CITY OF MANHATTAN BEACH
MISCELLANEOUS AND SAFETY PLANS

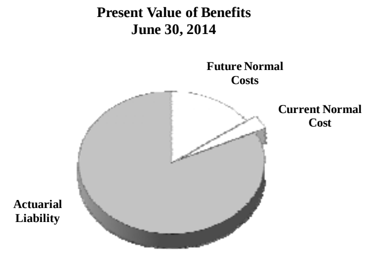
CalPERS Actuarial Issues – 6/30/14 Valuation Preliminary Results

Presented by **John Bartel, President**
Prepared by Bianca Lin, Assistant Vice President
Wai Man Yam, Actuarial Analyst
Bartel Associates, LLC

September 6, 2016

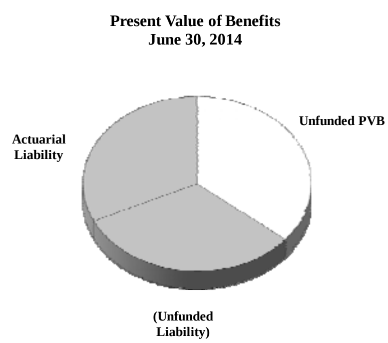
Agenda

DEFINITIONS



- **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

DEFINITIONS



- **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

CALPERS CHANGES

- Contribution policy changes:
  - No asset smoothing
  - 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 Pool changes
  - All Risk Pools combined into one Miscellaneous & one Safety
  - Collect payment on UAL as dollar amount, not as % of pay
  - Payments allocated to agencies based on liability & assets rather than payroll
  - Included in 6/30/13 valuation (impacts 15/16 rates)

CALPERS CHANGES

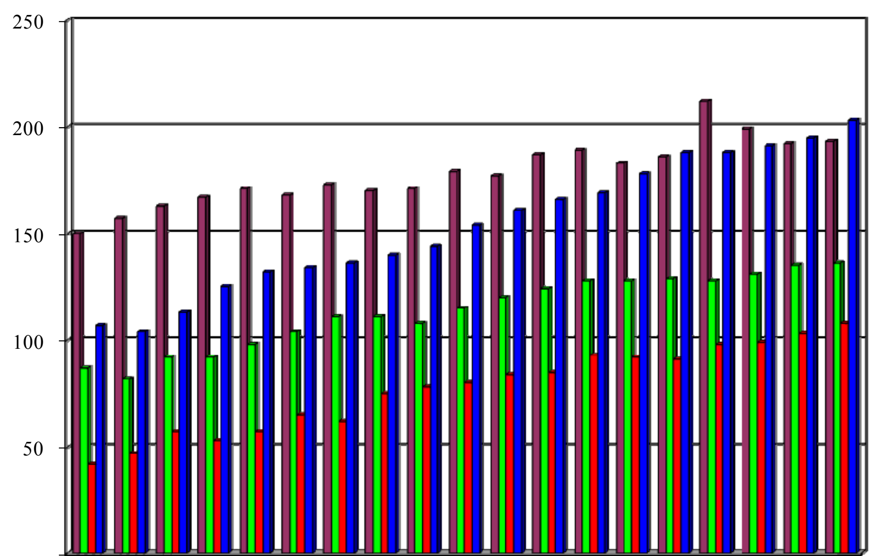
- Risk Mitigation Strategy
  - Move to more conservative investments over time
  - Only when investment return is better than expected
  - Lower discount rate in concert
  - Essentially use ≈50% of investment gains to pay for cost increases
  - Likely get to 6.5% over ≈ 20 years

SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS

	1996	2003	2013	2014
Actives				
■ Counts	150	170	192	193
■ Average				
• Age	43	45	45	46
• City Service	7	9	11	11
• PERSable Wages	$39,100	$50,800	$64,400	$67,100
■ Total PERSable Wages (millions)	5.9	8.6	12.3	13.0
Receiving Payments				
■ Counts				
• Service		100	151	158
• Disablity		20	15	17
• Beneficiaries		20	29	28
• Total	107	140	195	203
■ Average Annual City Provided Benefit[1]				
• Service		$9,700	$18,400	$18,300
• Disability		4,400	4,600	4,200
• Service Retirements in last 5 years		8,900	27,900	26,200

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

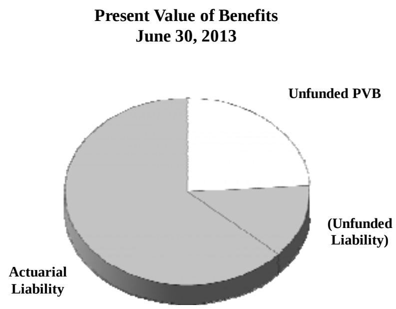
MEMBERS INCLUDED IN VALUATION - MISCELLANEOUS

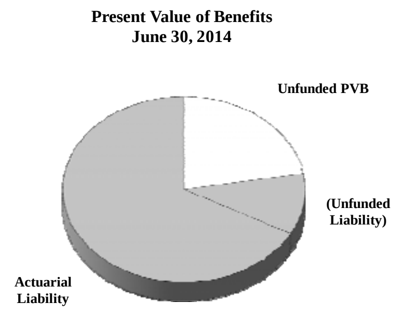


	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Active	150	157	163	167	171	168	173	170	171	179	177	187	189	183	186	212	199	192	193
Transfers	87	82	92	92	98	104	111	111	108	115	120	124	128	128	129	128	131	135	136
Vested Terminations	42	47	57	53	57	65	62	75	78	80	84	85	93	92	91	98	99	103	108
Receiving Payments	107	104	113	125	132	134	136	140	144	154	161	166	169	178	188	188	191	195	203

Note: Missing City's June 30, 2007 & 2008 CalPERS reports.

FUNDED STATUS - MISCELLANEOUS



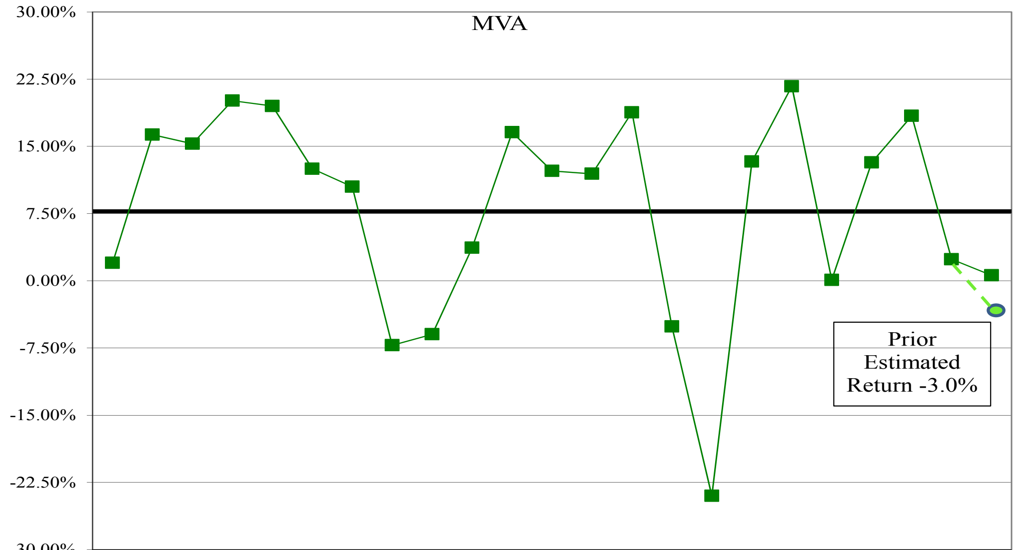


June 30, 2013		June 30, 2014
$ 33,800,000	**Active AAL**	$ 37,500,000
34,600,000	**Retiree AAL**	38,300,000
9,000,000	**Inactive AAL**	9,700,000
77,400,000	**Total AAL**	85,500,000
61,800,000	**Market Asset Value**	72,000,000
(15,600,000)	**(Unfunded Liability)**	(13,500,000)

FUNDED STATUS - MISCELLANEOUS

- What happened between 6/30/13 and 6/30/14?
  - Unfunded Liability (Increase)/Decrease ≈ $2.0 million
- Reasons for Unfunded Liability increase
  - Asset gain/(loss): ≈ $6.1 million
  - Assumption Change gain/(loss): ≈ $(3.7) million
  - Actuarial gain/(loss): ≈ $0.2 million
    - Average Salary $64,400 → $67,100
    - Number of Actives 192 → 193
    - Number of Inactives 238 → 244
    - Number of Retirees 195 → 203
  - Other gain/(loss): ≈ $(0.6) million
    - Contributions
    - Other (expected)

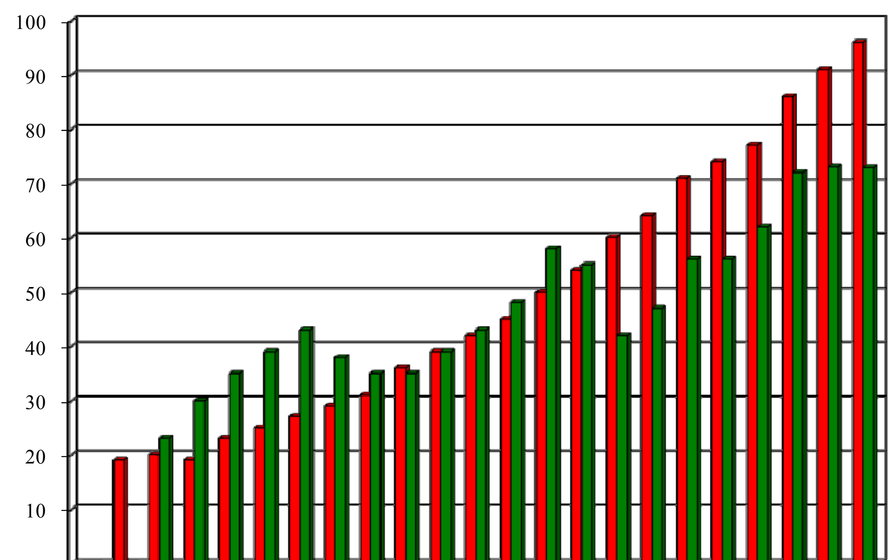
Investment Return - Miscellaneous



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MVA	2.0%	16.3%	15.3%	20.1%	19.5%	12.5%	10.5%	-7.2%	-6.0%	3.7%	16.6%	12.3%	11.9%	18.8%	-5.1%	-24.0	13.3%	21.7%	0.1%	13.2%	18.4%	2.4%	0.6%

Above assumes contributions, payments, etc. received evenly throughout year.
Prior estimated return based on actual CalPERS investment return through 1/31/16 and 7.5% annualized return for remaining 5 months.

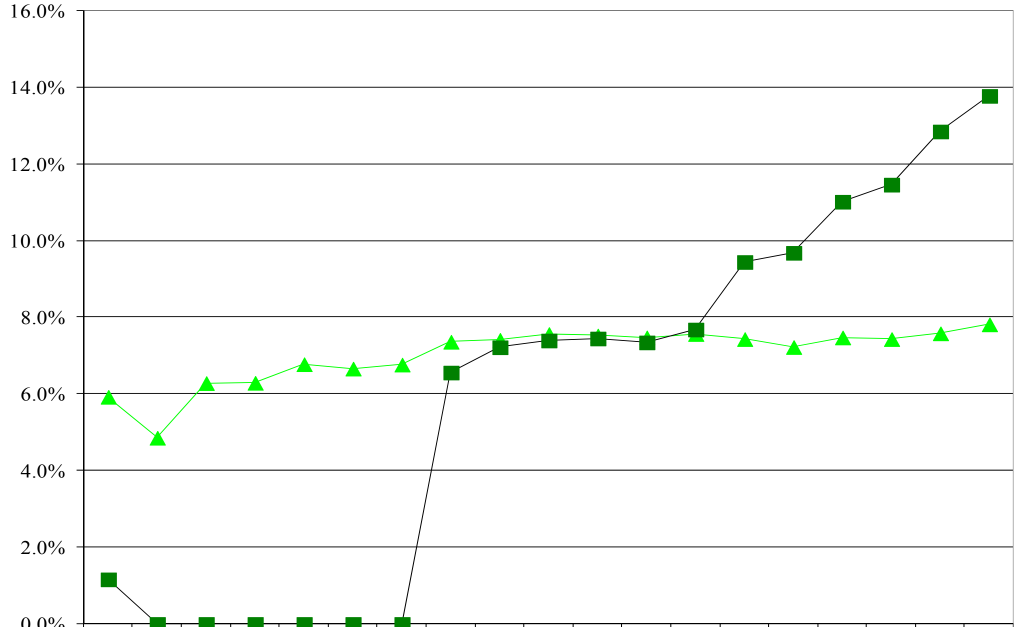
Funded Status (Millions) - Miscellaneous



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actuarial Liability	-	19	20	19	23	25	27	29	31	36	39	42	45	50	54	60	64	71	74	77	86	91	96
Market Asset Value	-	-	23	30	35	39	43	38	35	35	39	43	48	58	55	42	47	56	56	62	72	73	73

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

CONTRIBUTION RATES - MISCELLANEOUS



	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
ER Normal Cost	5.9%	4.9%	6.3%	6.3%	6.8%	6.7%	6.8%	7.4%	7.4%	7.6%	7.5%	7.5%	7.6%	7.4%	7.2%	7.5%	7.4%	7.6%	7.8%
Total ER Cont Rate	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.6%	7.2%	7.4%	7.4%	7.3%	7.7%	9.4%	9.7%	11.0%	11.5%	12.8%	13.8%

CONTRIBUTION RATES - MISCELLANEOUS

	6/30/13 2015/2016	6/30/14 2016/2017
■ Total Normal Cost	14.6%	14.8%
■ Employee Normal Cost	7.0%	6.9%
■ Employer Normal Cost	7.6%	7.8%
■ Amortization Bases	5.3%	6.0%
■ Total Employer Contribution Rate	12.8%	13.8%
■ Amortization Period	Multiple	Multiple

- What Happened from 6/30/13 to 6/30/14:
  - 2015/16 Rate 12.8%
  - Asset Method Change (2nd Year) 0.9%
  - Assumption Change (1st Year) 0.9%
  - (Gains)/Losses (0.8%)
  - 2016/17 Rate 13.8%

CONTRIBUTION PROJECTIONS - MISCELLANEOUS

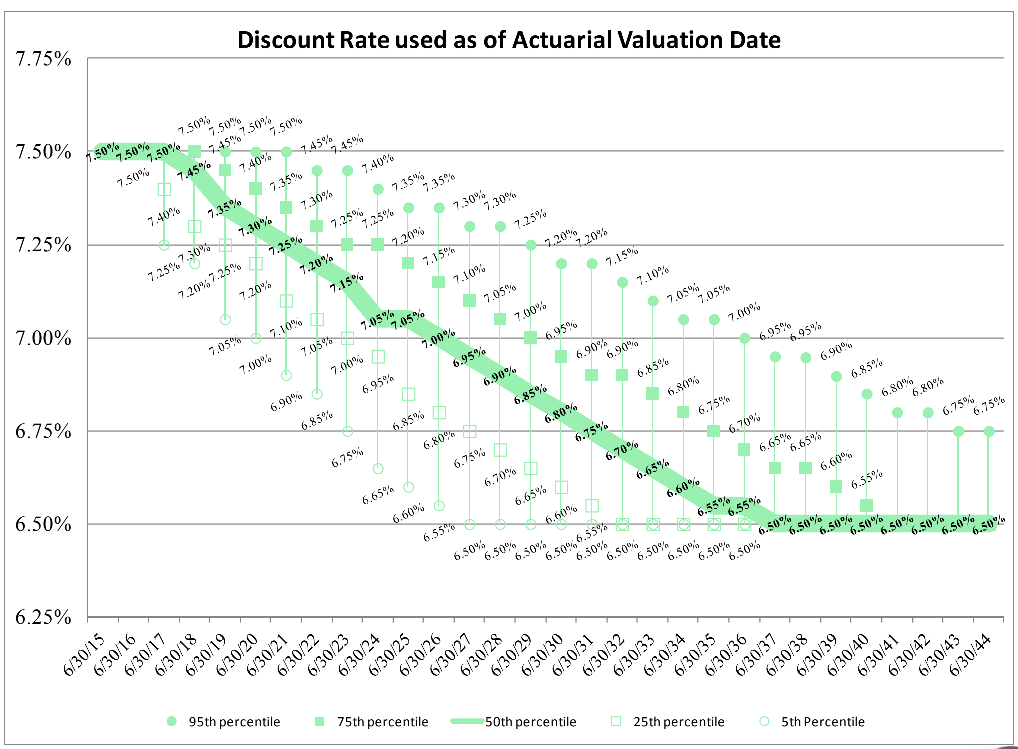
- Market Value Investment Return:
  - June 30, 2015 — 2.4%[2]
  - June 30, 2016 — 0.6%[3]
  - Future returns based on stochastic analysis using 1,000 trials

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%**

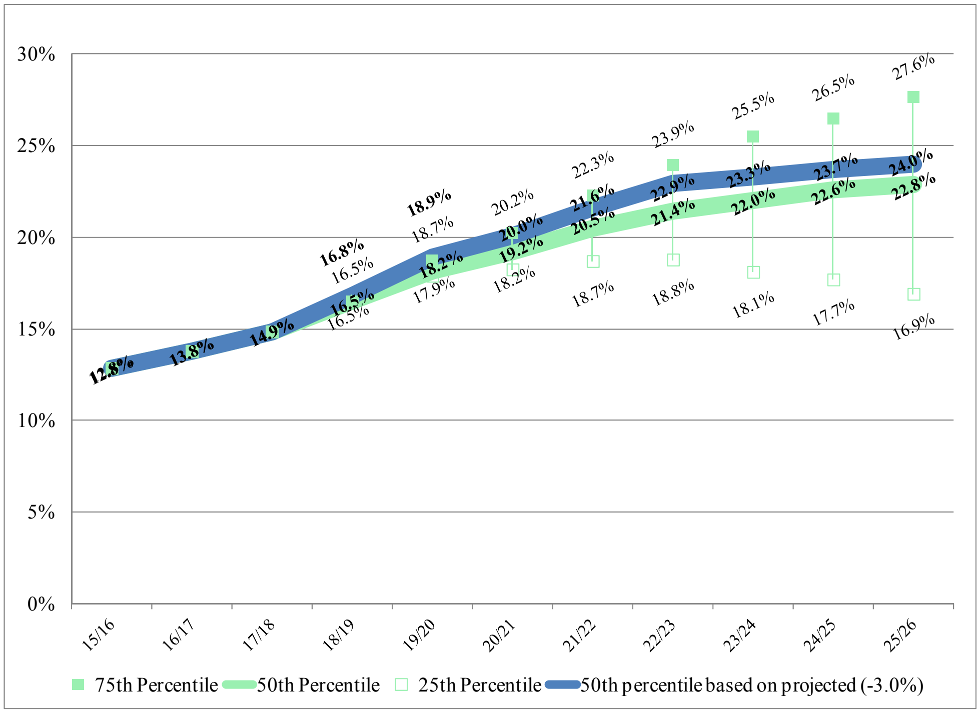
- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)
- New hire assumptions:
  - Assumes 35% of 2013 new hires will be Classic Members (2.0%@55) and 65% will be New Members with PEPRA benefits.
  - Assumes Classic Members will decrease from 35% to 0% of new hires over 20 years.

2 Based on CalPERS CAFR.
3 Based on CalPERS press release on 7/18/16, preliminary investment return of 0.61%.

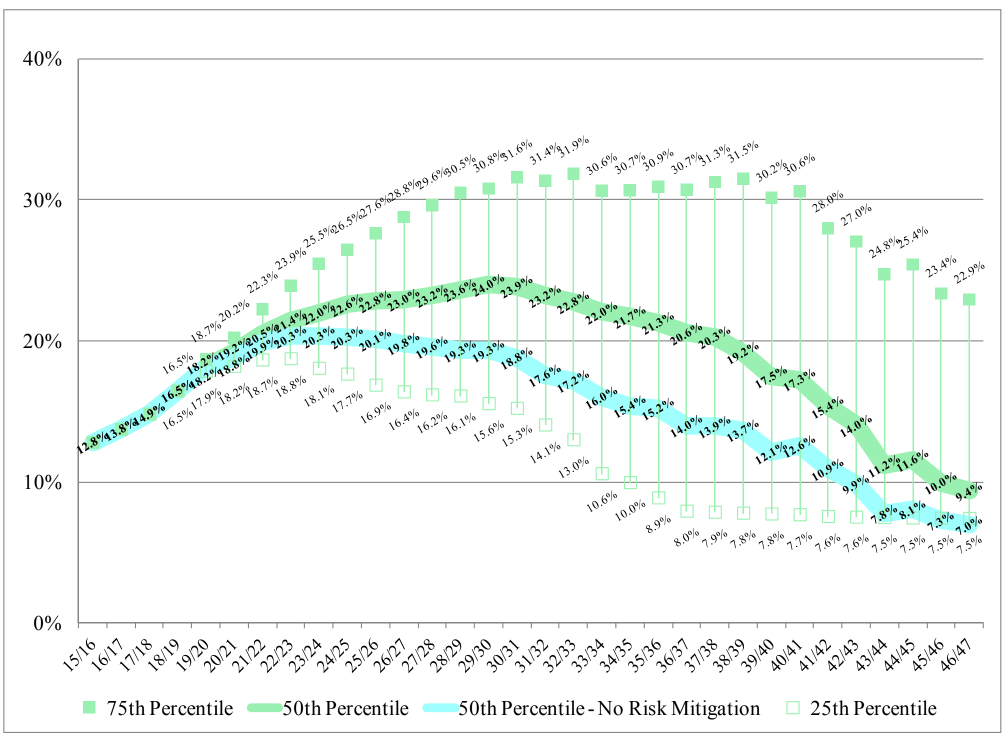
CONTRIBUTION PROJECTIONS - MISCELLANEOUS



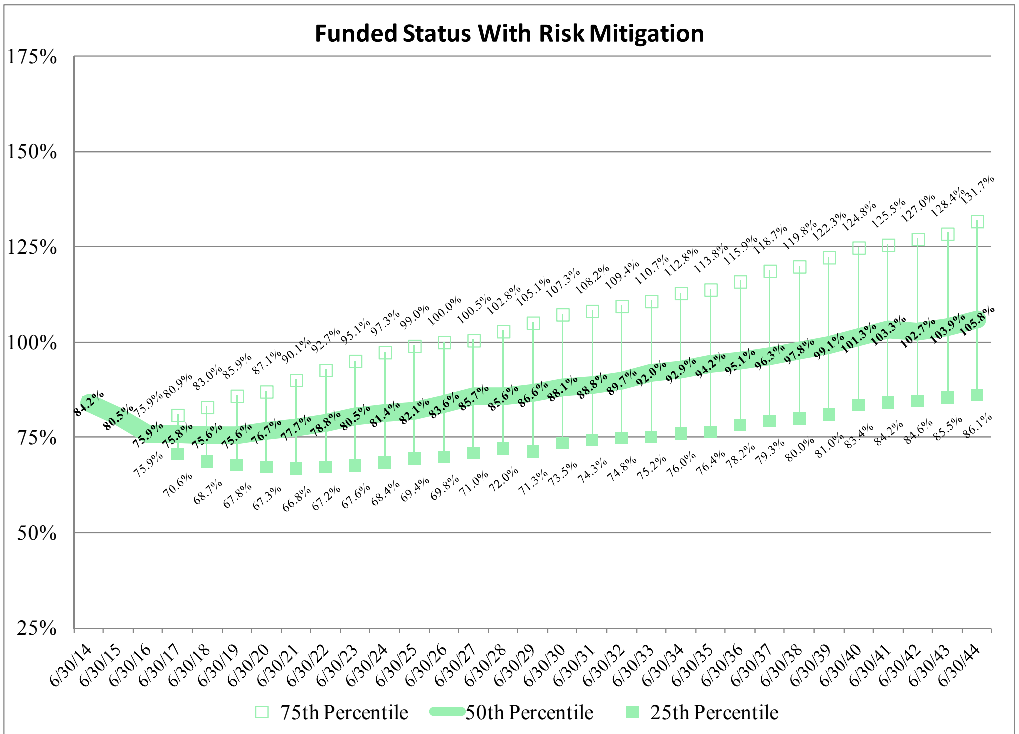
CONTRIBUTION PROJECTIONS - MISCELLANEOUS



CONTRIBUTION PROJECTIONS - MISCELLANEOUS



FUNDED STATUS - MISCELLANEOUS



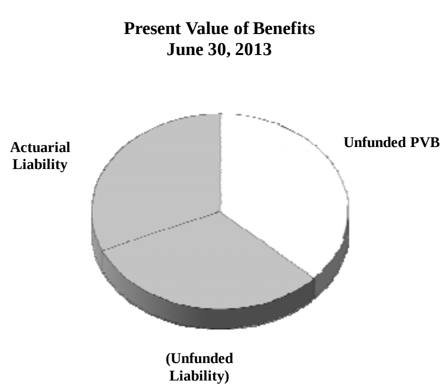
FUNDED STATUS - MISCELLANEOUS

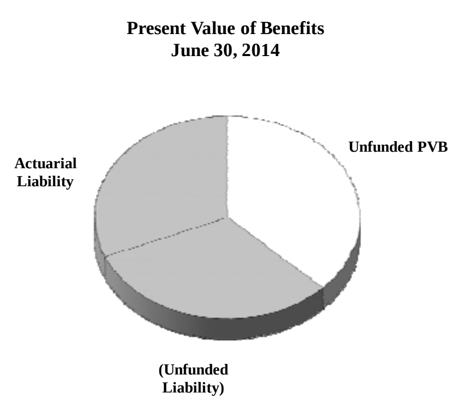
This page intentionally blank

SUMMARY OF DEMOGRAPHIC INFORMATION – POLICE SAFETY

	2009	2011	2013	2014
Actives				
■ Counts	63	59	58	62
■ Average PERSable Wages	$71,600	$121,500	$120,500	$121,300
■ Total PERSable Wages (millions)	4.5	7.2	7.0	7.5
Inactive Counts				
■ Transferred	23	17	15	15
■ Separated	3	9	10	13
■ Retired	63	104	110	107

FUNDED STATUS – POLICE SAFETY





June 30, 2013		June 30, 2014
	Active AAL	$ 35,100,000
	Retiree AAL	69,100,000
	Inactive AAL	1,600,000
$ 97,300,000	**Total AAL**	105,800,000
75,500,000	**Market Asset Value**	85,200,000
(21,800,000)	**(Unfunded Liability)**	(20,600,000)

CONTRIBUTION RATES – POLICE SAFETY

	6/30/13 Valuation 2015/2016 Contribution Rates		
	Total[4]	Tier 1 3%@50	PEPRA 2.7%@57
■ Required Employer Contribution			
● Risk Pool's Base Employer Normal Cost	17.6%	17.6%	12.25%
● Class 1 Benefits			
☐ FAC1	1.0%	1.0%	0.0%
☐ PRSA	1.7%	1.7%	0.0%
● Pool's Expected EE Contribution	9.0%	9.0%	12.25%
● Plan's Employee Contribution Rate	(9.0%)	(9.0%)	(12.25%)
● Risk Pool's Payment on Amort Bases	13.2%	13.2%	0.0%
● Amortization of Side Fund	0.0%	0.0%	0.0%
● EE Cost Sharing	(3.0%)	(3.0%)	0.0%
● **Total ER Contribution**	**30.5%**	**30.5%**	**12.25%**
● **Total ER Contribution $ (in 000's)**	**$ 2,328**		

4 Weighting of total contribution projection based on estimated projected classic and PEPRA payrolls

CONTRIBUTION RATES – POLICE SAFETY

	6/30/14 Valuation 2016/2017 Contribution Rates		
	Total[5]	Tier 1 3%@50	PEPRA 2.7%@57
■ Required Employer Contribution			
● Risk Pool's Base Employer Normal Cost	18.4%	18.4%	11.8%
● Class 1 Benefits			
☐ FAC1	1.1%	1.1%	0.0%
☐ PRSA	1.7%	1.7%	1.5%
● Pool's Expected EE Contribution	9.0%	9.0%	11.8%
● Plan's Employee Contribution Rate	(9.0%)	(9.0%)	(12.3%)
● Risk Pool's Payment on AmortBases	14.7%	14.7%	0.0%
● Amortization of Side Fund	0.0%	0.0%	0.0%
● EE Cost Sharing	(3.0%)	(3.0%)	0.0%
● **Total ER Contribution**	**33.0%**	**33.0%**	**12.8%**
● **Total ER Contribution $ (in 000's)**	**$2,709**		

5 Weighting of total contribution projection based on estimated projected classic and PEPRA payrolls

CONTRIBUTION RATES – POLICE SAFETY

	6/30/13	6/30/14
■ Valuation	**6/30/13**	**6/30/14**
■ Contribution Year	**2015/16**	**2016/17**
■ Required Employer Contribution		
● Risk Pool's Net Employer Normal Cost	17.6%	18.4%
● Final Average Compensation (1-Year)	1.0%	1.1%
● Post-Retirement Survivor Allowance	1.7%	1.7%
● **Total Normal Cost**	**20.2%**	**21.2%**
● Risk Pool's Payment on Amortization Bases	13.3%	14.7%
● Total Employer Contribution	33.5%	36.0%
● Employee Cost Sharing[6]	(3.0%)	(3.0%)
● **Net Employer Contributions**	**30.5%**	**33.0%**
● **Net Employer Contribution $**	**$2,328**	**$2,709**

■ What Happened from 6/30/13 to 6/30/14:

● 2015/16 Rate	30.5%
● Asset Method (2nd year)	2.0%
● Assumption Change (1st year)	2.4%
● Payroll Increase More Than Expected	(0.7%)
● (Gains)/Losses	(1.2%)
● 2016/17 Rate	33.0%

6 3% for Tier 1 employees.

CONTRIBUTION RATES – POLICE SAFETY

This page intentionally blank

CONTRIBUTION PROJECTIONS - POLICE SAFETY

- Market Value Investment Return:
  - June 30, 2015 — 2.4%[7]
  - June 30, 2016 — 0.6%[8]
  - Future returns based on stochastic analysis using 1,000 trials

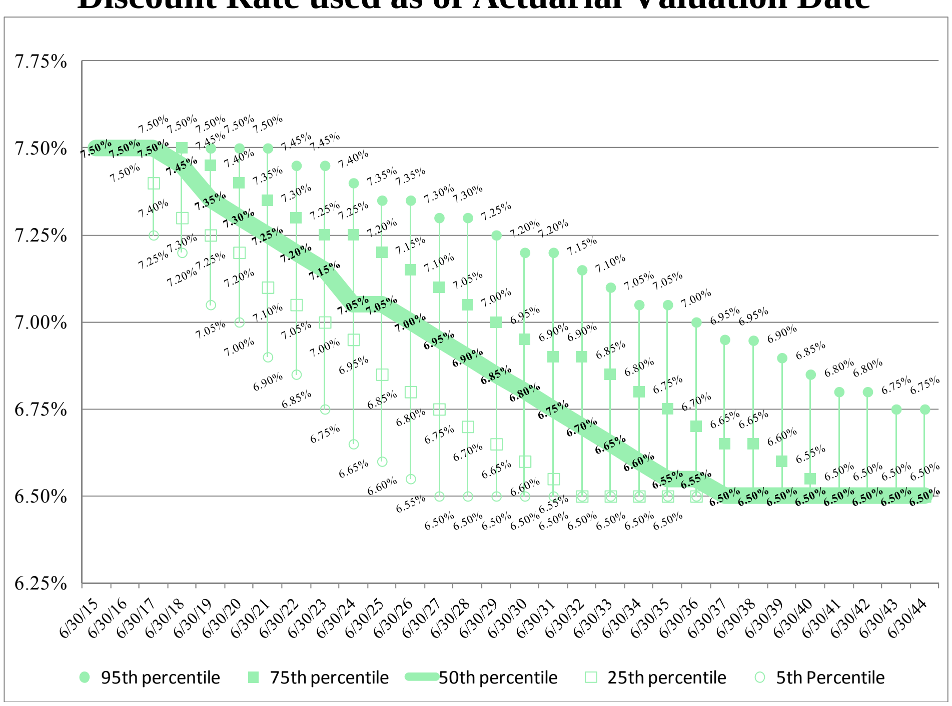
Single Year Returns at	25th Percentile	50th Percentile	75th Percentile
7.5% Investment Mix	**0.6%**	**7.5%**	**15.3%**
6.5% Investment Mix	**1.3%**	**6.5%**	**11.9%**

- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)
- New hire assumptions:
  - Assumes 60% of 2013 new hires will be Classic Members (3%@50) and 40% will be New Members with PEPRA benefits.
  - Assumes Classic Members will decrease from 60% to 0% of new hires over 10 years.

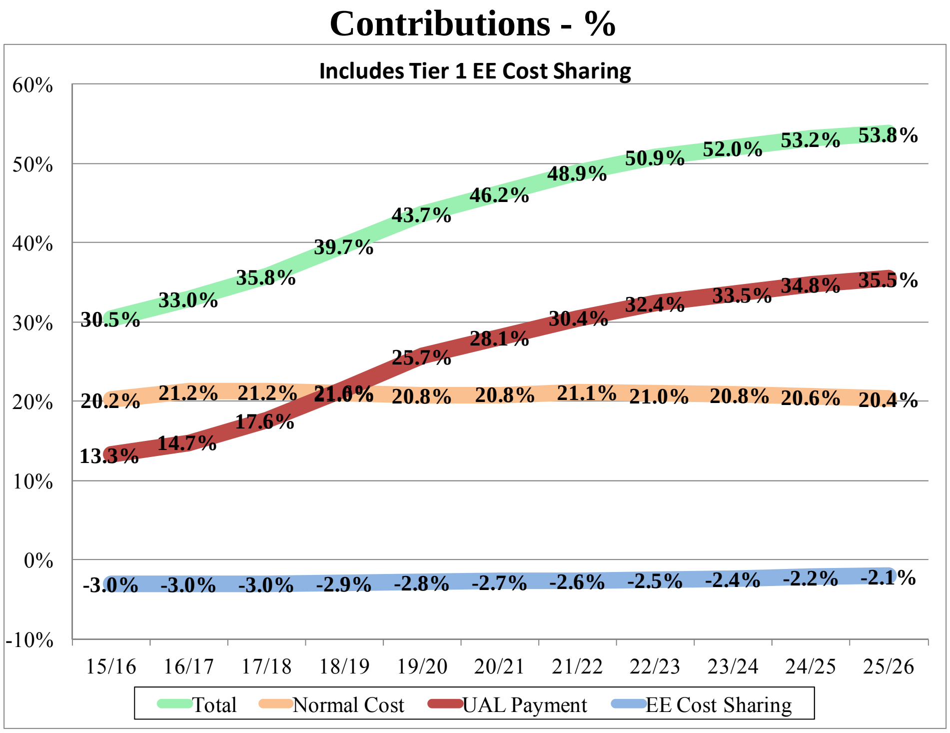
7 Based on CalPERS CAFR.
8 June Based on CalPERS press release on 7/18/16, preliminary investment return of 0.61%.

CONTRIBUTION PROJECTIONS - POLICE SAFETY

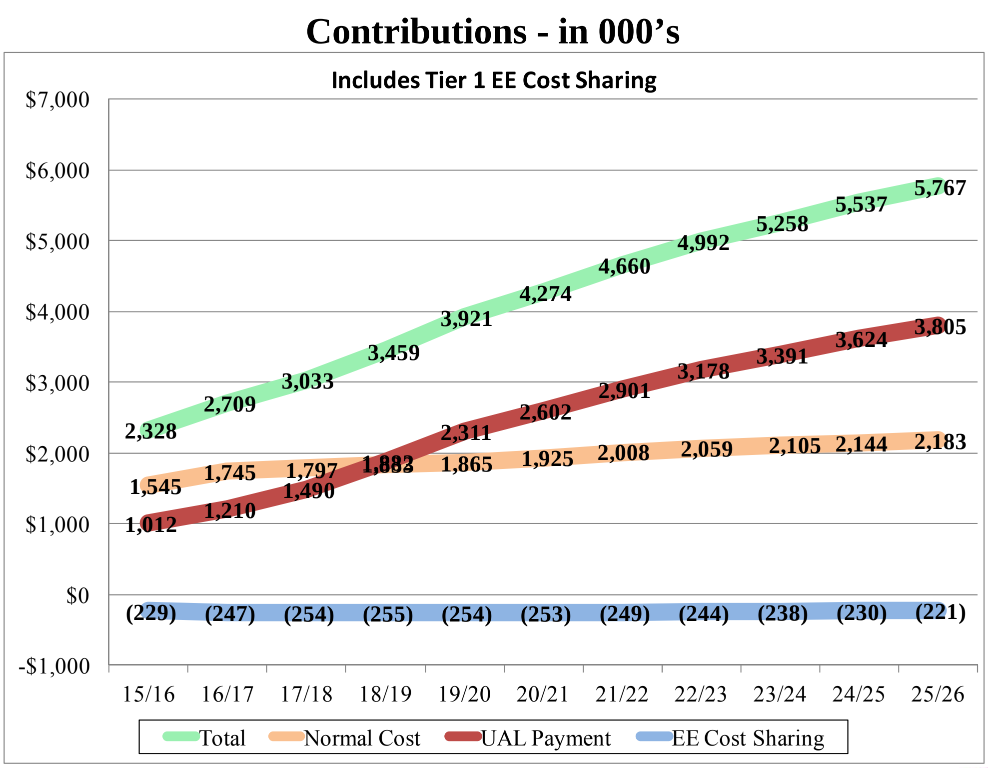
Discount Rate used as of Actuarial Valuation Date



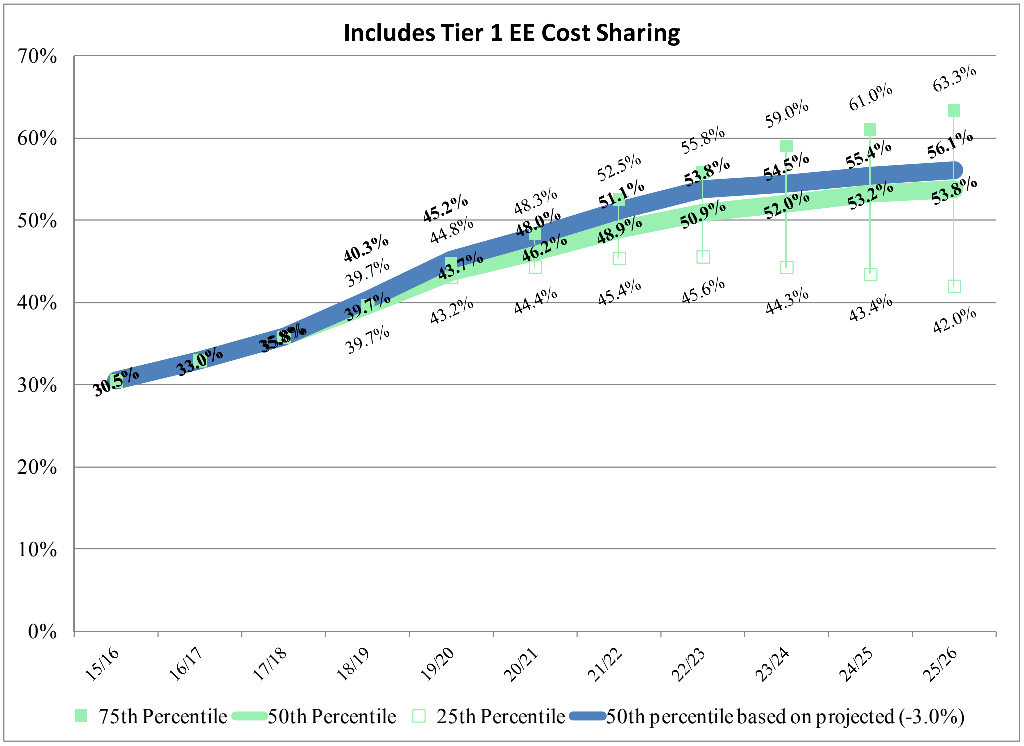
CONTRIBUTION PROJECTIONS - POLICE SAFETY



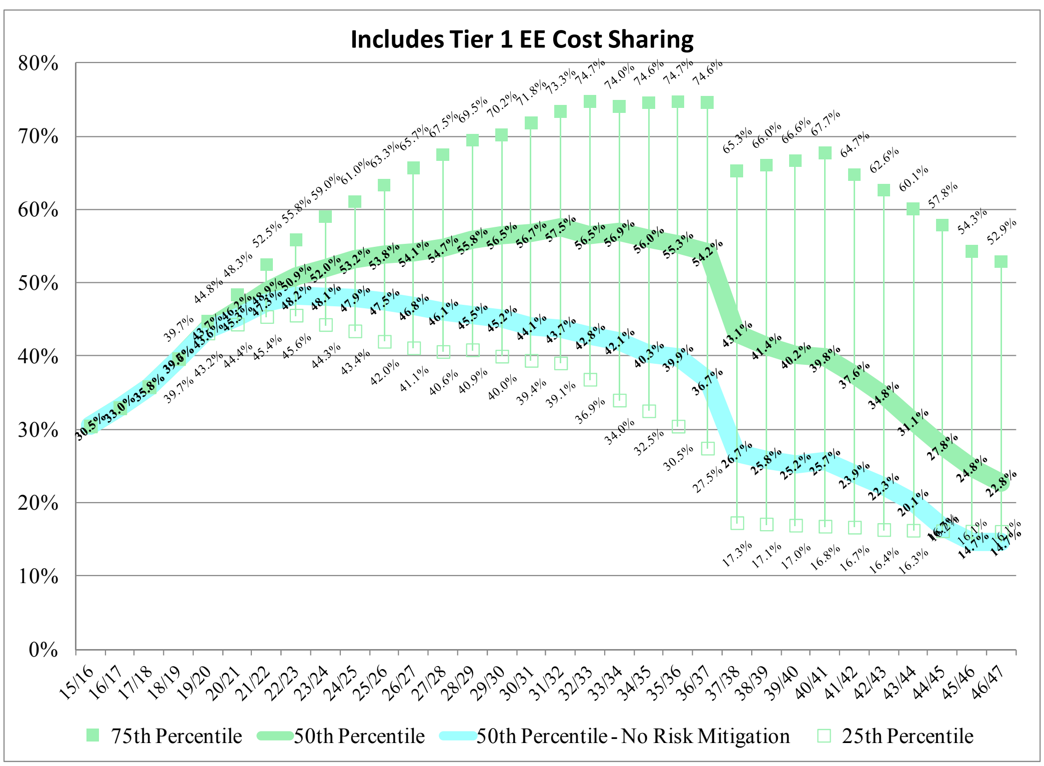
CONTRIBUTION PROJECTIONS - POLICE SAFETY



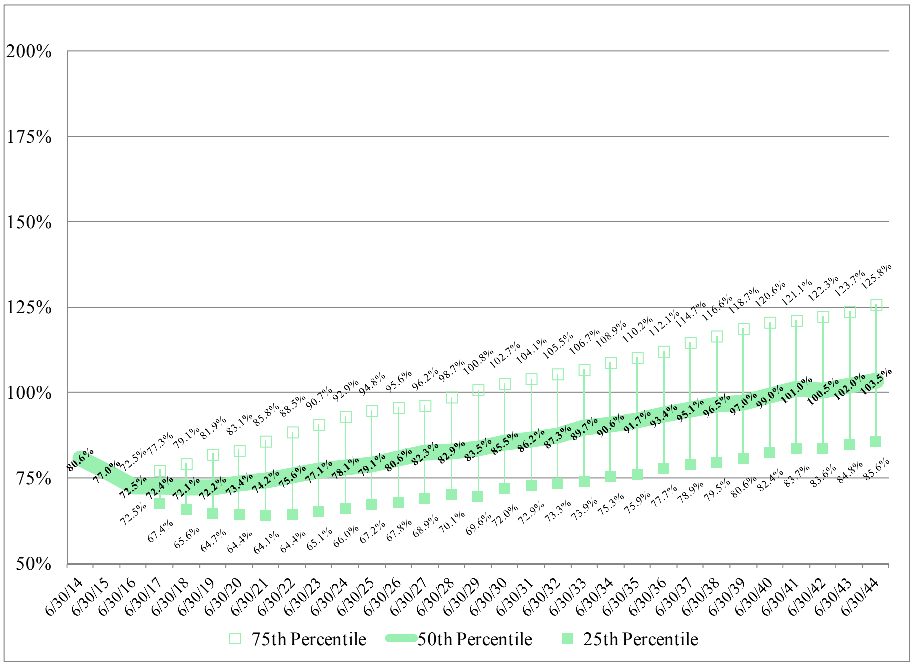
Contribution Projections - Police Safety



Contribution Projections - Police Safety



Funded Status - With Risk Mitigation

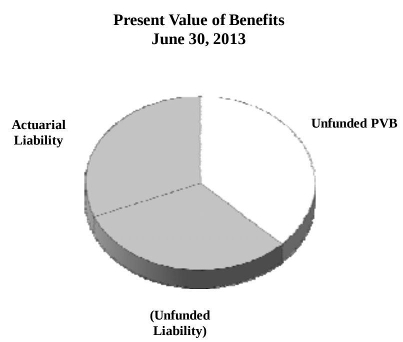


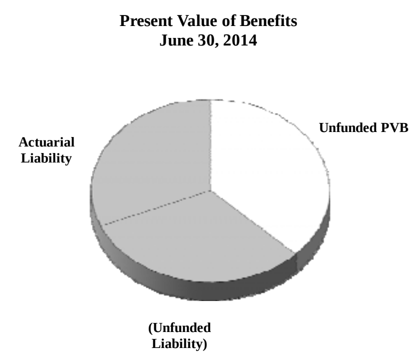
This page intentionally blank

SUMMARY OF DEMOGRAPHIC INFORMATION – FIRE SAFETY

	2001	2011	2013	2014
Actives				
■ Counts	30	27	30	30
■ Average PERSable Wages	$82,300	$144,400	$145,300	$152,443
■ Total PERSable Wages (millions)	2.5	3.9	4.4	4.6
Inactive Counts				
■ Transferred	11	5	5	4
■ Separated	1	4	3	3
■ Retired	41	54	51	50

FUNDED STATUS – FIRE SAFETY





June 30, 2013		June 30, 2014
	Active AAL	$ 25,000,000
	Retiree AAL	27,000,000
	Inactive AAL	1,400,000
$ 48,900,000	**Total AAL**	53,400,000
39,400,000	**Market Asset Value**	44,900,000
(9,500,000)	**(Unfunded Liability)**	(8,500,000)

CONTRIBUTION PROJECTIONS - FIRE SAFETY

	6/30/13 Valuation	2015/2016 Contribution Rates	
	Total[9]	**Tier 1 3%@55**	**PEPRA 2.7%@57**
■ Required Employer Contribution			
● Risk Pool's Base Employer Normal Cost	15.6%	15.6%	12.25%
● Class 1 Benefits			
☐ FAC1	0.9%	0.9%	0.00%
☐ PRSA	1.7%	1.7%	0.00%
● Pool's Expected EE Contribution	9.0%	9.0%	12.25%
● Plan's Employee Contribution Rate	(9.0%)	(9.0%)	(12.25%)
● Risk Pool's Payment on Amort Bases	8.8%	8.8%	0.0%
● Amortization of Side Fund	0.0%	0.0%	0.0%
● EE Cost Sharing	(3.0%)	(3.0%)	0.0%
● **Total ER Contribution**	**24.0%**	**24.0%**	**12.25%**
● **Total ER Contribution $ (in 000's)**	**$ 1,143**		

9 Weighting of total contribution projection based on estimated projected classic and PEPRA payrolls

CONTRIBUTION PROJECTIONS - FIRE SAFETY

	6/30/14 Valuation	2016/2017 Contribution Rates	
	Total[10]	**Tier 1 3%@55**	**PEPRA 2.7%@57**
■ Required Employer Contribution			
● Risk Pool's Base Employer Normal Cost	16.7%	16.7%	12.25%
● Class 1 Benefits			
☐ FAC1	1.0%	1.0%	0.00%
☐ PRSA	1.6%	1.6%	0.00%
● Pool's Expected EE Contribution	9.0%	9.0%	12.25%
● Plan's Employee Contribution Rate	(9.0%)	(9.0%)	(12.25%)
● Risk Pool's Payment on Amort Bases	10.2%	10.2%	0.0%
● Amortization of Side Fund	0.0%	0.0%	0.0%
● EE Cost Sharing	(3.0%)	(3.0%)	0.0%
● **Total ER Contribution**	**26.5%**	**26.5%**	**12.25%**
● **Total ER Contribution $ (in 000's)**	**$ 1,325**		

10 Weighting of total contribution projection based on estimated projected classic and PEPRA payrolls

CONTRIBUTION PROJECTIONS - FIRE SAFETY

	6/30/13	6/30/14
■ Valuation	6/30/13	6/30/14
■ Contribution Year	2015/16	2016/17
■ Required Employer Contribution		
● Risk Pool's Net Employer Normal Cost	15.6%	16.7%
● Final Average Compensation (1-Year)	0.9%	1.0%
● Post-Retirement Survivor Allowance	1.7%	1.6%
● **Total Normal Cost**	**18.2%**	**19.3%**
● Risk Pool's Payment on Amortization Bases	8.8%	10.2%
● Total Employer Contribution	27.0%	29.5%
● Employee Cost Sharing[11]	(3.0%)	(3.0%)
● **Net Employer Contributions**	**24.0%**	**26.5%**
● **Net Employer Contribution $**	**$1,143**	**$1,325**

■ What Happened from 6/30/13 to 6/30/14:

● 2015/16 Rate	24.0%
● Asset Method (2nd year)	1.6%
● Assumption Change (1st year)	2.2%
● (Gains)/Losses	(1.3%)
● 2016/17 Rate	26.5%

[11] 3% for Tier 1 employees.

CONTRIBUTION PROJECTIONS - FIRE SAFETY

This page intentionally blank

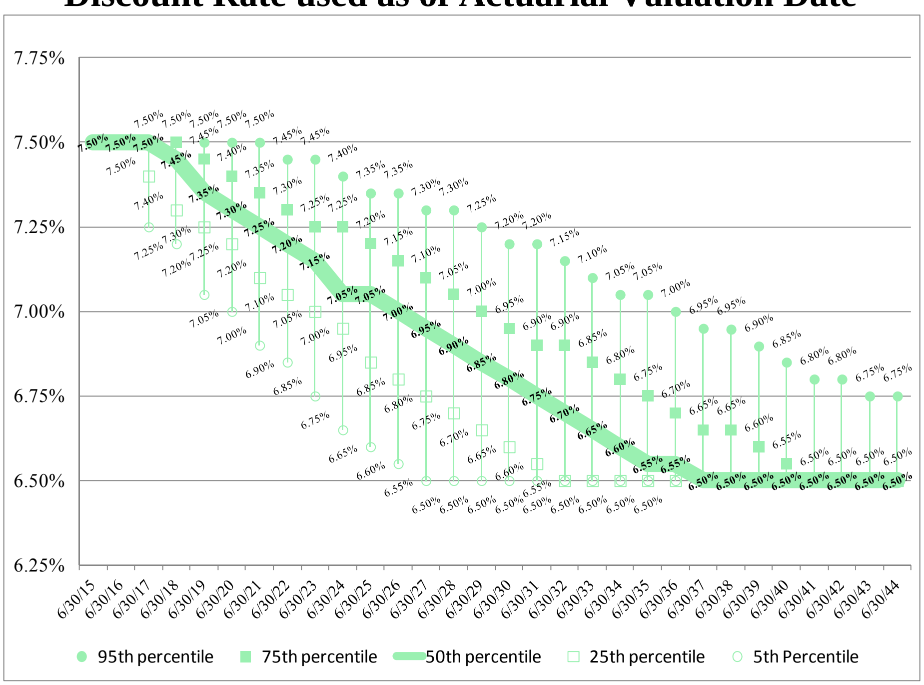
- Market Value Investment Return:
  - June 30, 2015 — 2.4%[12]
  - June 30, 2016 — 0.6%[13]
  - Future returns based on stochastic analysis using 1,000 trials

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

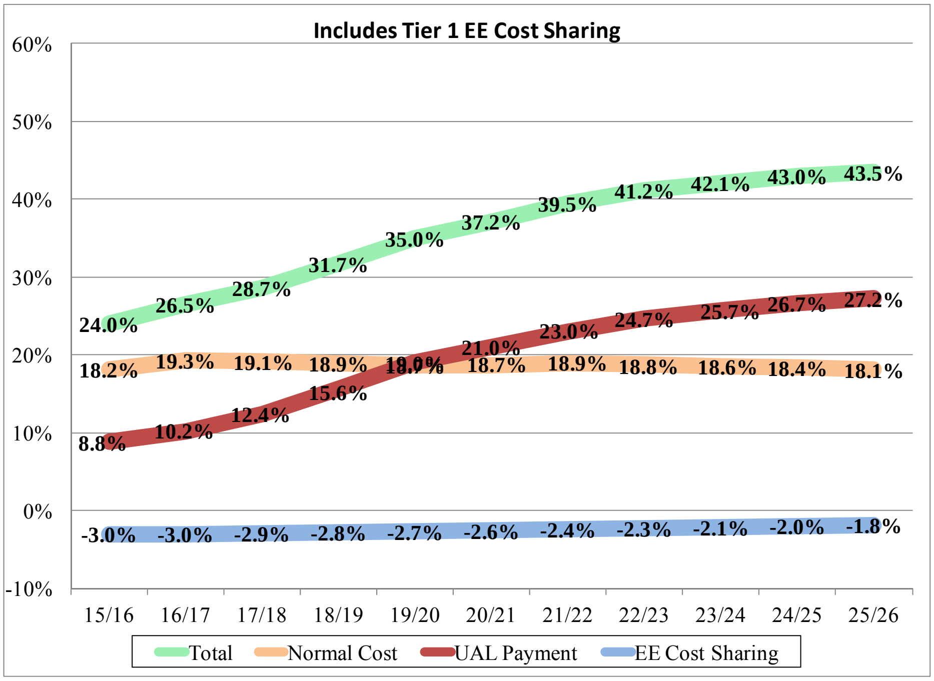
[12] Based on CalPERS CAFR.
[13] Based on CalPERS press release on 7/18/16, preliminary investment return of 0.61%.

Discount Rate used as of Actuarial Valuation Date



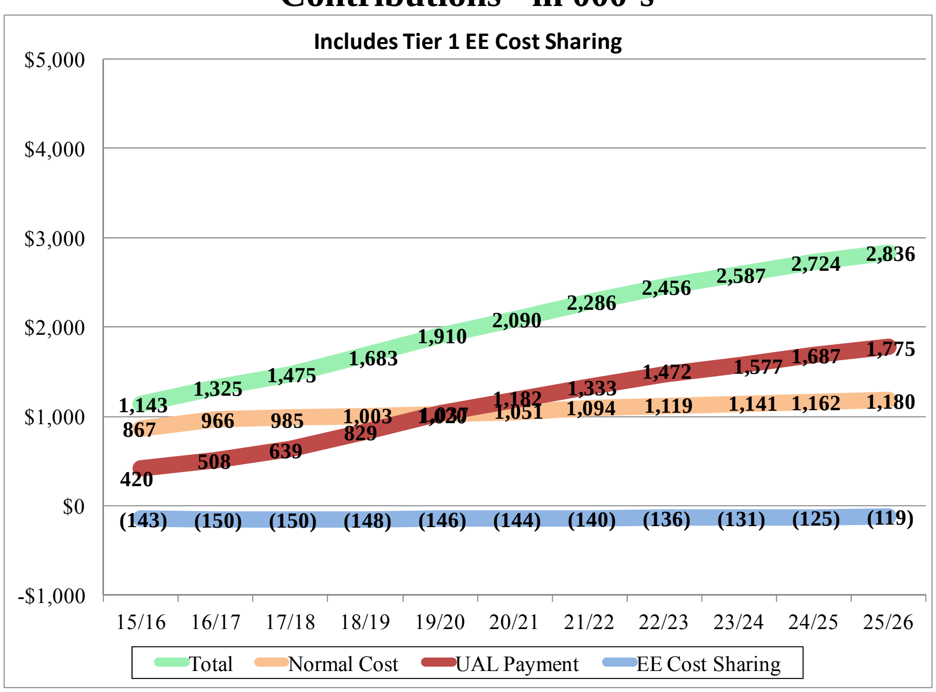
Contribution Projections - Fire Safety

Contributions - %

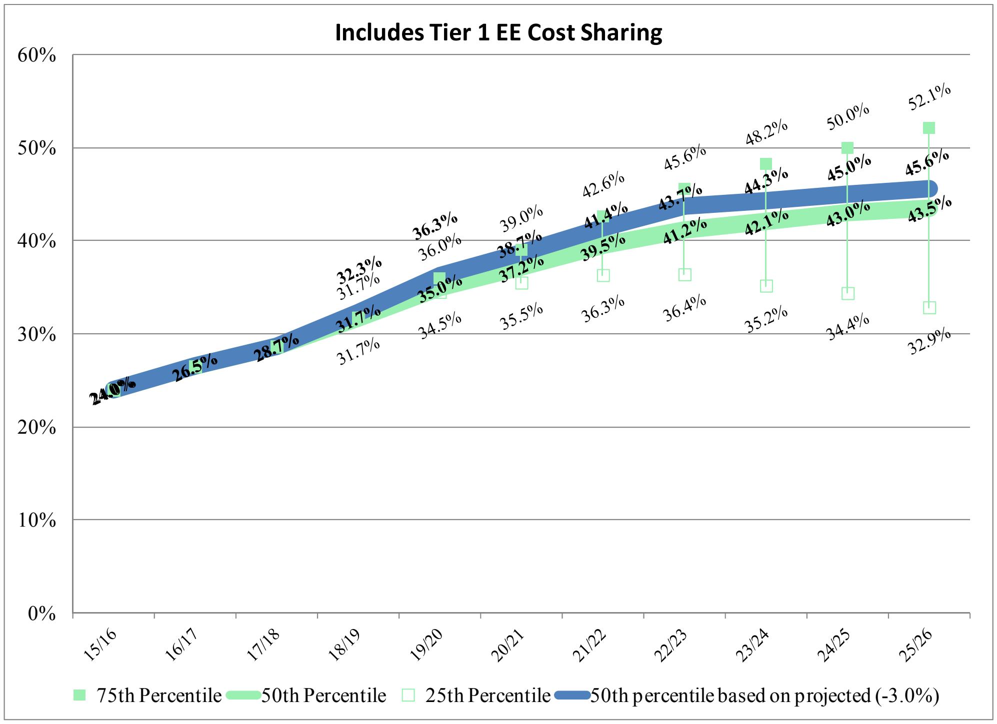


Contribution Projections – Fire Safety

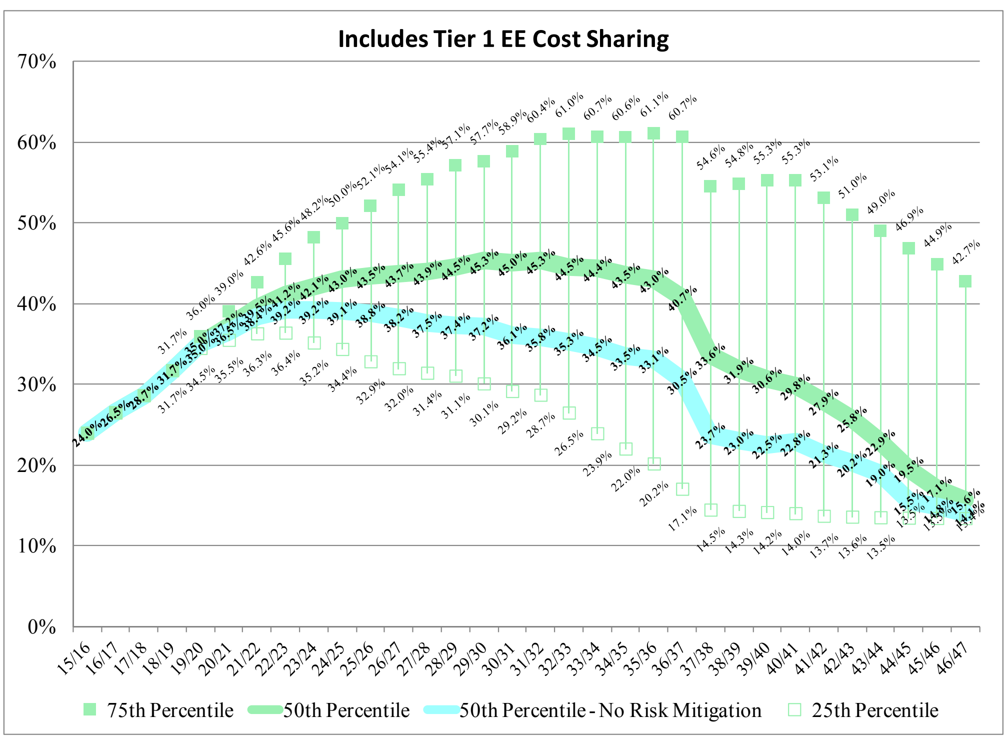
Contributions - in 000's



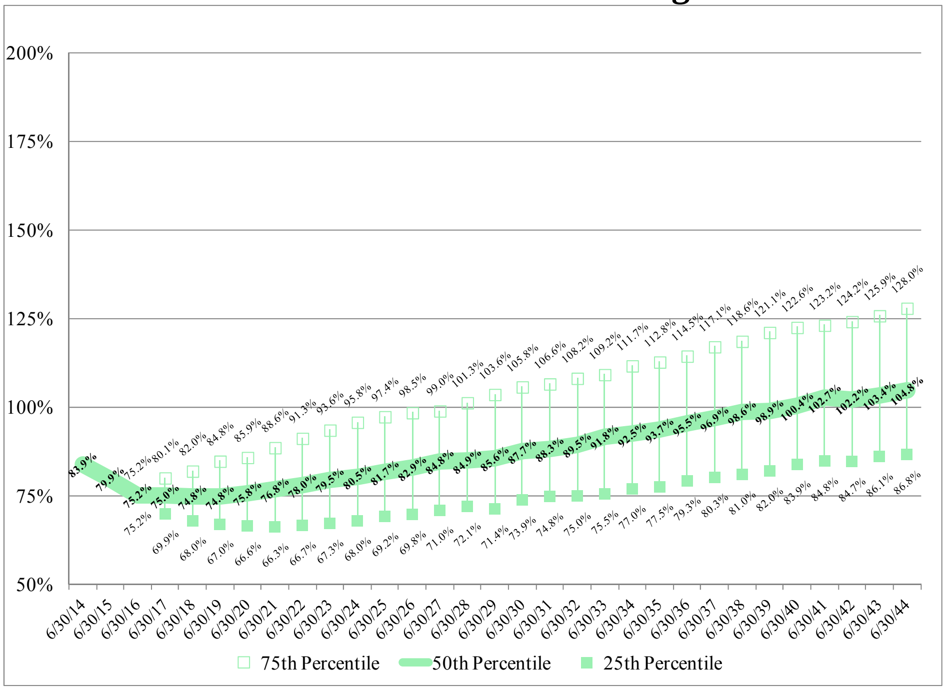
Contribution Projections – Fire Safety



Contribution Projections – Fire Safety



Funded Status - With Risk Mitigation



This page intentionally blank

APPENDICES – CONTRIBUTION PROJECTION TABLE

($000s)

Confidence Level	Miscellaneous Plan Projected Contributions Based on Final (0.6%) 6/30/2016 Inv. Return										
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
75%	1,737	1,951	2,167	2,478	2,898	3,226	3,656	4,046	4,440	4,751	5,108
50%	1,737	1,951	2,167	2,478	2,812	3,056	3,363	3,625	3,833	4,050	4,221
25%	1,737	1,951	2,167	2,478	2,769	2,908	3,070	3,176	3,154	3,175	3,125

Confidence Level	Miscellaneous Plan Projected Contributions Based on Projected (-3.0%) 6/30/2016 Inv. Return										
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
75%	1,737	1,951	2,167	2,559	3,016	3,392	3,865	4,319	4,694	5,012	5,348
50%	1,737	1,951	2,167	2,526	2,926	3,195	3,545	3,875	4,052	4,245	4,434
25%	1,737	1,951	2,167	2,489	2,835	3,018	3,249	3,397	3,402	3,440	3,497

Confidence Level	Police Safety Plan Projected Contributions (w cost sharing) Based on Final (0.6%) 6/30/2016 Inv. Return										
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
75%	2,328	2,709	3,033	3,459	4,022	4,472	5,003	5,479	5,966	6,356	6,793
50%	2,328	2,709	3,033	3,459	3,921	4,274	4,660	4,992	5,258	5,537	5,767
25%	2,328	2,709	3,033	3,459	3,876	4,105	4,326	4,475	4,480	4,524	4,507

Confidence Level	Police Safety Plan Projected Contributions (w cost sharing) Based on Projected (-3.0%) 6/30/2016 Inv. Return										
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
75%	2,328	2,709	3,033	3,555	4,162	4,670	5,244	5,799	6,256	6,666	7,071
50%	2,328	2,709	3,033	3,516	4,057	4,440	4,873	5,282	5,511	5,771	6,019
25%	2,328	2,709	3,033	3,472	3,951	4,236	4,526	4,728	4,765	4,831	4,929

Confidence Level	Fire Safety Plan Projected Contributions (w cost sharing) Based on Final (0.6%) 6/30/2016 Inv. Return										
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
75%	1,143	1,325	1,475	1,683	1,964	2,195	2,469	2,718	2,965	3,164	3,398
50%	1,143	1,325	1,475	1,683	1,910	2,090	2,286	2,456	2,587	2,724	2,836
25%	1,143	1,325	1,475	1,683	1,885	1,998	2,104	2,172	2,163	2,177	2,142

Confidence Level	Fire Safety Plan Projected Contributions (w cost sharing) Based on Projected (-3.0%) 6/30/2016 Inv. Return										
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
75%	1,143	1,325	1,475	1,734	2,037	2,298	2,600	2,887	3,126	3,330	3,545
50%	1,143	1,325	1,475	1,713	1,981	2,176	2,399	2,608	2,725	2,848	2,971
25%	1,143	1,325	1,475	1,690	1,925	2,067	2,215	2,309	2,312	2,340	2,367

APPENDICES – UNFUNDED LIABILITY TABLE

In Millions $

Confidence Level	Miscellaneous Plan Projected Unfunded Liability Based on Final (0.6%) 6/30/2016 Inv. Return								
	6/30/14	6/30/15	6/30/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22
50%	14	18	23	25	26	28	28	29	29

Confidence Level	Miscellaneous Plan Projected Unfunded Liability Based on Projected (-3.0%) 6/30/2016 Inv. Return								
	6/30/14	6/30/15	6/30/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22
50%	14	18	26	28	29	31	32	33	33

Confidence Level	Police Safety Plan Projected Unfunded Liability Based on Final (0.6%) 6/30/2016 Inv. Return								
	6/30/14	6/30/15	6/30/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22
50%	21	26	33	35	37	39	40	41	41

Confidence Level	Police Safety Plan Projected Unfunded Liability Based on Projected (-3.0%) 6/30/2016 Inv. Return								
	6/30/14	6/30/15	6/30/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22
50%	21	26	36	38	40	43	44	46	46

Confidence Level	Fire Safety Plan Projected Unfunded Liability Based on Final (0.6%) 6/30/2016 Inv. Return								
	6/30/14	6/30/15	6/30/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22
50%	9	11	15	16	17	18	19	19	19

Confidence Level	Fire Safety Plan Projected Unfunded Liability Based on Projected (-3.0%) 6/30/2016 Inv. Return								
	6/30/14	6/30/15	6/30/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22
50%	9	11	17	18	19	21	21	22	22