



**METROPOLITAN WATER DISTRICT OF SOUTHERN
CALIFORNIA
RETIREE HEALTHCARE PLAN**

BARTTEL
ASSOCIATES, LLC

June 30, 2013 GASB 45 Actuarial Valuation
Final Results

Bartel Associates, LLC
John E. Bartel, President
Catherine Wandro, Assistant Vice President
Adam Zimmerer, Actuarial Analyst

February 6, 2014

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BENEFIT SUMMARY

<p>■ Eligibility</p>	<p>■ Full-time employees who service or disability retire directly from the District under CalPERS (50 & 5 years of service)</p>																								
<p>■ Medical Benefit</p>	<p>■ District pays PEMHCA medical premium for retirees and eligible dependents up to a cap which varies by employee group:</p> <ul style="list-style-type: none"> ● Represented – 100% of Blue Shield HMO Bay Area Basic Premium ● Unrepresented – 90% of PERSCare LA Basic Premium <p>■ 2013 and 2014 Monthly Caps:</p> <table border="1" data-bbox="540 468 1308 667"> <thead> <tr> <th rowspan="2">Medical Coverage</th> <th colspan="2">Represented</th> <th colspan="2">Unrepresented</th> </tr> <tr> <th>2013</th> <th>2014</th> <th>2013</th> <th>2014</th> </tr> </thead> <tbody> <tr> <td>Single</td> <td>\$ 784.63</td> <td>\$ 836.59</td> <td>\$ 858.51</td> <td>\$ 562.13</td> </tr> <tr> <td>2-Party</td> <td>1,569.26</td> <td>1,673.18</td> <td>1,717.02</td> <td>1,124.26</td> </tr> <tr> <td>Family</td> <td>2,040.04</td> <td>2,175.13</td> <td>2,232.13</td> <td>1,461.54</td> </tr> </tbody> </table>	Medical Coverage	Represented		Unrepresented		2013	2014	2013	2014	Single	\$ 784.63	\$ 836.59	\$ 858.51	\$ 562.13	2-Party	1,569.26	1,673.18	1,717.02	1,124.26	Family	2,040.04	2,175.13	2,232.13	1,461.54
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	2013	2014	2013	2014																					
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2-Party	1,569.26	1,673.18	1,717.02	1,124.26																					
Family	2,040.04	2,175.13	2,232.13	1,461.54																					
<p>■ Surviving Spouse</p>	<p>■ Surviving spouse coverage based on retirement plan election</p> <p>■ Same benefit continues to surviving spouse</p>																								
<p>■ Dental, Vision, Life</p>	<p>■ None</p>																								



BENEFIT SUMMARY

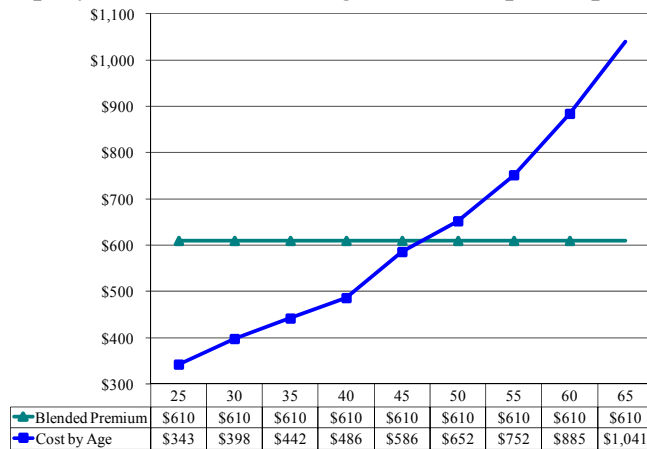
<p>■ State Vesting Schedule §22893</p>	<p>■ Applies to employees hired on or after 1/1/12</p> <p>■ Vesting schedule applies to the maximum of:</p> <ul style="list-style-type: none"> ● District cap, or ● State 100/90 premiums, ● But not more than 100% of the premium <p>■ Vesting % based on CalPERS service, with 5 years District service minimum:</p> <table border="1" data-bbox="508 1497 1092 1770"> <thead> <tr> <th colspan="2">CalPERS Service</th> <th colspan="2">CalPERS Vesting %</th> </tr> <tr> <th>Service</th> <th>Vesting %</th> <th>Service</th> <th>Vesting %</th> </tr> </thead> <tbody> <tr> <td>< 10</td> <td>0%</td> <td>15</td> <td>75%</td> </tr> <tr> <td>10</td> <td>50%</td> <td>16</td> <td>80%</td> </tr> <tr> <td>11</td> <td>55%</td> <td>17</td> <td>85%</td> </tr> <tr> <td>12</td> <td>60%</td> <td>18</td> <td>90%</td> </tr> <tr> <td>13</td> <td>65%</td> <td>19</td> <td>95%</td> </tr> <tr> <td>14</td> <td>70%</td> <td>20+</td> <td>100%</td> </tr> </tbody> </table> <p>■ 100% vested for disability retirement or 20 years District service</p>	CalPERS Service		CalPERS Vesting %		Service	Vesting %	Service	Vesting %	< 10	0%	15	75%	10	50%	16	80%	11	55%	17	85%	12	60%	18	90%	13	65%	19	95%	14	70%	20+	100%
CalPERS Service		CalPERS Vesting %																															
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< 10	0%	15	75%																														
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11	55%	17	85%																														
12	60%	18	90%																														
13	65%	19	95%																														
14	70%	20+	100%																														
<p>■ Pay-As-You-Go Costs</p>	<p><u>Fiscal Year</u></p> <p>■ FY 2012/13 \$13,181,000</p> <p>■ FY 2011/12 \$12,764,000</p>																																



IMPLIED SUBSIDY

■ Background

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



- GASB 45 defers to actuarial standards of practice.
- Actuarial Standards of Practice No. 6¹ (ASOP 6) allows community rated plans to value their liability using premiums, resulting in no implied subsidy.
- Valuation includes an implied subsidy sensitivity for PEMHCA.

¹ Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Plan Costs or Contributions.



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IMPLIED SUBSIDY

- In April 2012, Actuarial Standards Board released 2nd Exposure Draft for ASOP 6:
 - Would require implied subsidy valued for community rated plans such as PEMHCA.
 - Timing:
 - First Exposure Draft issued April 2012 (July 15, 2012 comment deadline)
 - Second Exposure Draft issued March 2013 (August 30, 2013 comment deadline)
 - Current draft calls for effective date 1 year after final statement adopted with earlier implementation encouraged
- Implied Subsidy impact depends on a number of factors including:
 - CalPERS provided information
 - Miscellaneous/Safety mix
 - Active/retiree proportions
 - Level of pre-funding
- AAL/ARC increase relative to current plan very large for PEMHCA minimum



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PARTICIPANT STATISTICS

Active Participant Statistics

	1/1/09 Valuation	1/1/11 Valuation²	6/30/11 Valuation²	6/30/13 Valuation
■ Count	1,923	1,802	1,802	1,746
■ Average Age	48.7	49.5	50.0	50.0
■ Average Service:				
• CalPERS	14.2	15.8	16.3	16.6
• District	13.5	15.1	15.6	15.8
■ Pay				
• Average	\$94,539	\$99,469	\$99,469	\$104,775
• Total Payroll (000's)	\$181,799	\$179,242	\$179,242	\$182,937

² 6/30/11 data used for both the 1/1/11 and 6/30/11 valuations.



PARTICIPANT STATISTICS

Retiree Participant Statistics

	1/1/09 Valuation	1/1/11 Valuation³	6/30/11 Valuation³	6/30/13 Valuation
■ Count				
• Service Retirees	970	1,044	1,044	1,166
• Disabled Retirees	138	143	143	133
• Surviving Spouses	<u>228</u>	<u>256</u>	<u>256</u>	<u>280</u>
• Total	1,336	1,443	1,443	1,579
■ Average Age				
• Service Retirees	70.0	69.9	70.4	70.3
• Disabled Retirees	64.2	65.0	65.5	66.6
• Surviving Spouses	75.8	75.4	75.9	76.2
• Total	70.4	70.4	70.9	71.0
■ Average Retirement Age				
• Service Retirees	59.3	59.4	59.4	59.5
• Disabled Retirees	50.8	50.6	50.6	50.5
• Total	58.3	57.6	57.6	57.8

³ 6/30/11 data used for both the 1/1/11 and 6/30/11 valuations.



CERBT INVESTMENT OPTIONS

- Additional CERBT asset allocations and revised discount rate assumption
 - Agency selects one option effective July 1, 2011
- Target asset allocations

Asset Classifications	Option 1	Option 2	Option 3
Global Equity	66%	50%	32%
US Nominal Bonds	18%	24%	42%
REIT's	8%	8%	8%
U.S. Inflation Linked Bonds	5%	15%	15%
Commodities	<u>3%</u>	<u>3%</u>	<u>3%</u>
Total	100%	100%	100%

- CalPERS reported expected returns (20 year period):

	Option 1	Option 2	Option 3
75% Confidence Limit ⁴	5.80%	5.60%	5.25%
50% Confidence Limit	7.61%	7.06%	6.39%
25% Confidence Limit	9.43%	8.52%	7.47%
Standard Deviation	11.73%	9.46%	7.27%

⁴ Confidence Limits – Actual Return will exceed the given rate with indicated probabilities, rates vary by year.



CERBT INVESTMENT OPTIONS

- CalPERS discount rate development:
 - 1st 10 year expected returns – based on asset advisors 10 year projections
 - Significantly higher returns assumed after 10 years
 - based on long term historical returns
 - implies actuarial losses in 1st 10 years
 - achievable?
- Requirement that discount rate cannot be greater than 50% confidence limit rate
- Bartel Associates Recommendation: select rate at 55% or 60% confidence limit

	Option 1	Option 2	Option 3
55% Confidence Limit			
Discount Rate	7.25%	6.75%	6.25%
Maximum Discount Rate	<u>7.61%</u>	<u>7.06%</u>	<u>6.39%</u>
Margin for Adverse Deviation	(0.36%)	(0.31%)	(0.14%)
60% Confidence Limit			
Discount Rate	7.00%	6.50%	6.00%
Maximum Discount Rate	<u>7.61%</u>	<u>7.06%</u>	<u>6.39%</u>
Margin for Adverse Deviation	(0.61%)	(0.56%)	(0.39%)



ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	June 30, 2011 Valuation	June 30, 2013 Valuation																																																										
■ Valuation Date	<ul style="list-style-type: none"> ■ June 30, 2011 ■ Fiscal Year 2013/14 	<ul style="list-style-type: none"> ■ June 30, 2013 ■ Fiscal Years 2014/15 & 2015/16 																																																										
■ Discount Rate	<ul style="list-style-type: none"> ■ 7.25% - pre-fund with CERBT Option 1 	<ul style="list-style-type: none"> ■ Same 																																																										
■ Aggregate Pay Increases	<ul style="list-style-type: none"> ■ 3.00% ■ Used to amortize UAAL 	<ul style="list-style-type: none"> ■ Same 																																																										
■ Medical Trend	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: left; vertical-align: bottom;"><u>Year</u></th> <th colspan="2" style="text-align: center;"><u>Increase from Prior Year</u></th> </tr> <tr> <th style="text-align: center;"><u>Non-Medicare</u></th> <th style="text-align: center;"><u>Medicare</u></th> </tr> <tr> <th colspan="3" style="text-align: center;"><u>All Plans</u></th> </tr> </thead> <tbody> <tr> <td>2011</td> <td colspan="2" style="text-align: center;">Actual 2011 Premiums</td> </tr> <tr> <td>2012</td> <td colspan="2" style="text-align: center;">Actual 2012 Premiums</td> </tr> <tr> <td>2013</td> <td style="text-align: center;">9.0%</td> <td style="text-align: center;">9.4%</td> </tr> <tr> <td>2014</td> <td style="text-align: center;">8.5%</td> <td style="text-align: center;">8.9%</td> </tr> <tr> <td>2015</td> <td style="text-align: center;">8.0%</td> <td style="text-align: center;">8.3%</td> </tr> <tr> <td>2016</td> <td style="text-align: center;">7.5%</td> <td style="text-align: center;">7.8%</td> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td>2021+</td> <td style="text-align: center;">5.0%</td> <td style="text-align: center;">5.0%</td> </tr> </tbody> </table>	<u>Year</u>	<u>Increase from Prior Year</u>		<u>Non-Medicare</u>	<u>Medicare</u>	<u>All Plans</u>			2011	Actual 2011 Premiums		2012	Actual 2012 Premiums		2013	9.0%	9.4%	2014	8.5%	8.9%	2015	8.0%	8.3%	2016	7.5%	7.8%	↓	↓	↓	2021+	5.0%	5.0%	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: left; vertical-align: bottom;"><u>Year</u></th> <th colspan="2" style="text-align: center;"><u>Increase from Prior Year</u></th> </tr> <tr> <th style="text-align: center;"><u>Non-Medicare</u></th> <th style="text-align: center;"><u>Medicare</u></th> </tr> <tr> <th colspan="3" style="text-align: center;"><u>All Plans</u></th> </tr> </thead> <tbody> <tr> <td>2013</td> <td colspan="2" style="text-align: center;">Actual 2013 Premiums</td> </tr> <tr> <td>2014</td> <td colspan="2" style="text-align: center;">Actual 2014 Premiums</td> </tr> <tr> <td>2015</td> <td style="text-align: center;">8.0%</td> <td style="text-align: center;">8.3%</td> </tr> <tr> <td>2016</td> <td style="text-align: center;">7.5%</td> <td style="text-align: center;">7.8%</td> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td>2021+</td> <td style="text-align: center;">5.0%</td> <td style="text-align: center;">5.0%</td> </tr> </tbody> </table>	<u>Year</u>	<u>Increase from Prior Year</u>		<u>Non-Medicare</u>	<u>Medicare</u>	<u>All Plans</u>			2013	Actual 2013 Premiums		2014	Actual 2014 Premiums		2015	8.0%	8.3%	2016	7.5%	7.8%	↓	↓	↓	2021+	5.0%	5.0%
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ACTUARIAL METHODS

Method	June 30, 2011 Valuation	June 30, 2013 Valuation
■ Cost Method	<ul style="list-style-type: none"> ■ Entry Age Normal 	<ul style="list-style-type: none"> ■ Same
■ Funding Policy	<ul style="list-style-type: none"> ■ Pre-funding with CERBT: <ul style="list-style-type: none"> • \$40 million in 2013/14 • Full ARC thereafter 	<ul style="list-style-type: none"> ■ Same
■ Amortization Method	<ul style="list-style-type: none"> ■ Level percent of payroll 	<ul style="list-style-type: none"> ■ Same
■ Amortization Period	<ul style="list-style-type: none"> ■ 24 year fresh start (closed) amortization of 6/30/13 UAAL 	<ul style="list-style-type: none"> ■ 23 years (closed) – amortization of 6/30/14 UAAL ■ 15 years (closed) – future gains/losses
■ Implied Subsidy	<ul style="list-style-type: none"> ■ Employer cost for allowing non-Medicare eligible retirees to participate at active rates ■ Community rated plans are not required to value an implied subsidy ■ PEMHCA is, for most employers, community rated ■ ASOP #6 Draft – removes community rating exception ■ Implied subsidy not included in valuation results but sensitivity for PEMHCA implied subsidy shown 	



ASSETS

Market Value of Plan Assets (MVA)

(Amounts in 000's)

	Projected 2013/14
■ MVA (Beginning of Year)	\$ -
• Contributions	40,000 ⁵
• Benefit Payments	-
• Investment Earnings	<u>2,209⁶</u>
■ MVA (End of Year)	42,209
■ Projected Annual Return	7.25%

⁵ District contributed \$40 million into CERBT on 9/25/13.

⁶ Estimated based on valuation investment return assumption of 7.25%.



ASSETS

Actuarial Value of Plan Assets (AVA)

(Amounts in 000's)

	2013/14
■ Actuarial Value at Beginning of Year	\$ -
• Contributions	40,000
• Benefit Payments	-
• Expected Earnings (Net of expenses)	2,209
■ Expected AVA at End of Year	42,209
■ Estimated Market Value at End of Year	42,209
■ MVA - Expected AVA	-
■ 1/5 of (MVA - Expected AVA)	-
■ Preliminary AVA	42,209
■ Minimum AVA (80% of MVA)	33,767
■ Maximum AVA (120% of MVA)	50,651
■ Actuarial Value at End Year	42,209
■ Projected Annual Return	7.25%



RESULTS

Actuarial Obligations

7.25% Discount Rate

(Amounts in 000's)

	1/1/11 Valuation	6/30/11 Valuation	6/30/13 Valuation	
			6/30/13	Projected 6/30/14
■ Discount Rate	4.5%	7.25%	7.25%	7.25%
■ PVPB				
• Actives	\$ 471,344	\$ 264,938	\$ 215,832	
• Retirees	<u>246,208</u>	<u>175,921</u>	<u>157,781</u>	
• Total	717,552	440,859	373,613	
■ AAL				
• Actives	299,268	191,798	157,545	
• Retirees	<u>246,208</u>	<u>175,921</u>	<u>157,781</u>	
• Total	545,476	367,719	315,326	\$ 333,112
■ Assets	-	-	-	<u>42,209</u>
■ Unfunded AAL	545,476	367,719	315,326	290,903
■ Normal Cost	20,543	11,377	n/a	9,036
■ Pay-As-You-Go	13,344	16,851	13,372	14,343



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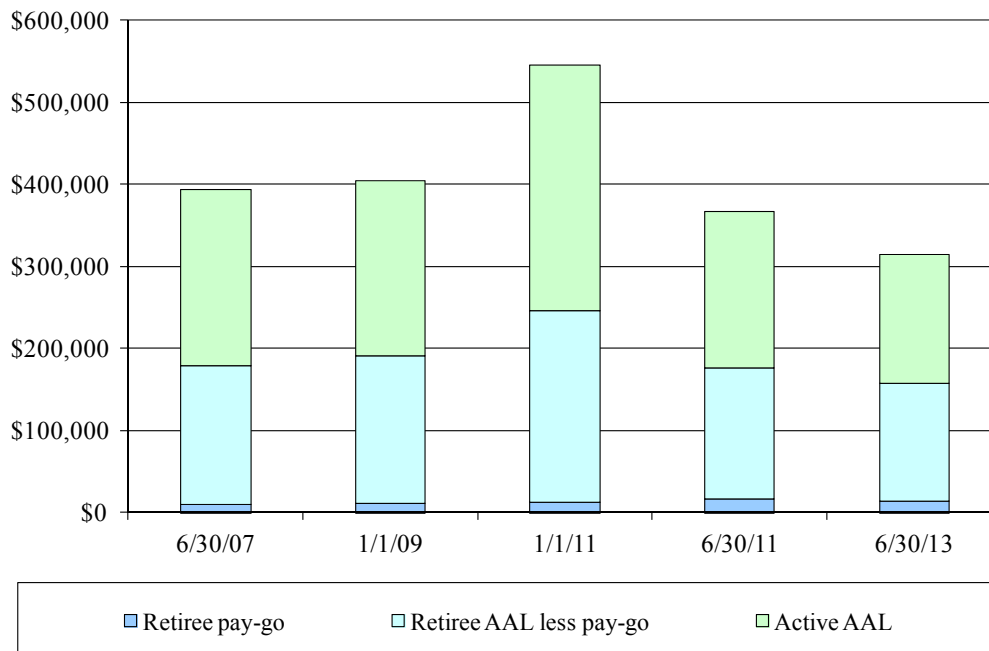
13



RESULTS

Historical Actuarial Accrued Liability

(Amounts in 000's)



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RESULTS

Actuarial Gains & Losses

(Amounts in 000's)

	NC%	AAL	AVA	UAAL
■ 6/30/11 Actual	5.9%	\$367,719	\$ -	\$367,719
■ 6/30/13 Projected	5.9%	416,964	-	416,964
■ 6/30/14 Expected	5.9%	440,982	42,209	398,773
■ (Gains)/Losses:				
● Actual premiums less than expected	(1.2%)	(93,784)	-	(93,784)
● Liability load removed	(0.1%)	(9,233)	-	(9,233)
● Demographic & other	(0.1%)	(4,853)	-	(4,853)
● Actual payroll lower than expected	0.3%	-	-	-
● Total (gains)/losses	(1.1%)	(107,870)	-	(107,870)
■ 6/30/14 Projected	4.8%	333,112	42,209	290,903



RESULTS

Schedule of Funding Progress

(Amounts in 000's)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as Percentage of Covered Payroll ((b-a)/c)
6/30/07	\$ 0	\$ 393,476	\$ 393,476	0.0%	\$ 170,059	231.4%
1/01/09	0	404,172	404,172	0.0%	192,816	209.6%
1/01/11	0	545,476	545,476	0.0%	187,368	291.1%
6/30/11	0	367,719	367,719	0.0%	179,242 ⁷	205.2%
6/30/13	0	315,326	315,326	0.0%	182,937 ⁷	172.4%

⁷ Estimated covered payroll based on valuation census data. Actual covered payroll should be used in financial statement.



RESULTS

Annual Required Contribution (ARC)

(Amounts in 000's)

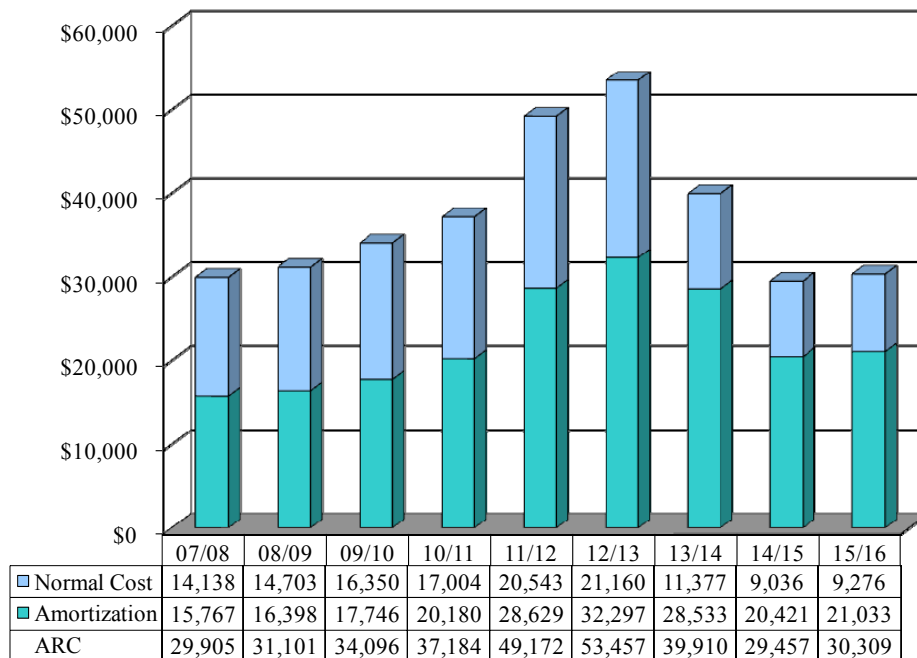
	1/1/11 Valuation		6/30/11 Val	6/30/13 Valuation	
	2011/12	2012/13	2013/14	2014/15	2015/16
■ Discount Rate	4.5%	4.5%	7.25%	7.25%	7.25%
■ ARC - \$					
• Normal Cost	\$20,543	\$21,160	\$ 11,377	\$ 9,036	\$ 9,276
• UAAL Amortization	<u>28,629</u>	<u>32,297</u>	<u>28,533</u>	<u>20,421</u>	<u>21,033</u>
• ARC (End of Year)	49,172	53,457	39,910	29,457	30,309
■ Projected Total Payroll	181,911	187,368	192,989	188,137	193,781
■ ARC - % Total Payroll					
• Normal Cost	11.3%	11.3%	5.9%	4.8%	4.8%
• UAAL Amortization	<u>15.7%</u>	<u>17.2%</u>	<u>14.8%</u>	<u>10.9%</u>	<u>10.9%</u>
• ARC	27.0%	28.5%	20.7%	15.7%	15.7%
■ Average Amort. Period	24.1	22.3	24.0	23.0	22.0



RESULTS

Historical Annual Required Contributions

(Amounts in 000's)



RESULTS

Estimated Net OPEB Obligation (NOO)

Full ARC Pre-Funding

(Amounts in 000's)

	1/1/11 Valuation		6/30/11 Val	6/30/13 Valuation	
	2011/12	2012/13	Est. 2013/14	Est. 2014/15	Est. 2015/16
■ Discount Rate	4.5%	4.5%	7.25%	7.25%	7.25%
■ NOO Beginning of Year	\$128,903	\$161,222	\$196,349	\$183,686	\$184,109
■ Annual OPEB Cost					
• ARC	49,200	53,457	39,910	29,457	30,309
• Interest on NOO	5,800	7,255	14,235	13,317	13,348
• Amortization of NOO	(9,917)	(12,404)	(13,436)	(12,894)	(13,281)
• Annual OPEB Cost	45,083	48,308	40,709	29,880	30,376
■ Contributions					
• Benefit Payments	12,764	13,181	13,372	14,343	16,252
• Trust Pre-Funding	-	-	40,000	15,114	14,057
• Total Contribution	12,764	13,181	53,372	29,457	30,309
■ NOO End of Year	161,222	196,349	183,686	184,109	184,176
■ Amortization Factor	12.9978	12.9978	14.6134	14.2455	13.8625



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RESULTS

10-Year Projection Illustration

Full ARC Pre-Funding

(Amounts in 000's)

FYE June 30,	Beginning of Year Net OPEB Obligation	ARC ⁸	Annual OPEB Cost (AOC)	Contribution			Payroll	ARC as % of Payroll	BOY UAAL
				Benefit Pmts	Pre- Fund	Total Contrib			
2015	\$183,686	\$29,457	\$29,880	\$14,343	\$15,114	\$29,457	\$188,137	15.7%	\$290,903
2016	184,109	30,309	30,376	16,252	14,057	30,309	193,781	15.6%	291,573
2017	184,176	31,149	30,822	18,237	12,912	31,149	199,594	15.6%	291,678
2018	183,849	32,015	31,254	20,168	11,847	32,015	205,582	15.6%	291,161
2019	183,088	32,907	31,668	21,839	11,068	32,907	211,750	15.5%	289,956
2020	181,850	33,826	32,062	23,588	10,238	33,826	218,102	15.5%	287,994
2021	180,086	34,775	32,435	25,154	9,621	34,775	224,645	15.5%	285,200
2022	177,745	35,755	32,783	26,566	9,189	35,755	231,384	15.5%	281,494
2023	174,774	36,766	33,103	27,989	8,777	36,766	238,326	15.4%	276,788
2024	171,110	37,807	33,389	29,391	8,416	37,807	245,476	15.4%	270,987

⁸ ARC projection reflects vesting schedule for new entrants.



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RESULTS

Estimated Net OPEB Obligation (NOO)

ARC + \$100 Million Pre-Funding Contribution in 2014/15

(Amounts in 000's)

	1/1/11 Valuation		6/30/11 Val	6/30/13 Valuation	
	2011/12	2012/13	Est. 2013/14	Est. 2014/15	Est. 2015/16
■ Discount Rate	4.5%	4.5%	7.25%	7.25%	7.25%
■ NOO Beginning of Year	\$128,903	\$161,222	\$196,349	\$183,686	\$84,109
■ Annual OPEB Cost					
• ARC	49,200	53,457	39,910	29,457	23,096
• Interest on NOO	5,800	7,255	14,235	13,317	6,098
• Amortization of NOO	(9,917)	(12,404)	(13,436)	(12,894)	(6,067)
• Annual OPEB Cost	45,083	48,308	40,709	29,880	23,126
■ Contributions					
• Benefit Payments	12,764	13,181	13,372	14,343	16,252
• Trust Pre-Funding	-	-	40,000	115,114	6,844
• Total Contribution	12,764	13,181	53,372	129,457	23,096
■ NOO End of Year	161,222	196,349	183,686	84,109	84,140
■ Amortization Factor	12.9978	12.9978	14.6134	14.2455	13.8625



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RESULTS

10-Year Projection Illustration

ARC + \$100 Million Pre-Funding Contribution in 2014/15

(Amounts in 000's)

FYE June 30,	Beginning of Year Net OPEB Obligation	ARC ⁹	Annual OPEB Cost (AOC)	Contribution			Payroll	ARC as % of Payroll	BOY UAAL
				Benefit Pmts	Pre- Fund	Total Contrib			
2015	\$183,686	\$29,457	\$29,880	\$14,343	\$115,114	\$129,457	\$188,137	15.7%	\$290,903
2016	84,109	23,096	23,126	16,252	6,844	23,096	193,781	11.9%	191,573
2017	84,140	23,718	23,569	18,237	5,481	23,718	199,594	11.9%	191,642
2018	83,990	24,362	24,015	20,168	4,194	24,362	205,582	11.9%	191,302
2019	83,643	25,024	24,458	21,839	3,185	25,024	211,750	11.8%	190,510
2020	83,077	25,707	24,901	23,588	2,119	25,707	218,102	11.8%	189,221
2021	82,271	26,413	25,343	25,154	1,259	26,413	224,645	11.8%	187,386
2022	81,202	27,141	25,783	26,566	575	27,141	231,384	11.7%	184,951
2023	79,844	27,894	26,220	27,989	(95)	27,894	238,326	11.7%	181,858
2024	78,171	28,669	26,651	29,391	(722)	28,669	245,476	11.7%	178,047

⁹ ARC projection reflects vesting schedule for new entrants.



February 6, 2014



RESULTS

PEMHCA Implied Subsidy Sensitivity

Actuarial Obligations

(Amounts in 000's)

	Current Valuation	Including Implied Subsidy
■ PVPB 6/30/13		
• Actives	\$ 215,832	\$ 254,868
• Retirees	<u>157,781</u>	<u>203,112</u>
• Total	373,613	457,980
■ AAL 6/30/13		
• Actives	157,545	186,673
• Retirees	<u>157,781</u>	<u>203,112</u>
• Total	315,326	389,785
■ AAL Proj. to 6/30/14	333,112	410,604
■ Assets Proj. to 6/30/14	<u>42,209</u>	<u>42,209</u>
■ Unfunded AAL 6/30/14	290,903	368,394
■ Normal Cost 14/15	9,036	10,582
■ Pay-As-You-Go 14/15	14,343	18,260



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RESULTS

PEMHCA Implied Subsidy Sensitivity

Annual Required Contribution – Fiscal Year 2014/15

(Amounts in 000's)

	Current Valuation	Including Implied Subsidy
■ ARC - \$		
• Normal Cost	\$ 9,036	\$ 10,582
• UAAL Amortization	<u>20,421</u>	<u>25,860</u>
• ARC (End of Year)	29,457	36,442
■ Projected Total Payroll	188,137	188,137
■ ARC - % Total Payroll		
• Normal Cost	4.8%	5.6%
• UAAL Amortization	<u>10.9%</u>	<u>13.7%</u>
• ARC	15.7%	19.4%
■ Amortization Period	23.0	23.0



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ACTUARIAL CERTIFICATION

This report presents the Metropolitan Water District of Southern California Retiree Healthcare Plan ("Plan") June 30, 2013 actuarial valuation. The purpose of this valuation is to:

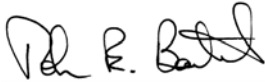
- Determine the Governmental Accounting Standards Board Statement Nos. 43 and 45 June 30, 2013 Benefit Obligations,
- Determine the Plan's June 30, 2013 Funded Status, and
- Calculate the 2014/15 and 2015/16 Annual Required Contributions.

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 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.

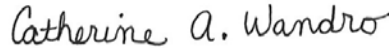
The valuation is based on Plan provisions, participant data, and asset information provided by the District as summarized in this report, which we relied on and did not audit. We reviewed the participant data for reasonableness.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. 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
February 6, 2014



Catherine A. Wandro, ASA, MAAA, FCA
Assistant Vice President
Bartel Associates, LLC
February 6, 2014



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EXHIBITS

<u>Topic</u>	<u>Page</u>
Premiums	E- 1
Data Summary	E- 6
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PREMIUMS

2013 Monthly PEMHCA Premiums
Los Angeles Area

Medical Plan	Non Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Blue Shield	\$530.75	\$1,061.50	\$1,379.95	\$261.32	\$522.64	\$783.96
Blue Shield NetValue	453.35	906.70	1,178.71	261.32	522.64	783.96
Kaiser	502.40	1,004.80	1,306.24	288.37	576.74	865.11
PERS Choice	587.46	1,174.92	1,527.40	325.74	651.48	977.22
PERS Select	429.08	858.16	1,115.61	325.74	651.48	977.22
PERSCare	953.90	1,907.80	2,480.14	370.43	740.86	1,111.29



PREMIUMS

2013 Monthly PEMHCA Premiums
Other Southern California

Medical Plan	Non Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Blue Shield	\$643.93	\$1,287.86	\$1,674.22	\$261.32	\$522.64	\$783.96
Blue Shield NetValue	550.03	1,100.06	1,430.08	261.32	522.64	783.96
Kaiser	558.95	1,117.90	1,453.27	288.37	576.74	865.11
PERS Choice	611.30	1,222.60	1,589.38	325.74	651.48	977.22
PERS Select	446.49	892.98	1,160.87	325.74	651.48	977.22
PERSCare	992.61	1,985.22	2,580.79	370.43	740.86	1,111.29



PREMIUMS

2014 PEMHCA Premiums

Los Angeles Area

Plan	Non Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Anthem Select	\$475.86	\$951.72	\$1,237.24	\$341.12	\$682.24	\$1,023.36
Anthem Traditional	549.76	1,099.52	1,429.38	341.12	682.24	1,023.36
Blue Shield	469.91	939.82	1,221.77	298.21	596.42	894.63
Blue Shield NetValue	395.50	791.00	1,028.30	298.21	596.42	894.63
Health Net Salud y Mas	425.44	850.88	1,106.14	261.24	522.48	783.72
Health Net SmartCare	542.71	1,085.42	1,411.05	261.24	522.48	783.72
Kaiser	541.79	1,083.58	1,408.65	294.97	589.94	884.91
UnitedHealthcare	487.76	975.52	1,268.18	193.33	386.66	579.99
PERS Choice	599.19	1,198.38	1,557.89	307.23	614.46	921.69
PERS Select	573.83	1,147.66	1,491.96	307.23	614.46	921.69
PERSCare	624.59	1,249.18	1,623.93	327.36	654.72	982.08



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PREMIUMS

2014 Monthly PEMHCA Premiums

Other Southern California

Plan	Non Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Anthem Select	\$536.99	\$1,073.98	\$1,396.17	\$341.12	\$682.24	\$1,023.36
Anthem Traditional	592.20	1,184.40	1,539.72	341.12	682.24	1,023.36
Blue Shield	543.21	1,086.42	1,412.35	298.21	596.42	894.63
Blue Shield NetValue	457.17	914.34	1,188.64	298.21	596.42	894.63
Health Net Salud y Mas	489.82	979.64	1,273.53	261.24	522.48	783.72
Health Net SmartCare	568.51	1,137.02	1,478.13	261.24	522.48	783.72
Kaiser	602.79	1,205.58	1,567.25	294.97	589.94	884.91
Sharp	538.59	1,077.18	1,400.33	306.51	613.02	919.53
UnitedHealthcare	521.01	1,042.02	1,354.63	193.33	386.66	579.99
PERS Choice	612.25	1,224.50	1,591.85	307.23	614.46	921.69
PERS Select	586.32	1,172.64	1,524.43	307.23	614.46	921.69
PERSCare	638.22	1,276.44	1,659.37	327.36	654.72	982.08



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PREMIUMS

2013 & 2014 State 100/90 Monthly Contribution
Pre/Post Medicare

Year	Single	2-Party	Family
2013	\$622.00	\$1,183.00	\$1,515.00
2014	642.00	1,218.00	1,559.00



DATA SUMMARY

Current Active Medical Coverage

Medical Plan	Region	Single	2-Party	Family	Total	Plan Total
Blue Shield	Bay Area	-	-	1	1	494
	Los Angeles	50	65	215	330	
	Sacramento	1	-	4	5	
	Southern CA	14	34	110	158	
Blue Shield NetValue	Los Angeles	1	-	3	4	6
	Southern CA	-	1	1	2	
Kaiser	Bay Area	-	-	1	1	511
	Los Angeles	71	99	191	361	
	Sacramento	3	1	2	6	
	Southern CA	12	40	91	143	
PERS Choice	Los Angeles	82	117	237	436	658
	Out of State	20	24	41	85	
	Sacramento	-	-	1	1	
	Southern CA	25	42	69	136	
PERSCare	Bay Area	-	-	1	1	15
	Los Angeles	6	2	1	9	
	Southern CA	3	2	-	5	
Waived		-	-	-	62	1,684
Total		288	427	969	1,746	



DATA SUMMARY

Current Retiree Medical Coverage – Pre 65

Medical Plan	Region	Single	2-Party	Family	Total	Plan Total
Blue Shield	Bay Area	-	1	2	3	78
	Los Angeles	9	20	14	43	
	Sacramento	1	-	-	1	
	Southern CA	6	14	11	31	
Blue Shield NetValue	Los Angeles	1	2	-	3	6
	Southern CA	1	2	-	3	
Kaiser	Bay Area	-	-	1	1	142
	Los Angeles	31	37	17	85	
	Out of State	2	4	-	6	
	Sacramento	1	2	1	4	
	Southern CA	18	17	11	46	
PERS Choice	Los Angeles	23	23	18	64	175
	Northern CA	3	2	-	5	
	Out of State	18	40	18	76	
	Southern CA	7	17	6	30	
PERSCare	Los Angeles	9	8	3	20	30
	Out of State	3	2	-	5	
	Southern CA	1	3	1	5	
Waived		-	-	-	33	431
Total		134	194	103	464	



DATA SUMMARY

Current Retiree Medical Coverage – Post 65

Medical Plan	Region	Single	2-Party	Family	Total	Plan Total
Blue Shield	Bay Area	-	1	-	1	72
	Los Angeles	16	26	-	42	
	Northern CA	1	-	-	1	
	Sacramento	1	-	-	1	
	Southern CA	15	11	1	27	
Blue Shield NetValue	Los Angeles	1	1	-	2	5
	Southern CA	1	1	1	3	
Kaiser	Los Angeles	92	96	3	191	320
	Out of State	3	5	-	8	
	Sacramento	1	1	-	2	
	Southern CA	45	70	4	119	
PERS Choice	Bay Area	1	-	-	1	210
	Los Angeles	19	29	2	50	
	Out of State	46	73	7	126	
	Sacramento	1	-	-	1	
	Southern CA	9	20	3	32	
PERS Select	Los Angeles	-	1	-	1	3
	Southern CA	2	-	-	2	
PERSCare	Bay Area	4	1	-	5	428
	Los Angeles	78	76	-	154	
	Northern CA	2	5	-	7	
	Out of State	87	72	1	160	
	Sacramento	1	3	-	4	
	Southern CA	51	46	1	98	
Waived		-	-	-	77	1,038
Total		477	538	23	1,115	



DATA SUMMARY

Medical Plan Participation
Non-Waived Participants

Medical Plan	Actives	Retirees		
		< 65	≥ 65	Total
Blue Shield	29%	18%	7%	10%
Blue Shield NetValue	0%	1%	1%	1%
Kaiser	30%	33%	31%	31%
PERS Choice	39%	40%	21%	26%
PERS Select	0%	0%	0%	0%
PERSCare	1%	7%	41%	31%
Total	100%	100%	100%	100%



DATA SUMMARY

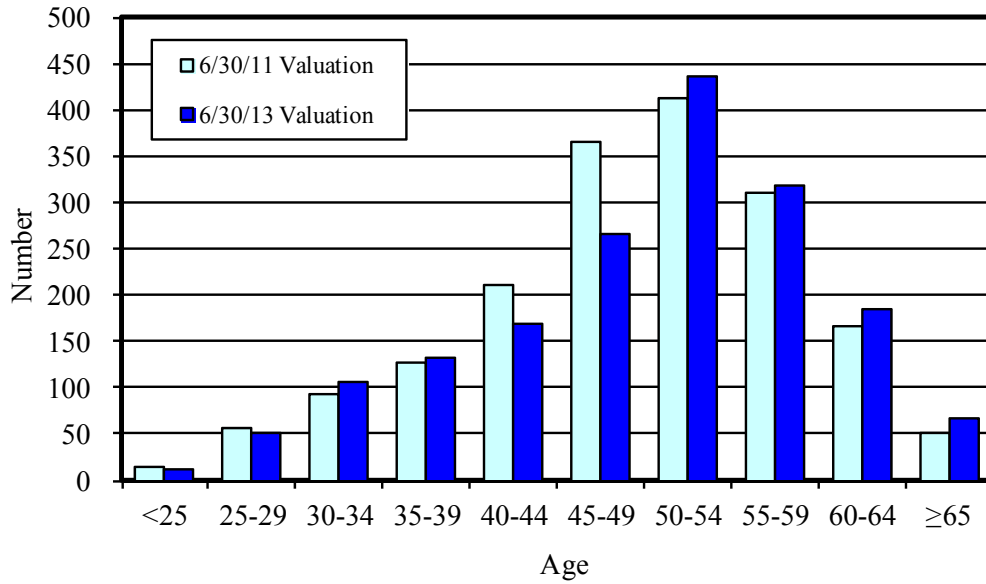
Actives by Age and Service

Age	City Service							Total
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	
< 25	5	8	-	-	-	-	-	13
25-29	14	25	13	-	-	-	-	52
30-34	20	33	51	2	-	-	-	106
35-39	12	24	62	14	18	1	-	131
40-44	7	26	60	21	28	27	-	169
45-49	13	17	63	30	38	95	11	267
50-54	6	15	62	52	63	151	88	437
55-59	2	5	34	24	45	113	96	319
60-64	-	2	29	19	30	59	45	184
≥ 65	1	-	6	4	15	25	17	68
Total	80	155	380	166	237	471	257	1,746



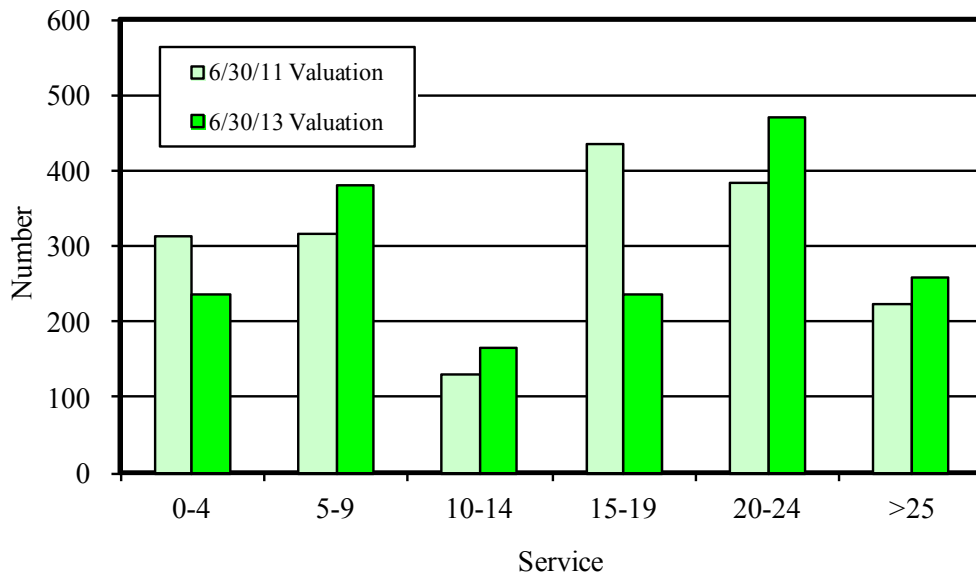
DATA SUMMARY

Active Age Distribution



DATA SUMMARY

Active Service Distribution



DATA SUMMARY

Retiree Medical Plan Coverage by Age

Age	Single	2-Party	Family	Waived	Total
Under 50	1	2	8	-	11
50-54	9	13	12	6	40
55-59	41	56	43	9	149
60-64	83	123	40	18	264
65-69	100	194	11	20	325
70-74	110	141	11	16	278
75-80	84	109	1	14	208
80-85	77	59	-	16	152
85 & Over	106	35	-	11	152
Total	611	732	126	110	1,579
Average Age	74.0	70.3	60.4	71.7	71.0



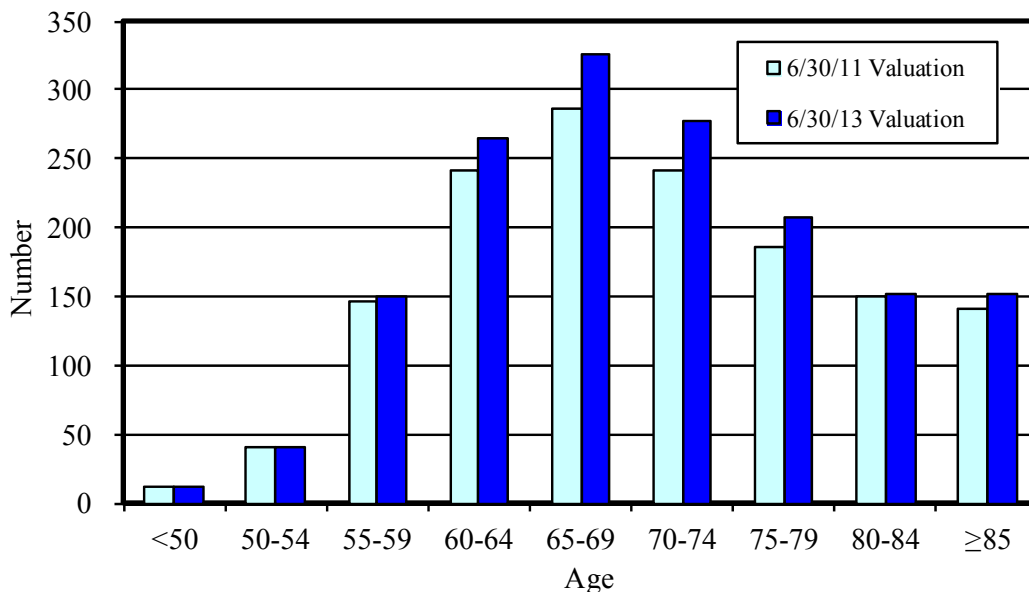
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DATA SUMMARY

Retiree Age Distribution



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ACTUARIAL ASSUMPTIONS

	June 30, 2011 Valuation	June 30, 2013 Valuation
■ Valuation Date	■ June 30, 2011 ■ Fiscal Year 2013/14	■ June 30, 2013 ■ Fiscal Years 2014/15 & 2015/16
■ Discount Rate	■ 7.25% - pre-fund with CERBT Option 1	■ Same
■ General Inflation	■ 3.00%	■ Same
■ Aggregate Payroll Increases	■ 3.00% ■ Used to amortize UAAL	■ Same
■ Merit & Longevity Pay Increases	■ CalPERS 1997-2007 Experience Study	■ Same
■ Liability Load	■ Liabilities increase by 1/3 of medical premium gain	■ No Load



ACTUARIAL ASSUMPTIONS

	June 30, 2011 Valuation	June 30, 2013 Valuation
■ Mortality, Termination, Disability	■ CalPERS 1997-2007 Experience Study ■ Mortality Improvement Projection Table AA	■ Same
■ Retirement	■ CalPERS 1997-2007 Experience Study <u>Misc</u> Level 2%@55 ERA 59.5	■ Same



ACTUARIAL ASSUMPTIONS

	June 30, 2011 Valuation			June 30, 2013 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>All Plans</u>		<u>Year</u>	<u>All Plans</u>	
	2011	Actual 2011 Premiums		2013	Actual 2013 Premiums	
	2012	Actual 2012 Premiums		2014	Actual 2014 Premiums	
	2013	9.0%	9.4%	2015	8.0%	8.3%
	2014	8.5%	8.9%	2016	7.5%	7.8%
	2015	8.0%	8.3%	2017	7.0%	7.2%
	2016	7.5%	7.8%	2018	6.5%	6.7%
	2017	7.0%	7.2%	2019	6.0%	6.1%
	2018	6.5%	6.7%	2020	5.5%	5.6%
	2019	6.0%	6.1%	2021+	5.0%	5.0%
	2020	5.5%	5.6%			
2021+	5.0%	5.0%				



ACTUARIAL ASSUMPTIONS

	June 30, 2011 Valuation			June 30, 2013 Valuation																																						
■ Medical Plan at Retirement	<ul style="list-style-type: none"> ■ Based on current experience ● Current retirees > 65 – no change to medical plan ● Current retirees < 65 – use post 65 assumption below when retiree attains age 65 ● Current Actives: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Plan</th> <th>Pre 65</th> <th>Post 65</th> </tr> </thead> <tbody> <tr> <td>Blue Shield</td> <td style="text-align:center">15%</td> <td style="text-align:center">5%</td> </tr> <tr> <td>BS NetValue</td> <td style="text-align:center">5%</td> <td style="text-align:center">0%</td> </tr> <tr> <td>Kaiser</td> <td style="text-align:center">30%</td> <td style="text-align:center">30%</td> </tr> <tr> <td>PERS Choice</td> <td style="text-align:center">35%</td> <td style="text-align:center">15%</td> </tr> <tr> <td>PERSCare</td> <td style="text-align:center">15%</td> <td style="text-align:center">50%</td> </tr> </tbody> </table> 			Plan	Pre 65	Post 65	Blue Shield	15%	5%	BS NetValue	5%	0%	Kaiser	30%	30%	PERS Choice	35%	15%	PERSCare	15%	50%	<ul style="list-style-type: none"> ■ Based on current experience ● Current retirees > 65 – no change to medical plan ● Current retirees < 65 – use post 65 assumption below when retiree attains age 65 ● Current Actives: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Plan</th> <th>Pre 65</th> <th>Post 65</th> </tr> </thead> <tbody> <tr> <td>Blue Shield</td> <td style="text-align:center">20%</td> <td style="text-align:center">10%</td> </tr> <tr> <td>BS NetValue</td> <td style="text-align:center">0%</td> <td style="text-align:center">0%</td> </tr> <tr> <td>Kaiser</td> <td style="text-align:center">35%</td> <td style="text-align:center">30%</td> </tr> <tr> <td>PERS Choice</td> <td style="text-align:center">40%</td> <td style="text-align:center">20%</td> </tr> <tr> <td>PERSCare</td> <td style="text-align:center">5%</td> <td style="text-align:center">40%</td> </tr> </tbody> </table> 			Plan	Pre 65	Post 65	Blue Shield	20%	10%	BS NetValue	0%	0%	Kaiser	35%	30%	PERS Choice	40%	20%	PERSCare	5%	40%
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ACTUARIAL ASSUMPTIONS

	June 30, 2011 Valuation	June 30, 2013 Valuation
■ Participation at Retirement	<ul style="list-style-type: none"> ■ Currently covered: 100% ■ Currently waived: 90% 	■ Same
■ Medicare Eligible Rate	<ul style="list-style-type: none"> ■ Pre 4/1/86 hires: 90% ■ Post 4/1/86 hires: 100% ■ Everyone eligible for Medicare will elect Part B coverage 	■ Same
■ Marital Status at Retirement	<ul style="list-style-type: none"> ■ Actives: <ul style="list-style-type: none"> • Currently covered: current marital status • Not currently covered: 80% married ■ Retirees: current marital status 	■ Same
■ Dependents at Retirement	<ul style="list-style-type: none"> ■ 20% elect family coverage at retirement until age 65 	■ Same



ACTUARIAL ASSUMPTIONS

	June 30, 2011 Valuation	June 30, 2013 Valuation
■ 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 not available 	■ Same
■ Surviving Spouse Participation	<ul style="list-style-type: none"> ■ 100% 	■ Same
■ Waived Retiree Re-Election	<ul style="list-style-type: none"> ■ Pre 65: 20% re-elect at age 65 ■ Post 65: 0% 	■ Same
■ Future New Participants	<ul style="list-style-type: none"> ■ None – Closed Group 	■ Same



DEFINITIONS

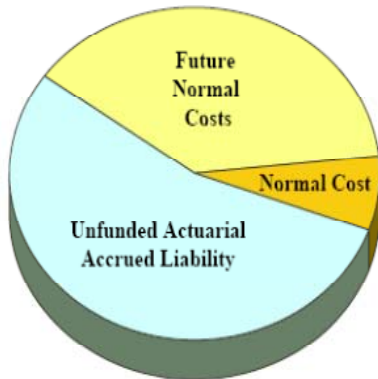
<p>■ GASB 45 Accrual Accounting</p>	<ul style="list-style-type: none"> • Project future employer-provided benefit cash flow for current active employees and current retirees • Discount projected cash flow to valuation date using discount rate and actuarial assumptions to determine present value of benefits (PVB) • Discount rate is expected long-term return on plan assets • Allocate PVB to past, current, and future periods • Normal Cost is portion of PVB allocated to current fiscal year • Actuarial cost method used for valuation is Entry Age Normal Cost method which determines Normal Cost as a level percent of payroll • Actuarial Accrued Liability (AAL) is portion of PVB allocated to prior service with the employer • Unfunded AAL (UAAL) is AAL less Plan Assets • Assets must be in segregated and restricted trust to be considered Plan Assets for GASB 45
<p>■ PayGo Cost</p>	<ul style="list-style-type: none"> • Cash subsidy is employer pay-as-you-go benefit payments for retirees • Implied subsidy is difference between actual cost of retiree benefits and retiree premiums subsidized by active employee premiums



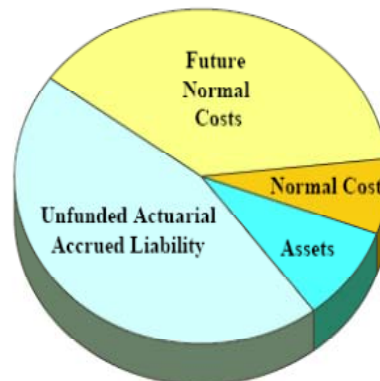
DEFINITIONS

Present Value of Benefits

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



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



DEFINITIONS

<p>■ Annual Required Contribution (ARC)</p>	<ul style="list-style-type: none">● GASB 45 contribution is Normal Cost plus amortization of:<ul style="list-style-type: none">➢ Initial UAAL and AAL for plan, assumption, and method changes➢ Experience gains and losses (difference between actual experience and that expected from assumptions)➢ Contribution gains and losses (difference between ARC and actual contributions)
<p>■ Net OPEB Obligation (NOO)</p>	<ul style="list-style-type: none">● NOO is accumulated amounts expensed but not funded● Net OPEB Asset if amounts funded exceed those expensed
<p>■ Annual OPEB Cost (AOC)</p>	<ul style="list-style-type: none">● Expense for current period including:<ul style="list-style-type: none">➢ ARC➢ Interest on NOO➢ Adjustment of NOO● Adjustment of NOO prevents double counting of expense since ARCs include amortization of prior contribution gains and losses previously expensed

