

# **Alameda County Employees' Retirement Association**

**Governmental Accounting Standards Board (GASB) 75  
Actuarial Valuation and Review of the Benefits  
Provided by the Supplemental Retiree Benefits Reserve  
Other Postemployment Benefits (OPEB)  
Based on December 31, 2017 Measurement Date for  
Employer Reporting as of June 30, 2018**



This report has been prepared at the request of the Board of Retirement to assist the sponsors of the Fund in preparing their financial report for their liabilities associated with the ACERA OPEB Plan. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

Copyright © 2018 by The Segal Group, Inc. All rights reserved.



100 Montgomery Street Suite 500 San Francisco, CA 94104-4308  
T 415.263.8200 www.segalco.com

*June 12, 2018*

*Board of Retirement  
Alameda County Employees' Retirement Association  
475 14<sup>th</sup> Street, Suite 1000  
Oakland, CA 94612*

*Dear Board Members:*

*We are pleased to submit this Governmental Accounting Standards Board (GASB) Statement No. 75 Actuarial Valuation and Review of Other Postemployment Benefits (OPEB) based on a December 31, 2017 measurement date for employer reporting as of June 30, 2018. It contains various information that will need to be disclosed in order for ACERA employers to comply with GASB 75.*

*This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist the sponsors in preparing their financial report for their liabilities associated with the ACERA OPEB plan. The census and financial information on which our calculations were based was provided by ACERA. That assistance is gratefully acknowledged.*

*The measurements shown in this actuarial valuation may not be applicable for other purposes. 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 health care cost, economic cost, or demographic assumptions; changes in health care trend, changes in economic or demographic assumptions; and changes in plan provisions or applicable law.*

*The actuarial calculations were completed under the supervision of Anna Buzueva, ASA, MAAA, Enrolled Actuary and Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions used in this valuation and described in Section 3 are reasonably related to the experience of and the expectations for the Association.*

*We look forward to reviewing this report with you and to answering any questions.*

*Sincerely,*

*Segal Consulting, a Member of The Segal Group, Inc.*

By:

*Andy Yeung, ASA, MAAA, FCA, EA  
Vice President and Actuary*

*Anna Buzueva, ASA, MAAA, EA  
Senior Actuary*

TJH/hy

## SECTION 1

### VALUATION SUMMARY

Purpose .....	i
General Observations on GASB 75 Actuarial Valuation .	i
Significant Issues in Valuation Year .....	ii
Summary of Key Valuation Results .....	v
Important Information About Actuarial Valuations .....	vi

## SECTION 2

### GASB 75 INFORMATION

EXHIBIT 1	
General Information – “Financial Statements”, Note Disclosures and Required Supplementary Information for a Cost-Sharing OPEB Plan.....	1
EXHIBIT 2	
Net OPEB Liability .....	5
EXHIBIT 3	
Target Asset Allocation.....	7
EXHIBIT 4	
Discount Rate and Trend Sensitivity.....	9
EXHIBIT 5	
Schedule of Changes in Net OPEB Liability – Last Fiscal Year .....	10
EXHIBIT 6	
Schedule of Employer Contributions – Last Ten Fiscal Years .....	11
EXHIBIT 7	
Determination of Proportionate Share.....	12

## SECTION 2 (CONTINUED)

EXHIBIT 8	
OPEB Expense .....	15
EXHIBIT 9	
Deferred Outflows of Resources and Deferred Inflows of Resources .....	23
EXHIBIT 10	
Schedule of Proportionate Share of the Net OPEB Liability .....	32
EXHIBIT 11	
Schedule of Reconciliation of Net OPEB Liability .....	40
EXHIBIT 12	
Schedule of Recognition of Changes in Total Net OPEB Liability .....	48
EXHIBIT 13	
Allocation of Changes in Total Net OPEB Liability .....	50

## SECTION 3

### ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions and Methods .....	51
Appendix A Calculation of Discount Rate as of December 31, 2017 .....	64

## SECTION 1: Valuation Summary for Alameda County Employees' Retirement Association

---

### Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standard Board (GASB) Statement 75 for employer reporting as of June 30, 2018. The results used in preparing this GASB 75 report are comparable to those used in preparing the Governmental Accounting Standard Board Statement 74 report for the plan based on a measurement date and a reporting date as of December 31, 2017. This valuation is based on:

- The benefit provisions of the OPEB Plan, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of November 30, 2016, provided by ACERA;
- The assets of the Plan as of December 31, 2017, provided by ACERA;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, health care trend, etc.

### General Observations on GASB 75 Actuarial Valuation

The following points should be considered when reviewing this GASB 75 report:

- The Government Accounting Standard Board (GASB) rules only define OPEB liability and expense for financial reporting purposes, and do not apply to contribution amounts for OPEB funding purposes. Employers and plans still develop and adopt funding policies, if applicable, under current practices.
- When measuring OPEB liability, GASB uses the same actuarial cost method (Entry Age) and, for benefits that are being fully funded on an actuarial basis, the same expected return on Plan assets as used for funding.<sup>1</sup> This means that the Total OPEB Liability (TOL) measure for financial reporting shown in this report is determined on the same basis as the Actuarial Accrued Liability (AAL) measure for funding.

---

<sup>1</sup> See discussions on next page regarding source of funding for payment of OPEB SRBR benefits not covered by current OPEB Plan's Fiduciary Net Position in the SRBR.

## SECTION 1: Valuation Summary for Alameda County Employees' Retirement Association

---

- The Net OPEB Liability (NOL) is equal to the difference between the TOL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NOL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis. The NOL reflects all investment gains and losses as of the measurement date.

### Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The Governmental Accounting Standards Board (GASB) approved two new Statements affecting the reporting of OPEB liabilities for accounting purposes. Statement 75 replaces Statement 45 and is for Plan reporting. Statement 74 is effective with the fiscal year ending June 30, 2018 for employer reporting. The information contained in this valuation is intended to be used (along with other information) in order to comply with Statement 75.
- As we disclosed in our December 31, 2017 pension funding valuation report, the 7.25% investment return assumption that the Board approved on December 21, 2017 for determining the liabilities for funding purposes and used for establishing the employer and employee contribution rates has continued to be developed without considering the impact of any future 50/50 excess earnings allocation. This is based on our understanding that Article 5.5 of the Statute, which authorizes the allocation of 50% of excess earnings to the SRBR, does not allow for the use of a different investment return for funding than is used for interest crediting. This would appear in effect to preclude the prefunding of the SRBR through the use of an assumption lower than the market earnings assumption of 7.25%.

As required by the Actuarial Standard of Practice (ASOP) No. 4 ("Measuring Pension Obligations and Determining Pension Plan Costs or Contributions"), we performed a stochastic model to estimate the impact of the 50% allocation of future excess earnings to the SRBR. The results of our model indicated that the 50/50 allocation of future excess earnings would have about the same impact as an "outflow" (i.e., assets not available to fund the benefits included in the determination of the TPL) that would average approximately 0.60% of assets over time. This approximated outflow was incorporated into our GASB crossover test for the pension benefits (reference: Exhibit 5 of our GASB 67 report as of December 31, 2017), along with the additional future employer contributions that would result from those future allocations of excess earnings to the SRBR under ACERA's funding policy.

Furthermore, note (6) provided in Exhibit 5 of the GASB 67 report indicates that the present value of outflows from the 0.60% of assets over time is expected to be higher than the present values of the remaining OPEB and non-OPEB SRBR benefits that could be paid after the exhaustion of assets currently available in the SRBR.

Therefore, in developing the crossover test for the OPEB SRBR in Appendix A of this report, we have only included the projected benefits so that on a present value basis they are equal to the OPEB assets currently available in the SRBR as the remaining OPEB SRBR benefits would be paid from future excess earnings.

## SECTION 1: Valuation Summary for Alameda County Employees' Retirement Association

---

- The NOLs for the employers in ACERA as of December 31, 2016 and December 31, 2017 are allocated based on the actual employer contributions made during 2016 and 2017, respectively.<sup>2</sup> The steps we used for the allocation are as follows:
  - First calculate the ratio of the employer's contributions to the total contributions.
  - Then multiply this ratio by the NOL to determine the employer's proportionate share of the NOL. The NOL allocation can be found in Exhibit 7 in Section 2.
  - It should be noted that the employer contribution amount that we used as the basis to allocate the NOL for the Office of Education has decreased from \$21,724 in 2016 to \$0 in 2017 because their payroll has decreased from \$83,000 in 2016 to \$0 in 2017. As a result, the NOL allocated to the Office of Education is \$0 as of December 31, 2017.<sup>3</sup>
- The TOL as of December 31, 2017 was determined by rolling forward the liability results used in determining the sufficiency of the SRBR to provide medical and dental subsidy benefits as of December 31, 2016. That TOL has been adjusted to reflect the new economic and non-economic actuarial assumptions proposed in the December 1, 2013 through November 30, 2016 experience study and approved by the Board for the December 31, 2017 valuation as well as the health care trend assumptions used for the sufficiency study for the SRBR as of December 31, 2017 (reference: our letter dated March 27, 2018).
- Similarly, the TOL as of December 31, 2016 (the beginning of the measurement period ending December 31 2017) was determined by rolling forward the liability results used in determining the sufficiency of the SRBR to provide medical and dental subsidy benefits as of December 31, 2015. That TOL has been adjusted to reflect the health care trend assumptions used in the sufficiency study for the SRBR as of December 31, 2016.

---

<sup>2</sup> *The December 31, 2016 and December 31, 2017 NOL has been allocated to the different employers in proportion to the total employer contributions made by those employers to the pension plan during calendar years 2016 and 2017, respectively, based on discussions and approval provided by the Board.*

<sup>3</sup> *As we pointed out in our Retirement Plan funding valuation report as of December 31, 2017, there is a need to pay off the Unfunded Actuarial Accrued Liability (UAAL) by the Office of Education in the General membership group and we would recommend to the Board that ACERA consider establishing a new policy to determine and allocate the UAAL payment for an employer with a declining payroll.*

## SECTION 1: Valuation Summary for Alameda County Employees' Retirement Association

---

- The Plan's Fiduciary Net Position as of December 31, 2017 of \$1,001.9 million was calculated by (a) taking the \$858.0 million set aside by the Retirement Board in the SRBR reserves to pay OPEB benefits as of December 31, 2017, and (b) adding \$143.9 million to reflect the proportion of one-half of the net deferred investment gains<sup>4</sup> that is commensurate with the size of the OPEB reserves.

It should be noted that in determining the Plan's Fiduciary Net Position as of December 31, 2016 of \$797.8 million, we included a proportion of any deferred investment losses after netting out the Contingency Reserve that was commensurate with the size of the OPEB reserves that would be available to the OPEB SRBR Plan.<sup>5</sup>

- The NOL decreased from \$135.2 million as of December 31, 2016 to \$27.5 million as of December 31, 2017 primarily as a result of favorable investment results during calendar year 2017 of about \$184 million, offset by the effect of the changes in actuarial assumptions (which increased the NOL by about \$59 million). Changes in these values during the last fiscal year ending December 31, 2017 can be found in Exhibit 5.

---

<sup>4</sup> After restoring the Contingency Reserve to 1% of total assets.

<sup>5</sup> The proportionate share of the deferred market losses after netting out the Contingency Reserve was equal to \$39.4 million as of December 31, 2016.

## SECTION 1: Valuation Summary for Alameda County Employees' Retirement Association

### Summary of Key Valuation Results

Reporting Date for Employer under GASB 75	June 30, 2018 <sup>(1)</sup>
Measurement Date for Employer under GASB 75	December 31, 2017
<b>Disclosure elements for fiscal year ending December 31:</b>	
1. Service cost <sup>(2)</sup>	\$26,991,283
2. Total OPEB Liability <sup>(3)</sup>	1,029,354,518
3. Plan's Fiduciary Net Position <sup>(3), **</sup>	1,001,876,232
4. Net OPEB Liability <sup>(3)</sup> (2) – (3)	27,478,286
5. OPEB expense	7,709,300
<b>Schedule of contributions for fiscal year ending December 31:</b>	
6. Actuarially determined contributions	N/A
7. Actual contributions*	N/A
8. Contribution deficiency (excess) (6) – (7)	0
<b>Demographic data for plan year ending December 31:<sup>(4)</sup></b>	
9. Number of retired members and beneficiaries receiving medical benefits	6,225
10. Number of retired members and beneficiaries receiving dental and vision benefits	7,270
11. Number of vested terminated members	381
12. Number of active members	11,323
<b>Key assumptions as of December 31:</b>	
13. Discount Rate	7.25%
14. Health care cost trend rates	
Non-Medicare medical plan	Graded from 7.00% to ultimate 4.50% over 10 years
Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years
Dental/Vision and Medicare Part B	4.50%

<sup>(1)</sup> The reporting date and measurement date for the plan are December 31, 2017.

<sup>(2)</sup> The service cost is always based on the previous year's valuation, meaning the 2017 value is based on the valuation as of December 31, 2016.

<sup>(3)</sup> For informational purposes, the TOL, Plan Fiduciary Net Position and NOL as of December 31, 2016 are as follows:

	December 31, 2016
Total OPEB Liability	\$933,042,736
Plan's Fiduciary Net Position	797,795,515
Net OPEB Liability	\$135,247,221

<sup>(4)</sup> The following data as of December 31, 2016 is used in the measurement of the TOL as of December 31, 2017:

Number of retired members and beneficiaries receiving medical benefits	6,018
Number of retired members and beneficiaries receiving dental and vision benefits	7,049
Number of vested terminated members	371
Number of active members	11,111

\* Employer contributions are on a net basis. Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.

\*\* For 2017, the Plan's Fiduciary Net Position (\$1,001,876,232) includes the SRBR and 401(h) account (\$863,836,077) less the estimated SRBR transfer to Employer Advance Reserve (\$5,830,283) plus one half of the deferred market gains after restoring the Contingency Reserve to 1% of total assets (\$143,870,438).



## SECTION 1: Valuation Summary for Alameda County Employees' Retirement Association

---

### Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a postretirement health plan. It is an estimated forecast – the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation.

In order to prepare an actuarial valuation, Segal Consulting (“Segal”) relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by ACERA. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to health care trends. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan’s assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions the actuary selects within that range. It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results and will have no impact on the actual cost of the plan. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.
- **Assets** This valuation is based on the market value of assets as of the valuation date, as provided by ACERA. The Association uses an actuarial value of assets that differs from market value of assets to gradually reflect six-month changes in the market value of assets in the SRBR sufficiency valuation.

## SECTION 1: Valuation Summary for Alameda County Employees' Retirement Association

---

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The valuation is prepared at the request of the Board to assist sponsors of the Fund in preparing items related to the OPEB SRBR plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If ACERA is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. ACERA should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of ACERA, it is not a fiduciary in its capacity as actuaries and consultants with respect to ACERA.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 1**

**General Information – “Financial Statements”, Note Disclosures and Required Supplementary Information for a Cost-Sharing OPEB Plan**

---

**Plan Description**

*Plan administration.* The Alameda County Employees' Retirement Association (ACERA) was established by the Alameda County Board of Supervisors in 1947. ACERA is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq.). ACERA is a cost-sharing, multiple employer, defined benefit, public employee retirement system whose main function is to provide service retirement, disability, death, and survivor benefits to the General and Safety members employed by the County of Alameda. ACERA also provides retirement benefits to the employee members of First 5 Alameda County, Housing Authority of the County of Alameda, Alameda Health System, Livermore Area Recreation and Park District (LARPD), Superior Court of California—County of Alameda, and Alameda County Office of Education.

The management of ACERA is vested with the ACERA Board of Retirement. The Board consists of nine members and two alternates. The County Treasurer is a member of the Board of Retirement by law and is elected by the general public. Four members are appointed by the Board of Supervisors, one of whom may be a County Supervisor. Two active members are elected by the General members; one active member and one alternate are elected by the Safety members; one retired member and one alternate are elected by the retired members. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with his term as County Treasurer.

*Plan membership.* At December 31, 2017, OPEB plan membership consisted of the following:

Retired members or beneficiaries currently receiving medical benefits	6,225
Retired members or beneficiaries currently receiving dental and vision benefits	7,270
Vested terminated members entitled to, but not yet receiving benefits	381
Active members	11,323

*Note: Data as of December 31, 2017 is not used in the measurement of the TOL as of December 31, 2017.*

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

*Benefits provided.* ACERA provides benefits to eligible employees.

**Membership Eligibility:**

*Service Retirees:* Retired with at least 10 years of service (including deferred vested members who terminate employment and receive a retirement benefit from ACERA)

*Disabled Retirees:* A minimum of 10<sup>6</sup> years of service is required for non-duty disability.  
There is no minimum service requirement for duty disability.

**Benefit Eligibility:**

1. Monthly Medical Allowance

*Service Retirees:* For retirees, a Maximum Monthly Medical Allowance of \$540.44 per month is provided, effective January 1, 2017 and through December 31, 2017. For the period January 1, 2018 through December 31, 2018, the maximum allowance will remain at the 2017 levels for retirees who are not purchasing individual insurance through the Medicare exchange. For those purchasing individual insurance through the Medicare exchange, the Monthly Medical Allowance will be \$414.00 per month for 2017 and will remain at the 2017 levels for 2018. These Allowances are subject to the following subsidy schedule:

<b>Completed Years of Service</b>	<b>Percentage Subsidized</b>
10-14	50%
15-19	75%
20+	100%

*Disabled Retirees:* Non-duty disabled retirees receive the same Monthly Medical Allowance as service retirees.

Duty disabled retirees receive the same Monthly Medical Allowance as those service retirees with 20 or more years of service.

---

<sup>6</sup> *The 10 years of service requirement is only used for determining eligibility for health benefits. For pension benefits, the eligibility requirement is 5 years of service.*

## SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association

---

### 2. Medicare Benefit Reimbursement Plan:

The SRBR reimburses the full Medicare Part B premium to qualified retired members.

To qualify for reimbursement, a retiree must:

- Have at least 10 years of ACERA service,
- Be eligible for Monthly Medical Allowance,
- Provide proof of enrollment in Medicare Part B.

### 3. Dental and Vision Plans:

The SRBR provides dental and vision benefits for retirees only. The maximum combined monthly dental and vision premiums will be \$46.90 in 2017 and \$47.91 in 2018. The eligibility for these premiums is as follows:

*Service Retirees:* Retired with at least 10 years of service.

*Disabled Retirees:* For non-duty disabled retirees, 10 years of service is required. For grandfathered non-duty disabled retirees (with effective retirement dates on or before January 31, 2014), there is no minimum service requirement.

For duty disabled retirees, there is no minimum service requirement.

#### Note about Monthly Medical Allowance:

The maximum levels of subsidy are reviewed by the Board annually and are not indexed to increase automatically.

In addition, the Monthly Medical Allowance can only be used to pay for retiree medical benefits. There is no benefit payable to beneficiaries, current spouses, former spouses or dependents.

If the actual cost of coverage is less than the Monthly Medical Allowance, the difference is not paid in cash or applied towards the coverage for beneficiaries, current spouses, former spouses or dependents.

## SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association

---

**Deferred Benefit:**

Members who terminate employment with 10 or more years of service before reaching Pension eligibility commencement age may elect deferred MMA and/or dental/vision benefits.

**Death Benefit:**

Surviving spouses/domestic partners of members who die before the member commences retiree health benefits may enroll in an ACERA group medical plan on the date that the member would have been eligible to commence benefits. The surviving spouse/domestic partner must pay 100% of the premium. Because premiums for surviving spouses/domestic partners under age 65 include active participants for purposes of underwriting, the surviving spouses/domestic partners receive an implicit subsidy from the actives, which creates a liability for the SRBR.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 2**

**Net OPEB Liability**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>	<b>June 30, 2017</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>	<b>December 31, 2016</b>
The components of the Net OPEB Liability are as follows:		
Total OPEB Liability	\$1,029,354,518	\$933,042,736
Plan's Fiduciary Net Position	<u>1,001,876,232</u>	<u>797,795,515</u>
Net OPEB Liability	\$27,478,286	\$135,247,221
Plan's Fiduciary Net Position as a Percentage of the Total OPEB Liability	97.33%	85.50%

The Net OPEB Liability was measured as of December 31, 2017 and 2016. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date, while the Total OPEB Liability was determined by rolling forward the Total OPEB Liability as of December 31, 2016 and 2015, respectively.

*Plan provisions.* The plan provisions used in the measurement of the NOL as of December 31, 2017 and December 31, 2016 are the same as those used in ACERA's SRBR sufficiency valuation as of December 31, 2016 and December 31, 2015, respectively.

*Actuarial assumptions.* The actuarial assumptions used for the December 31, 2017 valuation were based on the results of the experience study for the period from December 1, 2013 through November 30, 2016 that were approved by the Board effective with the December 31, 2017 valuation and the health care trend assumptions used in the sufficiency study for the SRBR as of December 31, 2017 (reference: our letter dated March 27, 2018). The following actuarial assumptions were applied to all periods included in the measurement:

**December 31, 2017**

Investment rate of return	7.25%, net of OPEB plan investment expense, including inflation
Inflation	3.00%
Health care premium trend rates	
Non-Medicare medical plan	Graded from 7.00% to ultimate 4.50% over 10 years
Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years
Dental/Vision and Medicare Part B	4.50%
Other assumptions	Same as those proposed in the experience study for the period December 1, 2013 through November 30, 2016

## SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association

---

The TOL as of December 31, 2016 was determined by rolling forward the TOL from actuarial valuations as of December 31, 2015. The actuarial assumptions used to develop the December 31, 2016 TOL are based on the health care trend assumptions used in the sufficiency study for the SRBR as of December 31, 2016. The following actuarial assumptions were applied to all periods included in the measurement.

### **December 31, 2016**

Investment rate of return	7.60%, net of OPEB plan investment expense, including inflation
Inflation	3.25%
Health care premium trend rates	
Non-Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years
Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years
Dental/Vision	4.50%
Medicare Part B	28.44%, then 4.50% ultimate
Other assumptions	Same as those proposed in the experience study for the period December 1, 2010 through November 30, 2013



## SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association

---

### EXHIBIT 3

#### Target Asset Allocation

---

The long-term expected rate of return on OPEB plan investments<sup>7</sup> was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin.

The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption for the December 31, 2017 valuation are summarized in the following table:

<b>Asset Class</b>	<b>Target Allocation</b>	<b>Long-Term (Arithmetic) Expected Real Rate of Return</b>
Domestic Large Cap Equity	22.40%	5.75%
Domestic Small Cap Equity	5.60%	6.37%
Developed International Equity	19.50%	6.89%
Emerging Markets Equity	6.50%	9.54%
U.S. Core Fixed Income	11.25%	1.03%
High Yield Bonds	1.50%	3.99%
International Bonds	2.25%	0.19%
TIPS	2.00%	0.98%
Real Estate	8.00%	4.47%
Commodities	3.00%	3.78%
Hedge Funds	9.00%	4.30%
Private Equity	<u>9.00%</u>	7.60%
<b>Total</b>	<b>100.00%</b>	

---

<sup>7</sup> Note that the investment return assumption for SRBR sufficiency testing (and pension plan funding) purposes was developed net of both investment and administrative expenses; however, the same investment return assumption was adopted by the Board for financial reporting purposes, and it was considered gross of administrative expenses for financial reporting purposes. (This resulted in an increase in the margin for adverse deviation when using that assumption for financial reporting.)

## SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association

---

*Discount rate:* The discount rate used to measure the Total OPEB Liability was 7.25% as of December 31, 2017 and 7.60% December 31, 2016. The projection of cash flows used to determine the discount rate assumed benefit are paid out of current OPEB SRBR assets. Based on those assumptions, the SRBR OPEB plan's Fiduciary Net Position was projected to be available to make all projected future benefits payments for current plan members.<sup>8</sup> Therefore the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the Total OPEB Liability as of December 31, 2017 and December 31, 2016.

---

<sup>8</sup> See discussions in Section 1 regarding source of funding for payment of OPEB SRBR benefits not covered by current OPEB SRBR Plan's Fiduciary Net Position.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 4**

**Discount Rate and Trend Sensitivity**

*Sensitivity of the Net OPEB Liability to changes in the discount rate.* The following presents the Net OPEB Liability (NOL) of ACERA as of December 31, 2017, calculated using the discount rate of 7.25%, as well as what ACERA's NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

<b>Net OPEB Liability</b>	<b>1% Decrease (6.25%)</b>	<b>Current Discount Rate (7.25%)</b>	<b>1% Increase (8.25%)</b>
Alameda County	\$121,427,649	\$20,962,931	(\$62,600,242)
Health System	29,768,211	5,139,101	(15,346,564)
Superior Court	5,990,116	1,034,117	(3,088,117)
First 5	586,814	101,306	(302,524)
Housing Authority	718,663	124,068	(370,496)
LARPD	676,349	116,763	(348,682)
Office of Education	<u>0</u>	<u>0</u>	<u>0</u>
Total for all Employers	\$159,167,802	\$27,478,286	(\$82,056,625)

*Sensitivity of the Net OPEB Liability to changes in the healthcare cost trend rate.* The following presents the Net OPEB Liability of ACERA as of December 31, 2017, as well as what ACERA's Net OPEB Liability would be if it were calculated using a trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate.

<b>Net OPEB Liability</b>	<b>1% Decrease</b>	<b>Current Trend Rates*</b>	<b>1% Increase</b>
Alameda County	(\$72,234,971)	\$20,962,931	\$135,675,270
Health System	(17,708,536)	5,139,101	33,261,041
Superior Court	(3,563,405)	1,034,117	6,692,962
First 5	(349,085)	101,306	655,668
Housing Authority	(427,519)	124,068	802,987
LARPD	(402,347)	116,763	755,708
Office of Education	<u>0</u>	<u>0</u>	<u>0</u>
Total for all Employers	(\$94,685,863)	\$27,478,286	\$177,843,636

\* Current trend rates: 7.00% graded down to 4.5% over 10 years for Non-Medicare medical plan costs; 6.50% graded down to 4.5% over 8 years for Medicare medical plan costs and 4.5% for all years for Dental, Vision and Medicare Part B costs.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 5**

**Schedule of Changes in Net OPEB Liability – Last Fiscal Year**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Total OPEB Liability</b>	
Service cost <sup>(1)</sup>	\$26,991,283
Interest	69,878,539
Change of benefit terms	0
Differences between actual and expected experience	(21,627,766)
Changes of assumptions	58,973,316
Benefit payments	<u>(37,903,590)</u>
<b>Net change in Total OPEB Liability</b>	<b>\$96,311,782</b>
<b>Total OPEB Liability – beginning</b>	<b><u>933,042,736</u></b>
<b>Total OPEB Liability – ending (a)</b>	<b><u>\$1,029,354,518</u></b>
<b>Plan's Fiduciary Net Position</b>	
Contributions – employer <sup>(2)</sup>	N/A
Contributions – employee	N/A
Net investment income	\$243,187,807
Benefit payments	(37,903,590)
Administrative expense	(1,203,500)
Other	<u>0</u>
<b>Net change in Plan's Fiduciary Net Position</b>	<b>\$204,080,717</b>
<b>Plan's Fiduciary Net Position – beginning<sup>(3)</sup></b>	<b><u>797,795,515</u></b>
<b>Plan's Fiduciary Net Position – ending (b)<sup>(3)</sup></b>	<b>\$1,001,876,232</b>
<b>System's Net OPEB Liability – ending (a) – (b)</b>	<b><u>\$27,478,286</u></b>
<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>	<b>97.33%</b>
<b>Covered-employee payroll<sup>(4)</sup></b>	<b>\$995,178,209</b>
<b>Plan's Net OPEB Liability as percentage of covered-employee payroll</b>	<b>2.76%</b>

<sup>(1)</sup> The service cost is always based on the previous year's valuation, meaning the 2017 value is based on the valuation as of December 31, 2016.

<sup>(2)</sup> Employer contributions are on a net basis. Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.

<sup>(3)</sup> "Plan's Fiduciary Net Position – beginning" (\$797,795,515) includes the SRBR and 401(h) account (\$846,049,591) less the estimated SRBR transfer to Employer Advance Reserve (\$8,865,275) less the proportionate share of the deferred market losses after netting out the Contingency Reserve that was commensurate with the size of the OPEB reserve (\$39,388,801). "Plan's Fiduciary Net Position – ending" (\$1,001,876,232) includes the SRBR and 401(h) account (\$863,836,077) less the estimated SRBR transfer to Employer Advance Reserve (\$5,830,283) plus one half of the deferred market gains after restoring the Contingency Reserve to 1% of total assets (\$143,870,438).

<sup>(4)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 6**

**Schedule of Employer Contributions – Last Ten Fiscal Years**

<b>Year Ended December 31</b>	<b>Actuarially Determined Contributions<sup>(1)</sup></b>	<b>Contributions in Relation to the Actuarially Determined Contributions<sup>(1)</sup></b>	<b>Contribution Deficiency / (Excess)</b>	<b>Covered-Employee Payroll<sup>(2)</sup></b>	<b>Contributions as a Percentage of Covered-Employee Payroll</b>
2008	N/A	N/A	\$0	\$810,712,790	0.00%
2009	N/A	N/A	0	838,141,323	0.00
2010	N/A	N/A	0	839,617,361	0.00
2011	N/A	N/A	0	837,482,162	0.00
2012	N/A	N/A	0	845,932,592	0.00
2013	N/A	N/A	0	853,349,657	0.00
2014	N/A	N/A	0	886,924,862	0.00
2015	N/A	N/A	0	945,858,017 <sup>(3)</sup>	0.00
2016	N/A	N/A	0	947,567,631	0.00
2017	N/A	N/A	0	995,178,209	0.00

<sup>(1)</sup> Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.

<sup>(2)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

<sup>(3)</sup> ACERA indicated that this amount is based on 27 pay periods for 2015.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 7**

**Determination of Proportionate Share**

**Actual Employer Contributions by Employer  
January 1, 2016 to December 31, 2016**

<b>Employer</b>	<b>Contributions</b>	<b>Percentage*</b>
Alameda County	\$185,611,711	76.785%
Health System	43,317,507	17.920
Superior Court	9,537,741	3.946
First 5	897,742	0.371
Housing Authority	1,152,380	0.477
LARPD	1,189,646	0.492
Office of Education	<u>21,724</u>	<u>0.009</u>
Total for all Employers	\$241,728,451	100.000%

**Allocation of December 31, 2016 Net OPEB Liability**

<b>Employer</b>	<b>NOL</b>	<b>Percentage</b>
Alameda County	\$103,849,869	76.785%
Health System	24,236,173	17.920
Superior Court	5,336,372	3.946
First 5	502,287	0.371
Housing Authority	644,757	0.477
LARPD	665,608	0.492
Office of Education	<u>12,155</u>	<u>0.009</u>
Total for all Employers	\$135,247,221	100.000%

\* The unrounded percentages are used in the allocation of the NOL amongst employers.

**Notes:**

1. Based on the January 1, 2016 through December 31, 2016 employer contributions in total as provided by ACERA.
2. The Net OPEB Liability (NOL) is the Total OPEB Liability (TOL) minus the OPEB SRBR Plan's Fiduciary Net Position (plan assets).
3. The employer's share of the total plan NOL is the ratio of the employer's total contributions to the total contributions for all employers.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 7 (continued)**

**Determination of Proportionate Share**

**Actual Employer Contributions by Employer  
January 1, 2017 to December 31, 2017**

<b>Employer</b>	<b>Contributions</b>	<b>Percentage*</b>
Alameda County	\$188,482,504	76.289%
Health System	46,206,829	18.702
Superior Court	9,297,985	3.763
First 5	910,867	0.369
Housing Authority	1,115,522	0.452
LARPD	1,049,843	0.425
Office of Education	<u>0</u>	<u>0.000</u>
Total for all Employers	\$247,063,550	100.000%

**Allocation of December 31, 2017 Net OPEB Liability**

<b>Employer</b>	<b>NOL</b>	<b>Percentage</b>
Alameda County	\$20,962,931	76.289%
Health System	5,139,101	18.702
Superior Court	1,034,117	3.763
First 5	101,306	0.369
Housing Authority	124,068	0.452
LARPD	116,763	0.425
Office of Education**	<u>0</u>	<u>0.000</u>
Total for all Employers	\$27,478,286	100.000%

\* The unrounded percentages are used in the allocation of the NOL amongst employers.

\*\* There is no allocation of NOL to the Office of Education, since there were no employer contributions made during 2017 for that employer.

**Notes:**

1. Based on the January 1, 2017 through December 31, 2017 employer contributions in total as provided by ACERA.
2. The Net OPEB Liability (NOL) is the Total OPEB Liability (TOL) minus the OPEB SRBR Plan's Fiduciary Net Position (plan assets).
3. The employer's share of the total plan NOL is the ratio of the employer's total contributions to the total contributions for all employers.

## SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association

---

---

### EXHIBIT 7 (continued)

#### Determination of Proportionate Share

---

**Notes:**

For purposes of the results in this exhibit, the reporting date for the employer under GASB 75 is June 30, 2018. The reporting date and measurement date for the plan under GASB 74 are December 31, 2017. Consistent with the provisions of GASB 75, the assets and liabilities measured as of December 31, 2017 are not adjusted or rolled forward to the June 30, 2018 reporting date. Other results, such as the total deferred inflows and outflows would also be allocated based on the same proportionate shares determined above.

The following items are allocated based on the corresponding proportionate share:

- 1) Net OPEB Liability
- 2) Service Cost
- 3) Interest on the Total OPEB Liability
- 4) Current-period benefit changes
- 5) Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability
- 6) Expensed portion of current-period changes of assumptions or other inputs
- 7) Member contributions
- 8) Projected earnings on plan investments
- 9) Expensed portion of current-period differences between actual and projected earnings on plan investments
- 10) Administrative expense
- 11) Recognition of beginning of year deferred outflows of resources as OPEB expense
- 12) Recognition of beginning of year deferred inflows of resources as OPEB expense



**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 8  
OPEB Expense – Total for all Employers**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Components of OPEB Expense</b>	
1. Service cost	\$26,991,283
2. Interest on the Total OPEB Liability	69,878,539
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0
4. Current-period benefit changes	0
5. Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability	(3,237,690)
6. Expensed portion of current-period changes of assumptions or other inputs	8,828,341
7. Member contributions	0
8. Projected earnings on plan investments	(59,146,390)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	(36,808,283)
10. Administrative expense	1,203,500
11. Other	0
12. Recognition of beginning of year deferred outflows of resources as OPEB expense	0
13. Recognition of beginning of year deferred inflows of resources as OPEB expense	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>
<b>OPEB Expense</b>	<b><u>\$7,709,300</u></b>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 8 (continued)**

**OPEB Expense – Alameda County**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Components of OPEB Expense</b>	
1. Service cost	\$20,591,398
2. Interest on the Total OPEB Liability	53,309,693
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(100,451)
4. Current-period benefit changes	0
5. Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability	(2,470,003)
6. Expensed portion of current-period changes of assumptions or other inputs	6,735,060
7. Member contributions	0
8. Projected earnings on plan investments	(45,122,236)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	(28,080,699)
10. Administrative expense	918,140
11. Other	0
12. Recognition of beginning of year deferred outflows of resources as OPEB expense	0
13. Recognition of beginning of year deferred inflows of resources as OPEB expense	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>
<b>OPEB Expense</b>	<b><u>\$5,780,902</u></b>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 8 (continued)**

**OPEB Expense – Health System**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Components of OPEB Expense</b>	
1. Service cost	\$5,048,021
2. Interest on the Total OPEB Liability	13,068,968
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	158,430
4. Current-period benefit changes	0
5. Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability	(605,526)
6. Expensed portion of current-period changes of assumptions or other inputs	1,651,112
7. Member contributions	0
8. Projected earnings on plan investments	(11,061,798)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	(6,884,035)
10. Administrative expense	225,083
11. Other	0
12. Recognition of beginning of year deferred outflows of resources as OPEB expense	0
13. Recognition of beginning of year deferred inflows of resources as OPEB expense	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>
<b>OPEB Expense</b>	<b><u>\$1,600,255</u></b>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 8 (continued)**

**OPEB Expense – Superior Court**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Components of OPEB Expense</b>	
1. Service cost	\$1,015,789
2. Interest on the Total OPEB Liability	2,629,808
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(36,898)
4. Current-period benefit changes	0
5. Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability	(121,847)
6. Expensed portion of current-period changes of assumptions or other inputs	332,246
7. Member contributions	0
8. Projected earnings on plan investments	(2,225,914)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	(1,385,242)
10. Administrative expense	45,292
11. Other	0
12. Recognition of beginning of year deferred outflows of resources as OPEB expense	0
13. Recognition of beginning of year deferred inflows of resources as OPEB expense	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>
<b>OPEB Expense</b>	<b><u>\$253,234</u></b>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 8 (continued)**

**OPEB Expense – First 5**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Components of OPEB Expense</b>	
1. Service cost	\$99,512
2. Interest on the Total OPEB Liability	257,626
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(548)
4. Current-period benefit changes	0
5. Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability	(11,937)
6. Expensed portion of current-period changes of assumptions or other inputs	32,548
7. Member contributions	0
8. Projected earnings on plan investments	(218,059)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	(135,704)
10. Administrative expense	4,437
11. Other	0
12. Recognition of beginning of year deferred outflows of resources as OPEB expense	0
13. Recognition of beginning of year deferred inflows of resources as OPEB expense	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>
<b>OPEB Expense</b>	<b><u>\$27,875</u></b>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 8 (continued)**

**OPEB Expense – Housing Authority**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Components of OPEB Expense</b>	
1. Service cost	\$121,869
2. Interest on the Total OPEB Liability	315,510
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(5,105)
4. Current-period benefit changes	0
5. Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability	(14,619)
6. Expensed portion of current-period changes of assumptions or other inputs	39,861
7. Member contributions	0
8. Projected earnings on plan investments	(267,053)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	(166,194)
10. Administrative expense	5,434
11. Other	0
12. Recognition of beginning of year deferred outflows of resources as OPEB expense	0
13. Recognition of beginning of year deferred inflows of resources as OPEB expense	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>
<b>OPEB Expense</b>	<b><u>\$29,703</u></b>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 8 (continued)**

**OPEB Expense – LARPD**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Components of OPEB Expense</b>	
1. Service cost	\$114,694
2. Interest on the Total OPEB Liability	296,934
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(13,608)
4. Current-period benefit changes	0
5. Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability	(13,758)
6. Expensed portion of current-period changes of assumptions or other inputs	37,514
7. Member contributions	0
8. Projected earnings on plan investments	(251,330)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	(156,409)
10. Administrative expense	5,114
11. Other	0
12. Recognition of beginning of year deferred outflows of resources as OPEB expense	0
13. Recognition of beginning of year deferred inflows of resources as OPEB expense	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>
<b>OPEB Expense</b>	<b><u>\$19,151</u></b>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 8 (continued)**

**OPEB Expense – Office of Education**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Components of OPEB Expense</b>	
1. Service cost	\$0
2. Interest on the Total OPEB Liability	0
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(1,820)
4. Current-period benefit changes	0
5. Expensed portion of current-period difference between actual and expected experience in the Total OPEB Liability	0
6. Expensed portion of current-period changes of assumptions or other inputs	0
7. Member contributions	0
8. Projected earnings on plan investments	0
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	0
10. Administrative expense	0
11. Other	0
12. Recognition of beginning of year deferred outflows of resources as OPEB expense	0
13. Recognition of beginning of year deferred inflows of resources as OPEB expense	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>
<b>OPEB Expense</b>	<b><u>(\$1,820)</u></b>



**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 9**

**Deferred Outflows of Resources and Deferred Inflows of Resources – Total for all Employers**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Deferred Outflows of Resources</b>	
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$899,882
2. Changes of assumptions or other inputs	50,144,975
3. Net excess of projected over actual earnings on OPEB plan investments (if any)	0
4. Difference between actual and expected experience in the Total OPEB Liability	<u>0</u>
5. Total Deferred Outflows of Resources	\$51,044,857
<b>Deferred Inflows of Resources</b>	
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$899,882
7. Changes of assumptions or other inputs	0
8. Net excess of actual over projected earnings on OPEB plan investments (if any)	147,233,134
9. Difference between expected and actual experience in the Total OPEB Liability	<u>18,390,076</u>
10. Total Deferred Inflows of Resources	\$166,523,092

Deferred outflows of resources and deferred inflows of resources related to OPEB expense will be recognized as follows:

**Reporting Date for Employer under GASB 75 Year Ended June 30:**

2019	(\$31,217,632)
2020	(31,217,632)
2021	(31,217,632)
2022	(31,217,634)
2023	5,590,651
2024	3,801,644
Thereafter	0

<sup>(1)</sup> Calculated in accordance with Paragraphs 64 and 65 of GASB 75.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 9 (continued)**

**Deferred Outflows of Resources and Deferred Inflows of Resources – Alameda County**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Deferred Outflows of Resources</b>	
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$0
2. Changes of assumptions or other inputs	38,255,139
3. Net excess of projected over actual earnings on OPEB plan investments (if any)	0
4. Difference between actual and expected experience in the Total OPEB Liability	<u>0</u>
5. Total Deferred Outflows of Resources	\$38,255,139
<b>Deferred Inflows of Resources</b>	
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$570,560
7. Changes of assumptions or other inputs	0
8. Net excess of actual over projected earnings on OPEB plan investments (if any)	112,322,800
9. Difference between expected and actual experience in the Total OPEB Liability	<u>14,029,619</u>
10. Total Deferred Inflows of Resources	\$126,922,979

Deferred outflows of resources and deferred inflows of resources related to OPEB expense will be recognized as follows:

**Reporting Date for Employer under GASB 75 Year Ended June 30:**

2019	(\$23,916,095)
2020	(23,916,095)
2021	(23,916,095)
2022	(23,916,096)
2023	4,164,607
2024	2,831,934
Thereafter	0

<sup>(1)</sup> Calculated in accordance with Paragraphs 64 and 65 of GASB 75.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 9 (continued)**

**Deferred Outflows of Resources and Deferred Inflows of Resources – Health System**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Deferred Outflows of Resources</b>	
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$899,882
2. Changes of assumptions or other inputs	9,378,317
3. Net excess of projected over actual earnings on OPEB plan investments (if any)	0
4. Difference between actual and expected experience in the Total OPEB Liability	<u>0</u>
5. Total Deferred Outflows of Resources	\$10,278,199
<b>Deferred Inflows of Resources</b>	
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$0
7. Changes of assumptions or other inputs	0
8. Net excess of actual over projected earnings on OPEB plan investments (if any)	27,536,139
9. Difference between expected and actual experience in the Total OPEB Liability	<u>3,439,387</u>
10. Total Deferred Inflows of Resources	\$30,975,526

Deferred outflows of resources and deferred inflows of resources related to OPEB expense will be recognized as follows:

**Reporting Date for Employer under GASB 75 Year Ended June 30:**

2019	(\$5,680,018)
2020	(5,680,018)
2021	(5,680,018)
2022	(5,680,019)
2023	1,204,016
2024	818,730
Thereafter	0

<sup>(1)</sup> Calculated in accordance with Paragraphs 64 and 65 of GASB 75.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 9 (continued)**

**Deferred Outflows of Resources and Deferred Inflows of Resources – Superior Court**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Deferred Outflows of Resources</b>	
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$0
2. Changes of assumptions or other inputs	1,887,155
3. Net excess of projected over actual earnings on OPEB plan investments (if any)	0
4. Difference between actual and expected experience in the Total OPEB Liability	<u>0</u>
5. Total Deferred Outflows of Resources	\$1,887,155
<b>Deferred Inflows of Resources</b>	
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$209,583
7. Changes of assumptions or other inputs	0
8. Net excess of actual over projected earnings on OPEB plan investments (if any)	5,540,969
9. Difference between expected and actual experience in the Total OPEB Liability	<u>692,092</u>
10. Total Deferred Inflows of Resources	\$6,442,644

Deferred outflows of resources and deferred inflows of resources related to OPEB expense will be recognized as follows:

**Reporting Date for Employer under GASB 75 Year Ended June 30:**

2019	(\$1,211,742)
2020	(1,211,742)
2021	(1,211,742)
2022	(1,211,742)
2023	173,500
2024	117,979
Thereafter	0

<sup>(1)</sup> Calculated in accordance with Paragraphs 64 and 65 of GASB 75.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 9 (continued)**

**Deferred Outflows of Resources and Deferred Inflows of Resources – First 5**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Deferred Outflows of Resources</b>	
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$0
2. Changes of assumptions or other inputs	184,873
3. Net excess of projected over actual earnings on OPEB plan investments (if any)	0
4. Difference between actual and expected experience in the Total OPEB Liability	<u>0</u>
5. Total Deferred Outflows of Resources	\$184,873
<b>Deferred Inflows of Resources</b>	
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$3,114
7. Changes of assumptions or other inputs	0
8. Net excess of actual over projected earnings on OPEB plan investments (if any)	542,815
9. Difference between expected and actual experience in the Total OPEB Liability	<u>67,800</u>
10. Total Deferred Inflows of Resources	\$613,729

Deferred outflows of resources and deferred inflows of resources related to OPEB expense will be recognized as follows:

**Reporting Date for Employer under GASB 75 Year Ended June 30:**

2019	(\$115,640)
2020	(115,640)
2021	(115,640)
2022	(115,640)
2023	20,063
2024	13,641
Thereafter	0

<sup>(1)</sup> Calculated in accordance with Paragraphs 64 and 65 of GASB 75.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 9 (continued)**

**Deferred Outflows of Resources and Deferred Inflows of Resources – Housing Authority**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Deferred Outflows of Resources</b>	
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$0
2. Changes of assumptions or other inputs	226,411
3. Net excess of projected over actual earnings on OPEB plan investments (if any)	0
4. Difference between actual and expected experience in the Total OPEB Liability	<u>0</u>
5. Total Deferred Outflows of Resources	\$226,411
<b>Deferred Inflows of Resources</b>	
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$28,994
7. Changes of assumptions or other inputs	0
8. Net excess of actual over projected earnings on OPEB plan investments (if any)	664,776
9. Difference between expected and actual experience in the Total OPEB Liability	<u>83,033</u>
10. Total Deferred Inflows of Resources	\$776,803

Deferred outflows of resources and deferred inflows of resources related to OPEB expense will be recognized as follows:

**Reporting Date for Employer under GASB 75 Year Ended June 30:**

2019	(\$146,056)
2020	(146,056)
2021	(146,056)
2022	(146,056)
2023	20,137
2024	13,695
Thereafter	0

<sup>(1)</sup> Calculated in accordance with Paragraphs 64 and 65 of GASB 75.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 9 (continued)**

**Deferred Outflows of Resources and Deferred Inflows of Resources – LARPD**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Deferred Outflows of Resources</b>	
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$0
2. Changes of assumptions or other inputs	213,080
3. Net excess of projected over actual earnings on OPEB plan investments (if any)	0
4. Difference between actual and expected experience in the Total OPEB Liability	<u>0</u>
5. Total Deferred Outflows of Resources	\$213,080
<b>Deferred Inflows of Resources</b>	
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$77,296
7. Changes of assumptions or other inputs	0
8. Net excess of actual over projected earnings on OPEB plan investments (if any)	625,635
9. Difference between expected and actual experience in the Total OPEB Liability	<u>78,145</u>
10. Total Deferred Inflows of Resources	\$781,076

Deferred outflows of resources and deferred inflows of resources related to OPEB expense will be recognized as follows:

**Reporting Date for Employer under GASB 75 Year Ended June 30:**

2019	(\$146,261)
2020	(146,261)
2021	(146,261)
2022	(146,261)
2023	10,148
2024	6,900
Thereafter	0

<sup>(1)</sup> Calculated in accordance with Paragraphs 64 and 65 of GASB 75.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 9 (continued)**

**Deferred Outflows of Resources and Deferred Inflows of Resources – Office of Education**

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Deferred Outflows of Resources</b>	
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$0
2. Changes of assumptions or other inputs	0
3. Net excess of projected over actual earnings on OPEB plan investments (if any)	0
4. Difference between actual and expected experience in the Total OPEB Liability	<u>0</u>
5. Total Deferred Outflows of Resources	0
<b>Deferred Inflows of Resources</b>	
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>(1)</sup>	\$10,335
7. Changes of assumptions or other inputs	0
8. Net excess of actual over projected earnings on OPEB plan investments (if any)	0
9. Difference between expected and actual experience in the Total OPEB Liability	<u>0</u>
10. Total Deferred Inflows of Resources	\$10,335

Deferred outflows of resources and deferred inflows of resources related to OPEB expense will be recognized as follows:

**Reporting Date for Employer under GASB 75 Year Ended June 30:**

2019	(\$1,820)
2020	(1,820)
2021	(1,820)
2022	(1,820)
2023	(1,820)
2024	(1,235)
Thereafter	0

<sup>(1)</sup> Calculated in accordance with Paragraphs 64 and 65 of GASB 75.



## SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association

---

---

### EXHIBIT 9 (continued)

#### Deferred Outflows of Resources and Deferred Inflows of Resources

---

There are changes in each employer's proportionate share of the total Net OPEB Liability (NOL) during the measurement period ended December 31, 2017. The net effect of the change on the employer's proportionate share of the collective NOL and collective deferred outflows of resources and deferred inflows of resources is recognized over the average of the expected remaining service lives of all employees that are provided with benefits through ACERA which is 6.68<sup>9</sup> years determined as of December 31, 2016 (the beginning of the measurement period ended December 31, 2017). This is described in Paragraph 64 of GASB 75.

The average of the expected service lives of all employees is determined by:

- Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

We did not attempt to determine the beginning balances for deferred inflows of resources and deferred outflows of resources as of beginning of the period for the 2017 plan year. Per paragraph 244 of GASB 75, these balances are assumed to be zero.

---

<sup>9</sup> *The remaining service lives of all employees of 6.68 years used here for GASB 75 is different from the 5.47 years used for GASB 68 because the number of payees and nonactive members (with 0 years of expected remaining service lives) receiving health benefits under the SRBR Plan is less than the number of payees and nonactive members receiving pension benefits.*

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 10**

**Schedule of Proportionate Share of the Net OPEB Liability – Total for all Employers**

<b>Reporting Date for Employer under GASB 75 as of June 30</b>	<b>Proportion of the Net OPEB Liability</b>	<b>Proportionate share of Net OPEB Liability</b>	<b>Covered-employee payroll<sup>(1)</sup></b>	<b>Proportionate share of the Net OPEB Liability as a percentage of its covered-employee payroll</b>	<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>
2017	100.000%	\$135,247,221	\$947,567,631	14.27%	85.50%
2018	100.000%	\$27,478,286	\$995,178,209	2.76%	97.33%

<sup>(1)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 10 (continued)**

**Schedule of Proportionate Share of the Net OPEB Liability – Alameda County**

<b>Reporting Date for Employer under GASB 75 as of June 30</b>	<b>Proportion of the Net OPEB Liability</b>	<b>Proportionate share of Net OPEB Liability</b>	<b>Covered-employee payroll<sup>(1)</sup></b>	<b>Proportionate share of the Net OPEB Liability as a percentage of its covered-employee payroll</b>	<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>
2017	76.785%	\$103,849,869	\$670,675,915	15.48%	85.50%
2018	76.289%	\$20,962,931	\$696,359,743	3.01%	97.33%

<sup>(1)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 10 (continued)**

**Schedule of Proportionate Share of the Net OPEB Liability – Health System**

<b>Reporting Date for Employer under GASB 75 as of June 30</b>	<b>Proportion of the Net OPEB Liability</b>	<b>Proportionate share of Net OPEB Liability</b>	<b>Covered-employee payroll<sup>(1)</sup></b>	<b>Proportionate share of the Net OPEB Liability as a percentage of its covered-employee payroll</b>	<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>
2017	17.920%	\$24,236,173	\$216,685,931	11.18%	85.50%
2018	18.702%	\$5,139,101	\$239,207,087	2.15%	97.33%

<sup>(1)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 10 (continued)**

**Schedule of Proportionate Share of the Net OPEB Liability – Superior Court**

<b>Reporting Date for Employer under GASB 75 as of June 30</b>	<b>Proportion of the Net OPEB Liability</b>	<b>Proportionate share of Net OPEB Liability</b>	<b>Covered-employee payroll<sup>(1)</sup></b>	<b>Proportionate share of the Net OPEB Liability as a percentage of its covered-employee payroll</b>	<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>
2017	3.946%	\$5,336,372	\$46,866,752	11.39%	85.50%
2018	3.763%	\$1,034,117	\$46,437,348	2.23%	97.33%

<sup>(1)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 10 (continued)**

**Schedule of Proportionate Share of the Net OPEB Liability – First 5**

<b>Reporting Date for Employer under GASB 75 as of June 30</b>	<b>Proportion of the Net OPEB Liability</b>	<b>Proportionate share of Net OPEB Liability</b>	<b>Covered-employee payroll<sup>(1)</sup></b>	<b>Proportionate share of the Net OPEB Liability as a percentage of its covered-employee payroll</b>	<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>
2017	0.371%	\$502,287	\$4,416,769	11.37%	85.50%
2018	0.369%	\$101,306	\$4,562,701	2.22%	97.33%

<sup>(1)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 10 (continued)**

**Schedule of Proportionate Share of the Net OPEB Liability – Housing Authority**

<b>Reporting Date for Employer under GASB 75 as of June 30</b>	<b>Proportion of the Net OPEB Liability</b>	<b>Proportionate share of Net OPEB Liability</b>	<b>Covered-employee payroll<sup>(1)</sup></b>	<b>Proportionate share of the Net OPEB Liability as a percentage of its covered-employee payroll</b>	<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>
2017	0.477%	\$644,757	\$4,354,275	14.81%	85.50%
2018	0.452%	\$124,068	\$4,299,288	2.89%	97.33%

<sup>(1)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 10 (continued)**

**Schedule of Proportionate Share of the Net OPEB Liability – LARPD**

<b>Reporting Date for Employer under GASB 75 as of June 30</b>	<b>Proportion of the Net OPEB Liability</b>	<b>Proportionate share of Net OPEB Liability</b>	<b>Covered-employee payroll<sup>(1)</sup></b>	<b>Proportionate share of the Net OPEB Liability as a percentage of its covered-employee payroll</b>	<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>
2017	0.492%	\$665,608	\$4,487,952	14.83%	85.50%
2018	0.425%	\$116,763	\$4,312,042	2.71%	97.33%

<sup>(1)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.



**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 10 (continued)**

**Schedule of Proportionate Share of the Net OPEB Liability – Office of Education**

<b>Reporting Date for Employer under GASB 75 as of June 30</b>	<b>Proportion of the Net OPEB Liability</b>	<b>Proportionate share of Net OPEB Liability</b>	<b>Covered-employee payroll<sup>(1)</sup></b>	<b>Proportionate share of the Net OPEB Liability as a percentage of its covered-employee payroll</b>	<b>Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability</b>
2017	0.009%	\$12,155	\$80,037	15.19%	85.50%
2018	0.000%	\$0	\$0	N/A	97.33%

<sup>(1)</sup> Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation and is defined as the payroll of employees that are provided with OPEB through the OPEB plan.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 11**

**Schedule of Reconciliation of Net OPEB Liability – Total for all Employers**

---

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Reconciliation of Net OPEB Liability</b>	
1. Beginning Net OPEB Liability	\$135,247,221
2. OPEB Expense	7,709,300
3. Employer Contributions	0
4. New Net Deferred Inflows/Outflows	(115,478,235)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0
6. New Net Deferred Flows Due to Change in Proportion	0
7. Recognition of Prior Deferred Inflows/Outflows	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	0
9. Ending Net OPEB Liability	<u>\$27,478,286</u>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 11 (continued)**

**Schedule of Reconciliation of Net OPEB Liability – Alameda County**

---

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Reconciliation of Net OPEB Liability</b>	
1. Beginning Net OPEB Liability	\$103,849,869
2. OPEB Expense	5,780,902
3. Employer Contributions	0
4. New Net Deferred Inflows/Outflows	(88,097,280)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0
6. New Net Deferred Flows Due to Change in Proportion	(570,560)
7. Recognition of Prior Deferred Inflows/Outflows	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	0
9. Ending Net OPEB Liability	<u>\$20,962,931</u>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 11 (continued)**

**Schedule of Reconciliation of Net OPEB Liability – Health System**

---

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Reconciliation of Net OPEB Liability</b>	
1. Beginning Net OPEB Liability	\$24,236,173
2. OPEB Expense	1,600,255
3. Employer Contributions	0
4. New Net Deferred Inflows/Outflows	(21,597,209)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0
6. New Net Deferred Flows Due to Change in Proportion	899,882
7. Recognition of Prior Deferred Inflows/Outflows	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>0</u>
9. Ending Net OPEB Liability	<u>\$5,139,101</u>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 11 (continued)**

**Schedule of Reconciliation of Net OPEB Liability – Superior Court**

---

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Reconciliation of Net OPEB Liability</b>	
1. Beginning Net OPEB Liability	\$5,336,372
2. OPEB Expense	253,234
3. Employer Contributions	0
4. New Net Deferred Inflows/Outflows	(4,345,906)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0
6. New Net Deferred Flows Due to Change in Proportion	(209,583)
7. Recognition of Prior Deferred Inflows/Outflows	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	0
9. Ending Net OPEB Liability	<u>\$1,034,117</u>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 11 (continued)**

**Schedule of Reconciliation of Net OPEB Liability – First 5**

---

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Reconciliation of Net OPEB Liability</b>	
1. Beginning Net OPEB Liability	\$502,287
2. OPEB Expense	27,875
3. Employer Contributions	0
4. New Net Deferred Inflows/Outflows	(425,742)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0
6. New Net Deferred Flows Due to Change in Proportion	(3,114)
7. Recognition of Prior Deferred Inflows/Outflows	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>0</u>
9. Ending Net OPEB Liability	<u>\$101,306</u>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 11 (continued)**

**Schedule of Reconciliation of Net OPEB Liability – Housing Authority**

---

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Reconciliation of Net OPEB Liability</b>	
1. Beginning Net OPEB Liability	\$644,757
2. OPEB Expense	29,703
3. Employer Contributions	0
4. New Net Deferred Inflows/Outflows	(521,398)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0
6. New Net Deferred Flows Due to Change in Proportion	(28,994)
7. Recognition of Prior Deferred Inflows/Outflows	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	0
9. Ending Net OPEB Liability	<u>\$124,068</u>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 11 (continued)**

**Schedule of Reconciliation of Net OPEB Liability – LARPD**

---

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Reconciliation of Net OPEB Liability</b>	
1. Beginning Net OPEB Liability	\$665,608
2. OPEB Expense	19,151
3. Employer Contributions	0
4. New Net Deferred Inflows/Outflows	(490,700)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0
6. New Net Deferred Flows Due to Change in Proportion	(77,296)
7. Recognition of Prior Deferred Inflows/Outflows	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	0
9. Ending Net OPEB Liability	<u>\$116,763</u>



**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

---

**EXHIBIT 11 (continued)**

**Schedule of Reconciliation of Net OPEB Liability – Office of Education**

---

<b>Reporting Date for Employer under GASB 75</b>	<b>June 30, 2018</b>
<b>Measurement Date for Employer under GASB 75</b>	<b>December 31, 2017</b>
<b>Reconciliation of Net OPEB Liability</b>	
1. Beginning Net OPEB Liability	\$12,155
2. OPEB Expense	(1,820)
3. Employer Contributions	0
4. New Net Deferred Inflows/Outflows	0
5. Change in Allocation of Prior Deferred Inflows/Outflows	0
6. New Net Deferred Flows Due to Change in Proportion	(10,335)
7. Recognition of Prior Deferred Inflows/Outflows	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>0</u>
9. Ending Net OPEB Liability	<u>\$0</u>

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 12**

**Schedule of Recognition of Changes in Total Net OPEB Liability**

**Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of Differences between Actual and Expected Experience on Total OPEB Liability**

Reporting Date for Employer under GASB 75 Year Ended June 30	Differences Between Actual and Expected Experience	Recognition Period (Years)	Reporting Date for Employer under GASB 75, Year Ended June 30						
			2018	2019	2020	2021	2022	2023	2024
2018	(\$21,627,766)	6.68	<u>(\$3,237,690)</u>	<u>(\$3,237,690)</u>	<u>(\$3,237,690)</u>	<u>(\$3,237,690)</u>	<u>(\$3,237,690)</u>	<u>(\$3,237,690)</u>	<u>(\$2,201,626)</u>
Net increase (decrease) in OPEB expense			(\$3,237,690)	(\$3,237,690)	(\$3,237,690)	(\$3,237,690)	(\$3,237,690)	(\$3,237,690)	(\$2,201,626)

**Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of Assumption Changes**

Reporting Date for Employer under GASB 75 Year Ended June 30	Effect of Assumption Changes	Recognition Period (Years)	Reporting Date for Employer under GASB 75, Year Ended June 30						
			2018	2019	2020	2021	2022	2023	2024
2018	\$58,973,316	6.68	<u>\$8,828,341</u>	<u>\$8,828,341</u>	<u>\$8,828,341</u>	<u>\$8,828,341</u>	<u>\$8,828,341</u>	<u>\$8,828,341</u>	<u>\$6,003,270</u>
Net increase (decrease) in OPEB expense			\$8,828,341	\$8,828,341	\$8,828,341	\$8,828,341	\$8,828,341	\$8,828,341	\$6,003,270

As described in Exhibit 9, the average of the expected remaining service lives of all employees that are provided with benefits through ACERA (active and inactive employees) determined as of December 31, 2016 (the beginning of the measurement period ending December 31, 2017) is 6.68 years.

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 12 (continued)**

**Schedule of Recognition of Changes in Total Net OPEB Liability**

**Increase (Decrease) in OPEB Expense Arising from the Recognition of Differences between Projected and Actual Earnings on OPEB Plan Investments**

Reporting Date for Employer under GASB 75 Year Ended June 30	Differences between Projected and Actual Earnings	Recognition Period (Years)	Reporting Date for Employer under GASB 75, Year Ended June 30				
			2018	2019	2020	2021	2022
2018	(\$184,041,417)	5.00	<u>(\$36,808,283)</u>	<u>(\$36,808,283)</u>	<u>(\$36,808,283)</u>	<u>(\$36,808,283)</u>	<u>(\$36,808,285)</u>
Net increase (decrease) in OPEB expense			(\$36,808,283)	(\$36,808,283)	(\$36,808,283)	(\$36,808,283)	(\$36,808,285)

The differences between projected and actual earnings on OPEB plan investments are recognized over a five-year period per Paragraph 43b. of GASB 75.

**Total Increase (Decrease) in OPEB Expense**

Reporting Date for Employer under GASB 75 Year Ended June 30	Total Differences	Reporting Date for Employer under GASB 75, Year Ended June 30						
		2018	2019	2020	2021	2022	2023	2024
2018	(\$146,695,867)	<u>(\$31,217,632)</u>	<u>(\$31,217,632)</u>	<u>(\$31,217,632)</u>	<u>(\$31,217,632)</u>	<u>(\$31,217,634)</u>	<u>\$5,590,651</u>	<u>\$3,801,644</u>
Net increase (decrease) in OPEB expense		(\$31,217,632)	(\$31,217,632)	(\$31,217,632)	(\$31,217,632)	(\$31,217,634)	\$5,590,651	\$3,801,644

**SECTION 2: GASB 75 Information for Alameda County Employees' Retirement Association**

**EXHIBIT 13**

**Allocation of Changes in Total Net OPEB Liability**

In addition to the amounts shown in Exhibit 12, there are changes in each employer's proportionate share of the total Net OPEB Liability (NOL) during the measurement period ending on December 31, 2017. The net effect of the change on the employer's proportionate share of the collective NOL and collective deferred outflows of resources and deferred inflows of resources is also recognized over the average of the expected remaining service lives of all employees shown previously. These amounts are shown below. While these amounts are different for each employer, they sum to zero for ACERA.

**Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Reporting Year Ended June 30, 2018**

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GASB 75, Year Ended June 30						
			2018	2019	2020	2021	2022	2023	2024
Alameda County	(\$671,011)	6.68	(\$100,451)	(\$100,451)	(\$100,451)	(\$100,451)	(\$100,451)	(\$100,451)	(\$68,305)
Health System	1,058,312	6.68	158,430	158,430	158,430	158,430	158,430	158,430	107,732
Superior Court	(246,481)	6.68	(36,898)	(36,898)	(36,898)	(36,898)	(36,898)	(36,898)	(25,093)
First 5	(3,662)	6.68	(548)	(548)	(548)	(548)	(548)	(548)	(374)
Housing Authority	(34,099)	6.68	(5,105)	(5,105)	(5,105)	(5,105)	(5,105)	(5,105)	(3,469)
LARPD	(90,904)	6.68	(13,608)	(13,608)	(13,608)	(13,608)	(13,608)	(13,608)	(9,256)
Office of Education	(12,155)	6.68	(1,820)	(1,820)	(1,820)	(1,820)	(1,820)	(1,820)	(1,235)
<b>Total for all Employers</b>	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Actuarial Assumptions and Methods**

**For December 31, 2017 Measurement Date and Employer Reporting as of June 30, 2018**

---

**Data:** Detailed census data and summary plan descriptions for postretirement benefits were provided by ACERA.

---

**Rationale for Assumptions:** The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the December 1, 2013 through November 30, 2016 Actuarial Experience Study report dated September 6, 2017, and in our letter dated March 27, 2018 regarding the health assumptions recommended for the December 31, 2017 SRBR retiree health actuarial valuation. In addition, the Board adopted a 7.25% investment return assumption for this valuation. Unless otherwise noted, all actuarial assumptions and methods shown below apply to all tiers. These assumptions were adopted by the Board.

**Post-Retirement Mortality Rates**

*Healthy:* For General members and all beneficiaries: Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Table, with no setback for males and females, projected generationally with the two-dimensional MP-2016 projection scale.  
For Safety members: Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Table, with no setback for males and females, projected generationally with the two-dimensional MP-2016 projection scale.

*Disabled:* For General members: Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Table, set forward seven years for males and set forward four years for females, projected generationally with the two-dimensional MP-2016 projection scale.  
For Safety members: Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Table, set forward two years for males and with no set forward for females, projected generationally with the two-dimensional MP-2016 projection scale.

The RPH-2014 morality tables and adjustments as shown above reflect the mortality experience as of the measurement date. The generational projection is a provision for future mortality improvement.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Pre-Retirement Mortality Rates**

**General and Safety Members:** Headcount-Weighted RP-2014 (RPH-2014) Employee Mortality Table times 80%, projected generationally with the two-dimensional MP-2016 projection scale.

**Termination Rates Before Retirement:<sup>1</sup>**

Age	Rate (%)			
	Mortality Before Retirement <sup>1</sup>			
	General <sup>2</sup>		Safety <sup>2</sup>	
	Male	Female	Male	Female
25	0.05	0.02	0.05	0.02
30	0.05	0.02	0.05	0.02
35	0.05	0.03	0.05	0.03
40	0.06	0.04	0.06	0.04
45	0.10	0.07	0.10	0.07
50	0.17	0.11	0.17	0.11
55	0.27	0.17	0.27	0.17
60	0.45	0.24	0.45	0.24
65	0.78	0.36	0.78	0.36

<sup>1</sup> Note that generational projections beyond the base year (2014) are not reflected in the above mortality rates. All pre-retirement deaths are assumed to be non-service connected.

<sup>2</sup> Based on the Headcount-Weighted RP-2014 (RPH-2014) Employee Mortality Tables times 80%, projected generationally with the two-dimensional MP-2016 projection scale.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Termination Rates Before Retirement (continued):**

<b>Age</b>	<b>Rate (%)</b>	
	<b>Disability</b>	
	<b>General<sup>(1)</sup></b>	<b>Safety<sup>(2)</sup></b>
20	0.00	0.00
25	0.01	0.03
30	0.03	0.26
35	0.05	0.58
40	0.08	0.73
45	0.19	0.78
50	0.31	1.52
55	0.38	2.00
60	0.43	2.60

<sup>(1)</sup> 60% of General disabilities are assumed to be service connected disabilities. The other 40% are assumed to be non-service connected disabilities.

<sup>(2)</sup> 100% of Safety disabilities are assumed to be service connected disabilities.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Termination Rates Before Retirement (continued):**

<b>Years of Service</b>	<b>Rate (%)</b>	
	<b>Termination (&lt; 5 Years of Service)<sup>(1)</sup></b>	
	<b>General</b>	<b>Safety</b>
0	11.00	4.00
1	9.00	3.50
2	8.00	3.50
3	6.00	2.50
4	6.00	2.00

  

<b>Age</b>	<b>Termination (5+ Years of Service)<sup>(2)</sup></b>	
	<b>General</b>	<b>Safety</b>
20	6.00	2.00
25	6.00	2.00
30	5.40	2.00
35	4.40	1.70
40	3.40	1.20
45	3.00	1.00
50	3.00	1.00
55	3.00	1.00
60	3.00	0.40

<sup>(1)</sup> 60% of terminated members will choose a refund of contributions and 40% will choose a deferred vested benefit.

<sup>(2)</sup> 35% of terminated members will choose a refund of contributions and 65% will choose a deferred vested benefit. No termination is assumed after a member is eligible for retirement (as long as a retirement rate is present).



**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

**Retirement Rates:**

Age	Rate (%)							
	General Tier 1	General Tier 2	General Tier 3	General Tier 4	Safety Tier 1 <sup>(1)</sup>	Safety Tier 2, 2D <sup>(1)</sup>	Safety Tier 2C <sup>(1)</sup>	Safety Tier 4
49	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00
50	4.00	2.00	6.00	0.00	35.00	15.00	4.00	4.00
51	4.00	2.00	3.00	0.00	30.00	15.00	2.00	2.00
52	4.00	2.00	5.00	4.00	25.00	15.00	2.00	2.00
53	4.00	2.00	6.00	1.50	35.00	15.00	3.00	3.00
54	4.00	2.00	6.00	1.50	45.00	15.00	6.00	6.00
55	6.00	2.00	12.00	2.00	45.00	15.00	10.00	10.00
56	8.00	3.00	13.00	2.50	45.00	15.00	12.00	12.00
57	10.00	4.00	13.00	3.50	45.00	15.00	20.00	20.00
58	12.00	4.00	14.00	3.50	45.00	20.00	10.00	10.00
59	14.00	5.00	16.00	4.50	45.00	20.00	15.00	15.00
60	20.00	7.00	21.00	6.00	45.00	30.00	60.00	60.00
61	20.00	9.00	20.00	8.00	45.00	30.00	60.00	60.00
62	35.00	15.00	30.00	18.00	45.00	30.00	60.00	60.00
63	30.00	16.00	25.00	15.00	45.00	30.00	60.00	60.00
64	30.00	18.00	25.00	17.00	45.00	50.00	60.00	60.00
65	35.00	25.00	30.00	22.00	100.00	100.00	100.00	100.00
66	35.00	25.00	25.00	25.00	100.00	100.00	100.00	100.00
67	30.00	25.00	25.00	25.00	100.00	100.00	100.00	100.00
68	30.00	30.00	25.00	30.00	100.00	100.00	100.00	100.00
69	35.00	35.00	50.00	35.00	100.00	100.00	100.00	100.00
70	65.00	50.00	65.00	50.00	100.00	100.00	100.00	100.00
71	65.00	50.00	65.00	50.00	100.00	100.00	100.00	100.00
72	65.00	50.00	65.00	50.00	100.00	100.00	100.00	100.00
73	65.00	50.00	65.00	50.00	100.00	100.00	100.00	100.00
74	65.00	50.00	65.00	50.00	100.00	100.00	100.00	100.00
75	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>(1)</sup> Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Retirement Age and Benefit for  
Deferred Vested Members:**

For deferred vested members, retirement age assumptions are as follows:

General Age:	61
Safety Age:	56

For future deferred vested members who terminate with less than five years of service and who are not vested, we assume that they will retire at age 70 for both General and Safety if they decide to leave their contributions on deposit.

We assume that 30% of future General and 60% of future Safety deferred vested members will continue to work for a reciprocal employer. For reciprocals, we assume 3.90% and 4.30% compensation increases per annum for General and Safety, respectively.

---

**Measurement Date:** December 31, 2017

**Discount Rate:** 7.25%

---

**Future Benefit Accruals:** 1.0 year of service per year of employment, plus 0.003 years of additional service for General members and 0.006 years of additional service for Safety members, to anticipate conversion of unused sick leave for each year of employment.

**Unknown Data for Members:** Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

**Inclusion of Deferred Vested  
Members:**

All deferred vested members are included in the valuation.

**Consumer Price Index:**

Increase of 3.00% per year, retiree COLA increases due to CPI subject to a 3% maximum change per year for General Tier 1, General Tier 3, and Safety Tier 1 and 2% maximum change per year for General Tier 2, General Tier 4, Safety Tier 2, Safety Tier 2C, Safety Tier 2D, and Safety Tier 4.

---

**Actuarial Cost Method:** Entry Age Cost Method.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Salary Increases:**

Annual Rate of Compensation Increase (%)		
Inflation: 3.00%; an additional 0.50% “across the board” salary increases (other than inflation); plus the following Merit and Promotional increases based on service.		
Service	General	Safety
0-1	4.80%	7.80%
1-2	4.80	7.80
2-3	3.90	7.00
3-4	2.40	4.40
4-5	1.90	3.50
5-6	1.60	2.30
6-7	1.50	1.60
7-8	1.10	1.00
8-9	0.80	1.00
9-10	0.80	0.90
10-11	0.50	0.80
11+	0.40	0.80

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Terminal Pay Assumptions:**

Additional pay elements are expected to be received during a member's final average earnings period. The percentages, added to the final year salary, used in this valuation are:

	<u>Service Retirement</u>	<u>Disability Retirement</u>
General Tier 1	8.0%	6.5%
General Tier 2	3.0%	1.4%
General Tier 3	8.0%	6.5%
General Tier 4	N/A	N/A
Safety Tier 1	8.5%	6.4%
Safety Tier 2	3.5%	2.1%
Safety Tier 2C	3.5%	2.1%
Safety Tier 2D	3.5%	2.1%
Safety Tier 4	N/A	N/A

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

**Per Capita Health Costs:**

The combined monthly per capita dental and vision claims cost for plan year 2017 was assumed to be \$46.90. The monthly Medicare Part B premium reimbursement for 2017 is \$109.00. For calendar year 2017, medical costs for a retiree were assumed to be as follows:

<b>Medical Plan</b>	<b>Election Assumption</b>	<b>Monthly Premium</b>	<b>Maximum Monthly Medical Allowance*</b>
<b>Under Age 65</b>			
Kaiser HMO	85%	\$729.08	\$540.44
United Healthcare HMO	15%	\$982.06	\$540.44
<b>Age 65 and Older</b>			
Kaiser Senior Advantage	70%	\$354.73	\$540.44
OneExchange Individual Insurance Exchange	30%	\$278.65**	\$414.00

\* The Maximum Monthly Medical Allowance of \$540.44 (\$414.00 for retirees purchasing individual insurance from the Medicare exchange) is subject to the following subsidy schedule:

<b>Completed Years of Service</b>	<b>Percentage Subsidized</b>
10-14	50%
15-19	75%
20+	100%

\*\*The derivation of amount expected to be paid out in 2017 from the Health Reimbursement Account for members with 20 or more years of service is provided in the table on the following page. In the table, we have also provided the amount expected to be paid for members with 10-14 and 15-19 years of service.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Per Capita  
Health Costs (continued):**

Derivation of OneExchange Monthly Per Capita Costs

	(Years of Service Category)	<u>10-14</u>	<u>15-19</u>	<u>20+</u>
1.	Maximum MMA for 2016*	\$207.00	\$310.50	\$414.00
2.	Total of Maximum MMA** (From Jan. 2016 to Dec. 2016)	\$384,936	\$684,032	\$4,325,721
3.	Total of Actual Reimbursement (From Jan. 2016 to Dec. 2016)**	\$294,309	\$478,118	\$2,479,490
4.	Ratio of Actual Reimbursement to Maximum 2016 MMA [(3) / (2)]	76.46%	69.90%	57.32%
5.	Average Monthly Per Capita Cost for 2016 [(1) x (4)]	\$158.27	\$217.03	\$237.30
6.	Increased for Expected Medical Trend (6.75%) from 2016 to 2017 [(5) x 1.0675]	\$168.95	\$231.68	\$253.32
7.	Increased for Additional 10% Margin for 2016 Expenses Incurred in 2016 but Reimbursed after December 2016 [(6) x 1.10]	<b>\$185.84</b>	<b>\$254.85</b>	<b>\$278.65</b>

\* These are the original amounts adopted by the Board in 2013. The maximum MMA increased from \$400.00 in 2015 to \$414.00 in 2016.

\*\* For retirees participating in OneExchange for all 12 months of 2016.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Per Capita Health Costs (continued): Implicit Subsidy**

We have estimated the average per capita premium for retirees under age 65 to be \$9,204 per year. Because premiums for retirees under age 65 include active participants for purposes of underwriting, the retirees receive an implicit subsidy from the actives. Had the retirees under age 65 been underwritten as a separate group, their age-based premiums would be higher for most individuals. The excess of the age-based premium over the per capita premium charged makes up the subsidy. Below is a sample of the age-based costs for the retirees under age 65.

**Average Medical**

Age	Retiree		Spouse	
	Male	Female	Male	Female
50	\$9,544	\$10,871	\$6,666	\$8,729
55	11,335	11,702	8,921	10,104
60	13,461	12,614	11,942	11,718
64	15,443	13,381	15,075	13,189

Not all ACERA employers are receiving an implicit subsidy reimbursement from the Association. For SRBR sufficiency purposes, we have adjusted (by about a 10% reduction of the costs shown above) our projected implicit subsidy payments to account for this fact, based on data provided by the County of Alameda's health consultant.

For calculating the AAL, we have not applied the adjustment.

---

**Participation and Coverage Election:** Based on proportion of current retirees receiving a medical benefit subsidy, we estimate that 80% of employees under age 65, and 90% of employees age 65 and older, who are eligible to retire and receive subsidized postretirement medical coverage will elect to participate in the plan.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

**Health Care Cost Trend Rates:** Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are “net” and are applied to the net per capita costs shown above. The trend shown for a particular plan year is the rate that is to be applied to the premium for the shown calendar year to calculate the next calendar year’s projected premium. For example, the projected 2018 calendar year premium for Kaiser (under age 65) is \$735.64 per month (\$729.08 increased by 0.90%).

Calendar Year	Non-Medicare Plans		Medicare Advantage Plan	Dental, Vision and Medicare Part B	
	Kaiser HMO Early Retiree	United Healthcare HMO Early Retiree	One Exchange & Kaiser Senior Advantage	Dental and Vision	Medicare Part B
2017	6.50% <sup>(1)</sup>	6.50% <sup>(1)</sup>	6.50% <sup>(1)</sup>	4.50% <sup>(1)</sup>	28.44% <sup>(2)</sup>
2018	7.00	7.00	6.50	4.50	4.50 <sup>(3)</sup>
2019	6.75	6.75	6.25	4.50	4.50
2020	6.50	6.50	6.00	4.50	4.50
2021	6.25	6.25	5.75	4.50	4.50
2022	6.00	6.00	5.50	4.50	4.50
2023	5.75	5.75	5.25	4.50	4.50
2024	5.50	5.50	5.00	4.50	4.50
2025	5.25	5.25	4.74	4.50	4.50
2026	5.00	5.00	4.50	4.50	4.50
2027	4.75	4.75	4.50	4.50	4.50
2028 & Later	4.50	4.50	4.50	4.50	4.50

<sup>(1)</sup> The actual trends are shown below, based on premium renewals for 2018 as reported by ACERA.

Kaiser HMO Early Retiree	United Healthcare HMO Early Retiree	Kaiser Senior Advantage	Dental and Vision
0.90%	6.63%	3.52%	2.15%

<sup>(2)</sup> The increases in Part B premium for continuing retirees from 2016 to 2017 had been limited due to relatively low Social Security cost-of-living-adjustment (COLA) and the hold-harmless provision (i.e. Medicare Part B premium dollar increases were limited to Social Security COLA dollar increases). Based on the 3.25% inflation assumption used in the pension valuation, we expect the Social Security COLA from 2017 to 2018 will be large enough to cover the dollar increases in the Medicare Part B premium for most retirees. We expect this increase to be at least \$25 per month, from \$109, the lowest standard Medicare Part B premium for 2017 to \$134, the highest standard Medicare Part B premium. We assume that the standard premium for all retirees in 2018 will be \$140 (\$134 increased by 4.50%) per month.

<sup>(3)</sup> Based on the 3.00% inflation assumption used in the experience study as of November 30, 2016, we expect the Social Security COLA from 2018 to 2019 will be large enough to cover the dollar increases in the Medicare Part B premium for most retirees. We assume that the standard premium for all retirees in 2019 will be \$140 (\$134 in 2018 increased by 4.50%) per month.



**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

---

**Assumed Increase in Annual Maximum Benefits:**

For the “substantive plan design” shown in this report, we have assumed:

- a) Maximum medical allowance for 2018 will remain at the 2017 levels, then increase with 50% of trend for medical plans, or 3.25%, graded down to the ultimate rate of 2.25% over 8 years.
- b) Dental and vision premium reimbursement will increase with full trend.
- c) Medicare B premium reimbursement will increase with full trend.

**Dependents:**

Demographic data was available for spouses of current retirees. For future retirees, husbands were assumed to be three years older than their wives. Of the future retirees who elect to continue their medical coverage at retirement, 35% males and 15% females were assumed to have an eligible spouse who also opts for health coverage at that time.

Please note that these assumptions are only used to determine the cost of the implicit subsidy.

**Plan Design:**

Development of plan liabilities was based on the plan of benefits in effect as described in Exhibit I.

**Administrative Expenses:**

An administrative expense load was not added to projected incurred claim costs in developing per capita health costs.

**Missing Participant Data:**

Any missing census items for a given participant was set to equal to the average value of that item over all other participants of the same membership status for whom the item is known.

**SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association**

**APPENDIX A**

**Projection of OPEB Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of December 31, 2017  
(\$ in millions)**

Year Beginning January 1,	Projected Beginning OPEB Plan's Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending OPEB Plan's Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2017	\$798	\$0	\$38	\$1	\$243	\$1,002
2018	1,002	0	50	2	71	1,021
2019	1,021	0	54	2	72	1,038
2020	1,038	0	57	2	73	1,052
2021	1,052	0	61	2	74	1,063
2022	1,063	0	65	2	75	1,071
2023	1,071	0	70	2	75	1,075
2024	1,075	0	74	2	75	1,074
2025	1,074	0	78	2	75	1,070
2026	1,070	0	82	2	75	1,061
2027	1,061	0	86	2	74	1,048
2028	1,048	0	89	2	73	1,030
2029	1,030	0	93	2	71	1,006
2030	1,006	0	97	2	69	977
2031	977	0	101	1	67	942
2032	942	0	104	1	65	901
2033	901	0	108	1	61	853
2034	853	0	111	1	58	798
2035	798	0	114	1	54	736
2036	736	0	117	1	49	667
2037	667	0	119	1	44	591
2038	591	0	122	1	38	506
2039	506	0	124	1	32	414
2040	414	0	126	1	26	313
2041	313	0	128	0 *	18	203
2042	203	0	129	0 *	10	84
2043	84	0	87	0 *	3	0
2044	0 *	0	0	0 *	0 *	0
2045	0 *	0	0	0 *	0 *	0
2131	0 *	0	0	0 *	0 *	0
2132	0 *	0	0	0 *	0 *	0
2132	Discounted Value:	0 *				

\* Less than \$1 M, when rounded.

## SECTION 3: Actuarial Assumptions and Methods for Alameda County Employees' Retirement Association

---

### APPENDIX A (continued)

#### Projection of OPEB Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of December 31, 2017 (\$ in millions) - continued

---

Notes:

- (1) Amounts may not total exactly due to rounding.
- (2) Amounts shown in the year beginning January 1, 2017 row are actual amounts, based on the financial statements provided by ACERA. The Plan's Fiduciary Net Position as of December 31, 2017 of \$1,002 million was calculated by (a) taking the \$858 million set aside by the Retirement Board in the SRBR reserves to pay OPEB benefits as of December 31, 2017, and (b) adding \$144 million to reflect the proportion of one-half of the net deferred investment gains, after restoring the Contingency Reserve to 1% of total assets, that is commensurate with the size of the OPEB reserves. It should be noted that in determining the Plan's Fiduciary Net Position as of December 31, 2016 of \$798 million, we included a proportion of any deferred investment losses after netting out the Contingency Reserve that was commensurate with the size of the OPEB reserves that would be available to the OPEB SRBR Plan.
- (3) Years 2046-2130, have been omitted from this table.
- (4) Column (a): Except for the "discounted value" shown for 2132, all of the projected beginning Plan Fiduciary Net Position amounts shown have not been adjusted for the time value of money.
- (5) Column (b): \$0. Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.
- (6) Column (c): Projected benefit payments have been determined in accordance with paragraph 43-47 of GASB Statement No. 74, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of November 30, 2016. The projected benefit payments reflect future health care trends. The projected benefit payments include the OPEB SRBR benefits to the extent the current OPEB SRBR (including the portion of deferred investment gain as of December 31, 2017 that is expected to be allocated to the SRBR) supports those benefits\*. Benefit payments are assumed to occur halfway through the year, on average. In accordance with paragraph 35 b.(2)(e) of GASB Statement No. 74, the long-term expected rate of return on Plan investments of 7.25% per annum was applied to all periods of projected benefit payments to determine the discount rate.
- (7) Column (d): Projected administrative expenses are calculated as approximately 0.15% of the beginning OPEB SRBR Plan's Fiduciary Net Position amount. The 0.15% portion was based on the actual fiscal year 2017 administrative expenses as a percentage of the beginning OPEB SRBR Plan's Fiduciary Net Position amount as of January 1, 2017. Administrative expenses are assumed to occur halfway through the year, on average.
- (8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.25% per annum.
- (9) As illustrated in this Exhibit, the OPEB SRBR Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.25% per annum was applied to all periods of projected benefit payments to determine the total OPEB liability as of December 31, 2017 shown earlier in this report, pursuant to paragraph 48 of GASB Statement No. 74.

\* See discussion on page ii regarding source of funding for payment of OPEB SRBR benefits not covered by current OPEB Plan's Fiduciary Net Position in the SRBR.

5537920v5/05579.027