

**ASSOCIATION OF BAY AREA GOVERNMENTS  
RETIREE HEALTHCARE PLAN**

**BARTEL**  
ASSOCIATES, LLC

June 30, 2015 Actuarial Valuation  
Final Results

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**Bartel Associates, LLC**

August 8, 2016

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## BENEFIT SUMMARY

	Tier 1 (Hired < 7/1/09)	Tier 2 (Hired ≥ 7/1/09)
■ Eligibility	■ Service or disability retire directly from ABAG under CalPERS	
■ Medical Benefit	<ul style="list-style-type: none"> <li>■ Retired &lt; 9/1/94 – 100% of Kaiser single premium</li> <li>■ Retired ≥ 9/1/94 – 100% of Kaiser 2-party premium</li> <li>■ Basic/Supplemental Medicare premium for pre-/post-65<sup>1</sup></li> </ul>	■ PEMHCA minimum
■ PEMHCA Admin Fee	■ Paid by ABAG	
■ Medical After Retirement Account (MARA) (Not included in OPEB valuation)	<ul style="list-style-type: none"> <li>■ One time only option to enroll</li> <li>■ Must opt out of defined benefit medical plan</li> <li>■ ABAG contributes PEMHCA minimum if opt in MARA</li> <li>■ Open enrollment for MARA ended in 2013</li> </ul>	<ul style="list-style-type: none"> <li>■ Must enroll in MARA</li> <li>■ ABAG contributes the \$200/mo for management and \$100/mo for non-management to an individual MARA account</li> </ul>

<sup>1</sup> Effective 1/1/2015. Cap was basic premium prior to the change.



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## BENEFIT SUMMARY

	Tier 1 (Hired < 7/1/09)	Tier 2 (Hired ≥ 7/1/09)																
■ Medicare Part B Reimbursement	<ul style="list-style-type: none"> <li>■ Retired &lt; 9/1/94 – 100% for retiree</li> <li>■ Retired ≥ 9/1/94 – 100% for retiree and spouse</li> </ul>	■ None																
■ Surviving Spouse Benefit	■ Same benefit continues to surviving spouse if retiree elects CalPERS survivor annuity																	
■ Dental, Vision & Life	■ None																	
■ Pay-As-You-Go Cost	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Year</th> <th style="text-align: center;">CAFR</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2014/15</td> <td style="text-align: center;">\$293,898</td> </tr> <tr> <td style="text-align: center;">2013/14</td> <td style="text-align: center;">227,019</td> </tr> <tr> <td style="text-align: center;">2012/13</td> <td style="text-align: center;">190,834</td> </tr> <tr> <td style="text-align: center;">2011/12</td> <td style="text-align: center;">169,855</td> </tr> <tr> <td style="text-align: center;">2010/11</td> <td style="text-align: center;">152,985</td> </tr> <tr> <td style="text-align: center;">2009/10</td> <td style="text-align: center;">148,241</td> </tr> <tr> <td style="text-align: center;">2008/09</td> <td style="text-align: center;">120,677</td> </tr> </tbody> </table>	Year	CAFR	2014/15	\$293,898	2013/14	227,019	2012/13	190,834	2011/12	169,855	2010/11	152,985	2009/10	148,241	2008/09	120,677	
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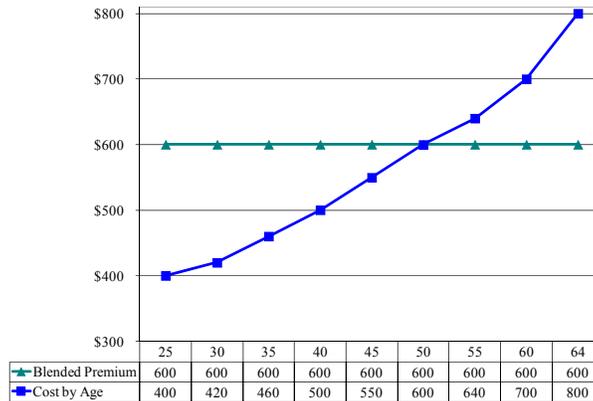


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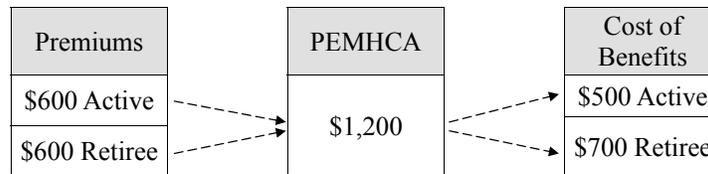


## IMPLIED SUBSIDY

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



- Sample active age 40, retire age 60:



## IMPLIED SUBSIDY

- GASB 45 defers to actuarial standards of practice.
- Prior Actuarial Standards of Practice No. 6<sup>2</sup> (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
- Both June 30, 2013 and June 30, 2015 valuations include the PEMHCA implied subsidy.

<sup>2</sup> Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Plan Costs or Contributions.

## PARTICIPANT STATISTICS

### Actives

	1/1/07	6/30/09	6/30/11	6/30/13	6/30/15
■ Tier 1	79	82	73	50	33
• Average Age	46.5	46.7	48.6	52.3	52.5
• Average ABAG Service	7.7	7.1	8.8	11.6	13.2
• Average Payroll	\$77,310	\$83,264	\$86,213	\$88,818	\$95,929
• Payroll (000's)	6,108	6,828	6,294	4,441	3,166
■ Tier 2	-	-	5	32	36
• Average Age	n/a	n/a	44.2	40.3	42.6
• Average ABAG Service	n/a	n/a	1.1	2.7	3.8
• Average Payroll	n/a	n/a	\$78,057	\$75,936	\$88,901
• Payroll (000's)	n/a	n/a	390	2,430	3,200
■ Total	79	82	78	82	69
• Average Age	46.5	46.7	48.3	47.6	47.4
• Average ABAG Service	7.7	7.1	8.3	8.1	8.3
• Average Payroll	\$77,310	\$83,264	\$85,691	\$83,791	\$92,262
• Payroll (000's)	6,108	6,828	6,684	6,871	6,366



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## PARTICIPANT STATISTICS

### Retirees

	1/1/07	6/30/09	6/30/11	6/30/13	6/30/15
■ Count					
• Tier 1 (Retired < 9/1/94)	3	3	3	3	3
• Tier 1 (Retired ≥ 9/1/94)	13	23	26	33	48
• Tier 2	-	-	-	-	-
• Total	16	26	29	36	51
• Not receiving benefits	4	6	7	8	10
• Receiving benefits	12	20	22	28	41
■ Average Age	65.6	66.0	67.6	68.0	67.1
■ Average Retirement Age					
• Service	59.0	60.0	60.5	60.4	59.8
• Disabled Retirees	n/a	n/a	n/a	n/a	51.8



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## PARTICIPANT STATISTICS

### Participant Reconciliation

	Actives	Service Retirees	Disability Retirees	Total
■ <b>June 30, 2013</b>	82	36	-	118
• Terminations/Deaths	(13)	-	-	(13)
• New Retirees	(15)	15	-	-
• New Hires/Rehires	15	-		15
• Data Adjustments	<u>-</u>	<u>(1)</u>	<u>1</u>	<u>-</u>
■ <b>June 30, 2015</b>	69	50	1	120

## ACTUARIAL ASSUMPTIONS HIGHLIGHTS

Assumption	June 30, 2013 Valuation	June 30, 2015 Valuation
■ Valuation Date	■ June 30, 2013 ■ 2014/15 & 2015/16 ARCs	■ June 30, 2015 ■ 2016/17 ARC & 2017/18 ADC
■ Discount Rate	■ 7.61% – ARC pre-funded with CalPERS CERBT Fund #1	■ 7.25% – ARC pre-funded with CalPERS CERBT Fund #1
■ Mortality, Withdrawal, Disability	■ CalPERS 1997-2011 Experience Study ■ Post-retirement mortality projected fully generational with Scale AA	■ CalPERS 1997-2011 Experience Study ■ Post-retirement mortality projected fully generational with Scale MP-2014, modified to converge to ultimate rates in 2022
■ ACA Excise Tax	■ n/a	■ 2% load on cash liability

## ACTUARIAL ASSUMPTIONS HIGHLIGHTS

Assumption	June 30, 2013 Valuation		June 30, 2015 Valuation			
■ Medical Trend	<u>Increase from Prior Year</u>		<u>Increase from Prior Year</u>			
		<u>Non-Medicare</u>	<u>Medicare</u>	<u>Non-Medicare</u>	<u>Medicare</u>	
	<u>Year</u>			<u>Year</u>		
	2013		Premiums	2013	n/a	
	2014		Premiums	2014	n/a	
	2015	Premium	8.3% <sup>3</sup>	2015	Premiums	
	2016	7.5%	7.8%	2016	Premiums	
	2017	7.0%	7.2%	2017	Premiums	7.2% <sup>4</sup>
	2018	6.5%	6.7%	2018	6.5%	6.7%
	2019	6.0%	6.1%	2019	6.0%	6.1%
	2020	5.5%	5.6%	2020	5.5%	5.6%
2021+	5.0%	5.0%	2021+	5.0%	5.0%	

<sup>3</sup> Applicable to Medicare Part B premium only. 2015 based on actual PEMHCA premiums.

<sup>4</sup> Applicable to Medicare Part B premium only. 2017 based on actual PEMHCA premiums.



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## ACTUARIAL ASSUMPTIONS HIGHLIGHTS

Assumption	June 30, 2013 Valuation		June 30, 2015 Valuation			
■ Medical Plan at Retirement	■ Actives – Based on current retiree elections		■ Actives – Based on current retiree elections			
		<u>&lt;65</u>	<u>65+</u>	<u>&lt;65</u>	<u>65+</u>	
	BS Access+	45%	5%	BS Access+	25%	15%
	Kaiser	45%	55%	Kaiser	65%	55%
	PERS Choice	10%	40%	PERS Choice	10%	30%
	■ Retirees:		■ Retirees:			
	• Currently < 65			• Currently < 65		
	➢ Pre-65 – Same as current elections			➢ Pre-65 – Same as current elections		
	➢ Post-65 – Based on current post-65 retiree elections			➢ Post-65 – Based on current post-65 retiree elections		
	• Currently ≥ 65 – Same as current elections			• Currently ≥ 65 – Same as current elections		
				■ Non-Kaiser HMO over 65 – Elect UnitedHealthcare beginning 2016		
			■ BSNV under 65 – Elect BS Access+ beginning 2017			



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## ACTUARIAL METHODS

Method	June 30, 2013 Valuation	June 30, 2015 Valuation
■ Cost Method	■ Entry Age Normal	■ Same
■ Actuarial Value of Assets	<ul style="list-style-type: none"> <li>■ Investment gains and losses spread over a 5-year rolling period</li> <li>■ Not less than 80% nor more than 120% of market value</li> </ul>	■ Same
■ Amortization Method	■ Level percent of payroll	■ Same
■ Amortization Period	<ul style="list-style-type: none"> <li>■ 6/30/14 UAAL – 23-year fixed (closed) period (fresh start for 2014/15 ARC)</li> <li>■ 6/30/15 UAAL – 22-year fixed (closed) period (fresh start for 2015/16 ARC)</li> <li>■ Maximum 30-year combined period</li> </ul>	<ul style="list-style-type: none"> <li>■ 6/30/16 UAAL – 21-year fixed (closed) period (fresh start for 2016/17 ARC)</li> <li>■ 6/30/17 UAAL – 20-year fixed (closed) period (fresh start for 2017/18 ARC)</li> <li>■ Maximum 30-year combined period</li> </ul>

## ACTUARIAL METHODS

Method	June 30, 2013 Valuation	June 30, 2015 Valuation
■ "Implied Subsidy"	<ul style="list-style-type: none"> <li>■ Employer cost for allowing non-Medicare eligible retirees to participate at active rates</li> <li>■ Actuarial Standards Board released revised ASOP 6: Requires implied subsidy valued for community rated plans such as PEMHCA.</li> <li>■ Valuation includes the implied subsidy</li> </ul>	
■ Future New Entrants	■ None – closed group	
■ Contribution Policy	<ul style="list-style-type: none"> <li>■ Contribute the prior year end's Net OPEB Obligation (NOO)</li> <li>■ Beginning in 2018/19 contribute the Actuarially Determined Contribution (ADC)</li> </ul>	

**ASSETS**

**Market Value of Plan Assets**

(Amounts in 000's)

	2012/13	2013/14	2014/15	Proj. 2015/16 <sup>5</sup>
■ <b>MVA (Beginning of Year)</b>	\$ 1,947	\$ 2,801	\$ 4,034	\$ 4,630
• Contributions	610	667	600	402
• Benefit Payments <sup>6</sup>	-	-	-	-
• Expenses	(4)	(5)	(4)	(4)
• Earnings	<u>248</u>	<u>571</u>	<u>0</u>	<u>32</u>
■ <b>MVA (End of Year)</b>	2,801	4,034	4,630	5,060
■ <b>Approximate Annualized Return<sup>7</sup></b>	10.8%	18.0%	(0.1%)	0.6%

<sup>5</sup> Asset data used through March 2016, last 3 months assume 7.25% annualized rate of return.

<sup>6</sup> Paid outside of CERBT.

<sup>7</sup> Net of expenses.



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**ASSETS**

**Actuarial Value of Plan Assets**

(Amounts in 000's)

	2012/13	2013/14	2014/15	Proj. 2015/16
■ <b>AVA (Beginning of Year)</b>	\$ 1,960	\$ 2,754	\$ 3,732	\$ 4,637
• Contributions	610	667	600	402
• Benefit Payments <sup>8</sup>	-	-	-	-
• Expected Earnings	<u>173</u>	<u>236</u>	<u>307</u>	<u>351</u>
■ <b>Expected AVA (End of Year)</b>	2,743	3,657	4,639	5,390
■ <b>MVA (End of Year)</b>	2,801	4,034	4,630	<b>5,060</b>
■ <b>1/5 of (MVA - Expected AVA)</b>	12	75	(2)	(66)
■ <b>Preliminary AVA</b>	2,754	3,732	4,637	5,324
• Minimum AVA (80% of MVA)	n/a	3,227	3,704	4,048
• Maximum AVA (120% of MVA)	n/a	4,841	5,556	6,072
■ <b>AVA (End of Year)</b>	2,754	3,732	4,637	<b>5,324</b>
■ <b>Approximate Annualized Return</b>	8.1%	10.0%	7.6%	5.9%

<sup>8</sup> Paid outside of CERBT.

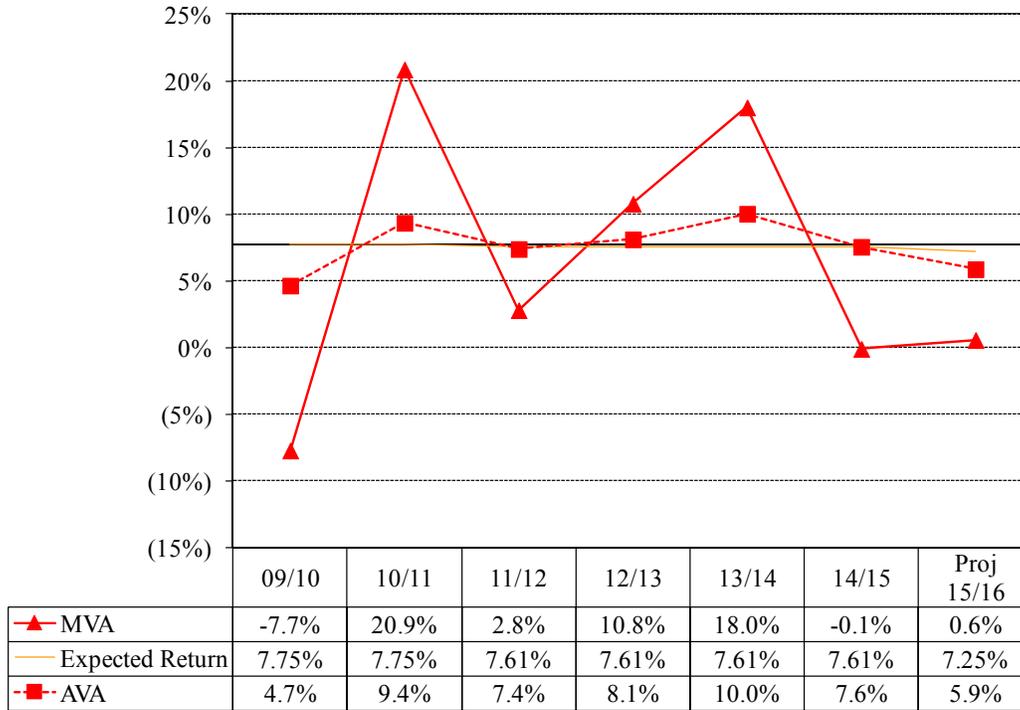


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## ASSETS

### Historical Annualized Asset Returns

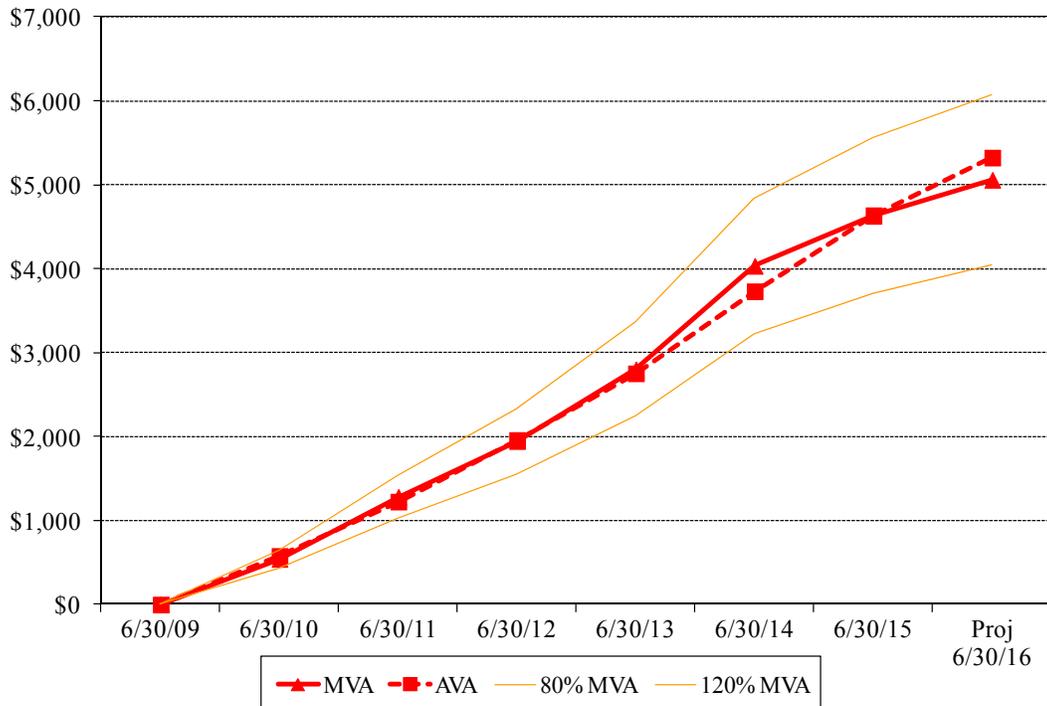


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## ASSETS

### Historical Value of Plan Assets



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## RESULTS

### Actuarial Obligations

(Amounts in 000's)

	6/30/13 Valuation		6/30/15 Valuation	
	Actual 6/30/13	Projected 6/30/14	Actual 6/30/15	Projected 6/30/16
■ <b>Discount Rate</b>	7.61%		7.25%	
■ <b>Present Value of Benefits</b>				
• Actives	\$ 7,355		\$ 6,042	
• Retirees	<u>3,284</u>		<u>6,087</u>	
• Total	10,639		12,129	
■ <b>Actuarial Accrued Liability</b>				
• Actives	4,391		3,826	
• Retirees	<u>3,284</u>		<u>6,087</u>	
• Total	7,675	\$ 8,457	9,913	\$ 10,533
■ <b>Actuarial Value of Assets</b>	<u>2,754</u>	<u>3,710</u>	<u>4,637</u>	<u>5,324</u>
■ <b>Unfunded AAL</b>	4,921	4,747	5,276	5,209
■ <b>Funded Ratio</b>	35.9%	43.9%	46.8%	50.5%
■ <b>Normal Cost</b>		385		374
■ <b>Pay-As-You-Go Cost</b>		296		498



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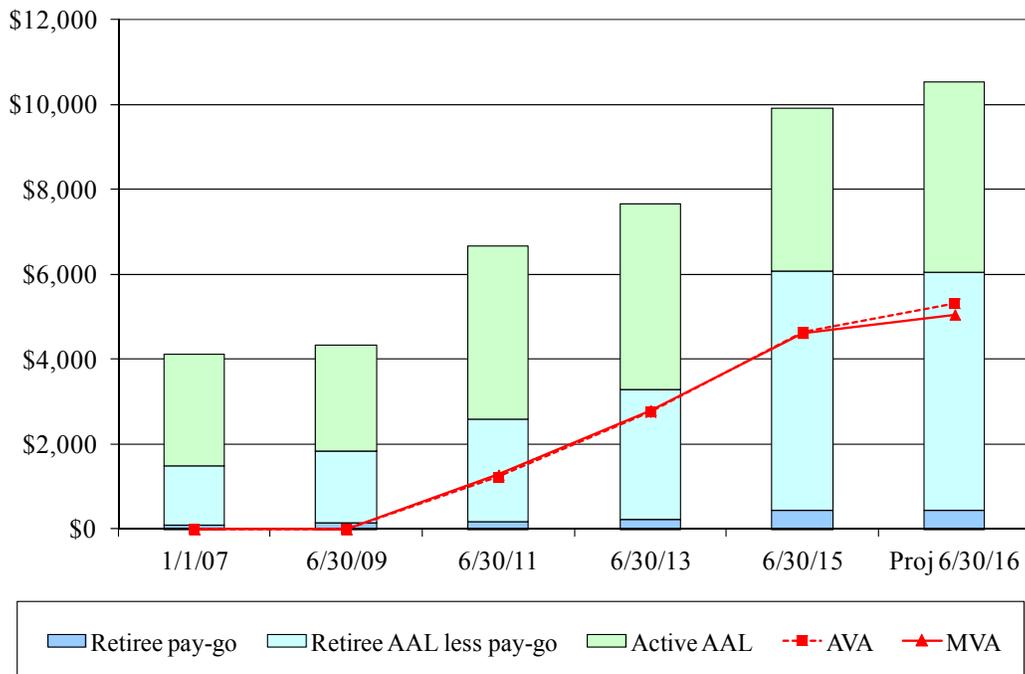
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## RESULTS

### Historical Funded Status

(Amounts in 000's)



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**RESULTS**

**Estimated Actuarial Gain/Loss Analysis**

(Amounts in 000's)

	<b>AAL</b>	<b>(Assets)</b>	<b>UAAL</b>
■ Actual @ 6/30/13	\$ 7,675	\$ (2,754)	\$ 4,921
■ Expected @ 6/30/16	9,880	(5,081)	4,799
■ (Gains)/Losses			
• Premiums and PEMHCA minimum lower than expected	(967)	-	(967)
• Contribution & investment (gain)/loss	-	(243)	(243)
• Demographic & other	984 <sup>9</sup>	-	984
■ Assumption Changes			
• Medical plan elections at retirement	(21)	-	(21)
• Mortality Projection with Scale MP-2014	348	-	348
• Discount Rate Change: 7.61% to 7.25%	451	-	451
• ACA Excise Tax	194	-	194
■ Plan Change	(335)	-	(335)
■ Total Changes	654	(244)	410
■ Projected @ 6/30/16	10,533	(5,324)	5,209

<sup>9</sup> Includes \$1,091,000 retirement losses.



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**RESULTS**

**Schedule of Funding Progress**

(Amounts in 000's)

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Entry Age Actuarial Accrued Liability (b)</b>	<b>Unfunded Actuarial Accrued Liability (b-a)</b>	<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as Percentage of Covered Payroll ((b-a)/c)</b>
1/01/07	\$ -	\$ 4,128	\$ 4,128	0.0%	\$ 6,306	65.5%
6/30/09	-	4,346	4,346	0.0%	6,828	63.6%
6/30/11	1,226	6,684	5,458	18.3%	6,684	81.7%
6/30/13	2,754	7,675	4,921	35.9%	6,871	71.6%
6/30/15	4,637	9,913	5,276	46.8%	6,366	82.9%



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## RESULTS

### Annual Required Contribution (ARC)

(Amounts in 000's)

	6/30/13 Valuation		6/30/15 Valuation	
	2014/15	2015/16	2016/17	2017/18
■ <b>Discount Rate</b>	7.61%		7.25%	
■ <b>ARC - \$</b>				
• Normal Cost <sup>10</sup>	\$ 385	\$ 374	\$ 374	\$ 362
• UAAL Amortization	<u>337</u>	<u>335</u>	<u>379</u>	<u>390</u>
• Total	722	709	753	752
■ <b>Projected Payroll</b>	6,408	6,617	6,573	6,787
■ <b>ARC - %</b>				
• Normal Cost	6.0%	5.7%	5.7%	5.3%
• UAAL Amortization	<u>5.3%</u>	<u>5.1%</u>	<u>5.8%</u>	<u>5.7%</u>
• Total	11.3%	10.7%	11.5%	11.1%

<sup>10</sup> Blended Tier 1 and Tier 2 Normal Cost. Does not include \$200 or \$100/mo MARA contribution.



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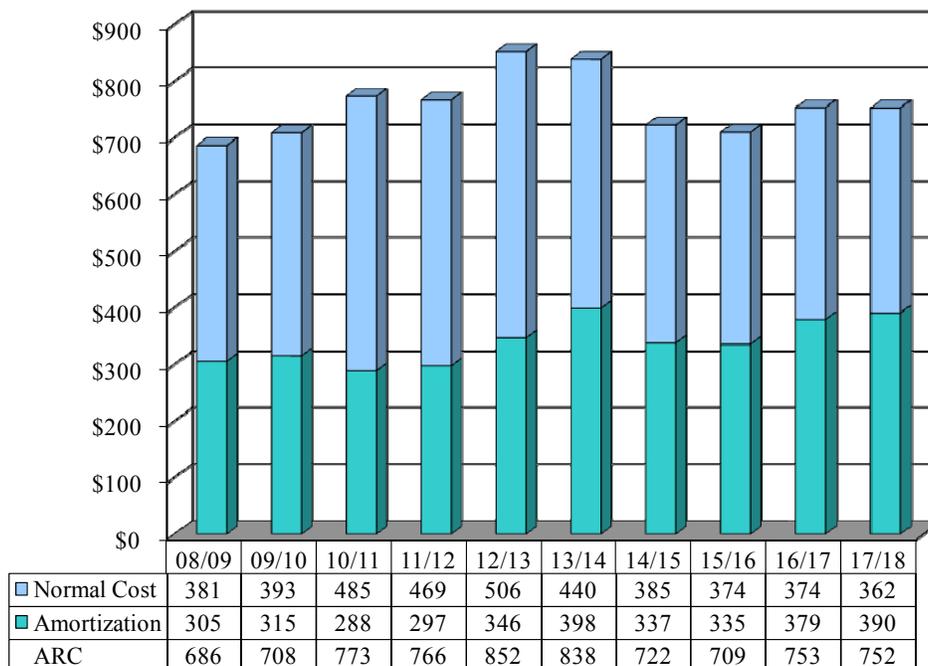
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## RESULTS

### Historical Annual Required Contributions

(Amounts in 000's)



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**RESULTS**

**Amortization Bases**

(Amounts in 000's)

	6/30/13 Valuation		6/30/15 Valuation	
	6/30/14	6/30/15	6/30/16	6/30/17
<b>■ Discount Rate</b>	7.61%		7.25%	
<b>■ Amortization Payment - \$</b>				
• 2014 Fresh Start UAAL	\$ 4,747			
• 2015 Fresh Start UAAL	-	\$ 4,594		
• 2016 Fresh Start UAAL	-	-	\$ 5,209	
• 2017 Fresh Start UAAL	-	-	-	\$ 5,196
• Total	4,747	4,594	5,209	5,196



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**RESULTS**

**Amortization Payments**

(Amounts in 000's)

	6/30/13 Valuation		6/30/15 Valuation	
	2014/15	2015/16	2016/17	2017/18
<b>■ Discount Rate</b>	7.61%		7.25%	
<b>■ Amortization Payment<sup>11</sup> - \$</b>				
• 2014 Fresh Start UAAL	\$ 337			
• 2015 Fresh Start UAAL	-	\$ 335		
• 2016 Fresh Start UAAL	-	-	\$ 379	
• 2017 Fresh Start UAAL	-	-	-	\$ 390
• Total	337	335	379	390
<b>■ Average Amortization Years</b>	23.0	22.0	21.0	20.0

<sup>11</sup> Amortized over 23-year closed period beginning 2014/15.  
Amortized over 21-year closed period beginning 2016/17



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**RESULTS**

**Estimated Net OPEB Obligation (NOO) Illustration**

(Amounts in 000's)	CAFR 2014/15	Estimated 2015/16	Estimated 2016/17
■ <b>NOO at Beginning of Year</b>	\$ 600	\$ 402	\$ 266
■ <b>Annual OPEB Cost (AOC)</b>			
• Annual Required Contribution	768	709	753
• Interest on NOO	46	31	19
• Amortization of NOO	<u>(118)</u>	<u>(29)</u>	<u>(19)</u>
• Annual OPEB Cost	696	710	753
■ <b>Contributions</b>			
• Cash Subsidy Paid Outside Trust <sup>12</sup>	294	402	427
• Implied Subsidy	-	42	72
• Reimbursement from Trust	-	-	-
• Trust Pre-Funding <sup>13</sup>	<u>600</u>	<u>402</u>	<u>266</u>
• Total Contribution	894	846	764
■ <b>NOO at End of Year</b>	402	266	255
■ <b>NOO Amortization Years</b>	n/a	22.0	21.0
■ <b>NOO Amortization Factor</b>	n/a	13.70	13.75

<sup>12</sup> Estimated cash payments shown for 2015/16 to 2016/17. Actual cash payments should be used for OPEB footnote.

<sup>13</sup> Assumes ABAG continues current prefunding pattern that contribution equals to NOO for 2016/17.



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**RESULTS**

**Estimated Full ARC Pre-Funding Illustration<sup>14</sup>**

**Cash & Implied Subsidy**

**7.25% Discount Rate**

(Amounts in 000's)

FYE June 30,	Beginning of Year Net OPEB Obligation	ARC/ ADC	Annual OPEB Cost (AOC)	Contribution			Payroll	ARC as % of Payroll	Contrib as % of Payroll
				Benefit Pmts	Pre- Funding	Total Contrib			
2017	\$ 266	\$ 753	\$ 753	\$ 498	\$ 266	\$ 764	\$ 6,573	11.5%	11.6%
2018	255	752	n/a	525	255	780	6,787	11.1%	11.5%
2019	n/a	751	n/a	593	158	751	7,007	10.7%	10.7%
2020	n/a	751	n/a	672	79	751	7,235	10.4%	10.4%
2021	n/a	754	n/a	703	51	754	7,470	10.1%	10.1%
2022	n/a	757	n/a	756	1	757	7,713	9.8%	9.8%
2023	n/a	762	n/a	790	(28)	762	7,963	9.6%	9.6%
2024	n/a	766	n/a	863	(97)	766	8,222	9.3%	9.3%
2025	n/a	766	n/a	902	(136)	766	8,489	9.0%	9.0%
2026	n/a	771	n/a	943	(172)	771	8,765	8.8%	8.8%

<sup>14</sup> Assumes ABAG continues current prefunding pattern that contribution equals to the beginning of year NOO for 2016/17 and 2017/18, and full ADC prefunding thereafter.



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**RESULTS**

**Projected ARC – Tier 1 & Tier 2 Blended (without DC Plan Contributions)**

**7.25% Discount Rate**

(Amounts in 000's)

FYE June 30,	Payroll			NC as % of Payroll			UAAL Amort as % of Payroll	Blended ARC as % of Payroll	Blended ARC
	Tier 1	Tier 2	Total	Tier 1	Tier 2 <sup>15</sup>	Total			
2017	\$2,986	\$3,587	\$6,573	10.6%	1.6%	5.7%	5.8%	11.5%	\$753
2018	2,820	3,967	6,787	10.6%	1.6%	5.3%	5.8%	11.1%	752
2019	2,643	4,364	7,007	10.6%	1.6%	5.0%	5.7%	10.7%	751
2020	2,466	4,769	7,235	10.6%	1.6%	4.7%	5.7%	10.4%	751
2021	2,305	5,165	7,470	10.6%	1.6%	4.4%	5.7%	10.1%	754
2022	2,145	5,568	7,713	10.6%	1.6%	4.1%	5.7%	9.8%	757
2023	1,996	5,968	7,963	10.6%	1.6%	3.8%	5.7%	9.6%	762
2024	1,836	6,386	8,222	10.6%	1.6%	3.6%	5.7%	9.3%	766
2025	1,619	6,871	8,490	10.6%	1.6%	3.3%	5.7%	9.0%	766
2026	1,446	7,320	8,765	10.6%	1.6%	3.1%	5.7%	8.8%	771

<sup>15</sup> Does not include MARA contributions.



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**RESULTS**

**Projected ARC – Tier 1 & Tier 2 Blended (with DC Plan Contributions)**

**7.25% Discount Rate**

(Amounts in 000's)

FYE June 30,	Payroll			NC as % of Payroll			UAAL Amort as % of Payroll	Blended ARC as % of Payroll	Blended ARC
	Tier 1	Tier 2	Total	Tier 1	Tier 2 <sup>16</sup>	Total			
2017	\$2,986	\$3,587	\$6,573	10.6%	3.1%	6.5%	5.8%	12.3%	\$809
2018	2,820	3,967	6,787	10.6%	3.1%	6.2%	5.8%	12.0%	814
2019	2,643	4,364	7,007	10.6%	3.1%	6.0%	5.7%	11.7%	819
2020	2,466	4,769	7,235	10.6%	3.1%	5.7%	5.7%	11.4%	825
2021	2,305	5,165	7,470	10.6%	3.1%	5.4%	5.7%	11.2%	834
2022	2,145	5,568	7,713	10.6%	3.1%	5.2%	5.7%	10.9%	843
2023	1,996	5,968	7,963	10.6%	3.1%	5.0%	5.7%	10.7%	855
2024	1,836	6,386	8,222	10.6%	3.1%	4.8%	5.7%	10.5%	865
2025	1,619	6,871	8,490	10.6%	3.1%	4.6%	5.7%	10.3%	873
2026	1,446	7,320	8,765	10.6%	3.1%	4.4%	5.7%	10.1%	885

<sup>16</sup> Includes both MARA contributions and PEMHCA minimum benefit.  
Contributions to MARA assumed to remain at approximately 1.6% of MARA participant pay.



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**RESULTS**

**Actuarial Obligations**

**June 30, 2015**

**7.25% Discount Rate**

(Amounts in 000's)

	<b>Cash Subsidy</b>	<b>Implied Subsidy</b>	<b>Total</b>
<b>■ Present Value of Benefits</b>			
• Actives	\$ 5,233	\$ 809	\$ 6,042
• Retirees	<u>5,589</u>	<u>498</u>	<u>6,087</u>
• Total	10,822	1,307	12,129
<b>■ Actuarial Accrued Liability</b>			
• Actives	3,375	451	3,826
• Retirees	<u>5,589</u>	<u>498</u>	<u>6,087</u>
• Total	8,964	949	9,913
<b>■ Actuarial Value of Assets<sup>17</sup></b>	<u>4,193</u>	<u>444</u>	<u>4,637</u>
<b>■ Unfunded AAL</b>	4,771	505	5,276
<b>■ Normal Cost 2016/17</b>	322	52	374
<b>■ Pay-As-You-Go Cost 2016/17</b>	427	72	498

<sup>17</sup> Asset allocation based on liability.



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**RESULTS**

**Annual Required Contribution (ARC)**

**2016/17 Fiscal Year**

**7.25% Discount Rate**

(Amounts in 000's)

	<b>Cash Subsidy</b>	<b>Implied Subsidy</b>	<b>Total</b>
<b>■ ARC - \$</b>			
• Normal Cost <sup>18</sup>	\$ 322	\$ 52	\$ 374
• UAAL Amortization <sup>19</sup>	<u>343</u>	<u>36</u>	<u>379</u>
• Total	665	88	753
<b>■ Projected Payroll</b>	6,573	6,573	6,573
<b>■ ARC - %</b>			
• Normal Cost	4.9%	0.8%	5.7%
• UAAL Amortization	<u>5.2%</u>	<u>0.5%</u>	<u>5.8%</u>
• Total	10.1%	1.3%	11.5%

<sup>18</sup> Blended Tier 1 and Tier 2 Normal Cost. Does not include MARA contribution.

<sup>19</sup> 21-year closed period amortization of 6/30/16 UAAL beginning 2016/17.



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## RESULTS

### Benefit Payment Projection

(Amounts in 000's)

Fiscal Year	Cash Subsidy			Implied Subsidy	Total Payments
	Current Actives	Current Retirees	Total Payments		
2016/17	\$ 47	\$ 380	\$ 427	\$ 72	\$ 499
2017/18	75	378	453	72	525
2018/19	107	398	505	88	593
2019/20	144	415	559	113	672
2020/21	177	417	594	108	702
2021/22	214	422	636	119	755
2022/23	249	421	670	118	788
2023/24	295	429	724	139	863
2024/25	336	422	758	122	880
2025/26	373	434	807	136	943



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## ACTUARIAL CERTIFICATION

This report presents the Association of Bay Area Governments Retiree Healthcare Plan ("Plan") June 30, 2015 actuarial valuation. The purpose of this valuation is to:

- Determine the Governmental Accounting Standards Board Statement Nos. 43 and 45 June 30, 2015 Benefit Obligations,
- Determine the Plan's June 30, 2015 Funded Status, and
- Calculate the 2016/17 and 2017/18 Annual Required Contributions.

The report provides information intended for reporting under GASB 43 and 45, but may not be appropriate for other purposes. Information provided in this report may be useful to the Association 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 Association 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. Additionally, in our opinion, actuarial methods and assumptions comply with GASB 43 and 45. As members of the American Academy of Actuaries meeting the Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,

John E. Bartel, ASA, MAAA, FCA  
President  
Bartel Associates, LLC  
August 8, 2016

Bianca Lin, FSA, MAAA, FCA, EA  
Assistant Vice President  
Bartel Associates, LLC  
August 8, 2016



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**EXHIBITS**

<u>Topic</u>	<u>Page</u>
Premiums	E - 1
Data Summary	E - 4
Actuarial Assumptions	E - 13
Definitions	E - 21

**EXHIBIT – PREMIUMS**

**2015 PEMHCA Monthly Medical Premiums**  
**Bay Area**

Plan	Non-Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Anthem Select	\$662.41	\$1,324.82	\$1,722.27	\$445.38	\$890.76	\$1,336.14
Anthem Traditional	827.57	1,655.14	2,151.68	445.38	890.76	1,336.14
Blue Shield Access+	928.87	1,857.74	2,415.06	352.63	705.26	1,057.89
Blue Shield NetValue	870.60	1,741.20	2,263.56	352.63	705.26	1,057.89
Kaiser	714.45	1,428.90	1,857.57	295.51	591.02	886.53
UnitedHealthcare	850.67	1,701.34	2,211.74	267.41	534.82	802.23
PERS Choice	700.84	1,401.68	1,822.18	339.47	678.94	1,018.41
PERS Select	690.43	1,380.86	1,795.12	339.47	678.94	1,018.41
PERSCare	775.08	1,550.16	2,015.21	368.76	737.52	1,106.28

**EXHIBIT – PREMIUMS**

**2016 PEMHCA Monthly Medical Premiums**  
**Bay Area**

Medical Plan	Non Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Anthem HMO Select	\$721.79	\$1,443.58	\$1,876.65	n/a	n/a	n/a
Anthem HMO Traditional	855.42	1,710.84	2,224.09	n/a	n/a	n/a
Blue Shield Access+	1,016.18	2,032.36	2,642.07	n/a	n/a	n/a
Blue Shield NetValue	1,033.86	2,067.72	2,688.04	n/a	n/a	n/a
Health Net SmartCare	808.44	1,616.88	2,101.94	n/a	n/a	n/a
Kaiser	746.47	1,492.94	1,940.82	\$297.23	\$594.46	\$891.69
UnitedHealthcare	955.44	1,910.88	2,484.14	320.98	641.96	962.94
PERS Choice	798.36	1,596.72	2,075.74	366.38	732.76	1,099.14
PERS Select	730.07	1,460.14	1,898.18	366.38	732.76	1,099.14
PERSCare	889.27	1,778.54	2,312.10	408.04	816.08	1,224.12



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**EXHIBIT – 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
Health Net SmartCare	733.29	1,466.58	1,906.55	n/a	n/a	n/a
Kaiser	733.39	1,466.78	1,906.81	\$300.48	\$600.96	\$ 901.44
UnitedHealthcare	1,062.26	2,124.52	2,761.88	324.21	648.42	972.63
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	353.63	707.26	1,060.89
PERSCare	932.39	1,864.78	2,424.21	389.76	779.52	1,169.28



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**EXHIBIT – DATA SUMMARY**

**Active Medical Coverage**

Medical Plan	Region	Single	2-Party	Family	Waived	Total	Plan
Anthem Select	Bay Area	-	-	2	-	2	2
Anthem Traditional	Bay Area	1	6	1	-	8	8
Blue Shield Access+	Bay Area	5	3	7	-	15	15
Blue Shield NetValue	Bay Area	2	-	-	-	2	2
Kaiser	Bay Area	12	7	13	-	32	32
PERS Choice	Bay Area	1	2	1	-	4	4
PERSCare	Bay Area	1	-	1	-	2	2
Waived		-	-	-	4	4	4
<b>Total</b>		<b>22</b>	<b>18</b>	<b>25</b>	<b>4</b>	<b>69</b>	<b>69</b>

**EXHIBIT – DATA SUMMARY**

**Retiree Medical Coverage**  
**Under Age 65**

Medical Plan	Region	Single	2-Party	Family	Waived	Total	Plan
Anthem Traditional	Bay Area	1	-	-	-	1	1
Blue Shield Access+	Bay Area	1	1	1	-	3	4
	North	1	-	-	-	1	
Kaiser	Bay Area	3	4	-	-	7	8
	Sacramento	-	-	1	-	1	
PERS Choice	Out of State	-	1	-	-	1	1
PERSCare	Out of State	-	1	-	-	1	1
Waived		-	-	-	4	4	4
<b>Total</b>		<b>6</b>	<b>2</b>	<b>7</b>	<b>4</b>	<b>19</b>	<b>19</b>

**EXHIBIT – DATA SUMMARY**

**Retiree Medical Coverage**  
**Age 65 & Over**

Medical Plan	Region	Single	2-Party	Family	Waived	Total	Plan
Blue Shield Access+	Bay Area	4	-	-	-	4	4
Kaiser	Bay Area	10	3	-	-	13	14
	North	-	1	-	-	1	
PERS Choice	Bay Area	1	3	-	-	4	8
	Out of State	3	1	-	-	4	
Waived		-	-	-	6	6	6
<b>Total</b>		<b>18</b>	<b>8</b>	<b>-</b>	<b>6</b>	<b>32</b>	<b>32</b>

**EXHIBIT – DATA SUMMARY**

**Medical Plan Participation**  
**Non-Waived Participants**

Medical Plan	6/30/13			6/30/15		
	Actives	Retirees <sup>20</sup>		Actives	Retirees <sup>21</sup>	
		< 65	≥ 65		< 65	≥ 65
Anthem Select	0.0%	0.0%	0.0%	3%	0%	0%
Anthem Traditional	0.0%	0.0%	0.0%	13%	7%	0%
Blue Shield Access+	54.0%	10.0%	0.0%	23%	26%	15%
Blue Shield NetValue	0.0%	0.0%	0.0%	3%	0%	0%
Kaiser	37.5%	40.0%	66.5%	49%	53%	54%
PERS Choice	8.5%	50.0%	33.5%	6%	7%	31%
PERSCare	0.0%	0.0%	0.0%	3%	7%	0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

<sup>20</sup> 9 non-waived retirees under 65. 19 non-waived retirees 65 & over.

<sup>21</sup> 15 non-waived retirees under 65. 26 non-waived retirees 65 & over.

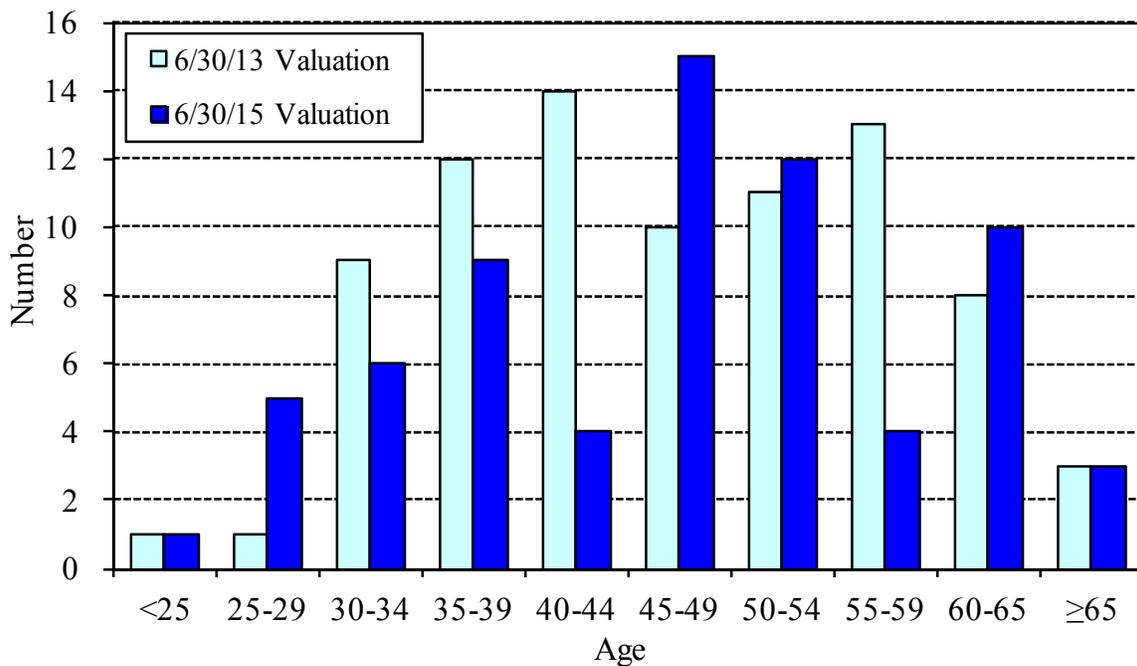
**EXHIBIT – DATA SUMMARY**

**Actives by Age and ABAG Service**

Age	ABAG Service							Total
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	
< 25	1	-	-	-	-	-	-	1
25-29	1	3	1	-	-	-	-	5
30-34	1	4	1	-	-	-	-	6
35-39	1	3	3	1	1	-	-	9
40-44	-	-	1	3	-	-	-	4
45-49	-	5	2	4	3	1	-	15
50-54	-	45	2	1	1	2	1	12
55-59	-	-	-	2	2	-	-	4
60-64	-	5	3	-	1	1	-	10
≥ 65	-	-	2	1	-	-	-	3
<b>Total</b>	<b>4</b>	<b>25</b>	<b>15</b>	<b>12</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>69</b>

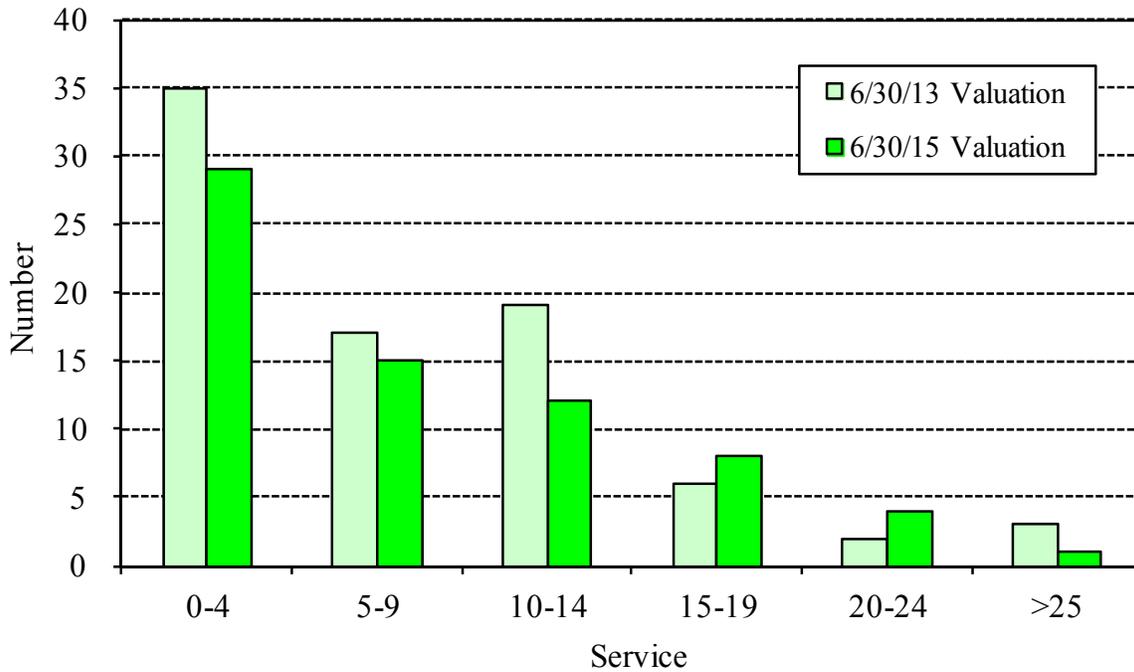
**EXHIBIT – DATA SUMMARY**

**Active Age Distribution**



**EXHIBIT – DATA SUMMARY**

**Active Service Distribution**



**EXHIBIT – DATA SUMMARY**

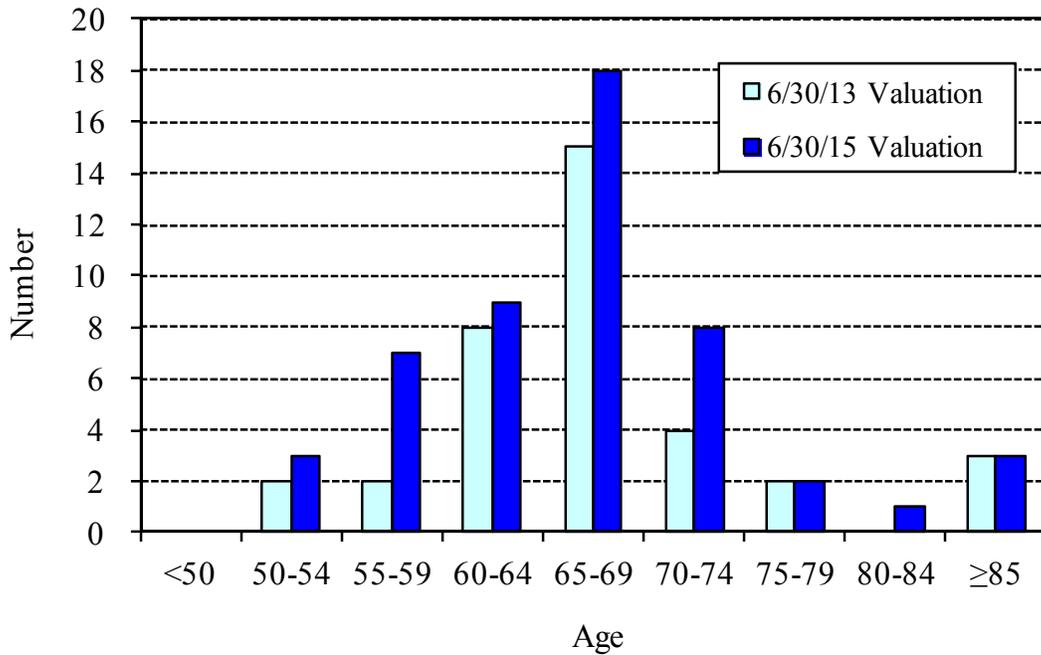
**Retiree Medical Coverage by Age Group**

Age	Single	2-Party	Family	Waived	Total
Under 50	-	-	-	-	-
50-54	-	1	1	1	3
55-59	3	3	1	-	7
60-64	3	3	-	3	9
65-69	10	5	-	3	18
70-74	3	3	-	2	8
75-79	2	-	-	-	2
80-84	-	-	-	1	1
Over 85	3	-	-	-	3
<b>Total</b>	<b>24</b>	<b>15</b>	<b>2</b>	<b>10</b>	<b>51</b>

Average Age	69.9	64.5	53.6	66.9	67.1
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**EXHIBIT – DATA SUMMARY**

**Retiree Age Distribution**



**EXHIBIT – ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>June 30, 2013 Valuation</b>	<b>June 30, 2015 Valuation</b>
<ul style="list-style-type: none"> <li>■ Valuation Date</li> </ul>	<ul style="list-style-type: none"> <li>■ June 30, 2013</li> <li>■ 2014/15 &amp; 2015/16 ARCs</li> <li>■ ARC calculated as of beginning of the year with interest to end of year</li> <li>■ 1-year lag period</li> </ul>	<ul style="list-style-type: none"> <li>■ June 30, 2015</li> <li>■ 2016/17 ARC &amp; 2017/18 ADC</li> <li>■ ARC/ADC calculated as of beginning of the year with interest to end of year</li> <li>■ 1-year lag period</li> </ul>
<ul style="list-style-type: none"> <li>■ Funding Policy</li> </ul>	<ul style="list-style-type: none"> <li>■ Pre-fund at least ARC less benefit payments through CERBT (CalPERS trust)<sup>22</sup></li> <li>■ Benefit payments made from ABAG assets</li> </ul>	<ul style="list-style-type: none"> <li>■ Same</li> </ul>
<ul style="list-style-type: none"> <li>■ Discount Rate</li> </ul>	<ul style="list-style-type: none"> <li>■ 7.61% – ARC pre-funded with CalPERS CERBT Fund #1</li> </ul>	<ul style="list-style-type: none"> <li>■ 7.25% – ARC pre-funded with CalPERS CERBT Fund #1</li> </ul>
<ul style="list-style-type: none"> <li>■ General Inflation</li> </ul>	<ul style="list-style-type: none"> <li>■ 3.00%</li> </ul>	<ul style="list-style-type: none"> <li>■ Same</li> </ul>

<sup>22</sup> ABAG has been making prefunding contributions that equal the beginning of year NOO.

**EXHIBIT – ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>June 30, 2013 Valuation</b>	<b>June 30, 2015 Valuation</b>																																																												
■ Payroll Increase	<ul style="list-style-type: none"> <li>■ Aggregate Increases – 3.25%</li> <li>■ Merit Increases – CalPERS 1997-2011 Experience Study</li> </ul>	■ Same																																																												
■ Mortality, Withdrawal, Disability	<ul style="list-style-type: none"> <li>■ CalPERS 1997-2011 Experience Study</li> <li>■ Post-retirement mortality projected fully generational with Scale AA</li> </ul>	<ul style="list-style-type: none"> <li>■ CalPERS 1997-2011 Experience Study</li> <li>■ Post-retirement mortality projected fully generational with Scale MP-2014, modified to converge to ultimate rates in 2022</li> </ul>																																																												
■ Service Retirement	<ul style="list-style-type: none"> <li>■ CalPERS 1997-2011 Experience Study</li> </ul> <table border="0" style="margin-left: 40px;"> <tr> <td></td> <td align="center" colspan="4">CalPERS</td> </tr> <tr> <td><u>Classic</u></td> <td><u>Benefit</u></td> <td><u>Hire Age</u></td> <td><u>ERA</u></td> <td></td> </tr> <tr> <td>Misc</td> <td>2.5%@55</td> <td>38.1</td> <td>61.4</td> <td></td> </tr> <tr> <td></td> <td align="center" colspan="4">CalPERS</td> </tr> <tr> <td><u>New</u></td> <td><u>Benefit</u></td> <td><u>Hire Age</u></td> <td><u>ERA</u></td> <td></td> </tr> <tr> <td>Misc</td> <td>2%@62</td> <td>38.3</td> <td>63.2</td> <td></td> </tr> </table>		CalPERS				<u>Classic</u>	<u>Benefit</u>	<u>Hire Age</u>	<u>ERA</u>		Misc	2.5%@55	38.1	61.4			CalPERS				<u>New</u>	<u>Benefit</u>	<u>Hire Age</u>	<u>ERA</u>		Misc	2%@62	38.3	63.2		<ul style="list-style-type: none"> <li>■ CalPERS 1997-2011 Experience Study</li> </ul> <table border="0" style="margin-left: 40px;"> <tr> <td></td> <td align="center" colspan="4">CalPERS</td> </tr> <tr> <td><u>Classic</u></td> <td><u>Benefit</u></td> <td><u>Hire Age</u></td> <td><u>ERA</u></td> <td></td> </tr> <tr> <td>Misc</td> <td>2.5%@55</td> <td>37.6</td> <td>61.2</td> <td></td> </tr> <tr> <td></td> <td align="center" colspan="4">CalPERS</td> </tr> <tr> <td><u>New</u></td> <td><u>Benefit</u></td> <td><u>Hire Age</u></td> <td><u>ERA</u></td> <td></td> </tr> <tr> <td>Misc</td> <td>2%@62</td> <td>37.9</td> <td>64.1</td> <td></td> </tr> </table>		CalPERS				<u>Classic</u>	<u>Benefit</u>	<u>Hire Age</u>	<u>ERA</u>		Misc	2.5%@55	37.6	61.2			CalPERS				<u>New</u>	<u>Benefit</u>	<u>Hire Age</u>	<u>ERA</u>		Misc	2%@62	37.9	64.1	
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Misc	2%@62	37.9	64.1																																																											

**EXHIBIT – ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>June 30, 2013 Valuation</b>	<b>June 30, 2015 Valuation</b>																																																																								
■ CalPERS Service	■ Service provided	■ Same																																																																								
■ Medical Trend	<table border="0" style="margin-left: 40px;"> <tr> <td></td> <td align="center" colspan="2"><u>Increase from Prior Year</u></td> </tr> <tr> <td></td> <td align="center"><u>Non-Medicare</u></td> <td align="center"><u>Medicare</u></td> </tr> <tr> <td><u>Year</u></td> <td></td> <td></td> </tr> <tr> <td>2013</td> <td align="center" colspan="2">Premiums</td> </tr> <tr> <td>2014</td> <td align="center" colspan="2">Premiums</td> </tr> <tr> <td>2015</td> <td align="center">Premiums</td> <td align="center">8.3%<sup>23</sup></td> </tr> <tr> <td>2016</td> <td align="center">7.5%</td> <td align="center">7.8%</td> </tr> <tr> <td>2017</td> <td align="center">7.0%</td> <td align="center">7.2%</td> </tr> <tr> <td>2018</td> <td align="center">6.5%</td> <td align="center">6.7%</td> </tr> <tr> <td>2019</td> <td align="center">6.0%</td> <td align="center">6.1%</td> </tr> <tr> <td>2020</td> <td align="center">5.5%</td> <td align="center">5.6%</td> </tr> <tr> <td>2021+</td> <td align="center">5.0%</td> <td align="center">5.0%</td> </tr> </table>		<u>Increase from Prior Year</u>			<u>Non-Medicare</u>	<u>Medicare</u>	<u>Year</u>			2013	Premiums		2014	Premiums		2015	Premiums	8.3% <sup>23</sup>	2016	7.5%	7.8%	2017	7.0%	7.2%	2018	6.5%	6.7%	2019	6.0%	6.1%	2020	5.5%	5.6%	2021+	5.0%	5.0%	<table border="0" style="margin-left: 40px;"> <tr> <td></td> <td align="center" colspan="2"><u>Increase from Prior Year</u></td> </tr> <tr> <td></td> <td align="center"><u>Non-Medicare</u></td> <td align="center"><u>Medicare</u></td> </tr> <tr> <td><u>Year</u></td> <td></td> <td></td> </tr> <tr> <td>2013</td> <td align="center" colspan="2">n/a</td> </tr> <tr> <td>2014</td> <td align="center" colspan="2">n/a</td> </tr> <tr> <td>2015</td> <td align="center" colspan="2">Premiums</td> </tr> <tr> <td>2016</td> <td align="center" colspan="2">Premiums</td> </tr> <tr> <td>2017</td> <td align="center">Premiums</td> <td align="center">7.2%<sup>24</sup></td> </tr> <tr> <td>2018</td> <td align="center">6.5%</td> <td align="center">6.7%</td> </tr> <tr> <td>2019</td> <td align="center">6.0%</td> <td align="center">6.1%</td> </tr> <tr> <td>2020</td> <td align="center">5.5%</td> <td align="center">5.6%</td> </tr> <tr> <td>2021+</td> <td align="center">5.0%</td> <td align="center">5.0%</td> </tr> </table>		<u>Increase from Prior Year</u>			<u>Non-Medicare</u>	<u>Medicare</u>	<u>Year</u>			2013	n/a		2014	n/a		2015	Premiums		2016	Premiums		2017	Premiums	7.2% <sup>24</sup>	2018	6.5%	6.7%	2019	6.0%	6.1%	2020	5.5%	5.6%	2021+	5.0%	5.0%
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<sup>23</sup> Applicable to Medicare Part B premium. 2015 based on actual PEMHCA premiums.

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**EXHIBIT – ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>June 30, 2013 Valuation</b>	<b>June 30, 2015 Valuation</b>
<ul style="list-style-type: none"> <li>■ PEMHCA Minimum Increase</li> </ul>	<ul style="list-style-type: none"> <li>■ 2013 – \$115/month</li> <li>■ 2014 – \$119/month</li> <li>■ 2015 – \$122/month</li> <li>■ 2016+ – 4.50% annually</li> </ul>	<ul style="list-style-type: none"> <li>■ 2015 – \$122/month</li> <li>■ 2016 – \$125/month</li> <li>■ 2017 – \$128/month</li> <li>■ 2018+ – 4.50% annually</li> </ul>
<ul style="list-style-type: none"> <li>■ PEMHCA Admin Expenses</li> </ul>	<ul style="list-style-type: none"> <li>■ Included</li> </ul>	<ul style="list-style-type: none"> <li>■ Same</li> </ul>
<ul style="list-style-type: none"> <li>■ Active Employee Participation at Retirement</li> </ul>	<ul style="list-style-type: none"> <li>■ Tier 1:                             <ul style="list-style-type: none"> <li>• Currently covered – 100%</li> <li>• Currently waived – 80%</li> </ul> </li> <li>■ Tier 2 – 80%</li> </ul>	<ul style="list-style-type: none"> <li>■ Same</li> </ul>
<ul style="list-style-type: none"> <li>■ Waived Retiree Re-election</li> </ul>	<ul style="list-style-type: none"> <li>■ Currently &lt; 65 – 20% at 65</li> <li>■ Currently ≥ 65 – 0%</li> </ul>	<ul style="list-style-type: none"> <li>■ Same</li> </ul>

**EXHIBIT – ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>June 30, 2013 Valuation</b>	<b>June 30, 2015 Valuation</b>																								
<ul style="list-style-type: none"> <li>■ Medical Plan at Retirement</li> </ul>	<ul style="list-style-type: none"> <li>■ Actives – Based on current retiree elections                             <table border="0" style="margin-left: 20px;"> <tr> <td></td> <td align="center"><u>&lt;65</u></td> <td align="center"><u>65+</u></td> </tr> <tr> <td>BS Access+</td> <td align="center">45%</td> <td align="center">5%</td> </tr> <tr> <td>Kaiser</td> <td align="center">45%</td> <td align="center">55%</td> </tr> <tr> <td>PERS Choice</td> <td align="center">10%</td> <td align="center">40%</td> </tr> </table> </li> <li>■ Retirees:                             <ul style="list-style-type: none"> <li>• Currently &lt; 65                                     <ul style="list-style-type: none"> <li>➢ Pre-65 – Same as current elections</li> <li>➢ Post-65 – Based on current post-65 retiree elections</li> </ul> </li> <li>• Currently ≥ 65 – Same as current elections</li> </ul> </li> </ul>		<u>&lt;65</u>	<u>65+</u>	BS Access+	45%	5%	Kaiser	45%	55%	PERS Choice	10%	40%	<ul style="list-style-type: none"> <li>■ Actives – Based on current retiree elections                             <table border="0" style="margin-left: 20px;"> <tr> <td></td> <td align="center"><u>&lt;65</u></td> <td align="center"><u>65+</u></td> </tr> <tr> <td>BS Access+</td> <td align="center">25%</td> <td align="center">15%</td> </tr> <tr> <td>Kaiser</td> <td align="center">65%</td> <td align="center">55%</td> </tr> <tr> <td>PERS Choice</td> <td align="center">10%</td> <td align="center">30%</td> </tr> </table> </li> <li>■ Retirees:                             <ul style="list-style-type: none"> <li>• Currently &lt; 65                                     <ul style="list-style-type: none"> <li>➢ Pre-65 – Same as current elections</li> <li>➢ Post-65 – Based on current post-65 retiree elections</li> </ul> </li> <li>• Currently ≥ 65 – Same as current elections</li> </ul> </li> <li>■ Non-Kaiser HMO over 65 – Elect UnitedHealthcare beginning 2016</li> <li>■ BSNV under 65 – Elect BS Access+ beginning 2017</li> </ul>		<u>&lt;65</u>	<u>65+</u>	BS Access+	25%	15%	Kaiser	65%	55%	PERS Choice	10%	30%
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**EXHIBIT – ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>June 30, 2013 Valuation</b>	<b>June 30, 2015 Valuation</b>
■ Medicare Eligibility	<ul style="list-style-type: none"> <li>■ 100%</li> <li>■ Everyone eligible for Medicare will elect Part B coverage</li> </ul>	■ Same
■ Spouse Coverage at Retirement	<ul style="list-style-type: none"> <li>■ Currently covered – Same as current elections</li> <li>■ Currently waived – 80% covered</li> </ul>	■ Same
■ Spouse Age	<ul style="list-style-type: none"> <li>■ Actives – Males 3 years older than females</li> <li>■ Retirees – Males 3 years older than females if spouse birth date not available</li> </ul>	■ Same
■ Surviving Spouse Participation	■ 100%	■ Same
■ Implied Subsidy	■ Valued up to Medicare eligibility	■ Same

**EXHIBIT – ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>June 30, 2013 Valuation</b>	<b>June 30, 2015 Valuation</b>																																																																
<ul style="list-style-type: none"> <li>■ HMO Medical Claims Costs 2015 PEMHCA Implied Subsidy Estimate</li> </ul>	<ul style="list-style-type: none"> <li>• Monthly claims costs estimated from Bartel Associates PEMHCA client database and PEMHCA premiums</li> </ul> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th colspan="8">Bay Area Region – Non-Medicare Eligible</th> </tr> <tr> <th></th> <th colspan="2"><u>BS Access+</u></th> <th colspan="2"><u>BS NetValue</u></th> <th colspan="2"><u>Kaiser</u></th> </tr> <tr> <th><u>Age</u></th> <th><u>M</u></th> <th><u>F</u></th> <th><u>M</u></th> <th><u>F</u></th> <th><u>M</u></th> <th><u>F</u></th> </tr> </thead> <tbody> <tr> <td>25</td> <td>\$273</td> <td>\$536</td> <td>\$276</td> <td>\$543</td> <td>\$235</td> <td>\$462</td> </tr> <tr> <td>35</td> <td>358</td> <td>656</td> <td>362</td> <td>665</td> <td>308</td> <td>566</td> </tr> <tr> <td>45</td> <td>569</td> <td>689</td> <td>577</td> <td>698</td> <td>491</td> <td>594</td> </tr> <tr> <td>55</td> <td>951</td> <td>961</td> <td>963</td> <td>974</td> <td>820</td> <td>829</td> </tr> <tr> <td>60</td> <td>1,214</td> <td>1,135</td> <td>1,229</td> <td>1,150</td> <td>1,046</td> <td>979</td> </tr> <tr> <td>65</td> <td>1,533</td> <td>1,381</td> <td>1,553</td> <td>1,399</td> <td>1,322</td> <td>1,190</td> </tr> </tbody> </table>	Bay Area Region – Non-Medicare Eligible									<u>BS Access+</u>		<u>BS NetValue</u>		<u>Kaiser</u>		<u>Age</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	25	\$273	\$536	\$276	\$543	\$235	\$462	35	358	656	362	665	308	566	45	569	689	577	698	491	594	55	951	961	963	974	820	829	60	1,214	1,135	1,229	1,150	1,046	979	65	1,533	1,381	1,553	1,399	1,322	1,190	
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**EXHIBIT – ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>June 30, 2013 Valuation</b>	<b>June 30, 2015 Valuation</b>							
<b>■ PPO Medical Claims Costs 2015 PEMHCA Implied Subsidy Estimate</b>	<b>● Monthly claims costs estimated from Bartel Associates PEMHCA client database and PEMHCA premiums</b> Bay Area Region – Non-Medicare Eligible								
		<u>PERS Choice</u>		<u>PERS Select</u>		<u>PERSCare</u>		<u>PORAC</u>	
	<u>Age</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>
	25	\$215	\$352	\$204	\$335	\$247	\$406	\$229	\$376
	35	318	489	303	465	367	564	339	521
	45	505	554	481	527	582	638	539	590
	55	747	723	711	687	861	833	798	772
	60	898	830	854	790	1,034	956	956	886
65	1,115	1,003	1,061	953	1,285	1,155	1,189	1,069	
<b>■ ACA Excise Tax</b>	<b>■ n/a</b>			<b>■ 2% load on cash liability as an estimate</b>					

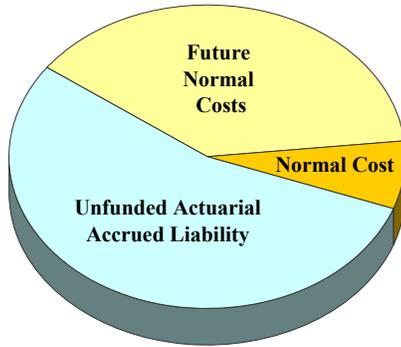
**EXHIBIT – DEFINITIONS**

<b>■ GASB 45 Accrual Accounting</b>	<ul style="list-style-type: none"> <li><b>■ Project future employer-provided benefit cash flows for current active employees and current retirees</b></li> <li><b>■ 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)</b></li> <li><b>■ Allocate PVB to past, current, and future periods using the actuarial cost method</b></li> <li><b>■ 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)</b></li> <li><b>■ Normal Cost is amount allocated to current fiscal year</b></li> <li><b>■ Actuarial Accrued Liability (AAL) is amount allocated to prior service with employer</b></li> <li><b>■ Unfunded AAL (UAAL) is AAL less plan assets pre-funded in a segregated and restricted trust</b></li> </ul>
<b>■ PayGo Cost</b>	<ul style="list-style-type: none"> <li><b>■ Cash subsidy is the pay-as-you-go employer benefit payments for retirees</b></li> <li><b>■ Implied subsidy is the difference between the actual cost of retiree benefits and retiree premiums subsidized by active employee premiums</b></li> </ul>

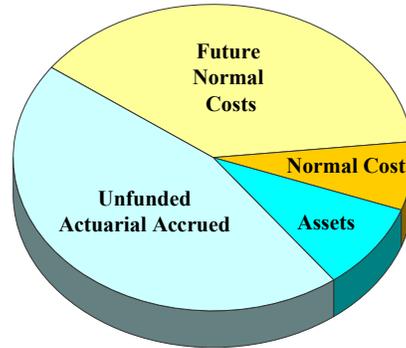
**EXHIBIT – DEFINITIONS**

**Present Value of Benefits**

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



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



**EXHIBIT – DEFINITIONS**

<p>■ Annual Required Contribution (ARC)</p>	<p>■ “Required contribution” for the current period including:</p> <ul style="list-style-type: none"> <li>• Normal Cost</li> <li>• Amortization of: <ul style="list-style-type: none"> <li>➢ Initial UAAL</li> <li>➢ AAL for plan, assumption, and method changes</li> <li>➢ Experience gains/losses (difference between expected and actual)</li> <li>➢ Contribution gains/losses (difference between ARC and contributions)</li> </ul> </li> </ul> <p>■ ARC in excess of pay-as-you-go costs not required to be funded</p>
<p>■ Net OPEB Obligation (NOO)</p>	<p>■ Net OPEB Obligation is the accumulated amounts expensed but not funded</p> <p>■ Net OPEB Asset if amounts funded exceed those expensed</p>
<p>■ Annual OPEB Cost (AOC)</p>	<p>■ Expense for the current period including:</p> <ul style="list-style-type: none"> <li>• ARC</li> <li>• Interest on NOO</li> <li>• Adjustment of NOO</li> </ul> <p>■ NOO adjustment prevents double counting of expense since ARCs include an amortization of prior contribution gains/losses previously expensed</p>