



BARTEL
ASSOCIATES, LLC

COUNTY OF HUMBOLDT
MISCELLANEOUS AND SAFETY PLANS

CalPERS Actuarial Issues – 6/30/14 Valuation
Preliminary Results

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Bartel Associates, LLC

June 1, 2016

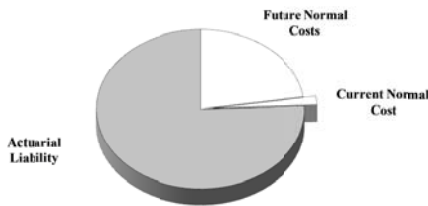
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DEFINITIONS

Present Value of Benefits
June 30, 2014



■ PVB - Present Value of all Projected Benefits:

- Discounted value (at valuation date - 6/30/14), of all future expected benefit payments based on various (actuarial) assumptions

■ Actuarial Liability:

- Discounted value (at valuation date) of benefits earned through valuation date [value of past service benefit]
- Portion of PVB “earned” at measurement

■ Current Normal Cost:

- Portion of PVB allocated to (or “earned” during) current year
- Value of employee and employer current service benefit



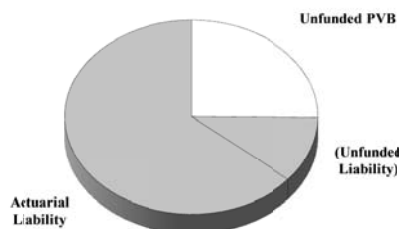
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DEFINITIONS

Present Value of Benefits
June 30, 2014



■ Target- Have money in the bank to cover Actuarial Liability (past service)

■ Unfunded Liability - Money short of target at valuation date

■ Excess Assets / Surplus:

- Money over and above target at that point in time.
- Doesn't mean you're done contributing.

■ Super Funded:

- Assets cover whole pie (PVB)
- If everything goes exactly like PERS calculated, you'll never have to put another (employer or employee) dime in.



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CALPERS CHANGES

- Contribution policy changes:
 - No asset smoothing
 - No rolling amortization
 - 5-year ramp up
 - Included in 6/30/13 valuation (first impact 15/16 rates; full impact 19/20)
- Assumption changes:
 - Anticipate future mortality improvement
 - Other, less significant, changes
 - Included in 6/30/14 valuation (first impact 16/17 rates; full impact 20/21)
- Risk Mitigation Strategy
 - Move to more conservative investments over time
 - Only when investment return is better than expected
 - Lower discount rate in concert
 - Essentially use $\approx 50\%$ of investment gains to pay for cost increases
 - Likely get to 6.5% over ≈ 20 years



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CALPERS CHANGES

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SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS

	1995	2004	2013	2014
Actives				
■ Counts	1,254	1,549	1,631	1,663
■ Average				
• Age	44	48	47	47
• County Service	9	9	9	9
• PERSable Wages	\$27,200	\$39,000	\$49,800	\$50,500
■ Total PERSable Wages (millions)	37.3	66.6	88.8	91.8
Receiving Payments				
■ Counts				
• Service		802	1,442	1,504
• Disability		110	113	113
• Beneficiaries		113	137	139
• Total	791	1,025	1,692	1,756
■ Average Annual County Provided Benefit ¹				
• Service		\$12,900	\$19,500	\$20,500
• Disability		9,900	6,900	7,100
• Service Retirements in last 5 years		16,300	21,100	21,600

¹ Average County provided pensions are based on County service & County benefit formula, and are not representative of benefits for long service employees.

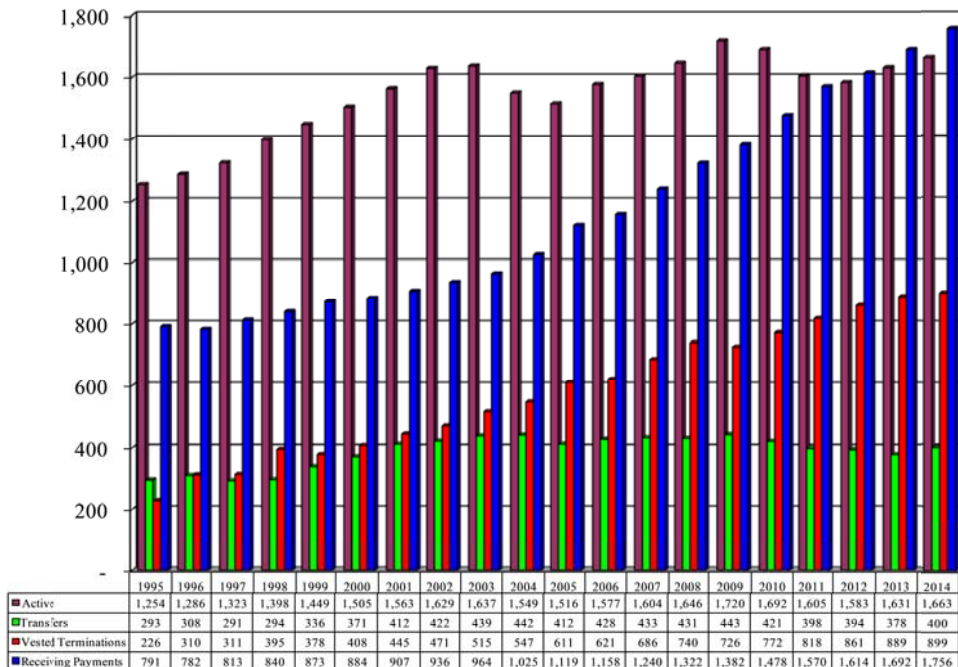


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MEMBERS INCLUDED IN VALUATION - MISCELLANEOUS



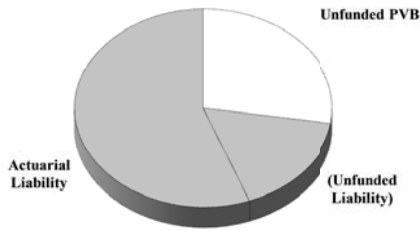
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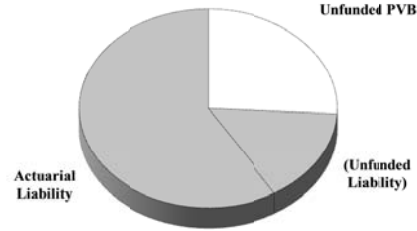


PLAN FUNDED STATUS - MISCELLANEOUS

Present Value of Benefits
June 30, 2013



Present Value of Benefits
June 30, 2014



<u>June 30, 2013</u>		<u>June 30, 2014</u>
\$ 214,900,000	Active AAL	\$ 236,700,000
306,500,000	Retiree AAL	342,400,000
<u>38,800,000</u>	Inactive AAL	<u>39,100,000</u>
560,200,000	Total AAL	618,200,000
<u>391,000,000</u>	Market Asset Value	<u>455,600,000</u>
(169,200,000)	(Unfunded Liability)	(162,600,000)



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PLAN FUNDED STATUS - MISCELLANEOUS

- What happened between 6/30/13 and 6/30/14?
 - Unfunded Liability (Increase)/Decrease ≈ \$6.6 million
- Reasons for Unfunded Liability increase
 - Asset gain/(loss): ≈ \$38.9 million
 - Assumption Change gain/(loss): ≈ \$(30.2) million
 - Actuarial gain/(loss): ≈ \$1.1 million
 - Average Salary \$49,800 → \$50,500
 - Number of Actives 1,631 → 1,663
 - Number of Inactives 1,267 → 1,299
 - Number of Retirees 1,692 → 1,756
 - Other gain/(loss): ≈ \$(3.2) million
 - Contributions
 - Other (expected)

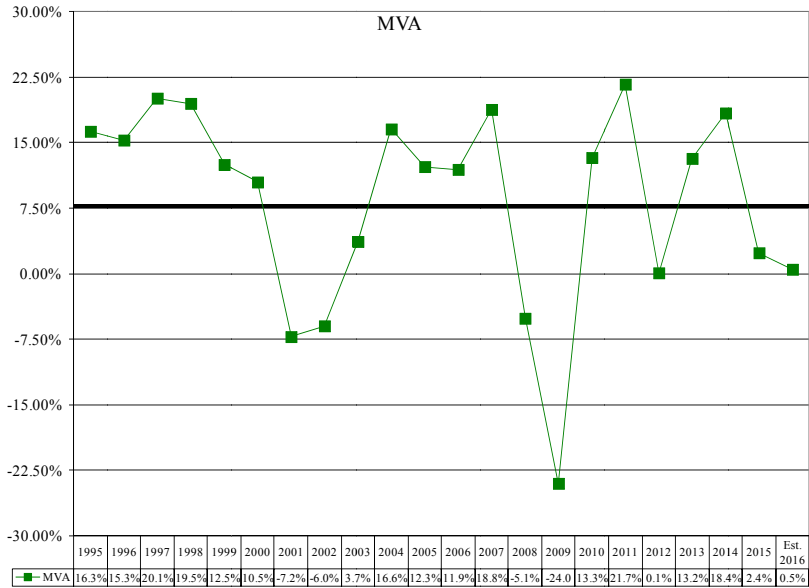


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INVESTMENT RETURN - MISCELLANEOUS



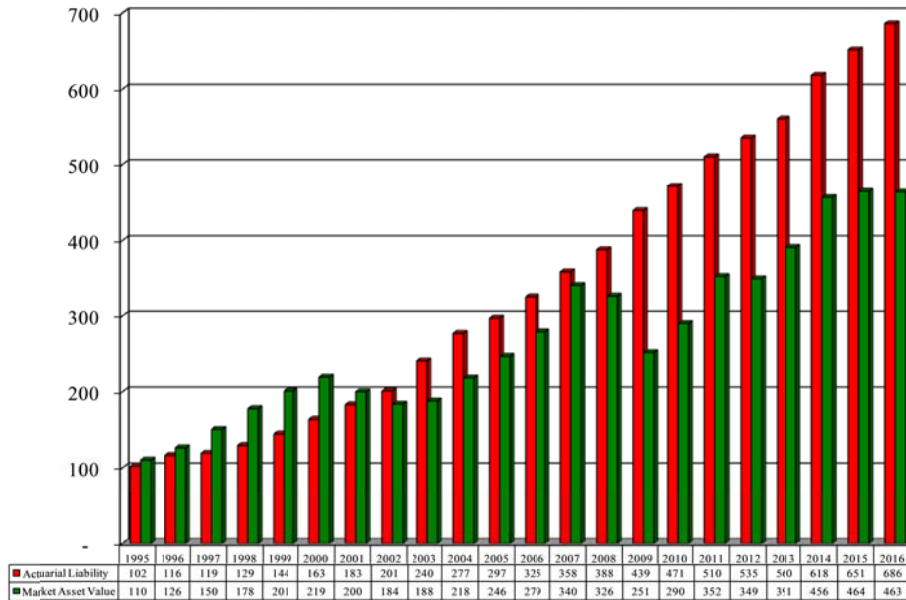
Above assumes contributions, payments, etc. received evenly throughout year.
 Estimated June 30, 2016 based on CalPERS actual return through 3/31/16 and
 assumed 7.5% annual return for the remaining 3 months.



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FUNDED STATUS (MILLIONS) - MISCELLANEOUS



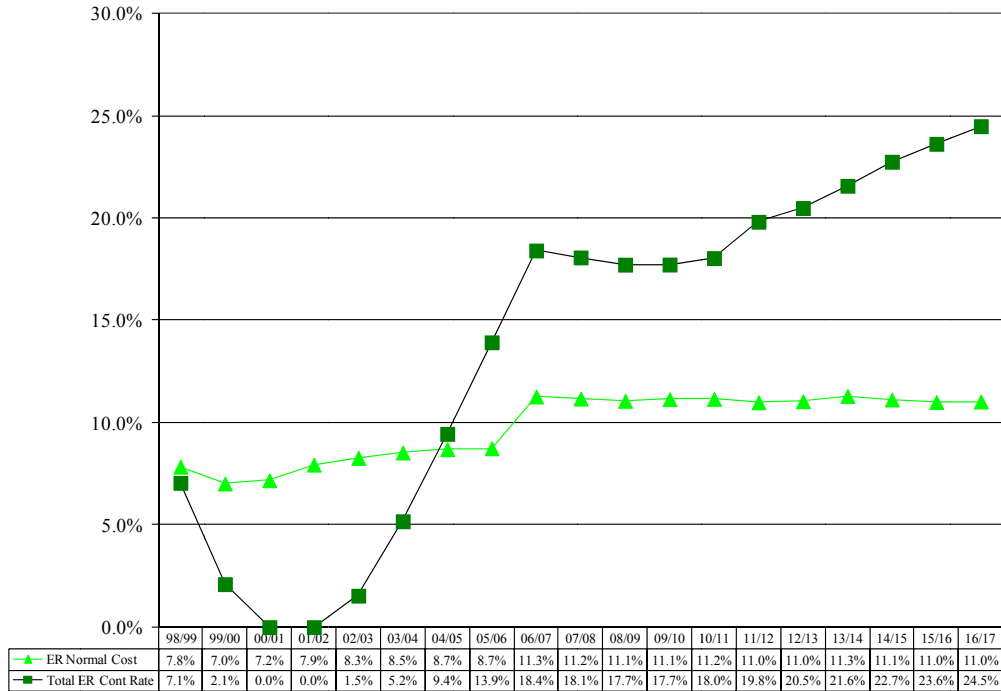
6/30/15 & 6/30/16 funded status estimated



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CONTRIBUTION RATES - MISCELLANEOUS



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CONTRIBUTION RATES - MISCELLANEOUS

	<u>6/30/13</u>	<u>6/30/14</u>
	<u>2015/2016</u>	<u>2016/2017</u>
■ Total Normal Cost	18.7%	18.6%
■ Employee Normal Cost	7.7%	7.6%
■ Employer Normal Cost	11.0%	11.0%
■ Amortization Bases	<u>12.6%</u>	<u>13.5%</u>
■ Total Employer Contribution Rate	23.6%	24.5%
■ Amortization Period	Multiple	Multiple
■ What Happened from 6/30/13 to 6/30/14:		
● 2015/16 Rate	23.6%	
● Asset Method Change (2 nd Year)	0.8%	
● Assumption Change (1 st Year)	1.2%	
● (Gains)/Losses	<u>(1.1%)</u>	
● 2016/17 Rate	24.5%	



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CONTRIBUTION PROJECTIONS - MISCELLANEOUS

■ Market Value Investment Return:

- June 30, 2014 18.4%²
- June 30, 2015 2.4%²
- June 30, 2016 0.5%²
- Future returns² based on stochastic analysis using 1,000 trials

Single Year Returns at 25th Percentile 50th Percentile 75th Percentile

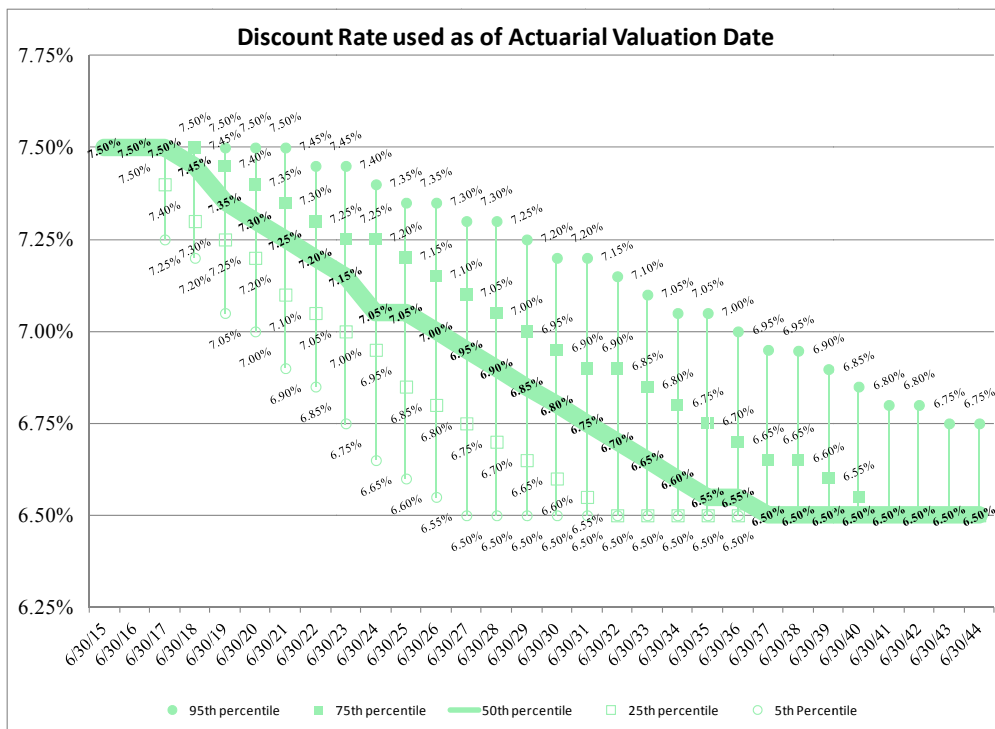
- 7.5% Investment Mix **0.6%** **7.5%** **15.3%**
- 6.5% Investment Mix **1.3%** **6.5%** **11.9%**

- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)
- Tier 2 2%@55 FAE3 effective 7/6/12
- New hire assumptions:
 - Assumes 50% of 2013 new hires will be Classic Tier 2 Members and 50% will be New Members with PEPRAs benefits.
 - Assumes Classic Members will decrease from 50% to 0% of new hires over 20 years.

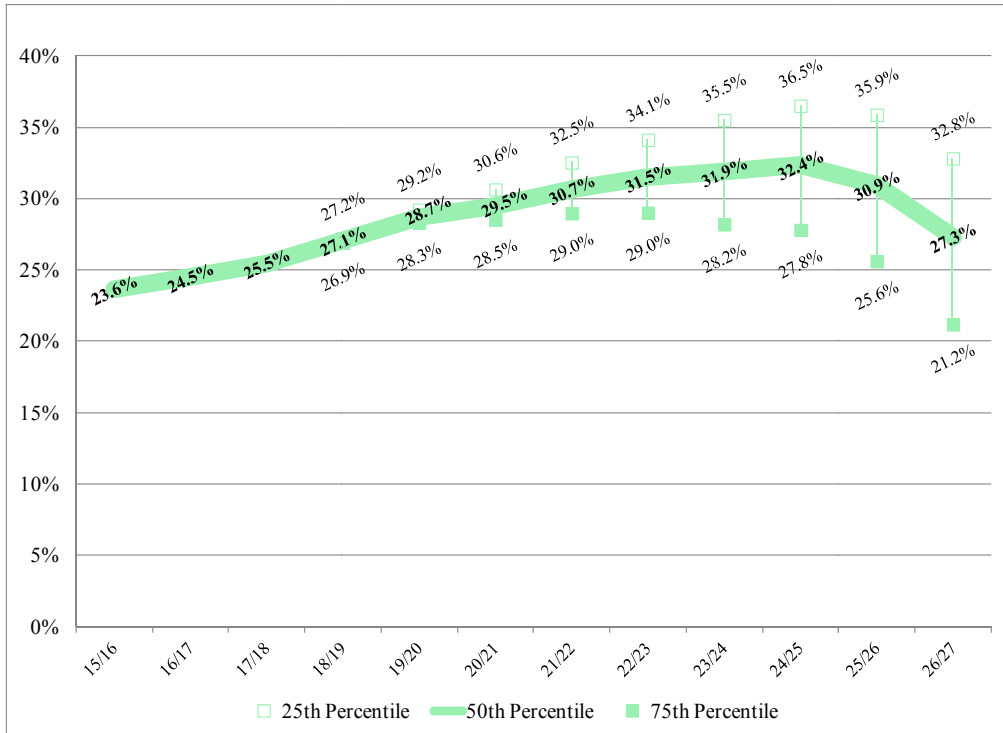
² June 30, 2016 return based on CalPERS return of (1.3%) through 3/31/16 and assumed future returns for 3 months.



CONTRIBUTION PROJECTIONS - MISCELLANEOUS



CONTRIBUTION PROJECTIONS - MISCELLANEOUS

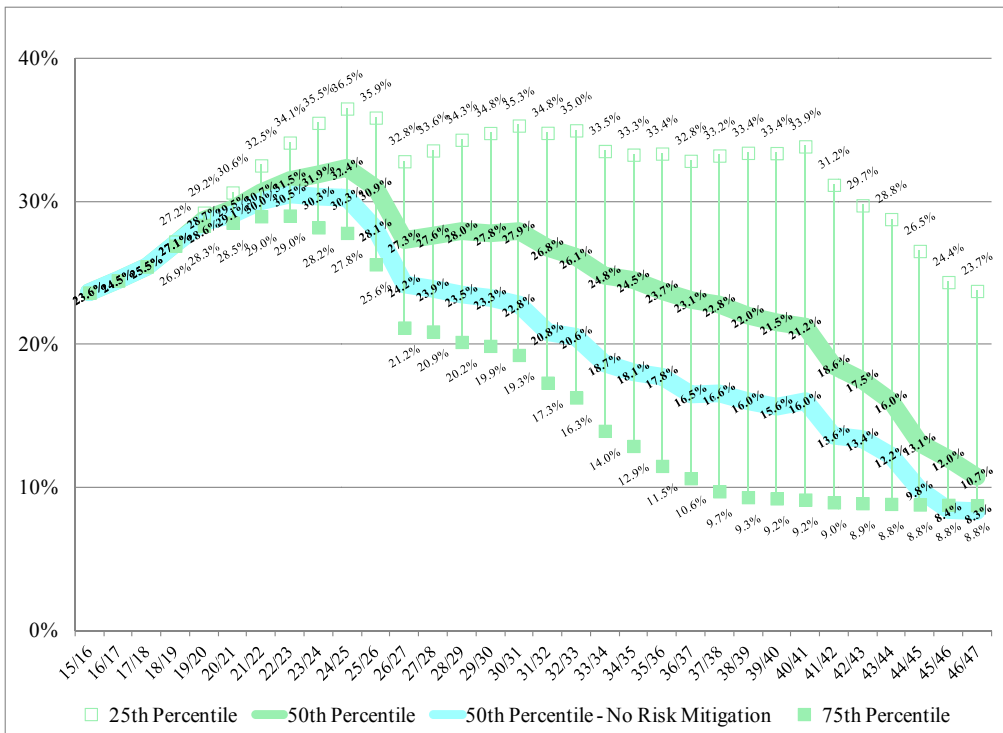


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CONTRIBUTION PROJECTIONS - MISCELLANEOUS

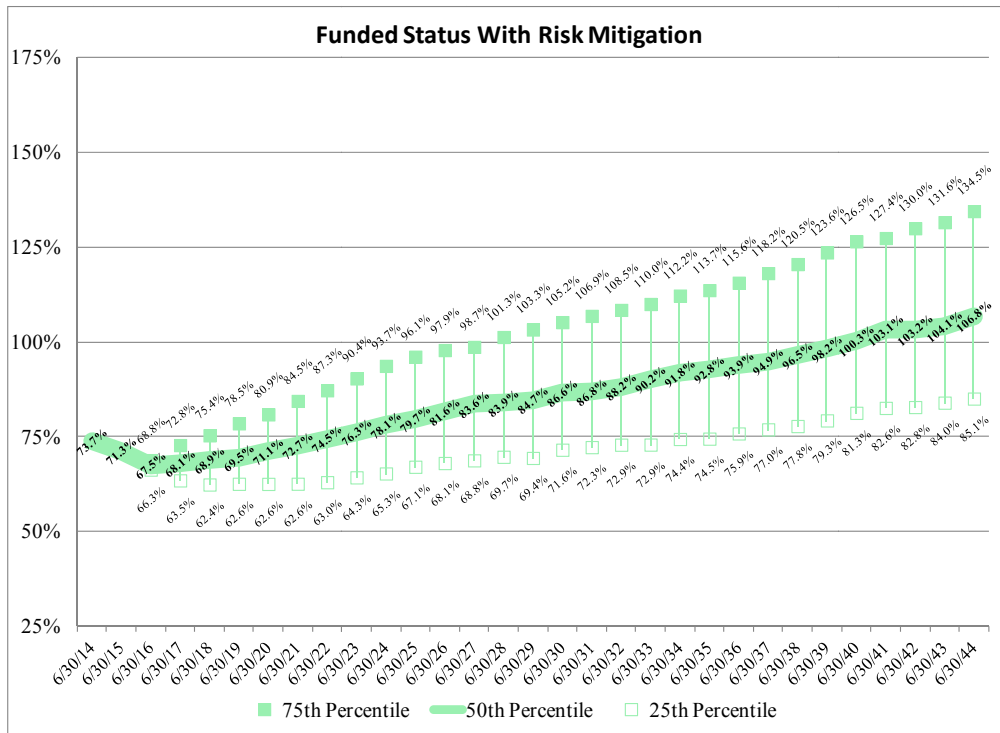


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CONTRIBUTION PROJECTIONS - MISCELLANEOUS



CONTRIBUTION PROJECTIONS - MISCELLANEOUS

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SUMMARY OF DEMOGRAPHIC INFORMATION - SAFETY

	1996	2004	2013	2014
Actives				
■ Counts	230	282	272	273
■ Average				
• Age	39	39	41	41
• County Service	9	8	11	11
• PERSable Wages	\$30,100	\$41,200	\$54,700	\$56,400
■ Total PERSable Wages (millions)	7.9	12.8	16.3	16.8
Receiving Payments				
■ Counts				
• Service		89	157	170
• Disability		62	85	88
• Beneficiaries		18	28	28
• Total	93	169	270	286
■ Average Annual County Provided Benefit ³				
• Service		\$25,500	\$32,500	\$32,000
• Disability		15,300	17,900	18,100
• Service Retirements in last 5 years		32,700	35,600	32,000

³ Average County provided pensions are based on County service & County benefit formula, and are not representative of benefits for long service employees.

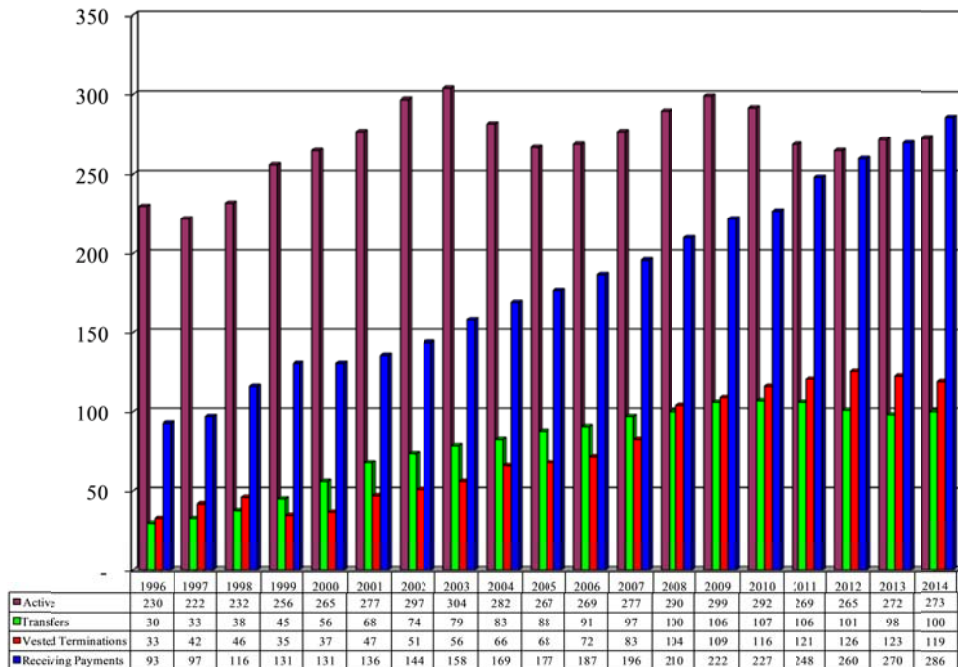


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MEMBERS INCLUDED IN VALUATION - SAFETY



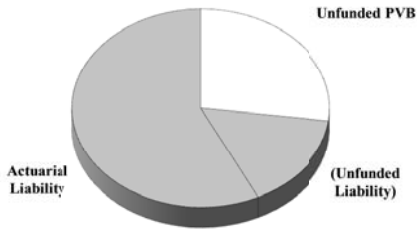
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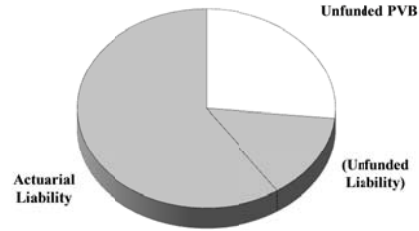


PLAN FUNDED STATUS - SAFETY

**Present Value of Benefits
June 30, 2013**



**Present Value of Benefits
June 30, 2014**



<u>June 30, 2013</u>		<u>June 30, 2014</u>
\$ 56,100,000	Active AAL	\$ 63,900,000
92,900,000	Retiree AAL	102,300,000
10,900,000	Inactive AAL	9,400,000
159,900,000	Total AAL	175,600,000
115,900,000	Market Asset Value	134,100,000
(44,000,000)	(Unfunded Liability)	(41,500,000)

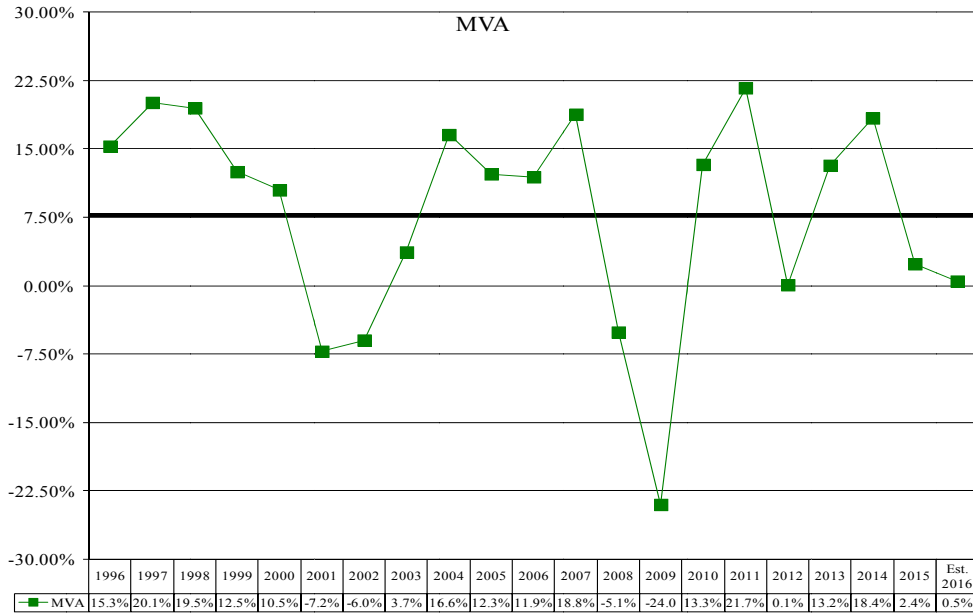


PLAN FUNDED STATUS - SAFETY

- What happened between 6/30/13 and 6/30/14?
 - Unfunded Liability (Increase)/Decrease ≈ \$2.5 million
- Reasons for Unfunded Liability increase
 - Asset gain/(loss): ≈ \$11.4 million
 - Assumption Change gain/(loss): ≈ \$(8.8) million
 - Actuarial gain/(loss): ≈ \$1.5 million
 - Average Salary \$54,700 → \$56,400
 - Number of Actives 272 → 273
 - Number of Inactives 221 → 219
 - Number of Retirees 270 → 286
 - Other gain/(loss): ≈ \$(1.6) million
 - Contributions
 - Other (expected)



INVESTMENT RETURN - SAFETY



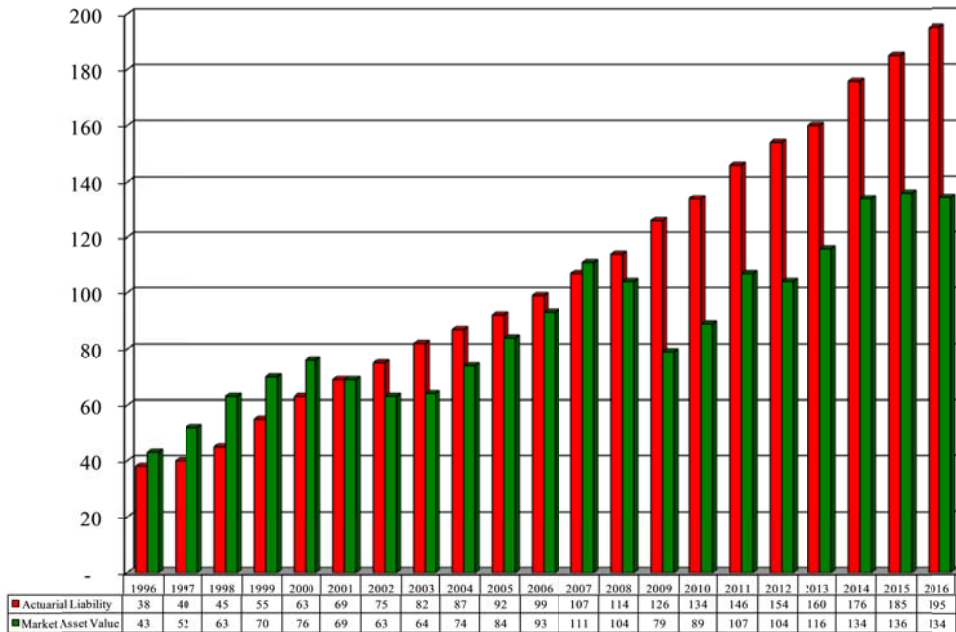
Above assumes contributions, payments, etc. received evenly throughout year.
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 assumed 7.5% annual return for the remaining 3 months.



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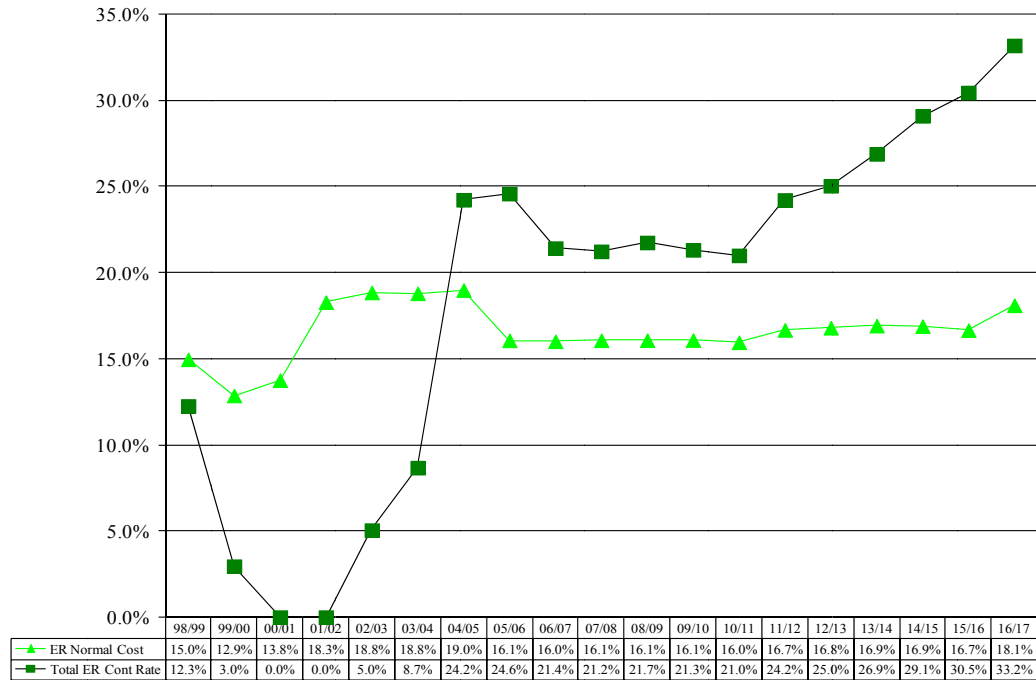
FUNDED STATUS (MILLIONS) - SAFETY



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CONTRIBUTION RATES - SAFETY



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CONTRIBUTION RATES - SAFETY

	<u>6/30/13</u> <u>2015/2016</u>	<u>6/30/14</u> <u>2016/2017</u>
■ Total Normal Cost	25.7%	27.2%
■ Employee Normal Cost	9.0%	9.1%
■ Employer Normal Cost	16.7%	18.1%
■ Amortization Bases	<u>13.8%</u>	<u>15.1%</u>
■ Total Employer Contribution Rate	30.5%	33.2%
■ Amortization Period	Multiple	Multiple
■ What Happened from 6/30/13 to 6/30/14:		
● 2015/16 Rate	30.5%	
● Asset Method Change (2 nd Year)	1.3%	
● Assumption Change (1 st Year)	2.9%	
● (Gains)/Losses	<u>(1.5)%</u>	
● 2016/17 Rate	33.2%	



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CONTRIBUTION PROJECTIONS - SAFETY

■ Market Value Investment Return:

- June 30, 2014 18.4%²
- June 30, 2015 2.4%²
- June 30, 2016 0.5%²
- Future returns⁴ based on stochastic analysis using 1,000 trials

Single Year Returns at 25th Percentile 50th Percentile 75th Percentile

- 7.5% Investment Mix **0.6%** **7.5%** **15.3%**
- 6.5% Investment Mix **1.3%** **6.5%** **11.9%**

■ No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements

■ Excludes Employer Paid Member Contributions (EPMC)

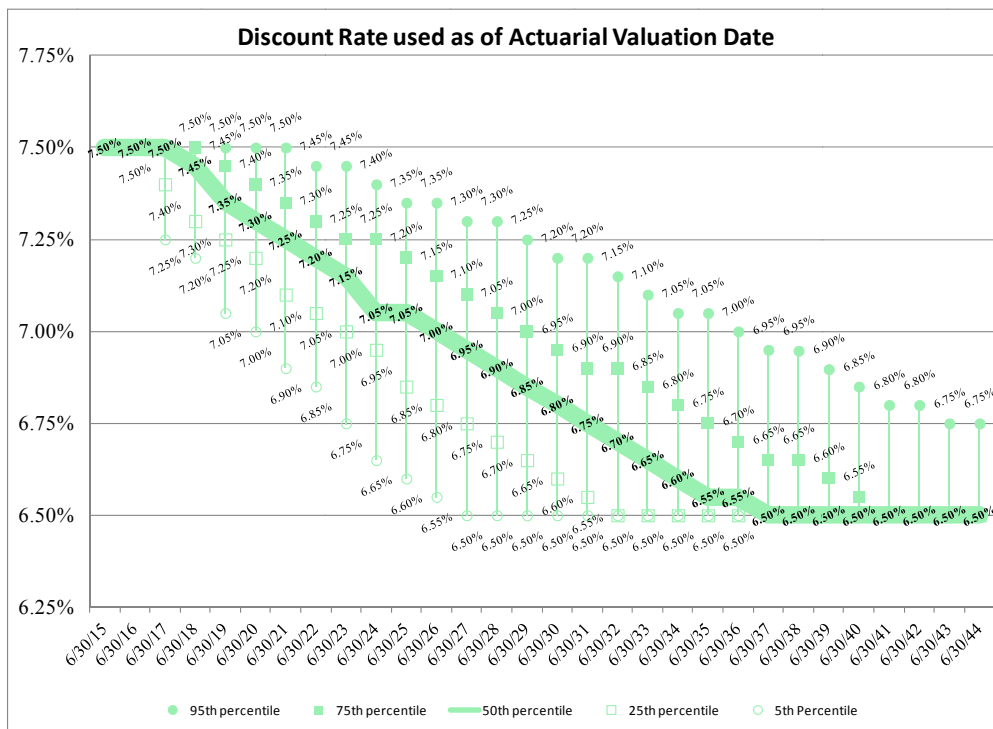
■ New hire assumptions:

- Assumes 50% of 2013 new hires will be Classic Members (3%@50) and 50% will be New Members with PEPRAs benefits.
- Assumes Classic Members will decrease from 50% to 0% of new hires over 10 years

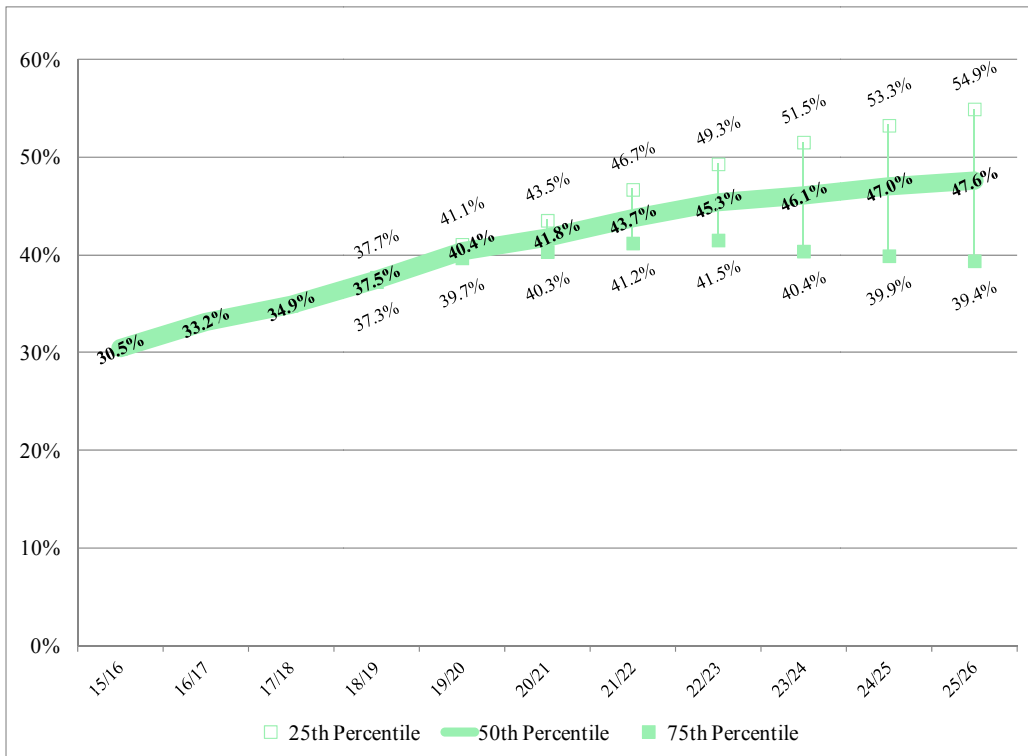
⁴ June 30, 2016 return based on CalPERS return of (1.3%) through 3/31/16 and assumed future returns for 3 months.



CONTRIBUTION PROJECTIONS - SAFETY



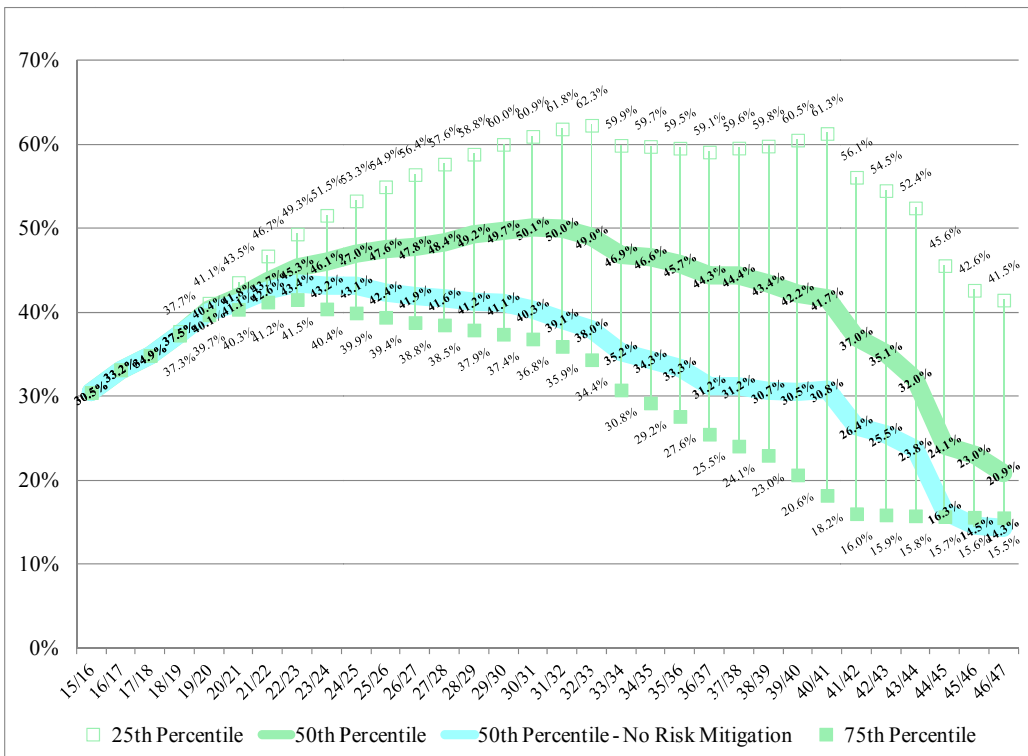
CONTRIBUTION PROJECTIONS - SAFETY



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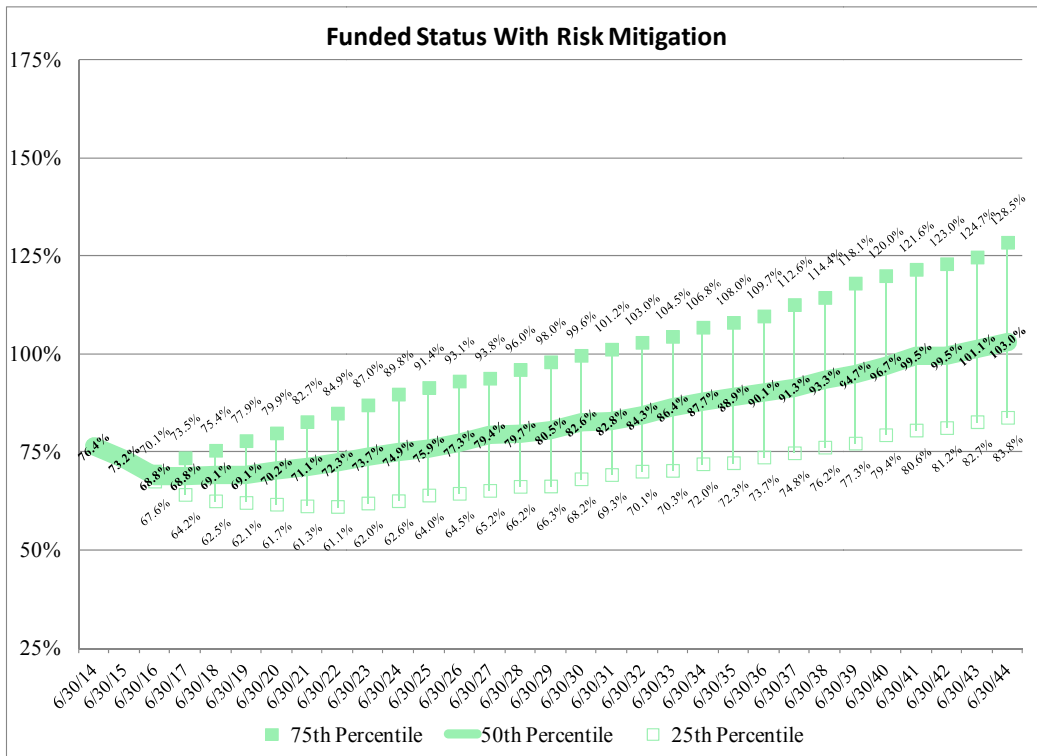
CONTRIBUTION PROJECTIONS - SAFETY



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CONTRIBUTION PROJECTIONS - SAFETY



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CONTRIBUTION PROJECTIONS - SAFETY

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PEPRA COST SHARING

- Target of 50% of total normal cost for everyone
- *New members* must pay greater of 50% of total normal cost or bargained amount if higher
- Employer cannot pay any part of *new member* required employee contributions
- Employer may impose current employees pay 50% of total normal cost (limited to certain amounts) if not agreed through collective bargaining by 1/1/18
- Miscellaneous Plan

	<u>Current Members</u>		<u>New Members</u>
	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 3</u>
	<u>2.7% @ 55</u>	<u>2% @ 55</u>	<u>2.5% @ 67</u>
	<u>FAE1</u>	<u>FAE3</u>	<u>FAE3</u>
● Employer Normal Cost	11.2%	7.9%	7.00%
● Member Normal Cost	<u>7.9%</u>	<u>6.9%</u>	<u>6.25%</u>
● Total Normal Cost	19.1%	14.8%	13.25%
● 50% Target	9.55%	7.4%	6.63%



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PEPRA COST SHARING

- Safety Plan

	<u>Current Members</u>		<u>New Members</u>
	<u>Peace</u>	<u>Fire</u>	
	<u>3% @ 50</u>	<u>3% @ 50</u>	<u>2.7% @ 57</u>
	<u>FAE1</u>	<u>FAE3</u>	<u>FAE3</u>
● Employer Normal Cost	18.3%	17.8%	11.60%
● Member Normal Cost	<u>9.0%</u>	<u>9.0%</u>	<u>11.75%</u>
● Total Normal Cost	27.3%	26.8%	23.35%
● 50% Target	13.65%	13.40%	11.70%



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IRREVOCABLE SUPPLEMENTAL (\$115) PENSION TRUST

- ≈30 trusts established
- PARS & PFM
- Investments significantly less restricted than County investment funds
 - Designed for long term returns
 - Likely much higher (5% - 7%) investment return
- Assets could not be used by the Board for other purposes
- Can only be used to
 - Reimburse County for CalPERS contributions
 - Make payments directly to CalPERS
- Parameters: Miscellaneous

	A	B	C
● Initial seed money?	\$ 6,000	\$ 8,000	\$ 9,500
● Additional amount contributed in future years?	500	0	0
● Target budget rate?	29%	29%	29%
● Year target budget rate kicks in?	20/21	18/19	20/21
<input type="checkbox"/> Before or after CalPERS rate exceeds budgeted rate?	After	Before	After



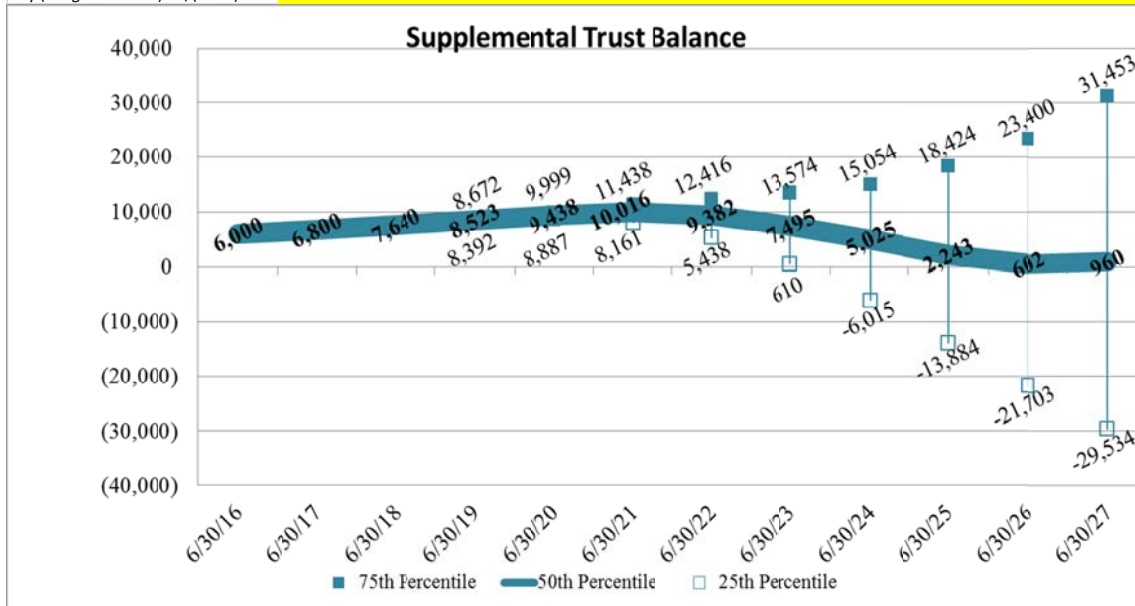
IRREVOCABLE SUPPLEMENTAL (\$115) PENSION TRUST

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IRREVOCABLE SUPPLEMENTAL (\$115) PENSION TRUST

Initial 6/30/16 Fund Balance	6,000	Miscellaneous Plan Rate Stabilization Fund Balance										
Stabilization Fund - Rate of Return	5.0%											
Target Rate	29.0%											
		16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
End of Year Contribution - \$	500	500	500	500	500	500	500	500	500	500	500	500
Pay (Budget-CalPERS) To/(From) Trust	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N

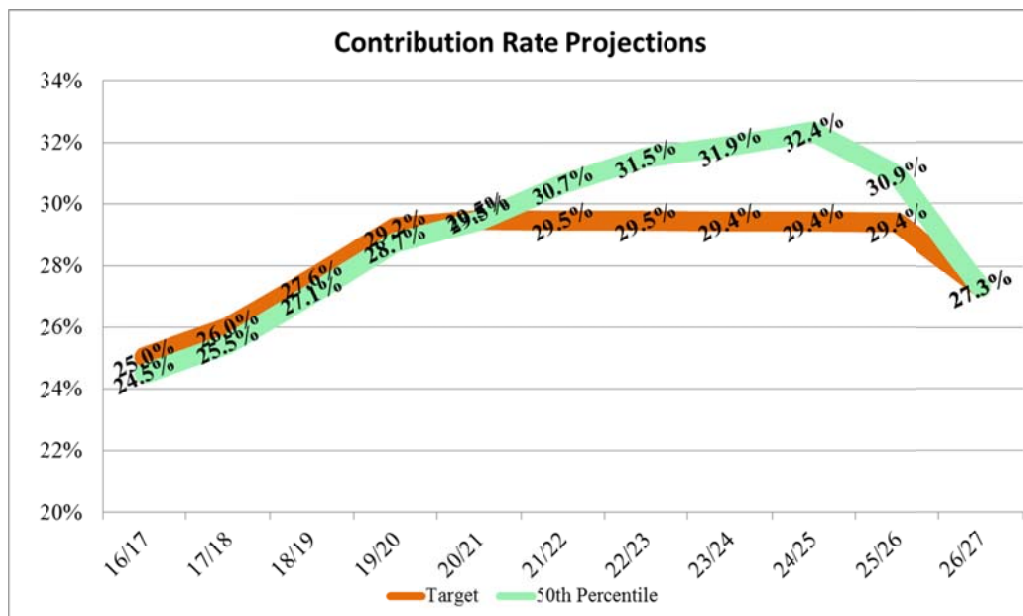


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IRREVOCABLE SUPPLEMENTAL (\$115) PENSION TRUST



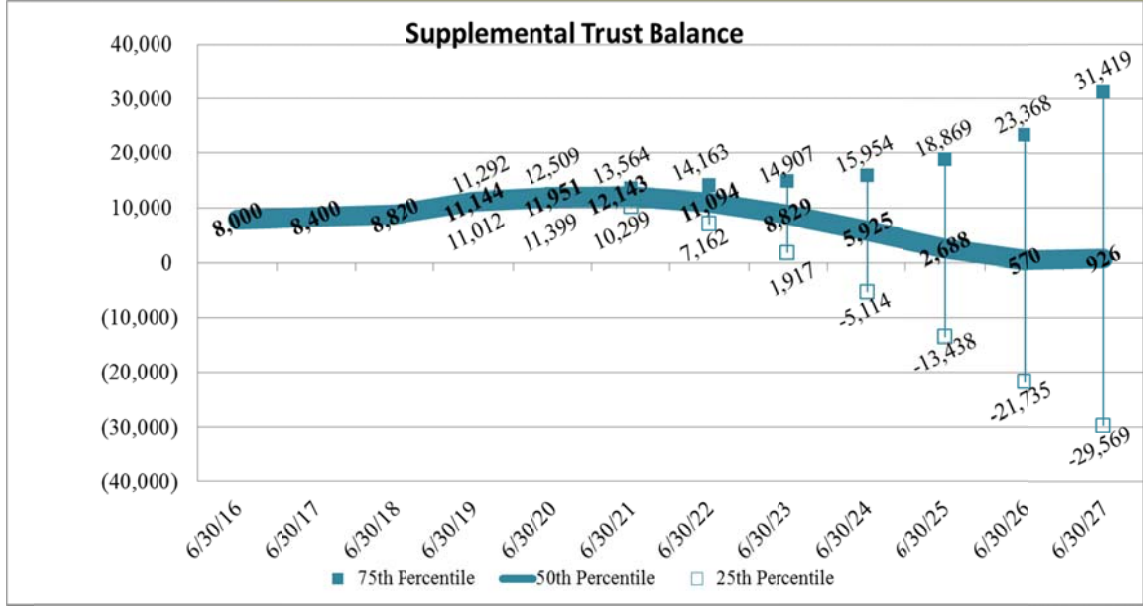
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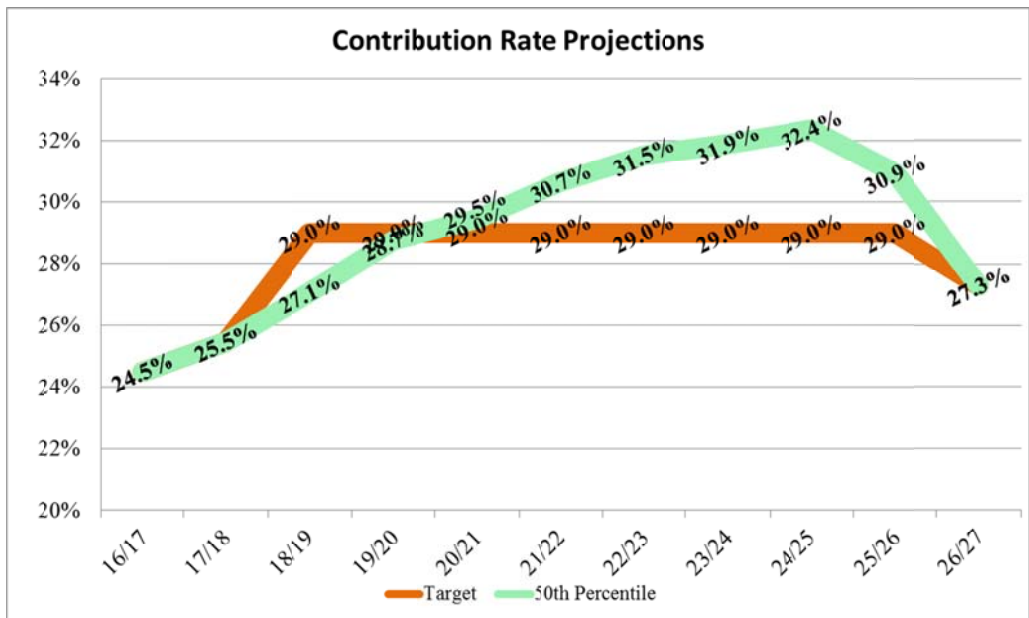


IRREVOCABLE SUPPLEMENTAL (\$115) PENSION TRUST

Initial 6/30/16 Fund Balance	8,000	Miscellaneous Plan Rate Stabilization Fund Balance										
Stabilization Fund - Rate of Return	5.0%											
Target Rate	29.0%											
		16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
End of Year Contribution - \$												
Pay (Budget-CalPERS) To/(From) Trust		N	N	Y	Y	Y	Y	Y	Y	Y	Y	N

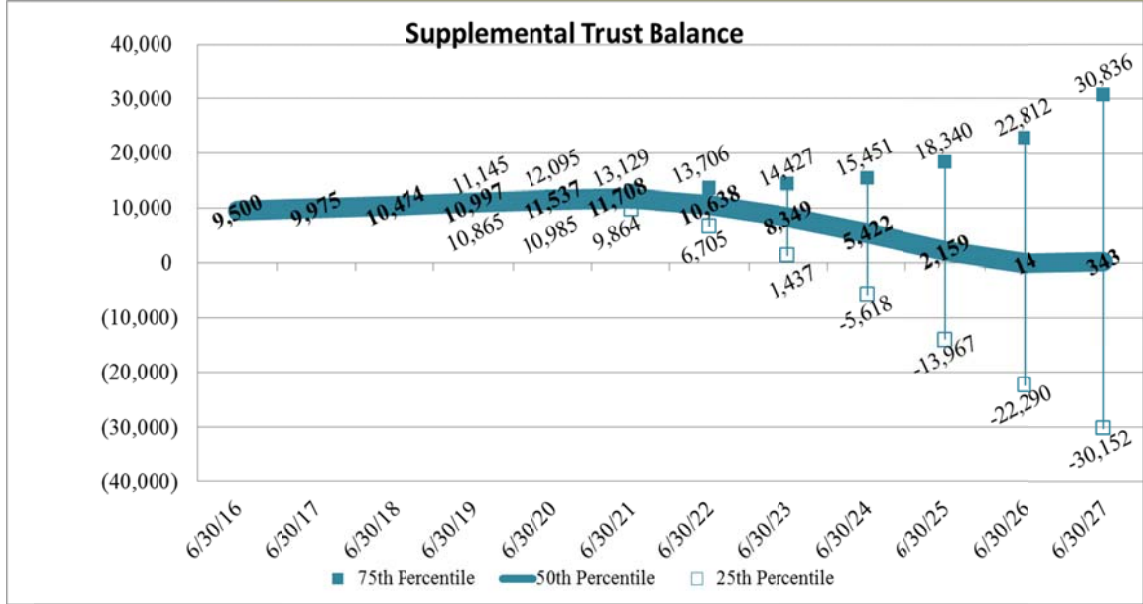


IRREVOCABLE SUPPLEMENTAL (\$115) PENSION TRUST



IRREVOCABLE SUPPLEMENTAL (\$115) PENSION TRUST

Initial 6/30/16 Fund Balance	9,500	Miscellaneous Plan Rate Stabilization Fund Balance									
Stabilization Fund - Rate of Return	5.0%										
Target Rate	29.0%										
	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
End of Year Contribution - \$	-										
Pay (Budget-CalPERS) To/(From) Trust	N	N	N	N	Y	Y	Y	Y	Y	Y	N



IRREVOCABLE SUPPLEMENTAL (\$115) PENSION TRUST

