</u>	<u>1,592</u>
Total	\$ 8,237	\$ 11,109
Total Claims Costs	\$ 412,626	\$ 401,117

<sup>a</sup>Retired participants with dental only coverage, 1,654 as of July 1, 2019, and 1,664 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) CALIFORNIA STATE UNIVERSITY									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
Year Plan is Fully Funded		N/A							
FYE	Assets (boy)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eoy)	Accrued Liability (eoy)	Funded Ratio	Normal Cost
2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	8,427,538	0.0%	\$ 266,956
2021	-	-	-	-	-	-	8,878,204	0.0%	255,682
2022	-	-	-	-	-	-	9,318,419	0.0%	246,029
2023	-	-	-	-	-	-	9,740,923	0.0%	236,779
2024	-	-	-	-	-	-	10,144,433	0.0%	227,659
2025	-	-	-	-	-	-	10,527,832	0.0%	218,556
2026	-	-	-	-	-	-	10,891,199	0.0%	209,715
2027	-	-	-	-	-	-	11,235,737	0.0%	201,020
2028	-	-	-	-	-	-	11,562,915	0.0%	192,366
2029	-	-	-	-	-	-	11,872,427	0.0%	183,861
2030	-	-	-	-	-	-	12,162,562	0.0%	175,555
2031	-	-	-	-	-	-	12,432,258	0.0%	167,267
2032	-	-	-	-	-	-	12,679,863	0.0%	158,971
2033	-	-	-	-	-	-	12,903,971	0.0%	150,750
2034	-	-	-	-	-	-	13,104,290	0.0%	142,586
2035	-	-	-	-	-	-	13,280,322	0.0%	134,398
2036	-	-	-	-	-	-	13,431,016	0.0%	126,196
2037	-	-	-	-	-	-	13,556,126	0.0%	118,056
2038	-	-	-	-	-	-	13,655,383	0.0%	110,010
2039	-	-	-	-	-	-	13,727,839	0.0%	102,075
2040	-	-	-	-	-	-	13,772,760	0.0%	94,251
2041	-	-	-	-	-	-	13,789,571	0.0%	86,551
2042	-	-	-	-	-	-	13,777,922	0.0%	78,977
2043	-	-	-	-	-	-	13,737,158	0.0%	71,512
2044	-	-	-	-	-	-	13,666,829	0.0%	64,150
2045	-	-	-	-	-	-	13,566,798	0.0%	56,958
2046	-	-	-	-	-	-	13,437,251	0.0%	50,006
2047	-	-	-	-	-	-	13,278,591	0.0%	43,341
2048	-	-	-	-	-	-	13,090,819	0.0%	37,034
2049	-	-	-	-	-	-	12,875,159	0.0%	31,153
2050	-	-	-	-	-	-	12,632,399	0.0%	25,764
2051	-	-	-	-	-	-	12,363,917	0.0%	20,918
2052	-	-	-	-	-	-	12,072,106	0.0%	16,639
2053	-	-	-	-	-	-	11,758,535	0.0%	12,946
2054	-	-	-	-	-	-	11,425,836	0.0%	9,840
2055	-	-	-	-	-	-	11,077,992	0.0%	7,290
2056	-	-	-	-	-	-	10,717,967	0.0%	5,270
2057	-	-	-	-	-	-	10,348,336	0.0%	3,732
2058	-	-	-	-	-	-	9,971,727	0.0%	2,602

# Individual Actuarial Valuation Results

## CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) CALIFORNIA STATE UNIVERSITY

20-Year GO Municipal Bond Rate at June 30, 2020 2.450%  
Long-Term Investment Return 6.750%  
Year Plan is Fully Funded N/A  
Single Equivalent Rate 2.450%

Present Value of Benefits \$ 25,913,942

\$ 25,913,942

FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 390,008	2.450%	0.98797	\$ 385,316	2.450%	0.98797	\$ 385,316
2022	417,919	2.450%	0.96434	403,017	2.450%	0.96434	403,017
2023	453,847	2.450%	0.94128	427,199	2.450%	0.94128	427,199
2024	490,269	2.450%	0.91877	450,446	2.450%	0.91877	450,446
2025	526,669	2.450%	0.89680	472,317	2.450%	0.89680	472,317
2026	561,701	2.450%	0.87535	491,687	2.450%	0.87535	491,687
2027	594,520	2.450%	0.85442	507,971	2.450%	0.85442	507,971
2028	624,852	2.450%	0.83399	521,119	2.450%	0.83399	521,119
2029	654,377	2.450%	0.81404	532,692	2.450%	0.81404	532,692
2030	684,567	2.450%	0.79458	543,941	2.450%	0.79458	543,941
2031	714,729	2.450%	0.77558	554,327	2.450%	0.77558	554,327
2032	745,163	2.450%	0.75703	564,110	2.450%	0.75703	564,110
2033	775,512	2.450%	0.73893	573,046	2.450%	0.73893	573,046
2034	804,692	2.450%	0.72125	580,388	2.450%	0.72125	580,388
2035	832,850	2.450%	0.70401	586,332	2.450%	0.70401	586,332
2036	860,417	2.450%	0.68717	591,253	2.450%	0.68717	591,253
2037	886,558	2.450%	0.67074	594,648	2.450%	0.67074	594,648
2038	911,346	2.450%	0.65470	596,656	2.450%	0.65470	596,656
2039	935,471	2.450%	0.63904	597,804	2.450%	0.63904	597,804
2040	958,656	2.450%	0.62376	597,970	2.450%	0.62376	597,970
2041	980,725	2.450%	0.60884	597,107	2.450%	0.60884	597,107
2042	1,001,423	2.450%	0.59428	595,128	2.450%	0.59428	595,128
2043	1,021,021	2.450%	0.58007	592,264	2.450%	0.58007	592,264
2044	1,039,276	2.450%	0.56620	588,437	2.450%	0.56620	588,437
2045	1,055,828	2.450%	0.55266	583,512	2.450%	0.55266	583,512
2046	1,070,439	2.450%	0.53944	577,440	2.450%	0.53944	577,440
2047	1,082,983	2.450%	0.52654	570,236	2.450%	0.52654	570,236
2048	1,093,916	2.450%	0.51395	562,218	2.450%	0.51395	562,218
2049	1,102,135	2.450%	0.50166	552,896	2.450%	0.50166	552,896
2050	1,108,208	2.450%	0.48966	542,648	2.450%	0.48966	542,648
2051	1,111,685	2.450%	0.47795	531,333	2.450%	0.47795	531,333
2052	1,111,727	2.450%	0.46652	518,647	2.450%	0.46652	518,647
2053	1,109,308	2.450%	0.45537	505,142	2.450%	0.45537	505,142
2054	1,103,528	2.450%	0.44448	490,493	2.450%	0.44448	490,493
2055	1,093,249	2.450%	0.43385	474,304	2.450%	0.43385	474,304
2056	1,079,685	2.450%	0.42347	457,217	2.450%	0.42347	457,217
2057	1,063,379	2.450%	0.41335	439,543	2.450%	0.41335	439,543
2067	844,105	2.450%	0.32448	273,899	2.450%	0.32448	273,899
2077	502,600	2.450%	0.25473	128,025	2.450%	0.25473	128,025
2087	152,468	2.450%	0.19997	30,488	2.450%	0.19997	30,488
2097	12,992	2.450%	0.15698	2,039	2.450%	0.15698	2,039
2107	125	2.450%	0.12323	15	2.450%	0.12323	15
2117	-	2.450%	0.09674	-	2.450%	0.09674	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 795,696	\$ 680,934	\$ 603,049	\$ 643,745
Interest on Total OPEB Liability	436,431	513,512	490,260	467,733
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(1,111,239)	(94,145)	(471,337)
Changes of Assumptions	(1,663,194)	(519,714)	751,688	585,190
Benefit Payments	(333,828)	(353,022)	(381,303)	(400,600)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (764,895)</b>	<b>\$ (789,529)</b>	<b>\$ 1,369,549</b>	<b>\$ 824,731</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 14,683,420</b>	<b>\$ 13,918,525</b>	<b>\$ 13,128,996</b>	<b>\$ 14,498,545</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 13,918,525</b>	<b>\$ 13,128,996</b>	<b>\$ 14,498,545</b>	<b>\$ 15,323,276</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 333,828	\$ 353,022	\$ 381,303	\$ 400,600
Employer Pre-Funding Contributions	-	-	-	-
Active Member Contributions	-	-	-	-
Net Investment Income	-	-	-	-
Benefit Payments	(333,828)	(353,022)	(381,303)	(400,600)
Administrative Expense	-	-	-	-
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 13,918,525</b>	<b>\$ 13,128,996</b>	<b>\$ 14,498,545</b>	<b>\$ 15,323,276</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>0.000%</b>	<b>0.000%</b>	<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 732,573</b>	<b>\$ 754,550</b>	<b>\$ 743,648</b>	<b>\$ 786,426</b>
<b>Employer Contribution</b>	<b>\$ 333,828</b>	<b>\$ 353,022</b>	<b>\$ 381,303</b>	<b>\$ 400,600</b>
<b>Percentage of ADC made by Employer</b>	<b>46%</b>	<b>47%</b>	<b>51%</b>	<b>51%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (398,745)</b>	<b>\$ (401,528)</b>	<b>\$ (362,345)</b>	<b>\$ (385,826)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Average Expected Remaining Service</b>	<b>6.864209</b>	<b>7.170774</b>	<b>7.253473</b>	<b>7.304825</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>2.850%</b>	<b>3.560%</b>	<b>3.620%</b>	<b>3.130%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.560%</b>	<b>3.620%</b>	<b>3.130%</b>	<b>2.450%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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>CALIFORNIA STATE UNIVERSITY</b>		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 603,049	\$ 643,745
Interest on the Total OPEB Liability	490,260	467,733
Current-Period Benefit Changes	-	-
Active Member Contributions	-	-
Projected Earnings on Plan Investments	-	-
Operating Expenses	-	-
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(167,947)	(232,471)
Recognition of Outflow/(Inflow) due to Assumption Changes	(211,145)	(131,035)
Recognition of Outflow/(Inflow) due to Investment Experience	-	-
<b>Net OPEB Expense</b>	<b>\$ 714,217</b>	<b>\$ 747,972</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 13,128,996</b>	<b>\$ 14,498,545</b>
OPEB Expense	714,217	747,972
Employer Contributions	(381,303)	(400,600)
Change in Outflow/(Inflow) due to Non-investment Experience	73,802	(238,866)
Change in Outflow/(Inflow) due to Assumption Changes	962,833	716,225
Change in Outflow/(Inflow) due to Investment Experience	-	-
<b>Net OPEB Liability End of Year</b>	<b>\$ 14,498,545</b>	<b>\$ 15,323,276</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (882,469)	\$ (1,121,335)
Assumption Changes	\$ (1,311,057)	\$ (996,281)
Investment Experience	\$ -	\$ -
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 648,057	\$ 1,049,506
Investment Experience	\$ -	\$ -
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.130%	2.450%
Baseline Discount Rate and Trend Rates	\$ 14,498,545	\$ 15,323,276
Increase Discount Rate by One Percentage Point	\$ 12,495,949	\$ 13,119,591
Decrease Discount Rate by One Percentage Point	\$ 17,001,133	\$ 18,094,566
Increase Trend Rate by One Percentage Point	\$ 17,249,934	\$ 17,792,403
Decrease Trend Rate by One Percentage Point	\$ 12,349,046	\$ 13,408,462

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	6.864209	\$ -	\$ (1,663,194)	6.864209	\$ (242,299)	\$ -	\$ 5.000000	\$ -
7/1/2017	\$ (1,111,239)	7.170774	\$ (154,968)	\$ (519,714)	7.170774	\$ (72,477)	\$ -	5.000000	\$ -
7/1/2018	\$ (94,145)	7.253473	\$ (12,979)	\$ 751,688	7.253473	\$ 103,631	\$ -	5.000000	\$ -
7/1/2019	\$ (471,337)	7.304825	\$ (64,524)	\$ 585,190	7.304825	\$ 80,110	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (232,471)	\$ (232,471)	\$ 183,741	\$ (314,776)	\$ (131,035)	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (232,471)	\$ (232,471)	\$ 183,741	\$ (314,776)	\$ (131,035)	\$ -	\$ -	\$ -
6/30/2022	\$ -	\$ (232,471)	\$ (232,471)	\$ 183,741	\$ (314,776)	\$ (131,035)	\$ -	\$ -	\$ -
6/30/2023	\$ -	\$ (232,471)	\$ (232,471)	\$ 183,741	\$ (281,877)	\$ (98,136)	\$ -	\$ -	\$ -
6/30/2024	\$ -	\$ (232,471)	\$ (232,471)	\$ 183,741	\$ (72,477)	\$ 111,264	\$ -	\$ -	\$ -
6/30/2025	\$ -	\$ (103,966)	\$ (103,966)	\$ 183,741	\$ (12,375)	\$ 171,366	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (67,816)	\$ (67,816)	\$ 106,381	\$ -	\$ 106,381	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ (19,669)	\$ (19,669)	\$ 24,420	\$ -	\$ 24,420	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (1,121,335)	\$ (1,121,335)	\$ 1,049,506	\$ (996,281)	\$ 53,225	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (238,866)			\$ 716,225			\$ -

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>JUDICIAL BRANCH</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	1,617	1,662
Retired Participants <sup>a</sup>	<u>1,019</u>	<u>1,066</u>
Total Participants	2,636	2,728
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 209,147	\$ 204,021
Retired Participants	<u>196,969</u>	<u>190,420</u>
Total Participants	\$ 406,116	\$ 394,441
Actuarial Accrued Liability		
Active Participants	\$ 136,439	\$ 131,797
Retired Participants	<u>196,969</u>	<u>190,420</u>
Total Participants	\$ 333,408	\$ 322,217
Actuarial Value of Assets	\$ 20,165	\$ 29,841
Unfunded Actuarial Accrued Liability	\$ 313,243	\$ 292,376
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 8,101	\$ 7,967
Administrative Expenses	33	17
Amortization of UAAL	<u>18,356</u>	<u>17,475</u>
Total ADC	\$ 26,490	\$ 25,459
Estimated Member Contributions	<u>(4,067)</u>	<u>-</u>
Net Employer ADC	\$ 22,423	\$ 25,459
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 8,517	\$ 8,924
Part B Reimbursement	1,903	2,310
Dental Claims	<u>670</u>	<u>698</u>
Total	\$ 11,090	\$ 11,932
Employer Implicit Costs	<u>2,291</u>	<u>1,594</u>
Total Employer Costs	\$ 13,381	\$ 13,526
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 650	\$ 667
Dental Claims	<u>208</u>	<u>217</u>
Total	\$ 858	\$ 884
Total Claims Costs	\$ 14,239	\$ 14,410

<sup>a</sup>Retired participants with dental only coverage, 46 as of July 1, 2019, and 46 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.



# Individual Actuarial Valuation Results

## CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) JUDICIAL BRANCH

Fiscal Year Beginning 7/1/2020  
Long-term Asset Return 6.750%  
Discount Rate 6.750%  
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
2020	\$ 20,165	\$ -	\$ 12	\$ 8,846	\$ 842	\$ 29,841	\$ 322,217	9.3%	\$ 7,967
2021	29,841	-	17	3,992	2,146	35,962	338,489	10.6%	7,658
2022	35,962	-	18	3,838	2,554	42,336	354,363	11.9%	7,364
2023	42,336	-	20	7,385	3,102	52,803	369,494	14.3%	7,086
2024	52,803	-	22	7,108	3,799	63,688	383,839	16.6%	6,815
2025	63,688	-	24	6,838	4,525	75,027	397,497	18.9%	6,547
2026	75,027	-	25	6,573	5,282	86,857	410,303	21.2%	6,281
2027	86,857	-	27	6,308	6,071	99,209	422,314	23.5%	6,010
2028	99,209	-	29	6,038	6,896	112,114	433,607	25.9%	5,742
2029	112,114	-	30	5,772	7,758	125,614	444,067	28.3%	5,476
2030	125,614	-	32	5,508	8,661	139,751	453,542	30.8%	5,209
2031	139,751	-	34	5,242	9,606	154,565	461,951	33.5%	4,944
2032	154,565	-	35	4,979	10,597	170,106	469,282	36.2%	4,675
2033	170,106	-	37	4,712	11,638	186,419	475,579	39.2%	4,404
2034	186,419	-	38	4,442	12,730	203,553	480,768	42.3%	4,143
2035	203,553	-	40	4,183	13,878	221,574	484,664	45.7%	3,887
2036	221,574	-	41	3,928	15,085	240,546	487,401	49.4%	3,633
2037	240,546	-	43	3,676	16,358	260,537	489,031	53.3%	3,377
2038	260,537	-	44	3,421	17,698	281,612	489,425	57.5%	3,122
2039	281,612	-	45	3,167	19,113	303,847	488,562	62.2%	2,869
2040	303,847	-	46	2,916	20,605	327,322	486,463	67.3%	2,622
2041	327,322	-	47	2,669	22,181	352,125	483,152	72.9%	2,377
2042	352,125	-	48	2,425	23,847	378,349	478,741	79.0%	2,137
2043	378,349	-	49	2,185	25,610	406,095	473,181	85.8%	1,906
2044	406,095	-	49	1,955	27,475	435,476	466,496	93.4%	1,685
2045	435,476	664	50	1,734	29,429	465,925	458,771	101.6%	1,475
2046	465,925	39,904	50	-	30,124	456,095	450,078	101.3%	1,280
2047	456,095	39,932	50	-	29,459	445,572	440,562	101.1%	1,098
2048	445,572	39,850	50	-	28,752	434,424	430,294	101.0%	928
2049	434,424	39,850	50	-	27,999	422,523	419,152	100.8%	771
2050	422,523	39,689	50	-	27,201	409,985	407,256	100.7%	630
2051	409,985	39,338	49	-	26,367	396,965	394,771	100.6%	506
2052	396,965	38,927	49	-	25,502	383,491	381,735	100.5%	398
2053	383,491	38,389	48	-	24,610	369,664	368,260	100.4%	307
2054	369,664	37,736	47	-	23,698	355,579	354,454	100.3%	232
2055	355,579	37,008	46	-	22,772	341,297	340,389	100.3%	171
2056	341,297	36,195	45	-	21,835	326,892	326,149	100.2%	122
2057	326,892	35,344	44	-	20,891	312,395	311,775	100.2%	86
2058	312,395	34,441	43	-	19,942	297,853	297,325	100.2%	60



# Individual Actuarial Valuation Results

## CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) JUDICIAL BRANCH

20-Year GO Municipal Bond Rate at June 30, 2020 2.450%  
Long-Term Investment Return 6.750%  
Year Plan is Fully Funded 2045  
Single Equivalent Rate 3.252%

Present Value of Benefits \$ 755,281 \$ 755,281

FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 13,526	2.450%	0.98797	\$ 13,364	3.252%	0.98413	\$ 13,312
2022	14,656	2.450%	0.96434	14,133	3.252%	0.95313	13,969
2023	16,108	2.450%	0.94128	15,162	3.252%	0.92311	14,869
2024	17,569	2.450%	0.91877	16,142	3.252%	0.89404	15,707
2025	18,891	2.450%	0.89680	16,941	3.252%	0.86588	16,357
2026	20,332	2.450%	0.87535	17,798	3.252%	0.83861	17,051
2027	21,662	2.450%	0.85442	18,508	3.252%	0.81220	17,594
2028	22,861	2.450%	0.83399	19,066	3.252%	0.78661	17,983
2029	24,128	2.450%	0.81404	19,641	3.252%	0.76184	18,382
2030	25,491	2.450%	0.79458	20,255	3.252%	0.73785	18,808
2031	26,865	2.450%	0.77558	20,836	3.252%	0.71461	19,198
2032	28,183	2.450%	0.75703	21,335	3.252%	0.69210	19,506
2033	29,386	2.450%	0.73893	21,714	3.252%	0.67030	19,697
2034	30,591	2.450%	0.72125	22,064	3.252%	0.64919	19,859
2035	31,910	2.450%	0.70401	22,465	3.252%	0.62874	20,063
2036	33,023	2.450%	0.68717	22,692	3.252%	0.60894	20,109
2037	34,010	2.450%	0.67074	22,812	3.252%	0.58976	20,058
2038	35,049	2.450%	0.65470	22,946	3.252%	0.57119	20,020
2039	36,028	2.450%	0.63904	23,023	3.252%	0.55320	19,930
2040	36,907	2.450%	0.62376	23,021	3.252%	0.53577	19,774
2041	37,687	2.450%	0.60884	22,946	3.252%	0.51890	19,556
2042	38,283	2.450%	0.59428	22,751	3.252%	0.50256	19,239
2043	38,859	2.450%	0.58007	22,541	3.252%	0.48673	18,914
2044	39,346	2.450%	0.56620	22,277	3.252%	0.47140	18,548
2045	39,689	2.450%	0.55266	21,934	3.252%	0.45655	18,120
2046	39,904	6.750%	0.51771	20,659	3.252%	0.44217	17,644
2047	39,932	6.750%	0.48498	19,366	3.252%	0.42825	17,101
2048	39,850	6.750%	0.45431	18,104	3.252%	0.41476	16,528
2049	39,850	6.750%	0.42558	16,959	3.252%	0.40169	16,007
2050	39,689	6.750%	0.39867	15,823	3.252%	0.38904	15,441
2051	39,338	6.750%	0.37346	14,691	3.252%	0.37679	14,822
2052	38,927	6.750%	0.34985	13,619	3.252%	0.36492	14,205
2053	38,389	6.750%	0.32773	12,581	3.252%	0.35343	13,568
2054	37,736	6.750%	0.30701	11,585	3.252%	0.34230	12,917
2055	37,008	6.750%	0.28759	10,643	3.252%	0.33152	12,269
2056	36,195	6.750%	0.26941	9,751	3.252%	0.32108	11,621
2057	35,344	6.750%	0.25237	8,920	3.252%	0.31096	10,991
2067	25,074	6.750%	0.13133	3,293	3.252%	0.22580	5,662
2077	12,702	6.750%	0.06834	868	3.252%	0.16396	2,083
2087	3,192	6.750%	0.03556	114	3.252%	0.11906	380
2097	199	6.750%	0.01851	4	3.252%	0.08645	17
2107	-	6.750%	0.00963	-	3.252%	0.06278	-
2117	-	6.750%	0.00501	-	3.252%	0.04558	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 21,728	\$ 19,162	\$ 16,635	\$ 17,458
Interest on Total OPEB Liability	18,121	20,340	19,448	19,272
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(36,336)	623	(10,408)
Changes of Assumptions	(47,721)	(21,827)	18,913	747
Benefit Payments	(10,339)	(9,362)	(11,534)	(10,841)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (18,211)</b>	<b>\$ (28,023)</b>	<b>\$ 44,085</b>	<b>\$ 16,228</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 507,578</b>	<b>\$ 489,367</b>	<b>\$ 461,344</b>	<b>\$ 505,429</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 489,367</b>	<b>\$ 461,344</b>	<b>\$ 505,429</b>	<b>\$ 521,657</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 10,339	\$ 9,362	\$ 11,534	\$ 10,841
Employer Pre-Funding Contributions	1,612	3,689	3,934	4,423
Active Member Contributions	1,612	3,689	3,934	4,423
Net Investment Income	160	421	1,130	842
Benefit Payments	(10,339)	(9,362)	(11,534)	(10,841)
Administrative Expense	(1)	(4)	(3)	(12)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 3,383</b>	<b>\$ 7,795</b>	<b>\$ 8,995</b>	<b>\$ 9,676</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ 3,383</b>	<b>\$ 11,170</b>	<b>\$ 20,165</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 3,383</b>	<b>\$ 11,178</b>	<b>\$ 20,165</b>	<b>\$ 29,841</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 485,984</b>	<b>\$ 450,166</b>	<b>\$ 485,264</b>	<b>\$ 491,816</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.691%</b>	<b>2.423%</b>	<b>3.990%</b>	<b>5.720%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 23,621</b>	<b>\$ 22,301</b>	<b>\$ 21,247</b>	<b>\$ 22,067</b>
<b>Employer Contribution</b>	<b>\$ 11,951</b>	<b>\$ 13,051</b>	<b>\$ 15,468</b>	<b>\$ 15,264</b>
<b>Percentage of ADC made by Employer</b>	<b>51%</b>	<b>59%</b>	<b>73%</b>	<b>69%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (11,670)</b>	<b>\$ (9,250)</b>	<b>\$ (5,779)</b>	<b>\$ (6,803)</b>
<b>Expected Return on Assets</b>	<b>\$ 115</b>	<b>\$ 510</b>	<b>\$ 1,053</b>	<b>\$ 1,654</b>
<b>Investment (Gain)/Loss</b>	<b>\$ (45)</b>	<b>\$ 89</b>	<b>\$ (77)</b>	<b>\$ 812</b>
<b>Average Expected Remaining Service</b>	<b>6.606982</b>	<b>6.745952</b>	<b>6.724931</b>	<b>6.780100</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.457%</b>	<b>4.043%</b>	<b>4.118%</b>	<b>3.724%</b>
<b>Blended Discount Rate End of Year</b>	<b>4.043%</b>	<b>4.118%</b>	<b>3.724%</b>	<b>3.252%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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>JUDICIAL BRANCH</b>		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 16,635	\$ 17,458
Interest on the Total OPEB Liability	19,448	19,272
Current-Period Benefit Changes	-	-
Active Member Contributions	(3,934)	(4,423)
Projected Earnings on Plan Investments	(1,053)	(1,654)
Operating Expenses	3	12
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(5,293)	(6,828)
Recognition of Outflow/(Inflow) due to Assumption Changes	(7,647)	(7,537)
Recognition of Outflow/(Inflow) due to Investment Experience	(6)	156
<b>Net OPEB Expense</b>	<b>\$ 18,153</b>	<b>\$ 16,456</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 450,174</b>	<b>\$ 485,264</b>
OPEB Expense	18,153	16,456
Employer Contributions	(15,468)	(15,264)
Change in Outflow/(Inflow) due to Non-investment Experience	5,916	(3,580)
Change in Outflow/(Inflow) due to Assumption Changes	26,560	8,284
Change in Outflow/(Inflow) due to Investment Experience	(71)	656
<b>Net OPEB Liability End of Year</b>	<b>\$ 485,264</b>	<b>\$ 491,816</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (25,564)	\$ (29,051)
Assumption Changes	\$ (41,407)	\$ (30,948)
Investment Experience	\$ (80)	\$ (56)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ 530	\$ 437
Assumption Changes	\$ 16,101	\$ 13,926
Investment Experience	\$ 53	\$ 685
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.724%	3.252%
Baseline Discount Rate and Trend Rates	\$ 485,264	\$ 491,816
Increase Discount Rate by One Percentage Point	\$ 416,305	\$ 419,490
Decrease Discount Rate by One Percentage Point	\$ 570,891	\$ 581,924
Increase Trend Rate by One Percentage Point	\$ 577,212	\$ 569,227
Decrease Trend Rate by One Percentage Point	\$ 412,349	\$ 430,391

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	6.606982	\$ -	\$ (47,721)	6.606982	\$ (7,223)	\$ (45)	\$ 5.000000	\$ (9)
7/1/2017	\$ (36,336)	6.745952	\$ (5,386)	\$ (21,827)	6.745952	\$ (3,236)	\$ 89	5.000000	\$ 18
7/1/2018	\$ 623	6.724931	\$ 93	\$ 18,913	6.724931	\$ 2,812	\$ (77)	5.000000	\$ (15)
7/1/2019	\$ (10,408)	6.780100	\$ (1,535)	\$ 747	6.780100	\$ 110	\$ 812	5.000000	\$ 162
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ 93	\$ (6,921)	\$ (6,828)	\$ 2,922	\$ (10,459)	\$ (7,537)	\$ 180	\$ (24)	\$ 156
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ 93	\$ (6,921)	\$ (6,828)	\$ 2,922	\$ (10,459)	\$ (7,537)	\$ 180	\$ (24)	\$ 156
6/30/2022	\$ 93	\$ (6,921)	\$ (6,828)	\$ 2,922	\$ (10,459)	\$ (7,537)	\$ 179	\$ (15)	\$ 164
6/30/2023	\$ 93	\$ (6,921)	\$ (6,828)	\$ 2,922	\$ (7,619)	\$ (4,697)	\$ 162	\$ (17)	\$ 145
6/30/2024	\$ 93	\$ (5,555)	\$ (5,462)	\$ 2,922	\$ (2,411)	\$ 511	\$ 164	\$ -	\$ 164
6/30/2025	\$ 65	\$ (1,535)	\$ (1,470)	\$ 2,151	\$ -	\$ 2,151	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (1,198)	\$ (1,198)	\$ 87	\$ -	\$ 87	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ 437	\$ (29,051)	\$ (28,614)	\$ 13,926	\$ (30,948)	\$ (17,022)	\$ 685	\$ (56)	\$ 629
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (3,580)			\$ 8,284			\$ 656

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>EXEMPT/EXCLUDED/EXECUTIVE</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	6,926	6,630
Retired Participants <sup>a</sup>	<u>4,262</u>	<u>3,873</u>
Total Participants	11,188	10,503
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 771,098	\$ 746,315
Retired Participants	<u>791,878</u>	<u>685,679</u>
Total Participants	\$ 1,562,976	\$ 1,431,994
Actuarial Accrued Liability		
Active Participants	\$ 518,577	\$ 501,475
Retired Participants	<u>791,878</u>	<u>685,679</u>
Total Participants	\$ 1,310,455	\$ 1,187,154
Actuarial Value of Assets	\$ 6,855	\$ 24,455
Unfunded Actuarial Accrued Liability	\$ 1,303,600	\$ 1,162,699
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 26,855	\$ 25,773
Administrative Expenses	139	63
Amortization of UAAL	<u>76,391</u>	<u>69,494</u>
Total ADC	\$ 103,385	\$ 95,330
Estimated Member Contributions	<u>(6,749)</u>	<u>-</u>
Net Employer ADC	\$ 96,636	\$ 95,330
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 36,152	\$ 34,256
Part B Reimbursement	7,560	7,205
Dental Claims	<u>2,804</u>	<u>2,553</u>
Total	\$ 46,516	\$ 44,014
Employer Implicit Costs	<u>9,245</u>	<u>6,288</u>
Total Employer Costs	\$ 55,761	\$ 50,302
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 2,739	\$ 2,621
Dental Claims	<u>869</u>	<u>791</u>
Total	\$ 3,608	\$ 3,412
Total Claims Costs	\$ 59,369	\$ 53,714

<sup>a</sup>Retired participants with dental only coverage, 297 as of July 1, 2019, and 278 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) EXEMPT/EXCLUDED/EXECUTIVE									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
Year Plan is Fully Funded		2050							
FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 6,855	\$ -	\$ 7	\$ 17,130	\$ 477	\$ 24,455	\$ 1,187,154	2.1%	\$ 25,773
2021	24,455	-	63	12,918	2,077	39,387	1,242,803	3.2%	24,888
2022	39,387	-	68	12,478	3,071	54,868	1,297,287	4.2%	24,091
2023	54,868	-	73	24,165	4,503	83,463	1,349,808	6.2%	23,320
2024	83,463	-	80	23,400	6,408	113,191	1,399,983	8.1%	22,531
2025	113,191	-	86	22,616	8,388	144,109	1,447,629	10.0%	21,710
2026	144,109	-	92	21,802	10,448	176,267	1,492,748	11.8%	20,894
2027	176,267	-	97	20,992	12,592	209,754	1,535,511	13.7%	20,106
2028	209,754	-	102	20,209	14,826	244,687	1,575,967	15.5%	19,327
2029	244,687	-	107	19,434	17,158	281,172	1,614,334	17.4%	18,542
2030	281,172	-	112	18,654	19,595	319,309	1,650,217	19.3%	17,764
2031	319,309	-	118	17,881	22,143	359,215	1,683,287	21.3%	16,989
2032	359,215	-	123	17,112	24,811	401,015	1,713,424	23.4%	16,210
2033	401,015	-	128	16,339	27,607	444,833	1,740,260	25.6%	15,423
2034	444,833	-	134	15,557	30,538	490,794	1,763,746	27.8%	14,640
2035	490,794	-	138	14,778	33,614	539,048	1,784,144	30.2%	13,863
2036	539,048	-	143	14,006	36,846	589,757	1,801,261	32.7%	13,083
2037	589,757	-	147	13,230	40,243	643,083	1,815,040	35.4%	12,295
2038	643,083	-	151	12,447	43,816	699,195	1,825,464	38.3%	11,498
2039	699,195	-	156	11,654	47,577	758,270	1,832,366	41.4%	10,702
2040	758,270	-	160	10,862	51,538	820,510	1,835,446	44.7%	9,902
2041	820,510	-	164	10,066	55,713	886,125	1,834,431	48.3%	9,104
2042	886,125	-	168	9,271	60,116	955,344	1,829,284	52.2%	8,316
2043	955,344	-	172	8,488	64,762	1,028,422	1,819,774	56.5%	7,540
2044	1,028,422	-	175	7,715	69,669	1,105,631	1,805,983	61.2%	6,781
2045	1,105,631	-	178	6,959	74,855	1,187,267	1,788,192	66.4%	6,046
2046	1,187,267	-	180	6,226	80,341	1,273,654	1,766,283	72.1%	5,352
2047	1,273,654	-	182	5,534	86,149	1,365,155	1,740,719	78.4%	4,706
2048	1,365,155	-	183	4,889	92,304	1,462,165	1,712,165	85.4%	4,099
2049	1,462,165	-	183	4,283	98,832	1,565,097	1,680,532	93.1%	3,533
2050	1,565,097	13,924	184	3,716	105,299	1,660,004	1,645,835	100.9%	3,010
2051	1,660,004	146,746	183	-	107,172	1,620,247	1,608,510	100.7%	2,533
2052	1,620,247	146,074	183	-	104,511	1,578,501	1,568,852	100.6%	2,097
2053	1,578,501	145,288	182	-	101,719	1,534,750	1,526,863	100.5%	1,705
2054	1,534,750	144,304	180	-	98,799	1,489,065	1,482,642	100.4%	1,363
2055	1,489,065	142,926	179	-	95,761	1,441,721	1,436,495	100.4%	1,069
2056	1,441,721	141,151	176	-	92,624	1,393,018	1,388,754	100.3%	820
2057	1,393,018	139,142	174	-	89,403	1,343,105	1,339,602	100.3%	616
2058	1,343,105	137,007	171	-	86,105	1,292,032	1,289,121	100.2%	454

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM							
DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S)							
EXEMPT/EXCLUDED/EXECUTIVE							
20-Year GO Municipal Bond Rate at June 30, 2020				2.450%			
Long-Term Investment Return				6.750%			
Year Plan is Fully Funded				2050			
Single Equivalent Rate				3.050%			
Present Value of Benefits				\$ 2,949,737		\$ 2,949,737	
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 50,302	2.450%	0.98797	\$ 49,697	3.050%	0.98509	\$ 49,552
2022	54,149	2.450%	0.96434	52,219	3.050%	0.95593	51,763
2023	58,782	2.450%	0.94128	55,331	3.050%	0.92764	54,529
2024	63,688	2.450%	0.91877	58,515	3.050%	0.90018	57,331
2025	68,598	2.450%	0.89680	61,519	3.050%	0.87354	59,923
2026	73,307	2.450%	0.87535	64,170	3.050%	0.84768	62,141
2027	77,693	2.450%	0.85442	66,383	3.050%	0.82259	63,910
2028	81,906	2.450%	0.83399	68,309	3.050%	0.79824	65,381
2029	85,765	2.450%	0.81404	69,816	3.050%	0.77462	66,435
2030	89,865	2.450%	0.79458	71,405	3.050%	0.75169	67,551
2031	94,128	2.450%	0.77558	73,003	3.050%	0.72944	68,661
2032	98,326	2.450%	0.75703	74,436	3.050%	0.70785	69,600
2033	102,686	2.450%	0.73893	75,877	3.050%	0.68690	70,535
2034	106,867	2.450%	0.72125	77,079	3.050%	0.66657	71,234
2035	110,583	2.450%	0.70401	77,851	3.050%	0.64684	71,529
2036	114,289	2.450%	0.68717	78,536	3.050%	0.62769	71,738
2037	117,832	2.450%	0.67074	79,034	3.050%	0.60911	71,773
2038	121,165	2.450%	0.65470	79,326	3.050%	0.59109	71,619
2039	124,432	2.450%	0.63904	79,517	3.050%	0.57359	71,373
2040	127,760	2.450%	0.62376	79,691	3.050%	0.55661	71,113
2041	131,099	2.450%	0.60884	79,819	3.050%	0.54014	70,812
2042	134,207	2.450%	0.59428	79,757	3.050%	0.52415	70,345
2043	137,282	2.450%	0.58007	79,633	3.050%	0.50864	69,827
2044	140,003	2.450%	0.56620	79,270	3.050%	0.49358	69,103
2045	142,191	2.450%	0.55266	78,583	3.050%	0.47897	68,106
2046	144,256	2.450%	0.53944	77,818	3.050%	0.46480	67,049
2047	145,646	2.450%	0.52654	76,688	3.050%	0.45104	65,692
2048	146,204	2.450%	0.51395	75,141	3.050%	0.43769	63,992
2049	146,693	2.450%	0.50166	73,590	3.050%	0.42473	62,306
2050	147,007	2.450%	0.48966	71,984	3.050%	0.41216	60,590
2051	146,746	6.750%	0.45870	67,313	3.050%	0.39996	58,693
2052	146,074	6.750%	0.42970	62,767	3.050%	0.38812	56,695
2053	145,288	6.750%	0.40253	58,482	3.050%	0.37664	54,721
2054	144,304	6.750%	0.37707	54,413	3.050%	0.36549	52,741
2055	142,926	6.750%	0.35323	50,486	3.050%	0.35467	50,692
2056	141,151	6.750%	0.33089	46,706	3.050%	0.34417	48,580
2057	139,142	6.750%	0.30997	43,130	3.050%	0.33399	46,471
2067	107,799	6.750%	0.16130	17,388	3.050%	0.24731	26,660
2077	63,566	6.750%	0.08394	5,336	3.050%	0.18313	11,641
2087	20,856	6.750%	0.04368	911	3.050%	0.13560	2,828
2097	2,501	6.750%	0.02273	57	3.050%	0.10041	251
2107	43	6.750%	0.01183	1	3.050%	0.07435	3
2117	-	6.750%	0.00616	-	3.050%	0.05506	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 85,390	\$ 71,649	\$ 64,676	\$ 63,622
Interest on Total OPEB Liability	65,881	76,114	72,985	74,580
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(147,520)	24,633	(154,418)
Changes of Assumptions	(262,923)	(67,124)	(38,227)	35,760
Benefit Payments	(46,707)	(47,009)	(51,792)	(46,009)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (158,359)</b>	<b>\$ (113,890)</b>	<b>\$ 72,275</b>	<b>\$ (26,465)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 2,249,404</b>	<b>\$ 2,091,045</b>	<b>\$ 1,977,155</b>	<b>\$ 2,049,430</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 2,091,045</b>	<b>\$ 1,977,155</b>	<b>\$ 2,049,430</b>	<b>\$ 2,022,965</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 46,707	\$ 47,009	\$ 51,792	\$ 46,009
Employer Pre-Funding Contributions	-	-	3,243	8,565
Active Member Contributions	-	-	3,243	8,565
Net Investment Income	-	-	370	477
Benefit Payments	(46,707)	(47,009)	(51,792)	(46,009)
Administrative Expense	-	-	(1)	(7)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 6,855</b>	<b>\$ 17,600</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 6,855</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 6,855</b>	<b>\$ 24,455</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 2,091,045</b>	<b>\$ 1,977,155</b>	<b>\$ 2,042,575</b>	<b>\$ 1,998,510</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>0.000%</b>	<b>0.334%</b>	<b>1.209%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 93,212</b>	<b>\$ 96,008</b>	<b>\$ 92,803</b>	<b>\$ 94,820</b>
<b>Employer Contribution</b>	<b>\$ 46,707</b>	<b>\$ 47,009</b>	<b>\$ 55,035</b>	<b>\$ 54,574</b>
<b>Percentage of ADC made by Employer</b>	<b>50%</b>	<b>49%</b>	<b>59%</b>	<b>58%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (46,505)</b>	<b>\$ (48,999)</b>	<b>\$ (37,768)</b>	<b>\$ (40,246)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 223</b>	<b>\$ 1,031</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (147)</b>	<b>\$ 554</b>
<b>Average Expected Remaining Service</b>	<b>6.958847</b>	<b>7.188319</b>	<b>7.271707</b>	<b>7.535851</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>2.850%</b>	<b>3.560%</b>	<b>3.620%</b>	<b>3.568%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.560%</b>	<b>3.620%</b>	<b>3.568%</b>	<b>3.050%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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>EXEMPT/EXCLUDED/EXECUTIVE</b>		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 64,676	\$ 63,622
Interest on the Total OPEB Liability	72,985	74,580
Current-Period Benefit Changes	-	-
Active Member Contributions	(3,243)	(8,565)
Projected Earnings on Plan Investments	(223)	(1,031)
Operating Expenses	1	7
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(17,134)	(37,625)
Recognition of Outflow/(Inflow) due to Assumption Changes	(52,378)	(47,633)
Recognition of Outflow/(Inflow) due to Investment Experience	(29)	82
<b>Net OPEB Expense</b>	<b>\$ 64,655</b>	<b>\$ 43,437</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 1,977,155</b>	<b>\$ 2,042,575</b>
OPEB Expense	64,655	43,437
Employer Contributions	(55,035)	(54,574)
Change in Outflow/(Inflow) due to Non-investment Experience	41,767	(116,793)
Change in Outflow/(Inflow) due to Assumption Changes	14,151	83,393
Change in Outflow/(Inflow) due to Investment Experience	(118)	472
<b>Net OPEB Liability End of Year</b>	<b>\$ 2,042,575</b>	<b>\$ 1,998,510</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (106,476)	\$ (219,881)
Assumption Changes	\$ (230,992)	\$ (178,614)
Investment Experience	\$ (118)	\$ (89)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ 21,245	\$ 17,857
Assumption Changes	\$ -	\$ 31,015
Investment Experience	\$ -	\$ 443
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.568%	3.050%
Baseline Discount Rate and Trend Rates	\$ 2,042,575	\$ 1,998,510
Increase Discount Rate by One Percentage Point	\$ 1,754,669	\$ 1,703,230
Decrease Discount Rate by One Percentage Point	\$ 2,403,591	\$ 2,370,905
Increase Trend Rate by One Percentage Point	\$ 2,432,736	\$ 2,325,757
Decrease Trend Rate by One Percentage Point	\$ 1,737,692	\$ 1,743,950

# 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		6/30/2020							
Measurement Date		6/30/2020							
	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	\$ -	6.958847	\$ -	\$ (262,923)	6.958847	\$ (37,783)	\$ -	\$ 5.000000	\$ -
7/1/2017	\$ (147,520)	7.188319	\$ (20,522)	\$ (67,124)	7.188319	\$ (9,338)	\$ -	5.000000	\$ -
7/1/2018	\$ 24,633	7.271707	\$ 3,388	\$ (38,227)	7.271707	\$ (5,257)	\$ (147)	5.000000	\$ (29)
7/1/2019	\$ (154,418)	7.535851	\$ (20,491)	\$ 35,760	7.535851	\$ 4,745	\$ 554	5.000000	\$ 111
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ 3,388	\$ (41,013)	\$ (37,625)	\$ 4,745	\$ (52,378)	\$ (47,633)	\$ 111	\$ (29)	\$ 82
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ 3,388	\$ (41,013)	\$ (37,625)	\$ 4,745	\$ (52,378)	\$ (47,633)	\$ 111	\$ (29)	\$ 82
6/30/2022	\$ 3,388	\$ (41,013)	\$ (37,625)	\$ 4,745	\$ (52,378)	\$ (47,633)	\$ 111	\$ (29)	\$ 82
6/30/2023	\$ 3,388	\$ (41,013)	\$ (37,625)	\$ 4,745	\$ (50,820)	\$ (46,075)	\$ 111	\$ (31)	\$ 80
6/30/2024	\$ 3,388	\$ (41,013)	\$ (37,625)	\$ 4,745	\$ (14,595)	\$ (9,850)	\$ 110	\$ -	\$ 110
6/30/2025	\$ 3,388	\$ (24,357)	\$ (20,969)	\$ 4,745	\$ (7,015)	\$ (2,270)	\$ -	\$ -	\$ -
6/30/2026	\$ 917	\$ (20,491)	\$ (19,574)	\$ 4,745	\$ (1,428)	\$ 3,317	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ (10,981)	\$ (10,981)	\$ 2,545	\$ -	\$ 2,545	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ 17,857	\$ (219,881)	\$ (202,024)	\$ 31,015	\$ (178,614)	\$ (147,599)	\$ 443	\$ (89)	\$ 354
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (116,793)			\$ 83,393			\$ 472

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>OTHER</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	4,281	4,283
Retired Participants <sup>a</sup>	<u>12,204</u>	<u>11,146</u>
Total Participants	16,485	15,429
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 515,706	\$ 484,850
Retired Participants	<u>1,425,899</u>	<u>1,181,814</u>
Total Participants	\$ 1,941,605	\$ 1,666,664
Actuarial Accrued Liability		
Active Participants	\$ 328,168	\$ 312,622
Retired Participants	<u>1,425,899</u>	<u>1,181,814</u>
Total Participants	\$ 1,754,067	\$ 1,494,436
Actuarial Value of Assets	\$ -	\$ -
Unfunded Actuarial Accrued Liability	\$ 1,754,067	\$ 1,494,436
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 20,836	\$ 19,153
Administrative Expenses	358	151
Amortization of UAAL	<u>170,200</u>	<u>154,197</u>
Total ADC	\$ 191,394	\$ 173,501
Estimated Member Contributions	-	-
Net Employer ADC	\$ 191,394	\$ 173,501
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 73,846	\$ 68,190
Part B Reimbursement	23,326	23,175
Dental Claims	<u>6,655</u>	<u>6,128</u>
Total	\$ 103,827	\$ 97,493
Employer Implicit Costs	<u>39,455</u>	<u>22,977</u>
Total Employer Costs	\$ 143,282	\$ 120,470
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 1,954	\$ 2,004
Dental Claims	<u>2,058</u>	<u>1,900</u>
Total	\$ 4,012	\$ 3,904
Total Claims Costs	\$ 147,294	\$ 124,374

<sup>a</sup>Retired participants with dental only coverage, 805 as of July 1, 2019, and 746 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) OTHER									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
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
2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,494,436	0.0%	\$ 19,153
2021	-	-	-	-	-	-	1,491,221	0.0%	18,061
2022	-	-	-	-	-	-	1,487,113	0.0%	17,367
2023	-	-	-	-	-	-	1,480,688	0.0%	16,665
2024	-	-	-	-	-	-	1,472,210	0.0%	15,960
2025	-	-	-	-	-	-	1,462,025	0.0%	15,316
2026	-	-	-	-	-	-	1,450,532	0.0%	14,660
2027	-	-	-	-	-	-	1,438,250	0.0%	13,987
2028	-	-	-	-	-	-	1,425,370	0.0%	13,358
2029	-	-	-	-	-	-	1,412,066	0.0%	12,710
2030	-	-	-	-	-	-	1,398,174	0.0%	12,044
2031	-	-	-	-	-	-	1,383,552	0.0%	11,413
2032	-	-	-	-	-	-	1,368,167	0.0%	10,868
2033	-	-	-	-	-	-	1,352,267	0.0%	10,330
2034	-	-	-	-	-	-	1,335,906	0.0%	9,735
2035	-	-	-	-	-	-	1,318,750	0.0%	9,173
2036	-	-	-	-	-	-	1,300,842	0.0%	8,657
2037	-	-	-	-	-	-	1,282,233	0.0%	8,119
2038	-	-	-	-	-	-	1,262,986	0.0%	7,543
2039	-	-	-	-	-	-	1,243,051	0.0%	6,972
2040	-	-	-	-	-	-	1,222,369	0.0%	6,468
2041	-	-	-	-	-	-	1,201,052	0.0%	6,019
2042	-	-	-	-	-	-	1,179,428	0.0%	5,599
2043	-	-	-	-	-	-	1,157,727	0.0%	5,207
2044	-	-	-	-	-	-	1,135,732	0.0%	4,826
2045	-	-	-	-	-	-	1,113,476	0.0%	4,449
2046	-	-	-	-	-	-	1,090,976	0.0%	4,073
2047	-	-	-	-	-	-	1,068,094	0.0%	3,701
2048	-	-	-	-	-	-	1,044,611	0.0%	3,337
2049	-	-	-	-	-	-	1,020,414	0.0%	2,969
2050	-	-	-	-	-	-	995,392	0.0%	2,598
2051	-	-	-	-	-	-	969,371	0.0%	2,232
2052	-	-	-	-	-	-	942,403	0.0%	1,874
2053	-	-	-	-	-	-	914,402	0.0%	1,538
2054	-	-	-	-	-	-	885,443	0.0%	1,233
2055	-	-	-	-	-	-	855,973	0.0%	961
2056	-	-	-	-	-	-	826,021	0.0%	728
2057	-	-	-	-	-	-	795,880	0.0%	535
2058	-	-	-	-	-	-	766,025	0.0%	383

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM							
DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S)							
OTHER							
20-Year GO Municipal Bond Rate at June 30, 2020				2.450%			
Long-Term Investment Return				6.750%			
Year Plan is Fully Funded				N/A			
Single Equivalent Rate				2.450%			
Present Value of Benefits				\$ 3,180,266		\$ 3,180,266	
FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 120,470	2.450%	0.98797	\$ 119,021	2.450%	0.98797	\$ 119,021
2022	119,999	2.450%	0.96434	115,721	2.450%	0.96434	115,721
2023	121,256	2.450%	0.94128	114,136	2.450%	0.94128	114,136
2024	122,098	2.450%	0.91877	112,180	2.450%	0.91877	112,180
2025	122,470	2.450%	0.89680	109,831	2.450%	0.89680	109,831
2026	122,407	2.450%	0.87535	107,149	2.450%	0.87535	107,149
2027	121,741	2.450%	0.85442	104,018	2.450%	0.85442	104,018
2028	120,826	2.450%	0.83399	100,768	2.450%	0.83399	100,768
2029	119,746	2.450%	0.81404	97,479	2.450%	0.81404	97,479
2030	118,780	2.450%	0.79458	94,380	2.450%	0.79458	94,380
2031	117,891	2.450%	0.77558	91,433	2.450%	0.77558	91,433
2032	117,025	2.450%	0.75703	88,591	2.450%	0.75703	88,591
2033	115,957	2.450%	0.73893	85,684	2.450%	0.73893	85,684
2034	114,811	2.450%	0.72125	82,808	2.450%	0.72125	82,808
2035	113,899	2.450%	0.70401	80,185	2.450%	0.70401	80,185
2036	112,928	2.450%	0.68717	77,601	2.450%	0.68717	77,601
2037	111,905	2.450%	0.67074	75,059	2.450%	0.67074	75,059
2038	110,753	2.450%	0.65470	72,510	2.450%	0.65470	72,510
2039	109,568	2.450%	0.63904	70,019	2.450%	0.63904	70,019
2040	108,401	2.450%	0.62376	67,616	2.450%	0.62376	67,616
2041	107,145	2.450%	0.60884	65,234	2.450%	0.60884	65,234
2042	105,589	2.450%	0.59428	62,750	2.450%	0.59428	62,750
2043	103,818	2.450%	0.58007	60,222	2.450%	0.58007	60,222
2044	102,282	2.450%	0.56620	57,912	2.450%	0.56620	57,912
2045	100,707	2.450%	0.55266	55,656	2.450%	0.55266	55,656
2046	99,101	2.450%	0.53944	53,459	2.450%	0.53944	53,459
2047	97,613	2.450%	0.52654	51,397	2.450%	0.52654	51,397
2048	96,318	2.450%	0.51395	49,503	2.450%	0.51395	49,503
2049	95,100	2.450%	0.50166	47,708	2.450%	0.50166	47,708
2050	93,940	2.450%	0.48966	45,999	2.450%	0.48966	45,999
2051	92,889	2.450%	0.47795	44,397	2.450%	0.47795	44,397
2052	91,729	2.450%	0.46652	42,794	2.450%	0.46652	42,794
2053	90,598	2.450%	0.45537	41,255	2.450%	0.45537	41,255
2054	89,350	2.450%	0.44448	39,714	2.450%	0.44448	39,714
2055	87,639	2.450%	0.43385	38,022	2.450%	0.43385	38,022
2056	85,899	2.450%	0.42347	36,376	2.450%	0.42347	36,376
2057	83,885	2.450%	0.41335	34,673	2.450%	0.41335	34,673
2067	61,248	2.450%	0.32448	19,874	2.450%	0.32448	19,874
2077	42,762	2.450%	0.25473	10,893	2.450%	0.25473	10,893
2087	18,090	2.450%	0.19997	3,617	2.450%	0.19997	3,617
2097	2,255	2.450%	0.15698	354	2.450%	0.15698	354
2107	29	2.450%	0.12323	4	2.450%	0.12323	4
2117	-	2.450%	0.09674	-	2.450%	0.09674	-

## 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				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 64,873	\$ 55,285	\$ 48,033	\$ 52,139
Interest on Total OPEB Liability	82,194	94,010	86,636	80,058
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(201,879)	52,984	(193,729)
Changes of Assumptions	(243,150)	(43,635)	111,835	(1,952)
Benefit Payments	(135,079)	(131,602)	(165,439)	(112,102)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (231,162)</b>	<b>\$ (227,821)</b>	<b>\$ 134,049</b>	<b>\$ (175,586)</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 2,886,186</b>	<b>\$ 2,655,024</b>	<b>\$ 2,427,203</b>	<b>\$ 2,561,252</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 2,655,024</b>	<b>\$ 2,427,203</b>	<b>\$ 2,561,252</b>	<b>\$ 2,385,666</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 135,079	\$ 131,602	\$ 165,439	\$ 112,102
Employer Pre-Funding Contributions	-	-	-	-
Active Member Contributions	-	-	-	-
Net Investment Income	-	-	-	-
Benefit Payments	(135,079)	(131,602)	(165,439)	(112,102)
Administrative Expense	-	-	-	-
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 2,655,024</b>	<b>\$ 2,427,203</b>	<b>\$ 2,561,252</b>	<b>\$ 2,385,666</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>0.000%</b>	<b>0.000%</b>	<b>0.000%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 174,233</b>	<b>\$ 179,460</b>	<b>\$ 177,293</b>	<b>\$ 191,394</b>
<b>Employer Contribution</b>	<b>\$ 135,079</b>	<b>\$ 131,602</b>	<b>\$ 165,439</b>	<b>\$ 112,102</b>
<b>Percentage of ADC made by Employer</b>	<b>78%</b>	<b>73%</b>	<b>93%</b>	<b>59%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (39,154)</b>	<b>\$ (47,858)</b>	<b>\$ (11,854)</b>	<b>\$ (79,292)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Average Expected Remaining Service</b>	<b>2.607026</b>	<b>2.749775</b>	<b>2.965309</b>	<b>3.141965</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>2.850%</b>	<b>3.560%</b>	<b>3.620%</b>	<b>3.130%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.560%</b>	<b>3.620%</b>	<b>3.130%</b>	<b>2.450%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</b>

## Individual Actuarial Valuation Results

GASB NOS. 74 AND 75 DISCLOSURES		
OPEB EXPENSES AND NET OPEB LIABILITY SENSITIVITY (\$ IN 000'S)		
OTHER		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 48,033	\$ 52,139
Interest on the Total OPEB Liability	86,636	80,058
Current-Period Benefit Changes	-	-
Active Member Contributions	-	-
Projected Earnings on Plan Investments	-	-
Operating Expenses	-	-
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(55,549)	(98,836)
Recognition of Outflow/(Inflow) due to Assumption Changes	(34,771)	25,196
Recognition of Outflow/(Inflow) due to Investment Experience	-	-
<b>Net OPEB Expense</b>	<b>\$ 44,349</b>	<b>\$ 58,557</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 2,427,203</b>	<b>\$ 2,561,252</b>
OPEB Expense	44,349	58,557
Employer Contributions	(165,439)	(112,102)
Change in Outflow/(Inflow) due to Non-investment Experience	108,533	(94,893)
Change in Outflow/(Inflow) due to Assumption Changes	146,606	(27,148)
Change in Outflow/(Inflow) due to Investment Experience	-	-
<b>Net OPEB Liability End of Year</b>	<b>\$ 2,561,252</b>	<b>\$ 2,385,666</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (55,045)	\$ (132,070)
Assumption Changes	\$ (11,897)	\$ (1,331)
Investment Experience	\$ -	\$ -
<b>Deferred Outflows</b>		
Non-investment Experience	\$ 35,116	\$ 17,248
Assumption Changes	\$ 74,121	\$ 36,407
Investment Experience	\$ -	\$ -
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.130%	2.450%
Baseline Discount Rate and Trend Rates	\$ 2,561,252	\$ 2,385,666
Increase Discount Rate by One Percentage Point	\$ 2,282,730	\$ 2,110,303
Decrease Discount Rate by One Percentage Point	\$ 2,900,652	\$ 2,723,652
Increase Trend Rate by One Percentage Point	\$ 2,902,686	\$ 2,664,475
Decrease Trend Rate by One Percentage Point	\$ 2,283,935	\$ 2,160,659

# 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	6/30/2020								
Measurement Date	6/30/2020								
	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	\$ -
7/1/2017	\$ (201,879)	2.749775	\$ (73,417)	\$ (43,635)	2.749775	\$ (15,869)	\$ -	5.000000	\$ -
7/1/2018	\$ 52,984	2.965309	\$ 17,868	\$ 111,835	2.965309	\$ 37,714	\$ -	5.000000	\$ -
7/1/2019	\$ (193,729)	3.141965	\$ (61,659)	\$ (1,952)	3.141965	\$ (621)	\$ -	5.000000	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ 17,868	\$ (116,704)	\$ (98,836)	\$ 37,714	\$ (12,518)	\$ 25,196	\$ -	\$ -	\$ -
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ 17,248	\$ (61,659)	\$ (44,411)	\$ 36,407	\$ (621)	\$ 35,786	\$ -	\$ -	\$ -
6/30/2022	\$ -	\$ (61,659)	\$ (61,659)	\$ -	\$ (621)	\$ (621)	\$ -	\$ -	\$ -
6/30/2023	\$ -	\$ (8,752)	\$ (8,752)	\$ -	\$ (89)	\$ (89)	\$ -	\$ -	\$ -
6/30/2024	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2025	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ 17,248	\$ (132,070)	\$ (114,822)	\$ 36,407	\$ (1,331)	\$ 35,076	\$ -	\$ -	\$ -
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (94,893)			\$ (27,148)			\$ -

## Individual Actuarial Valuation Results

<b>CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM</b> <b>FULL-FUNDING ACTUARIAL VALUATION (\$ IN 000'S)</b> <b>6.75% AT JULY 1, 2019 AND 6.75% AT JULY 1, 2020</b> <b>SERVICE EMPLOYEES INTERNATIONAL UNION (SEIU)</b>		
	<b>July 1, 2019</b>	<b>July 1, 2020</b>
Number of Participants Covered		
Active Participants	112,123	113,525
Retired Participants <sup>a</sup>	<u>70,106</u>	<u>72,935</u>
Total Participants	182,229	186,460
Actuarial Present Value of Projected Benefits		
Active Participants	\$ 13,333,227	\$ 12,560,704
Retired Participants	<u>11,447,335</u>	<u>11,090,145</u>
Total Participants	\$ 24,780,562	\$ 23,650,849
Actuarial Accrued Liability		
Active Participants	\$ 8,766,373	\$ 8,318,696
Retired Participants	<u>11,447,335</u>	<u>11,090,145</u>
Total Participants	\$ 20,213,708	\$ 19,408,841
Actuarial Value of Assets	\$ 151,612	\$ 509,722
Unfunded Actuarial Accrued Liability	\$ 20,062,096	\$ 18,899,119
Net Employer ADC for FYE	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost	\$ 488,072	\$ 453,699
Administrative Expenses	2,052	1,042
Amortization of UAAL	<u>1,175,638</u>	<u>1,129,590</u>
Total ADC	\$ 1,665,762	\$ 1,584,331
Estimated Member Contributions	<u>(122,531)</u>	<u>-</u>
Net Employer ADC	\$ 1,543,231	\$ 1,584,331
Expected Claim Costs for FYE <sup>b</sup>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Employer Explicit Costs		
Medical and Rx Claims	\$ 533,672	\$ 556,581
Part B Reimbursement	110,695	124,580
Dental Claims	<u>42,944</u>	<u>44,490</u>
Total	\$ 687,311	\$ 725,651
Employer Implicit Costs	<u>133,610</u>	<u>107,612</u>
Total Employer Costs	\$ 820,921	\$ 833,263
Retiree Share of Claim Costs		
Medical and Rx Claims	\$ 29,134	\$ 29,291
Dental Claims	<u>13,156</u>	<u>13,653</u>
Total	\$ 42,290	\$ 42,944
Total Claims Costs	\$ 863,211	\$ 876,207

<sup>a</sup>Retired participants with dental only coverage, 5,258 as of July 1, 2019, and 5,420 as of July 1, 2020, are excluded from the above counts but are reflected in the actuarial valuation.

<sup>b</sup>For purposes of financial reporting, employer explicit and implicit costs will be updated based on actual experience and allocation methodology during each respective reporting period.

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM FULL-FUNDING PROJECTIONS BASED ON JULY 1, 2020, ACTUARIAL VALUATION (\$ IN 000'S) SERVICE EMPLOYEES INTERNATIONAL UNION (SEIU)									
Fiscal Year Beginning		7/1/2020							
Long-term Asset Return		6.750%							
Discount Rate		6.750%							
Year Plan is Fully Funded		2049							
FYE	Assets (bo)	Disbursements/ Benefits	Administrative Expenses	Pre-Fund Contribution	Investment Income	Assets (eo)	Accrued Liability (eo)	Funded Ratio	Normal Cost
2020	\$ 151,612	\$ -	\$ 148	\$ 348,470	\$ 9,788	\$ 509,722	\$ 19,408,841	2.6%	\$ 453,699
2021	509,722	-	1,042	227,370	41,920	777,970	20,341,905	3.8%	438,619
2022	777,970	-	1,112	439,731	67,075	1,283,664	21,263,880	6.0%	424,269
2023	1,283,664	-	1,207	425,476	100,733	1,808,666	22,153,653	8.2%	409,995
2024	1,808,666	-	1,307	411,301	135,696	2,354,356	23,006,321	10.2%	395,504
2025	2,354,356	-	1,406	396,910	172,049	2,921,909	23,819,161	12.3%	380,802
2026	2,921,909	-	1,504	382,306	209,871	3,512,582	24,590,043	14.3%	365,980
2027	3,512,582	-	1,599	367,579	249,250	4,127,812	25,318,515	16.3%	351,130
2028	4,127,812	-	1,689	352,819	290,285	4,769,227	26,005,874	18.3%	336,335
2029	4,769,227	-	1,777	338,111	333,089	5,438,650	26,651,226	20.4%	321,650
2030	5,438,650	-	1,864	323,514	377,787	6,138,087	27,252,203	22.5%	307,064
2031	6,138,087	-	1,952	309,015	424,515	6,869,665	27,805,950	24.7%	292,540
2032	6,869,665	-	2,038	294,578	473,415	7,635,620	28,310,145	27.0%	278,063
2033	7,635,620	-	2,124	280,186	524,636	8,438,318	28,762,122	29.3%	263,634
2034	8,438,318	-	2,209	265,843	578,339	9,280,291	29,158,608	31.8%	249,244
2035	9,280,291	-	2,293	251,538	634,695	10,164,231	29,496,813	34.5%	234,911
2036	10,164,231	-	2,376	237,287	693,885	11,093,027	29,774,393	37.3%	220,662
2037	11,093,027	-	2,455	223,118	756,105	12,069,795	29,989,843	40.2%	206,525
2038	12,069,795	-	2,532	209,057	821,568	13,097,888	30,141,669	43.5%	192,542
2039	13,097,888	-	2,606	195,148	890,500	14,180,930	30,227,332	46.9%	178,669
2040	14,180,930	-	2,678	181,347	963,145	15,322,744	30,244,201	50.7%	164,874
2041	15,322,744	-	2,748	167,622	1,039,759	16,527,377	30,189,986	54.7%	151,199
2042	16,527,377	-	2,813	154,012	1,120,618	17,799,194	30,063,434	59.2%	137,650
2043	17,799,194	-	2,875	140,525	1,206,016	19,142,860	29,862,696	64.1%	124,260
2044	19,142,860	-	2,931	127,191	1,296,268	20,563,388	29,587,793	69.5%	111,132
2045	20,563,388	-	2,979	114,111	1,391,718	22,066,238	29,240,598	75.5%	98,372
2046	22,066,238	-	3,020	101,392	1,492,737	23,657,347	28,822,538	82.1%	86,074
2047	23,657,347	-	3,052	89,126	1,599,729	25,343,150	28,336,734	89.4%	74,339
2048	25,343,150	-	3,075	77,414	1,713,131	27,130,620	27,786,989	97.6%	63,269
2049	27,130,620	1,566,439	3,087	66,357	1,781,413	27,408,864	27,178,064	100.8%	52,964
2050	27,408,864	2,470,525	3,088	-	1,767,977	26,703,228	26,516,339	100.7%	43,546
2051	26,703,228	2,463,031	3,079	-	1,720,596	25,957,714	25,807,663	100.6%	35,082
2052	25,957,714	2,445,772	3,057	-	1,670,847	25,179,732	25,059,968	100.5%	27,628
2053	25,179,732	2,418,620	3,023	-	1,619,236	24,377,325	24,281,923	100.4%	21,234
2054	24,377,325	2,384,394	2,980	-	1,566,211	23,556,162	23,479,913	100.3%	15,913
2055	23,556,162	2,341,515	2,927	-	1,512,208	22,723,928	22,662,415	100.3%	11,626
2056	22,723,928	2,291,919	2,865	-	1,457,681	21,886,825	21,836,415	100.2%	8,301
2057	21,886,825	2,238,337	2,798	-	1,402,957	21,048,647	21,006,491	100.2%	5,831
2058	21,048,647	2,181,169	2,726	-	1,348,281	20,213,033	20,176,990	100.2%	4,050

# Individual Actuarial Valuation Results

## CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM DEVELOPMENT OF GASB NOS. 74 AND 75 SINGLE EQUIVALENT DISCOUNT RATE (\$ IN 000'S) SERVICE EMPLOYEES INTERNATIONAL UNION (SEIU)

20-Year GO Municipal Bond Rate at June 30, 2020 2.450%  
Long-Term Investment Return 6.750%  
Year Plan is Fully Funded 2049  
Single Equivalent Rate 3.077%

Present Value of Benefits \$ 48,097,765 \$ 48,097,765

FYE	Net Employer Benefits	Cross-over Investment Return	Discount Factor	Discounted Benefit Payment	Single Equivalent Return	Discount Factor	Discounted Benefit Payment
2021	\$ 833,263	2.450%	0.98797	\$ 823,239	3.077%	0.98496	\$ 820,731
2022	889,345	2.450%	0.96434	857,634	3.077%	0.95555	849,817
2023	965,912	2.450%	0.94128	909,196	3.077%	0.92703	895,426
2024	1,045,221	2.450%	0.91877	960,321	3.077%	0.89935	940,021
2025	1,124,489	2.450%	0.89680	1,008,443	3.077%	0.87250	981,118
2026	1,203,012	2.450%	0.87535	1,053,063	3.077%	0.84645	1,018,293
2027	1,279,091	2.450%	0.85442	1,092,883	3.077%	0.82118	1,050,367
2028	1,351,141	2.450%	0.83399	1,126,837	3.077%	0.79667	1,076,409
2029	1,421,392	2.450%	0.81404	1,157,077	3.077%	0.77288	1,098,569
2030	1,491,355	2.450%	0.79458	1,184,997	3.077%	0.74981	1,118,231
2031	1,561,241	2.450%	0.77558	1,210,861	3.077%	0.72742	1,135,684
2032	1,630,397	2.450%	0.75703	1,234,258	3.077%	0.70571	1,150,582
2033	1,698,890	2.450%	0.73893	1,255,353	3.077%	0.68464	1,163,125
2034	1,767,231	2.450%	0.72125	1,274,623	3.077%	0.66420	1,173,793
2035	1,834,673	2.450%	0.70401	1,291,622	3.077%	0.64437	1,182,207
2036	1,900,636	2.450%	0.68717	1,306,061	3.077%	0.62513	1,188,149
2037	1,964,195	2.450%	0.67074	1,317,459	3.077%	0.60647	1,191,224
2038	2,025,258	2.450%	0.65470	1,325,932	3.077%	0.58836	1,191,588
2039	2,084,765	2.450%	0.63904	1,332,250	3.077%	0.57080	1,189,980
2040	2,142,634	2.450%	0.62376	1,336,487	3.077%	0.55376	1,186,499
2041	2,198,294	2.450%	0.60884	1,338,414	3.077%	0.53723	1,180,979
2042	2,250,650	2.450%	0.59428	1,337,521	3.077%	0.52119	1,173,008
2043	2,300,202	2.450%	0.58007	1,334,280	3.077%	0.50563	1,163,044
2044	2,345,051	2.450%	0.56620	1,327,765	3.077%	0.49053	1,150,322
2045	2,383,521	2.450%	0.55266	1,317,273	3.077%	0.47589	1,134,287
2046	2,416,260	2.450%	0.53944	1,303,433	3.077%	0.46168	1,115,538
2047	2,441,832	2.450%	0.52654	1,285,727	3.077%	0.44790	1,093,688
2048	2,459,885	2.450%	0.51395	1,264,258	3.077%	0.43452	1,068,881
2049	2,469,827	2.450%	0.50166	1,239,012	3.077%	0.42155	1,041,161
2050	2,470,525	6.750%	0.46994	1,160,995	3.077%	0.40897	1,010,363
2051	2,463,031	6.750%	0.44022	1,084,285	3.077%	0.39676	977,226
2052	2,445,772	6.750%	0.41239	1,008,606	3.077%	0.38491	941,408
2053	2,418,620	6.750%	0.38631	934,340	3.077%	0.37342	903,164
2054	2,384,394	6.750%	0.36188	862,874	3.077%	0.36227	863,801
2055	2,341,515	6.750%	0.33900	793,777	3.077%	0.35146	822,943
2056	2,291,919	6.750%	0.31757	727,835	3.077%	0.34096	781,464
2057	2,238,337	6.750%	0.29749	665,873	3.077%	0.33079	740,410
2067	1,696,231	6.750%	0.15481	262,586	3.077%	0.24430	414,382
2077	997,523	6.750%	0.08056	80,358	3.077%	0.18042	179,973
2087	289,184	6.750%	0.04192	12,123	3.077%	0.13325	38,533
2097	22,041	6.750%	0.02181	481	3.077%	0.09841	2,169
2107	271	6.750%	0.01135	3	3.077%	0.07268	20
2117	4	6.750%	0.00591	-	3.077%	0.05367	-

## 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) SERVICE EMPLOYEES INTERNATIONAL UNION (SEIU)				
Fiscal Year Ending	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
<b>Total OPEB Liability</b>				
Service Cost	\$ 1,378,943	\$ 1,200,926	\$ 1,078,364	\$ 1,116,519
Interest on Total OPEB Liability	1,134,584	1,275,886	1,201,673	1,162,741
Changes of Benefit Terms	-	-	-	-
Difference between Expected and Actual Experience	-	(2,703,574)	(525,007)	(720,036)
Changes of Assumptions	(3,327,962)	(1,136,147)	1,213,332	480,992
Benefit Payments	(700,957)	(821,018)	(856,494)	(910,765)
<b>Net Change in Total OPEB Liability</b>	<b>\$ (1,515,392)</b>	<b>\$ (2,183,927)</b>	<b>\$ 2,111,868</b>	<b>\$ 1,129,451</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 33,184,807</b>	<b>\$ 31,669,415</b>	<b>\$ 29,485,488</b>	<b>\$ 31,597,356</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 31,669,415</b>	<b>\$ 29,485,488</b>	<b>\$ 31,597,356</b>	<b>\$ 32,726,807</b>
<b>Plan Fiduciary Net Position</b>				
Employer PayGO Contributions	\$ 700,957	\$ 821,018	\$ 856,494	\$ 910,765
Employer Pre-Funding Contributions	-	-	71,712	174,235
Active Member Contributions	-	-	71,712	174,235
Net Investment Income	-	-	8,202	9,788
Benefit Payments	(700,957)	(821,018)	(856,494)	(910,765)
Administrative Expense	-	-	(14)	(148)
Other	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 151,612</b>	<b>\$ 358,110</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 151,612</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 151,612</b>	<b>\$ 509,722</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>\$ 31,669,415</b>	<b>\$ 29,485,488</b>	<b>\$ 31,445,744</b>	<b>\$ 32,217,085</b>
<b>Plan Fiduciary Net Position as a Percentage Total OPEB Liability</b>	<b>0.000%</b>	<b>0.000%</b>	<b>0.480%</b>	<b>1.558%</b>
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$ 1,569,195</b>	<b>\$ 1,616,271</b>	<b>\$ 1,525,833</b>	<b>\$ 1,491,527</b>
<b>Employer Contribution</b>	<b>\$ 700,957</b>	<b>\$ 821,018</b>	<b>\$ 928,206</b>	<b>\$ 1,085,000</b>
<b>Percentage of ADC made by Employer</b>	<b>45%</b>	<b>51%</b>	<b>61%</b>	<b>73%</b>
<b>Contribution Excess/(Shortfall)</b>	<b>\$ (868,238)</b>	<b>\$ (795,253)</b>	<b>\$ (597,627)</b>	<b>\$ (406,527)</b>
<b>Expected Return on Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 4,934</b>	<b>\$ 21,798</b>
<b>Investment (Gain)/Loss</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (3,268)</b>	<b>\$ 12,010</b>
<b>Average Expected Remaining Service</b>	<b>6.774713</b>	<b>7.091438</b>	<b>7.220061</b>	<b>7.249365</b>
<b>Blended Discount Rate Beginning of Year</b>	<b>3.316%</b>	<b>3.930%</b>	<b>3.987%</b>	<b>3.604%</b>
<b>Blended Discount Rate End of Year</b>	<b>3.930%</b>	<b>3.987%</b>	<b>3.604%</b>	<b>3.077%</b>
<b>Long-term Expected Return on Assets</b>	<b>7.280%</b>	<b>7.000%</b>	<b>6.750%</b>	<b>6.750%</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>SERVICE EMPLOYEES INTERNATIONAL UNION (SEIU)</b>		
Measured for the Plan's Fiscal Year Ending Applicable for the Sponsor's Fiscal Year Ending	June 30, 2019 June 30, 2020	June 30, 2020 June 30, 2021
<b>OPEB Expense</b>		
Service Cost	\$ 1,078,364	\$ 1,116,519
Interest on the Total OPEB Liability	1,201,673	1,162,741
Current-Period Benefit Changes	-	-
Active Member Contributions	(71,712)	(174,235)
Projected Earnings on Plan Investments	(4,934)	(21,798)
Operating Expenses	14	148
Other Changes in Plan Fiduciary Net Position	-	-
Recognition of Outflow/(Inflow) due to Non-investment Experience	(456,898)	(556,222)
Recognition of Outflow/(Inflow) due to Assumption Changes	(483,397)	(417,047)
Recognition of Outflow/(Inflow) due to Investment Experience	(654)	1,748
<b>Net OPEB Expense</b>	<b>\$ 1,262,456</b>	<b>\$ 1,111,854</b>
<b>Reconciliation of Net OPEB Liability</b>		
<b>Net OPEB Liability Beginning of Year</b>	<b>\$ 29,485,488</b>	<b>\$ 31,445,744</b>
OPEB Expense	1,262,456	1,111,854
Employer Contributions	(928,206)	(1,085,000)
Change in Outflow/(Inflow) due to Non-investment Experience	(68,109)	(163,814)
Change in Outflow/(Inflow) due to Assumption Changes	1,696,729	898,039
Change in Outflow/(Inflow) due to Investment Experience	(2,614)	10,262
<b>Net OPEB Liability End of Year</b>	<b>\$ 31,445,744</b>	<b>\$ 32,217,085</b>
<b>Deferred (Inflows)</b>		
Non-investment Experience	\$ (2,387,500)	\$ (2,551,314)
Assumption Changes	\$ (2,669,982)	\$ (2,018,535)
Investment Experience	\$ (2,614)	\$ (1,960)
<b>Deferred Outflows</b>		
Non-investment Experience	\$ -	\$ -
Assumption Changes	\$ 1,045,282	\$ 1,291,874
Investment Experience	\$ -	\$ 9,608
<b>Net OPEB Liability Sensitivity</b>		
Baseline Discount Rate	3.604%	3.077%
Baseline Discount Rate and Trend Rates	\$ 31,445,744	\$ 32,217,085
Increase Discount Rate by One Percentage Point	\$ 26,978,518	\$ 27,507,740
Decrease Discount Rate by One Percentage Point	\$ 37,038,559	\$ 38,131,376
Increase Trend Rate by One Percentage Point	\$ 37,595,207	\$ 37,474,214
Decrease Trend Rate by One Percentage Point	\$ 26,649,969	\$ 28,126,549

# Individual Actuarial Valuation Results

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM GASB NOS. 74 AND 75 DISCLOSURES DEFERRED INFLOWS AND OUTFLOWS (\$ IN 000'S) SERVICE EMPLOYEES INTERNATIONAL UNION (SEIU)									
Valuation Date		6/30/2020							
Measurement Date		6/30/2020							
Plan Year Beginning	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
7/1/2016	\$ -	6.774713	\$ -	\$ (3,327,962)	6.774713	\$ (491,233)	\$ -	\$ 5.000000	\$ -
7/1/2017	\$ (2,703,574)	7.037205	\$ (384,183)	\$ (1,136,147)	7.091438	\$ (160,214)	\$ -	5.000000	\$ -
7/1/2018	\$ (525,007)	7.220061	\$ (72,715)	\$ 1,213,332	7.220061	\$ 168,050	\$ (3,268)	5.000000	\$ (654)
7/1/2019	\$ (720,036)	7.249365	\$ (99,324)	\$ 480,992	7.249365	\$ 66,350	\$ 12,010	5.000000	\$ 2,402
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Current Plan Year End	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net	Outflows	(Inflows)	Net
6/30/2020	\$ -	\$ (556,222)	\$ (556,222)	\$ 234,400	\$ (651,447)	\$ (417,047)	\$ 2,402	\$ (654)	\$ 1,748
Deferred Outflows/(Inflows) Recognized in OPEB Expense for Future Plan Years Ending									
6/30/2021	\$ -	\$ (556,222)	\$ (556,222)	\$ 234,400	\$ (651,447)	\$ (417,047)	\$ 2,402	\$ (654)	\$ 1,748
6/30/2022	\$ -	\$ (556,222)	\$ (556,222)	\$ 234,400	\$ (651,447)	\$ (417,047)	\$ 2,402	\$ (654)	\$ 1,748
6/30/2023	\$ -	\$ (556,222)	\$ (556,222)	\$ 234,400	\$ (540,778)	\$ (306,378)	\$ 2,402	\$ (652)	\$ 1,750
6/30/2024	\$ -	\$ (556,222)	\$ (556,222)	\$ 234,400	\$ (160,214)	\$ 74,186	\$ 2,402	\$ -	\$ 2,402
6/30/2025	\$ -	\$ (186,332)	\$ (186,332)	\$ 234,400	\$ (14,649)	\$ 219,751	\$ -	\$ -	\$ -
6/30/2026	\$ -	\$ (115,326)	\$ (115,326)	\$ 103,332	\$ -	\$ 103,332	\$ -	\$ -	\$ -
6/30/2027	\$ -	\$ (24,768)	\$ (24,768)	\$ 16,542	\$ -	\$ 16,542	\$ -	\$ -	\$ -
6/30/2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/30/2029	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ (2,551,314)	\$ (2,551,314)	\$ 1,291,874	\$ (2,018,535)	\$ (726,661)	\$ 9,608	\$ (1,960)	\$ 7,648
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2020			\$ (163,814)			\$ 898,039			\$ 10,262