



**APTOS/LA SELVA FIRE PROTECTION DISTRICT
RETIREE HEALTHCARE PLAN**

BARTEL
ASSOCIATES, LLC

June 30, 2017 Actuarial Valuation

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Bartel Associates, LLC

February 2, 2018

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BENEFIT SUMMARY

<ul style="list-style-type: none"> ■ Eligibility 	<ul style="list-style-type: none"> ■ Retire directly from District under CalPERS (age 50¹ and 5 years of CalPERS service or disability) ■ Continue participating in PEMHCA after retirement
<ul style="list-style-type: none"> ■ Retiree Medical Benefit 	<ul style="list-style-type: none"> ■ PEMHCA minimum <ul style="list-style-type: none"> ➢ \$128/month in 2017 and \$133/month in 2018 ■ Longevity Benefit <ul style="list-style-type: none"> ➢ Eligible if hired before 4/1/2005 ➢ 15 years District service at retirement required ➢ \$350/month until age 65 or retiree's death, if earlier, in addition to PEMHCA minimum
<ul style="list-style-type: none"> ■ Surviving Spouse Benefit 	<ul style="list-style-type: none"> ■ Surviving spouse coverage based on retirement plan election ■ PEMHCA minimum continues to surviving spouse

¹ Age 52 for Miscellaneous PEPRA employees.



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BENEFIT SUMMARY

<ul style="list-style-type: none"> ■ Dental, Vision, Life & Medicare Part B Reimbursement 	<ul style="list-style-type: none"> ■ None 								
<ul style="list-style-type: none"> ■ Pay-as-you-go Costs (000's) (Cash Subsidy) 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Fiscal Year</th> <th style="width: 50%;">Pay-Go</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2016/17</td> <td style="text-align: center;">\$ 99</td> </tr> <tr> <td style="text-align: center;">2015/16</td> <td style="text-align: center;">79</td> </tr> <tr> <td style="text-align: center;">2014/15</td> <td style="text-align: center;">70</td> </tr> </tbody> </table>	Fiscal Year	Pay-Go	2016/17	\$ 99	2015/16	79	2014/15	70
Fiscal Year	Pay-Go								
2016/17	\$ 99								
2015/16	79								
2014/15	70								



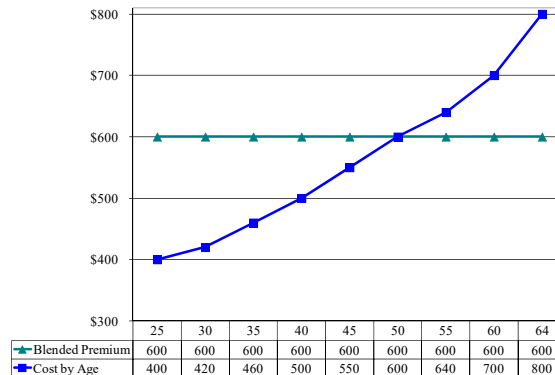
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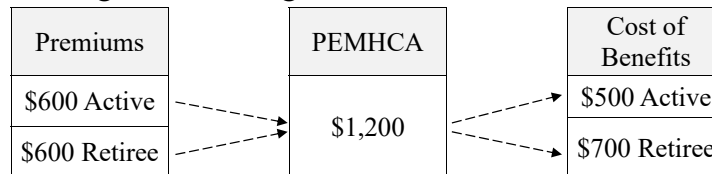
BENEFIT SUMMARY

Implied Subsidy

- For PEMHCA, employer cost for allowing retirees to participate at active rates.
 - General trend:



- Sample active age 40, retire age 60:



BENEFIT SUMMARY

Implied Subsidy

- GASBS 75 defers to actuarial standards of practice.
- Previous Actuarial Standards of Practice No. 6² (ASOP 6) allowed community rated plans to value liability using premiums, resulting in no implied subsidy.
- In May 2014, Actuarial Standards Board released revised ASOP 6:
 - Requires implied subsidy valued for community rated plans such as PEMHCA.
 - Timing: effective with all valuations on or after March 31, 2015 with earlier implementation encouraged
- Valuation includes implied subsidy.

² Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Plan Costs or Contributions.



DATA SUMMARY

Participant Statistics

	7/1/15	6/30/17
■ Actives		
• Count	38	37 ³
• Average		
➢ Age	n/a	44.3
➢ District Service	n/a	12.3
➢ Salary	n/a	\$133,700
• Total Salary (000's)	n/a	4,946
■ Covered Retirees		
• Count	24	26 ⁴
• Average	n/a	
➢ Age	n/a	64.1
➢ Service Retirement Age	n/a	56.8

³ Includes 3 Miscellaneous actives.

⁴ Includes 1 Miscellaneous service retiree.



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ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	July 1, 2015 Valuation	June 30, 2017 Valuation
■ Valuation Date	<ul style="list-style-type: none"> ■ July 1, 2015 ■ Fiscal Years 15/16 & 16/17 	<ul style="list-style-type: none"> ■ June 30, 2017 ■ Fiscal Years 17/18 & 18/19
■ Funding Policy	■ Full ADC pre-funded through CERBT fund #1	■ Same
■ Discount Rate	■ 7.00%	■ 6.75%
■ Additional Benefit (\$350) Increase	■ n/a	■ None



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ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	July 1, 2015 Valuation	June 30, 2017 Valuation		
■ Healthcare Trend	■ 4.00%	<u>Increase from Prior Year</u>		
		<u>Year</u>	<u>Non-Medicare</u>	<u>Medicare</u>
		2017	Actual Premiums/Claims	
		2018	Actual Premiums/Claims	
		2019	7.50%	6.50%
		2020	7.50%	6.50%
		2021	7.25%	6.30%
		2022	7.00%	6.10%
		2023	6.75%	5.90%
		2024	6.50%	5.70%
		2025	6.25%	5.50%
		2026	6.00%	5.30%
		2027	5.80%	5.15%
		2028	5.60%	5.00%
		2029	5.40%	4.85%
		2030	5.20%	4.70%
		2031-2035	5.05%	4.60%
2036-2045	4.90%	4.50%		
2046-2055	4.75%	4.45%		
2056-2065	4.60%	4.40%		
2066-2075	4.30%	4.20%		
2076+	4.00%	4.00%		



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ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	July 1, 2015 Valuation	June 30, 2017 Valuation		
■ Mortality, & Disability	■ CalPERS 1997-2011 Experience Study	■ CalPERS 1997-2011 Experience Study ■ Mortality projected fully generational with Scale MP-2017		
■ Withdrawal	■ “CalPERS 2009 Withdrawal Rates”	■ CalPERS 1997-2011		
■ Retirement	■ “CalPERS 2009 Retirement Rates”	■ CalPERS 1997-2011 Experience Study		
		<u>Misc</u>	<u>Misc</u>	
		Benefit	3%@60	2%@62
		ERA	59.5	61.1
		<u>Fire</u>	<u>Fire</u>	
		Benefit	3%@55	2.7%@57
ERA	57.8	57.7		



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ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	July 1, 2015 Valuation	June 30, 2017 Valuation
<ul style="list-style-type: none"> ■ Medical Participation at Retirement 	<ul style="list-style-type: none"> ■ 100% of employees currently receiving additional benefit ■ 90% of employees receiving PEMHCA minimum only 	<ul style="list-style-type: none"> ■ Receiving additional benefit <ul style="list-style-type: none"> • Pre-65: 90% • Post-65: 75% ■ 60% of employees receiving PEMHCA minimum only
<ul style="list-style-type: none"> ■ Medical Plan at Retirement 	<ul style="list-style-type: none"> ■ n/a 	<ul style="list-style-type: none"> ■ Currently covered – current elections ■ Currently waived – PERS Choice



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ACTUARIAL METHODS

Method	July 1, 2015 Valuation	June 30, 2017 Valuation
<ul style="list-style-type: none"> ■ Cost Method 	<ul style="list-style-type: none"> ■ Entry Age Normal 	<ul style="list-style-type: none"> ■ Same
<ul style="list-style-type: none"> ■ Actuarial Value of Assets 	<ul style="list-style-type: none"> ■ Asset gains/losses recognized over 5 years ■ Corridor: 80% & 120% of market value 	<ul style="list-style-type: none"> ■ Asset gains/losses recognized over rolling 5 years ■ Corridor: 80% & 120% of market value
<ul style="list-style-type: none"> ■ Amortization Method 	<ul style="list-style-type: none"> ■ Level Percent of Payroll 	<ul style="list-style-type: none"> ■ Same
<ul style="list-style-type: none"> ■ Amortization Periods 	<ul style="list-style-type: none"> ■ 30-year fixed (closed) period for initial unfunded liability ■ 20-year fixed (open) period for residual UAAL ■ Combined approximate 22.5 years. 	<ul style="list-style-type: none"> ■ 20-year fixed (closed) period for unfunded liability at 6/30/17



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ASSETS

Market Value of Plan Assets

(amounts in 000's)

	2015/16	2016/17
■ MVA (Beginning of Year)	\$ 632	\$ 638
• Employer Contribution	-	-
• Benefit Payments ⁵	-	-
• Investment Expenses	(0)	(0)
• Administrative Expenses	(0)	(0)
• Investment Return	<u>7</u>	<u>68</u>
■ MVA (Year End)	638	705
■ Approximate Annual Return	1.0%	10.5%

⁵ Paid outside of the trust.



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ASSETS

Actuarial Value of Plan Assets

(amounts in 000's)

	2015/16	2016/17
■ AVA (Beginning of Year)	\$ 627	\$ 664
• Employer Contribution	-	-
• Benefit Payments	-	-
• Credited Investment Return	<u>37</u>	<u>45</u>
■ AVA (Year End)	664	710
■ Approximate Annual Return	5.9%	6.8%



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RESULTS

Actuarial Obligations

(amounts in 000's)

	TCS ⁶ 7/1/15	Bartel 6/30/17
■ Present Value of Benefits		
• Actives	\$ 815	\$ 1,545
• Retirees	<u>765</u>	<u>1,410</u>
• Total	1,580	2,956
■ Actuarial Accrued Liability		
• Actives	667	1,001
• Retirees	<u>765</u>	<u>1,410</u>
• Total	1,432	2,411
■ Actuarial Value of Assets	<u>627</u>	<u>710</u>
■ Unfunded Liability	805	1,701
■ Service Cost	22	74
■ Expected Pay-Go Cost		
• Cash Subsidy	88	101
• Implied Subsidy	n/a	63

⁶ Total Compensation Systems, Inc.



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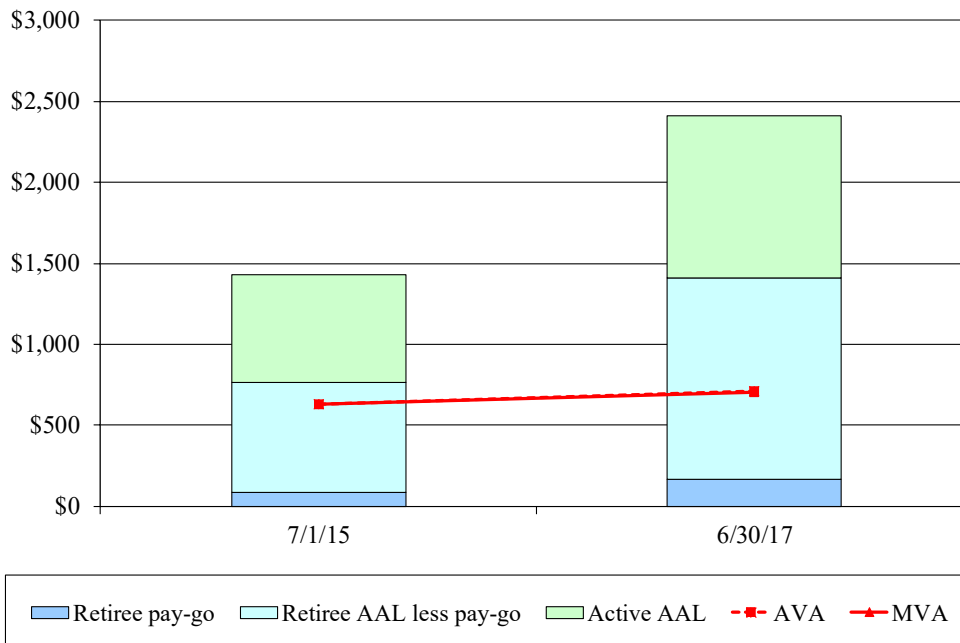
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RESULTS

Funded Status

(amounts in 000's)



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RESULTS

Actuarial Determined Contribution (ADC)

(amounts in 000's)

	TCS		Bartel	
	7/1/15 Valuation		6/30/17 Valuation ⁷	
	2015/16	2016/17 ⁸	2017/18	2018/19
■ ADC - \$				
• Service Cost	\$ 22	\$ 22	\$ 74	\$ 75
• UAAL Amortization	<u>57</u>	<u>59</u>	<u>125</u>	<u>129</u>
• Total	79	81	199	204
■ Projected Payroll	n/a	n/a	5,094	5,247
■ ADC - %				
• Service Cost	n/a	n/a	1.5%	1.5%
• UAAL Amortization	<u>n/a</u>	<u>n/a</u>	<u>2.5%</u>	<u>2.5%</u>
• Total	n/a	n/a	3.9%	3.9%

⁷ Normal Cost plus estimated CERBT/PEMHCA administrative expenses of \$1,000 for 17/18 and \$2,000 for 18/19.

⁸ Not disclosed in 7/1/15 valuation. ADC shown based on level % of pay increase of 2.75%.



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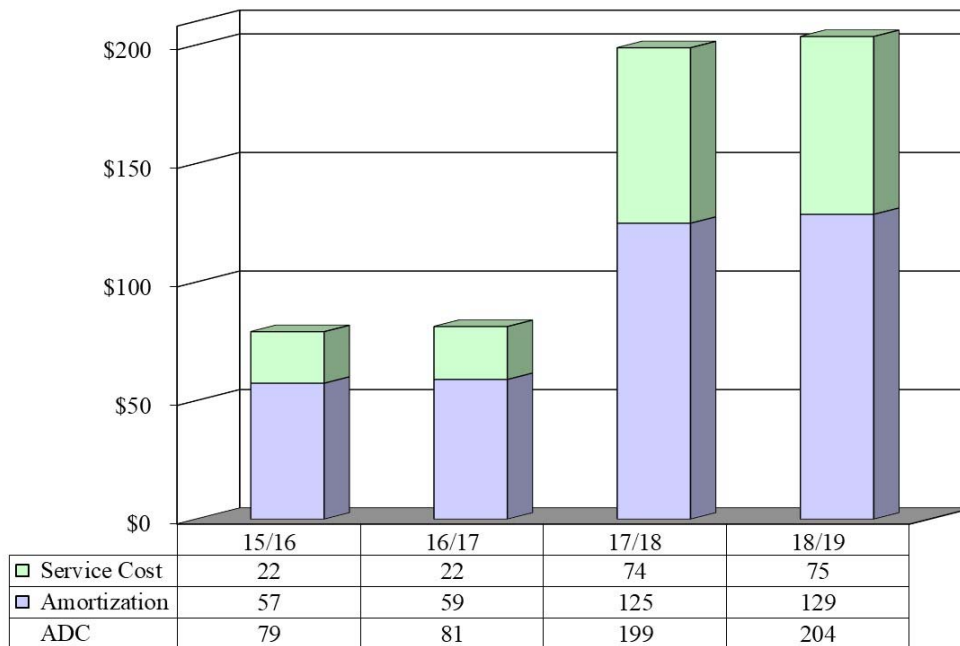
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RESULTS

Actuarial Determined Contribution (ADC)

(amounts in 000's)



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RESULTS

Actuarial Obligations

(amounts in 000's)

	Cash Subsidy	Implied Subsidy	Total
■ Present Value of Benefits			
• Actives	\$ 879	\$ 666	\$ 1,545
• Retirees	<u>954</u>	<u>456</u>	<u>1,410</u>
• Total	1,833	1,122	2,955
■ Actuarial Accrued Liability			
• Actives	575	426	1,001
• Retirees	<u>954</u>	<u>456</u>	<u>1,410</u>
• Total	1,529	882	2,411
■ Actuarial Value of Assets⁹	<u>710</u>	-	<u>710</u>
■ Unfunded Liability	819	882	1,701
■ 2017/18 Service Cost	43	31	74
■ 2017/18 Pay-As-You-Go Cost	101	63	164

⁹ 100% allocated to cash subsidy for illustrative purposes.



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RESULTS

2017/18 Actuarially Determined Contribution (ADC)

(amounts in 000's)

	Cash Subsidy	Implied Subsidy	Total
■ ADC - \$			
• Service Cost	\$ 43	\$ 31	\$ 74
• UAAL Amortization	<u>60</u>	<u>65</u>	<u>125</u>
• Total	103	96	199
■ Projected Payroll	5,094	5,094	5,094
■ ADC - %			
• Service Cost	0.8%	0.6%	1.5%
• UAAL Amortization	<u>1.2%</u>	<u>1.3%</u>	<u>2.5%</u>
• Total	2.0%	1.9%	3.9%



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RESULTS

Estimated 2017/18 Implied Subsidy Transfer for Medical Coverage

(amounts in 000's)

Before Implied Subsidy

	Actives	Retirees	Total
■ Total Premium	\$ 609	\$ 345	\$ 954
■ Member Contribution ¹⁰	-	(244)	(244)
■ Employer Contribution	609	101	710

After Implied Subsidy

	Actives	Retirees	Total
■ Total Premium	\$ 609	\$ 345	\$ 954
■ Member Contribution	-	(244)	(244)
■ Implied Subsidy Transfer	(63)	63	-
■ Employer Contribution	546	164	710

¹⁰ Assumes District pays full active participant premiums for illustrative purposes.



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RESULTS

Trust Contributions

(amounts in 000's)

	2017/18	2018/19
■ ADC - \$		
• Cash Subsidy	\$ 103	\$ 105
• Implied Subsidy	96	99
• Total	199	204
■ Pay-Go		
• Cash Subsidy	101	108
• Implied Subsidy	63	72
• Total	164	180
■ Trust Contribution¹¹		
• Cash Subsidy	2	(3)
• Implied Subsidy	33	27
• Total	35	24

¹¹ Assumes pay-go payments made by District with no trust reimbursement.



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GASBS 75

- Accounting information will be provided in a separate report
- Effective for 2017/18 fiscal year
- Fundamental changes
 - Delinks contributions and accounting
 - Unfunded liability recognition drives expense
- Unfunded liability on balance sheet



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ACTUARIAL CERTIFICATION

This report presents the Aptos/La Selva Fire Protection District Retiree Healthcare Plan (“Plan”) June 30, 2017 actuarial valuation. The purpose of this valuation is to:

- Determine the Plan’s June 30, 2017 Funded Status, and
- Calculate the 2017/18 and 2018/19 Actuarially Determined Contributions.

Information provided in this report may be useful to the District for the Plan’s financial management. Future valuations may differ significantly if the Plan’s experience differs from our assumptions or if there are changes in Plan design, actuarial methods, or actuarial assumptions. The project scope did not include an analysis of this potential variation.

The valuation is based on Plan provisions, participant data, and asset information provided by the District as summarized in this report, which we relied on and did not audit. We reviewed the participant data for reasonableness.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. As members of the American Academy of Actuaries meeting the Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,

Doug Pryor, ASA, MAAA, EA
Vice President
Bartel Associates, LLC
February 2, 2018

Tak Frazita ASA, MAAA, EA
Associate Actuary
Bartel Associates, LLC
February 2, 2018



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PREMIUMS

2017 PEMHCA Monthly Medical Premiums
Bay Area

Medical Plan	Non-Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Anthem HMO Select	\$783.46	\$1,566.92	\$2,037.00	n/a	n/a	n/a
Anthem HMO Traditional	990.05	1,980.10	2,574.13	n/a	n/a	n/a
Blue Shield Access+	1,024.85	2,049.70	2,664.61	n/a	n/a	n/a
Kaiser	733.29	1,466.58	1,906.55	\$300.48	\$600.96	\$901.44
UnitedHealthcare	1,062.26	2,124.52	2,761.88	353.63	707.26	1,060.89
PERS Choice	830.30	1,660.60	2,158.78	353.63	707.26	1,060.89
PERS Select	736.27	1,472.54	1,914.30	389.76	779.52	1,169.28
PERSCare	932.39	1,864.78	2,424.21	464.00	924.00	1,477.00



PREMIUMS

2018 PEMHCA Monthly Medical Premiums
Bay Area

Medical Plan	Non-Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Anthem HMO Select	\$856.41	\$1,712.82	\$2,226.67	n/a	n/a	n/a
Anthem HMO Traditional	925.47	1,850.94	2,406.22	\$370.34	\$740.68	\$1,111.0
Blue Shield Access+	889.02	1,778.04	2,311.45	n/a	n/a	n/a
Health Net SmartCare	863.48	1,726.96	2,245.05	n/a	n/a	n/a
Kaiser	779.86	1,559.72	2,027.64	316.34	632.68	949.02
UnitedHealthCare	1,371.84	1,743.68	3,566.78	330.76	661.52	992.28
Western Health Advantage	792.56	1,585.12	2,060.66	n/a	n/a	n/a
PERS Choice	800.27	1,600.54	2,080.70	345.97	691.94	1,037.91
PERS Select	717.50	1,435.00	1,865.50	345.97	691.94	1,037.91
PERSCare	882.45	1,764.90	2,294.37	382.30	764.60	1,146.90



ACTUARIAL ASSUMPTIONS

	July 1, 2015 Valuation	June 30, 2017 Valuation
■ General Inflation	■ 2.75%	■ Same
■ Aggregate Payroll Increase	■ 2.75%	■ 3.00%
■ Salary Merit and Longevity Increases	■ n/a	■ CalPERS 1997-2011 Experience Study
■ Marital Status	<ul style="list-style-type: none"> ■ Currently covered: current marital status ■ Currently waived: 80% married at retirement 	■ Same
■ Spouse Age	<ul style="list-style-type: none"> ■ Actives: males 3 years older than females ■ Retirees: males 3 years older than females if spouse birth date is unavailable 	■ Same



ACTUARIAL ASSUMPTIONS

	July 1, 2015 Valuation	June 30, 2017 Valuation
■ Surviving Spouse Participation	■ n/a	■ 100%
■ Medicare Eligible Rate	■ n/a	<ul style="list-style-type: none"> ■ 100% ■ Everyone eligible for Medicare will elect Part B coverage
■ CalPERS Service	■ n/a	■ District service plus ½ service between age 30 and District hire date



DEFINITIONS

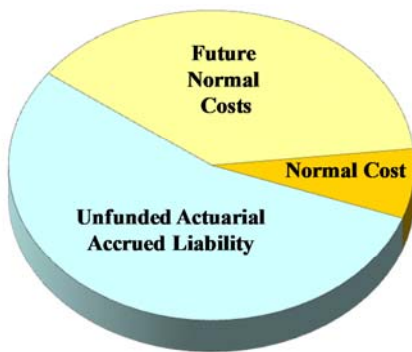
<ul style="list-style-type: none"> ■ OPEB Actuarial Valuation 	<ul style="list-style-type: none"> ■ Project future employer-provided benefit cash flows for current active employees and current retirees ■ Discount projected cash flow to valuation date using discount rate (assumed return on assets used to pay benefits) and other actuarial assumptions to determine present value of projected future benefits (PVB) ■ Allocate PVB to past, current, and future periods using the actuarial cost method ■ Actuarial cost method used for this valuation is the Entry Age Normal Cost method which determines Normal Cost as a level percentage of payroll (same method used by CalPERS) ■ Normal Cost is amount allocated to current fiscal year ■ Actuarial Accrued Liability (AAL) is amount allocated to prior service with employer ■ Unfunded AAL (UAAL) is AAL less plan assets pre-funded in a segregated and restricted trust
<ul style="list-style-type: none"> ■ PayGo Cost 	<ul style="list-style-type: none"> ■ Cash subsidy is the pay-as-you-go employer benefit payments for retirees ■ Implied subsidy is the difference between the actual cost of retiree benefits and retiree premiums subsidized by active employee premiums



DEFINITIONS

Present Value of Benefits

**Present Value of Benefits
(Without Plan Assets)**



**Present Value of Benefits
(With Plan Assets)**

