



BARTEL
ASSOCIATES, LLC

**CITY OF ROCKLIN
MISCELLANEOUS AND SAFETY PLANS**

CalPERS Actuarial Analysis – 6/30/18 Valuation

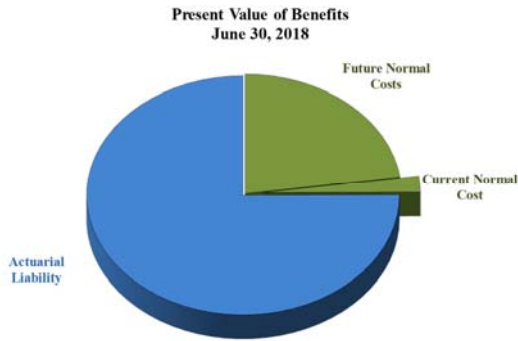
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March 10, 2020

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DEFINITIONS



- **PVB - Present Value of all Projected Benefits:**
 - The value now of amounts due to be paid in the future
 - Discounted value (at valuation date - 6/30/18), of all future expected benefit payments based on various (actuarial) assumptions

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

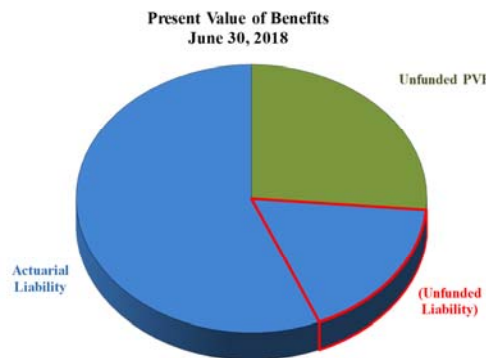
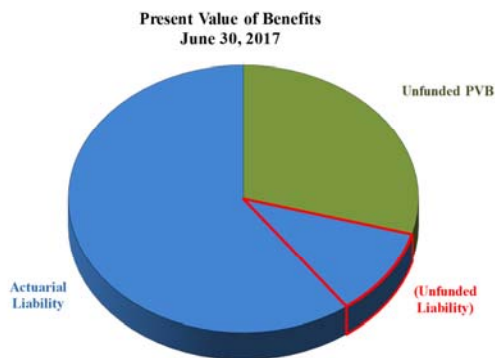


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DEFINITIONS



- **Target-** Have money in the bank to cover Actuarial Liability (past service)
- **Unfunded Liability (UAAL or UAL) -** 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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HOW WE GOT HERE

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

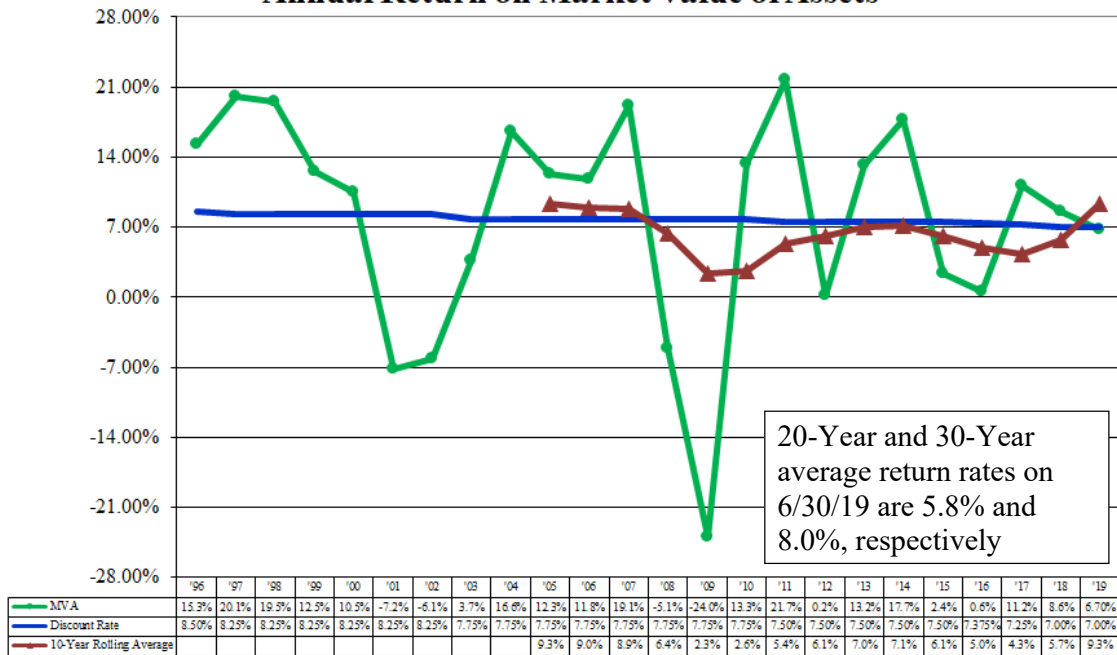


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HOW WE GOT HERE – INVESTMENT RETURN

Annual Return on Market Value of Assets



Returns (after 2001) shown are gross returns, unreduced for administrative expenses. The discount rate is based on expected returns net of administrative expenses.



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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



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HOW WE GOT HERE – ENHANCED BENEFITS

- At CalPERS, Enhanced Benefits implemented using all (future & prior) service
- Typically not negotiated with cost sharing
- City of Rocklin

| | Tier 1 | PEPRA |
|-----------------|---------------|--------------|
| ● Miscellaneous | 2%@55 FAE1 | 2%@62 FAE3 |
| ● Police | 3%@50 FAE1 | 2.7%@57 FAE3 |
| ● Fire | 3%@50 FAE1 | 2.7%@57 FAE3 |

- Note:
 - FAE1 is highest one year (typically final) average earnings
 - FAE3 is highest three years (typically final three) average earnings
- PEPRA tier implemented for new employees hired after 1/1/13
 - Employee pays half of total normal cost
 - 2020 Compensation limit
 - \$151,549 (non-Social Security participants)



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HOW WE GOT HERE – DEMOGRAPHIC

- Around the State
 - Large retiree liability compared to actives
 - State average: 59% for Miscellaneous, 62% for Safety
 - Declining active population and increasing number of retirees
 - Higher percentage of retiree liability increases contribution volatility
- City of Rocklin percentage of liability belonging to retirees:
 - Miscellaneous 53%
 - Police 52%
 - Fire 50%



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CALPERS CHANGES

- Recent contribution policy changes:
 - No asset smoothing
 - No rolling amortization
 - 5-year ramp up
- 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

- CalPERS Board changed the discount rate:

| | <u>Rate</u> | <u>Initial Impact</u> | <u>Full Impact</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 |



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CALPERS CHANGES

- Risk Mitigation Strategy
 - Move to more conservative investments over time to reduce volatility
 - 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 6.0% discount rate over 20+ years
 - Implies expected return 7% declining to 6% over 20 years
 - Average long term return and discount rate likely close to 6.5%
 - Risk mitigation suspended from 6/30/16 to 6/30/18 valuation
 - Did not trigger for 6/30/19 valuation



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SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS

| | 1996 | 2017 | 2018 |
|--|-----------|------------|------------|
| Actives | | | |
| ■ Counts | 110 | 144 | 142 |
| ■ Average | | | |
| • Age | 40 | 47 | 47 |
| • City Service | 6 | 10 | 10 |
| • PERSable Wages | \$ 32,600 | \$ 75,800 | \$ 77,300 |
| ■ Total PERSable Wages | 3,600,000 | 10,900,000 | 11,000,000 |
| Inactive Members | | | |
| ■ Counts | | | |
| • Transferred | 16 | 98 | 94 |
| • Separated | 12 | 165 | 173 |
| • Retired | | | |
| □ Service | n/a | 128 | 134 |
| □ Disability | n/a | 9 | 11 |
| □ Beneficiaries | n/a | 5 | 6 |
| □ Total | 17 | 142 | 151 |
| ■ Average Annual City Provided Benefit for Service Retirees ¹ | | 23,000 | 24,100 |

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

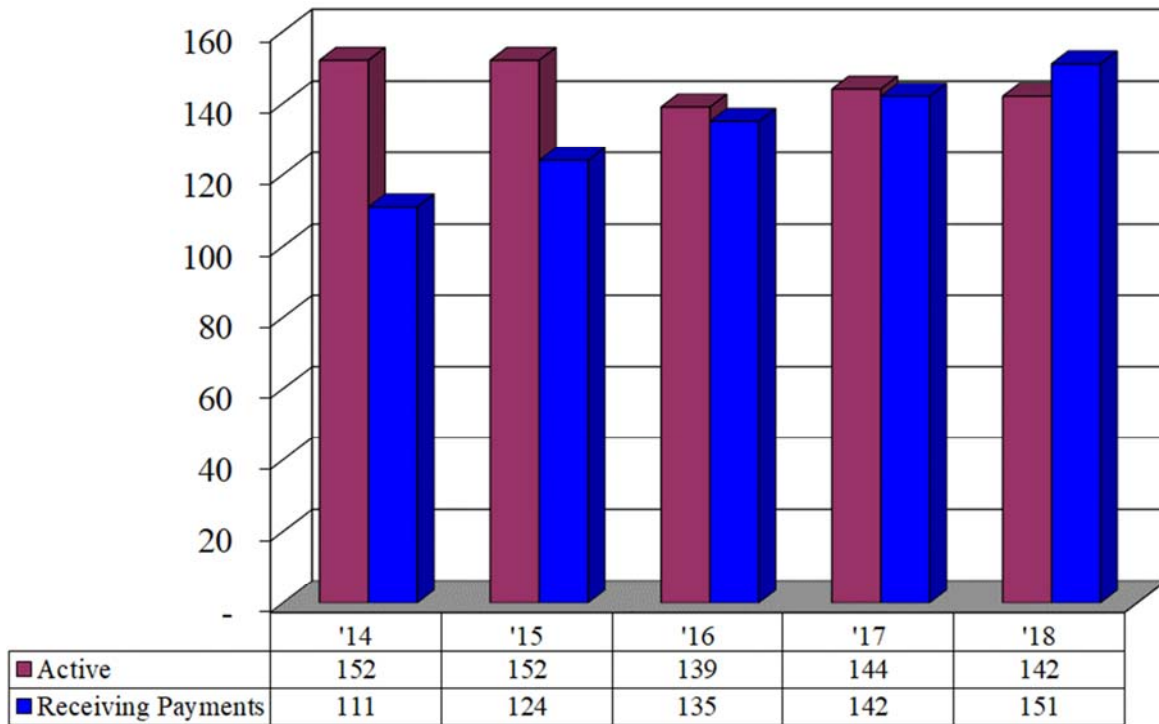


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SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS



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PLAN FUNDED STATUS - MISCELLANEOUS

| | <u>June 30, 2017</u> | <u>June 30, 2018</u> |
|--------------------------------------|----------------------|----------------------|
| ■ Actuarial Accrued Liability | | |
| ● Active | \$ 29,400,000 | \$ 31,500,000 |
| ● Retiree | 41,800,000 | 47,000,000 |
| ● Inactive | <u>9,200,000</u> | <u>10,200,000</u> |
| ● Total | 80,400,000 | 88,700,000 |
| ■ Assets | <u>56,700,000</u> | <u>61,400,000</u> |
| ■ Unfunded Liability | 23,700,000 | 27,300,000 |
| ■ Funded Ratio | 70.5% | 69.2% |



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PLAN FUNDED STATUS - MISCELLANEOUS

Discount Rate Sensitivity
June 30, 2018

| | Discount Rate | | |
|---------------------------|----------------------|---------------------------------|---------------------|
| | <u>7.00%</u> | <u>6.50%²</u> | <u>6.00%</u> |
| AAL | \$ 88,700,000 | \$ 94,900,000 | \$ 101,100,000 |
| Assets | <u>61,400,000</u> | <u>61,400,000</u> | <u>61,400,000</u> |
| Unfunded Liability | 27,300,000 | 33,500,000 | 39,700,000 |
| Funded Ratio | 69.2% | 64.7% | 60.7% |

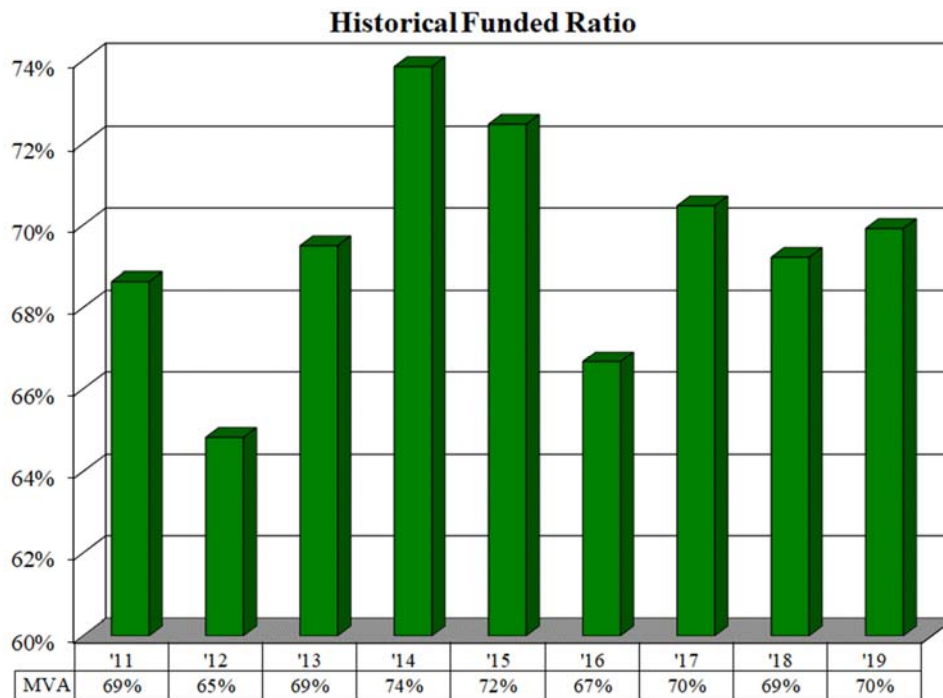
⁶ Estimated by Bartel Associates.



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FUNDED RATIO - MISCELLANEOUS



6/30/19 funded status estimated

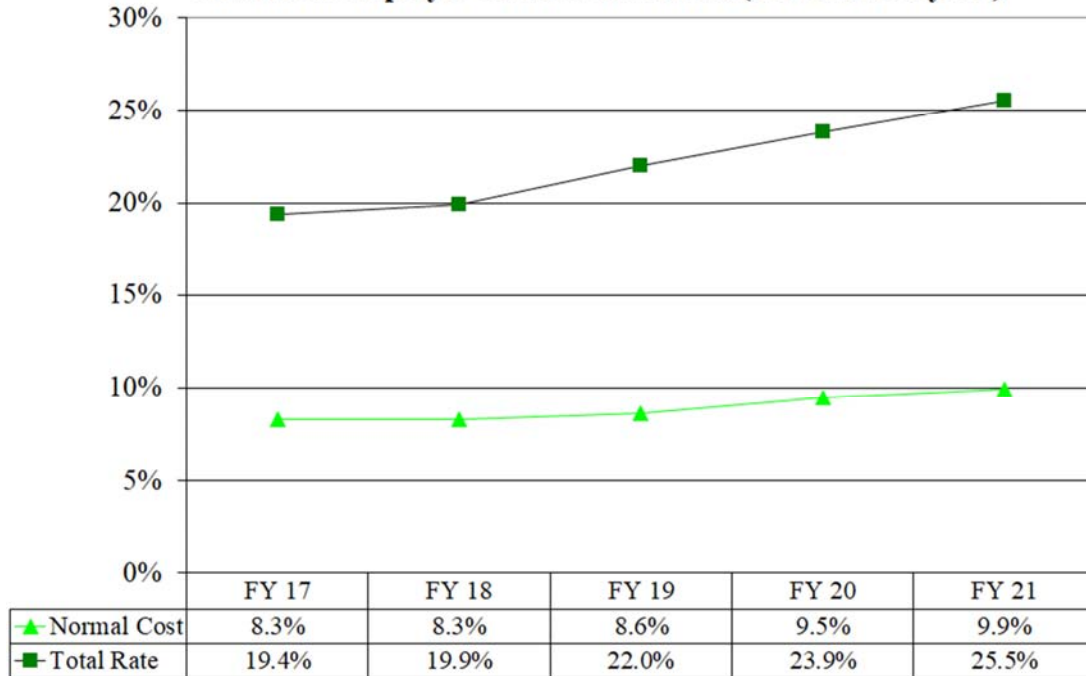


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CONTRIBUTION RATES - MISCELLANEOUS

Historical Employer Contribution Rates (Percent of Payroll)



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SUMMARY OF DEMOGRAPHIC INFORMATION - POLICE

| | 2003 | 2006 | 2017 | 2018 |
|--------------------------|-----------|-----------|------------|------------|
| Actives | | | | |
| ■ Counts | 42 | 50 | 52 | 57 |
| ■ Average PERSable Wages | \$ 61,600 | \$ 74,700 | \$ 108,600 | \$ 109,900 |
| ■ Total PERSable Wages | 2,600,000 | 3,700,000 | 5,600,000 | 6,300,000 |
| Inactive Members | | | | |
| ■ Counts | | | | |
| • Transferred | 20 | 20 | 28 | 31 |
| • Separated | 4 | 10 | 11 | 11 |
| • Receiving Payments | 12 | 17 | 45 | 49 |

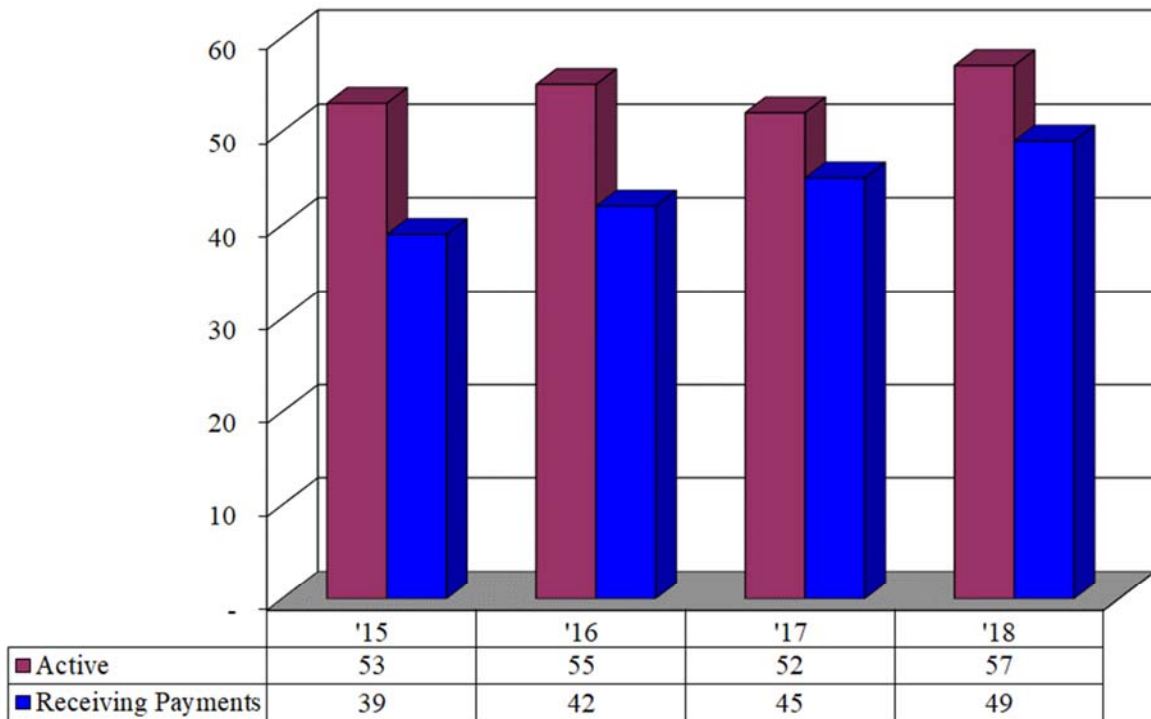


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SUMMARY OF DEMOGRAPHIC INFORMATION - POLICE



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PLAN FUNDED STATUS - POLICE

| | <u>June 30, 2017</u> | <u>June 30, 2018</u> |
|--------------------------------------|----------------------|----------------------|
| ■ Actuarial Accrued Liability | | |
| ● Active | \$ 21,800,000 | \$ 23,400,000 |
| ● Retiree | 27,600,000 | 32,000,000 |
| ● Inactive | <u>6,000,000</u> | <u>6,800,000</u> |
| ● Total | 55,400,000 | 62,200,000 |
| ■ Assets | <u>42,300,000</u> | <u>46,700,000</u> |
| ■ Unfunded Liability | 13,100,000 | 15,500,000 |
| ■ Funded Ratio | 76.3% | 75.1% |



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PLAN FUNDED STATUS - POLICE

Discount Rate Sensitivity June 30, 2018

| | <u>Discount Rate</u> | | |
|---------------------------|----------------------|--------------------------|-------------------|
| | <u>7.00%</u> | <u>6.50%⁶</u> | <u>6.00%</u> |
| AAL | \$ 62,200,000 | \$ 66,900,000 | \$ 71,600,000 |
| Assets | <u>46,700,000</u> | <u>46,700,000</u> | <u>46,700,000</u> |
| Unfunded Liability | 15,500,000 | 20,200,000 | 24,900,000 |
| Funded Ratio | 75.1% | 69.8% | 65.2% |

⁶ Estimated by Bartel Associates.

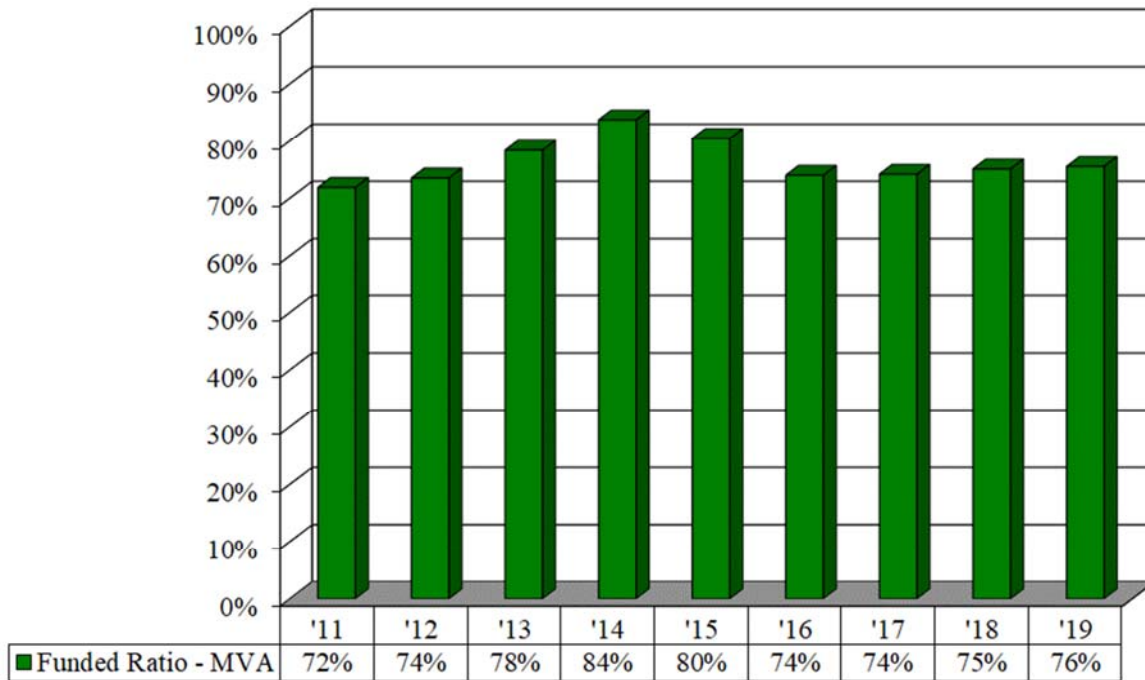


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FUNDED STATUS (MILLIONS) - POLICE



6/30/19 funded status estimated

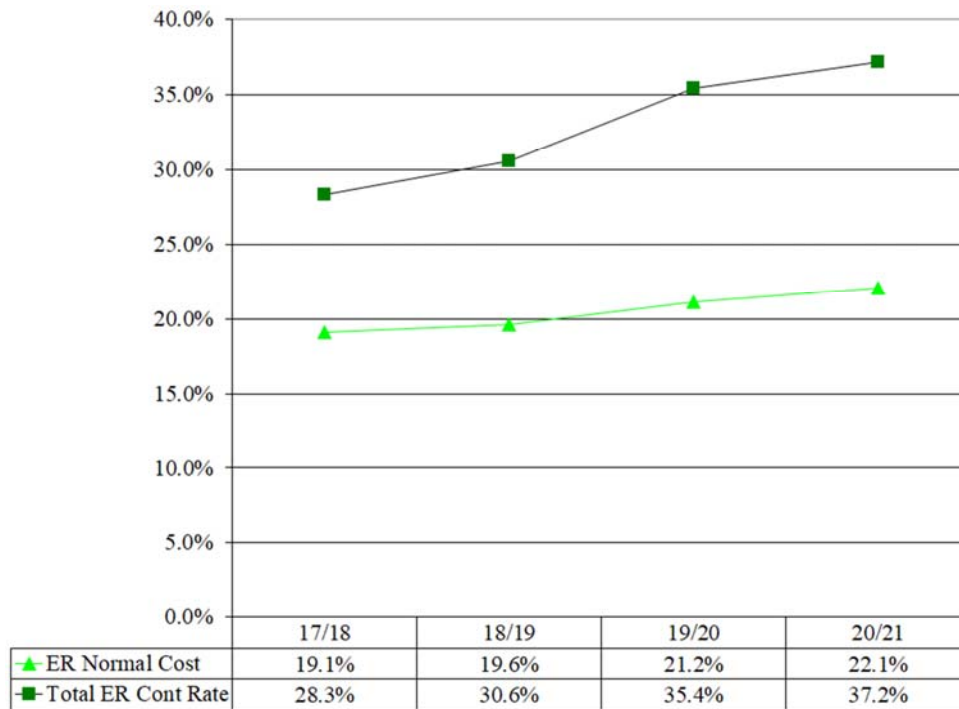


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CONTRIBUTION RATES - POLICE



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SUMMARY OF DEMOGRAPHIC INFORMATION - FIRE

| | 2003 | 2006 | 2017 | 2018 |
|--------------------------|-----------|-----------|------------|------------|
| Actives | | | | |
| ■ Counts | 42 | 38 | 34 | 34 |
| ■ Average PERSable Wages | \$ 53,400 | \$ 70,600 | \$ 113,600 | \$ 116,000 |
| ■ Total PERSable Wages | 2,200,000 | 2,700,000 | 3,900,000 | 3,900,000 |
| Inactive Members | | | | |
| ■ Counts | | | | |
| • Transferred | 25 | 32 | 35 | 34 |
| • Separated | 7 | 10 | 8 | 8 |
| • Receiving Payments | 4 | 9 | 26 | 26 |

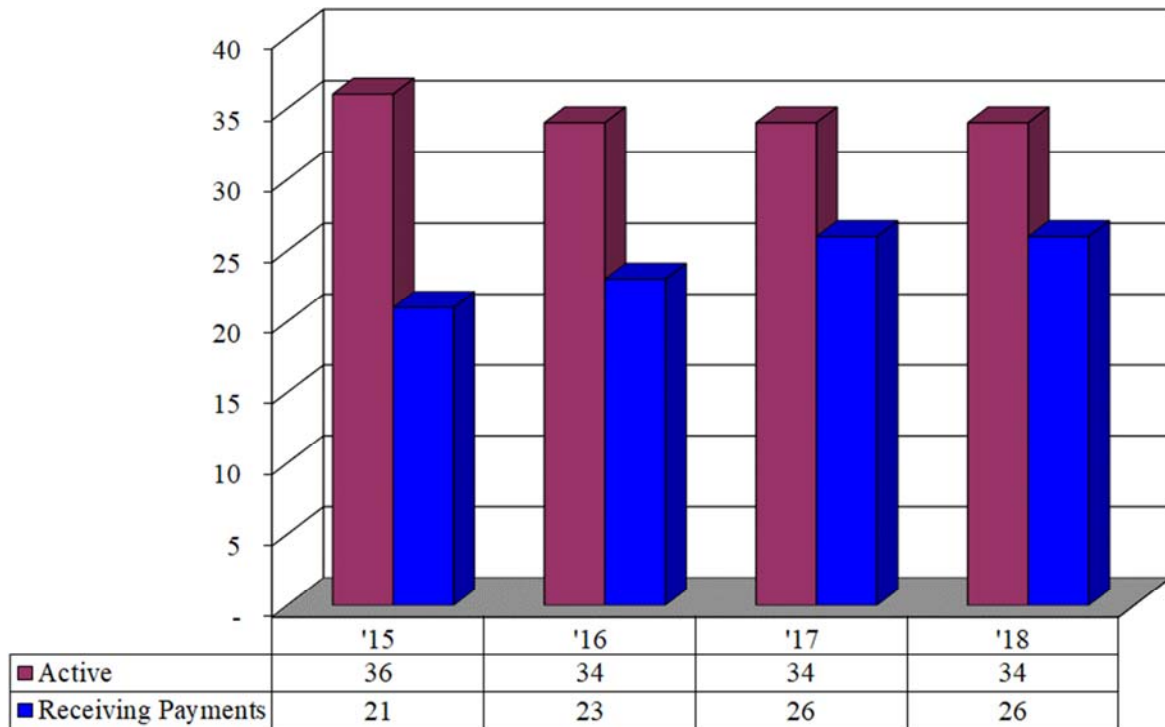


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SUMMARY OF DEMOGRAPHIC INFORMATION - FIRE



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PLAN FUNDED STATUS - FIRE

| | <u>June 30, 2017</u> | <u>June 30, 2018</u> |
|--------------------------------------|----------------------|----------------------|
| ■ Actuarial Accrued Liability | | |
| ● Active | \$ 20,800,000 | \$ 21,100,000 |
| ● Retiree | 19,200,000 | 23,200,000 |
| ● Inactive | <u>2,000,000</u> | <u>2,200,000</u> |
| ● Total | 42,000,000 | 46,500,000 |
| ■ Assets | <u>31,900,000</u> | <u>34,600,000</u> |
| ■ Unfunded Liability | 10,100,000 | 11,900,000 |
| ■ Funded Ratio | 76.0% | 74.5% |



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PLAN FUNDED STATUS - FIRE

Discount Rate Sensitivity June 30, 2018

| | <u>Discount Rate</u> | | |
|---------------------------|----------------------|---------------------------|-------------------|
| | <u>7.00%</u> | <u>6.50%¹¹</u> | <u>6.00%</u> |
| AAL | \$ 46,500,000 | \$ 50,100,000 | \$ 53,600,000 |
| Assets | <u>34,600,000</u> | <u>34,600,000</u> | <u>34,600,000</u> |
| Unfunded Liability | 11,900,000 | 15,500,000 | 19,000,000 |
| Funded Ratio | 74.5% | 69.1% | 64.6% |

¹¹ Estimated by Bartel Associates.

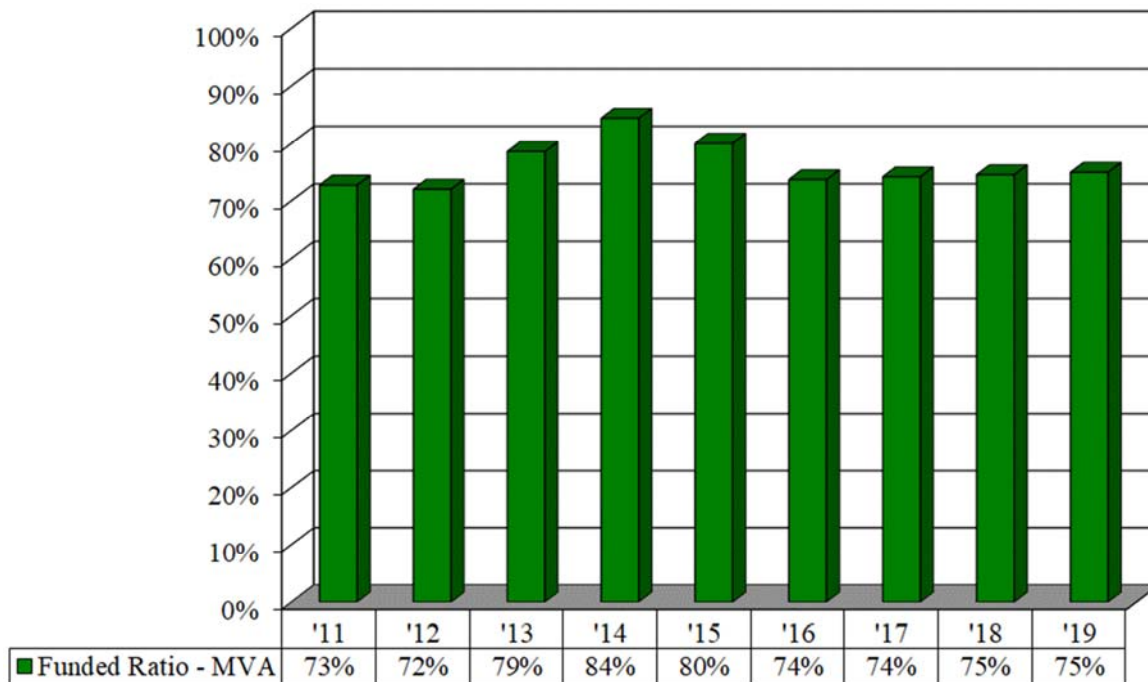


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CONTRIBUTION RATES - FIRE



6/30/19 funded status estimated

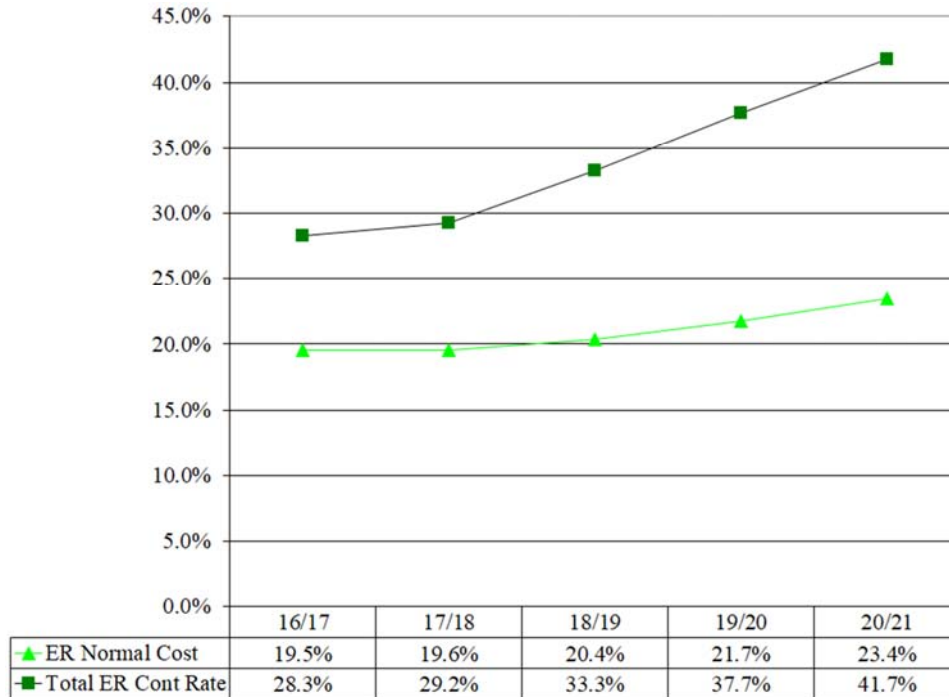


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CONTRIBUTION RATES - FIRE



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COMBINED MISCELLANEOUS AND SAFETY PROJECTIONS

Assumptions and Methodology

- Investment Returns:
 - 6.7% June 30, 2019 return reported by CalPERS
 - Future returns based Bartel Associates stochastic model, using survey of 5 outside investment advisors. Generally, 6.5% (as compared to 7.0%) over the next 9 years and higher thereafter.
- Discount Rate decreases due to Risk Mitigation policy
- Includes impact of PEPPA mandated Normal Cost payment when overfunded
- New hire assumptions:
 - 92.5% PEPPA members/7.5% Classic members in 2019/20
 - 100% PEPPA members in 3 years
- Employee cost-sharing:
 - Miscellaneous (includes non-Sworn Police)

| | AFSCME | Confidential | Management | City Manager | Police-Classic | Police-PEPPA | Totals |
|--------------|--------|--------------|------------|--------------|----------------|--------------|--------|
| Employee % | 1.0% | 2.0% | 2.0% | 1.0% | 3.0% | 2.5% | 1.6% |
| % of Payroll | 53.3% | 6.2% | 23.5% | 1.8% | 10.4% | 4.8% | 100.0% |

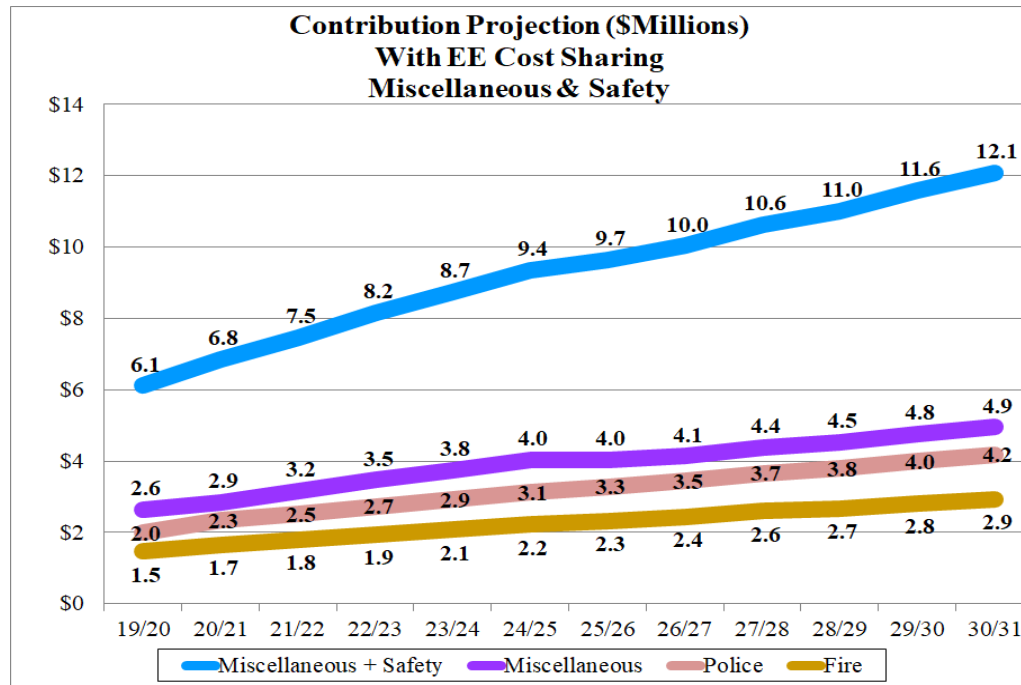
- Safety: 3%



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COMBINED MISCELLANEOUS AND SAFETY PROJECTIONS



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COMBINED MISCELLANEOUS AND SAFETY PROJECTIONS

Funded Status Summary on June 30, 2018¹⁶ (Amounts in \$Millions)

| | Miscellaneous | Police | Fire | Total |
|----------------|---------------|-----------|-----------|------------|
| ■ AAL | \$ 89 | \$ 62 | \$ 47 | \$ 197 |
| ■ Assets | <u>61</u> | <u>47</u> | <u>35</u> | <u>143</u> |
| ■ Unfunded AAL | 28 | 15 | 12 | 54 |
| ■ Funded Ratio | 69.2% | 75.1% | 74.5% | 72.6% |

¹⁶ 7% Discount Rate



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ADDITIONAL PAYMENTS TO CALPERS

Phase-In to 15-Year Fresh Start

- Contribution phase-in to 15-year fresh start:
 - 50% of difference between fresh start and current payment in 20/21
 - Percentage increases by 10% annually to 100% in 25/26
 - UAL projected to be paid off in year after 15-year fresh start schedule ends
- Estimated savings and present value of savings:

| | Misc. | Police | Fire | Total |
|----------------------------|---------|---------|---------|----------|
| \$ Savings (000's) | \$6,666 | \$3,015 | \$2,363 | \$12,044 |
| PV Savings @ 3% (000's) | 2,445 | 1,153 | 902 | 4,500 |



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ADDITIONAL PAYMENTS TO CALPERS

Additional Percent of Payroll Contributions

- Additional percentage of payroll contribution:
 - 1% in 19/20,
 - 2% in 20/21,
 - 3% in 21/22,
 - 4% in 22/23 and future years
- Future required CalPERS contributions are impacted by the additional amounts
 - Applying contributions credits to longest bases results in higher near term contributions and higher long term savings.
 - Projections assume credits applied to long bases
- Estimated savings and present value of savings:

| | Misc. | Police | Fire | Total |
|----------------------------|---------|---------|---------|----------|
| \$ Savings (000's) | \$6,731 | \$3,265 | \$2,194 | \$12,190 |
| PV Savings @ 3% (000's) | 2,521 | 1,259 | 837 | 4,617 |



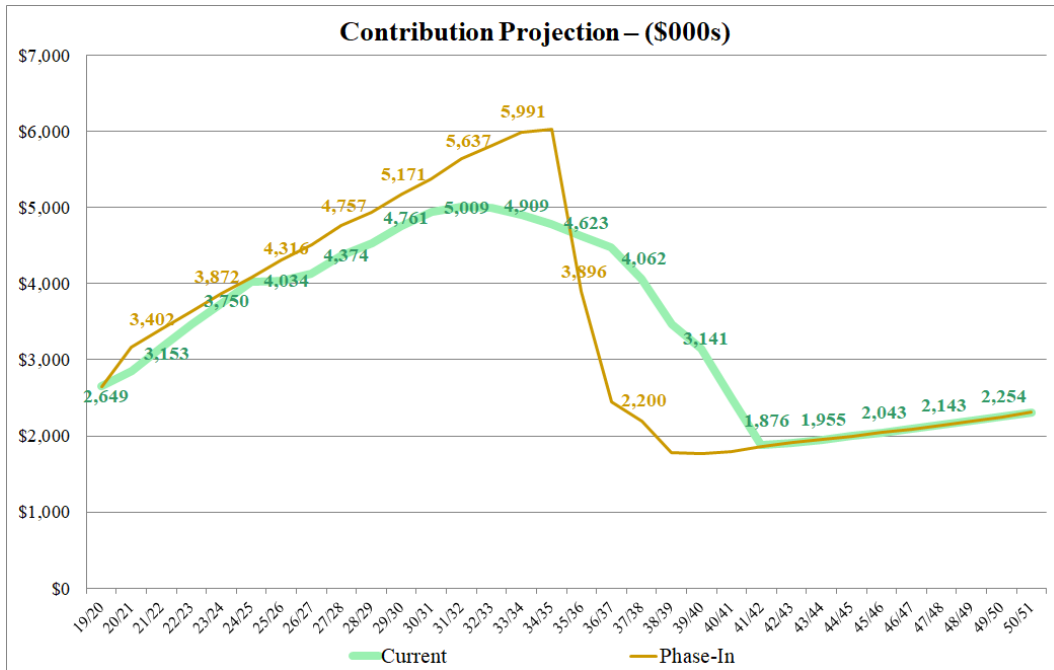
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ADDITIONAL PAYMENTS TO CALPERS

Miscellaneous Phase-In to 15-Year Fresh Start Contribution Projection – (\$000s)

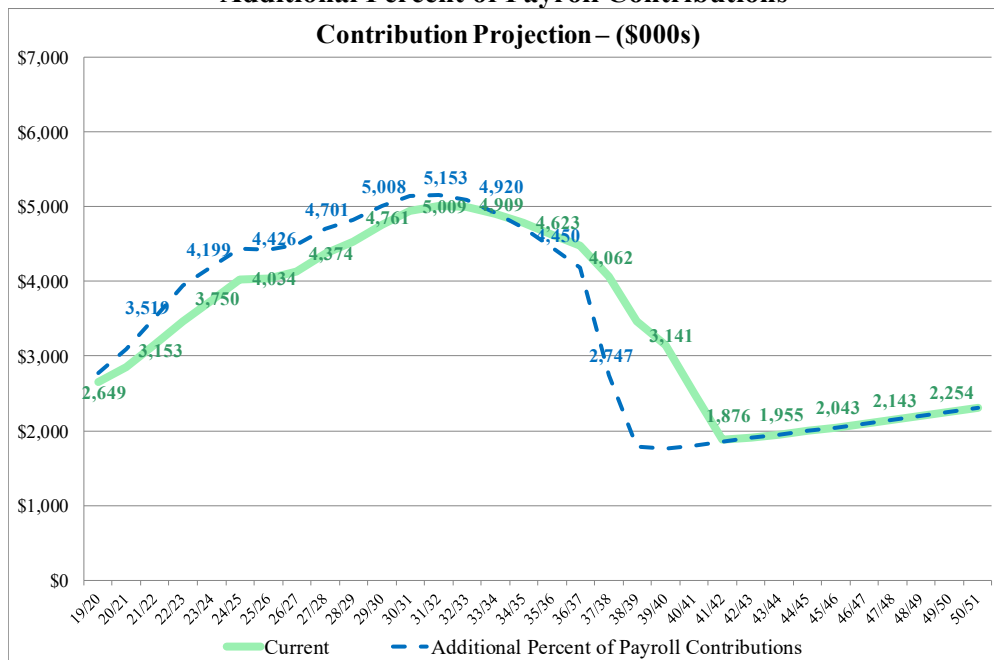


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ADDITIONAL PAYMENTS TO CALPERS

Miscellaneous Additional Percent of Payroll Contributions Contribution Projection – (\$000s)

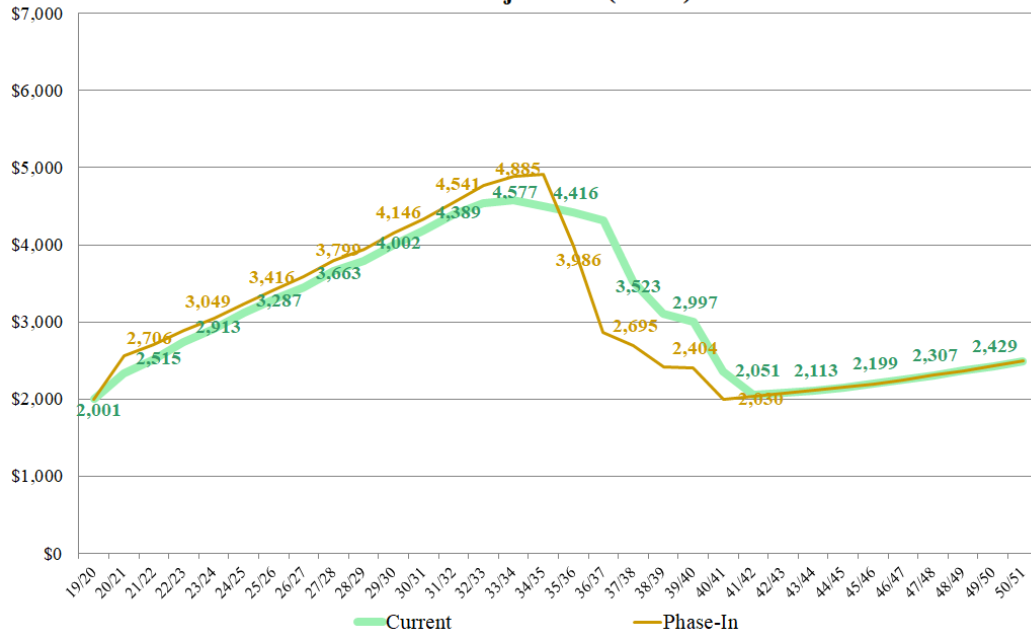


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ADDITIONAL PAYMENTS TO CALPERS

Police Phase-In to 15-Year Fresh Start Contribution Projection – (\$000s)

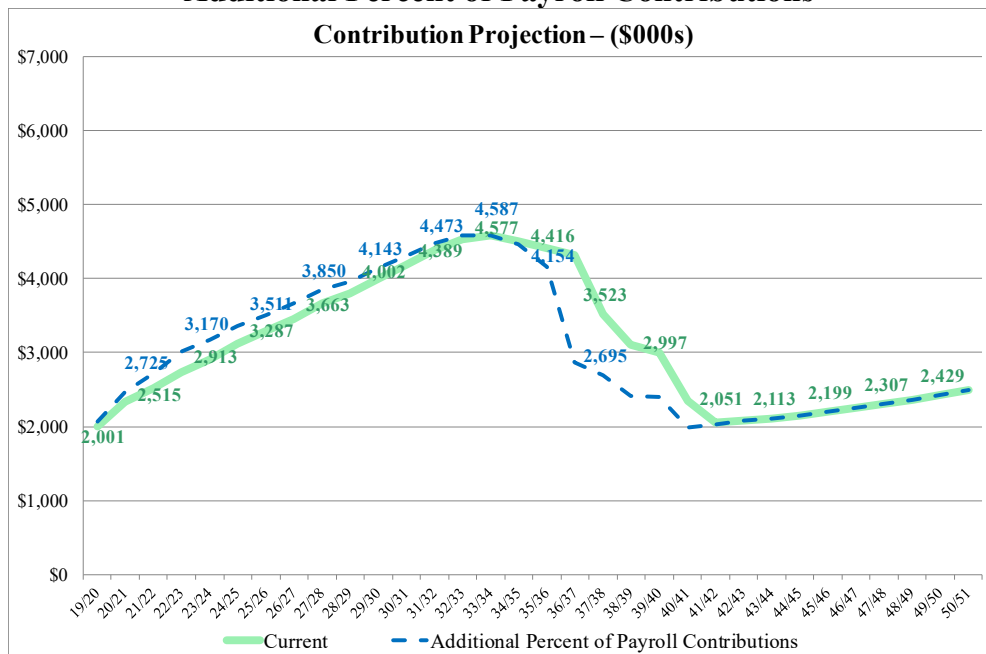


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ADDITIONAL PAYMENTS TO CALPERS

Police Additional Percent of Payroll Contributions Contribution Projection – (\$000s)

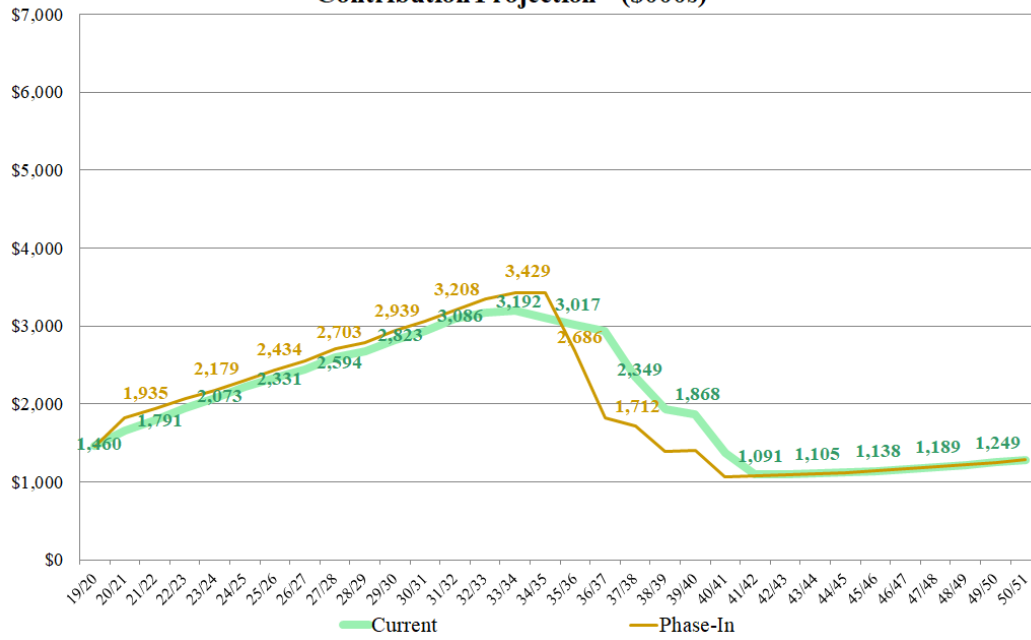


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ADDITIONAL PAYMENTS TO CALPERS

Fire Phase-In to 15-Year Fresh Start Contribution Projection – (\$000s)

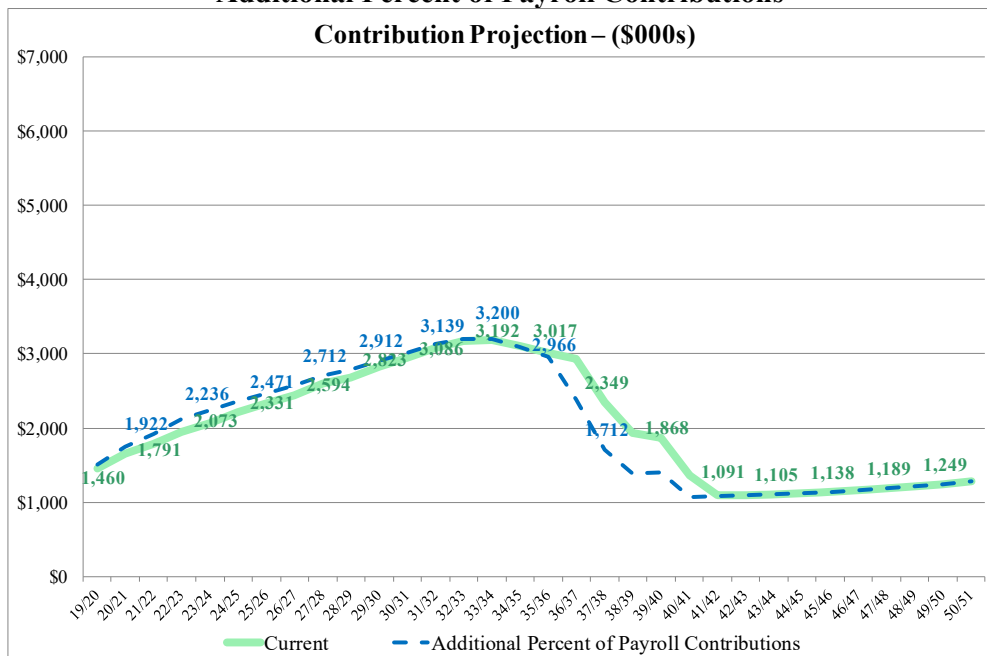


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ADDITIONAL PAYMENTS TO CALPERS

Fire Additional Percent of Payroll Contributions Contribution Projection – (\$000s)

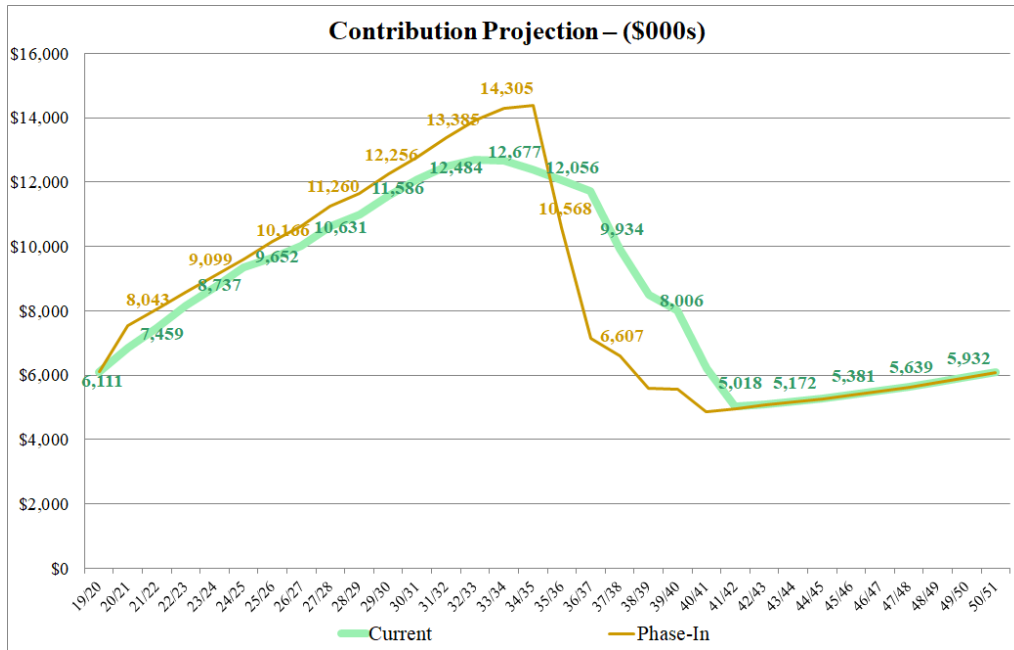


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ADDITIONAL PAYMENTS TO CALPERS

Miscellaneous and Safety Combined Phase-In to 15-Year Fresh Start

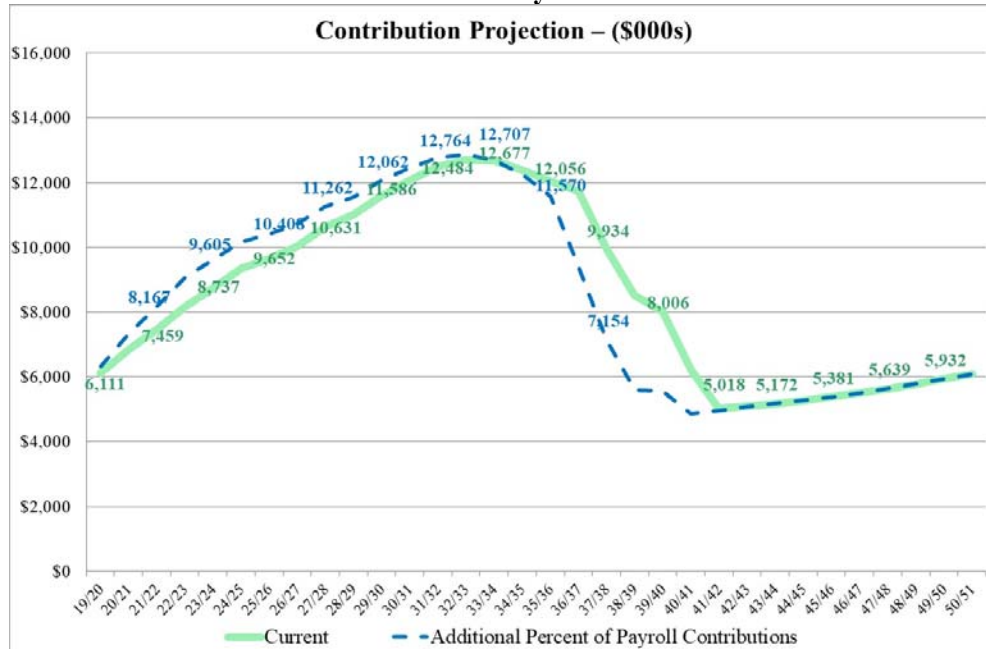


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ADDITIONAL PAYMENTS TO CALPERS

Miscellaneous and Safety Combined Additional Percent of Payroll Contributions



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ACTUARIAL CERTIFICATION

This report presents analysis of the City of Rocklin's CalPERS pension plans. The purpose of this report is to provide the City:

- Historical perspective on the plan investment returns, assets, funded status and contributions.
- Projections of likely future contributions and the impact of investment volatility

The calculations and projections in this report are based on information contained in the City's June 30, 2018 and earlier CalPERS actuarial valuation reports. We reviewed this information for reasonableness, but do not make any representation on the accuracy of the CalPERS reports.

Future investment returns and volatility are based on Bartel Associates Capital Market model which results in long term returns summarized on pages 28.

Future results may differ from our projections due to differences in actual experience as well as changes in plan provisions, CalPERS actuarial assumptions or methodology. Other than variations in investment return, this study does not analyze these.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. As members of the American Academy of Actuaries meeting the Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,



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March 10, 2020

Bianca Lin, FSA, EA, FSA, MAAA
Assistant Vice President
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March 10, 2020



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