

AGENDA ITEM 1 I
Consent Item

MEMORANDUM

DATE: March 1, 2018

TO: El Dorado County Transit Authority

FROM: Julie Petersen, Finance Manager

SUBJECT: California Employer's Retiree Benefit Trust Program (CERBT) funding for Other Post-Employment Benefits Funding (OPEB)

REQUESTED ACTION:
BY MOTION,

1. **Accept Actuarial Valuation of Other Post-Employee Benefit Program for fiscal years ending June 30, 2018 and June 30, 2019**
2. **Adopt Resolution No. 18-10 approving the pre-fund amount in the California Employer's Retiree Benefit Trust Program (CERBT)**
3. **Authorize Executive Director to execute all documents necessary for continued participation**

BACKGROUND

In July 2004, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pension*. GASB 45 mandates disclosure of Other Post-Employment Benefits (OPEB) liabilities for public employees. OPEB may include benefits such as medical, dental, prescription drug, vision and life insurance plans. GASB 45 establishes a standard for measuring and reporting the liability of retirement benefits other than pensions however; it does not require funding the liability.

During Fiscal Year (FY) 2007/08 El Dorado Transit contracted with California Public Employers' Retirement System (CalPERS) to provide cost effective medical insurance for the unrepresented employee group (27 employees). CalPERS contractually requires El Dorado Transit to contribute an amount towards the cost of retiree medical coverage as a condition of participating in the CalPERS medical plans. There are two (2) eligible retirees who have elected coverage. Monthly cost to the agency is currently at the lowest level possible of \$73.15 per eligible retiree. This contribution is based on a formula and increases a modest amount each year.

On August 5, 2010 the Board adopted resolution 10-10 to pre-fund the OPEB future liability by placing assets in the CERBT program to allow for a manageable dollar

amount to be budgeted each year for contributions to build reserves and earn interest to offset the cost of the program. A thirty (30) year amortization period is consistent with the anticipated retirement trend of current employees.

In March 2011, the CalPERS Board approved a change to the classes in which assets of the CERBT are invested in public market securities. The Executive Director approved the development of the actuarial valuation based on “Strategy 1” which is the class most similar to the strategy previously chosen by the Board and the class El Dorado Transit is currently participating in.

DISCUSSION

The El Dorado Transit continuing retiree health plan allows eligible retirees to enroll in the agency group medical plan through CalPERS at time of separation or at any subsequent open enrollment period. The plan includes only medical insurance coverage excluding other possible retiree benefits e.g. dental, vision, etc. Since plan inception in 2007, two (2) eligible participants have elected coverage however; three (3) eligible retirees may enroll during any open enrollment period. There are twenty-seven (27) current employees who are qualified, and nine (9) who may retire within the next five (5) years. These employees have the option to continue their medical coverage under this plan.

Actuarial valuations are used as a method of verifying the changing conditions of an agency’s employee statistics that impact the annual cost of OPEB and outstanding obligations or future potential liabilities. CalPERS requires an actuarial valuation every two (2) years under the CERBT pooling program.

El Dorado Transit contracted Bickmore to complete an actuarial valuation of other post-employment benefits to capture and report the current and future potential liabilities of this benefit. This report provides statistics as of July 1, 2017 for the years ending June 30, 2018 and June 30, 2019.

This is the third year that GASB 45 requires both “Explicit” and “Implicit” liabilities be calculated as a part of the actuarial process. This information will be included as part of El Dorado Transit’s Financial and Compliance Audits reports. Two (2) noticeable effects of this requirement will be an increase to liabilities on the Financial and Compliance Audit report and; the increase of program funding from 34.9% to an estimated 58.7% on the presented Other Post-Employment Benefits Programs of the El Dorado County Transit Authority Actuarial Valuation as of July 1, 2017.

As represented in the Actuarial Report, El Dorado Transit is currently using the “Pay-As-You-Go” method for two (2) retiree’s currently enrolled. The total for the “Pay-As-You-Go” expenses for FY 2016/17 equaled \$1,443.00. This amount was paid in addition to the OPEB Pre-Funding of \$51,092.00. Remaining unfunded liability is estimated at \$181,857 as of July 1, 2019.

Staff is recommending the acceptance of the Report as presented and the continued “Pay-As-You-Go” methodology, covering current retiree’s, for fiscal years 2017/18 and 2018/19.

FISCAL IMPACT

The projected actuarial expense for FY 2017/18 of \$55,631 and FY 2018/19 of \$57,407 total \$113,038 to capture both years. Costs for FY 2017/18 are included in the adopted budget. Costs for both fiscal years are represented.

Fiscal Year 2017/18 Mid-Year Budget

		<u>Revenue</u>	<u>Proposed</u>
4270.00	State Transit Assistance	\$55,631	
5020.02	OPEB Pre-fund		\$55,361

Fiscal Year 2018/19 Proposed Preliminary Budget

		<u>Revenue</u>	<u>Proposed</u>
4270.00	State Transit Assistance	\$57,407	
5020.02	OPEB Pre-fund		\$57,407

**EL DORADO COUNTY TRANSIT AUTHORITY
RESOLUTION NO. 18-10**

RESOLUTION OF THE BOARD OF DIRECTORS OF THE EL DORADO COUNTY
TRANSIT AUTHORITY ADOPTING PRE-FUNDING FOR OTHER POST
EMPLOYMENT BENEFITS ADMINISTERED BY THE CALIFORNIA
EMPLOYERS' RETIREE BENEFITS TRUST FOR PRE-FUNDED ACCOUNTS

WHEREAS, Governmental Standards Board Statement Number 45/75, dealing with Other Post Employment Benefits (OPEB), requires that governments report the annual cost of OPEB and the unfunded actuarial accrued liabilities for past service costs; and

WHEREAS, the El Dorado County Transit Authority (El Dorado Transit) provides eligible regular unrepresented employees with medical benefits subsequent to their retirement from El Dorado Transit; and

WHEREAS, El Dorado Transit has deemed it to be in El Dorado Transit's best financial interest and the most financially prudent action to pre-fund post employment health benefits past service liabilities and fund current year contributions; and

WHEREAS, the actuarially determined costs for fiscal year (FY) 2017/2018 to pre-fund an annual contribution of \$55,361; and

WHEREAS, the actuarially determined costs for FY 2018/2019 to pre-fund an annual contribution of \$57,407; and

WHEREAS, the California Employers' Retiree Benefits Trust, part of the California Public Employees Retirement System, is a trust fund that allows public employers to pre-fund the future cost of retiree benefits;

NOW, THEREFORE, BE IT RESOLVED, that El Dorado Transit hereby approves and directs staff to pre-fund the FY 2017/2018 Annual Contribution of \$55,361 and the FY 2018/2019 Annual Contribution of \$57,407; and

PASSED AND ADOPTED BY THE GOVERNING BOARD OF THE EL DORADO COUNTY TRANSIT AUTHORITY at the regular meeting of said Board held on the 1st day of March 2018, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Shiva Frentzen, Chairperson

ATTEST:

Megan Wilcher, Secretary to the Board



February 14, 2018

Mindy Jackson
Executive Director
El Dorado County Transit Authority
6565 Commerce Way
Diamond Springs, CA 95619

Re: July 1, 2017 Actuarial Valuation: Determination of OPEB Funding Contributions

Dear Ms. Jackson:

We are pleased to enclose our report providing the results of the July 1, 2017 actuarial funding valuation of other post-employment benefit (OPEB) liabilities for the El Dorado County Transit Authority (the Authority). The report's text describes our analysis and assumptions in detail.

The primary purposes of the report are to develop the value of future OPEB expected to be provided by the Authority **on behalf of unrepresented employees in retirement**. The report focuses on the development of annual amounts to be contributed by the Authority for the fiscal years ending June 30, 2018 and June 30, 2019 toward prefunding the OPEB plan liability. This report should be submitted to the California Employers' Retiree Benefit Trust (CERBT) to satisfy filing requirements for the trust.

Items of note in this valuation are:

- Actuarially Determined Contributions (ADC) are developed on the same basis as the Annual Required Contribution were previously developed under GASB 45. We anticipate that these ADCs will satisfy the requirements of an ADC as described under GASB 75. The Authority's current OPEB Funding Policy anticipates contributing 100% or more of the ADC each year.
- OPEB trust assets are assumed to remain in CERBT Asset Allocation Strategy 1. The future long term rate of return on trust assets assumed in this valuation is 7.28%.
- Information presented in this report is not considered suitable for satisfying the Authority's financial reporting requirements under GASB 75. That information will be developed and presented in a separate report.

We have based our valuation on employee data and plan information provided by the Authority, including employment agreements and PEMHCA resolutions on file with CalPERS. Please review Table 3A to ensure that we have summarized the plan's benefit provisions correctly.

We appreciate the opportunity to work on this analysis and acknowledge the efforts of Authority employees who provided valuable information and assistance to enable us to perform this valuation. Please let us know if we can be of further assistance.

Sincerely,

Catherine L. MacLeod, FSA, FCA, EA, MAAA
Director, Health and Benefit Actuarial Services



El Dorado County Transit Authority

Actuarial Valuation of the Other
Post-Employment Benefit Programs
As of July 1, 2017

Submitted February 2018

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A. Executive Summary

This report presents the results of the July 1, 2017 actuarial valuation of the El Dorado County Transit Authority (the Authority) other post-employment benefit (OPEB) programs. The primary purpose of this valuation is to assess the OPEB liabilities of the Authority and to develop contribution levels for the funding of these benefits. Some of the results of this valuation may be applied to develop the information to be reported in the Authority’s financial statements, but such information will require additional calculations and will be provided in a separate report(s).

Medical coverage and benefits under this program are available to unrepresented employees only; employees covered by labor agreements are not eligible for these retiree benefits. This report reflects the valuation of two distinct types of OPEB liability:

- An “explicit subsidy” exists when the employer contributes directly toward retiree healthcare premiums. In this program, benefits include a monthly subsidy toward medical premiums for eligible retirees. Future excise taxes expected to be paid for “high cost” retiree coverage are also explicit costs and are included with explicit liabilities.
- An “implicit subsidy” exists when the premiums charged for retiree coverage are lower than the expected retiree claims for that coverage. The Authority’s OPEB program includes implicit subsidy liabilities for retiree medical coverage prior to coverage under Medicare.

Trust assets are currently invested in the CERBT with Asset Allocation Strategy 1, which the Authority expects will yield 7.28% per year over the long term. The Actuarially Determined Contributions (ADC) in this report are developed in the same manner as the Annual Required Contributions (ARC) were developed under GASB 45 in prior fiscal years and the Authority indicated that it expects to contribute 100% of the ADC each year. With the Authority’s approval, this valuation was prepared using a 7.28% discount rate, the same rate assumed in the prior valuation. Please recognize that use of this rate is an assumption and is not a guarantee of future investment performance.

Exhibits presented in this report reflect our understanding that the results of this July 1, 2017 valuation will be applied in developing the Authority’s Actuarially Determined Contributions for its fiscal years ending June 30, 2018 and 2019. The ADC is determined as the sum of the current year’s Normal Cost plus amortization of the current Unfunded Actuarial Accrued Liability over a remaining fixed period, adjusted with interest to fiscal year end.

The Actuarial Accrued Liability and Plan Assets as of July 1, 2017 are shown below:

Subsidy	Explicit	Implicit	Total
Discount Rate	7.28%	7.28%	7.28%
Actuarial Accrued Liability	\$ 239,026	\$ 200,694	\$ 439,720
Actuarial Value of Assets	207,939	50,009	257,948
Unfunded Actuarial Accrued Liability	31,087	150,685	181,772
Funded Ratio	87.0%	24.9%	58.7%

The liabilities shown in the report reflect assumptions regarding continued future employment, rates of retirement and survival, and elections by future unrepresented retirees to elect coverage

Executive Summary

(Concluded)

for themselves and their dependents. This valuation has been prepared on a closed group basis; no provision is generally made for new employees until the valuation date following their employment.

The Actuarially Determined Contribution for the fiscal year ending June 30, 2018 is shown below. Detailed results are shown in tables beginning on page 13 and historical information is provided in the Appendix.

Subsidy	Explicit	Implicit	Total
Actuarially Determined Contribution (ADC) for FYE 2018	\$ 23,134	\$ 32,497	\$ 55,631
Expected employer paid benefits for retirees	1,959	-	1,959
Current year's implicit subsidy credit	-	2,226	2,226
Expected contribution to OPEB trust	21,175	30,271	51,446
Total OPEB contributions expected for FYE 2018	\$ 23,134	\$ 32,497	\$ 55,631

Current valuation results are compared to prior valuation results on page 6, followed by a discussion of changes. An actuarial valuation is a projection and to the extent that actual experience is not what we assumed, future results will be different. Future differences may arise from:

- A significant change in the number of covered or eligible plan members;
- A significant increase or decrease in the future medical premium rates;
- A change in the subsidy provided by the Agency toward retiree medical premiums;
- Longer life expectancies of retirees;
- Significant changes in expected retiree healthcare claims by age, relative to healthcare claims for active employees and their dependents; and/or
- Higher or lower returns on plan assets or contribution levels other than were assumed.

Details of our valuation process are provided on the following pages. Information required for financial reporting under GASB 75 will be provided in separate reports once the data needed to develop those results becomes available.

The next actuarial valuation is scheduled to be prepared as of July 1, 2019. If there are any significant changes in the employee data, benefits provided or the funding policy, please contact us to discuss whether an earlier valuation is appropriate.

Important Notices

This report is intended to be used only to present the actuarial information relating to the Authority's other postemployment benefits and to provide the annual contribution information with respect to the Authority's current OPEB funding policy. The results of this report may not be appropriate for other purposes, including financial reporting purposes under GASB 75, where other assumptions, methodology and/or actuarial standards of practice may be required or more suitable. Some issues in this report may involve analysis of applicable law or regulations. The Authority should consult counsel on these matters; Bickmore does not practice law and does not intend anything in this report to constitute legal advice.

B. Sources of OPEB Liabilities

General Types of OPEB

Post-employment benefits other than pensions (OPEB) comprise a part of compensation that employers offer for services received. The most common OPEB are medical, prescription drug, dental, vision, and/or life insurance coverage. Other OPEB may include outside group legal, long-term care, or disability benefits outside of a pension plan. OPEB does not generally include COBRA, vacation, sick leave (unless converted to defined benefit OPEB), or other direct retiree payments.

A direct employer payment toward the cost of OPEB benefits is referred to as an “explicit subsidy”. Upcoming excise tax exposure under the Affordable Care Act for retirees covered by high cost plans is another potential source of explicit subsidy liability for the Authority.

In addition, if claims experience of employees and retirees are pooled when determining premiums, the retirees pay a premium based on a pool of members that, on average, are younger and healthier. For certain types of coverage, such as medical insurance, this results in an “implicit subsidy” of retiree premiums by active employee premiums since the retiree premiums are lower than they would have been if retirees were insured separately. Actuarial Standards of Practice generally require an implicit subsidy of retiree premium rates be valued as an OPEB liability.

This chart shows the sources of funds needed to cover expected medical claims for pre-Medicare retirees.

Expected retiree claims		
Premium charged for retiree coverage		Covered by higher active premiums
Retiree portion of premium	Agency portion of premium Explicit subsidy	Implicit subsidy

The implicit subsidy is not affected by how much or little of the premium is paid by the Authority.

The implicit subsidy liability was first recognized in the July 1, 2015 actuarial valuation. The same methodology was applied to develop the implicit subsidy liability in this July 1, 2017 valuation.

OPEB Obligations of the Authority

The Authority provides continuation of medical coverage to retired employees not covered by formal labor agreements. For unrepresented employees, this coverage may create one or more of the following types of OPEB liabilities:

- **Explicit subsidy liabilities:** The Authority contributes directly toward retiree medical premiums, as described in Table 3A. Liabilities for these benefits have been included in this valuation.
- **Implicit subsidy liabilities:** Employees are covered by the CalPERS medical program, where the same monthly premiums are charged for active employees and for pre- Medicare retirees. In addition to whatever portion of retiree premiums are paid directly by the Authority, we valued the difference between projected retiree claims and the premiums projected to be charged for retiree coverage. To develop this difference with respect to medical (and prescription drug) coverage, we followed the methodology outlined in Table 4 and described further in Addendum 1: Bickmore Age Rating Methodology.

Sources of OPEB Liability

(Concluded)

- *Implicit subsidy Liabilities - continued*

Different monthly premiums are charged for Medicare-eligible members and CalPERS has confirmed that only the claims experience of these Medicare eligible members is considered in setting these premium rates. We have assumed that this premium structure is adequate to cover the expected claims of these retirees and believe that there is no implicit subsidy of premiums for these members by active employees.

- **Excise tax liability for retirees in “high cost” plans:** The Patient Protection and Affordable Care Act (ACA) includes a 40% excise tax on high-cost employer-sponsored health coverage. The tax was to be effective in 2018. However, implementation has been delayed by subsequent legislation until 2022. The tax applies to the aggregate cost of an employee’s applicable coverage that exceeds a dollar limit. While there are discussions in Congress of eliminating or again delaying this tax, this report assumes that it will take effect as current law provides.

For those current and future retirees assumed to retain coverage in the Authority’s medical program, we determined the excess, if any, of projected annual plan premiums for the retiree and his or her covered dependents over the projected applicable excise tax threshold beginning in 2022. The excise tax burden will ultimately fall on a combination of Authority and plan participants, unless the Authority is able to and ultimately does pass the retiree entire tax burden to retirees. *This report assumes that 100% of any excise tax liability for high cost retiree coverage will be borne by the Authority.* No legal obligation with regard to the Authority’s current or future liability to absorb this potential tax is to be construed from this accounting treatment. Please refer to the note under the chart in Section D for an estimate of this projected liability.

C. Valuation Process

The valuation has been based on employee census data and benefits initially submitted to us by the Authority in November 2017 and clarified in various related communications. A summary of the employee data is provided in Table 2 and a summary of the benefits provided under the Plan is provided in Table 3A. While individual employee records have been reviewed to verify that they are reasonable in various respects, the data has not been audited and we have otherwise relied on the Authority as to its accuracy. The valuation described below has been performed in accordance with the actuarial methods and assumptions described in Table 4. Please note that throughout this report, the terms “employee” and retiree” refer only to unrepresented members; those covered by formal labor agreement are not included in this benefit program or this valuation.

In projecting benefit values and liabilities, we determine an expected benefit stream over the employee’s future retirement. Benefits include direct employer payments (explicit subsidies) and an implicit subsidy, arising when retiree premiums are expected to be subsidized by active employee premiums. The projected benefit streams reflect assumed trends in future benefit levels and assumptions about the expected date(s) when benefits end. We then apply assumptions regarding:

- The probability that each individual employee will or will not continue in service with the Authority to receive benefits.
- To the extent assumed to retire from the Authority, the probability of various possible retirement dates for each retiree, based on current age, service and employee type; and
- The likelihood that future retirees will or will not elect retiree coverage (and benefits) for themselves and/or their dependents.

We then calculate a present value of these benefits by discounting the value of each future expected benefit payment, multiplied by the assumed expectation that it will be paid, back to the valuation date using the discount rate. These benefit projections and liabilities have a very long time horizon. Final payments for currently active employees may not be made for 60 years or more.

The resulting present value for each employee is allocated as a level percent of payroll each year over the employee’s career using the entry age normal cost method and the amounts for each individual are then summed to get the results for the entire plan. This creates a cost expected to increase each year as payroll increases. Amounts attributed to prior fiscal years form the “actuarial accrued liability” (AAL). The amount of future OPEB cost allocated for active employees in the current year is referred to as the “normal cost”. The remaining active cost to be assigned to future years is called the “present value of future normal costs”. In summary:

Actuarial Accrued Liability	Past Years’ Cost Allocations	Actives and Retirees
<i>plus</i> Normal Cost	Current Year’s Cost Allocation	Actives only
<u>plus Present Value of Future Normal Costs</u>	<u>Future Years’ Cost Allocations</u>	<u>Actives only</u>
<i>equals</i> Present Value of Projected Benefits	Total Benefit Costs	Actives and Retirees

Where contributions have been made to an irrevocable OPEB trust, the accumulated value of trust assets is applied to offset the AAL. In this valuation, we set the Actuarial Value of Assets equal to the market value of assets invested in in the Authority’s CERBT account. The June 30, 2017 market value of assets in this report was \$257,948. The portion of the AAL not covered by assets is referred to as the unfunded actuarial accrued liability (UAAL).

D. Basic Valuation Results

The following chart compares the results of the July 1, 2017 valuation of OPEB liabilities to the results of the July 1, 2015 valuation.

Funding Policy	Prefunding Basis					
	7/1/2015			7/1/2017		
Valuation date	Explicit	Implicit	Total	Explicit	Implicit	Total
Subsidy						
Discount rate	7.28%	7.28%	7.28%	7.28%	7.28%	7.28%
Number of Covered Employees						
Actives	23	23	23	27	27	27
Retirees	2	1	2	2	-	2
Total Participants	25	24	25	29	27	29
Actuarial Present Value of Projected Benefits						
Actives	\$ 281,025	\$ 292,616	\$ 573,641	\$ 349,798	\$ 356,105	\$ 705,903
Retirees	41,411	5,582	46,993	42,814	-	42,814
Total APVPB	322,436	298,198	620,634	392,612	356,105	748,717
Actuarial Accrued Liability (AAL)						
Actives	167,305	168,321	335,626	196,212	200,694	396,906
Retirees	41,411	5,582	46,993	42,814	-	42,814
Total AAL	208,716	173,903	382,619	239,026	200,694	439,720
Actuarial Value of Assets	133,693	-	133,693	207,939	50,009	257,948
Unfunded AAL (UAAL)	75,023	173,903	248,926	31,087	150,685	181,772
Normal Cost	14,339	15,900	30,239	19,468	20,132	39,600
Percent funded	64.1%	0.0%	34.9%	87.0%	24.9%	58.7%
Reported covered payroll	1,235,669	1,235,669	1,235,669	1,462,832	1,462,832	1,462,832
UAAL as percent of payroll	6.1%	14.1%	20.1%	2.1%	10.3%	12.4%

Note: The Explicit Subsidy AAL as of July 1, 2017 includes about \$7,000 in projected excise tax liability for retirees expected to be covered by "high cost" plans under the Affordable Care Act.

Basic Valuation Results

(Concluded)

Changes Since the Prior Valuation

Even if all of the previous assumptions were met exactly as projected, liabilities often increase over time as active employees get closer to the date their benefits are expected to begin. Given the uncertainties involved and the long term nature of these projections, the prior assumptions are not likely ever to be exactly realized. Nonetheless, it is helpful to review why results are different than may have been anticipated.

In comparing results shown in the exhibit on the preceding page, we can see that the Unfunded Actuarial Accrued Liability (UAAL) decreased by roughly \$67,000 between July 1, 2015 and July 1, 2017, from \$249,000 to \$182,000. Some of this difference was expected based on the assumptions made in the prior valuation. Some of the difference was not anticipated, such as premium changes or employee decisions about their medical coverage that were different than previously assumed (referred to as “plan experience”). The balance of the difference is due to changes in actuarial methodology or assumptions.

The chart below summarizes the primary sources of the difference between the actual and the expected UAAL.

Source of Change	Increase (decrease) in UAAL
Update in assumed future healthcare trend	\$ 27,000
Update to scale used to project future mortality improvement	(7,000)
Changes in the %s of future retirees assumed to elect coverage	(61,000)
Expected change in the UAAL due to the passage of time	2,000
Favorable plan experience, relative to prior assumptions	(28,000)
Change in UAAL from July 2015 to July 2017	\$ (67,000)

E. Funding Policy

Actuarially Determined Contributions and Authority Funding Policy

The Actuarially Determined Contribution (ADC) consists of two basic components, which have been adjusted with interest to the Authority's fiscal year end:

- The amounts attributed to service performed in the current fiscal year (the normal cost) and
- Amortization of the unfunded actuarial accrued liability (UAAL).

The ADC developed in this report includes amortization of the unfunded AAL over a closed 30-year period initially effective for fiscal year ending July 1, 2009. The remaining period applicable in determining the ADC for the fiscal year ending June 30, 2018 is 22 years. Amortization payments are determined on a level percent of pay basis.¹

The Authority's Funding Policy is to contribute 100% or more of the ADC each year. The amounts calculated for the fiscal years ending June 30, 2018 and June 30, 2019 are shown in Tables 1A and 1B.

Paying Down the UAAL

Once an entity decides to prefund, a decision must be made about how to pay for benefits already earned that have not yet been funded (the UAAL). This is most often, though not always, handled through structured amortization payments. The period and method chosen for amortizing this unfunded liability can significantly affect the Actuarially Determined Contribution.

Much like paying off a mortgage, choosing a longer amortization period to pay off the UAAL means initial payments will be smaller, but the payments will be required for a longer period. In general, the longer the amortization period, the less time investments will work toward helping reduce required contribution levels.

There are several ways the amortization payment can be determined. The most common methods are calculating the amortization payment as a level dollar amount or as a level percentage of payroll. The Authority's current amortization approach is stated above.

Funding of the Implicit Subsidy

The implicit subsidy liability created when expected retiree medical claims exceed the retiree premiums was described earlier in Section B. In practical terms, when the Authority pays the premiums for active employees each year, their premiums include an amount expected to be transferred to cover the portion of the retirees' claims not covered by their premiums. This transfer represents the current year's implicit subsidy and is illustrated in the example below.

Hypothetical Illustration Of Implicit Subsidy Recognition	For Active Employees	For Retired Employees	Total
Annual Agency Contribution Toward Premiums	\$ 426,000	\$ 2,000	\$ 428,000
Current Year's Implicit Subsidy Adjustment	(2,200)	2,200	-
Adjusted contributions reported in Financial Stmts	\$ 423,800	\$ 4,200	\$ 428,000

Please see the Expected Employer Contributions Section in Tables 1A and 1B for the estimated implicit subsidy amounts which should be applied to offset against the ADC for the years shown.

¹ Where the UAAL is amortized on a level percent of pay basis, if all assumptions are met, the UAAL may increase, rather than decrease, in the earlier years of the amortization period.

F. Choice of Actuarial Funding Method and Assumptions

The ultimate real cost of an employee benefit plan is the value of all benefits and other expenses of the plan over its lifetime. These expenditures are dependent only on the terms of the plan and the administrative arrangements adopted, and as such are not affected by the actuarial funding method. The actuarial funding method attempts to spread recognition of these expected costs on a level basis over the life of the plan, and as such sets the “incidence of cost”. Methods that produce higher initial annual (prefunding) costs will produce lower annual costs later. Conversely, methods that produce lower initial costs will produce higher annual costs later relative to the other methods.

Factors Impacting the Selection of a Cost Allocation Method

While the goal is to match recognition of retiree medical expense with the periods during which the benefit is earned, cost allocation methods differ because they focus on different financial measures in attempting to level the incidence of cost. Appropriate selection of a cost allocation method for funding purposes contributes to creating intergenerational equity between generations of taxpayers.

We believe it is most appropriate for the plan sponsor to adopt a theory of funding and consistently apply the best cost allocation method representing that theory. This valuation was prepared using the entry age normal cost method with normal cost determined on a level percent of pay basis. The entry age normal cost method was one of the most commonly used of the cost allocation methods permitted by GASB 45. It is the only cost allocation method permitted for financial reporting purposes under GASB 75.

Factors Affecting the Selection of Assumptions

Special considerations apply to the selection of actuarial funding methods and assumptions for the Authority. The “demographic” actuarial assumptions used in this report were chosen, for the most part, to be the same as the actuarial assumptions used for the most recent actuarial valuations of the retirement plans covering Authority employees. Other assumptions, such as healthcare trend, age related healthcare claims, retiree participation rates and spouse coverage, were selected based on demonstrated plan experience and/or our best estimate of expected future experience. We will continue to gather information and monitor these assumptions for future valuations, as more experience develops.

In selecting an appropriate discount rate for funding purposes it is most common to use the expected long-term yield on investments expected to be deployed to pay the benefits. Other strategies could include using a long term debt rate to calculate contribution levels even if the Authority hopes their long term investment strategy will yield higher returns. In this way required contributions may be reduced if those higher returns are actually realized, but only as they are actually realized. If higher returns are not realized to the degree expected, then the difference between the debt rate and what is actually earned acts as a safety margin so that larger contributions than planned are less likely to occur. The Authority has chosen to fund based on the expected long term return of trust assets. If returns prove to be lower than this expected market return, future contribution levels will likely increase.


G. Certification

This report presents the results of our actuarial valuation of the other post-employment benefits provided by the El Dorado County Transit Authority. The purpose of this valuation was to determine the plan's funded status as of the valuation date and to develop actuarially determined contribution levels to be used by the Authority toward funding plan benefits.

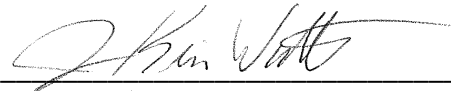
We certify that, to the best of our knowledge, the report is complete and accurate, based upon the data and plan provisions provided to us by the Authority. We believe the assumptions and method used are reasonable and appropriate for purposes of this report. The results may not be appropriate for other purposes.

Each of the undersigned individuals is a Fellow in the Society of Actuaries and Member of the American Academy of Actuaries who satisfies the Academy Qualification Standards for rendering this opinion.

Signed: February 14, 2018



Catherine L. MacLeod, FSA, FCA, EA, MAAA



J. Kevin Watts, FSA, FCA, MAAA

Table 1

Actuarially Determined Contributions for fiscal years 2018 and 2019: The basic results of our July 1, 2017 valuation of OPEB liabilities for the Authority were summarized in Section D. Those results are applied to develop the actuarially determined contribution (ADC) for the fiscal years ending June 30, 2018 and June 30, 2019.

As noted earlier in this report, the development of the ADC reflects the assumption that the Authority will contribute at least 100% of this amount each year, with contributions comprised of:

- Direct payments to insurers toward retiree premiums,
- Each current year's implicit subsidy, and
- Contributions to the OPEB trust.

GASB 75 Calculations: GASB Statement 75 will impact the liabilities and/or expenses developed for reporting in the Authority's financial statements. Those calculations will be provided in separate reports for each fiscal year.

Employees reflected in future years' costs: The counts of unrepresented active employees and retirees shown in the report reflect the status of plan members reported to us for the valuation. While we do not adjust these counts for any future years shown in this report, the liabilities and costs developed for those years do anticipate the likelihood that some active employees may leave employment forfeiting benefits, some may retire and elect benefits and coverage for some of the retired employees may cease. We will reflect employment status changes in the next valuation. In addition, because this valuation has been prepared on a closed group basis, no potential future employees are included. We will incorporate any new employees in the next valuation, in the same way we included new employees hired after July 2015 in this July 2017 valuation.

Note that neither of the current retirees currently creates an implicit subsidy OPEB liability. CalPERS medical premiums for retirees over age 65 and covered by Supplemental Medicare plans are not subsidized by active employee medical premiums, so do not create an implicit subsidy liability.

Table 1A
Actuarially Determined Contribution for Fiscal Year End 2018

This table develops the valuation results applicable to the Authority's fiscal year ending June 30, 2018, based on the July 1, 2017 valuation results and on the funding policy described earlier in this report.

Funding Policy	Prefunding Basis		
Valuation date	7/1/2017		
Subsidy	Explicit	Implicit	Total
For fiscal year ending	6/30/2018	6/30/2018	6/30/2018
Discount rate	7.28%	7.28%	7.28%
Number of Covered Employees			
Actives	27	27	27
Retirees	2	-	2
Total Participants	29	27	29
Actuarial Present Value of Projected Benefits			
Actives	\$ 349,798	\$ 356,105	\$ 705,903
Retirees	42,814	-	42,814
Total APVPB	392,612	356,105	748,717
Actuarial Accrued Liability (AAL)			
Actives	196,212	200,694	396,906
Retirees	42,814	-	42,814
Total AAL	239,026	200,694	439,720
Actuarial Value of Assets	207,939	50,009	257,948
Unfunded AAL (UAAL)	31,087	150,685	181,772
UAAL Amortization method	Level % of Pay	Level % of Pay	Level % of Pay
Remaining amortization period (years)	22	22	22
Amortization Factor	14.8306	14.8306	14.8306
Actuarially Determined Contribution (ADC)			
Normal Cost	19,468	20,132	39,600
Amortization of UAAL	2,096	10,160	12,256
Interest to fiscal year end	1,570	2,205	3,775
Total ADC	23,134	32,497	55,631
Projected covered payroll	\$ 1,462,832	\$ 1,462,832	\$ 1,462,832
Normal Cost as a percent of payroll	1.3%	1.4%	2.7%
ADC as a percent of payroll	1.6%	2.2%	3.8%
Expected Employer OPEB Contributions			
Estimated payments on behalf of retirees	1,959	-	1,959
Estimated current year's implicit subsidy	-	2,226	2,226
Estimated contribution to OPEB trust	21,175	30,271	51,446
Total Expected Employer Contribution	23,134	32,497	55,631

Table 1B
Actuarially Determined Contribution for Fiscal Year End 2019

This table develops the valuation results applicable to the Authority's fiscal year ending June 30, 2019, based on the July 1, 2017 valuation results and on the funding policy described earlier in this report.

Funding Policy	Prefunding Basis		
Valuation date	7/1/2017		
Subsidy	Explicit	Implicit	Total
For fiscal year ending	6/30/2019	6/30/2019	6/30/2019
Discount rate	7.28%	7.28%	7.28%
Number of Covered Employees			
Actives	27	27	27
Retirees	2	-	2
Total Participants	29	27	29
Actuarial Present Value of Projected Benefits			
Actives	\$ 374,948	\$ 379,803	\$ 754,751
Retirees	44,287	-	44,287
Total APVPB	419,235	379,803	799,038
Actuarial Accrued Liability (AAL)			
Actives	231,067	234,676	465,743
Retirees	44,287	-	44,287
Total AAL	275,354	234,676	510,030
Actuarial Value of Assets	244,252	83,921	328,173
Unfunded AAL (UAAL)	31,102	150,755	181,857
UAAL Amortization method	Level % of Pay	Level % of Pay	Level % of Pay
Remaining amortization period (years)	21	21	21
Amortization Factor	14.4053	14.4053	14.4053
Actuarially Determined Contribution (ADC)			
Normal Cost	20,101	20,786	40,887
Amortization of UAAL	2,159	10,465	12,624
Interest to fiscal year end	1,621	2,275	3,896
Total ADC	23,881	33,526	57,407
Projected covered payroll	\$ 1,510,374	\$ 1,510,374	\$ 1,510,374
Normal Cost as a percent of payroll	1.3%	1.4%	2.7%
ADC as a percent of payroll	1.6%	2.2%	3.8%
Expected Employer OPEB Contributions			
Estimated payments on behalf of retirees	2,681	-	2,681
Estimated current year's implicit subsidy	-	5,339	5,339
Estimated contribution to OPEB trust	21,200	28,187	49,387
Total Expected Employer Contribution	23,881	33,526	57,407

Table 2
Summary of Employee Data

The Authority reported 27 active unrepresented employees in the data provided to us for the July 2017 valuation. Of these, 26 were reported as currently enrolled in the medical program and 1 employee waiving coverage.

Distribution of Benefits-Eligible Active Employees								
Current Age	Years of Service						Total	Percent
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 & Up		
Under 25							0	0%
25 to 29		2					2	7%
30 to 34	2						2	7%
35 to 39		1	1				2	7%
40 to 44	2	1					3	11%
45 to 49		1	1	2			4	15%
50 to 54		2		2	1	2	7	26%
55 to 59	2			1		1	4	15%
60 to 64			1			1	2	7%
65 to 69				1			1	4%
70 & Up							0	0%
Total	6	7	3	6	1	4	27	100%
Percent	22%	26%	11%	22%	4%	15%	100%	

Valuation	July 2015	July 2017
Annual Covered Payroll	\$1,235,669	\$1,462,832
Average Attained Age for Actives	47.7	48.5
Average Years of Service	9.0	8.7

There are also 2 retirees currently receiving benefits under this program. Their ages are summarized in this chart:

Retirees by Age		
Current Age	Number	Percent
Below 50	0	0%
50 to 54	0	0%
55 to 59	0	0%
60 to 64	0	0%
65 to 69	1	50%
70 to 74	1	50%
75 to 79	0	0%
80 & up	0	0%
Total	2	100%
Average Age:		
On 7/1/2017	68.8	
At retirement	63.8	

Table 2- Summary of Employee Data
(Concluded)

The chart below reconciles the number of unrepresented actives and retirees included in the July 1, 2015 valuation of the Authority plan with those included in the July 1, 2017 valuation:

Reconciliation of Authority Plan Members Between Valuation Dates					
Status	Covered Actives	Waiving Actives	Covered Retirees	Covered Surviving Spouses	Total
Number reported as of July 1, 2015	23	0	2	0	25
New employees	6	1	-	-	7
Separated employees	(2)	-	-	-	(2)
New retiree, elected coverage	-	-	-	-	0
New retiree, waiving coverage	(1)	-	-	-	(1)
Number reported as of July 1, 2017	26	1	2	0	29

Overall, the number of active plan members increased by 4, from 23 to 27, representing a 17% increase in active employees included in the valuation. The number of covered retirees remained the same between valuations.

There was 1 new retirement reported between July 1, 2015 and July 1, 2017. This new retiree did not elect to continue medical coverage through the Authority, at least at the time this valuation was prepared; re-enrollment in the future is always an option. Based on all retiree elections since 2011, we made some minor adjustments in our assumption regarding future retiree enrollment in the CalPERS medical program through the Authority.

The following charts show plan choices and level of coverage in the medical program on the valuation date. These elections have minimal impact on the OPEB liability, generally impacting the only estimated implicit subsidy and potential excise tax liabilities.

Counts by Coverage Level			
Coverage Level	Active	Retired	Total
Employee Only	6	1	7
Employee & Spouse	10	1	11
Employee & Child(ren)	2	-	2
Employee & Family	8	-	8
Waived	1	-	1
Total	27	2	29

Counts by Medical Plan			
Medical Plan	Active	Retired	Total
Kaiser Sac	9	-	9
PERS Choice Sac	14	2	16
PERS Select Sac	3	-	3
Waived	1	-	1
Total	27	2	29

Table 3A Summary of Retiree Benefit Provisions

OPEB provided: The Authority reported that the only OPEB offered is continuation of medical insurance coverage for qualifying non-represented employees in retirement. Represented Transit Drivers are not eligible for retiree medical coverage through the Authority.

Access to coverage: Medical coverage for non-represented employees is currently provided through CalPERS as permitted under the Public Employees’ Medical and Hospital Care Act (PEMHCA). This coverage requires the employee to satisfy the requirements for retirement under CalPERS, which requires attainment of age 50 (age 52 for PEPRAs employees) with 5 years of State or public agency service or approved disability retirement. The employee must begin his or her *pension benefit* 120 days of terminating employment with the Authority to be eligible to continue medical coverage through the Authority and to receive the employer subsidy described below.

Once eligible for medical coverage as a retiree, he or she may enroll within 60 days of retirement or during any future open enrollment period. Coverage may be continued at the retiree’s option for his or her lifetime. A surviving spouse and other eligible dependents may also continue coverage.

Benefits provided: As a PEMHCA employer, the Authority is obligated to contribute toward the cost of retiree medical coverage for the retiree’s lifetime or until coverage is discontinued. In 2007, the Authority executed an “unequal” resolution with CalPERS. Under this resolution, the Authority’s contribution toward the cost of medical plan premiums is defined as follows:

- For *active* employees: the PEMHCA minimum employer contribution (MEC)². The MEC is \$128 per month in 2017 and increases to \$133 per month in 2018.
- For *retirees*, the product of (a) 5% times (b) the number of prior years the agency has been contracted with CalPERS times (c) the contribution the employer provides to active employee health benefits (i.e., the MEC). The Authority’s contribution toward retiree medical coverage is 50% or \$64 per month during 2017.

A surviving spouse who is also eligible for survivor pension benefits may continue or enroll in coverage and, if enrolled, will receive the same benefit to which the retiree was entitled.

Current premium rates: The 2017 monthly healthcare premiums for the Sacramento Area rate region are shown below. If different rates apply where the member resides outside of this area, those rates are reflected in the valuation, but not listed here. Please note that the CalPERS administration fee is assumed to be expensed each year and has not been projected as an OPEB liability in this valuation.

Sacramento 2017 Health Plan Rates						
	Actives and Pre-Med Retirees			Medicare Eligible Retirees		
Plan	Ee Only	Ee & 1	Ee & 2+	Ee Only	Ee & 1	Ee & 2+
Kaiser HMO	\$ 690.56	\$ 1,381.12	\$ 1,795.46	\$300.48	\$ 600.96	\$ 1,015.30
PERS Choice PPO	723.47	1,446.94	1,881.02	353.63	707.26	1,141.34
PERS Select PPO	641.47	1,282.94	1,667.82	353.63	707.26	1,092.14

² The Authority confirmed it provides additional healthcare benefits for active employees through a pre-tax flexible benefit plan which are not required to be paid to retired employees to meet PEMHCA requirements.

Table 3B
General CalPERS Annuitant Eligibility Provisions

The content of this section has been drawn from Section C, Summary of Plan Provisions, of the State of California OPEB Valuation as of June 30, 2016, issued January 2017, to the State Controller from Gabriel Roeder & Smith. It is provided here as a brief summary of general annuitant and survivor coverage.

Health Care Coverage

Retired Employees

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

Eligibility Exceptions: Certain family members are not eligible for CalPERS health benefits:

- Children age 26 or older
- Children's spouses
- Former spouses
- Disabled children over age 26 who were never enrolled or were deleted from coverage
- Grandparents
- Parents
- Children of former spouses
- Other relatives

Coordination with Medicare

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

Survivors of an Annuitant

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

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

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

Table 4
Actuarial Methods and Assumptions

Valuation Date	July 1, 2017
Funding Method	Entry Age Normal Cost, level percent of pay ³
Asset Valuation Method	Market value of assets
Long Term Return on Assets	7.28%
Discount Rate	7.28%
Participants Valued	Only current active employees and retired participants and covered dependents are valued. No future entrants are considered in this valuation.
Salary Increase	3.25% per year, used only to allocate the cost of benefits between service years
Assumed Wage Inflation	3.0% per year; used to determine amortization payments if developed on a level percent of pay basis
General Inflation Rate	2.75% per year

Demographic actuarial assumptions used in this valuation are those used in the recent June 30, 2016 valuation of the retirement plans covering Authority employees, and are based on the 2014 experience study of the California Public Employees Retirement System using data from 1997 to 2011, except for a different basis used to project future mortality improvements. Rates for selected age and service are shown below and on the following pages. The representative mortality rates were those published by CalPERS in their 2014 study, adjusted to back out 20 years of Scale BB to central year 2008.

Mortality Improvement Bickmore Scale 2017 applied generationally.

Mortality Before Retirement
(before improvement applied)

CalPERS Public Agency Miscellaneous Non-Industrial		
Age	Male	Female
20	0.00033	0.00021
30	0.00052	0.00027
40	0.00080	0.00053
50	0.00165	0.00106
60	0.00354	0.00223
70	0.00709	0.00467
80	0.01339	0.01036

³ The level percent of pay aspect of the funding method refers to how the normal cost is determined. Use of level percent of pay cost allocations in the funding method is separate from and has no effect on a decision regarding use of a level percent of pay or level dollar basis for determining amortization payments.

Table 4 - Actuarial Methods and Assumptions

(Continued)

Mortality After Retirement
(before improvement applied)

CalPERS Public Agency Healthy Miscellaneous, Police & Fire			CalPERS Public Agency Disabled Miscellaneous		
Age	Male	Female	Age	Male	Female
40	0.00117	0.00097	20	0.00641	0.00395
50	0.00532	0.00495	30	0.00736	0.00455
60	0.00817	0.00533	40	0.01008	0.00642
70	0.01766	0.01264	50	0.01784	0.01230
80	0.05275	0.03695	60	0.02634	0.01510
90	0.16186	0.12335	70	0.03890	0.02815
100	0.34551	0.31876	80	0.08230	0.06015
110	1.00000	1.00000	90	0.18469	0.16082

Termination Rates

Miscellaneous Employees: Sum of Vested Terminated & Refund Rates From CalPERS Experience Study Report Issued January 2014						
Attained Age	Years of Service					
	0	3	5	10	15	20
15	0.1812	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.1742	0.1193	0.0946	0.0000	0.0000	0.0000
25	0.1674	0.1125	0.0868	0.0749	0.0000	0.0000
30	0.1606	0.1055	0.0790	0.0668	0.0581	0.0000
35	0.1537	0.0987	0.0711	0.0587	0.0503	0.0450
40	0.1468	0.0919	0.0632	0.0507	0.0424	0.0370
45	0.1400	0.0849	0.0554	0.0427	0.0347	0.0290

Service Retirement Rates

The following miscellaneous retirement formulas apply:

If hired prior to 1/1/2013:	2% @ 55
If hired on or after 1/1/2013, with prior PERS Service	2% @ 55
If hired on or after 1/1/2013, PEPR:	2% @ 62

Sample rates of assumed future retirements for each of these retirement benefit formulas are shown in the table to the right and on the top of the following page. Rates shown reflect the probability that an employee at that age and service will retire in the next 12 months.

Miscellaneous Employees: 2% at 55 formula From CalPERS Experience Study Report Issued January 2014						
Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0140	0.0180	0.0210	0.0250	0.0270	0.0310
55	0.0480	0.0610	0.0740	0.0880	0.1000	0.1170
60	0.0670	0.0860	0.1030	0.1230	0.1390	0.1640
65	0.1550	0.1970	0.2380	0.2850	0.3250	0.3860
70	0.1300	0.1650	0.2000	0.2400	0.2720	0.3230
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Table 4 - Actuarial Methods and Assumptions

(Continued)

Service Retirement Rates - continued

Miscellaneous "PEPRA" Employees: 2% at 62 formula From CalPERS Experience Study Report Issued January 2014						
Current Age	Years of Service					
	5	10	15	20	25	30
52	0.0103	0.0132	0.0160	0.0188	0.0216	0.0244
55	0.0440	0.0560	0.0680	0.0800	0.0920	0.1040
60	0.0616	0.0784	0.0952	0.1120	0.1288	0.1456
65	0.1287	0.1638	0.1989	0.2340	0.2691	0.3042
70	0.1254	0.1596	0.1938	0.2280	0.2622	0.2964
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Disability Retirement Rates

CalPERS Public Agency Miscellaneous Disability From Jan 2014 Experience Study Report		
Age	Male	Female
20	0.00017	0.00010
25	0.00017	0.00010
30	0.00019	0.00024
35	0.00049	0.00081
40	0.00122	0.00155
45	0.00191	0.00218
50	0.00213	0.00229
55	0.00221	0.00179
60	0.00222	0.00135

Healthcare Trend

Medical plan premiums and claims costs by age are assumed to increase once each year. The increases over the prior year's levels are assumed to be effective on the dates shown below:

Effective January 1	Premium Increase	Effective January 1	Premium Increase
2018	8.00%	2022	6.00%
2019	7.50%	2023	5.50%
2020	7.00%	2024	5.00%
2021	6.50%	& later	5.00%

The required PEMHCA minimum employer contribution (MEC) is assumed to increase by 4.5% annually.

Table 4 - Actuarial Methods and Assumptions

(Continued)

Participation Rate

Active employees are assumed to continue their current plan election in retirement based on the following table:

Year	Percent	Year	Percent
2018	44%	2022	60%
2019	48%	2023	64%
2020	52%	2024	68%
2021	56%	and later	70%

Current retirees are assumed to continue their medical coverage until death.

Spouse Coverage

Active employees: 85% are assumed to be married and 80% of married employees are assumed to elect coverage for their spouse in retirement. Surviving spouses are assumed to continue coverage until their death. Husbands are assumed to be 3 years older than their wives.

Retired participants: Existing elections for spouse coverage are assumed to continue until the spouse's death. Actual spouse ages are used, where known; if not, husbands are assumed to be 3 years older than their wives.

Spouse gender is assumed to be the opposite of the employee.

Medicare Eligibility

Absent contrary data, all individuals are assumed to be eligible for Medicare Parts A and B at age 65.

Excise tax on high-cost plans

The expected value of excise taxes for high cost plan coverage for retirees, now expected to be effective in the year 2020, was included in this valuation. Annual threshold amounts for 2018 under the Affordable Care Act (ACA) are shown below. A 40% excise tax rate was applied to the portion of premiums projected to exceed the threshold.

2018 Thresholds	Ages 55-64	All Other Ages
Single	11,850	10,200
Other than Single	30,950	27,500

Note: Thresholds for disability retirements are assumed to be set at a level high enough to prevent taxation on disabled retiree benefits.

The actual 2018 limits may be higher, depending on cost increases prior to the effective date. The actual thresholds are scheduled to increase by CPI plus 1% in 2019 and by CPI annually thereafter.

Table 4 - Actuarial Methods and Assumptions
(Concluded)

Development of Age-related
Medical Premiums

Actual premium rates for retirees and their spouses were adjusted to an age-related basis by applying medical claim cost factors developed from the data presented in the report, “Health Care Costs – From Birth to Death”, sponsored by the Society of Actuaries. A description of the use of claims cost curves can be found in Bickmore’s Age Rating Methodology provided in Addendum 1 to this report.

Representative claims costs derived from the dataset provided by CalPERS for retirees not currently covered or not expected to be eligible for Medicare appear below:

Expected Monthly Claims by Medical Plan for Selected Ages					
	Male				
Medical Plan	50	53	56	59	62
Kaiser: Sacramento	\$ 685	\$ 808	\$ 939	\$ 1,076	\$ 1,223
PERS Choice: Sacramento	642	756	879	1,007	1,145
PERS Select: Sacramento	684	806	937	1,074	1,220
	Female				
Medical Plan	50	53	56	59	62
Kaiser: Sacramento	849	933	1,004	1,085	1,196
PERS Choice: Sacramento	795	873	940	1,015	1,119
PERS Select: Sacramento	848	931	1,002	1,082	1,193

All current and future Medicare-eligible retirees are assumed to be covered by plans that are rated based solely on the experience of Medicare retirees. Therefore, no implicit subsidy is calculated for Medicare-eligible retirees.

Changes Since the Prior Valuation:

Mortality improvement

We updated the projection scale used to project future mortality improvement from Bickmore Scale 2014 to Bickmore Scale 2017, based on new data provided by the Society of Actuaries and the Social Security Administration.

Healthcare trend

Medical plan premium rates are assumed to increase at slightly higher rates than were assumed in the prior valuation, with the ultimate trend of 5.0% per year, rather than 4.5% per year assumed in the prior valuation.

Participation Rate

The assumed percentage of active employees currently waiving Authority medical coverage who are assumed to elect coverage through the Authority in retirement was reduced from 50% to 40% in 2017 and phased up to 70% by 4% (rather than 5%) per year, based on a review of retiree elections since 2011.

Table 5
Projected Benefit Payments

The following is an estimate of other post-employment benefits to be paid on behalf of current retirees and current employees expected to retire from the Authority. Expected annual benefits have been projected on the basis of the actuarial assumptions outlined in Table 4.

These projections do not include any benefits expected to be paid on behalf of current active employees *prior to* retirement, nor do they include any benefits for potential *future employees* (i.e., those who might be hired in future years).

Projected Annual Benefit Payments							
Fiscal Year Ending June 30	Explicit Subsidy			Implicit Subsidy			Total
	Current Retirees	Future Retirees	Total	Current Retirees	Future Retirees	Total	
2018	\$ 1,644	\$ 315	\$ 1,959	\$ -	\$ 2,226	\$ 2,226	\$ 4,185
2019	1,865	816	2,681	-	5,339	5,339	8,020
2020	2,103	1,550	3,653	-	9,281	9,281	12,934
2021	2,355	2,539	4,894	-	15,923	15,923	20,817
2022	2,620	3,919	6,539	-	20,242	20,242	26,781
2023	2,897	5,726	8,623	-	21,299	21,299	29,922
2024	3,187	7,932	11,119	-	32,192	32,192	43,311
2025	3,488	10,745	14,233	-	38,734	38,734	52,967
2026	3,799	13,395	17,194	-	38,861	38,861	56,055
2027	4,119	16,548	20,667	-	48,068	48,068	68,735
2028	4,338	19,458	23,796	-	41,022	41,022	64,818
2029	4,443	21,927	26,370	-	47,439	47,439	73,809
2030	4,540	24,371	28,911	-	53,215	53,215	82,126
2031	4,625	26,933	31,558	-	42,344	42,344	73,902
2032	4,695	29,596	34,291	-	35,753	35,753	70,044

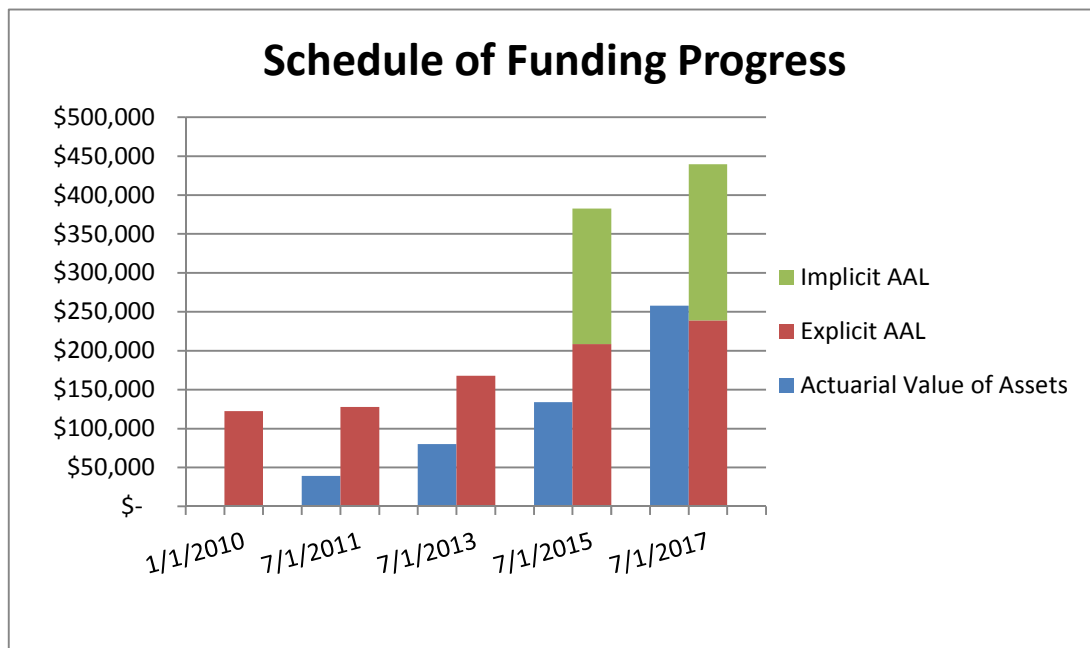
The amounts shown in the Explicit Subsidy section reflect the expected payment by the Authority toward retiree medical premiums in each of the years shown. The amounts are shown separately, and in total, for those retired on the valuation date (“current retirees”) and those expected to retire after the valuation date (“future retirees”).

The amounts shown in the Implicit Subsidy section reflect the expected excess of retiree medical (and prescription drug) claims over the premiums expected to be charged during the year for retirees’ coverage. These amounts are also shown separately and in total for those currently retired on the valuation date and for those expected to retire in the future.

Appendix 1 Historical Information

The chart and graph below provide a review of the plan's funded ratio on the current and each prior valuation date as well as a comparison of actual or projected contribution levels for the fiscal years ending 2010 through June 30, 2017.

Schedule of Funding Progress						
Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
1/1/2010	\$ -	\$ 122,210	\$ 122,210	0.0%	\$ 1,025,523	11.9%
7/1/2011	\$ 38,904	\$ 127,682	\$ 88,778	30.5%	\$ 1,044,243	8.5%
7/1/2013	\$ 79,923	\$ 167,989	\$ 88,066	47.6%	\$ 1,017,350	8.7%
7/1/2015	\$ 133,693	\$ 382,619	\$ 248,926	34.9%	\$ 1,235,669	20.1%
7/1/2017	\$ 257,948	\$ 439,720	\$ 181,772	58.7%	\$ 1,462,832	12.4%



Some changes impacting valuation results during these years include:

- *July 2011:* Discount rate decreased from 7.75% to 7.5%; decrease in assumed future increase to MEC; updated assumptions for mortality, termination, and retirement
- *July 2013:* Normal increase in AAL from absorbing cost accruals for active employees; added mortality improvement assumption (i.e., longer retiree life expectancy).
- *July 2015:* 1st time recognition of implicit subsidy liability; discount rate decreased from 7.5% to 7.28%; decreased assumptions for retiree election; recognition of potential retiree excise tax
- *July 2017:* Increase in assumed healthcare trend, decrease in future mortality improvement, decreased assumption for retiree election

Addendum 1: Bickmore Age Rating Methodology

Both accounting standards (e.g., GASB 75) and actuarial standards (e.g., ASOP 6) require that expected retiree claims, not just premiums paid, be reflected in most situations where an actuary is calculating retiree healthcare liabilities. Unfortunately the actuary is often required to perform these calculations without any underlying claims information. In most situations, the information is not available, but even when available, the information may not be credible due to the size of the group being considered.

Actuaries have developed methodologies to approximate healthcare claims from the premiums being paid by the plan sponsor. Any methodology requires adopting certain assumptions and using general studies of healthcare costs as substitutes when there is a lack of credible claims information for the specific plan being reviewed.

Premiums paid by sponsors are often uniform for all employee and retiree ages and genders, with a drop in premiums for those participants who are Medicare-eligible. While the total premiums are expected to pay for the total claims for the insured group, on average, the premiums charged would not be sufficient to pay for the claims of older insureds, and would be expected to exceed the expected claims of younger insureds. An age-rating methodology takes the typically uniform premiums paid by plan sponsors and spreads the total premium dollars to each age and gender intended to better approximate what the insurer might be expecting in actual claims costs at each age and gender.

The process of translating premiums into expected claims by age and gender generally follows the steps below.

1. *Obtain or Develop Relative Medical Claims Costs by Age, Gender, or other categories that are deemed significant.* For example, a claims cost curve might show that, if a 50 year old male has \$1 in claims, then on average a 50 year old female has claims of \$1.25, a 30 year male has claims of \$0.40, and an 8 year old female has claims of \$0.20. The claims cost curve provides such relative costs for each age, gender, or any other significant factor the curve might have been developed to reflect. Table 4 provides the source of information used to develop such a curve and shows sample relative claims costs developed for the plan under consideration.
2. *Obtain a census of participants, their chosen medical coverage, and the premium charged for their coverage.* An attempt is made to find the group of participants that the insurer considered in setting the premiums they charge for coverage. That group includes the participant and any covered spouses and children. When information about dependents is unavailable, assumptions must be made about spouse age and the number and age of children represented in the population. These assumptions are provided in Table 4.
3. *Spread the total premium paid by the group to each covered participant or dependent based on expected claims.* The medical claims cost curve is used to spread the total premium dollars paid by the group to each participant reflecting their age, gender, or other relevant category. After this step, the actuary has a schedule of expected claims costs for each age and gender for the current premium year. It is these claims costs that are projected into the future by medical cost inflation assumptions when valuing expected future retiree claims.

The methodology described above is dependent on the data and methodologies used in whatever study might be used to develop claims cost curves for any given plan sponsor. These methodologies and assumptions can be found in the referenced paper cited as a source in the valuation report.

Addendum 2: Bickmore Mortality Projection Methodology

Actuarial standards of practice (e.g., ASOP 35, Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations, and ASOP 6, Measuring Retiree Group Benefits Obligations) indicate that the actuary should reflect the effect of mortality improvement (i.e., longer life expectancies in the future), both before and after the measurement date. The development of credible mortality improvement rates requires the analysis of large quantities of data over long periods of time. Because it would be extremely difficult for an individual actuary or firm to acquire and process such extensive amounts of data, actuaries typically rely on large studies published periodically by organizations such as the Society of Actuaries or Social Security Administration.

As noted in a recent actuarial study on mortality improvement, key principals in developing a credible mortality improvement model would include the following:

- (1) Short-term mortality improvement rates should be based on recent experience.
- (2) Long-term mortality improvement rates should be based on expert opinion.
- (3) Short-term mortality improvement rates should blend smoothly into the assumed long-term rates over an appropriate transition period.

The **Bickmore Scale 2017** was developed from a blending of data and methodologies found in two published sources: (1) the Society of Actuaries Mortality Improvement Scale MP-2016 Report, published in October 2016 and (2) the demographic assumptions used in the 2016 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, published June 2016.

Bickmore Scale 2017 is a two-dimensional mortality improvement scale reflecting both age and year of mortality improvement. The underlying base scale is Scale MP-2016 which has two segments – (1) historical improvement rates for the period 1951-2012 and (2) an estimate of future mortality improvement for years 2013-2015 using the Scale MP-2016 methodology but utilizing the assumptions obtained from Scale MP-2015. The Bickmore scale then transitions from the 2015 improvement rate to the Social Security Administration (SSA) Intermediate Scale linearly over the 10 year period 2016-2025. After this transition period, the Bickmore Scale uses the constant mortality improvement rate from the SSA Intermediate Scale from 2025-2039. The SSA's Intermediate Scale has a final step down in 2040 which is reflected in the Bickmore scale for years 2040 and thereafter. Over the ages 100 to 115, the SSA improvement rate is graded to zero.

Scale MP-2016 can be found at the SOA website and the projection scales used in the 2016 Social Security Administrations Trustees Report at the Social Security Administration website.

Glossary

Actuarial Accrued Liability (AAL) – Total dollars required to fund all plan benefits attributable to service rendered as of the valuation date for current plan members and vested prior plan members; see “Actuarial Present Value”.

Actuarial Funding Method – A procedure which calculates the actuarial present value of plan benefits and expenses, and allocates these expenses to time periods, typically as a normal cost and an actuarial accrued liability.

Actuarial Present Value Projected Benefits (APVPB) – The amount presently required to fund all projected plan benefits in the future, it is determined by discounting the future payments by an appropriate interest rate and the probability of nonpayment.

Actuarial Value of Assets – The actuarial value of assets is the value used by the actuary to offset the AAL for valuation purposes. The actuarial value of assets may be the market value of assets or may be based on a methodology designed to smooth out short-term fluctuations in market values.

Actuarially Determined Contribution (ADC) – A contribution level determined by an actuary that is sufficient, assuming all assumptions are realized, to (1) fully fund new employee’s expected benefits by their expected retirement date(s), (2) pay off over a sufficiently short period any unfunded liabilities current as of the date funding commences, and (3) adequately fund the trust so that the trust can meet benefit payment obligations.

CalPERS – Many state governments maintain a public employee retirement system; CalPERS is the California program, covering all eligible state government employees as well as other employees of other governments within California who have elected to join the system.

Defined Benefit (DB) – A pension or OPEB plan which defines the monthly income or other benefit which the plan member receives at or after separation from employment.

Defined Contribution (DC) – A pension or OPEB plan which establishes an individual account for each member and specifies how contributions to each active member’s account are determined and the terms of distribution of the account after separation from employment.

Discount Rate – The rate of return that could be earned on an investment in the financial markets; typically, the discount rate is based on the expected long-term yield of investments used to finance the benefits. The discount rate is used to adjust the dollar value of future projected benefits into a present value equivalent as of the valuation date.

Entry Age Normal Cost (EANC) – An actuarial funding method where, for each individual, the actuarial present value of benefits is levelly spread over the individual’s projected earnings or service from entry age to the last age at which benefits can be paid.

Excise Tax – The Affordable Care Act created a 40% excise tax on the value of “employer sponsored coverage” that exceeds certain thresholds. The tax is first effective is 2020.

Glossary

(Continued)

Explicit Subsidy – The projected dollar value of future retiree healthcare costs expected to be paid directly by the Employer, e.g., the Employer’s payment of all or a portion of the monthly retiree premium billed by the insurer for the retiree’s coverage.

Funding Policy Contribution (FPC)– The contributions determined in accordance with the entity’s adopted funding policy. The FPC may range from “pay-go” (i.e. only paying benefits as they come due), to prefunding all projected liabilities expected for current and former employees. An entity’s FPC may be: (1) less than the Actuarially Determined Contribution (ADC) indicating that the entity has chosen not to prefund part of the liabilities reflected in the ADC; (2) more than the ADC indicating that the entity wants to prefund benefits faster than a typical ADC; or (3) based on contributions equal to 100% of an ADC, indicating that the entity desires to prefund over the period indicated by the ADC.

Government Accounting Standards Board (GASB) – A private, not-for-profit organization which develops generally accepted accounting principles (GAAP) for U.S. state and local governments; like FASB, it is part of the Financial Accounting Foundation (FAF), which funds each organization and selects the members of each board

Health Care Trend – The assumed rate(s) of increase in future dollar values of premiums or healthcare claims, attributable to increases in the cost of healthcare; contributing factors include medical inflation, frequency or extent of utilization of services and technological developments.

Implicit Subsidy – The projected difference between future retiree claims and the premiums to be charged for retiree coverage; this difference results when the claims experience of active and retired employees are pooled together and a ‘blended’ group premium rate is charged for both actives and retirees; a portion of the active employee premiums subsidizes the retiree premiums.

Non-Industrial Disability (NID) – Unless specifically contracted by the individual Agency, PAM employees are assumed to be subject to only non-industrial disabilities.

Normal Cost – Total dollar value of benefits expected to be earned by plan members in the current year, as assigned by the chosen funding method; also called current service cost.

Other Post-Employment Benefits (OPEB) – Post-employment benefits other than pension benefits, most commonly healthcare benefits but also including life insurance if provided separately from a pension plan.

Pay-As-You-Go (PAYGO) – Contributions to the plan are made at about the same time and in about the same amount as benefit payments and expenses coming due.

PEMHCA – The Public Employees’ Medical and Hospital Care Act, established by the California legislature in 1961, provides community-rated medical benefits to participating public employers. Among its extensive regulations are the requirements that a contracting Agency contribute toward medical insurance premiums for retired annuitants and that a contracting Agency file a resolution, adopted by its governing body, with the CalPERS Board establishing any new contribution.

Glossary
(Concluded)

Plan Assets – The value of cash and investments considered as ‘belonging’ to the plan and permitted to be used to offset the AAL for valuation purposes. To be considered a plan asset, (a) the assets should be segregated and restricted in a trust or similar arrangement, (b) employer contributions to the trust should be irrevocable, (c) the assets should be dedicated to providing benefits to retirees and their beneficiaries, and (d) that the assets should be legally protected from creditors of the employer and/or plan administrator. See also “Actuarial Value of Assets”.

Public Agency Miscellaneous (PAM) – Non-safety public employees.

Select and Ultimate – Actuarial assumptions which contemplate rates which differ by year initially (the select period) and then stabilize at a constant long-term rate (the ultimate rate).

Unfunded Actuarial Accrued Liability (UAAL) – The excess of the actuarial accrued liability over the actuarial value of plan assets.

Vesting – As defined by the plan, requirements which when met make a plan benefit nonforfeitable on separation of service before retirement eligibility.