



BARTEL
ASSOCIATES, LLC

**CITY OF SANTA CLARA
MISCELLANEOUS & SAFETY PLANS**

**CalPERS Actuarial Issues – 6/30/17 Valuation
Final Results**

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December 11, 2018

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HOW WE GOT HERE

- Investment Losses
- CalPERS Contribution Policy
- Enhanced Benefits
- Demographics



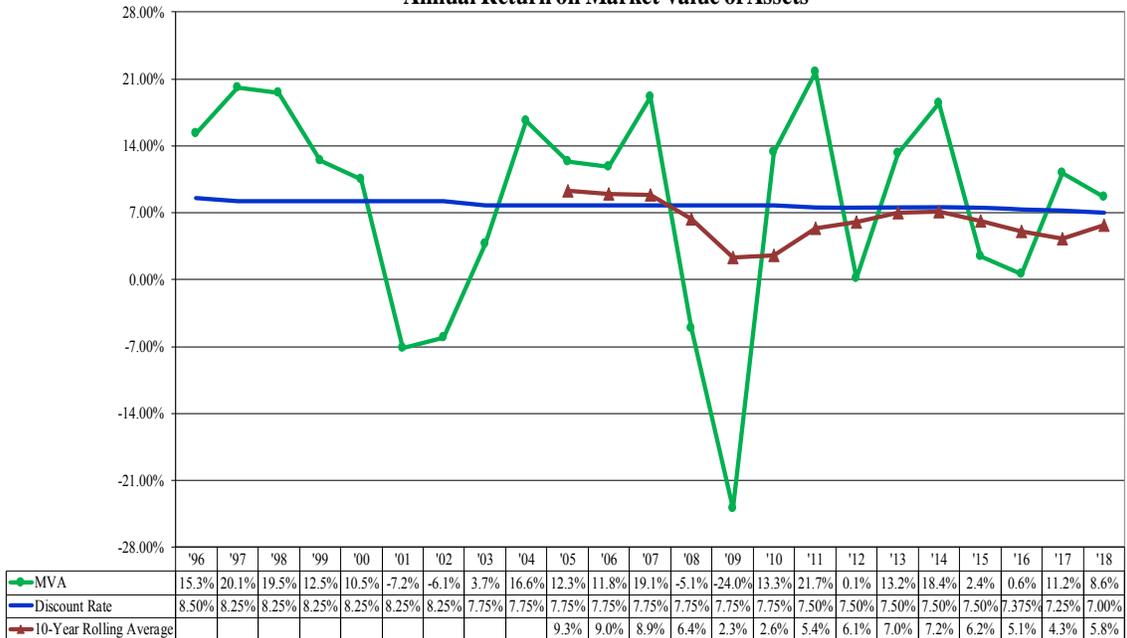
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HOW WE GOT HERE – INVESTMENT RETURN

Annual Return on Market Value of Assets



Above assumes contributions, payments, etc. received evenly throughout year.



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HOW WE GOT HERE – OLD CONTRIBUTION POLICY

- Effective with 2003 valuations:
 - Slow (15 year) recognition of investment losses into funded status
 - Rolling 30 year amortization of all (primarily investment) losses

- Designed to:
 - First smooth rates and
 - Second pay off UAL

- Mitigated contribution volatility



HOW WE GOT HERE – ENHANCED BENEFITS

- At CalPERS, Enhanced Benefits implemented using all (future & prior) service

- Typically not negotiated with cost sharing

■ City of Santa Clara	Tier 1	Tier 2	PEPRA
● Miscellaneous	2.7%@55 FAE1	N/A	2%@62 FAE3
● Safety Police	3%@50 FAE1	N/A	2.7%@57 FAE3
● Safety Fire	3%@50 FAE3	N/A	2.7%@57 FAE3

- Note:
 - FAE1 is highest one year (typically final) average earnings
 - FAE3 is highest three years (typically final three) average earnings



HOW WE GOT HERE – DEMOGRAPHIC

- Around the State
 - Large retiree liability compared to actives
 - State average: 55% for Miscellaneous, 65% for Safety
 - Declining active population and increasing number of retirees
 - Higher percentage of retiree liability increases contribution volatility

- City of Santa Clara percentage of liability belonging to retirees:
 - Miscellaneous 64%
 - Safety 71%



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HOW WE GOT HERE – DEMOGRAPHIC

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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)
- CalPERS Board changed their discount rate:

	<u>Rate</u>	<u>Initial</u>	<u>Full</u>
● 6/30/16 valuation	7.375%	18/19	22/23
● 6/30/17 valuation	7.25%	19/20	23/24
● 6/30/18 valuation	7.00%	20/21	24/25
- December 2018: CalPERS Board selected asset allocation similar to current portfolio. No change to the discount rate.



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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 $\approx 50\%$ of investment gains to pay for cost increases
 - Likely get to 6.0% over 20+ years
 - Risk mitigation suspended until 6/30/18 valuation
 - February 2018 CalPERS adopted new amortization policy
 - Applies only to newly established amortization bases
 - Fixed dollar amortization rather than % pay
 - Amortize gains/losses over 20 rather than 30 years
 - 5-year ramp up (not down) for investment gains and losses
 - No ramp up/down for other amortization bases
 - Minimizes total interest paid over time and pays off UAL faster
 - Effective June 30, 2019 valuation for 2021/22 contributions
- Included in this study



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SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS

	1997	2007	2016	2017
Actives				
■ Counts	641	645	636	691
■ Average				
• Age	45	47	46	45
• City Service	11	13	12	10
• PERSable Wages	\$ 55,500	\$ 79,300	\$ 98,400	\$ 102,100
■ Total PERSable Wages	39,700,000	56,300,000	68,400,000	76,800,000
Inactive Members				
■ Counts				
• Transferred	118	204	223	217
• Separated	66	147	185	205
• Retired				
□ Service		517	737	771
□ Disability		61	63	62
□ Beneficiaries		96	103	106
□ Total	454	674	903	939
■ Average Annual City Provided Benefit for Service Retirees ¹	N/A	\$ 26,400	\$ 42,100	\$ 43,100
■ Active / Retiree Ratio (City)	1.5	1.0	0.7	0.7
■ Active / Retiree Ratio (All CalPERS)	N/A	1.7	1.3	1.3

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

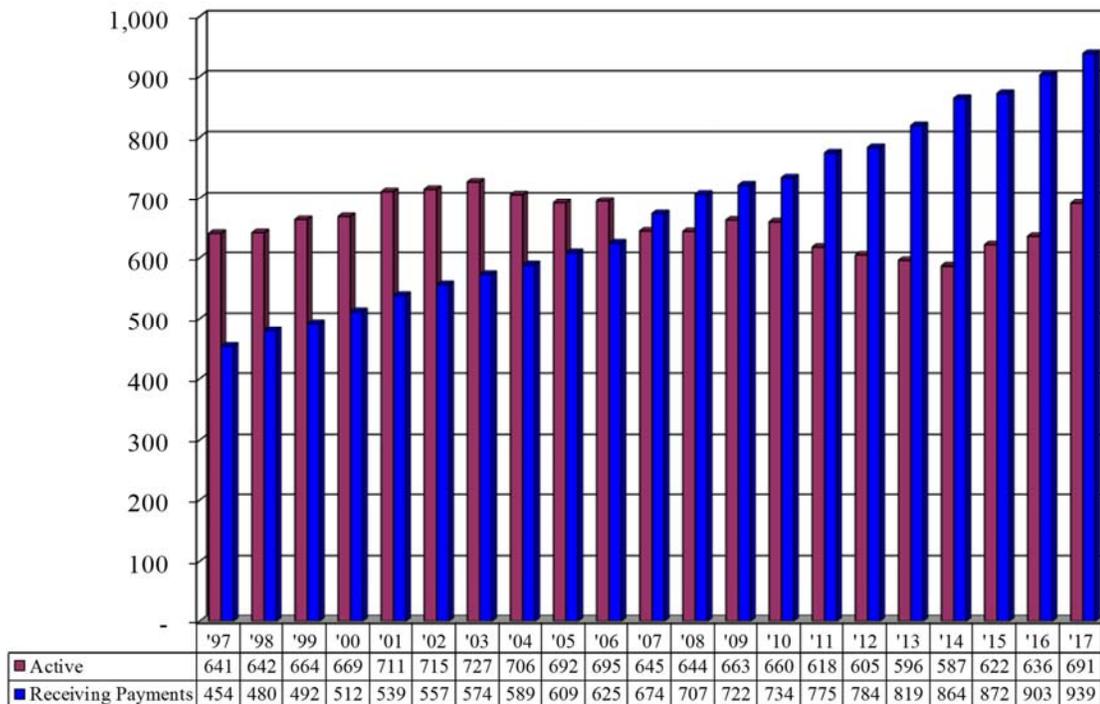


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SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS



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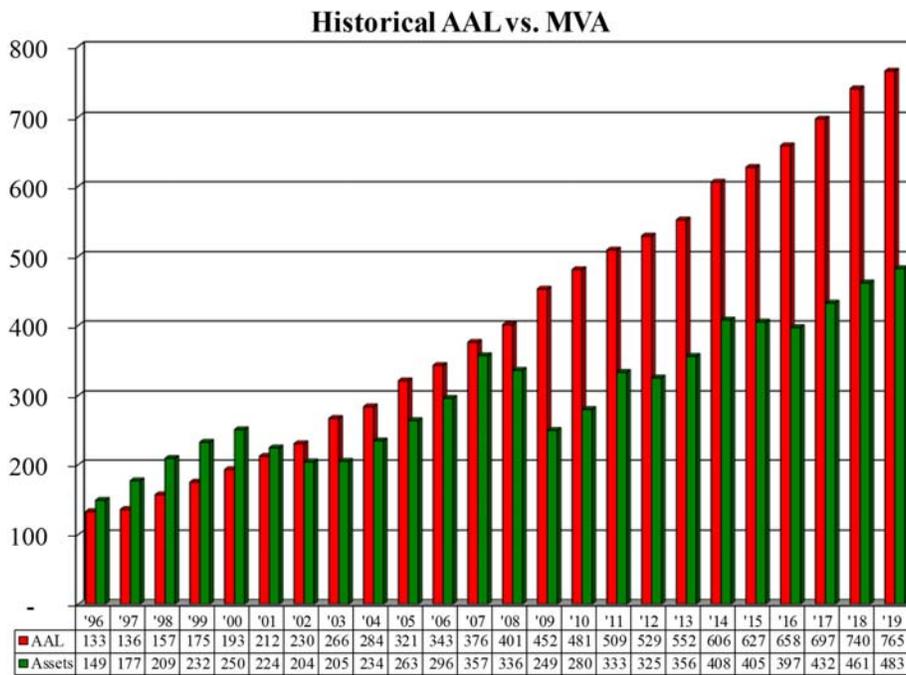


PLAN FUNDED STATUS - MISCELLANEOUS

	June 30, 2016	June 30, 2017
Active AAL	\$ 216,100,000	\$ 222,300,000
Retiree AAL	417,800,000	449,600,000
Inactive AAL	<u>23,600,000</u>	<u>25,300,000</u>
Total AAL	657,500,000	697,200,000
Assets	<u>396,900,000</u>	<u>432,100,000</u>
Unfunded Liability	260,600,000	265,100,000
Funded Ratio	60.4%	62.0%



FUNDED STATUS (MILLIONS) - MISCELLANEOUS

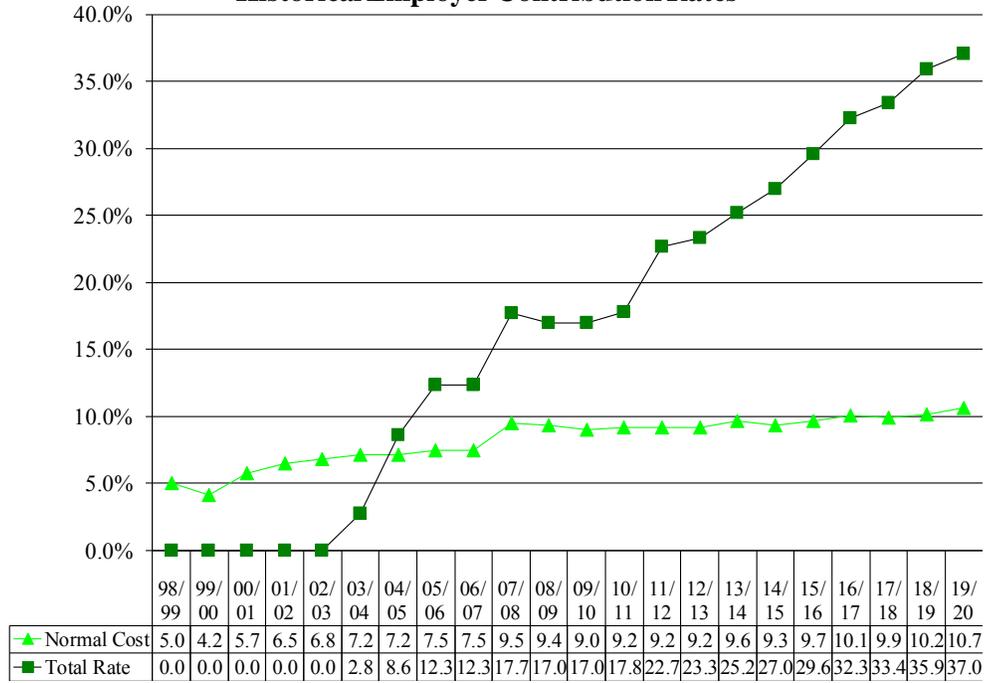


6/30/18 & 6/30/19 funded status estimated



CONTRIBUTION RATES - MISCELLANEOUS

Historical Employer Contribution Rates



CONTRIBUTION RATES - MISCELLANEOUS

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CONTRIBUTION PROJECTIONS - MISCELLANEOUS

■ Investment Return:

- June 30, 2018 8.6%²
- Future returns based on stochastic analysis using 1,000 trials³

	<u>25th Percentile</u>	<u>50th Percentile</u>	<u>75th Percentile</u>
Current Investment Mix	0.1%	7.0%	14.8%
Ultimate Investment Mix	0.8%	6.0%	11.4%
- Assumes investment returns will generally be 6.5% (as compared to 7.0%) over the next 10 years and higher beyond that.

■ Assumption Changes – Discount Rate

- Decrease to 7.0% by June 30, 2018 valuation
- Additional Discount Rate decreases due to Risk Mitigation policy.

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

■ Different from CalPERS projection

² based July 2018 CalPERS press release

³ Nth percentile means N percentage of our trials result in returns lower than the indicated rates.



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CONTRIBUTION PROJECTIONS - MISCELLANEOUS

■ New hire assumptions:

- 62.5% of 2018/19 hires are PEPRAs members and 37.5% are Classic members
- Percentage of PEPRAs member future hires to increase from 62.5% to 100% over 15 years

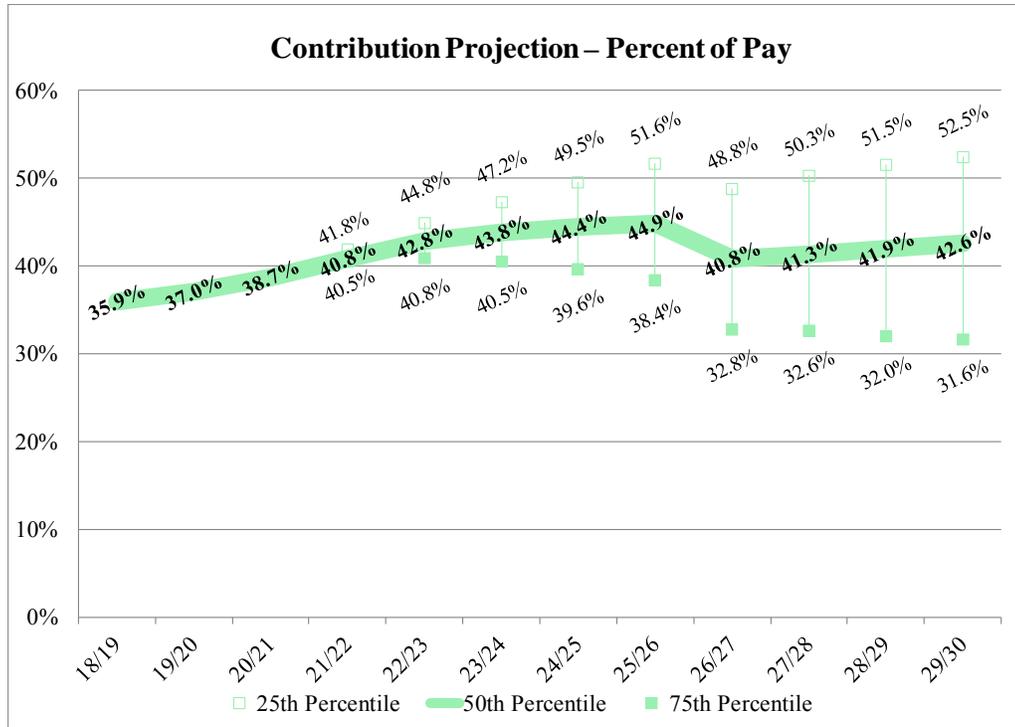


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CONTRIBUTION PROJECTIONS - MISCELLANEOUS

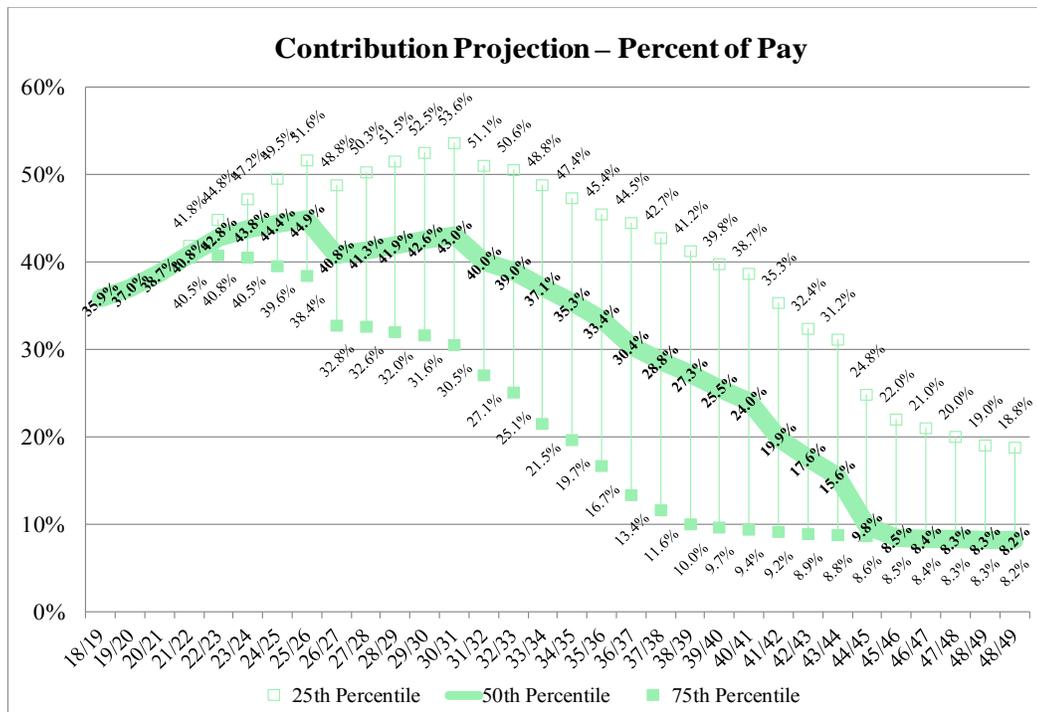


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CONTRIBUTION PROJECTIONS - MISCELLANEOUS

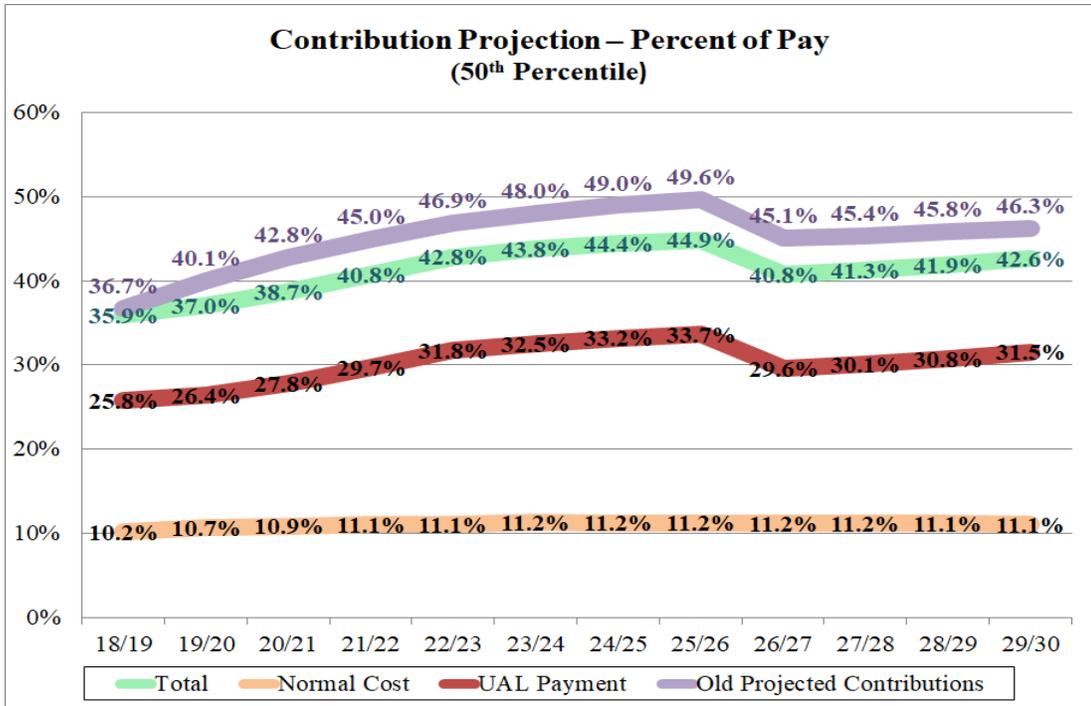


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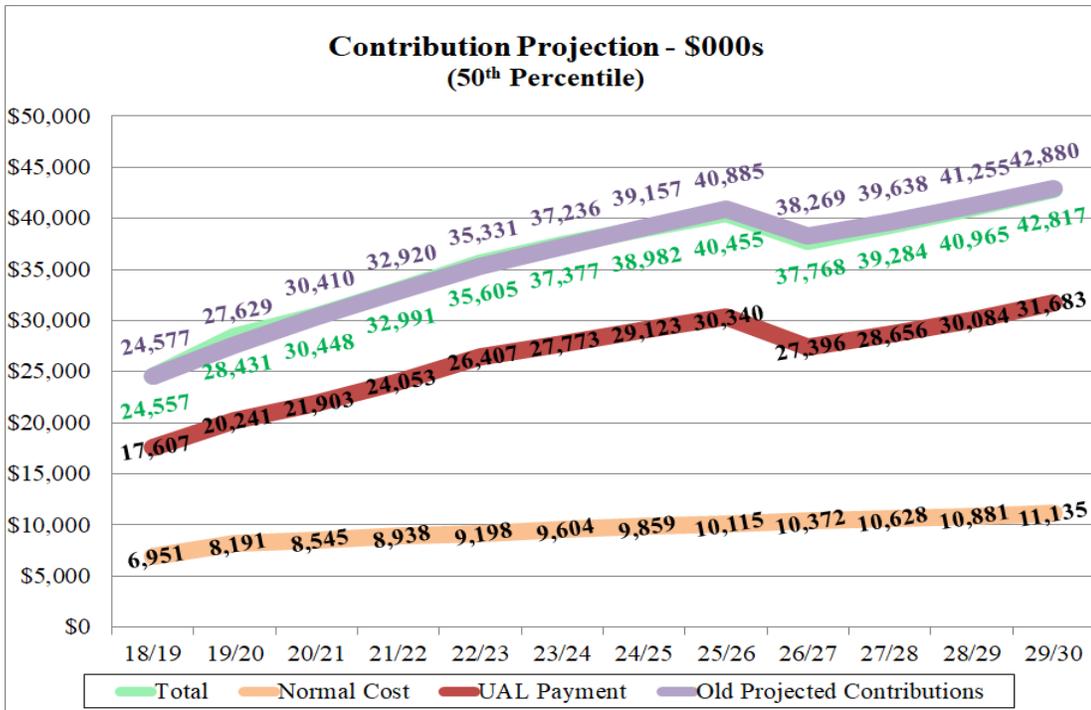
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CONTRIBUTION PROJECTIONS - MISCELLANEOUS



CONTRIBUTION PROJECTIONS - MISCELLANEOUS



SUMMARY OF DEMOGRAPHIC INFORMATION - SAFETY

	1997	2007	2016	2017
Actives				
■ Counts	293	283	286	285
■ Average				
• Age	42	41	41	41
• City Service	14	13	11	12
• PERSable Wages	\$ 82,400	\$ 126,200	\$ 144,800	\$ 157,800
■ Total PERSable Wages	27,000,000	39,300,000	45,300,000	49,000,000
Inactive Members				
■ Counts				
• Transferred	11	31	28	30
• Separated	13	16	29	29
• Retired				
□ Service		183	253	259
□ Disability		123	139	141
□ Beneficiaries		42	55	59
□ Total	191	348	447	459
■ Average Annual City Provided Benefit for Service Retirees ⁴	N/A	40,500	94,600	95,400
■ Active / Retiree Ratio (City)	1.5	0.8	0.6	0.6
■ Active / Retiree Ratio (All CalPERS)	N/A	1.7	1.3	1.3

⁴ Average City-provided pensions are based on City service & City benefit formula, and are not representative of benefits for long-service employees.

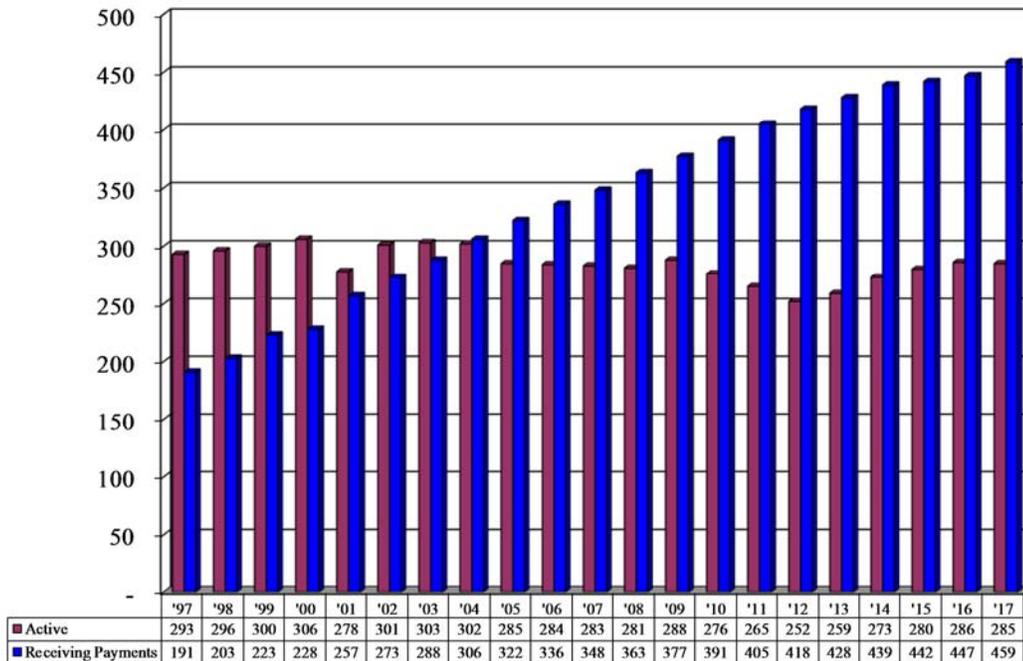


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SUMMARY OF DEMOGRAPHIC INFORMATION - SAFETY



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PLAN FUNDED STATUS - SAFETY

	<u>June 30, 2016</u>	<u>June 30, 2017</u>
Active AAL	\$ 187,100,000	\$ 206,400,000
Retiree AAL	495,000,000	516,600,000
Inactive AAL	<u>6,800,000</u>	<u>5,600,000</u>
Total AAL	688,900,000	728,600,000
Assets	<u>445,000,000</u>	<u>481,000,000</u>
Unfunded Liability	243,900,000	247,600,000
Funded Ratio	64.6%	66.0%

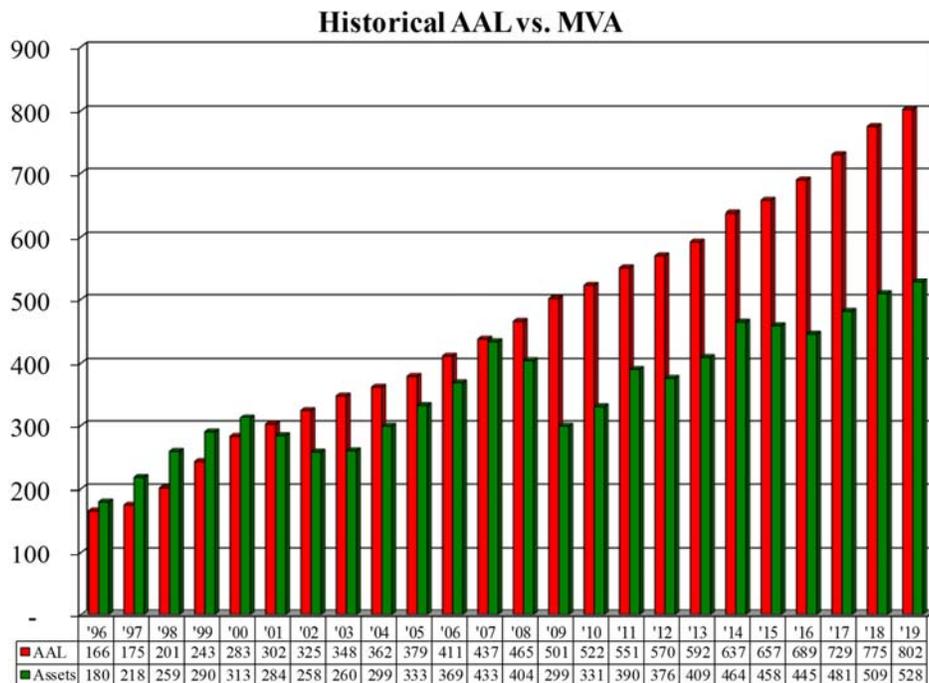


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FUNDED STATUS (MILLIONS) - SAFETY



6/30/18 & 6/30/19 funded status estimated



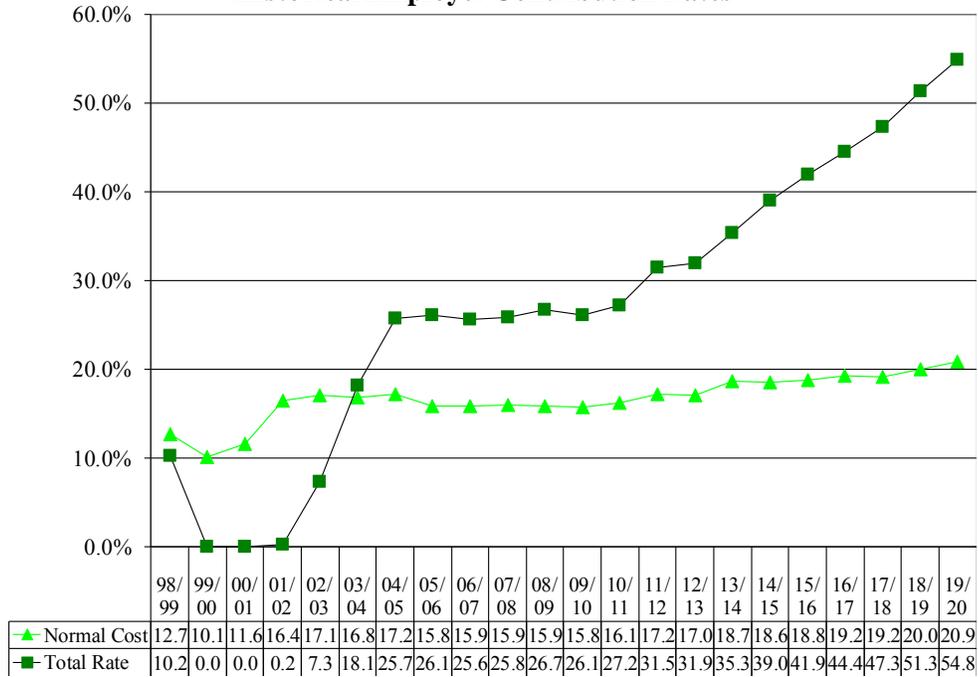
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CONTRIBUTION RATES - SAFETY

Historical Employer Contribution Rates



CONTRIBUTION RATES - SAFETY

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CONTRIBUTION PROJECTIONS - SAFETY

■ Investment Return:

- June 30, 2018 8.6%⁵
- Future returns based on stochastic analysis using 1,000 trials⁶

	<u>25th Percentile</u>	<u>50th Percentile</u>	<u>75th Percentile</u>
Current Investment Mix	0.1%	7.0%	14.8%
Ultimate Investment Mix	0.8%	6.0%	11.4%

- Assumes investment returns will generally be 6.5% (as compared to 7.0%) over the next 10 years and higher beyond that.

■ Assumption Changes – Discount Rate

- Decrease to 7.0% by June 30, 2018 valuation
- Additional Discount Rate decreases due to Risk Mitigation policy.

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

■ Different from CalPERS projection

⁵ based July 2018 CalPERS press release

⁶ Nth percentile means N percentage of our trials result in returns lower than the indicated rates.



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CONTRIBUTION PROJECTIONS - SAFETY

■ New hire assumptions:

- 75.0% of 2018/19 hires are PEPRAs and 25.0% are Classic members
- Percentage of PEPRAs member future hires to increase from 75.0% to 100% over 5 years

■ Employee Cost Sharing

- Police Safety Classic employees pay 2.25% toward employer rates

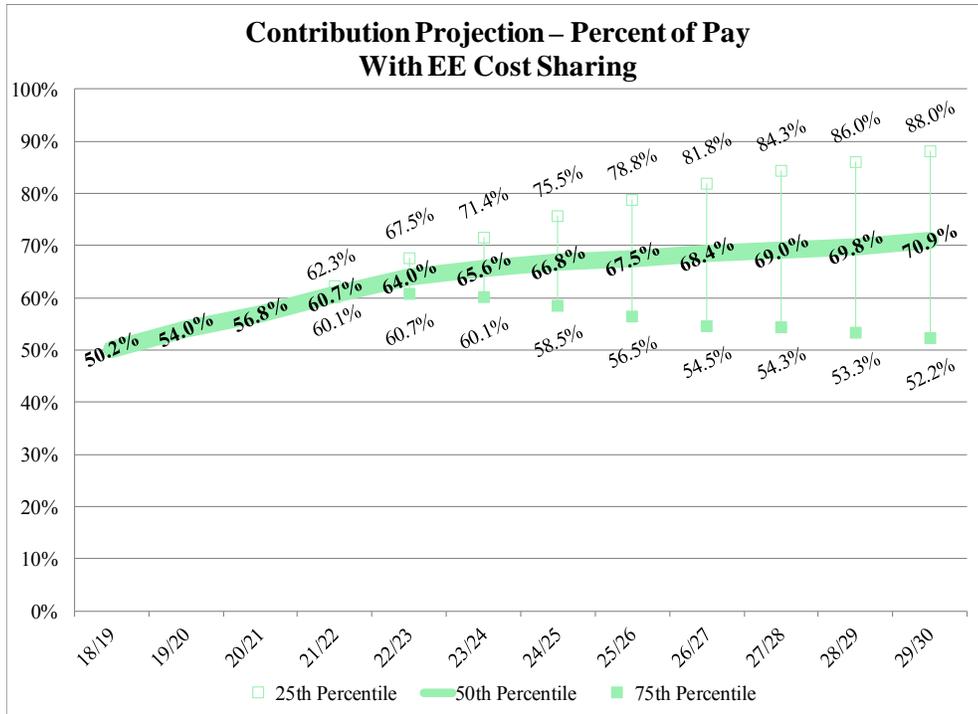


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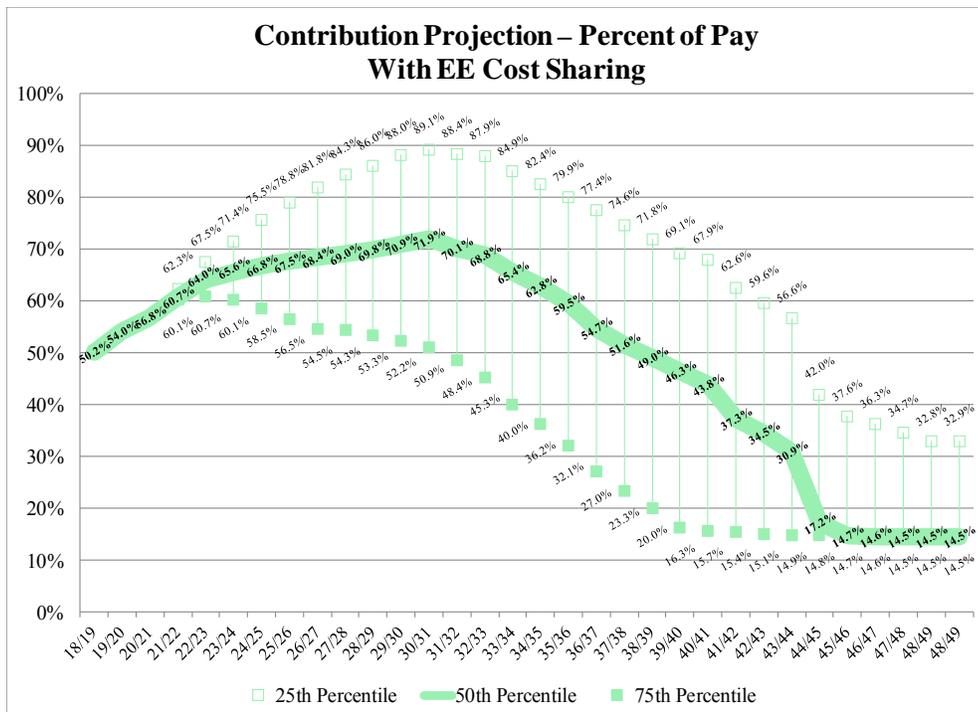
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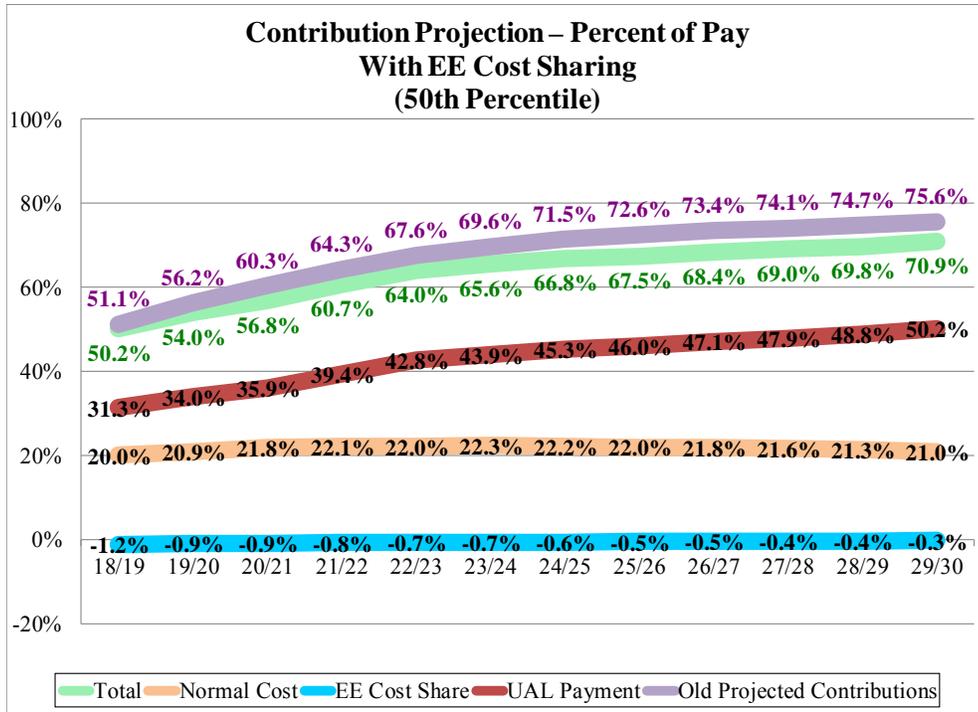
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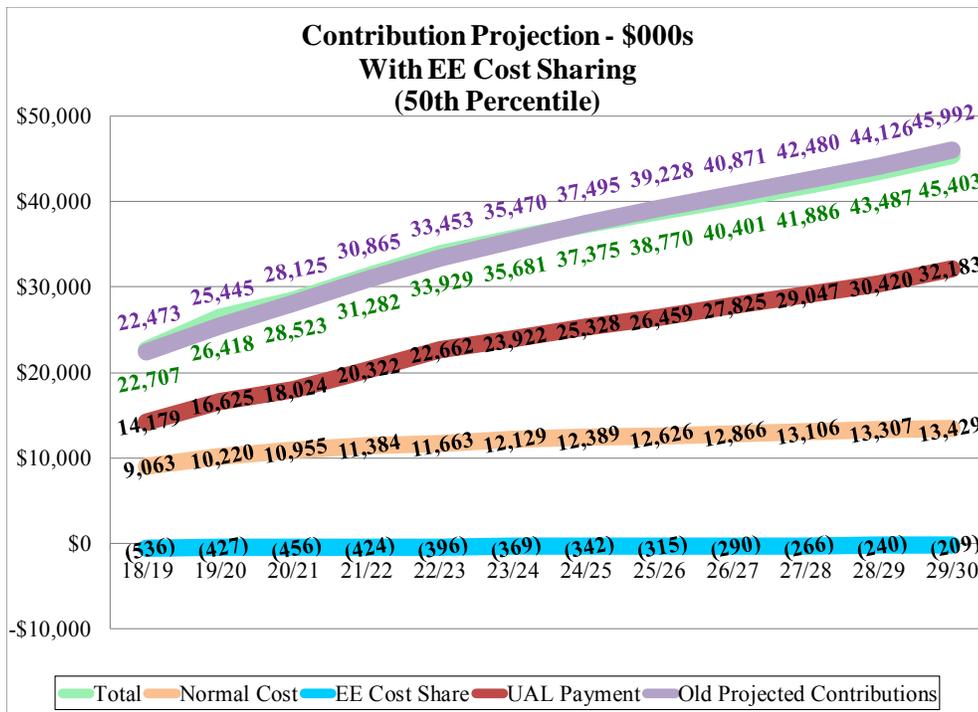
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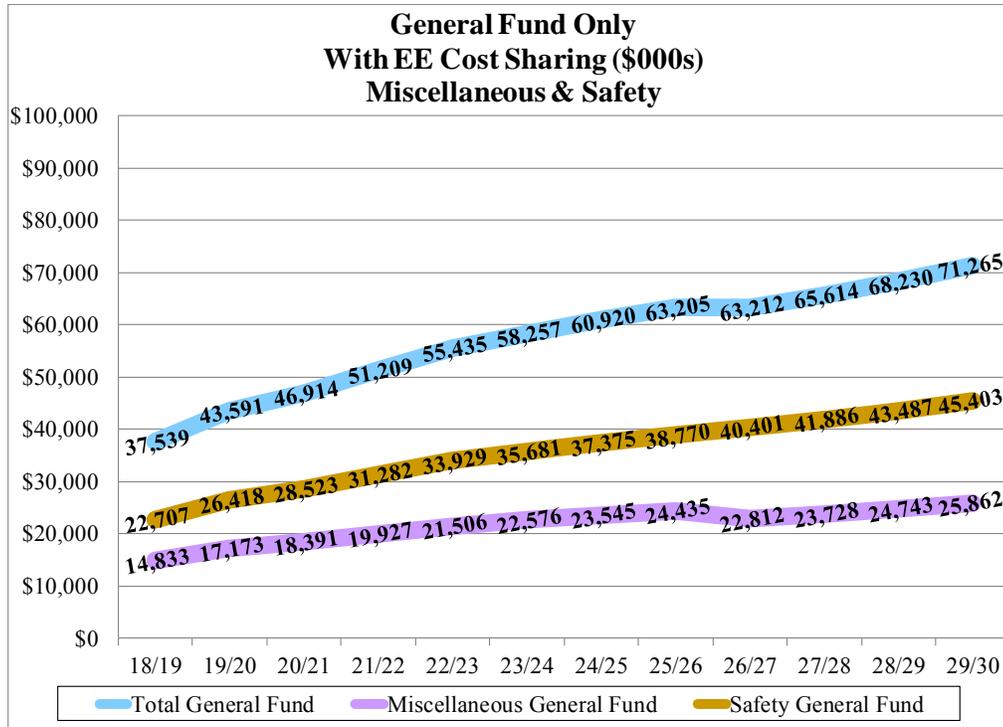
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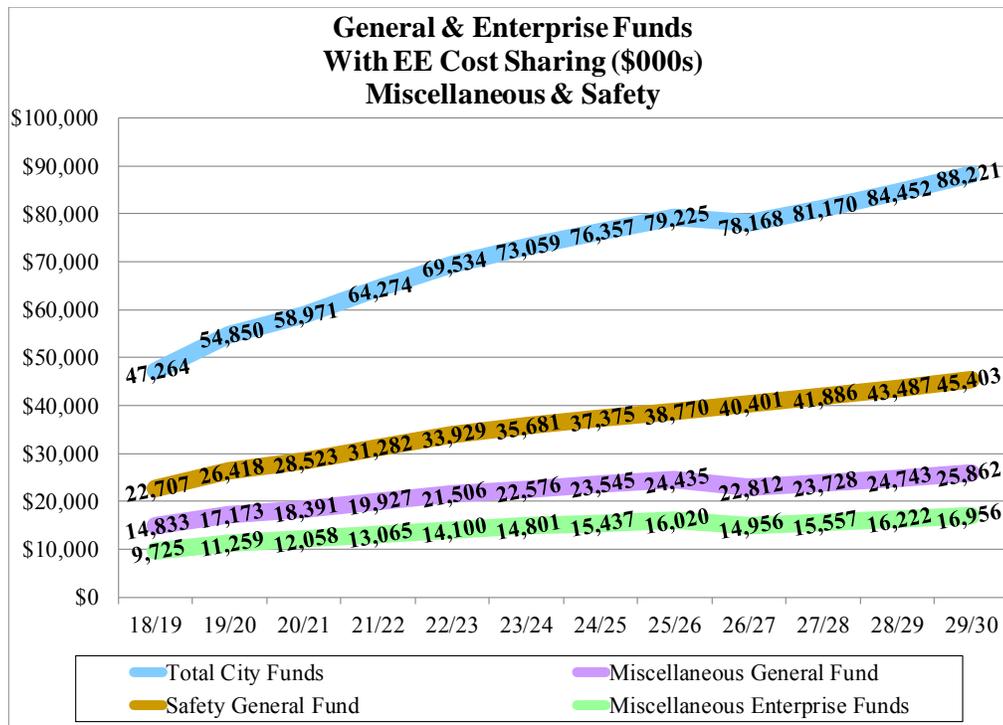
COMBINED MISCELLANEOUS AND SAFETY



COMBINED MISCELLANEOUS AND SAFETY



COMBINED MISCELLANEOUS AND SAFETY



COMBINED MISCELLANEOUS AND SAFETY

Funded Status Summary on June 30, 2017
(Amounts in \$Millions)

	Miscellaneous	Safety	Total
■ AAL	\$ 697	\$ 729	\$ 1,426
■ Assets	<u>432</u>	<u>481</u>	<u>913</u>
■ Unfunded AAL	265	248	513
■ Funded Ratio	62.0%	66.0%	64.0%



COMBINED MISCELLANEOUS AND SAFETY

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PAYING DOWN THE UNFUNDED LIABILITY & RATE STABILIZATION

- Where do you get the money from?
- How do you use the money?



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WHERE DO YOU GET THE MONEY FROM?

- POB
- Borrow from General Fund similar to State
- One time payments



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HOW DO YOU USE THE MONEY?

- Internal Service Fund
- Make payments directly to CalPERS
- Irrevocable Supplemental (§115) Trust



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IRREVOCABLE SUPPLEMENTAL (§115) PENSION TRUST

- Consider:
 - How much can you put into Trust?
 - Initial seed money?
 - Additional amounts in future years?
 - When do you take money out?
 - Target budget rate?
 - Year target budget rate kicks in?
 - Before or after CalPERS rate exceeds budgeted rate?



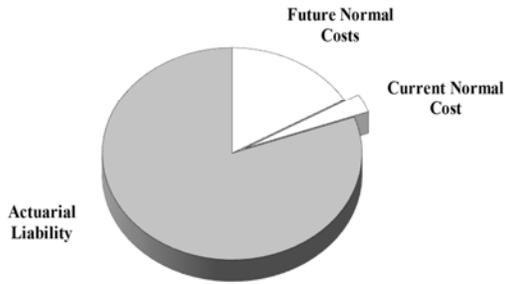
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APPENDIX – DEFINITIONS

Present Value of Benefits
June 30, 2017



- **Present Value of all Projected Benefits:**
 - The value now of amounts due to be paid in the future
- **PVB - Present Value of all Projected Benefits:**
 - Discounted value (at valuation date - 6/30/17), of all future expected benefit payments based on various (actuarial) assumptions

- **Current Normal Cost:**
 - Portion of PVB allocated to (or “earned” during) current year
 - Value of employee and employer current service benefit
- **Actuarial Liability:**
 - Discounted value (at valuation date) of benefits earned through valuation date [value of past service benefit]
 - Portion of PVB “earned” at measurement



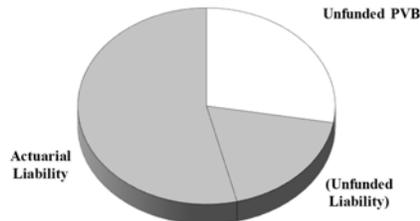
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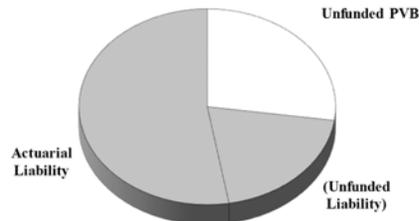


APPENDIX – DEFINITIONS

Present Value of Benefits
June 30, 2016



Present Value of Benefits
June 30, 2017



- **Target-** Have money in the bank to cover Actuarial Liability (past service)
- **Unfunded Liability** - Money short of target at valuation date
- **Unfunded Liability** - Money short of target at valuation date
 - If all actuarial assumptions were always exactly met, then the plan assets would always equal AAL
 - Any difference is the unfunded (or overfunded) AAL
 - Every year, the actuary calculates the difference between the expected UAAL and Actual UAAL. This is a new layer or amortization base
 - Each new layer gets amortized (paid off) over a period of time as part of the contribution [rate].



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