Bickmore

March 7, 2018

Robert Housley
Finance/HR Director
Midway City Sanitary District
14451 Cedarwood Avenue
Westminster, CA 92683

Re: July 1, 2017 Actuarial Valuation or the Purpose of Determining Funding Contributions

Dear Mr. Housley:

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 Midway City Sanitary District (the District). 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 District and to develop annual amounts to be contributed by the District for the fiscal years ending June 30, 2018 and June 30, 2019 toward prefunding the OPEB plan liability. This report may be required to 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 previously developed under GASB 45 and satisfies the requirements of an ADC as described under GASB 75. The District'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 6.75%.
- Information presented in this report is not considered suitable for satisfying the District'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 District, including the most recent bargaining 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 District 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

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

Bickmore

Midway City Sanitary District

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

Submitted March 2018

Table of Contents

A. Executive Summary

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

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 District'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 and the District expects these funds to yield 6.75% per year over the long term. The District's current OPEB funding policy is to contribute 100% of the Actuarially Determined Contributions (ADC) each year, with the ADC developed in the same manner as the Annual Required Contribution (ARC) was developed under GASB 45. Accordingly, with the District's approval, this valuation was prepared using a 6.75% discount rate, slightly lower than the 7.0% 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 Actuarially Determined Contributions for the District's fiscal years ending June 30, 2018 and 2019. The ADC is calculated 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	6.75%	6.75%	6.75%
Actuarial Accrued Liability	$ 4,019,758	$ 776,638	$ 4,796,396
Actuarial Value of Assets	3,507,041	-	3,507,041
Unfunded Actuarial Accrued Liability	512,717	776,638	1,289,355
Funded Ratio	87.2%	0.0%	73.1%

The liabilities shown in the report reflect assumptions regarding continued future employment, rates of retirement and survival, and elections by future retirees to elect coverage for themselves and their dependents. Please note that 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.

Executive Summary
(Concluded)

The Actuarially Determined Contributions for the fiscal year ending June 30, 2018 is shown below. Detailed results are shown in tables beginning on page 12 and some historical information is provided in the Appendix.

Subsidy	Explicit	Implicit	Total
Actuarially Determined Contribution (ADC) for FYE 2018	**$ 169,952**	**$ 87,045**	**$ 256,997**
Expected employer paid benefits for retirees	142,786	-	142,786
Current year's implicit subsidy credit	-	30,232	30,232
Expected contribution to OPEB trust	1,406,087	-	1,406,087
Total Expected OPEB Contributions for FYE 2018	**$ 1,548,873**	**$ 30,232**	**$ 1,579,105**

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 District 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
- 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 a separate report 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 District's other postemployment benefits and to provide the annual contribution information with respect to the District'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 District 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 District.

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 is the first valuation prepared for the District which includes the implicit subsidy liability.**

This chart shows the sources of funds needed to cover expected medical claims for pre-Medicare retirees. The implicit subsidy is not affected by how much or little of the premium is paid by the District.

<table>
<tr><td colspan="3">Expected retiree claims</td></tr>
<tr><td colspan="2">Premium charged for retiree coverage</td><td>Covered by higher active premiums</td></tr>
<tr><td>Retiree portion of premium</td><td>Agency portion of premium
Explicit subsidy</td><td>Implicit subsidy</td></tr>
</table>

OPEB Obligations of the District

The District provides continuation of medical coverage to its retiring employees, which creates one or more of the following types of OPEB liabilities:

- **Explicit subsidy liabilities**: The District contributes directly toward retiree medical premiums as described in Table 3A. Liabilities for these benefits are 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 District, 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.

  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.

Sources of OPEB Liability
(Concluded)

- **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 District'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 District and plan participants, unless the District 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 District.* No legal obligation with regard to the District's current or future liability to absorb this potential tax is to be construed from this 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 District 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 District as to its accuracy. The valuation described below has been performed in accordance with the actuarial methods and assumptions described in Table 4.

In projecting benefit values and liabilities, we first determine an expected premium or benefit stream over the employee's future retirement. Benefits may include both direct employer payments (explicit subsidies) and/or an implicit subsidy, arising when retiree premiums are expected to be subsidized by active employee premiums. The projected benefit streams reflect assumed trends in the cost of those benefits and assumptions as to the expected date(s) when benefits will end. We then apply assumptions regarding:

- The probability that each individual employee will or will not continue in service with the District to receive benefits.
- To the extent assumed to retire from the District, 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
plus Normal Cost	Current Year's Cost Allocation	Actives only
plus Present Value of Future Normal Costs	Future Years' Cost Allocations	Actives only
equals 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 District's CERBT account. The June 30, 2017 market value of assets in this report was $3,507,041. 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**			
Valuation date	**7/1/2015**	**7/1/2017**		
Subsidy	Explicit	Explicit	Implicit	Total
Discount rate	7.00%	6.75%	6.75%	6.75%
Number of Covered Employees				
Actives	25	25	25	25
Retirees	20	19	4	19
Total Participants	45	44	29	44
Actuarial Present Value of Projected Benefits				
Actives	$ 1,600,945	$ 3,417,142	$ 932,545	$ 4,349,687
Retirees	1,666,604	1,619,503	113,091	1,732,594
Total APVPB	3,267,549	5,036,645	1,045,636	6,082,281
Actuarial Accrued Liability (AAL)				
Actives	1,173,392	2,400,255	663,547	3,063,802
Retirees	1,666,604	1,619,503	113,091	1,732,594
Total AAL	2,839,996	4,019,758	776,638	4,796,396
Actuarial Value of Assets	3,751,818	3,507,041	-	3,507,041
Unfunded AAL (UAAL)	(911,822)	512,717	776,638	1,289,355
Normal Cost	53,725	127,942	34,184	162,126
Percent funded	132.1%	87.2%	0.0%	73.1%
Reported covered payroll	1,550,911	1,610,995	1,610,995	1,610,995
UAAL as percent of payroll	-58.8%	31.8%	48.2%	80.0%

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.

Changes Since the Prior Valuation

This is Bickmore's first valuation for the District. 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 unlikely ever to be exactly realized. Nonetheless, it is helpful to consider why the results of this valuation may be different than previously projected.

Basic Valuation Results
(Concluded)

In comparing results shown in the exhibit above, we can see that the total Unfunded Actuarial Accrued Liability (UAAL) increased substantially, from $(912,000) to $1,289,000 between July 1, 2015 and July 1, 2017. There are a number of factors which contributed to this difference between expected and actual UAAL. The primary sources of the difference are summarized in the chart below:

Source of Change	Increase (decrease) in UAAL
Update to medical premium and cap increase trend	$ 1,068,000
Introduction of the implicit subsidy liability	777,000
Asset valuation method changed to market value	539,000
Introduction of excise tax liability	7,000
Discount rate decreased from 7.0% to 6.75%	131,000
Introduction of liability for potential coverage of children on retiree healthcare plans	18,000
Decrease to percentage of future retirees assumed to elect District medical coverage in retirement (from 100% to 95%)	(75,000)
Decrease to % of future retirees assumed to cover a spouse on a District medical plan in retirement (from 80% to 75%)	(34,000)
Expected change in the UAAL due to the passage of time	(88,000)
Favorable plan experience	(142,000)
Change in UAAL from July 2015 to July 2017	**$ 2,201,000**

E. Funding Policy

Actuarially Determined Contributions and District Funding Policy

The Actuarially Determined Contribution (ADC) consists of two basic components, which have been adjusted with interest to the District'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 established July 1, 2009. The remaining period applicable in determining the ADC for the fiscal year ending June 30, 2018 is 24 years. Amortization payments are determined on a level percent of pay basis.[1]

The District'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 District's current amortization approach is described 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 District 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	$ 363,000	$ 143,000	$ 506,000
Current Year's Implicit Subsidy Adjustment	$ (30,000)	$ 30,000	$ -
Adjusted contributions reported in Financial Stmts	$ 333,000	$ 173,000	$ 506,000

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 Funding 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 District. 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 District employees. Other assumptions, such as healthcare trend, age related healthcare claims, retiree participation rates and spouse/dependent 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 District hopes their long term investment strategy will yield higher returns. In this way, future 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 District 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 Midway City Sanitary District. 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 District 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 District. 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: March 7, 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 District 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 District 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 District's financial statements. Those calculations will be provided in separate reports for each fiscal year.

Employees reflected in future years' costs: The counts of active employees and retirees shown in the report are those reported to us for this valuation. While we do not adjust or shift these counts between valuation dates, the liabilities and costs developed for those years already 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. 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 the number of retired employees expected to create an implicit subsidy OPEB liability is lower than the number of those which create an explicit subsidy 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 District's fiscal year ending June 30, 2018, based on the results of the July 1, 2017 valuation and the funding policy described 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
Expected long-term return on assets	6.75%	6.75%	6.75%
Discount rate	6.75%	6.75%	6.75%
Number of Covered Employees			
Actives	25	25	25
Retirees	19	4	19
Total Participants	44	29	44
Actuarial Present Value of Projected Benefits			
Actives	$ 3,417,142	$ 932,545	$ 4,349,687
Retirees	1,619,503	113,091	1,732,594
Total APVPB	5,036,645	1,045,636	6,082,281
Actuarial Accrued Liability (AAL)			
Actives	2,400,255	663,547	3,063,802
Retirees	1,619,503	113,091	1,732,594
Total AAL	4,019,758	776,638	4,796,396
Actuarial Value of Assets	3,507,041	-	3,507,041
Unfunded AAL (UAAL)	512,717	776,638	1,289,355
UAAL Amortization method	Level % of Pay	Level % of Pay	Level % of Pay
Remaining amortization period (years)	24	24	24
Amortization Factor	16.3996	16.3996	16.3996
Actuarially Determined Contribution (ADC)			
Normal Cost	127,942	34,184	162,126
Amortization of UAAL	31,264	47,357	78,621
Interest to fiscal year end	10,746	5,504	16,250
Total ADC	169,952	87,045	256,997
Projected covered payroll	$ 1,610,995	$ 1,610,995	$ 1,610,995
Normal Cost as a percent of payroll	7.9%	2.1%	10.1%
ADC as a percent of payroll	10.5%	5.4%	16.0%
Expected Employer OPEB Contributions			
Estimated payments on behalf of retirees	142,786	-	142,786
Estimated current year's implicit subsidy	-	30,232	30,232
Estimated contribution to OPEB trust	1,406,087	-	1,406,087
Total Expected Employer Contribution	1,548,873	30,232	1,579,105

Table 1B
Actuarially Determined Contribution for Fiscal Year End 2019

This table develops the valuation results applicable to the District's fiscal year ending June 30, 2019, based on the results of the July 1, 2017 valuation and the funding policy described 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
Expected long-term return on assets	6.75%	6.75%	6.75%
Discount rate	6.75%	6.75%	6.75%
Number of Covered Employees			
Actives	25	25	25
Retirees	19	4	19
Total Participants	44	29	44
Actuarial Present Value of Projected Benefits			
Actives	$ 3,634,282	$ 987,849	$ 4,622,131
Retirees	1,599,550	98,136	1,697,686
Total APVPB	5,233,832	1,085,985	6,319,817
Actuarial Accrued Liability (AAL)			
Actives	2,685,333	737,185	3,422,518
Retirees	1,599,550	98,136	1,697,686
Total AAL	4,284,883	835,321	5,120,204
Actuarial Value of Assets	5,149,853	-	5,149,853
Unfunded AAL (UAAL)	(864,970)	835,321	(29,649)
UAAL Amortization method	Level % of Pay	Level % of Pay	Level % of Pay
Remaining amortization period (years)	23	23	23
Amortization Factor	15.9603	15.9603	15.9603
Actuarially Determined Contribution (ADC)			
Normal Cost	132,100	35,295	167,395
Amortization of UAAL	(54,195)	52,337	(1,858)
Interest to fiscal year end	5,259	5,915	11,174
Total ADC	83,164	93,547	176,711
Projected covered payroll	$ 1,663,353	$ 1,663,353	$ 1,663,353
Normal Cost as a percent of payroll	7.9%	2.1%	10.1%
ADC as a percent of payroll	5.0%	5.6%	10.6%
Expected Employer OPEB Contributions			
Estimated payments on behalf of retirees	160,485	-	160,485
Estimated current year's implicit subsidy	-	43,248	43,248
Estimated contribution to OPEB trust*	-	-	-
Total Expected Employer Contribution	160,485	43,248	203,733

* The District may take reimbursement for retiree benefit payments in excess of the ADC if desired.

Table 2
Summary of Employee Data

The District reported 25 active employees (excluding active Board members) in the data provided to us for the July 2017 valuation. Of these, 23 were reported as currently enrolled in the medical program while 2 employees were waiving coverage. Their age and service information is below.

Distribution of Benefits-Eligible Active Employees

	Years of Service							
Current Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 & Up	**Total**	**Percent**
Under 25							0	0%
25 to 29	1						1	4%
30 to 34			1				1	4%
35 to 39			1	3			4	16%
40 to 44		2					2	8%
45 to 49		1	1	2	3	1	8	32%
50 to 54			1	1		1	3	12%
55 to 59			2	1		1	4	16%
60 to 64				1		1	2	8%
65 to 69							0	0%
70 & Up							0	0%
Total	1	3	6	8	3	4	**25**	**100%**
Percent	4%	12%	24%	32%	12%	16%	**100%**	

Valuation	July 2015	July 2017
Annual Covered Payroll	$1,550,911	$1,610,995
Average Attained Age for Actives	47 (est.)	48.1
Average Years of Service	*not provided*	12.2

There are also 15 retirees and 4 survivors currently receiving benefits under this program. Their current ages are summarized in the chart below, as well as the average age at retirement.

Retirees by Age

Current Age	Number	Percent
Below 50	0	0%
50 to 54	0	0%
55 to 59	1	5%
60 to 64	3	16%
65 to 69	6	32%
70 to 74	2	11%
75 to 79	3	16%
80 & up	4	21%
Total	**19**	**100%**
Average Age:		
On 7/1/2017	71.5	
At retirement	56.2	

Table 2- Summary of Employee Data
(Concluded)

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

Valuation Counts	Actives	Retirees	Total
As of July 1, 2015	25	20	45
As of July 1, 2017	25	19	44
Increase (decrease)	**0**	**(1)**	**(1)**

The particular medical plan chosen and the level of coverage selected impact the District's OPEB liability. The following exhibit summarizes the enrollment for all current active and retired members:

Enrollment by Plan, Status, and Coverage Level	**Actives**			**Retirees**			**Grand Total**
				Pre-65	Post-65		
	Single	Two-Party	Family	Single	Single	Two-Party	
Blue Shield Access LA				1			1
Blue Shield Access SoCal	3	1		2			6
Health Net Salud y Mas LA			1				1
Health Net SmartCare SoCal		1	3				4
Kaiser LA	1		1		1		3
Kaiser SoCal		3	4		1	1	9
PERS Choice LA						1	1
PERS Choice OOS				1	1	1	3
PERS Choice SoCal						1	1
PERSCare SoCal					1	1	2
UnitedHealthcare LA			1				1
UnitedHealthcare SoCal		2	2		4	2	10
Waived Coverage	2						2
Total	**6**	**7**	**12**	**4**	**8**	**7**	**44**

Table 3A
Summary of Retiree Benefit Provisions

OPEB provided: The District has indicated that the only OPEB provided is medical coverage.

Access to coverage: Medical coverage 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: either (a) attainment of age 50 (age 52, for miscellaneous PEPRA employees) with 5 years of State or public agency service or (b) an approved disability retirement.

The employee must begin his or her **pension benefit** within 120 days of terminating employment with the District to be eligible to continue medical coverage through the District and be entitled to the benefits described below. If an eligible employee is not already enrolled in the medical plan, he or she may enroll within 60 days of retirement, during any future open enrollment period or with a qualifying life event. *In other words, it is the timing of initiating pension benefits and not timing of enrollment in the medical program which determines whether or not the retiree qualifies for lifetime medical coverage and any benefits defined in the PEMHCA resolution*. Once eligible, 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: The District maintains a PEMHCA resolution which currently provides for the agency to contribute 100% of medical premiums for the retiree, spouse and other eligible covered dependents up to a stated monthly maximum. Retirees pay the remainder of the premium, if any, in excess of this amount. The maximum monthly benefit amounts in effect during the term of the current MOU are shown below:

Year	District-Paid Maximum
2017	$ 1,425
2018	$ 1,550
2019	$ 1,700
2020	$ 1,875

Current premium rates: The 2018 CalPERS monthly medical plan rates in the Southern California rate group are shown in the table below. If different rates apply where the member resides outside of this area, those rates are reflected in the valuation, but not listed here. The CalPERS administration fee is assumed to be expensed each year and has not been projected as an OPEB liability in this valuation:

Other Southern California Counties 2018 Health Plan Rates						
	Actives and Pre-Med Retirees			Medicare Eligible Retirees		
Plan	Ee Only	Ee & 1	Ee & 2+	Ee Only	Ee & 1	Ee & 2+
Blue Shield Access+ HMO	$ 695.97	$ 1,391.94	$ 1,809.52	*Not Available*		
Health Net SmartCare HMO	607.68	1,074.40	1,579.97	*Not Available*		
Kaiser HMO	666.80	1,333.60	1,733.68	$ 316.34	$ 632.68	$ 1,032.76
UnitedHealthcare	616.66	1,233.32	1,603.32	330.76	661.52	1,031.52
PERS Choice PPO	698.96	1,397.92	1,817.30	345.97	691.94	1,111.32
PERSCare PPO	733.50	1,467.00	1,907.10	382.30	764.60	1,204.70

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[2]
Asset Valuation Method	Market value of assets
Long Term Return on Assets	6.75%
Discount Rate	6.75%
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 when 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 District 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

[2] 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		
Age	Male	Female
40	0.00117	0.00097
50	0.00532	0.00495
60	0.00817	0.00533
70	0.01766	0.01264
80	0.05275	0.03695
90	0.16186	0.12335
100	0.34551	0.31876
110	1.00000	1.00000

CalPERS Public Agency Disabled Miscellaneous		
Age	Male	Female
20	0.00641	0.00395
30	0.00736	0.00455
40	0.01008	0.00642
50	0.01784	0.01230
60	0.02634	0.01510
70	0.03890	0.02815
80	0.08230	0.06015
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 7/1/2009:	3% @ 60
If hired on or after 6/30/2009, with prior PERS Service:	2% @ 55
If hired on or after 1/1/2013, PEPRA:	2% @ 62

Sample rates of assumed future retirements for each of these retirement benefit formulas are shown in the tables 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: 3.0% at 60 formula From CalPERS Experience Study Report Issued January 2014						
Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0120	0.0180	0.0240	0.0390	0.0400	0.0910
55	0.0430	0.0570	0.0720	0.0960	0.1050	0.1650
60	0.1140	0.1480	0.1820	0.2260	0.2550	0.3340
65	0.2020	0.2600	0.3180	0.3860	0.4390	0.5420
70	0.1400	0.1820	0.2230	0.2740	0.3100	0.3960
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Table 4 - Actuarial Methods and Assumptions
(Continued)

Retirement Rates
(Concluded)

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

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

Medicare Eligibility

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

Table 4 - Actuarial Methods and Assumptions
(Continued)

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	Actual	2022	6.00%
2019	7.50%	2023	5.50%
2020	7.00%	2024	5.00%
2021	6.50%	2025 & later	5.00%

Employer Cost Sharing

Actual increases to the District-paid maximums are reflected for years 2018-2020. Increases for years 2021 and later are assumed to increase at the rates shown above.

Participation Rate

Current actives: 95% are assumed to continue their current plan election in retirement. If not currently enrolled, the employee is assumed to elect coverage in the United Healthcare HMO plan.

Retired participants: Existing medical plan elections are assumed to be continued until retiree's death.

Spouse Coverage

Active employees: 75% are assumed to be married and elect coverage for their spouse in retirement. Surviving spouses are assumed to retain 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 be continued 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.

Dependent Coverage

An existing election for coverage of dependent children is assumed to continue until the youngest child is age 26.

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

Table 4 - Actuarial Methods and Assumptions
(Continued)

Age-related medical premiums (continued)

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
Blue Shield Access+: Los Angeles	$ 632	$ 746	$ 866	$ 992	$ 1,128
Blue Shield Access+: Other Southern California	687	810	940	1,078	1,225
HMO: Los Angeles	629	741	861	987	1,122
HMO: Other Southern California	662	781	907	1,040	1,182
Kaiser: Los Angeles	650	766	890	1,020	1,159
Kaiser: Other Southern California	662	781	907	1,040	1,182
PERS Choice: Los Angeles	559	660	766	878	998
PERS Choice: Other Southern California	598	706	819	939	1,068
PERS Choice: Out of State	419	494	574	658	748
PERSCare: Other Southern California	524	618	718	823	936
	Female				
Medical Plan	50	53	56	59	62
Blue Shield Access+: Los Angeles	$ 783	$ 860	$ 926	$ 1,001	$ 1,103
Blue Shield Access+: Other Southern California	851	934	1,005	1,086	1,198
HMO: Los Angeles	779	856	921	995	1,097
HMO: Other Southern California	821	901	970	1,048	1,155
Kaiser: Los Angeles	805	884	951	1,028	1,133
Kaiser: Other Southern California	821	901	970	1,048	1,155
PERS Choice: Los Angeles	693	761	819	885	976
PERS Choice: Other Southern California	741	814	876	947	1,044
PERS Choice: Out of State	519	570	613	663	731
PERSCare: Other Southern California	650	713	768	830	915

Medicare-eligible retirees are assumed to be covered by plans rated based solely on the experience of Medicare retirees. Thus, no implicit subsidy is calculated for them.

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 2022, 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.

Actual 2018 limits may be higher, depending on cost increases prior to 2022. 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)

Changes Since the Prior Valuation:

Discount rates	Decreased from 7.0% to 6.75%
Assumed wage inflation	Increased from 2.75% to 3.0%
Assumed annual payroll increase	Increased from 2.75% to 3.25% (for EAN annual cost increases)
Mortality improvement	We added Bickmore Scale 2017 to project future mortality improvement beyond the valuation date, based on recent data provided by the Society of Actuaries and the Social Security Administration.
Healthcare trend	Medical plan premium rates are assumed to increase higher rates than were assumed in the prior valuation, with the ultimate trend of 5.0% per year, rather than the 4.0% per year increase assumed in the prior valuation.
Maximum District cost sharing	In years after the expiration of the current MOU, the maximum District-paid subsidy is assumed to increase by healthcare trend. In the 2015 valuation, it appears that the maximum benefit were not assumed to increase beyond the levels in effect in 2014.
Dependent Coverage	Due to more favorable and longer eligibility for dependent children provided by the Affordable Care Act, this valuation includes projected OPEB costs for currently covered dependent children under age 26.
Spouse Coverage	We decreased the percentage of future retirees assumed to be married and to elect coverage for their spouse in retirement, from 80% to 75%. This change was based on a review of current retiree data provided by CalPERS, with consideration made for potential discontinuance of spouse coverage due to death.
Participation Rate	The assumed percentage of active employees currently waiving District medical coverage who are assumed to elect coverage through the District in retirement was reduced slightly, from 100% to 95%, based on a review of retiree data provided by CalPERS.
Age-Related Medical Premiums	We introduced methodology for developing age-related medical premiums based on updated research and data sponsored by the Society of Actuaries. We added an implicit subsidy analysis for pre-Medicare retirees covered by the CalPERS medical program.
Excise Tax Impact	We reflected the potential impact of the excise tax attributable to retirees for high cost healthcare plans for retirees, as provided by the Affordable Care Act.

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 District. 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	$ 129,269	$ 13,517	$ 142,786	$ 22,589	$ 7,643	$ 30,232	$ 173,018
2019	130,993	29,492	160,485	25,876	17,372	43,248	203,733
2020	132,342	44,064	176,406	26,686	22,099	48,785	225,191
2021	132,344	62,806	195,150	21,302	31,655	52,957	248,107
2022	127,248	81,206	208,454	12,631	36,951	49,582	258,036
2023	130,259	101,364	231,623	14,452	44,220	58,672	290,295
2024	127,822	125,257	253,079	6,384	53,951	60,335	313,414
2025	129,213	145,206	274,419	7,300	58,514	65,814	340,233
2026	125,434	169,338	294,772	-	66,269	66,269	361,041
2027	126,011	196,201	322,212	-	76,962	76,962	399,174
2028	126,252	230,978	357,230	-	100,770	100,770	458,000
2029	126,123	247,580	373,703	-	95,837	95,837	469,540
2030	125,608	282,210	407,818	-	113,973	113,973	521,791
2031	124,703	312,327	437,030	-	142,499	142,499	579,529
2032	123,366	323,448	446,814	-	154,370	154,370	601,184

The amounts shown in the Explicit Subsidy section reflect the expected payment by the District 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").

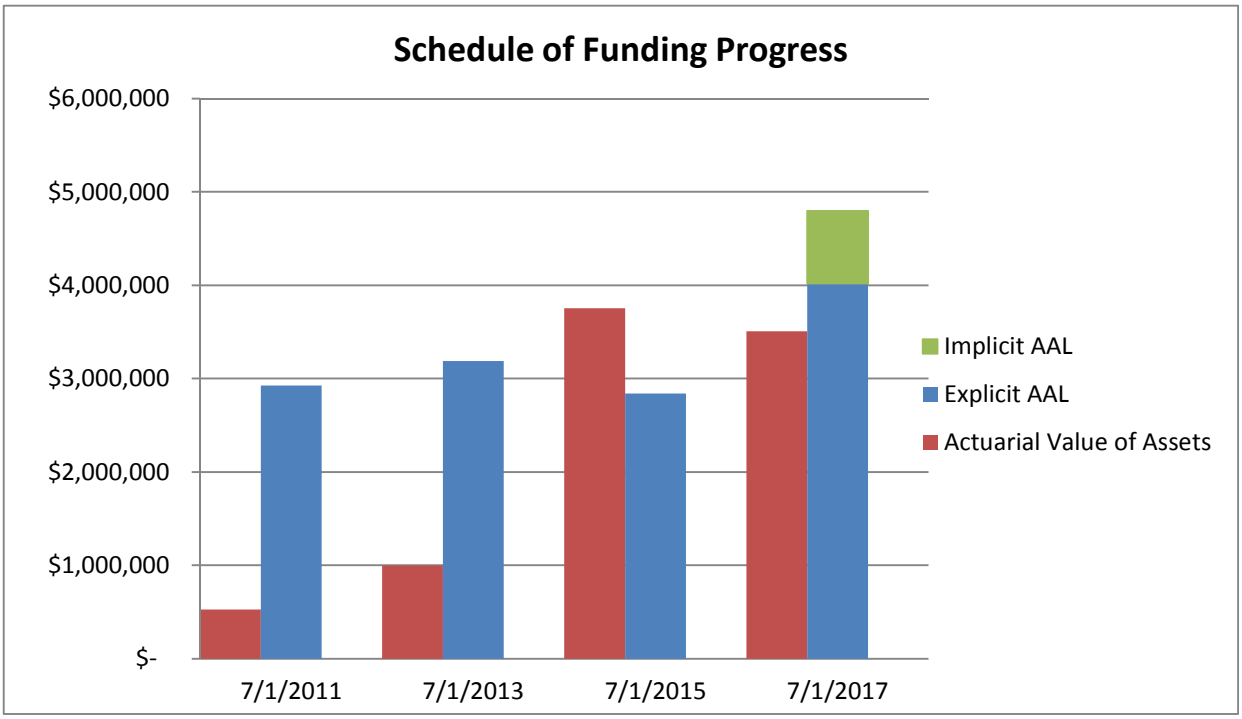
The amounts shown in the Implicit Subsidy section reflect the expected excess of retiree medical (and prescription drug) claims over the premiums expected to be charged during the year for retirees' coverage. These amounts are also shown separately and in total for those currently retired on the valuation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

Appendix 1
Historical Information

In this section, we provide a review of key components of valuation results from 2011 through 2017. The chart and graph below provide a review of the plan's funded ratio on each valuation date.

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)
7/1/2011	$ 526,085	$ 2,925,475	$ 2,399,390	18.0%	$ 1,592,879	150.6%
7/1/2013	$ 997,620	$ 3,187,342	$ 2,189,722	31.3%	$ 1,505,332	145.5%
7/1/2015	$ 3,751,818	$ 2,839,996	$ (911,822)	132.1%	$ 1,550,911	-58.8%
7/1/2017	$ 3,507,041	$ 4,796,396	$ 1,289,355	73.1%	$ 1,610,995	80.0%

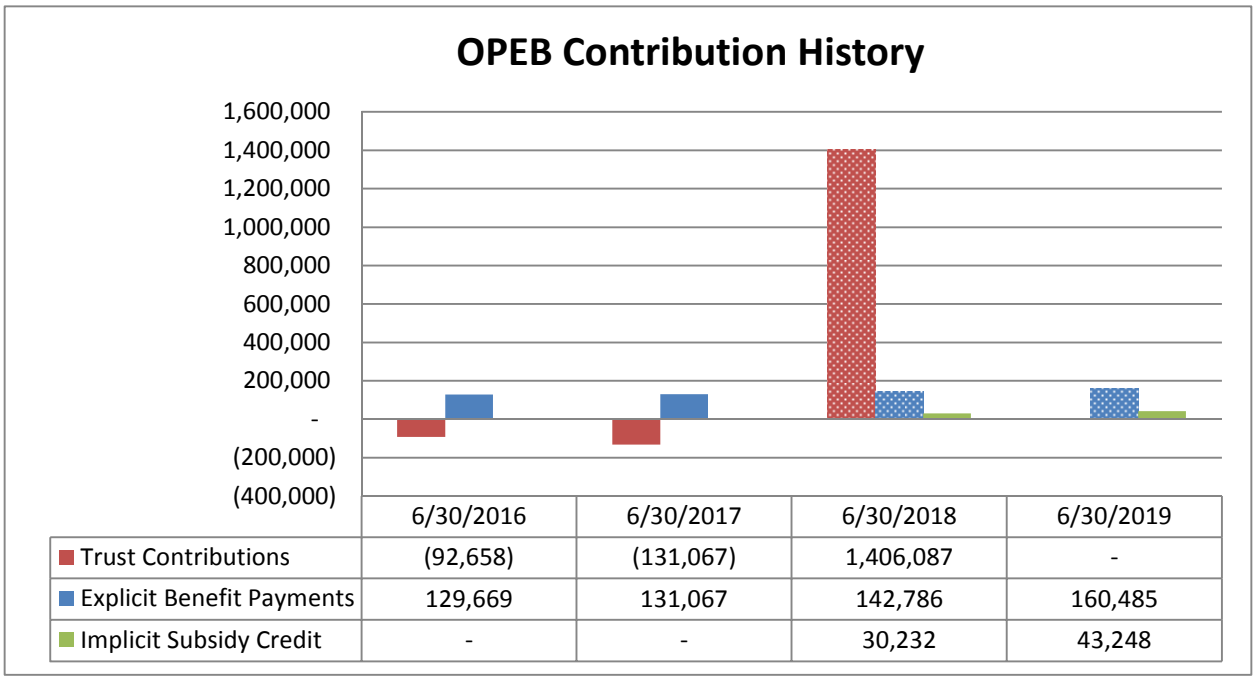


Significant changes made in the July 2017 valuation include: (a) first time recognition of the implicit subsidy liability; (b) increase in assumed future healthcare trend; (c) projection of future mortality improvement (i.e., longer retiree life expectancy) and (d) assumed future increases in the maximum monthly medical benefits paid by the District. These and other changes are summarized in Section D on page 7.

As shown on the following page, the District is planning to make a substantial trust contribution for the fiscal year ending June 30, 2018. Assuming this contribution is made and no reimbursement is taken for retiree benefit payments in either FYE 2018 or FYE 2019, we project that OPEB trust assets will slightly exceed the Present Value of Projected *Explicit Subsidy* Benefits as of June 30, 2019.

Appendix 1 - Historical Information
(Continued)

The graph below summarizes the recent history and projected contribution levels for the fiscal years ending June 30, 2016 through June 30, 2019. Note that the trust contribution shown for fiscal year ending June 30, 2018 reflects the amount expected to be contributed for this period. For FYE June 30, 2019, we assume that the District would contribute the retiree benefit payments, without reimbursement from the trust.



	6/30/2016	6/30/2017	6/30/2018	6/30/2019
Trust Contributions	(92,658)	(131,067)	1,406,087	-
Explicit Benefit Payments	129,669	131,067	142,786	160,485
Implicit Subsidy Credit	-	-	30,232	43,248

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.