ORANGE COUNTY FIRE AUTHORITY
AGENDA

Budget and Finance Committee Regular Meeting
Wednesday, April 11, 2018
12:00 Noon

Orange County Fire Authority
Regional Fire Operations and Training Center
1 Fire Authority Road
Room AE117
Irvine, California 92602

Joe Muller, Chair
Shelley Hasselbrink, Vice Chair
Ed Sachs   Gene Hernandez   Al Murray   Tri Ta   Elizabeth Swift
Vacant - Ex Officio

This Agenda contains a brief general description of each item to be considered. Except as otherwise provided by law, no action or discussion shall be taken on any item not appearing on the following Agenda. Unless legally privileged, all supporting documents, including staff reports, and any writings or documents provided to a majority of the Budget and Finance Committee after the posting of this agenda are available for review at the Orange County Fire Authority Regional Fire Operations & Training Center, 1 Fire Authority Road, Irvine, CA 92602 or you may contact Sherry A.F. Wentz, Clerk of the Authority, at (714) 573-6040 Monday through Thursday, and every other Friday from 8 a.m. to 5 p.m. and available online at http://www.ocfa.org

If you wish to speak before the Budget and Finance Committee, please complete a Speaker Form identifying which item(s) you wish to address. Please return the completed form to the Clerk of the Authority. Speaker Forms are available on the counter noted in the meeting room.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, you should contact the Clerk of the Authority at (714) 573-6040. Notification 48 hours prior to the meeting will enable the Authority to make reasonable arrangements to assure accessibility to the meeting.

CALL TO ORDER

PLEDGE OF ALLEGIANCE by Director Ta

ROLL CALL

1. PRESENTATIONS
No items.

PUBLIC COMMENTS

Any member of the public may address the Committee on items within the Committee's subject matter jurisdiction but which are not listed on this agenda during PUBLIC COMMENTS. However, no action may be taken on matters that are not part of the posted agenda. We request comments made on the agenda be made at the time the item is considered and that comments be limited to three minutes per person. Please address your comments to the Committee as a whole, and do not engage in dialogue with individual Committee Members, Authority staff, or members of the audience.

2. MINUTES

A. Minutes for the March 14, 2018, Budget and Finance Committee Meeting
Submitted by: Sherry Wentz, Clerk of the Authority

Recommended Action:
Approve as submitted.

3. CONSENT CALENDAR

A. Orange County Employees' Retirement System Quarterly Status Update
Submitted by: Lori Zeller, Assistant Chief/Business Support Department

Recommended Action:
Receive and file the report.

4. DISCUSSION CALENDAR

A. Monthly Investment Reports
Presented by: Patricia Jakubiak, Treasurer

Recommended Action:
Review the proposed agenda item and direct staff to place the item on the agenda for the Executive Committee meeting of April 26, 2018, with the Budget and Finance Committee's recommendation that the Executive Committee receive and file the reports.

B. Communication with Auditors for Fiscal Year 2017/18 Financial Audit
Presented by: Jim Ruane, Finance Manager/Auditor, Business Services Department

Recommended Action:
Receive and file the report.

REPORTS
No items.

COMMITTEE MEMBER COMMENTS

ADJOURNMENT – The next regular meeting of the Budget and Finance Committee is scheduled for Wednesday, May 9, 2018, at 12:00 noon.

AFFIDAVIT OF POSTING

I hereby certify under penalty of perjury under the laws of the State of California, that the foregoing Agenda was posted in the lobby, front gate public display case, and website of the Orange County Fire Authority, Regional Training and Operations Center, 1 Fire Authority Road, Irvine, CA, not less than 72 hours prior to the meeting. Dated this 5th day of April 2018.

Sherry A.F. Wentz, CMC
Clerk of the Authority

UPCOMING MEETINGS:

Claims Settlement Committee Meeting	Thursday, April 26, 2018, 5:00 p.m.
Executive Committee Meeting	Thursday, April 26, 2018, 5:30 p.m.
Board of Directors Meeting	Thursday, April 26, 2018, 6:00 p.m.

MINUTES
ORANGE COUNTY FIRE AUTHORITY

Budget and Finance Committee Regular Meeting
Wednesday, March 14, 2018
12:00 Noon

Regional Fire Operations and Training Center
Room AE117
1 Fire Authority Road
Irvine, CA 92602

CALL TO ORDER
A regular meeting of the Orange County Fire Authority Budget and Finance Committee was called to order on March 14, 2018, at 12:00 p.m. by Chair Muller.

PLEDGE OF ALLEGIANCE
Director Murray requested a moment of silence for fallen Pomona Police Officer Greggory Casillas, and then led the assembly in the Pledge of Allegiance to our Flag.

ROLL CALL

Present: Elizabeth Swift, Buena Park
Al Murray, Tustin
Gene Hernandez, Yorba Linda
Shelley Hasselbrink, Los Alamitos
Joseph Muller, Dana Point
Tri Ta, Westminster
Vacant, Ex Officio

Absent: Ed Sachs, Mission Viejo

Also present were:

Assistant Chief Lori Smith	Interim Fire Chief Patrick McIntosh
Assistant Chief Lori Zeller	Assistant Chief Brian Young
Assistant Chief Mike Schroeder	Assistant Chief Dave Anderson
Human Resources Director Brigette Gibb	Clerk of the Authority Sherry Wentz

PUBLIC COMMENTS
Chair Muller opened the Public Comments portion of the meeting. Chair Muller closed the Public Comments portion of the meeting without any comments from the general public.

1. PRESENTATIONS

No items.

2. MINUTES

A. Minutes for the February 14, 2018, Budget and Finance Committee Regular Meeting (F: 12.02B2)

On motion of Director Hernandez and second by Director Murray, the Budget and Finance Committee voted unanimously by those present to approve the Minutes of the February 14, 2018, regular meeting as submitted. Director Ta was recorded as an abstention due to his absence from the meeting.

3. CONSENT CALENDAR

No Items.

4. DISCUSSION CALENDAR

A. Monthly Investment Reports (F: 11.10D2)

Treasurer Tricia Jakubiak provided an overview of the Monthly Investment Reports.

On motion of Director Ta and second by Director Hernandez, the Committee voted unanimously by those present to direct staff to place the item on the agenda for the Executive Committee meeting of March 22, 2018, with the Budget and Finance Committee's recommendation that the Executive Committee receive and file the reports.

B. FY 2017/18 Mid-Year Budget Adjustments (F: 15.04 17/18)

Assistant Chief Lori Zeller provided an overview of the FY 2017/18 Mid-Year Budget Adjustments.

On motion of Director Murray and second by Director Ta, the Committee voted unanimously by those present to direct staff to place the item on the agenda for the Board of Directors meeting of March 22, 2018, with the Budget and Finance Committee's recommendation that the Board of Directors authorize the proposed mid-year budget adjustments and transfers.

C. FY 2016/17 Backfill/Overtime and Calendar Year 2017 Total Earnings/ Compensation Analysis (F: 15.11)

Assistant Chief Lori Zeller introduced Finance Manager Jim Ruane who provided a PowerPoint presentation on FY 2016/17 Backfill/Overtime and Calendar Year 2017 Total Earnings/Compensation Analysis.

Jon Dumitru, OCFA Dispatcher, addressed the correlation to Overtime/Backfill regarding dispatchers.

On motion of Director Murray and second by Director Ta, the Budget and Finance Committee voted unanimously by those present to direct staff to place the item on the agenda for the Board of Directors meeting of March 22, 2018, with the Budget and Finance Committee's recommendation that the Board of Directors take the following actions:

1. Direct staff to continue pursuing reductions in overtime by filling <u>permanent</u> vacancies as quickly as possible after the positions become vacant.
2. Authorize staff to temporarily exceed the number of authorized firefighter positions on the Master Position Control to enable the hiring of 50 firefighters into each of the next two academies, pending attrition/promotions that occur during and following academy graduations.
3. Direct staff to continue using overtime to fill <u>temporary</u> vacancies rather than hiring additional personnel, recognizing this as a cost-effective practice for temporary needs.

D. Second Amendment to Advanced Life Support Billing/Reimbursement Agreements (F: 18.05A4)

Finance Manager Jim Ruane presented an overview of the Second Amendment to Advanced Life Supporting Billing/Reimbursement Agreements.

On motion of Vice Chair Hasselbrink and second by Director Hernandez, the Budget and Finance Committee voted unanimously by those present to direct staff to place the item on the agenda for the Board of Directors meeting of March 22, 2018, with the Budget and Finance Committee's recommendation that the Board of Directors approve and authorize the Board Chair to sign the proposed Second Amendment to the Advanced Life Support Services Billing Agreement to amend the OCFA's reimbursement rates for the remainder of the agreement's term.

E. **Write-off for Uncollectible Account – Medix Ambulance Services** (F: 18.05D1)

Finance Manager Jim Ruane presented an overview of the Write-off for Uncollectible Accounts due from Medix Ambulance Services.

On motion Director Swift and second by Director Ta, the Budget and Finance Committee voted to direct staff to place the item on the agenda for the Executive Committee meeting of March 22, 2018, with the Budget and Finance Committee's recommendation that the Executive Committee approve the write-off of $68,921.73 as a one-time adjustment for uncollectible accounts due from Medix Ambulance Services. Director Murray voted in opposition.

REPORTS
No items.

COMMITTEE MEMBER COMMENTS (F: 12.02B4)

Director Hernandez commended staff on their work, and stated that he supports filling the vacant field personnel positions.

Director Al Murray extended his thanks and appreciation to Interim Chief McIntosh for his service.

ADJOURNMENT – Chair Muller adjourned the meeting at 12:35 p.m. The next regular meeting of the Budget and Finance Committee is scheduled for Wednesday, April 11, 2018, at 12:00 noon.

Sherry A.F. Wentz, CMC
Clerk of the Authority

Orange County Fire Authority

AGENDA STAFF REPORT

Budget and Finance Committee Meeting **Agenda Item No. 3A**
April 11, 2018 **Consent Calendar**

Orange County Employees' Retirement System Quarterly Status Update

Contact(s) for Further Information

Lori Zeller, Assistant Chief Business Services Department	lorizeller@ocfa.org	714.573.6020
Tricia Jakubiak, Treasurer Treasury & Financial Planning	triciajakubiak@ocfa.org	714.573.6301

Summary
This agenda item is a routine quarterly transmittal to the Committee to provide a report on actions taken by the Orange County Employees' Retirement System (OCERS) relating to financial issues, procedures, and business practices.

Prior Board/Committee Action
Not Applicable.

RECOMMENDED ACTION(S)
Receive and file the report.

Impact to Cities/County
Not Applicable.

Fiscal Impact
Not Applicable.

Background
Actions Taken/Financial Policies & Practices January – March 2018

<u>OCERS BOARD OF RETIREMENT MEETING February 13, 2018:</u>

In December 2017, Segal provided its annual rate projection letter allowing stakeholders to look ahead 20 years to see where the system funded ratio and accompanying contribution rates could possibly trend. The version provided proved to be unpopular with many stakeholder groups as Segal had shown the results for the December 31, 2016, valuation AS IF the new actuarial assumptions adopted by the Board at the end of the year had already been in place. They had not, so stakeholders found they could not use the data provided.

In this February 2, 2018, revision of the projection letter (Attachment 1), the actual timing of applying the new assumptions does not take place until the December 31, 2017, valuation which will not be completed until late spring 2018.

OCERS BOARD OF RETIREMENT MEETING March 19, 2018:

OCERS PLAN SPONSOR – AN ANNUAL REVIEW
OCERS Internal Auditor reviewed the current financial situations of several plan sponsors to demonstrate the Board's prudence and oversight in managing pension fund liabilities as much as its assets. The review of OCFA can be found on pages 12-18. (Attachment 2)

OCERS FUNDING POLICY
The Board adopted the Actuarial Funding Policy in January 2014 and approved amendments to the Policy in December 2014. The Board has since adopted new actuarial assumptions that need to be incorporated into the policy. The policy is also due for its regularly scheduled triennial review. Paul Angelo of Segal Consulting discussed actuarial funding policy components and objectives. This item will return to the Board in April for further discussion and action. (Attachment 3)

OCERS INVESTMENT RETURN

OCERS return for February was negative (-1.8%) and year-to-date (YTD) was 0.6%. OCERS is on a calendar year-basis, and has an assumed rate of return of 7.0%.

OCFA staff will continue to monitor actions taken by OCERS, and will report back in July regarding actions taken during the next quarter.

Attachment(s) (On file with the Clerk of the Authority, available upon request.)
1. Segal Consulting 20-Year Projections of Employer Contribution Rates, February 2, 2018
2. OCERS' 2018 Plan Sponsor Review March 7, 2018
3. OCERS' Actuarial Funding Policy Review, March 9, 2018

Segal Consulting

100 Montgomery Street Suite 500 San Francisco, CA 94104-4308
T 415.263.8283 www.segalco.com

Andy Yeung, ASA, MAAA, FCA, EA
Vice President & Actuary
ayeung@segalco.com

VIA E-MAIL AND USPS

February 2, 2018

Mr. Steve Delaney
Chief Executive Officer
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701-3101

Re: Illustrations of Retirement Costs, Unfunded Actuarial Accrued Liability and Funded Ratio under Alternative Investment Return Scenarios using the Assumptions Adopted by the Board for the December 31, 2017 Valuation (REVISED)

Dear Steve:

In our letter dated December 18, 2017, we provided 20-year illustrations of the employer contribution rates for OCERS under three sets of market investment return "scenarios" after December 31, 2016 using results in the December 31, 2016 valuation and the simplifying assumption that the new assumptions adopted by the Board for the December 31, 2017 valuation would be effective with the December 31, 2016 valuation. In that letter, we also provided the Unfunded Actuarial Accrued Liability (UAAL) in dollars and the funded ratio associated with those projected employer contribution rates.

As we discussed with OCERS, in this letter we have updated the December 18, 2017 illustrations to reflect the actual timing of applying the new assumptions with the December 31, 2017 valuation instead of the December 31, 2016 valuation.

The three market rate of return scenarios used in this letter are as follows:

	Market Rate of Return	Investment Return Assumption in Actuarial Valuation
Scenario 1	0.00% for 2017 and 7.00% thereafter	7.25% for 2017 and 7.00% thereafter
Scenario 2	7.25% for 2017 and 7.00% thereafter	7.25% for 2017 and 7.00% thereafter
Scenario 3	14.50% for 2017 and 7.00% thereafter	7.25% for 2017 and 7.00% thereafter

Even though the financial impact is shown under only three hypothetical market investment return scenarios for 2017, the financial impact under other possible short-term market investment return scenarios may be approximated by interpolating or extrapolating using the results from the three scenarios shown.[1]

The various projections included are as follows:

- The projected contribution rates for the aggregate plan are provided in Attachment A.
- The projected contribution rates for the eleven Rate Groups are provided in Attachment B.
- The projected UAAL and funded ratio for the aggregate plan are provided in Attachment C.
- The projected UAAL and funded ratio for the eleven Rate Groups are provided in Attachments D through N.
- Also, we have included in Attachment O the projected contribution rates for the different plans within the eleven Rate Groups.

This projection also reflects the potential employer savings as current members leave employment and are replaced by new members covered under the tiers required by the California Public Employees' Pension Reform Act of 2013 (CalPEPRA) starting at January 1, 2013 (or January 1, 2015 for Rate Group #5). Please note that some of the changes made by CalPEPRA, such as the sharing of the total Normal Cost on a 50:50 basis, may result in employer savings for current members under the legacy plans. As those changes have not been implemented by the employers and the bargaining parties at OCERS, we have not reflected them in this illustration.

METHODS AND ASSUMPTIONS

The methods and actuarial assumptions we used to prepare the employer contribution rates, the UAAL and the funded ratio are as summarized below:

- The illustrations are based on the census data used in our December 31, 2016 valuation report for the Retirement Plan and the actuarial assumptions adopted by the Board for the December 31, 2017 valuation. <u>We have estimated the effect of the changes in assumptions based on the December 31, 2016 valuation by assuming that the same proportional increase in the Actuarial Accrued Liability (AAL) and Normal Cost in that valuation would carry over to the December 31, 2017 valuation.</u> With the exception of the market rates of return specified above, it is assumed that all actuarial assumptions would be met in the future.
- The detailed amortization schedule for OCERS' UAAL as of December 31, 2016 is provided in the valuation report. For these illustrations, those bases were reamortized as of December 31, 2017 to take into account the reduction in the payroll growth assumption from

[1] For example, a hypothetical market investment return of 10.875% (i.e., halfway between 7.25% and 14.50%) is expected to result in a change in employer's contribution of about one-half of the difference between those shown for Scenarios #2 and #3, starting with the December 31, 2016 valuation.

3.50% per year to 3.25% per year and the reduction in the investment return assumption from 7.25% per year to 7.00% per year. Any subsequent changes in the UAAL due to actuarial gains or losses (e.g., from investment returns on valuation value of assets greater or less than assumed) are amortized over separate 20-year periods.

- An adjustment has been made in the illustrations to reflect the long-term impact on OCERS of the three-year phase-in of the UAAL cost increase due to the changes in actuarial assumptions adopted by the Board. The first year of the three-year phased-in contribution rates would apply to fiscal year 2019-2020, based on the December 31, 2017 valuation.

- CalPEPRA prescribes new benefit formulas for members with a membership date on or after January 1, 2013 (or January 1, 2015 for Rate Group #5). For Rate Groups #1, #3, #5, #9, #10, #11 and #12, we have estimated the Normal Cost savings[2] associated with the enrollment of those members under the new 2.5% at 67 formula.

  For new members within Rate Group #2, only the County's attorneys, San Juan Capistrano members[3] and OCERS Management members will receive the 2.5% at 67 formula while all other new members in Rate Group #2 will receive the "new" 1.62% at 65 formulas.[4] We assumed that the proportion of the payrolls for members who will receive the 2.5% at 67 formula, the Plan T "new" 1.62% at 65 formula and the Plan W "new" 1.62% at 65 formula in the future would remain unchanged from that observed at the December 31, 2016 valuation. As of December 31, 2016, payroll for active members in Rate Group #2 under these three formulas represented about 7.4%, 92.6% and 0.0% of the combined payroll for members under the 2.5% at 67 formula, the Plan T "new" 1.62% at 65 formula and the Plan W "new" 1.62% at 65 formula, respectively. We have estimated the Normal Cost savings[2] associated with the enrollment of new members under the three new formulas.[5]

  For Rate Group #6, #7 and #8 members with a membership date on and after January 1, 2013, we have estimated the Normal Cost savings[2] associated with the enrollment of those members under the new 2.7% at 57 formula.

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[2] We have estimated the potential employer Normal Cost savings assuming that the payroll for new members who would be covered after the December 31, 2016 valuation under the CalPEPRA tiers could be modeled by: (1) projecting the total December 31, 2016 payroll within each Rate Group using a 3.50% assumption to predict annual wage growth for amortizing the UAAL for 2017 and a 3.25% assumption thereafter and (2) subtracting the projected closed group payroll from the current members in the December 31, 2016 valuation using the assumptions to anticipate salary increases as well as termination, retirement (both service and disability) and other exits from active employment.

[3] For San Juan Capistrano members with membership dates on or after January 1, 2016, they will be allowed to elect Plan W (1.62% at 65) in lieu of Plan U (2.5% at 67). As of December 31, 2016, there were no members enrolled in Plan W. We estimated the Normal Cost for Plan W under the new assumptions by ratioing the current Normal Cost rate up by the propotional increase in the Plan T (1.62% at 65) Normal Cost under the new assumptions.

[4] The "new" 1.62% at 65 formula is the CalPEPRA Plan T for non-City of San Juan Capistrano members and the CalPEPRA Plan W for City of San Juan Capistrano members.

[5] The payroll for new members is split between the 2.5% at 67 formula, the Plan T 1.62% at 65 formula and the Plan W 1.62% at 65 formula based on the proportion of payrolls under those formulas as of December 31, 2016.

- We understand that, with the exception of new members who would be covered under the "new" 1.62% at 65 formulas, in the determination of pension benefits under the CalPEPRA formulas the maximum compensation that can be taken into account for new members on and after January 1, 2017 is equal to $142,530 in 2017. To the extent this provision will limit compensation of the new members, our assumption that the total payroll will increase by 3.50% for 2017 and 3.25% thereafter over the projection period (for use in determining the contribution rate for the UAAL) may be overstated somewhat. If so, then there would be an increase in the UAAL contribution rate as the amount required to amortize the UAAL will have to be spread over a somewhat smaller total payroll base.

- Other than the above adjustments to the Normal Costs from the new CalPEPRA formulas, we have not included any other adjustments for the pre-CalPEPRA members such as the anticipated reduction in proportion (and hence in the associated Normal Cost) of existing Tier 1 active members (with pension benefits based on final one year average formula) relative to the increase in proportion of existing Tier 2 active members (with pension benefits based on final three year average formula) for members in any Rate Group.

OTHER CONSIDERATIONS

Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

This study was prepared under my supervision and I am a member of the American Academy of Actuaries and meet the qualification requirements to provide the opinion contained herein.

Please let us know if you have any questions.

Sincerely,

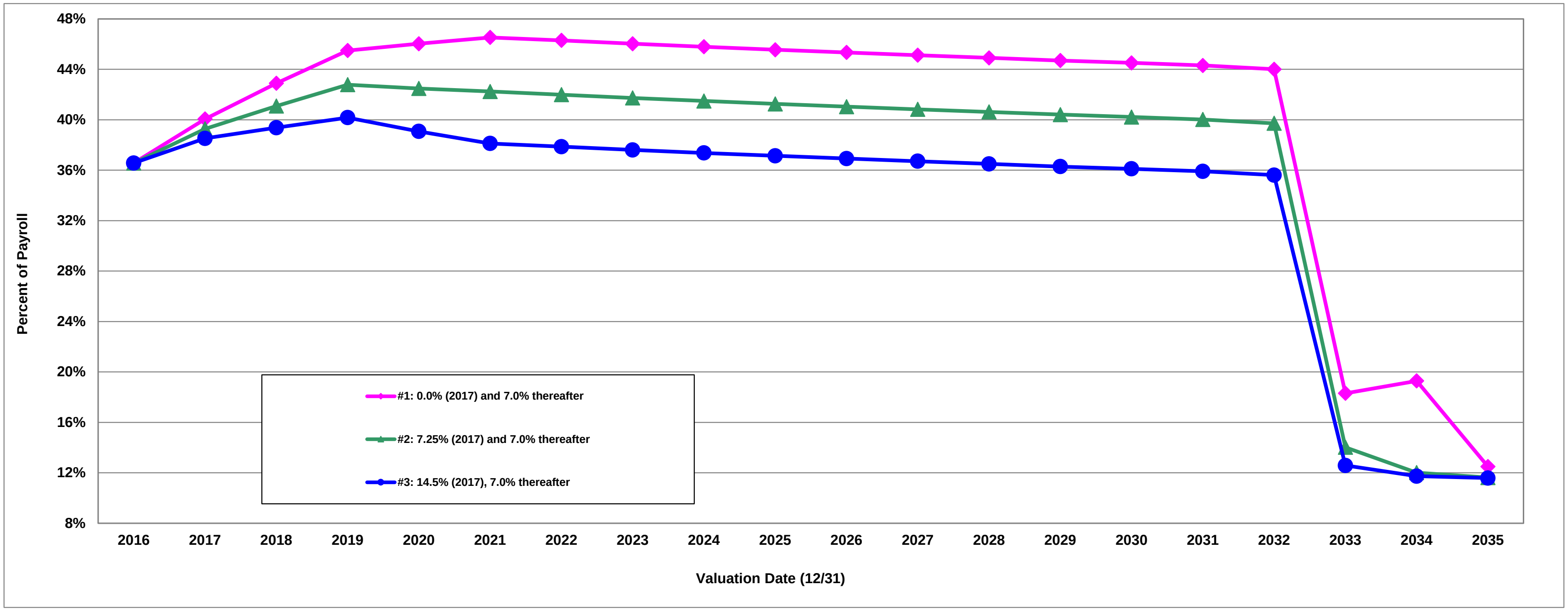
Andy Yeung

Andy Yeung

AW/hy
Enclosures

cc: Suzanne Jenike
Brenda Shott

Attachment A
Projected Employer Rates
Aggregate Plan



Valuation Date (12/31)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	36.6%	40.1%	42.9%	45.5%	46.0%	46.5%	46.3%	46.0%	45.8%	45.6%	45.3%	45.1%	44.9%	44.7%	44.5%	44.3%	44.0%	18.3%	19.3%	12.5%
#2: 7.25% (2017) and 7.0% thereafter	36.6%	39.3%	41.1%	42.8%	42.5%	42.2%	42.0%	41.7%	41.5%	41.3%	41.0%	40.8%	40.6%	40.4%	40.2%	40.0%	39.7%	14.0%	12.0%	11.6%
#3: 14.5% (2017), 7.0% thereafter	36.6%	38.5%	39.4%	40.2%	39.1%	38.1%	37.9%	37.6%	37.4%	37.1%	36.9%	36.7%	36.5%	36.3%	36.1%	35.9%	35.6%	12.6%	11.7%	11.6%

Attachment B
Projected Employer Rates by Rate Group
Scenario 1: 0.0% for 2017 and 7.0% thereafter

	Valuation Date (12/31)																			
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
General																				
RG #1 - Plans A, B and U (non-OCTA, non-OCSD)	16.4%	19.3%	21.1%	22.9%	23.3%	23.7%	23.7%	23.7%	23.6%	23.6%	23.6%	23.6%	23.6%	23.5%	23.5%	23.5%	23.4%	12.5%	14.0%	13.9%
RG #2 - Plans I, J, O, P, S, T, U and W (County et al.)	33.7%	36.9%	39.4%	41.8%	42.2%	42.6%	42.3%	42.1%	41.8%	41.6%	41.3%	41.1%	40.9%	40.7%	40.5%	40.3%	39.9%	13.1%	15.4%	8.6%
RG #3 - Plans B, G, H and U (OCSD)	11.6%	12.8%	15.1%	16.9%	17.6%	18.3%	18.2%	18.1%	17.9%	17.8%	17.7%	17.6%	17.5%	17.4%	17.4%	17.3%	17.2%	17.2%	17.1%	17.0%
RG #5 - Plans A, B and U (OCTA)	25.5%	29.1%	31.7%	34.1%	34.7%	35.2%	35.2%	35.1%	35.1%	35.0%	35.0%	35.0%	34.9%	34.9%	34.9%	34.8%	34.7%	16.4%	17.6%	11.4%
RG #9 - Plans M, N and U (TCA)	23.8%	26.1%	27.8%	29.3%	29.7%	30.1%	29.9%	29.8%	29.7%	29.6%	29.5%	29.4%	29.4%	29.3%	29.2%	29.2%	29.1%	14.7%	15.3%	11.5%
RG #10 - Plans I, J, M, N and U (OCFA)	30.5%	33.4%	35.6%	37.5%	38.0%	38.4%	38.2%	38.0%	37.9%	37.7%	37.6%	37.4%	37.3%	37.2%	37.0%	36.9%	36.7%	13.9%	16.3%	10.7%
RG #11 - Plans M and N, future service, and U (Cemetery)	10.9%	13.1%	15.2%	17.1%	17.6%	18.2%	18.2%	18.1%	18.0%	17.9%	17.8%	17.8%	17.7%	17.6%	17.5%	17.5%	17.5%	17.4%	17.4%	17.3%
RG #12 - Plans G and H, future service, and U (Law Library)	22.7%	23.8%	26.1%	28.1%	28.5%	28.9%	28.6%	28.3%	28.1%	27.9%	27.6%	27.4%	27.3%	27.2%	27.1%	26.9%	26.8%	15.1%	15.0%	14.9%
Safety																				
RG #6 - Plans E, F and V (Probation)	47.8%	53.5%	57.5%	61.3%	62.1%	62.9%	62.7%	62.4%	62.2%	61.9%	61.6%	61.3%	61.0%	60.6%	60.2%	59.8%	59.3%	34.9%	30.1%	31.0%
RG #7 - Plans E, F, Q, R and V (Law Enforcement)	62.8%	68.1%	72.6%	76.8%	77.7%	78.6%	78.4%	78.1%	77.8%	77.6%	77.4%	77.2%	77.0%	76.8%	76.6%	76.4%	76.1%	38.7%	35.8%	21.8%
RG #8 - Plans E, F, Q, R and V (Fire Authority)	47.8%	51.0%	54.2%	57.0%	57.6%	58.2%	57.8%	57.0%	56.4%	56.0%	55.5%	55.1%	54.7%	54.3%	53.9%	53.5%	53.0%	25.5%	25.0%	17.8%

Under this scenario, Rate Group #3 would be expected to use up the entire amount in the O.C. Sanitation District UAAL Deferred Account by the December 31, 2017 valuation. (That account has a balance of $34,067,000 as of December 31, 2016.)

Rates shown throughout these projections for Rate Group #12 have been adjusted for the future service only benefit enhancement. They have not been adjusted for the additional UAAL payment that Law Library has made on December 15, 2017. The Law Library’s contribution rates after adjusting for that additional UAAL payment will be provided in a separate report.

In our December 18, 2017 letter, Rate Group #6 was just barely over 100% funded as of December 31, 2035. Reflecting the impact of the implementation of the assumption changes in the December 31, 2017 valuation instead of the December 31, 2016 valuation increases the AAL enough to make Rate Group #6 drop below 100% funded as of December 31, 2035 in this letter. Therefore, they still have a UAAL contribution rate as of December 31, 2035 so their total rate as of that date is significantly higher than the total contribution rate in our December 18, 2017 letter.

Similar to prior projections, we have not taken into account the County Investment Account (that account has a balance of $117,723,000 as of December 31, 2016) in these projections.

Attachment B
Projected Employer Rates by Rate Group
Scenario 2: 7.25% for 2017 and 7.0% thereafter

	Valuation Date (12/31)																			
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
General																				
RG #1 - Plans A, B and U (non-OCTA, non-OCSD)	16.4%	18.8%	20.1%	21.3%	21.3%	21.3%	21.2%	21.2%	21.2%	21.2%	21.2%	21.1%	21.1%	21.1%	21.1%	21.1%	21.0%	10.1%	10.0%	10.0%
RG #2 - Plans I, J, O, P, S, T, U and W (County et al.)	33.7%	36.2%	37.8%	39.4%	39.0%	38.8%	38.5%	38.3%	38.0%	37.8%	37.5%	37.3%	37.1%	36.8%	36.7%	36.4%	36.1%	9.3%	8.8%	8.6%
RG #3 - Plans B, G, H and U (OCSD)	11.6%	12.4%	12.6%	13.2%	12.9%	12.7%	12.6%	12.5%	12.3%	12.2%	12.1%	12.0%	11.9%	11.8%	11.8%	11.7%	11.6%	11.6%	11.5%	11.4%
RG #5 - Plans A, B and U (OCTA)	25.5%	28.4%	30.2%	31.8%	31.8%	31.7%	31.7%	31.6%	31.6%	31.5%	31.5%	31.4%	31.4%	31.4%	31.3%	31.3%	31.2%	12.9%	11.4%	11.4%
RG #9 - Plans M, N and U (TCA)	23.8%	25.6%	26.7%	27.7%	27.5%	27.4%	27.2%	27.1%	27.0%	26.9%	26.8%	26.7%	26.7%	26.6%	26.5%	26.5%	26.3%	12.0%	11.5%	11.5%
RG #10 - Plans I, J, M, N and U (OCFA)	30.5%	32.8%	34.2%	35.5%	35.3%	35.2%	35.0%	34.8%	34.6%	34.5%	34.3%	34.2%	34.0%	33.9%	33.8%	33.7%	33.4%	10.8%	10.8%	10.7%
RG #11 - Plans M and N, future service, and U (Cemetery)	10.9%	12.4%	13.7%	14.8%	14.6%	14.6%	14.5%	14.4%	14.3%	14.3%	14.2%	14.2%	14.1%	14.0%	14.0%	14.0%	14.0%	14.0%	13.9%	13.9%
RG #12 - Plans G and H, future service, and U (Law Library)	22.7%	23.1%	24.4%	25.6%	25.1%	24.8%	24.5%	24.2%	24.0%	23.8%	23.5%	23.3%	23.2%	23.0%	22.9%	22.7%	22.6%	10.9%	10.8%	9.1%
Safety																				
RG #6 - Plans E, F and V (Probation)	47.8%	52.6%	55.5%	58.3%	58.1%	58.0%	57.7%	57.5%	57.3%	57.0%	56.7%	56.4%	56.1%	55.7%	55.3%	54.9%	54.4%	30.0%	25.2%	18.2%
RG #7 - Plans E, F, Q, R and V (Law Enforcement)	62.8%	66.9%	69.9%	72.7%	72.4%	72.1%	71.8%	71.6%	71.3%	71.1%	70.9%	70.7%	70.5%	70.3%	70.1%	69.9%	69.6%	32.2%	21.9%	21.8%
RG #8 - Plans E, F, Q, R and V (Fire Authority)	47.8%	50.0%	51.8%	53.4%	52.9%	52.5%	52.1%	51.3%	50.7%	50.3%	49.8%	49.4%	49.1%	48.7%	48.2%	47.9%	47.3%	19.8%	18.1%	17.8%

Under this scenario, Rate Group #3 would be expected to use up the entire amount in the O.C. Sanitation District UAAL Deferred Account by the December 31, 2018 valuation. (That account has a balance of $34,067,000 as of December 31, 2016.)

Rates shown throughout these projections for Rate Group #12 have been adjusted for the future service only benefit enhancement. They have not been adjusted for the additional UAAL payment that Law Library has made on December 15, 2017. The Law Library's contribution rates after adjusting for that additional UAAL payment will be provided in a separate report.

Similar to prior projections, we have not taken into account the County Investment Account (that account has a balance of $117,723,000 as of December 31, 2016) in these projections.

Attachment B
Projected Employer Rates by Rate Group
Scenario 3: 14.5% for 2017 and 7.0% thereafter

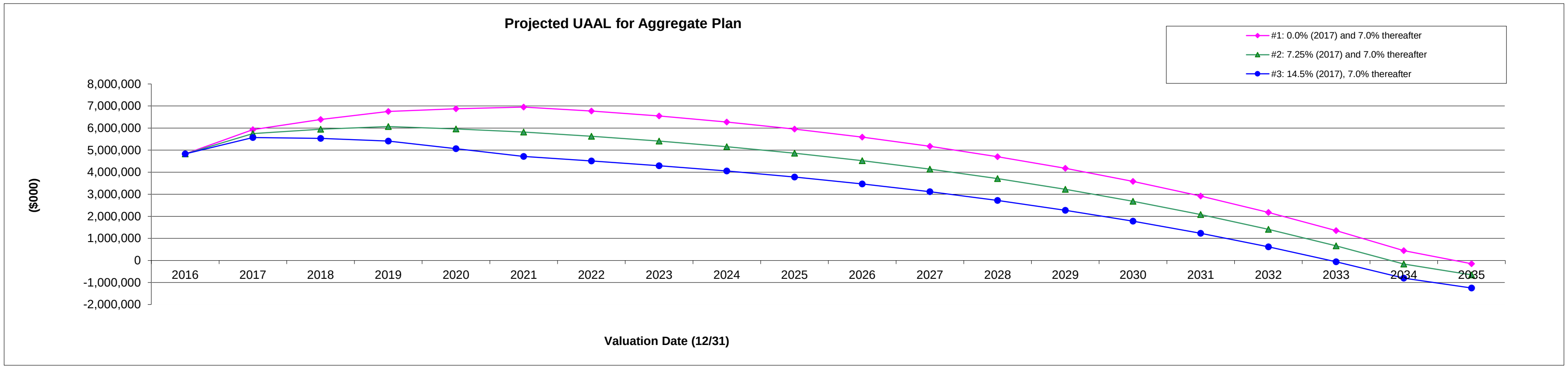
	Valuation Date (12/31)																			
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
General																				
RG #1 - Plans A, B and U (non-OCTA, non-OCSD)	16.4%	18.4%	19.1%	19.8%	19.3%	18.8%	18.8%	18.8%	18.8%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.6%	18.6%	10.0%	10.0%	10.0%
RG #2 - Plans I, J, O, P, S, T, U and W (County et al.)	33.7%	35.4%	36.2%	36.9%	35.9%	35.0%	34.7%	34.4%	34.2%	33.9%	33.7%	33.5%	33.2%	33.0%	32.8%	32.6%	32.3%	8.9%	8.8%	8.6%
RG #3 - Plans B, G, H and U (OCSD)	11.6%	12.4%	12.3%	12.1%	12.0%	11.8%	11.7%	11.5%	11.4%	11.3%	11.2%	11.1%	11.0%	10.9%	10.8%	10.8%	10.7%	10.6%	10.6%	10.5%
RG #5 - Plans A, B and U (OCTA)	25.5%	27.8%	28.7%	29.6%	28.8%	28.2%	28.1%	28.1%	28.0%	28.0%	27.9%	27.9%	27.9%	27.9%	27.8%	27.8%	27.7%	11.4%	11.4%	11.4%
RG #9 - Plans M, N and U (TCA)	23.8%	25.2%	25.6%	26.0%	25.3%	24.7%	24.6%	24.5%	24.4%	24.3%	24.2%	24.2%	24.1%	24.0%	24.0%	23.9%	23.8%	11.6%	11.5%	11.5%
RG #10 - Plans I, J, M, N and U (OCFA)	30.5%	32.3%	32.9%	33.5%	32.7%	31.9%	31.8%	31.6%	31.4%	31.2%	31.1%	31.0%	30.8%	30.7%	30.6%	30.4%	30.2%	10.8%	10.8%	10.7%
RG #11 - Plans M and N, future service, and U (Cemetery)	10.9%	11.9%	12.1%	12.4%	11.7%	11.7%	11.6%	11.6%	11.6%	11.5%	11.5%	11.5%	11.5%	11.4%	11.4%	11.4%	11.4%	11.4%	11.3%	11.3%
RG #12 - Plans G and H, future service, and U (Law Library)	22.7%	22.5%	22.9%	23.2%	22.0%	21.1%	20.9%	20.7%	20.6%	20.4%	20.2%	20.0%	19.9%	19.8%	19.7%	19.6%	9.3%	9.2%	9.2%	9.1%
Safety																				
RG #6 - Plans E, F and V (Probation)	47.8%	51.8%	53.5%	55.3%	54.1%	53.0%	52.8%	52.6%	52.4%	52.1%	51.8%	51.5%	51.2%	50.8%	50.4%	50.0%	49.5%	25.1%	18.6%	18.2%
RG #7 - Plans E, F, Q, R and V (Law Enforcement)	62.8%	65.7%	67.2%	68.6%	67.0%	65.6%	65.3%	65.1%	64.8%	64.6%	64.4%	64.2%	64.0%	63.8%	63.6%	63.4%	63.1%	25.7%	21.9%	21.8%
RG #8 - Plans E, F, Q, R and V (Fire Authority)	47.8%	48.9%	49.5%	49.9%	48.2%	46.8%	46.4%	45.6%	45.0%	44.6%	44.1%	43.8%	43.4%	43.0%	42.6%	42.2%	41.7%	18.5%	18.1%	17.8%

Under this scenario, Rate Group #3 would be expected to use up only some of the amount in the O.C. Sanitation District UAAL Deferred Account by the December 31, 2035 valuation. (That account has a balance of $34,067,000 as of December 31, 2016.)

Rates shown throughout these projections for Rate Group #12 have been adjusted for the future service only benefit enhancement. They have not been adjusted for the additional UAAL payment that Law Library has made on December 15, 2017. The Law Library's contribution rates after adjusting for that additional UAAL payment will be provided in a separate report.

Similar to prior projections, we have not taken into account the County Investment Account (that account has a balance of $117,723,000 as of December 31, 2016) in these projections.

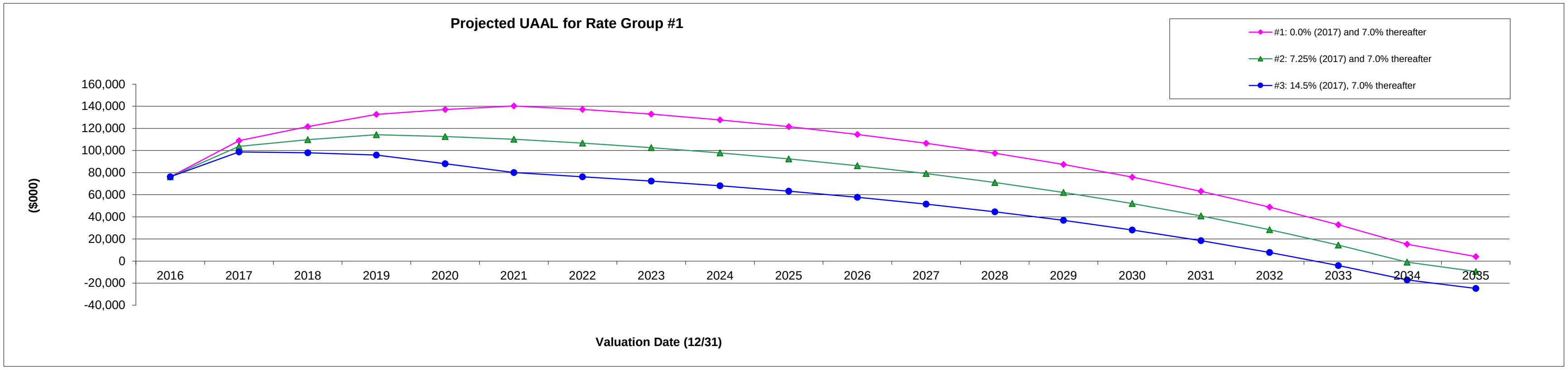
Attachment C
Projected UAAL and Funded Ratio for Aggregate Plan



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	4,830,483	5,927,829	6,386,244	6,754,835	6,875,889	6,950,171	6,773,514	6,546,047	6,271,335	5,953,703	5,589,486	5,174,629	4,704,698	4,175,007	3,580,577	2,915,995	2,175,426	1,352,601	442,611	-147,834
#2: 7.25% (2017) and 7.0% thereafter	4,830,483	5,748,356	5,950,087	6,072,307	5,960,899	5,820,306	5,631,529	5,410,749	5,154,642	4,860,113	4,523,823	4,142,248	3,711,412	3,227,162	2,685,090	2,080,339	1,407,658	661,459	-162,335	-656,147
#3: 14.5% (2017), 7.0% thereafter	4,830,483	5,572,635	5,533,501	5,410,580	5,067,501	4,711,876	4,509,776	4,293,485	4,053,128	3,778,592	3,466,836	3,114,679	2,718,776	2,275,356	1,780,436	1,229,834	618,897	-57,291	-802,072	-1,250,657

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	73.1%	70.0%	69.3%	69.2%	70.2%	71.4%	73.4%	75.5%	77.6%	79.7%	81.8%	83.8%	85.9%	88.0%	90.1%	92.3%	94.4%	96.7%	98.9%	100.3%
#2: 7.25% (2017) and 7.0% thereafter	73.1%	70.9%	71.4%	72.3%	74.2%	76.0%	77.9%	79.8%	81.6%	83.4%	85.2%	87.1%	88.9%	90.7%	92.6%	94.5%	96.4%	98.4%	100.4%	101.5%
#3: 14.5% (2017), 7.0% thereafter	73.1%	71.8%	73.4%	75.3%	78.1%	80.6%	82.3%	83.9%	85.5%	87.1%	88.7%	90.3%	91.9%	93.5%	95.1%	96.7%	98.4%	100.1%	101.9%	102.9%

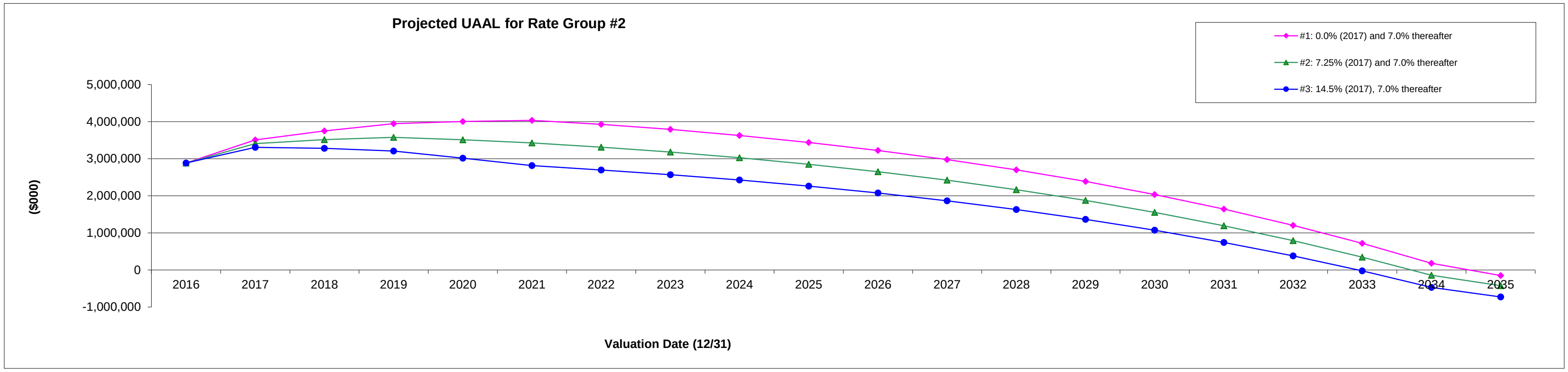
Attachment D
Projected UAAL and Funded Ratio for Rate Group #1
Plans A, B and U (non-OCTA, non-OCSD)



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	76,266	108,828	121,575	132,636	137,087	140,340	137,171	132,905	127,668	121,592	114,608	106,638	97,597	87,392	75,919	63,079	48,756	32,822	15,188	4,046
#2: 7.25% (2017) and 7.0% thereafter	76,266	103,779	109,783	114,258	112,565	110,191	106,701	102,619	97,882	92,425	86,192	79,115	71,118	62,127	52,059	40,817	28,305	14,418	-913	-9,473
#3: 14.5% (2017), 7.0% thereafter	76,266	98,731	97,988	95,872	88,025	80,017	76,215	72,311	68,060	63,215	57,724	51,532	44,580	36,804	28,137	18,498	7,806	-4,023	-17,039	-24,782

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	82.6%	77.6%	76.2%	75.3%	75.7%	76.2%	77.8%	79.5%	81.2%	82.8%	84.5%	86.1%	87.8%	89.5%	91.2%	92.9%	94.7%	96.6%	98.5%	99.6%
#2: 7.25% (2017) and 7.0% thereafter	82.6%	78.6%	78.5%	78.7%	80.0%	81.4%	82.8%	84.2%	85.6%	86.9%	88.3%	89.7%	91.1%	92.5%	94.0%	95.4%	96.9%	98.5%	100.1%	100.9%
#3: 14.5% (2017), 7.0% thereafter	82.6%	79.6%	80.8%	82.1%	84.4%	86.5%	87.7%	88.8%	90.0%	91.1%	92.2%	93.3%	94.4%	95.6%	96.7%	97.9%	99.2%	100.4%	101.7%	102.4%

Attachment E
Projected UAAL and Funded Ratio for Rate Group #2
Plans I, J, O, P, S, T, U and W (County et al.)



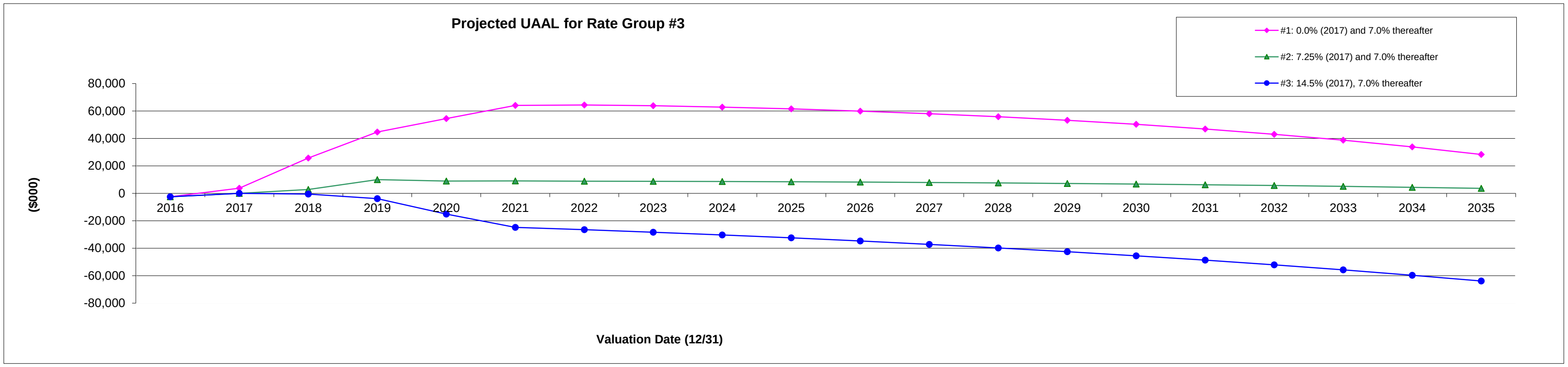
UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
#1: 0.0% (2017) and 7.0% thereafter	2,882,742	3,506,309	3,749,403	3,943,829	4,002,290	4,032,638	3,926,147	3,790,477	3,627,414	3,439,086
#2: 7.25% (2017) and 7.0% thereafter	2,882,742	3,406,084	3,514,227	3,575,897	3,509,490	3,424,717	3,311,792	3,179,767	3,026,745	2,850,876
#3: 14.5% (2017), 7.0% thereafter	2,882,742	3,305,858	3,279,042	3,207,926	3,016,707	2,816,780	2,697,290	2,568,835	2,425,769	2,262,337

UAAL ($000)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	3,223,348	2,977,825	2,699,881	2,386,755	2,035,558	1,643,106	1,205,975	720,485	183,818	-146,775
#2: 7.25% (2017) and 7.0% thereafter	2,650,167	2,422,553	2,165,657	1,876,999	1,553,993	1,193,783	793,204	348,942	-141,331	-419,831
#3: 14.5% (2017), 7.0% thereafter	2,076,708	1,866,982	1,631,191	1,367,065	1,072,239	744,256	380,304	-22,555	-466,335	-726,677

Funded Ratio	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
#1: 0.0% (2017) and 7.0% thereafter	71.2%	68.1%	67.6%	67.5%	68.5%	69.7%	71.7%	73.8%	76.0%	78.1%
#2: 7.25% (2017) and 7.0% thereafter	71.2%	69.0%	69.6%	70.5%	72.4%	74.2%	76.1%	78.1%	80.0%	81.9%
#3: 14.5% (2017), 7.0% thereafter	71.2%	70.0%	71.6%	73.5%	76.2%	78.8%	80.6%	82.3%	83.9%	85.6%

Funded Ratio	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	80.3%	82.4%	84.6%	86.9%	89.1%	91.5%	93.9%	96.5%	99.1%	100.7%
#2: 7.25% (2017) and 7.0% thereafter	83.8%	85.7%	87.7%	89.7%	91.7%	93.8%	96.0%	98.3%	100.7%	102.0%
#3: 14.5% (2017), 7.0% thereafter	87.3%	89.0%	90.7%	92.5%	94.3%	96.2%	98.1%	100.1%	102.2%	103.4%

Attachment F
Projected UAAL and Funded Ratio for Rate Group #3
Plans B, G, H and U (OCSD)

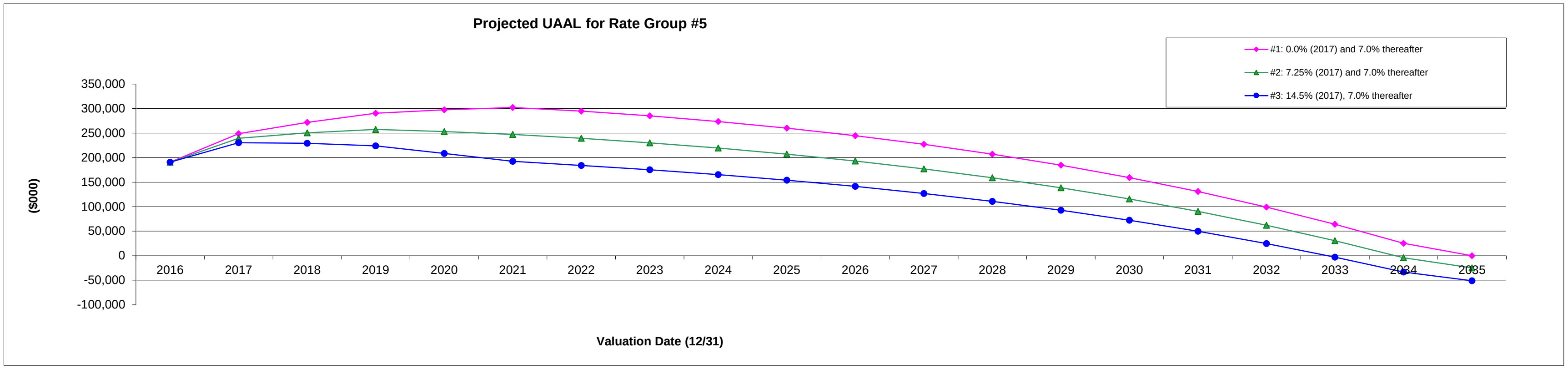


UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	-2,522	3,752	25,786	44,743	54,490	64,049	64,393	63,913	62,855	61,544	59,960	58,073	55,857	53,281	50,315	46,923	43,068	38,718	33,830	28,352
#2: 7.25% (2017) and 7.0% thereafter	-2,522	0	2,827	10,037	8,965	9,053	8,892	8,763	8,605	8,411	8,177	7,900	7,577	7,202	6,771	6,280	5,724	5,096	4,390	3,601
#3: 14.5% (2017), 7.0% thereafter	-2,522	0	-568	-3,889	-15,125	-24,771	-26,505	-28,361	-30,346	-32,470	-34,743	-37,175	-39,777	-42,562	-45,541	-48,729	-52,140	-55,790	-59,695	-63,874

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	100.4%	99.4%	96.3%	93.9%	93.0%	92.2%	92.5%	92.9%	93.3%	93.8%	94.2%	94.6%	95.1%	95.5%	95.9%	96.3%	96.8%	97.2%	97.6%	98.1%
#2: 7.25% (2017) and 7.0% thereafter	100.4%	100.0%	99.6%	98.6%	98.8%	98.9%	99.0%	99.0%	99.1%	99.1%	99.2%	99.3%	99.3%	99.4%	99.4%	99.5%	99.6%	99.6%	99.7%	99.8%
#3: 14.5% (2017), 7.0% thereafter	100.4%	100.0%	100.1%	100.5%	101.9%	103.0%	103.1%	103.1%	103.2%	103.3%	103.4%	103.4%	103.5%	103.6%	103.7%	103.8%	103.9%	104.0%	104.2%	104.3%

Unlike most of the other Rate Groups, Rate Group #3 has a UAAL under Scenarios #1 and #2 due to the reemergence of their UAAL amortization layers starting with the December 31, 2017 and December 31, 2018 valuations, respectively. While Rate Group #3 is overfunded as of the December 31, 2016 valuation, they are anticipated to have a restart amortization layer starting with the 2018 and 2019 valuations under Scenarios #1 and #2, respectively, which will not drop off until 20 years after that restart amortization layer is established.

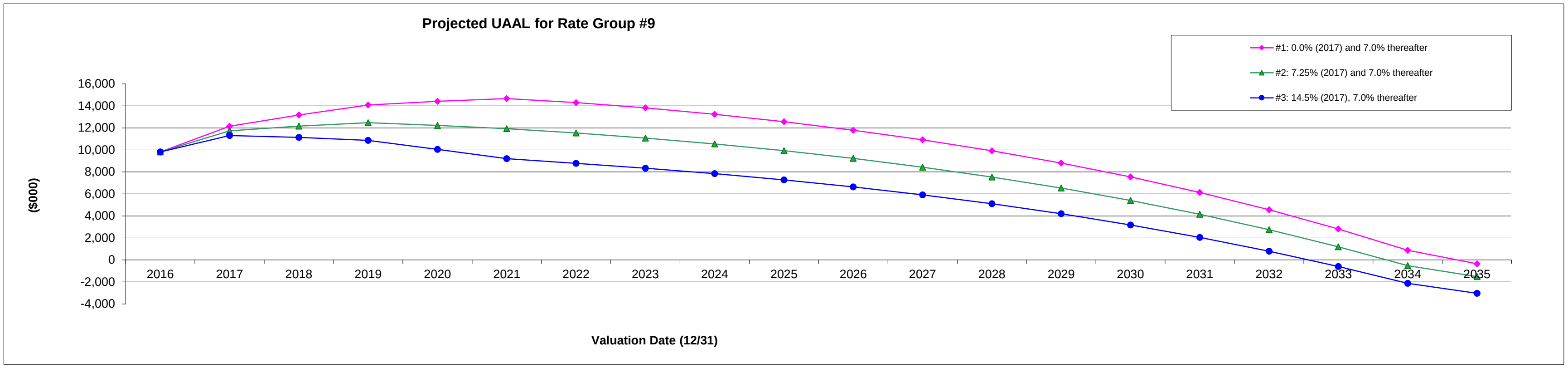
Attachment G
Projected UAAL and Funded Ratio for Rate Group #5
Plans A, B and U (OCTA)



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	190,783	248,671	271,722	290,633	297,543	302,181	294,862	285,288	273,650	260,170	244,692	227,052	207,054	184,498	159,167	130,828	99,231	64,107	25,249	-106
#2: 7.25% (2017) and 7.0% thereafter	190,783	239,574	250,430	257,378	253,066	247,378	239,478	230,231	219,491	207,134	193,018	176,992	158,891	138,540	115,750	90,309	62,006	30,605	-4,072	-24,733
#3: 14.5% (2017), 7.0% thereafter	190,783	230,476	229,136	224,115	208,576	192,558	184,081	175,161	165,326	154,092	141,337	126,931	110,735	92,598	72,351	49,817	24,817	-2,849	-33,323	-51,243

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	77.3%	73.2%	72.2%	71.7%	72.4%	73.3%	75.2%	77.1%	79.0%	80.9%	82.9%	84.8%	86.7%	88.6%	90.6%	92.6%	94.6%	96.6%	98.7%	100.0%
#2: 7.25% (2017) and 7.0% thereafter	77.3%	74.2%	74.3%	74.9%	76.5%	78.2%	79.8%	81.5%	83.2%	84.8%	86.5%	88.1%	89.8%	91.5%	93.2%	94.9%	96.6%	98.4%	100.2%	101.2%
#3: 14.5% (2017), 7.0% thereafter	77.3%	75.1%	76.5%	78.2%	80.7%	83.0%	84.5%	85.9%	87.3%	88.7%	90.1%	91.5%	92.9%	94.3%	95.7%	97.2%	98.6%	100.2%	101.7%	102.5%

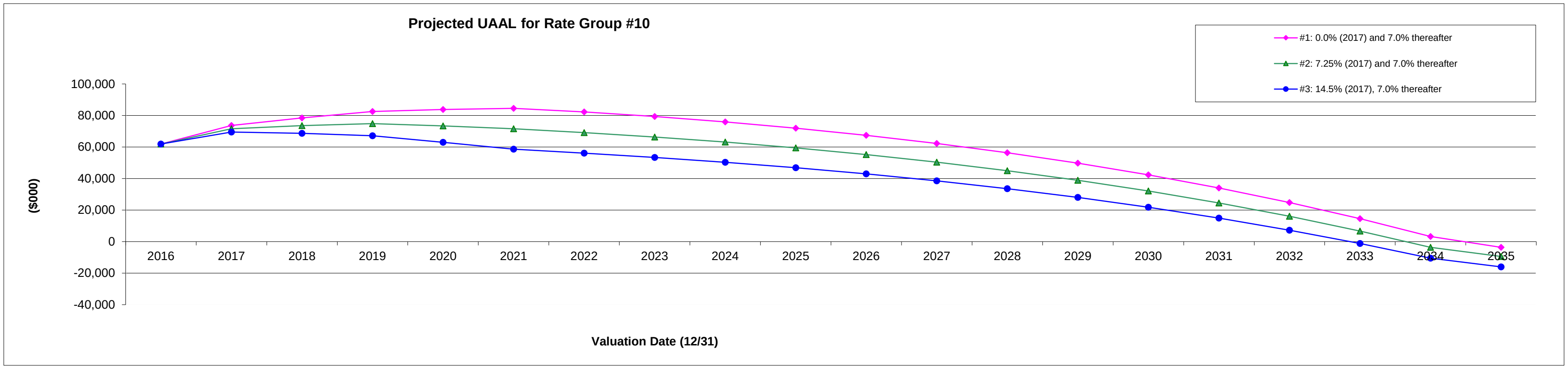
Attachment H
Projected UAAL and Funded Ratio for Rate Group #9
Plans M, N and U (TCA)



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	9,816	12,156	13,174	14,081	14,415	14,663	14,297	13,817	13,235	12,563	11,793	10,916	9,923	8,803	7,543	6,134	4,561	2,813	880	-354
#2: 7.25% (2017) and 7.0% thereafter	9,816	11,729	12,158	12,470	12,229	11,935	11,538	11,076	10,541	9,927	9,227	8,433	7,537	6,531	5,403	4,144	2,744	1,190	-525	-1,515
#3: 14.5% (2017), 7.0% thereafter	9,816	11,303	11,142	10,860	10,047	9,211	8,782	8,332	7,839	7,276	6,638	5,918	5,106	4,197	3,179	2,047	791	-598	-2,125	-3,038

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	75.3%	72.7%	72.4%	72.6%	73.8%	75.1%	77.3%	79.5%	81.6%	83.7%	85.6%	87.5%	89.3%	91.1%	92.8%	94.5%	96.2%	97.8%	99.3%	100.2%
#2: 7.25% (2017) and 7.0% thereafter	75.3%	73.6%	74.6%	75.7%	77.8%	79.8%	81.7%	83.6%	85.4%	87.1%	88.7%	90.3%	91.9%	93.4%	94.9%	96.3%	97.7%	99.1%	100.4%	101.1%
#3: 14.5% (2017), 7.0% thereafter	75.3%	74.6%	76.7%	78.8%	81.7%	84.4%	86.1%	87.6%	89.1%	90.5%	91.9%	93.2%	94.5%	95.8%	97.0%	98.2%	99.3%	100.5%	101.6%	102.1%

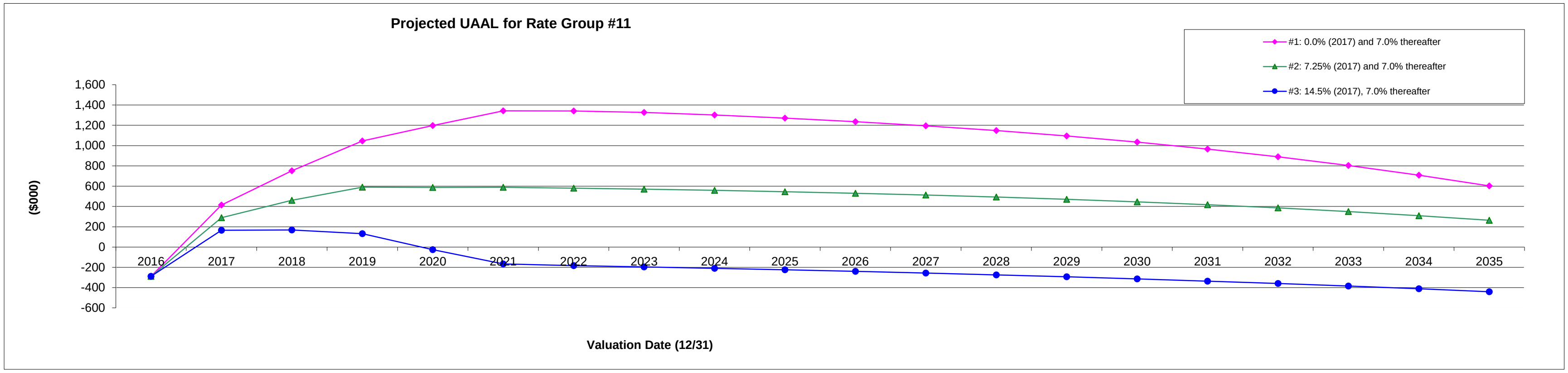
Attachment I
Projected UAAL and Funded Ratio for Rate Group #10
Plans I, J, M, N and U (OCFA)



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	61,930	73,681	78,489	82,569	83,816	84,537	82,288	79,420	75,970	71,988	67,426	62,235	56,362	49,750	42,334	34,046	24,818	14,568	3,238	-3,646
#2: 7.25% (2017) and 7.0% thereafter	61,930	71,616	73,596	74,847	73,392	71,578	69,183	66,389	63,154	59,439	55,202	50,398	44,981	38,897	32,090	24,499	16,061	6,708	-3,615	-9,427
#3: 14.5% (2017), 7.0% thereafter	61,930	69,552	68,704	67,130	62,979	58,642	56,103	53,384	50,364	46,915	43,001	38,581	33,612	28,048	21,838	14,929	7,265	-1,217	-10,555	-16,058

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	70.2%	67.9%	67.8%	68.1%	69.4%	70.8%	73.2%	75.5%	77.8%	80.0%	82.2%	84.4%	86.6%	88.7%	90.9%	93.0%	95.1%	97.3%	99.4%	100.6%
#2: 7.25% (2017) and 7.0% thereafter	70.2%	68.8%	69.8%	71.0%	73.2%	75.3%	77.4%	79.5%	81.5%	83.5%	85.5%	87.4%	89.3%	91.2%	93.1%	95.0%	96.8%	98.7%	100.6%	101.6%
#3: 14.5% (2017), 7.0% thereafter	70.2%	69.7%	71.8%	74.0%	77.0%	79.8%	81.7%	83.5%	85.3%	87.0%	88.7%	90.3%	92.0%	93.6%	95.3%	96.9%	98.6%	100.2%	101.9%	102.8%

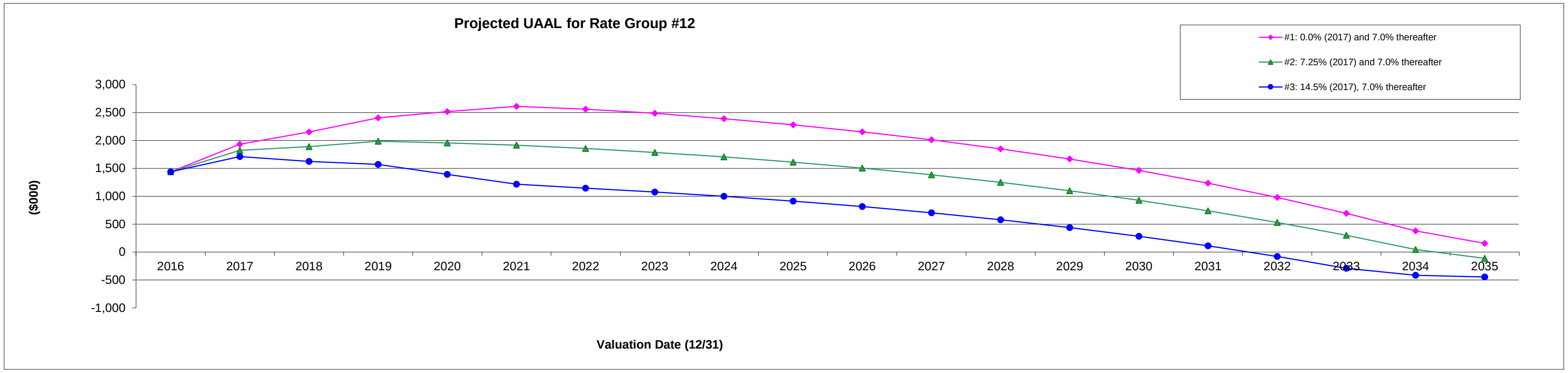
Attachment J
Projected UAAL and Funded Ratio for Rate Group #11
Plans M and N, future service, and U (Cemetery)



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	-289	414	752	1,046	1,198	1,343	1,342	1,327	1,301	1,271	1,236	1,195	1,148	1,094	1,034	966	890	805	709	602
#2: 7.25% (2017) and 7.0% thereafter	-289	290	460	590	587	589	580	571	559	546	530	513	493	470	445	417	386	350	309	264
#3: 14.5% (2017), 7.0% thereafter	-289	166	169	132	-26	-166	-183	-195	-209	-224	-239	-256	-274	-293	-314	-336	-359	-385	-411	-440

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	103.4%	95.7%	92.8%	90.7%	90.0%	89.6%	90.3%	91.0%	91.8%	92.5%	93.2%	93.8%	94.4%	95.0%	95.6%	96.1%	96.7%	97.2%	97.6%	98.1%
#2: 7.25% (2017) and 7.0% thereafter	103.4%	97.0%	95.6%	94.7%	95.1%	95.4%	95.8%	96.1%	96.5%	96.8%	97.1%	97.3%	97.6%	97.9%	98.1%	98.3%	98.6%	98.8%	99.0%	99.2%
#3: 14.5% (2017), 7.0% thereafter	103.4%	98.3%	98.4%	98.8%	100.2%	101.3%	101.3%	101.3%	101.3%	101.3%	101.3%	101.3%	101.3%	101.3%	101.3%	101.3%	101.4%	101.4%	101.4%	101.4%

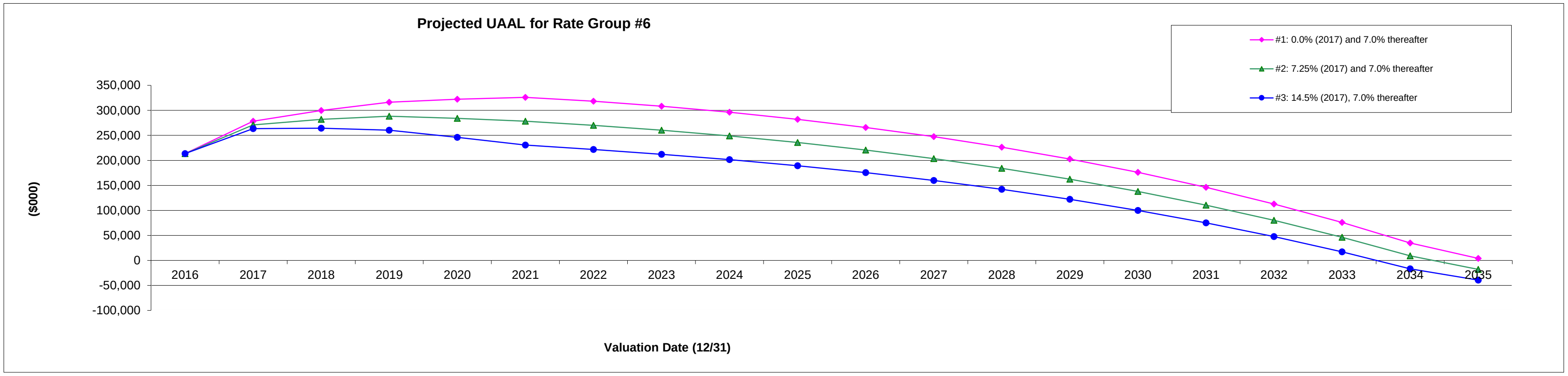
Attachment K
Projected UAAL and Funded Ratio for Rate Group #12
Plans G, H and U (Law Library)



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	1,438	1,933	2,154	2,404	2,517	2,612	2,560	2,485	2,391	2,281	2,155	2,012	1,850	1,668	1,464	1,235	979	695	380	155
#2: 7.25% (2017) and 7.0% thereafter	1,438	1,822	1,889	1,987	1,955	1,915	1,856	1,786	1,705	1,612	1,505	1,385	1,250	1,098	929	741	532	300	45	-113
#3: 14.5% (2017), 7.0% thereafter	1,438	1,711	1,625	1,570	1,392	1,215	1,146	1,076	1,001	914	815	703	578	439	284	112	-79	-290	-416	-446

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	84.4%	81.3%	80.6%	79.8%	80.2%	80.7%	82.2%	83.8%	85.3%	86.8%	88.3%	89.7%	91.0%	92.4%	93.7%	95.0%	96.2%	97.5%	98.7%	99.5%
#2: 7.25% (2017) and 7.0% thereafter	84.4%	82.4%	83.0%	83.3%	84.6%	85.9%	87.1%	88.4%	89.5%	90.7%	91.8%	92.9%	94.0%	95.0%	96.0%	97.0%	97.9%	98.9%	99.8%	100.4%
#3: 14.5% (2017), 7.0% thereafter	84.4%	83.5%	85.4%	86.8%	89.0%	91.0%	92.1%	93.0%	93.9%	94.7%	95.6%	96.4%	97.2%	98.0%	98.8%	99.5%	100.3%	101.1%	101.4%	101.5%

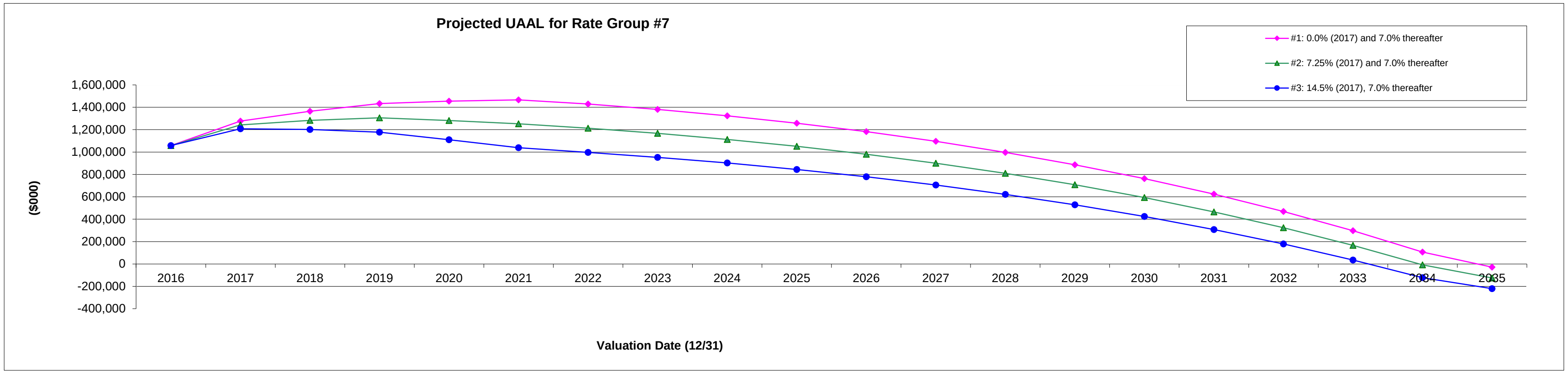
Attachment L
Projected UAAL and Funded Ratio for Rate Group #6
Plans E, F and V (Probation)



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	213,650	278,401	299,727	316,454	322,420	326,211	318,485	308,457	296,289	282,180	265,960	247,441	226,427	202,707	176,051	146,211	112,918	75,886	34,876	3,902
#2: 7.25% (2017) and 7.0% thereafter	213,650	271,005	282,074	288,388	284,232	278,345	270,045	260,270	248,882	235,743	220,696	203,576	184,207	162,401	137,950	110,629	80,199	46,409	9,044	-17,846
#3: 14.5% (2017), 7.0% thereafter	213,650	263,608	264,427	260,344	246,104	230,607	221,738	212,216	201,605	189,433	175,559	159,836	142,112	122,218	99,966	75,161	47,591	17,030	-16,696	-39,507

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	70.8%	66.8%	66.8%	67.4%	69.1%	70.9%	73.5%	76.0%	78.5%	80.8%	83.1%	85.3%	87.4%	89.4%	91.4%	93.3%	95.1%	96.9%	98.7%	99.9%
#2: 7.25% (2017) and 7.0% thereafter	70.8%	67.7%	68.8%	70.3%	72.7%	75.1%	77.5%	79.8%	81.9%	84.0%	86.0%	87.9%	89.7%	91.5%	93.2%	94.9%	96.5%	98.1%	99.7%	100.6%
#3: 14.5% (2017), 7.0% thereafter	70.8%	68.6%	70.7%	73.2%	76.4%	79.4%	81.5%	83.5%	85.4%	87.1%	88.8%	90.5%	92.1%	93.6%	95.1%	96.5%	97.9%	99.3%	100.6%	101.4%

Attachment M
Projected UAAL and Funded Ratio for Rate Group #7
Plans E, F, Q, R and V (Law Enforcement)



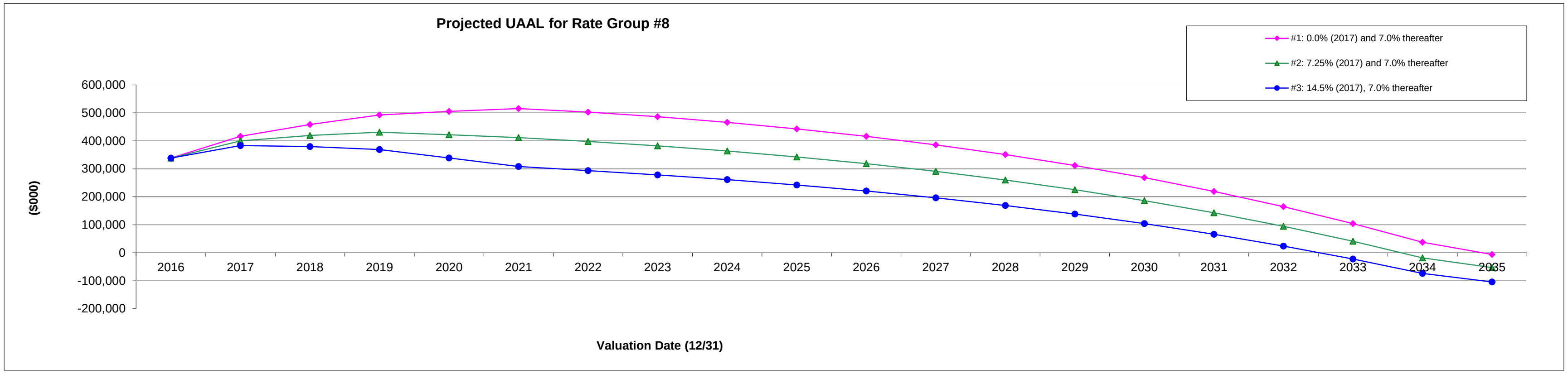
UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
#1: 0.0% (2017) and 7.0% thereafter	1,058,165	1,277,255	1,365,072	1,433,655	1,454,586	1,466,202	1,429,084	1,381,591	1,324,345	1,258,118
#2: 7.25% (2017) and 7.0% thereafter	1,058,165	1,242,655	1,283,555	1,305,574	1,282,313	1,252,742	1,213,264	1,166,999	1,113,260	1,051,388
#3: 14.5% (2017), 7.0% thereafter	1,058,165	1,208,056	1,202,043	1,177,506	1,110,066	1,039,342	997,495	952,448	902,205	844,690

UAAL ($000)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	1,182,134	1,095,547	997,444	886,843	762,688	623,843	469,086	297,104	106,819	-28,138
#2: 7.25% (2017) and 7.0% thereafter	980,687	900,393	809,671	707,651	593,384	465,831	323,889	166,377	-7,625	-124,352
#3: 14.5% (2017), 7.0% thereafter	779,258	705,243	621,918	528,481	424,086	307,824	178,717	35,714	-121,961	-220,391

Funded Ratio	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
#1: 0.0% (2017) and 7.0% thereafter	69.9%	67.0%	66.6%	66.8%	68.1%	69.5%	71.7%	74.0%	76.3%	78.6%
#2: 7.25% (2017) and 7.0% thereafter	69.9%	67.9%	68.6%	69.8%	71.8%	73.9%	76.0%	78.1%	80.1%	82.1%
#3: 14.5% (2017), 7.0% thereafter	69.9%	68.8%	70.6%	72.7%	75.6%	78.4%	80.3%	82.1%	83.9%	85.6%

Funded Ratio	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	80.9%	83.1%	85.3%	87.5%	89.8%	92.0%	94.2%	96.5%	98.8%	100.3%
#2: 7.25% (2017) and 7.0% thereafter	84.1%	86.1%	88.1%	90.1%	92.0%	94.0%	96.0%	98.0%	100.1%	101.3%
#3: 14.5% (2017), 7.0% thereafter	87.4%	89.1%	90.8%	92.6%	94.3%	96.1%	97.8%	99.6%	101.4%	102.4%

Attachment N
Projected UAAL and Funded Ratio for Rate Group #8
Plans E, F, Q, R and V (Fire Authority)



UAAL ($000)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
#1: 0.0% (2017) and 7.0% thereafter	338,504	416,428	458,391	492,783	505,527	515,394	502,884	486,367	466,217	442,911	416,173	385,695	351,155	312,216	268,506	219,625	165,143	104,598	37,624	-5,874
#2: 7.25% (2017) and 7.0% thereafter	338,504	399,802	419,088	430,881	422,103	411,862	398,201	382,279	363,818	342,613	318,422	290,991	260,032	225,246	186,314	142,888	94,608	41,064	-18,042	-52,721
#3: 14.5% (2017), 7.0% thereafter	338,504	383,175	379,792	369,015	338,756	308,441	293,615	278,278	261,514	242,415	220,780	196,384	168,995	138,360	104,211	66,257	24,185	-22,328	-73,513	-104,203

Funded Ratio																				
#1: 0.0% (2017) and 7.0% thereafter	77.6%	75.0%	74.2%	74.0%	74.9%	76.0%	77.9%	79.9%	81.8%	83.7%	85.5%	87.3%	89.0%	90.8%	92.5%	94.2%	95.8%	97.5%	99.1%	100.1%
#2: 7.25% (2017) and 7.0% thereafter	77.6%	76.0%	76.4%	77.3%	79.1%	80.8%	82.5%	84.2%	85.8%	87.4%	88.9%	90.4%	91.9%	93.3%	94.8%	96.2%	97.6%	99.0%	100.4%	101.1%
#3: 14.5% (2017), 7.0% thereafter	77.6%	77.0%	78.7%	80.5%	83.2%	85.6%	87.1%	88.5%	89.8%	91.1%	92.3%	93.5%	94.7%	95.9%	97.1%	98.2%	99.4%	100.5%	101.7%	102.3%

Attachment O
Projected Employer Rates by Plans within each Rate Group
Scenario 1: 0.0% for 2017 and 7.0% thereafter

	Valuation Date (12/31)																			
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
General																				
RG #1 - Plans A and B	16.8%	19.7%	21.6%	23.3%	23.8%	24.2%	24.2%	24.2%	24.2%	24.2%	24.2%	24.2%	24.2%	24.2%	24.2%	24.2%	24.1%	13.2%	14.7%	14.7%
RG #1 - Plan U	15.9%	18.8%	20.7%	22.4%	22.9%	23.3%	23.3%	23.3%	23.3%	23.3%	23.3%	23.3%	23.3%	23.3%	23.3%	23.3%	23.2%	12.3%	13.8%	13.7%
RG #1 - Plans A, B and U (non-OCTA, non-OCSD)	16.4%	19.3%	21.1%	22.9%	23.3%	23.7%	23.7%	23.7%	23.6%	23.6%	23.6%	23.6%	23.6%	23.5%	23.5%	23.5%	23.4%	12.5%	14.0%	13.9%
RG #2 - Plans I and J	34.9%	38.6%	41.4%	44.1%	44.8%	45.4%	45.4%	45.4%	45.4%	45.4%	45.4%	45.4%	45.4%	45.4%	45.4%	45.4%	45.2%	18.6%	21.0%	14.4%
RG #2 - Plans O and P	27.3%	30.4%	33.2%	35.9%	36.6%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.0%	10.4%	12.8%	6.2%
RG #2 - Plan S	32.1%	35.7%	38.5%	41.2%	41.9%	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%	42.3%	15.7%	18.1%	11.5%
RG #2 - Plan T	28.3%	31.3%	34.1%	36.8%	37.5%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	37.9%	11.3%	13.7%	7.1%
RG #2 - Plan U	30.0%	33.3%	36.1%	38.7%	39.4%	40.1%	40.1%	40.1%	40.1%	40.1%	40.1%	40.1%	40.1%	40.0%	40.0%	40.0%	39.9%	13.2%	15.7%	9.1%
RG #2 - Plan W	28.4%	31.4%	34.2%	36.9%	37.6%	38.3%	38.3%	38.2%	38.2%	38.2%	38.2%	38.2%	38.2%	38.2%	38.2%	38.2%	38.0%	11.4%	13.9%	7.2%
RG #2 - Plans I, J, O, P, S, T, U and W (County et al.)	33.7%	36.9%	39.4%	41.8%	42.2%	42.6%	42.3%	42.1%	41.8%	41.6%	41.3%	41.1%	40.9%	40.7%	40.5%	40.3%	39.9%	13.1%	15.4%	8.6%
RG #3 - Plans G and H	12.3%	13.7%	16.2%	18.0%	18.9%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%
RG #3 - Plan B	10.2%	11.8%	14.2%	16.1%	17.0%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%
RG #3 - Plan U	9.3%	10.5%	13.0%	14.9%	15.7%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%
RG #3 - Plans B, G, H and U (OCSD)	11.6%	12.8%	15.1%	16.9%	17.6%	18.3%	18.2%	18.1%	17.9%	17.8%	17.7%	17.6%	17.5%	17.4%	17.4%	17.3%	17.2%	17.2%	17.1%	17.0%
RG #5 - Plans A and B	25.5%	29.2%	31.9%	34.3%	35.0%	35.6%	35.6%	35.6%	35.6%	35.6%	35.6%	35.5%	35.5%	35.5%	35.5%	35.5%	35.4%	17.2%	18.3%	12.2%
RG #5 - Plan U	25.0%	28.3%	30.9%	33.4%	34.0%	34.7%	34.7%	34.7%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.5%	16.2%	17.4%	11.2%
RG #5 - Plans A, B and U (OCTA)	25.5%	29.1%	31.7%	34.1%	34.7%	35.2%	35.2%	35.1%	35.1%	35.0%	35.0%	35.0%	34.9%	34.9%	34.9%	34.8%	34.7%	16.4%	17.6%	11.4%
RG #9 - Plans M and N	24.8%	27.2%	29.0%	30.7%	31.2%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	31.6%	17.4%	18.0%	14.2%
RG #9 - Plan U	21.9%	24.2%	26.0%	27.7%	28.2%	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%	28.7%	28.6%	14.4%	15.0%	11.2%
RG #9 - Plans M, N and U (TCA)	23.8%	26.1%	27.8%	29.3%	29.7%	30.1%	29.9%	29.8%	29.7%	29.6%	29.5%	29.4%	29.4%	29.3%	29.2%	29.2%	29.1%	14.7%	15.3%	11.5%
RG #10 - Plans I and J	32.0%	35.1%	37.4%	39.5%	40.1%	40.7%	40.7%	40.7%	40.7%	40.7%	40.7%	40.7%	40.7%	40.6%	40.6%	40.6%	40.5%	17.8%	20.3%	14.8%
RG #10 - Plans M and N	31.0%	33.8%	36.1%	38.3%	38.9%	39.4%	39.4%	39.4%	39.4%	39.4%	39.4%	39.4%	39.4%	39.4%	39.4%	39.4%	39.3%	16.5%	19.0%	13.5%
RG #10 - Plan U	27.3%	30.3%	32.6%	34.8%	35.4%	35.9%	35.9%	35.9%	35.9%	35.9%	35.9%	35.9%	35.9%	35.9%	35.9%	35.9%	35.8%	13.0%	15.5%	10.0%
RG #10 - Plans I, J, M, N and U (OCFA)	30.5%	33.4%	35.6%	37.5%	38.0%	38.4%	38.2%	38.0%	37.9%	37.7%	37.6%	37.4%	37.3%	37.2%	37.0%	36.9%	36.7%	13.9%	16.3%	10.7%
RG #11 - Plans M and N, future service	11.1%	13.3%	15.4%	17.3%	18.0%	18.6%	18.6%	18.5%	18.5%	18.4%	18.4%	18.3%	18.3%	18.2%	18.2%	18.2%	18.1%	18.1%	18.1%	18.1%
RG #11 - Plan U	10.0%	12.4%	14.5%	16.4%	17.0%	17.7%	17.7%	17.6%	17.6%	17.5%	17.5%	17.4%	17.4%	17.3%	17.3%	17.2%	17.2%	17.2%	17.2%	17.2%
RG #11 - Plans M and N, future service, and U (Cemetery)	10.9%	13.1%	15.2%	17.1%	17.6%	18.2%	18.2%	18.1%	18.0%	17.9%	17.8%	17.8%	17.7%	17.6%	17.5%	17.5%	17.5%	17.4%	17.4%	17.3%
RG #12 - Plans G and H, future service	23.0%	25.1%	27.8%	30.3%	31.1%	31.9%	31.9%	31.8%	31.8%	31.8%	31.7%	31.6%	31.6%	31.6%	31.6%	31.6%	31.6%	20.0%	20.0%	19.9%
RG #12 - Plan U	17.3%	19.6%	22.4%	24.9%	25.6%	26.4%	26.4%	26.4%	26.4%	26.3%	26.3%	26.2%	26.2%	26.2%	26.2%	26.2%	26.1%	14.5%	14.5%	14.5%
RG #12 - Plans G and H, future service, and U (Law Library)	22.7%	23.8%	26.1%	28.1%	28.5%	28.9%	28.6%	28.3%	28.1%	27.9%	27.6%	27.4%	27.3%	27.2%	27.1%	26.9%	26.8%	15.1%	15.0%	14.9%
Safety																				
RG #6 - Plans E and F	47.9%	53.8%	58.0%	62.0%	62.9%	63.9%	63.9%	63.8%	63.8%	63.8%	63.8%	63.8%	63.8%	63.8%	63.8%	63.8%	63.7%	39.7%	35.3%	36.6%
RG #6 - Plan V	41.3%	46.5%	50.6%	54.6%	55.6%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.4%	56.3%	32.4%	28.0%	29.2%
RG #6 - Plans E, F and V (Probation)	47.8%	53.5%	57.5%	61.3%	62.1%	62.9%	62.7%	62.4%	62.2%	61.9%	61.6%	61.3%	61.0%	60.6%	60.2%	59.8%	59.3%	34.9%	30.1%	31.0%
RG #7 - Plans E and F	63.8%	69.4%	74.2%	78.6%	79.8%	81.0%	80.9%	80.9%	80.9%	80.9%	80.9%	80.9%	80.9%	80.8%	80.8%	80.8%	80.6%	43.4%	40.7%	26.8%
RG #7 - Plans Q and R	61.2%	66.5%	71.2%	75.6%	76.8%	78.0%	78.0%	78.0%	78.0%	77.9%	77.9%	77.9%	77.9%	77.9%	77.9%	77.9%	77.7%	40.5%	37.7%	23.8%
RG #7 - Plan V	57.6%	63.6%	68.4%	72.8%	74.0%	75.1%	75.1%	75.1%	75.1%	75.1%	75.1%	75.0%	75.0%	75.0%	75.0%	75.0%	74.8%	37.6%	34.9%	20.9%
RG #7 - Plans E, F, Q, R and V (Law Enforcement)	62.8%	68.1%	72.6%	76.8%	77.7%	78.6%	78.4%	78.1%	77.8%	77.6%	77.4%	77.2%	77.0%	76.8%	76.6%	76.4%	76.1%	38.7%	35.8%	21.8%
RG #8 - Plans E and F	49.1%	52.9%	56.5%	59.8%	60.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.7%	61.7%	61.7%	61.7%	61.6%	34.4%	34.3%	27.4%
RG #8 - Plans Q and R	44.1%	47.8%	51.4%	54.7%	55.7%	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	56.6%	56.6%	56.6%	56.6%	56.5%	29.3%	29.2%	22.3%
RG #8 - Plan V	37.1%	41.3%	44.9%	48.1%	49.1%	50.2%	50.2%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	49.9%	22.8%	22.7%	15.8%
RG #8 - Plans E, F, Q, R and V (Fire Authority)	47.8%	51.0%	54.2%	57.0%	57.6%	58.2%	57.8%	57.0%	56.4%	56.0%	55.5%	55.1%	54.7%	54.3%	53.9%	53.5%	53.0%	25.5%	25.0%	17.8%

Rates shown above have not been adjusted for employers with future service only benefit enhancement in Rate Group #2.

In our December 18, 2017 letter, Rate Group #6 was just barely over 100% funded as of December 31, 2035. Reflecting the impact of the implementation of the assumption changes in the December 31, 2017 valuation instead of the December 31, 2016 valuation increases the AAL enough to make Rate Group #6 drop below 100% funded as of December 31, 2035 in this letter. Therefore, they still have a UAAL contribution rate as of December 31, 2035 so their total rate as of that date is significantly higher than the total contribution rate in our December 18, 2017 letter.

Attachment O
Projected Employer Rates by Plans within each Rate Group
Scenario 2: 7.25% for 2017 and 7.0% thereafter

	Valuation Date (12/31)																			
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
General																				
RG #1 - Plans A and B	16.8%	19.3%	20.6%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.7%	10.8%	10.7%	10.7%
RG #1 - Plan U	15.9%	18.3%	19.6%	20.9%	20.9%	20.9%	20.9%	20.9%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	9.9%	9.8%	9.8%
RG #1 - Plans A, B and U (non-OCTA, non-OCSD)	16.4%	18.8%	20.1%	21.3%	21.3%	21.3%	21.2%	21.2%	21.2%	21.2%	21.2%	21.1%	21.1%	21.1%	21.1%	21.1%	21.0%	10.1%	10.0%	10.0%
RG #2 - Plans I and J	34.9%	37.9%	39.8%	41.7%	41.6%	41.6%	41.6%	41.6%	41.6%	41.6%	41.6%	41.6%	41.6%	41.6%	41.6%	41.6%	41.4%	14.8%	14.4%	14.4%
RG #2 - Plans O and P	27.3%	29.7%	31.6%	33.5%	33.4%	33.4%	33.4%	33.4%	33.4%	33.4%	33.4%	33.4%	33.4%	33.4%	33.4%	33.4%	33.2%	6.6%	6.2%	6.2%
RG #2 - Plan S	32.1%	35.0%	36.9%	38.8%	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	38.5%	11.9%	11.5%	11.5%
RG #2 - Plan T	28.3%	30.6%	32.5%	34.4%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	34.1%	7.5%	7.1%	7.1%
RG #2 - Plan U	30.0%	32.5%	34.5%	36.3%	36.3%	36.3%	36.3%	36.3%	36.3%	36.3%	36.3%	36.2%	36.2%	36.2%	36.2%	36.2%	36.1%	9.4%	9.1%	9.1%
RG #2 - Plan W	28.4%	30.7%	32.7%	34.5%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%	34.2%	7.6%	7.2%	7.2%
RG #2 - Plans I, J, O, P, S, T, U and W (County et al.)	33.7%	36.2%	37.8%	39.4%	39.0%	38.8%	38.5%	38.3%	38.0%	37.8%	37.5%	37.3%	37.1%	36.8%	36.7%	36.4%	36.1%	9.3%	8.8%	8.6%
RG #3 - Plans G and H	12.3%	13.3%	13.6%	14.3%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%
RG #3 - Plan B	10.2%	11.3%	11.7%	12.4%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%
RG #3 - Plan U	9.3%	10.1%	10.4%	11.2%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
RG #3 - Plans B, G, H and U (OCSD)	11.6%	12.4%	12.6%	13.2%	12.9%	12.7%	12.6%	12.5%	12.3%	12.2%	12.1%	12.0%	11.9%	11.8%	11.8%	11.7%	11.6%	11.6%	11.5%	11.4%
RG #5 - Plans A and B	25.5%	28.6%	30.4%	32.1%	32.1%	32.1%	32.1%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	31.9%	13.6%	12.2%	12.2%
RG #5 - Plan U	25.0%	27.6%	29.5%	31.2%	31.1%	31.1%	31.1%	31.1%	31.1%	31.1%	31.1%	31.1%	31.1%	31.1%	31.1%	31.1%	31.0%	12.7%	11.2%	11.2%
RG #5 - Plans A, B and U (OCTA)	25.5%	28.4%	30.2%	31.8%	31.8%	31.7%	31.7%	31.6%	31.6%	31.5%	31.5%	31.4%	31.4%	31.4%	31.3%	31.3%	31.2%	12.9%	11.4%	11.4%
RG #9 - Plans M and N	24.8%	26.7%	27.9%	29.1%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	28.9%	14.6%	14.2%	14.2%
RG #9 - Plan U	21.9%	23.7%	24.9%	26.1%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	25.9%	11.6%	11.2%	11.2%
RG #9 - Plans M, N and U (TCA)	23.8%	25.6%	26.7%	27.7%	27.5%	27.4%	27.2%	27.1%	27.0%	26.9%	26.8%	26.7%	26.7%	26.6%	26.5%	26.5%	26.3%	12.0%	11.5%	11.5%
RG #10 - Plans I and J	32.0%	34.5%	36.1%	37.5%	37.5%	37.5%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.3%	14.8%	14.8%	14.8%
RG #10 - Plans M and N	31.0%	33.2%	34.8%	36.3%	36.2%	36.2%	36.2%	36.2%	36.2%	36.2%	36.2%	36.1%	36.1%	36.1%	36.1%	36.1%	36.0%	13.5%	13.5%	13.5%
RG #10 - Plan U	27.3%	29.7%	31.3%	32.8%	32.7%	32.7%	32.7%	32.7%	32.7%	32.7%	32.7%	32.6%	32.6%	32.6%	32.6%	32.6%	32.5%	10.0%	10.0%	10.0%
RG #10 - Plans I, J, M, N and U (OCFA)	30.5%	32.8%	34.2%	35.5%	35.3%	35.2%	35.0%	34.8%	34.6%	34.5%	34.3%	34.2%	34.0%	33.9%	33.8%	33.7%	33.4%	10.8%	10.8%	10.7%
RG #11 - Plans M and N, future service	11.1%	12.6%	13.9%	15.0%	14.9%	14.9%	14.9%	14.9%	14.8%	14.8%	14.8%	14.7%	14.7%	14.6%	14.7%	14.7%	14.7%	14.7%	14.7%	14.7%
RG #11 - Plan U	10.0%	11.7%	13.0%	14.1%	14.0%	14.0%	14.0%	13.9%	13.9%	13.9%	13.8%	13.8%	13.8%	13.7%	13.7%	13.8%	13.8%	13.8%	13.8%	13.8%
RG #11 - Plans M and N, future service, and U (Cemetery)	10.9%	12.4%	13.7%	14.8%	14.6%	14.6%	14.5%	14.4%	14.3%	14.3%	14.2%	14.2%	14.1%	14.0%	14.0%	14.0%	14.0%	14.0%	13.9%	13.9%
RG #12 - Plans G and H, future service	23.0%	24.3%	26.2%	27.8%	27.7%	27.8%	27.8%	27.7%	27.7%	27.7%	27.6%	27.5%	27.5%	27.5%	27.5%	27.4%	27.4%	15.8%	15.8%	14.1%
RG #12 - Plan U	17.3%	18.9%	20.7%	22.4%	22.3%	22.3%	22.3%	22.3%	22.3%	22.2%	22.2%	22.1%	22.1%	22.1%	22.0%	22.0%	21.9%	10.4%	10.3%	8.7%
RG #12 - Plans G and H, future service, and U (Law Library)	22.7%	23.1%	24.4%	25.6%	25.1%	24.8%	24.5%	24.2%	24.0%	23.8%	23.5%	23.3%	23.2%	23.0%	22.9%	22.7%	22.6%	10.9%	10.8%	9.1%
Safety																				
RG #6 - Plans E and F	47.9%	53.0%	56.0%	59.0%	58.9%	58.9%	58.9%	58.9%	58.9%	58.9%	58.9%	58.9%	58.9%	58.9%	58.9%	58.9%	58.7%	34.8%	30.4%	23.8%
RG #6 - Plan V	41.3%	45.6%	48.7%	51.6%	51.6%	51.6%	51.6%	51.6%	51.6%	51.6%	51.6%	51.6%	51.5%	51.5%	51.5%	51.5%	51.4%	27.5%	23.1%	16.5%
RG #6 - Plans E, F and V (Probation)	47.8%	52.6%	55.5%	58.3%	58.1%	58.0%	57.7%	57.5%	57.3%	57.0%	56.7%	56.4%	56.1%	55.7%	55.3%	54.9%	54.4%	30.0%	25.2%	18.2%
RG #7 - Plans E and F	63.8%	68.2%	71.5%	74.5%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.3%	74.3%	74.3%	74.3%	74.1%	36.9%	26.8%	26.8%
RG #7 - Plans Q and R	61.2%	65.3%	68.5%	71.6%	71.5%	71.5%	71.5%	71.5%	71.4%	71.4%	71.4%	71.4%	71.4%	71.4%	71.4%	71.4%	71.2%	34.0%	23.8%	23.8%
RG #7 - Plan V	57.6%	62.4%	65.6%	68.7%	68.6%	68.6%	68.6%	68.6%	68.6%	68.6%	68.5%	68.5%	68.5%	68.5%	68.5%	68.5%	68.3%	31.1%	20.9%	20.9%
RG #7 - Plans E, F, Q, R and V (Law Enforcement)	62.8%	66.9%	69.9%	72.7%	72.4%	72.1%	71.8%	71.6%	71.3%	71.1%	70.9%	70.7%	70.5%	70.3%	70.1%	69.9%	69.6%	32.2%	21.9%	21.8%
RG #8 - Plans E and F	49.1%	51.9%	54.2%	56.2%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%	56.0%	56.0%	55.9%	28.8%	27.4%	27.4%
RG #8 - Plans Q and R	44.1%	46.8%	49.1%	51.1%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	50.9%	50.9%	50.8%	23.7%	22.3%	22.3%
RG #8 - Plan V	37.1%	40.3%	42.6%	44.6%	44.5%	44.5%	44.5%	44.5%	44.4%	44.4%	44.4%	44.4%	44.4%	44.4%	44.4%	44.4%	44.3%	17.1%	15.8%	15.8%
RG #8 - Plans E, F, Q, R and V (Fire Authority)	47.8%	50.0%	51.8%	53.4%	52.9%	52.5%	52.1%	51.3%	50.7%	50.3%	49.8%	49.4%	49.1%	48.7%	48.2%	47.9%	47.3%	19.8%	18.1%	17.8%

Rates shown above have <u>not</u> been adjusted for employers with future service only benefit enhancement in Rate Group #2.

Attachment O
Projected Employer Rates by Plans within each Rate Group
Scenario 3: 14.5% for 2017 and 7.0% thereafter

	Valuation Date (12/31)																			
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
General																				
RG #1 - Plans A and B	16.8%	18.8%	19.5%	20.3%	19.8%	19.4%	19.4%	19.3%	19.3%	19.3%	19.3%	19.3%	19.3%	19.3%	19.3%	19.3%	19.3%	10.7%	10.7%	10.7%
RG #1 - Plan U	15.9%	17.9%	18.6%	19.3%	18.9%	18.4%	18.4%	18.4%	18.4%	18.4%	18.4%	18.4%	18.4%	18.4%	18.4%	18.4%	18.3%	9.8%	9.8%	9.8%
RG #1 - Plans A, B and U (non-OCTA, non-OCSD)	16.4%	18.4%	19.1%	19.8%	19.3%	18.8%	18.8%	18.8%	18.8%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.6%	18.6%	10.0%	10.0%	10.0%
RG #2 - Plans I and J	34.9%	37.2%	38.2%	39.3%	38.5%	37.8%	37.8%	37.8%	37.8%	37.8%	37.8%	37.8%	37.8%	37.7%	37.7%	37.7%	37.6%	14.4%	14.4%	14.4%
RG #2 - Plans O and P	27.3%	29.0%	30.0%	31.1%	30.3%	29.6%	29.6%	29.6%	29.6%	29.6%	29.6%	29.6%	29.6%	29.5%	29.5%	29.5%	29.4%	6.2%	6.2%	6.2%
RG #2 - Plan S	32.1%	34.3%	35.3%	36.4%	35.6%	34.9%	34.9%	34.9%	34.9%	34.9%	34.9%	34.9%	34.9%	34.8%	34.8%	34.8%	34.7%	11.5%	11.5%	11.5%
RG #2 - Plan T	28.3%	29.9%	30.9%	32.0%	31.2%	30.5%	30.5%	30.5%	30.5%	30.5%	30.5%	30.5%	30.5%	30.4%	30.4%	30.4%	30.3%	7.1%	7.1%	7.1%
RG #2 - Plan U	30.0%	31.8%	32.9%	33.9%	33.1%	32.5%	32.5%	32.4%	32.4%	32.4%	32.4%	32.4%	32.4%	32.4%	32.4%	32.4%	32.3%	9.1%	9.1%	9.1%
RG #2 - Plan W	28.4%	30.0%	31.0%	32.1%	31.3%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.5%	30.4%	7.2%	7.2%	7.2%
RG #2 - Plans I, J, O, P, S, T, U and W (County et al.)	33.7%	35.4%	36.2%	36.9%	35.9%	35.0%	34.7%	34.4%	34.2%	33.9%	33.7%	33.5%	33.2%	33.0%	32.8%	32.6%	32.3%	8.9%	8.8%	8.6%
RG #3 - Plans G and H	12.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%
RG #3 - Plan B	10.2%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%
RG #3 - Plan U	9.3%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%
RG #3 - Plans B, G, H and U (OCSD)	11.6%	12.4%	12.3%	12.1%	12.0%	11.8%	11.7%	11.5%	11.4%	11.3%	11.2%	11.1%	11.0%	10.9%	10.8%	10.8%	10.7%	10.6%	10.6%	10.5%
RG #5 - Plans A and B	25.5%	27.9%	28.9%	29.9%	29.1%	28.5%	28.5%	28.5%	28.5%	28.5%	28.5%	28.5%	28.5%	28.5%	28.5%	28.5%	28.4%	12.2%	12.2%	12.2%
RG #5 - Plan U	25.0%	27.0%	28.0%	28.9%	28.2%	27.6%	27.6%	27.6%	27.6%	27.6%	27.6%	27.6%	27.6%	27.6%	27.6%	27.6%	27.5%	11.2%	11.2%	11.2%
RG #5 - Plans A, B and U (OCTA)	25.5%	27.8%	28.7%	29.6%	28.8%	28.2%	28.1%	28.1%	28.0%	28.0%	27.9%	27.9%	27.9%	27.9%	27.8%	27.8%	27.7%	11.4%	11.4%	11.4%
RG #9 - Plans M and N	24.8%	26.2%	26.9%	27.4%	26.8%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.3%	14.2%	14.2%	14.2%
RG #9 - Plan U	21.9%	23.2%	23.9%	24.4%	23.8%	23.4%	23.4%	23.4%	23.4%	23.4%	23.4%	23.4%	23.4%	23.4%	23.4%	23.4%	23.3%	11.2%	11.2%	11.2%
RG #9 - Plans M, N and U (TCA)	23.8%	25.2%	25.6%	26.0%	25.3%	24.7%	24.6%	24.5%	24.4%	24.3%	24.2%	24.2%	24.1%	24.0%	24.0%	23.9%	23.8%	11.6%	11.5%	11.5%
RG #10 - Plans I and J	32.0%	33.9%	34.7%	35.5%	34.8%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%	34.1%	14.8%	14.8%	14.8%
RG #10 - Plans M and N	31.0%	32.6%	33.5%	34.2%	33.6%	33.0%	33.0%	32.9%	32.9%	32.9%	32.9%	32.9%	32.9%	32.9%	32.9%	32.9%	32.8%	13.5%	13.5%	13.5%
RG #10 - Plan U	27.3%	29.1%	30.0%	30.7%	30.1%	29.5%	29.5%	29.4%	29.4%	29.4%	29.4%	29.4%	29.4%	29.4%	29.4%	29.4%	29.3%	10.0%	10.0%	10.0%
RG #10 - Plans I, J, M, N and U (OCFA)	30.5%	32.3%	32.9%	33.5%	32.7%	31.9%	31.8%	31.6%	31.4%	31.2%	31.1%	31.0%	30.8%	30.7%	30.6%	30.4%	30.2%	10.8%	10.8%	10.7%
RG #11 - Plans M and N, future service	11.1%	12.1%	12.3%	12.6%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%
RG #11 - Plan U	10.0%	11.1%	11.4%	11.7%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%
RG #11 - Plans M and N, future service, and U (Cemetery)	10.9%	11.9%	12.1%	12.4%	11.7%	11.7%	11.6%	11.6%	11.6%	11.5%	11.5%	11.5%	11.5%	11.4%	11.4%	11.4%	11.4%	11.4%	11.3%	11.3%
RG #12 - Plans G and H, future service	23.0%	23.7%	24.6%	25.4%	24.6%	24.0%	24.1%	24.2%	24.3%	24.3%	24.3%	24.2%	24.3%	24.3%	24.3%	24.3%	14.1%	14.1%	14.1%	14.1%
RG #12 - Plan U	17.3%	18.2%	19.2%	20.0%	19.2%	18.6%	18.7%	18.7%	18.8%	18.8%	18.8%	18.8%	18.8%	18.8%	18.8%	18.8%	8.7%	8.7%	8.7%	8.7%
RG #12 - Plans G and H, future service, and U (Law Library)	22.7%	22.5%	22.9%	23.2%	22.0%	21.1%	20.9%	20.7%	20.6%	20.4%	20.2%	20.0%	19.9%	19.8%	19.7%	19.6%	9.3%	9.2%	9.2%	9.1%
Safety																				
RG #6 - Plans E and F	47.9%	52.1%	54.0%	55.9%	54.9%	54.0%	54.0%	54.0%	54.0%	54.0%	54.0%	54.0%	54.0%	54.0%	54.0%	54.0%	53.8%	29.9%	23.8%	23.8%
RG #6 - Plan V	41.3%	44.8%	46.7%	48.6%	47.6%	46.7%	46.7%	46.7%	46.7%	46.7%	46.7%	46.6%	46.6%	46.6%	46.6%	46.6%	46.5%	22.6%	16.5%	16.5%
RG #6 - Plans E, F and V (Probation)	47.8%	51.8%	53.5%	55.3%	54.1%	53.0%	52.8%	52.6%	52.4%	52.1%	51.8%	51.5%	51.2%	50.8%	50.4%	50.0%	49.5%	25.1%	18.6%	18.2%
RG #7 - Plans E and F	63.8%	67.0%	68.8%	70.4%	69.1%	67.9%	67.9%	67.9%	67.9%	67.9%	67.9%	67.8%	67.8%	67.8%	67.8%	67.8%	67.6%	30.4%	26.8%	26.8%
RG #7 - Plans Q and R	61.2%	64.1%	65.8%	67.5%	66.1%	65.0%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.8%	64.7%	27.5%	23.8%	23.8%
RG #7 - Plan V	57.6%	61.2%	62.9%	64.6%	63.3%	62.1%	62.1%	62.1%	62.1%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	61.8%	24.6%	20.9%	20.9%
RG #7 - Plans E, F, Q, R and V (Law Enforcement)	62.8%	65.7%	67.2%	68.6%	67.0%	65.6%	65.3%	65.1%	64.8%	64.6%	64.4%	64.2%	64.0%	63.8%	63.6%	63.4%	63.1%	25.7%	21.9%	21.8%
RG #8 - Plans E and F	49.1%	50.9%	51.9%	52.7%	51.4%	50.4%	50.4%	50.4%	50.4%	50.4%	50.4%	50.4%	50.4%	50.4%	50.4%	50.4%	50.2%	27.4%	27.4%	27.4%
RG #8 - Plans Q and R	44.1%	45.8%	46.8%	47.6%	46.3%	45.3%	45.3%	45.3%	45.3%	45.3%	45.3%	45.3%	45.3%	45.3%	45.3%	45.3%	45.1%	22.3%	22.3%	22.3%
RG #8 - Plan V	37.1%	39.2%	40.2%	41.0%	39.8%	38.8%	38.8%	38.8%	38.8%	38.8%	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	38.6%	15.8%	15.8%	15.8%
RG #8 - Plans E, F, Q, R and V (Fire Authority)	47.8%	48.9%	49.5%	49.9%	48.2%	46.8%	46.4%	45.6%	45.0%	44.6%	44.1%	43.8%	43.4%	43.0%	42.6%	42.2%	41.7%	18.5%	18.1%	17.8%

Rates shown above have not been adjusted for employers with future service only benefit enhancement in Rate Group #2.

OCERS' 2018 Plan Sponsor Review

Report Date: March 7, 2018

Internal Audit Division
Internal Auditor: Mark Adviento, CPA

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Executive Summary

The OCERS’ 2018 Plan Sponsor Review report (Plan Sponsor report) provides OCERS’ Board of Retirement with a summary of key financial information on OCERS’ plan sponsors based upon information provided by their 2017 audited financial statements and 2017 budget and forecast documents.

- Internal Audit did not note anything that could significantly impact the plan sponsors’ ability to continue paying their financial obligations to OCERS in the near term.

- All of the audited financial statements obtained from the plan sponsors contained an external auditor’s unmodified (“clean”) opinion. In addition, no external auditor disclosed any “Going Concern” issues in regards to the plan sponsor’s ability to continue as a governmental entity.

- None of OCERS’ active plan sponsors have missed required contribution payments required of the OCERS’ plan since the prior year’s Plan Sponsor report.

- Also since the prior year’s Plan Sponsor report, some plan sponsors have continued with additional payments towards their unfunded actuarial accrued liability (UAAL); payments totaling $298 million in recent years from the Orange County Sanitation District, the Orange County Fire Authority, The Children and Families Commission of Orange County, the Orange County Public Law Library, UC Irvine Medical Center & Campus, and the Orange County Department of Education.

Although this report includes financial information on OCFA and the Orange County Sheriff’s Department, it does not include financial information of the entities that contract with OCFA and/or the Orange County Sheriff’s Department. A financial summary of the 19 contract cities that contract with OCFA and/or the Orange County Sheriff’s Department would require a separate report.

Introduction

At its May 19, 2014 Regular Meeting, the OCERS Board of Retirement (Board) directed the OCERS Internal Audit Department to prepare an annual report on key financial information on OCERS’ plan sponsors. This report is the fourth annual compilation of key financial information, such as revenue sources and net positions.

The Board can change its funding policy or revise its unfunded actuarial accrued liability (UAAL) amortization schedule in consultation with its actuary and as described in OCERS' *Declining Employer Payroll Policy*. However, the current financial states of OCERS' plan sponsors do not appear to indicate a need for such Board actions to ensure that plan sponsors meet their financial obligations to OCERS.

Background

Scope

This report includes financial information on OCERS' plan sponsors for fiscal year ending June 30, 2017, if publicly available. There were 21,964 active members within OCERS' thirteen plan sponsors as of December 31, 2017.

Background

Primary Revenue Sources for OCERS' Five Largest Plan Sponsors - Year Ending June 30, 2017:

Revenue Category	Orange County	OCFA	Superior Court	OCTA	Sanitation District
Monies from CA/Federal	52%	-	98%	31%	-
Property Tax/Other Tax	25%	62%	-	-	20%
Sales Tax	-	-	-	55%	-
Service Charges	23%	33%	-	12%	72%
% of Total Revenues	**100%**	**95%**	**98%**	**98%**	**92%**
Total Revenues:	$4.2 billion	$374 million	$193 million	$892 million	$432 million

Plan Sponsors' Rating Agency Bond Ratings, Purpose of Debt, and Form of Security:

Orange County	OCTA	Sanitation District	Toll Roads	City of SJC
AA-/AA for $264 MM of Revenue Bonds. AA for $11 MM of Pension Obligation Bonds.	AA- for $124 MM of Toll Road Revenue Bonds. AA+ for $318 MM of M2 Tax Revenue Bonds.	AAA for $1 BB of Certificate of Participation Notes and Revenue Bonds.	BB+/BBB for $4.7 BB of Toll Road Revenue bonds.	AAA for $30 MM in General Obligation Bonds. $27 MM in Certificates of Participation Notes/Water Refunding Bonds.
Debt issued to pay pension payments, construction of facilities, and to finance the Teeter Plan.	Debt issued to pay for Measure M2 projects and acquisition of 91 Express Toll Roads.	Debt issued to pay for treatment plant upgrades and water recycling facilities.	Debt issued to construct the 73, 241, & 261 toll roads.	Debts issued to acquire, preserve, and improve land; and to construct a ground water recovery plant.
Secured by lease payments from the County, general purpose revenues, airport revenues, and waste management revenues.	Secured by M2 sales tax revenues and 91 Express Lanes toll fees.	Secured by sewer usage fees.	Secured by toll road revenues.	Secured by property tax revenues and water usage fees.

Net Position - Total assets less total liabilities, as of June 30, 2017 for OCERS' Five Largest Plan Sponsors:

Net Position, as of Year Ending June 30 (000's):			
Plan Sponsor	**6/30/2015**	**6/30/2016**	**6/30/2017**
Orange County	$ 2,007,750	$ 2,185,709	$ 2,505,151
OCFA	$ (169,124)	$ (160,663)	$ (176,774)
OCTA	$ 1,260,358	$ 1,417,477	$ 1,580,417
Sanitation District	$ 1,761,844	$ 1,918,572	$ 2,041,225
Superior Court	n/a	n/a	n/a

The Unrestricted Fund portion of County's Net Position actually has a deficit of $2.6 billion.

Superior Court's financial statements are blended within those of the State of California.

Pension Debt - Net Pension Liability (NPL) is the accounting-based equivalent of UAAL that plan sponsors must report on their financial statements (GASB 68). See the chart below for plan sponsors' NPL for the fiscal years ending 2015 through 2017 calculated by OCERS actuary, Segal Consulting (Segal) using an actuarial measuring date of December 31st. Total NPL decreased $525 million between 2016 and 2017 primarily due to an 8.71% 2016 rate of return exceeding OCERS' targeted investment earnings rate of 7.0%.

GASB 68 Net Pension Liability (in '000s), per Segal Consulting:			
Plan Sponsor	**6/30/2015**	**6/30/2016**	**6/30/2017**
Orange County	3,897,233	4,391,071	4,043,856
OCFA	466,968	517,670	469,431
Superior Court	355,886	395,957	349,174
OCTA	203,593	250,193	230,260
Sanitation District	57,419	42,440	(10,385)
San Juan Capistrano	27,866	29,249	25,089
OCERS	20,656	24,747	21,886
Toll Roads	10,683	12,713	12,423
Children & Families	3,957	4,066	3,158
Law Library	3,222	3,472	1,770
LAFCO	1,303	1,157	1,341
In-Home Support Services	672	896	752
Cemetery District	(95)	534	222
UCI *	26,578	36,184	36,114
Dept of Education *	3,638	4,307	4,416
Vector Control *	2,900	1,942	1,670
Rancho Santa Margarita *	2	7	9
Net Pension Liability	**$ 5,082,481**	**$ 5,716,605**	**$ 5,191,186**

Gray-shaded plan sponsors represent 98% of the total pension liability.

* Denotes an Inactive Plan Sponsor

Contributions - OCERS' five largest plan sponsors paid 98% of employer and employee contributions received by OCERS for the year ending December 31, 2017. The County is OCERS' largest plan sponsor and paid 73% of employer and employee contributions received by OCERS for the year ending December 31, 2017. The four next largest plan sponsors (OCFA, Orange County Superior Court, the Orange County Transportation Authority, and the Orange County Sanitation District) taken together paid 25% of employer and employee contributions received by OCERS for the year ending December 31, 2017.

No actuarially required contribution payments have been missed by an active plan sponsor. Following are contributions received by plan sponsors over the past three years.

Employer/Employee Contributions (in 000's) for year ending December 31:			
Plan Sponsor	**2015**	**2016**	**2017 (prelim)**
Orange County	$ 585,487	$ 611,140	$ 626,850
OCFA	$ 99,495	$ 88,470	$ 119,584
Superior Court	$ 48,038	$ 47,455	$ 45,722
OCTA	$ 34,211	$ 33,653	$ 33,236
Sanitation District	$ 70,361	$ 56,208	$ 15,121
San Juan Capistrano	$ 3,136	$ 3,073	$ 3,193
OCERS	$ 2,918	$ 2,870	$ 2,861
Toll Roads	$ 2,139	$ 2,523	$ 2,431
Children & Families Commission	$ 491	$ 412	$ 2,101
Law Library	$ 524	$ 1,984	$ 1,964
In-Home Support Services	$ 263	$ 289	$ 316
Cemetery District	$ 270	$ 282	$ 301
LAFCO	$ 136	$ 172	$ 162
UCI *	$ 78	$ 1,316	$ 2,948
Department of Education *	$ -	$ -	$ 524
Vector Control *	$ 326	$ -	$ 4
Total:	**$ 847,873**	**$ 849,847**	**$ 857,318**

* Denotes an Inactive Plan Sponsor, payments mostly represent UAAL payments from the employer or service credit purchases from retiring members.

County of Orange

The County of Orange (the County) is governed by a five-member Board of Supervisors, who each serve four-year terms, and annually elect a Chair and Vice-Chair. A County Executive Officer, who reports to the Board of Supervisors, oversees nineteen County departments, and elected department heads oversee seven County departments.

The County is OCERS' largest plan sponsor, with 16,953 active members or 77% of OCERS' total active members. The County and its employees contributed $627 million (preliminary) to OCERS for the year ended December 31, 2017 (representing 73% of total contributions received by OCERS in that period).

Although the County's Net Position is a positive $2.5 billion entity wide, the Unrestricted Fund portion of the Net Position has a deficit of $2.6 billion primarily due to the recognition of the net pension liability on its Balance Sheet.

As of County Fiscal Year Ending:

	6/30/15	6/30/16	6/30/17
Total Assets	$8.3 billion	$9.1 billion	$9.2 billion
Total Liabilities	$6.3 billion	$6.9 billion	$6.7 billion
Net Position	$2.0 billion	$2.2 billion	$2.5 billion
Cash and Cash Equivalents	$2.6 billion	$2.8 billion	$2.9 billion
Net Pension Liability	$3.9 billion	$4.4 billion	$4.0 billion

Pension Contribution Rates, per Segal's actuarial valuation dated:

	12/31/14	12/31/15	12/31/16
Employer Contribution Rate - Safety	43% / 58%*	45% / 62%*	48% / 63%*
Avg. Member Contribution Rate - Safety	16%	16%	16%
Employer Contribution Rate - General	34%	34%	34%
Avg. Member Contribution Rate - General	11%	11%	11%

*OC Probation Department / OC Sheriff's Department

Revenues

The County's total primary governmental revenues (which exclude draws from reserves and intra-governmental fund transfers) were $4.2 billion for the year ending June 30, 2017.

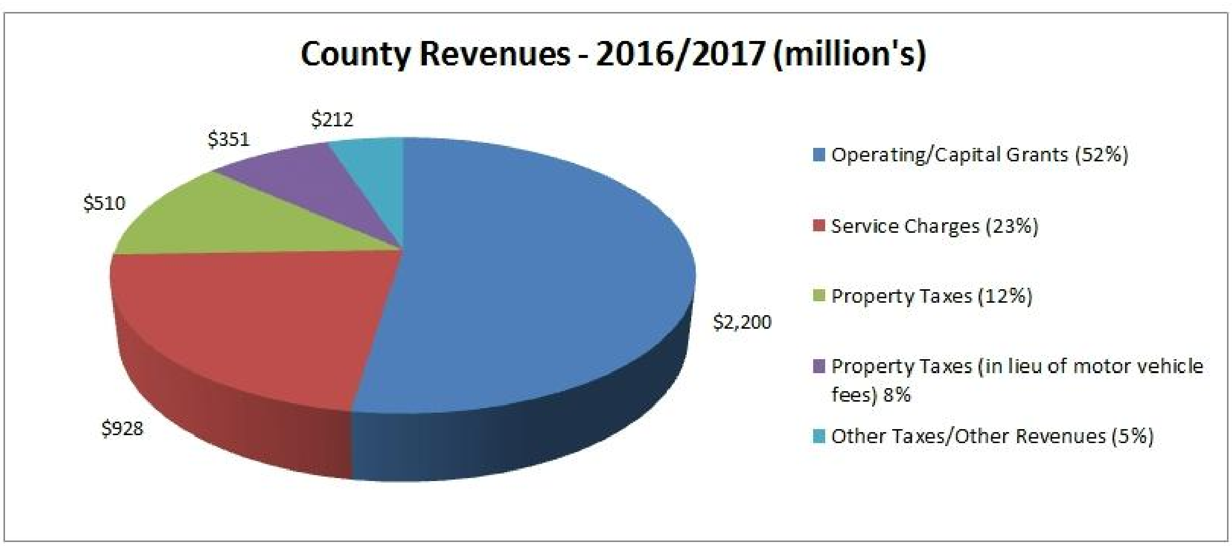
The County's governmental activities rely on several sources of revenue to finance ongoing operations. Operating/capital grants and contributions comprised the largest revenue source for the County at $2.2 billion, followed by charges for services at $928 million, property taxes at $510 million, property taxes (in lieu of motor vehicle license fees) at $351 million, and $212 million in other taxes/general revenue sources.

Operating/Capital grants and contributions ($2.2 billion) are monies received from parties outside the County and are generally restricted to one or more specific programs such as State and Federal revenues for public assistance programs and for health care programs. In early 2017, a California state budget proposal called for reduced state support of county elderly assistance programs. The County of Orange had estimated that this would add nearly $465 million in costs to the County over the next six years. However, a revised state budget walked back these cuts temporarily for the next two to four years.

Charges for services are revenues ($928 million) that arise from charges to customers or applicants who purchase, use, or directly benefit from the goods, services, or privileges provided. Examples of the types of services that fall under this category include engineering services provided to cities under contract, park and recreation fees, and law enforcement services provided to cities under contract.

Property taxes ($510 million) are levied by the County. The 1% tax rate is the general levy for property tax based on assessed property values within the County.

The County receives property taxes "In-Lieu of Motor Vehicle License Fees" ($351 million in 2017) as part of the California State Budget Act of 2004. The Legislature reduced the backfill to cities and counties for reductions in the Vehicle License Fee and in return gave cities and counties additional property tax revenue.



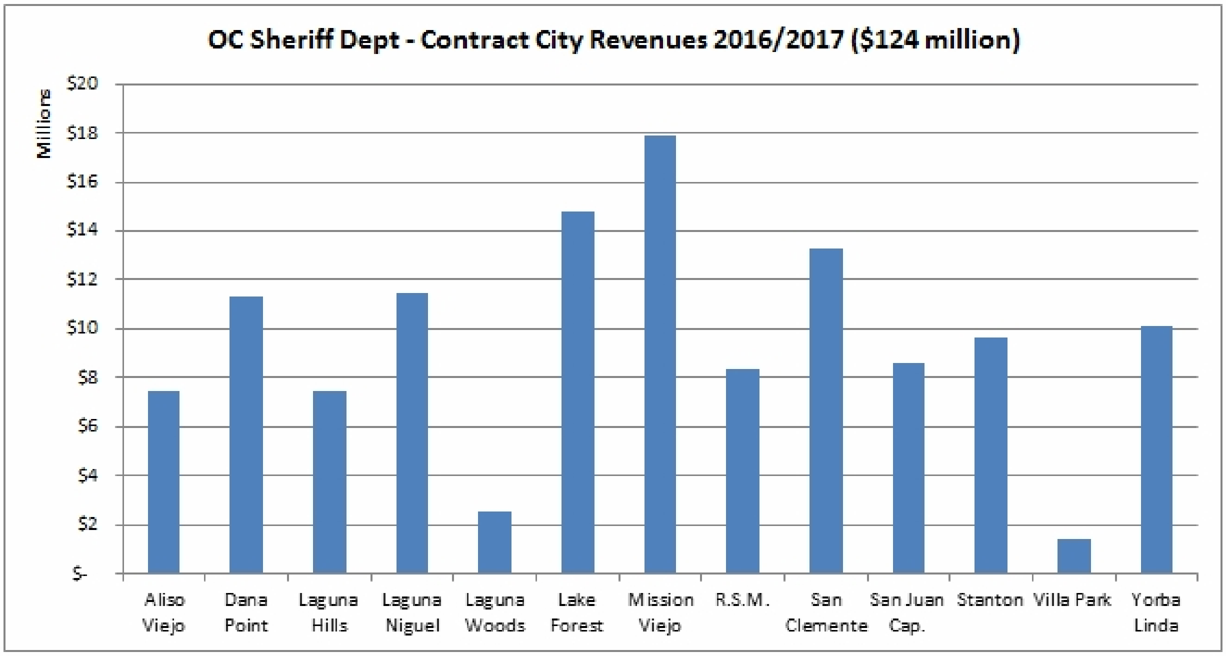
Sheriff's Department

A large component of service charges for government services was public safety services provided by the Orange County Sheriff's Department (Department) to 13 contract cities, unincorporated areas of the County, Orange County Transportation Authority, Harbor Patrol and John Wayne Airport. The Department has approximately 3,500 sworn and professional staff members in addition to reserve personnel. The Department receives financial support from the Proposition 172 Public Safety ½ Cent Sales Tax which provided approximately $249 million for fiscal 2016-2017. For fiscal 2016-17, 13 contract cities also paid approximately $124 million to obtain the services of the Department. In addition to the contract cities above, OCTA paid $7 million, John Wayne Airport paid $16 million, and the Harbor Patrol paid $13 million for the services of the Sheriff's Department for fiscal year 2016/2017. Service charges for law enforcement services provided to contract cities are budgeted to increase by an average of 6.97% for next fiscal year 2017-2018.

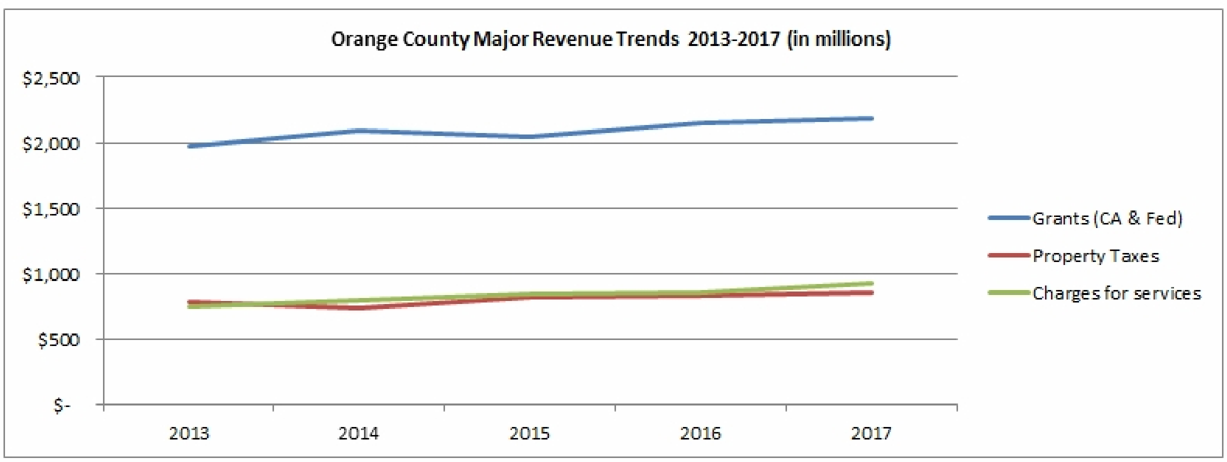
The Sheriff's Department has annual and multi-year contracts with Cities, and either party can terminate the agreement with 180 days written notice.

In November 2017, the above contract cities hired a consultant to perform a "cost and efficiency study project" in regards to the cost of contracting with the Orange County Sheriff's Department for law enforcement services. The study is expected to take several months to complete.

The project's objective states, "All thirteen cities contracting with OCSD for law enforcement services desire to gain a more detailed understanding of the trends and issues resulting in annual increases in the cost of service, which continue to exceed 5% on an ongoing basis. The County leadership, including our Sheriff and County of Orange Executive Staff, also support the completion of this exercise. "



County Revenue Trends



County's Long-Term Debt and Bond Ratings (Non-UAAL liability), as stated in its 2017 CAFR:

Outstanding Long Term Debt, as of 06/30/17	Type of Bonds	Fitch Ratings
$264 million	Revenue Bonds	AA- to AA
$11 million	Pension Obligation Bonds	AA
$28 million	Teeter Plan Notes	Not Rated
$11 million	Total Bond Premium	n/a
$47 million	Total Interest Accretion	n/a
$1 million	Certificates of Participation	n/a
$362 million, total		

The County maintains an Issuer Credit Rating of Aa1 from Moody's Investors Service, AA+ from Standard & Poor's Global Ratings, and AA+ Issuer Default Rating from Fitch Ratings.

Net Position as of June 30, 2017

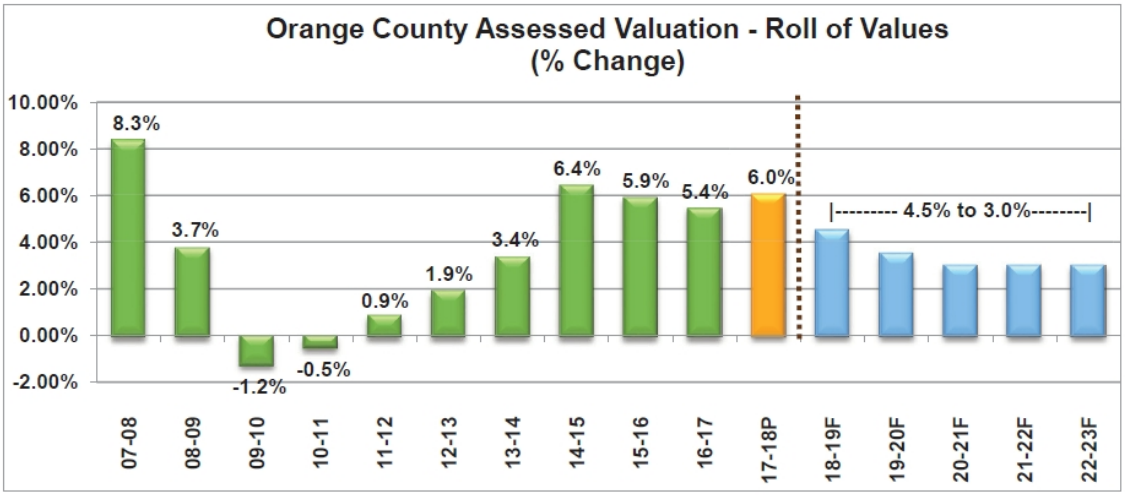
The total assets of the County exceeded total liabilities at June 30, 2017 by $2.5 billion. The County's Net Position was comprised of the following:

- **Net Investments in capital assets** of $3.5 billion includes buildings, equipment, land, construction in progress, structures, equipment, software, and infrastructure.
- **Restricted** was $1.6 billion, which combined amounts constrained to specific purposes by their providers (such as grantors, bondholders, and higher levels of government) through constitutional provisions or by enabling legislation and was primarily for social services/welfare grants, pension obligation bonds, future capital projects, and the County's debt service.
- **Unrestricted** has a deficit of $2.6 billion. The unrestricted fund balance is to be made available for any purpose approved by the Board of Supervisors, but is negative due to the recognition of the net pension liability (GASB 68).

Budgeting and Forecasting by the County

On June 26th, 2018, the Board of Supervisors adopted the fiscal year 2017-18 Budget prepared by the County Executive Office. On December 12th, 2017, the County Executive Office presented to the Board of Supervisors the 2017 Strategic Financial Plan, which included its forecast and key indicators utilized to prepare the plan. The Strategic Financial Plan is influenced by several economic factors, measuring the County against the nation and other counties and against its own past performance.

According to the Orange County Assessor's Office, the County's most recent total net taxable value on the Roll (listing of all taxable county property) is $558 billion. The Roll of Values is up 6.02% or $32 billion more than last year. Each of the County's 34 cities and the unincorporated areas had a year-to-year increase in net taxable value. Within the County's "2017 Strategic Plan", the following chart illustrates the history of the percent change in Orange County's Secured Assessment Roll of Value and the County's forecast for upcoming years:



<u>**Orange County Fire Authority (OCFA)**</u>

OCFA was formed on March 1, 1995, transitioning from the Orange County Fire Department to a Joint Powers Authority (JPA). The OCFA is an independent special district that services twenty-three member cities and the unincorporated areas of Orange County. A twenty-five member Board of Directors governs the OCFA. This board includes an elected official from each of the twenty-three member cities and two representatives from the County Board of Supervisors. The OCFA is managed by an appointed Fire Chief who reports to the Board of Directors. Emergency response services are provided to 1.8 million residents in a 576 square mile area of Orange County.

OCFA is one of OCERS' five largest plan sponsors. OCFA has 1,308 active employees, or 6% of OCERS' active membership. OCFA and its employees contributed $120 million (preliminary) to OCERS for the year ended December 31, 2017 (representing 14% of total contributions received by OCERS in that period).

OCFA's Net Position has a deficit of $177 million entity-wide; the Unrestricted portion of the Net Position has a deficit of $373 million primarily due to the recognition of the net pension liability (GASB 68).

As of OCFA's Fiscal Year Ending:

	6/30/15	6/30/16	6/30/17
Total Assets	$494 million	$562 million	$530 million
Total Liabilities	$663 million	$723 million	$707 million
Net Position	-$169 million	-$161 million	-$177 million
Cash and Investments	$165 million	$178 million	$178 million
Net Pension Liability	$467 million	$518 million	$469 million

.

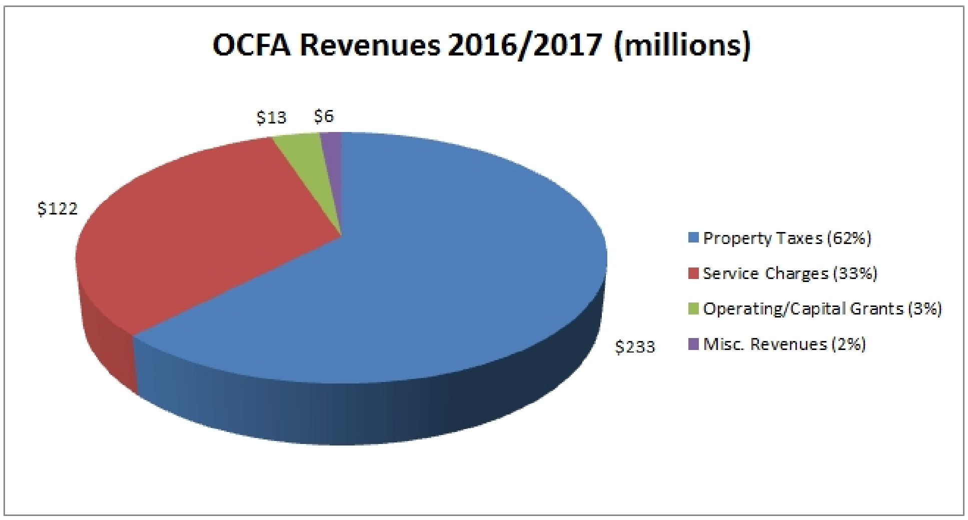
During OCFA's Fiscal Year Ending:

	6/30/15	**6/30/16**	**6/30/17**
Required Contributions to OCERS	$61.3 million	$63.3 million	$66.3 million
As a % of Covered Payroll	48%	48%	46%
Actual Contributions to OCERS (Note 1)	$87.5 million	$82.7 million	$84.6 million
As a % of Covered Payroll	68%	63%	59%
As a % of Total Revenues	26%	23%	23%
Note 1 – Actual contributions to OCERS exclude any contributions paid by OCFA employees			

Revenues

OCFA's total revenues were $374 million for the year ending June 30, 2017.

Two primary sources of OCFA revenue are the Structural Fire Fund (SFF) and contract cities as outlined in the Joint Powers Agreement for the OCFA. The majority of revenues came from $233 million in property taxes from the SFF, and $122 million in service charges paid by contract cities and the State of California. SFF property tax is 63% of their budgeted revenues. OCFA also received $13 million in operating grants and capital grants from other governmental agencies. There were $6 million in miscellaneous revenues and investment income.

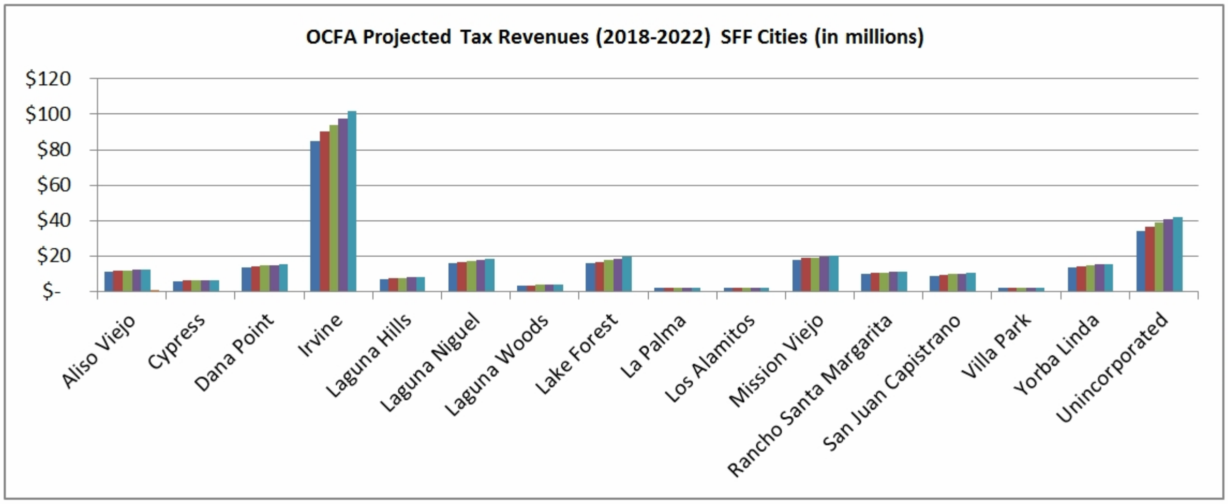


Structural Fire Funds (SFF)

The County of Orange remits a portion of property taxes collected from SFF cities to OCFA in accordance with the County's tax apportionment procedures and schedules. In fiscal year 2016-2017, the effective weighted rate of 11.49% of the county's 1% general levy tax was remitted to OCFA from SFF cities. (Rates by SFF city ranged from a low of 8.66% in the City of Cypress to 12.50% in the city of Irvine.)

SFF members currently include Aliso Viejo, Cypress, Dana Point, Irvine, Laguna Hills, Laguna Niguel, Laguna Woods, Lake Forest, La Palma, Los Alamitos, Mission Viejo, Rancho Santa Margarita, San Juan Capistrano, Villa Park, Yorba Linda, and unincorporated areas of the County. Approximately 48% of property tax revenues allocated to OCFA from SFF cities are generated from the City of Irvine (34%) and the County's unincorporated territory (14%).

Below is OCFA's multi-year projection of forecasted property tax revenues for each of the SFF cities, according to OCFA's consultant for property tax forecasting, RSG Inc. RSG expects an average 4.5% annual increase in property tax revenues through 2022.

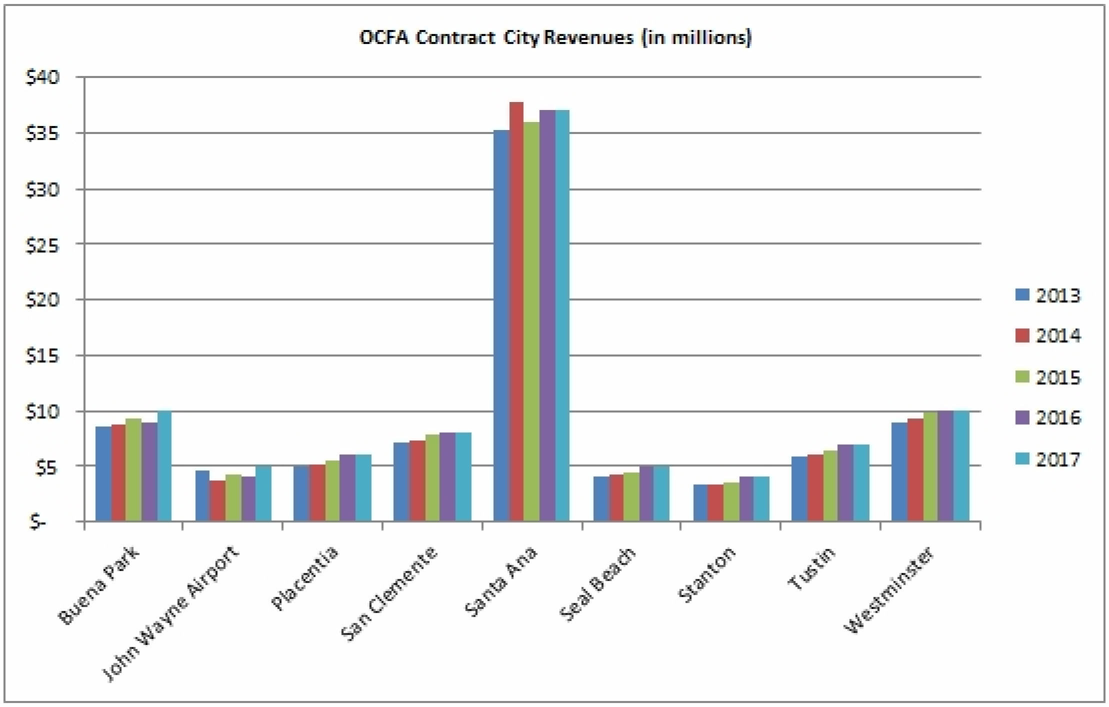


Contract Cities

Contract cities pay the OCFA for fire services out of their general funds. Contract cities currently include Buena Park, Placentia, San Clemente, Santa Ana, Seal Beach, Stanton, Tustin, and Westminster. There is also a contract with the State Department of Forestry (CAL FIRE) that renews every three years and a contract with John Wayne Airport that has renewed in varying intervals ranging from one-year intervals to five-year intervals. Contract cities are members of the OCFA for a current 20-year term that began on July 1, 2010 with the option of withdrawal after 10 years, only if notice is provided two years prior to the 10th year (i.e., notice must be provided by June 30, 2018 in order to withdraw effectively July 1, 2020.

Annually, OCFA calculates the total fire service charges for each contract city. The charge includes a base service charge, vehicle replacement costs, and station maintenance costs. The base service charge is the sum of the prior year total service charge plus cost increases capped at no more than 4.5%. Generally, salary and benefits historically account for more than 90% of the base service charge. Thus, increases in salary and benefits have been the general drivers of the annual increase in base service charges.

Every five years, OCFA compares actual operational costs for the fiscal year against the annual service charge of each contract city. Depending on the size of the difference between those two, the contract city may potentially end up paying to OCFA the entire difference in the current year or amortizing payment over the subsequent five years.



OCFA's Long-Term Liabilities

OCFA's long-term liabilities as of June 30, 2017 were $638 million composed of the following: $469 million in net pension liability, $66 million in accrued workers' compensation claims, $82 million in other post-employment benefits (OPEB), $17 million in compensated balances for vacation and sick pay, and $4 million in capital lease obligations for helicopters. Although OCFA has a $66 million liability for accrued workers' compensation claims, it has fully funded the liability with cash reserves that have been set aside for this dedicated purpose.

OCFA's Fund Balances

At the end of Fiscal Year 2016/17, OCFA's governmental funds reported combined ending fund balances of $213 million. Approximately $31 million or 14.7% constitutes unassigned fund balance, which is available for spending for any purpose. The remaining $182 million or 85.3% of fund balance is not available for spending on any new purpose, because it has already been restricted, committed, or assigned for specific purposes, or it is in a non-spendable form.

OCFA's "Expedited Pension UAAL Payment Plan"

In September 2013, the OCFA Board of Directors approved an "Expedited Pension UAAL Payment Plan" with an expected payment of the entire UAAL balance over 13 years by 2026-2027.

OCFA has made the following additional payments towards its UAAL:

- FY 13/14 $5.2 million
- FY 14/15 $21.3 million
- FY 15/16 $15.4 million
- FY 16/17 $16.6 million
- FY 17/18 $21.0 million YTD
- **Total of $79.5 million in additional payments towards its UAAL.**

Segal Consulting reported to OCFA that OCFA has saved $11.5 million in interest by making the above additional payments towards its UAAL and will achieve 85% funding by December 31, 2020 and 100% funding by December 31, 2027, assuming all other actuarial assumptions are held constant and if OCFA continues to make additional payments.

Net Position as of June 30, 2017

The total liabilities of OCFA exceeded its total assets at June 30, 2017 by $177 million. The negative net position is in part due to the GASB 68 requirement to include long-term unfunded pension liabilities in the Statement of Net Position, implemented in 2015.

The Unrestricted Fund portion of the Net Position has a deficit of $373 million primarily due to the recognition of the net pension liability on its Statement of Net Position (GASB 68).

Contract Cities Agreements and UAAL

Neither the original March 1995 OCFA Joint Powers Authority Agreement, nor the March 2000 amendment, nor the July 2010 amendment renewing the OCFA membership of contract cities, structural fire fund cities, and the County, explicitly mention any requirement for a member city to pay a portion of OCFA's unfunded actuarial accrued liability to OCERS upon leaving OCFA. However, the March 2012 "Fire Services and Medical Services Agreement" between the City of Santa Ana and OCFA (when the City of Santa Ana initially joined OCFA) states:

> "Upon termination or expiration of this Agreement or other cessation of city's membership in OCFA, city agrees to pay OCFA the amount of the unfunded pension liability that had accrued during the term of this Agreement for the number of OCFA employees serving the city. In the event of any dispute regarding the amount of the unfunded pension liability at that time, the parties agree that the amount shall be determined by an independent actuary selected either by mutual agreement of the parties, or failing that, by the actuary used by the Orange County Employees Retirement System (OCERS)."

Withdrawing from the JPA

Under the OCFA joint power agreement, both SFF and contract cities shall be members of OCFA for a 20-year term commencing July 1, 2010. Twenty-year membership terms automatically renew in 2030. However, a city may give written notice of withdrawal prior to July 1 of the second to last year of every ten-year interval of a twenty-year term. So for the first ten-year interval, notice must be given by July 1, 2018 to withdraw by June 30, 2020.

Impact on OCERS from Withdrawal or Termination of Members or Dissolution of the OCFA JPA

Under joint powers authority law, the "debts, liabilities, and obligations of the agency shall be debts, liabilities, and obligations of the parties to the agreement, unless the agreement specifies otherwise." Govt. Code sec. 6508.1. In OCFA's case, the joint powers agreement expressly disclaims members' liability for debts incurred by OCFA. While members are contractually obligated to OCFA to contribute their share towards OCFA's operating expenses and bonded indebtedness, OCFA's employer contribution obligations to OCERS are the obligations of OCFA alone.

SFF cities, contract cities and the County all have a contractual right to withdraw from OCFA at certain specified dates. The County may not withdraw until at least 2030. Alternatively, each participating city may be terminated for non-payment of its annual obligations to OCFA. In the event of a member withdrawal or termination, OCFA remains liable to OCERS for its full portion of OCERS' UAAL. Cities would remain liable to OCFA for their share of those liabilities generated during the period of their membership in OCFA.

The withdrawal or termination of a SFF city would not alter the County's obligation to pay into the OCFA that city's share of annual property taxes collected by the County, subject to applicable law such as SB 302, which was passed in 2017. Senate Bill 302 (2017-2018) amended the California Revenue and Taxation Code to provide additional protections for SFF property tax revenues by conditioning transfers of SFF property tax revenues on approval of the County Board of Supervisors, the city councils of a majority of member cities, and the agency currently receiving those funds for fire protection services (i.e., the OCFA). In this manner, a continuous flow of new cash would come into OCFA, likely sufficient to meet OCFA's anticipated UAAL payments to OCERS into the future. Further, OCFA has the authority to impose new special taxes or assessments in order to make up any funding shortage. Finally, under the County Employees Retirement Law (CERL), the California Constitution and OCERS' policies, OCERS has the right to accelerate the amortization of OCFA's UAAL so that it could become immediately due and payable in the event of a threatened dissolution of OCFA.

Ultimately, however, if OCFA were to cease operations, OCERS' ability to recover the $400 million in UAAL (as of December 31, 2016) for which the OCFA is liable could be compromised. Among other available remedies, OCERS may be entitled to subrogate to the rights of OCFA in order to proceed directly against any SFF or contract city for its share of the pension obligations generated during the term of that city's membership in OCFA.

Orange County Superior Court

The State of California has 58 superior courts—one in each of the state's 58 counties. Based on the number of authorized judicial officers, the Superior Court of Orange County is the third largest of the 58 courts (with 124 authorized judicial positions). The Orange County Superior Court was part of the County of Orange until 2004 when it transitioned to the State of California and became a plan sponsor in OCERS.

Orange County Superior Court is one of OCERS' five largest plan sponsors. Orange County Superior Court has 1,481 active employees, or 7% of OCERS' active membership. The court and its employees contributed $46 million (preliminary) to OCERS for the year ended December 31, 2017 (representing 5% of total contributions received by OCERS in that period).

Orange County Superior Court does not issue stand-alone financial statements.

As of Superior Court Fiscal Year Ending:

	6/30/15	6/30/16	6/30/17
Net pension liability	$356 million	$396 million	$349 million

Pension Contribution Rates, per Segal's actuarial valuation dated:

	12/31/14	12/31/15	12/31/16
Employer Contribution Rate	33%	33%	31%
Avg. Member Contribution Rate	12%	11%	11%

Trial courts in California are predominantly state-funded entities, whose funding appropriations are included in the State of California Budget under the Trial Court Trust Fund. Thus, the Judicial Branch is subject to the level of funding that is negotiated between the Governor and the state Legislature. Since the recession of 2008, funding for the entire state's Judicial Branch has decreased by $1 billion.

Revenue Allocation from the State

In 2012, the Governor and Legislature tasked the Judicial Branch with developing a new funding methodology to more equitably distribute funding to the 58 trial courts. In 2013, the new methodology named the Workload-Based Allocation and Funding Methodology (WAFM) established a baseline funding formula for each court using data such as total court filings, filing-driven costs, and U.S. Bureau of Labor Statistics labor cost data. The WAFM result for each court is updated annually and varies annually depending on actual filing trends, workload costs, and other various adjustments.

However, since the adoption of WAFM budget methodology, Orange County Superior Court consistently finds itself as one of several county court systems receiving less funding compared to historical pre-WAFM funding levels prior to 2013. Since the 2013 adoption of WAFM, Orange County Superior Court has lost $14 million in total base funding.

Due to these funding reductions, Orange County Superior Court does not participate in OCERS' prepayment plan for discounted employer contributions.

Revenues

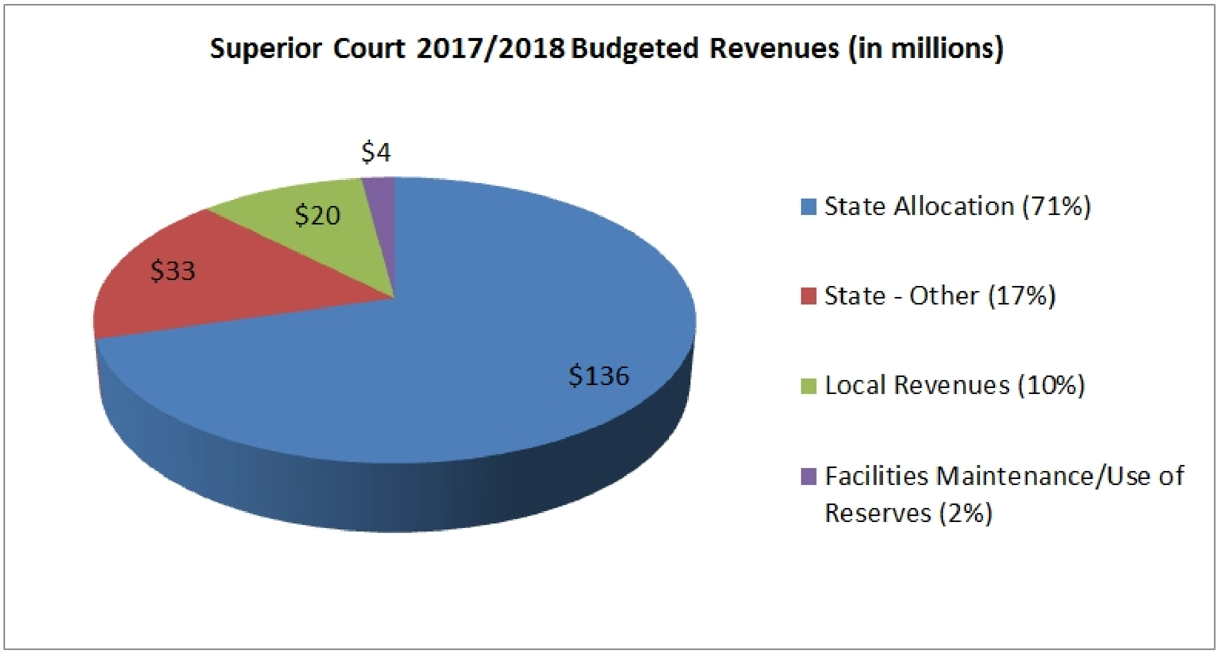
Orange County Superior Court's total revenues are budgeted for $193 million for the next fiscal year ending June 30, 2018.

California's allocation of revenues to the Court is budgeted for $136 million for fiscal year ended June 30, 2018.

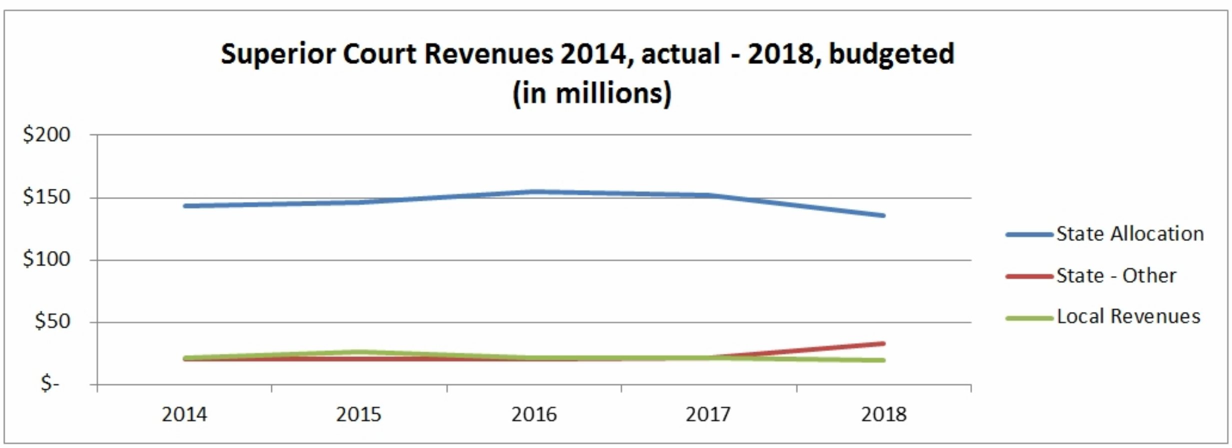
"State Other Revenue" is also budgeted at $33 million. This includes state grants and dollar for dollar reimbursements of expenditures for language interpreters, jury pay expenditures, complex case programs, and self-help programs.

Local Revenues are budgeted for $20 million and includes donations, reimbursements for services provided to the County, and cost recovery for the Enhanced Collections program and local fees, for example for copies of documents. Typically, local revenues remain consistent and fluctuate little from year to year. These are dollar in – dollar out reimbursement of expenses.

Facilities Maintenance revenues (plus use of Reserves) are budgeted at $4 million; this is a three-year pilot program in which the court gets reimbursed for facility maintenance and modifications, also a dollar in – dollar out reimbursement.



Superior Court's Past Revenue Trend



Orange County Transportation Authority (OCTA)

OCTA was established by state law on June 20, 1991. OCTA is governed by an 18-member Board of Directors that includes of five members of the Orange County Board of Supervisors, ten city representatives, two public members selected by the OCTA Board, and a non-voting representative appointed by the Governor of California. A Chief Executive Officer manages OCTA and acts in accordance with the directions, goals, and policies approved by the OCTA Board of Directors. OCTA serves County residents and commuters by providing countywide bus and paratransit service, Metrolink commuter rail service, freeway improvements, street and road improvements, the 91 Express Lanes, motorist aid services, and taxi program regulation.

OCTA is one of OCERS' five largest plan sponsors. OCTA has 1,333 active employees, or 6% of OCERS' active membership. OCTA and its employees contributed $33 million (preliminary) to OCERS for the year ended December 31, 2017 (representing 4% of total contributions received by OCERS in that period).

As of OCTA's Fiscal Year Ending:

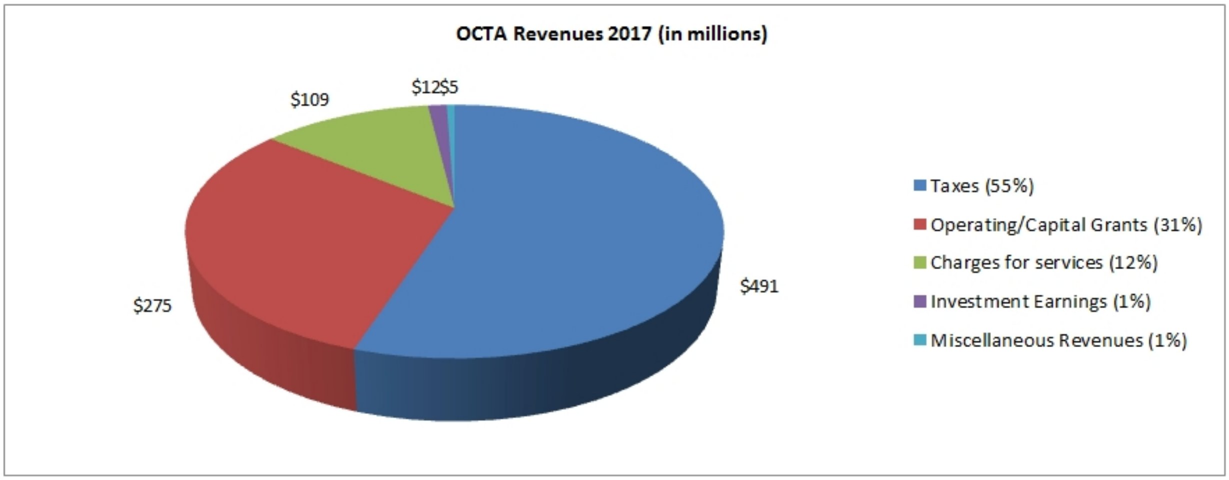
	6/30/15	6/30/16	6/30/17
Total Assets	$2.2 billion	$2.3 billion	$2.5 billion
Total Liabilities	$0.9 billion	$0.9 billion	$0.9 billion
Net Position	$1.3 billion	$1.4 billion	$1.6 billion
Cash and Investments	$1.3 billion	$1.3 billion	$1.4 billion
Net Pension Liability	$204 million	$250 million	$230 million

Pension Contribution Rates, per Segal's actuarial valuation dated:

	12/31/14	12/31/15	12/31/16
Employer Contribution Rate	25%	26%	25%
Avg. Member Contribution Rate	9%	9%	9%

2017 Revenues

OCTA's total revenues were $892 million. Most revenues were tax revenues, totaling $491 million for the year ended June 30, 2017. Other revenues included $275 million in operating and capital grants from the State of California and the Federal Government and $109 million in charges for services. Finally, OCTA earned $12 million in investment earnings and received $5 million in miscellaneous revenues.



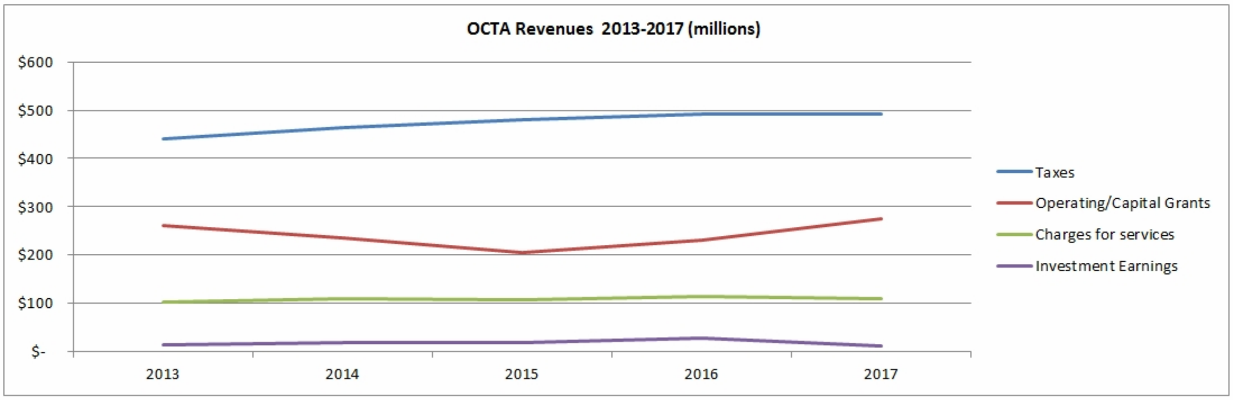
Tax revenues noted above were comprised of Orange County's Measure M2, California's Transportation Development Act, and State Transit Assistance programs:

- Measure M ½ cent local sales tax - In 2006, Orange County voters renewed the M2 ½-cent sales tax for an additional 30 years (2011-2041). Allocation of M2 funds remains the same as the original M1 program with 43% slated for freeway improvements, 32% for streets and roads, and 25% for transit projects and programs.
- California's Transportation Development Act (TDA) ¼ cent state sales tax - TDA provides funding for public transportation via the Local Transportation Fund (LTF). This fund exists for the development and support of public transportation needs that exist in California and are allocated to areas of each county based on population, taxable sales, and transit performance.
- State Transit Assistance (STA) revenue is generated by the state sales tax on diesel fuel as specified under the gas tax swap enacted in March 2010. STA revenues are then distributed based on several demographic factors.

Operating and capital grants noted above include Federal Operating Assistance Grants, Federal Capital Assistance Grants, and other federal or state grants. These funds are available for para-transit operating assistance, preventive maintenance, capital cost of contracting, demonstration projects, transportation planning, and acquisition and construction of facilities, transit vehicles and related support equipment. Federal grant funds are allocated on a formula and competitive basis for capital projects.

Charges for services noted above include toll revenues from the 91 Freeway Express Lanes and revenues from operating bus routes and Metrolink railway routes.

OCTA'S Past Revenue Trends

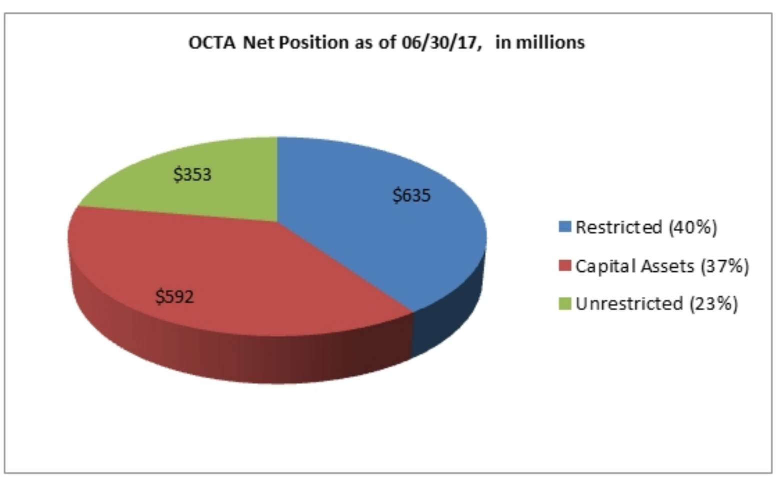


Net Position as of June 30, 2017

The total assets of OCTA exceeded its total liabilities at June 30, 2017 by $1.6 billion. Of this amount, $353 million is unrestricted and may be used to meet OCTA's ongoing obligations to citizens and creditors.

The OCTA's Net Position was assigned or restricted to the funds listed below:

- **Net Investments in capital assets** of $592 million includes buildings and improvements, machinery, equipment, furniture, transit vehicles, and transponders.
- **Restricted** was $635 million, represents net position that is not accessible for general use because their use is subject to restrictions enforceable by third parties. This is mostly comprised of $604 million of net assets restricted by Measure M2 legislation for transportation programs and motorist services.
- **Unrestricted** was $353 million. These are available for any purpose approved by the Board of Directors.



Budgeting and Forecasting by OCTA

In 2011, when M2 was initiated, the revenue forecast at that time assumed M2 would generate $24.3 billion during the 30 year program. However, OCTA's current forecasting methodology anticipates that total taxable sales available for the M2 Program will be $13.5 billion over the same 30 year period. Also, according to OCTA's tax forecasting methodology, the forecasted taxable sales growth rate from 2017 through 2041 is estimated at 3.98%. This rate is a blended rates based on forecasts from Chapman University, California State University, Fullerton, and University of California, Los Angeles, plus an outside consultant.

Also based OCTA's forecasting methodology, it is projected that OCTA's bus program will receive $1 billion less in California's Transportation Development Act (TDA) ¼ cent state sales tax revenue over the next 20 years (a decrease from $5.4 billion to $4.4 billion over 20 years, which represents an 18 percent decrease in sales tax revenue available to support bus operations). According to OCTA, by the 2028-2029 fiscal year, the bus system will be cash flow negative; OCTA is working on a long-term plan (e.g. reduced number of bus routes, reduced bus fleet, cancelling capital improvement projects, and outsourcing transportation services) to adequately address this shortfall.

Long-Term Obligations and Bond Ratings (Non-Pension Related)

In 2010, OCTA issued $293 million in par value of bonds. The outstanding amount as of June 30, 2017 was also $293 million. M2 sales tax revenues are the revenue source assigned to pay down this debt. Currently, bond rating agencies have assigned Aa2 and AA+ ratings for these bonds. These bonds mature in 2041.

Also in 2010, OCTA issued $59 million in par value of bonds. The outstanding amount as of June 30, 2017 was $25 million. M2 sales tax revenues are the revenue source assigned to pay down this debt. Currently, bond rating agencies have assigned Aa2 and AA+ ratings for these bonds. These bonds mature in 2020.

In 2013, OCTA issued $124 million in par value worth of bonds to help finance OCTA's purchase of the 91 Express Toll lanes. The outstanding amount as of June 30, 2017 was $109 million. 91 Express Lane toll revenue is the revenue source assigned to pay down this debt. Currently, bond rating agencies have assigned A1, AA-, and A ratings for these bonds. These bonds mature in 2030.

Orange County Sanitation District

The Orange County Sanitation District (OCSD) is a special district established by the California Legislature and governed by a 25-member board of directors. The directors are comprised of elected representatives for each of the sewer agencies or cities within OCSD's 479 square mile service area.

OCSD owns and operates certain wastewater facilities in order to provide regional wastewater collection, treatment, and disposal services to approximately 2.5 million people in the northern and central portion of the County – 200 million gallons of daily wastewater. It is managed by an administrative organization comprised of directors appointed by the agencies and cities which are serviced by OCSD.

OCSD is one of OCERS' five largest plan sponsors. OCSD has 592 active employees, or 3% of OCERS' active membership. OCSD and its employees contributed $15 million (preliminary) to OCERS for the year ended December 31, 2017 (representing 2% of total contributions received by OCERS in that period).

- The Orange County Sanitation District has eliminated its UAAL balance with a total of $214 million in additional contributions over the past three years.

As of OCSD Fiscal Year Ending:

	6/30/15	6/30/16	6/30/17
Total Assets	$3.2 billion	$3.2 billion	$3.3 billion
Total Liabilities	$1.4 billion	$1.3 billion	$1.3 billion
Net Position	$1.8 billion	$1.9 billion	$2.0 billion
Cash and Cash Equivalents	$58 million	$126 million	$89 million
Net Pension Liability	$57 million	$42 million	($10) million

Pension Contribution Rates, per Segal's actuarial valuation dated:

	12/31/14	12/31/15	12/31/16
Employer Contribution Rate - General	19%	14%	12%
Avg. Member Contribution Rate - General	12%	12%	12%

Revenues

OCSD's revenues were $432 million for the year ending June 30, 2017.

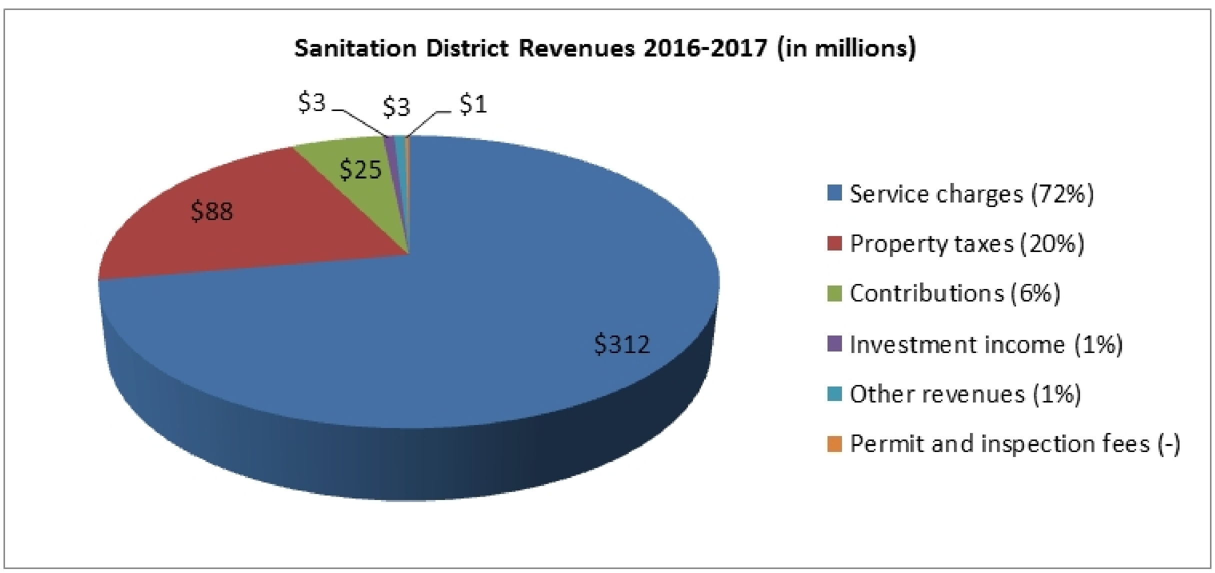
Service charges were $312 million. Service charges are ongoing fees for service paid by customers connected to the sewer system. A property owner, or user, does not pay user fees until connected to the sewer system. Once connected, a user is responsible for his or her share of the system's costs in proportion to demand on the system. These fees are for both single family residences and multiple family residences. The 2016-17 single family residential rate, the underlying basis for all sewer rates, is $331. Rates for commercial and residential use are modified upward for the additional water flow that comes from these types of structures.

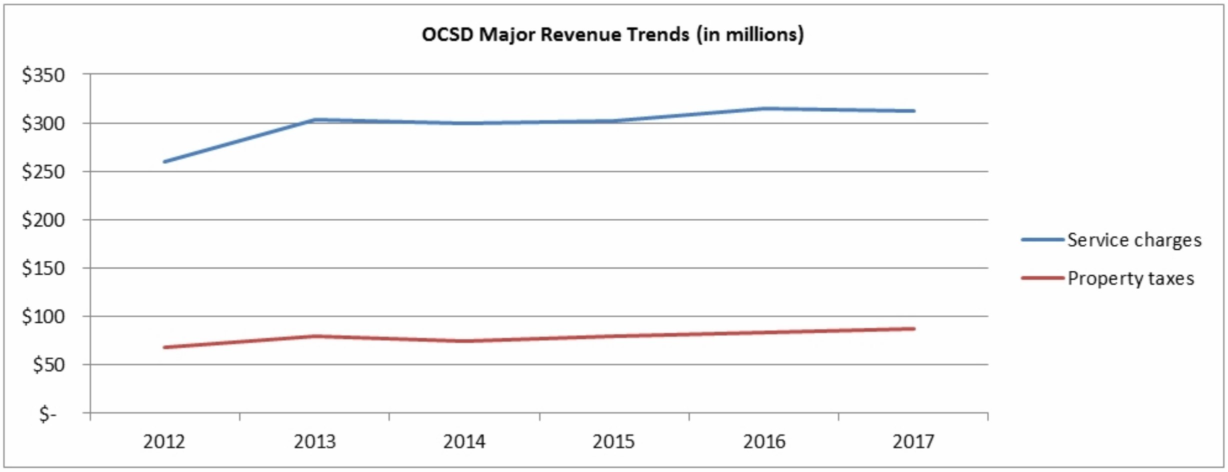
Property taxes were $88 million. The County is permitted by State law (Proposition 13) to levy taxes at one percent of full market value and can increase the assessed value no more than two percent per year. OCSD receives a share of the basic levy proportionate to what was received from 1976 to 1978. OCSD's share of this revenue is dedicated for the payment of debt service.

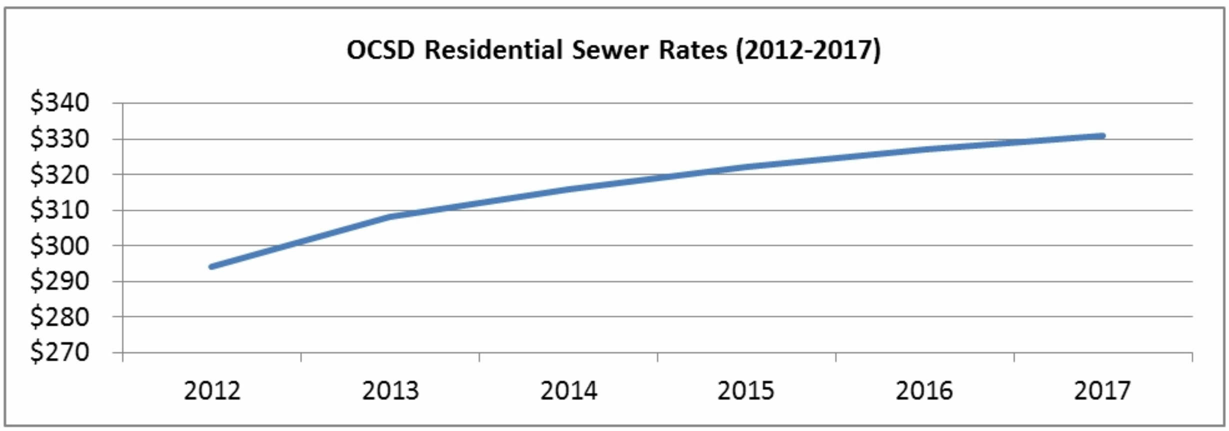
Contributions from other government were $25 million. This represents service charges to the Irvine Ranch Water District for its use of OCSD's collection, treatment, and disposal system.

Permit and inspection fees were $1 million. Large industrial and commercial properties that discharge high volumes or high strength wastewater are required to obtain a discharge permit and pay extra fees. These fees are for the owner's share of the system's costs, both fixed and variable, in proportion to the demand placed on the system.

Investment interest was $3 million in 2017, with other income of $3 million.





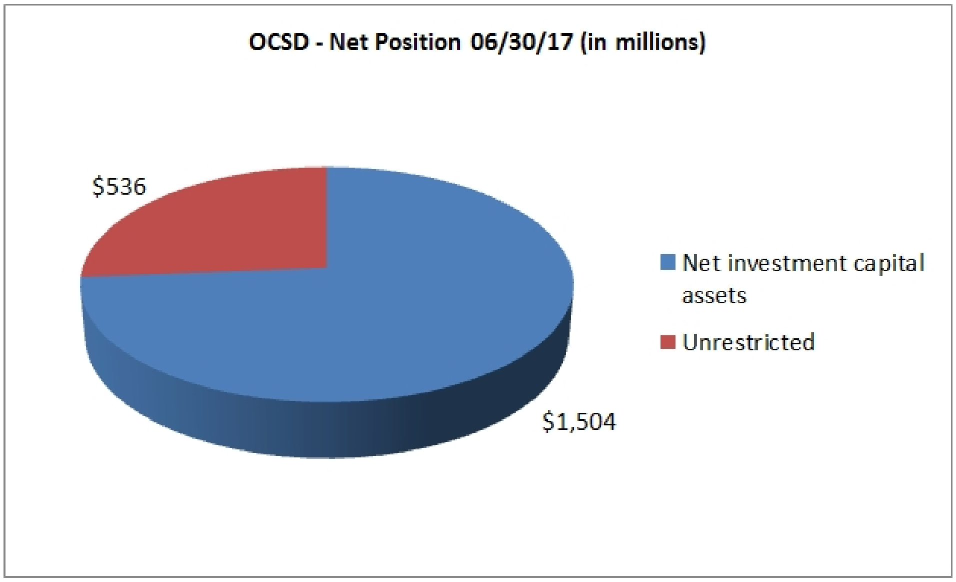


Net Position as of June 30, 2017

The total assets of OCSD exceeded its total liabilities at June 30, 2017 by $2.0 billion. Of this amount, $536 million is unrestricted and may be used to meet OCSD's ongoing obligations to citizens and creditors.

The County's Net Position was assigned or restricted to the funds listed below:

- Net investment in capital assets: $1.5 billion:
  - Collection system: $546 million
  - Treatment and disposal system/land: $2.1 billion
  - (Less: debt of $1.1 billion)
- Unrestricted: $536 million: These are available for any purpose approved by the Board of Directors.



Long-Term Obligations and Bond Ratings (Excluding Net Pension Liability)

All of the outstanding debt of OCSD ($1.1 billion as of June 30, 2017) has rate covenants that require a minimum coverage ratio of 1.25. The minimum coverage ratio is the ratio of net annual revenues available for debt service requirements to total annual debt service requirements. As of June 30, 2017, the coverage ratio for senior lien debt was 3.41.

Both Standard and Poor's Corporation and Fitch Ratings reaffirmed their AAA rating of the Orange County Sanitation District in the past fiscal year.

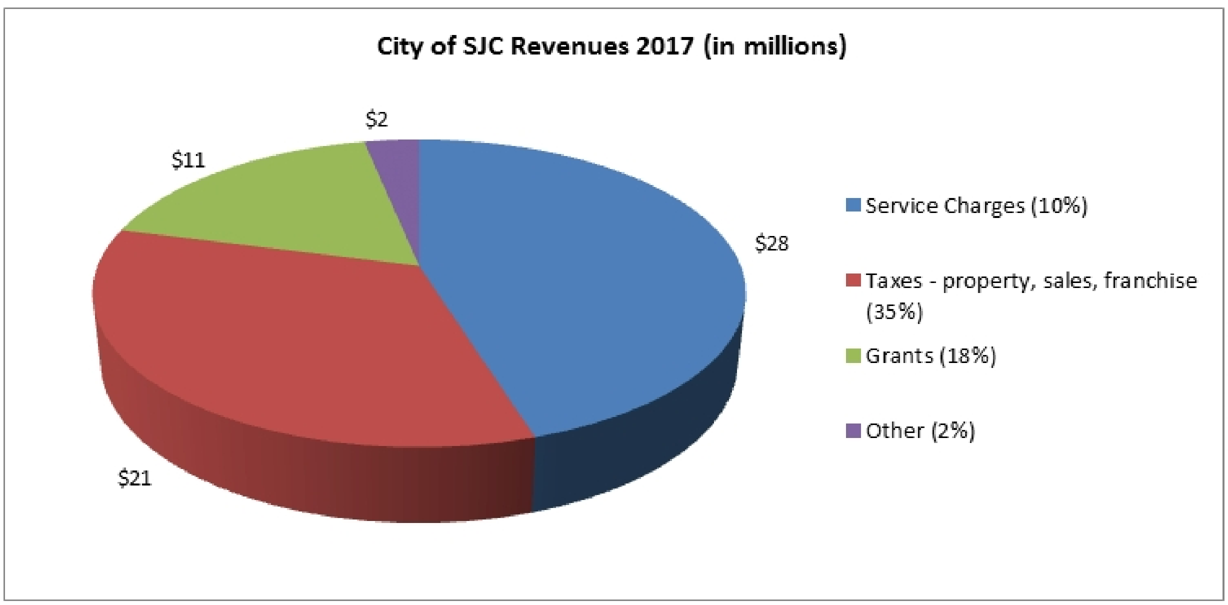
City of San Juan Capistrano

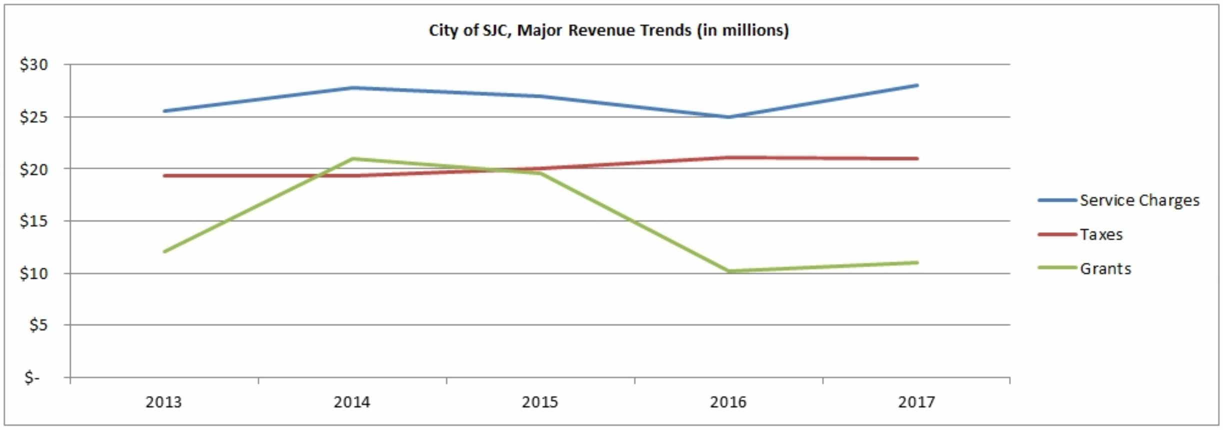
The City of San Juan Capistrano (City) and its employees contributed $3.1 million (preliminary) to OCERS for the year ended December 31, 2017. The City has 81 active members. The City's net pension liability was $25.1 million as of June 2017.

The City has grown from a community of 10,000 persons in 1974 to a developed city of 34,593 in 2016. The City is governed by a City Council of five members elected to four-year overlapping terms.

Revenues

The City's total revenues were $62 million for the year ending June 30, 2017 and are broken down as follows:

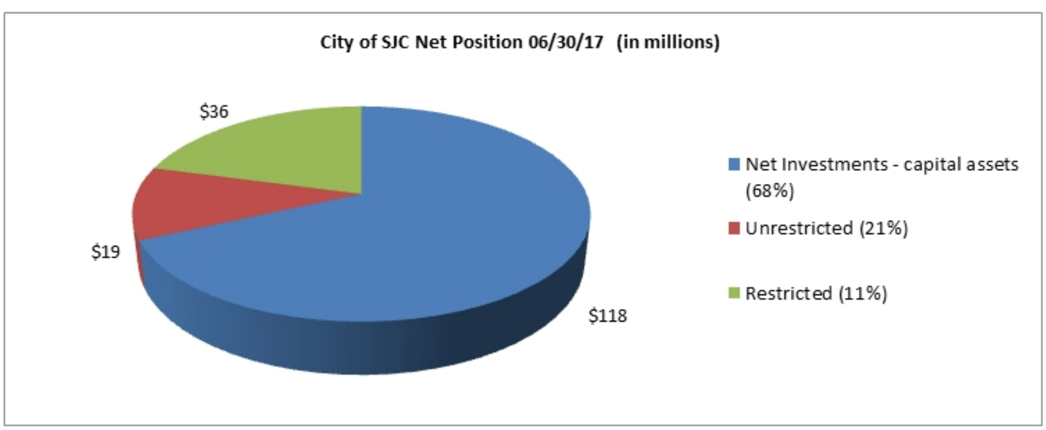




Net Position as of June 30, 2017

The total assets of the City exceeded its total liabilities at June 30, 2017 by $173 million. Of this amount, $19 million is unrestricted and may be used to meet the City's ongoing obligations to citizens and creditors. The City's Net Position was assigned or restricted to the funds listed below:

- **Net Investments in capital assets** of $118 million includes buildings, equipment, and land and also included construction-in-progress, structures, equipment, software, and infrastructure.
- **Restricted** was $36 million, which combined amounts constrained to specific purposes by their providers (such as grantors, bondholders and higher levels of government) through constitutional provisions or by enabling legislation. These funds are restricted to various public and development works projects and for the water rate stabilization project.
- **Unrestricted** was $19 million. These are available for any purpose approved by the City Council.



Orange County Employees Retirement System (OCERS)

OCERS is a plan sponsor and its employees contributed $2.8 million (preliminary) to the OCERS pension fund for the year ended December 31, 2017. OCERS has 71 active members. Its net pension liability as a plan sponsor was $21.8 million as of June 2017.

As permitted by Government Code section 31580.2, administrative expenses, which include contributions to the OCERS' retirement plan, are charged directly against the earnings of the OCERS' pension trust fund.

According to OCERS' 2016 CAFR (most recent CAFR), administrative expenses of $16 million were approximately $22 million less than the allowable limit under the CERL (Gov. Code §31580.2.).

Transportation Corridor Agencies

The Transportation Corridor Agencies (TCA), or the Toll Roads, and its employees contributed approximately $2.4 million (preliminary) to OCERS for the year ended December 31, 2017. It has 65 active members. TCA's net pension liability was $12.4 million as of June 30, 2017.

TCA is comprised of the two joint powers agencies - the San Joaquin Hills Transportation Corridor Agency (SJHTCA) and the Foothill/Eastern Transportation Corridor Agency (FETCA) - formed in 1986 to manage the planning, financing, construction, and operation of State Routes 73, 133, 241 and 261. TCA's Board of Directors is composed of elected officials from 18 cities and three members of the County Board of Supervisors.

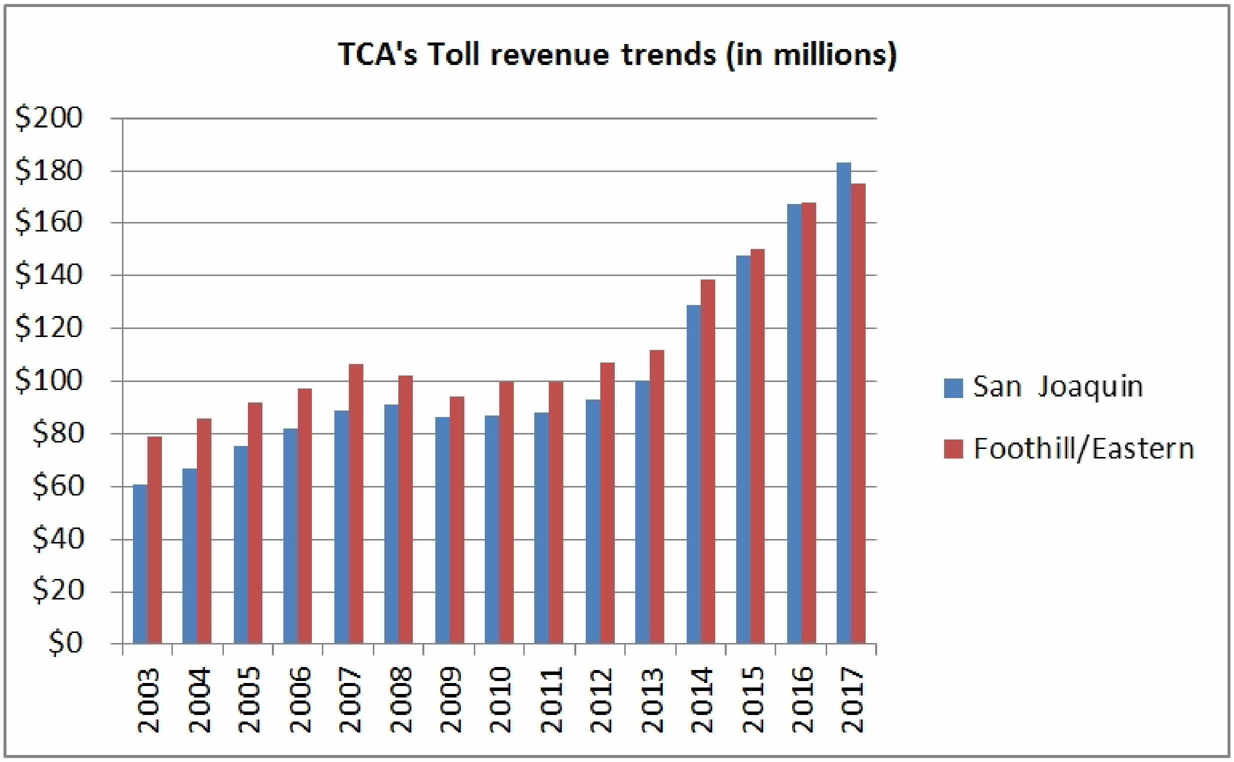
The San Joaquin Hills Transportation Corridor, commonly known as the 73 Toll Road, opened to traffic in 1996. For the year ending June 30, 2017, approximately 32 million transactions were recorded on the 73 Toll Road.

The Foothill/Eastern Transportation Corridor consists of the 241, 261, and 133 Toll Roads and first opened to traffic in 1993. For the year ending June 30, 2017, approximately 67 million transactions were recorded.

Revenues

TCA's total operating revenues (SJHTCA and FETCA combined) were $384 million for the year ending June 30, 2017.

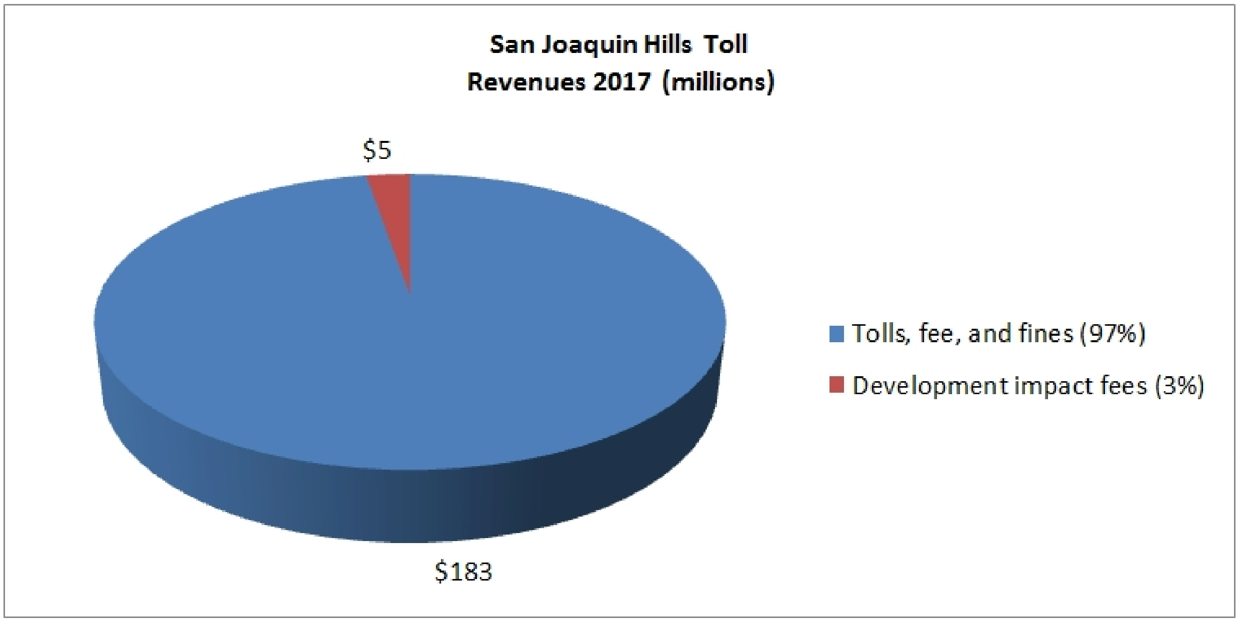
SJHTCA earned $183 million in tolls, fees, and fines during the year ended June 30, 2017. FETCA earned $175 million in tolls, fees, and fines during the year ended June 30, 2017.

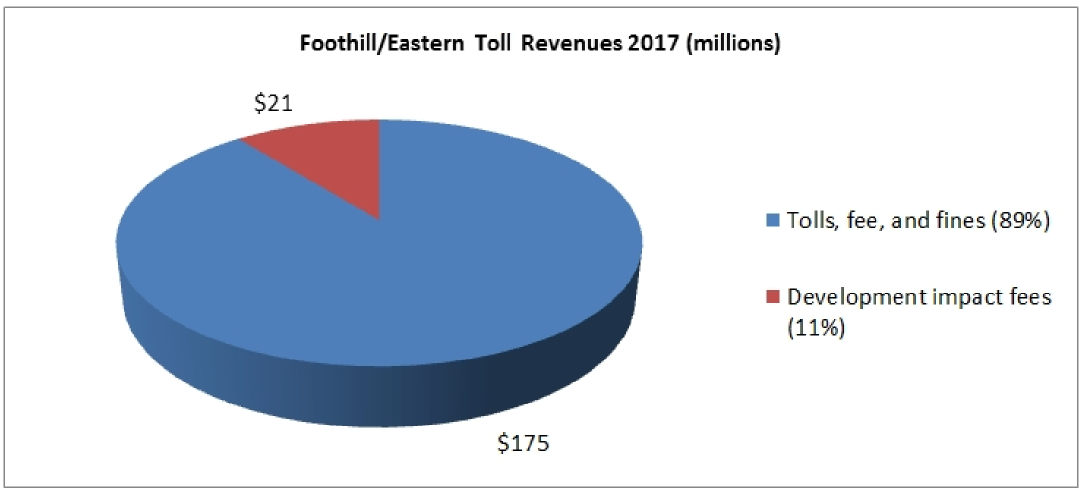


Development impact fees during the year ended June 30, 2017:

- SJHTCA earned $5 million in development impact fees during the year ended June 30, 2017.
- FETCA earned $21 million in development impact fees during the year ended June 30, 2017.

Development impact fees are fees charged for new residential units and new commercial square footage developed in certain cities that surround and benefit from the Toll Roads. The cities collect these fees from property developers and remit them directly to the Toll Roads. Of the $26 million development impact fees noted above, the City of Irvine was the city with the largest amount of fees remitted, or $18 million during the year ending June 30, 2017.





Long-Term Debt

SJHTCA's long-term debt of $2.4 billion as of June 30, 2017 has maturities extending up to 2049. FETCA's $2.3 billion in long-term debt as of June 30, 2017 has maturities extending up to 2036. According to the TCA joint powers agreement, SJHTCA's and FETCA's existence as independent agencies collecting tolls will "sunset," or cease, upon the payment in full of their respective debts. However, as has been done in the past, refinancing of debt can potentially push back the "sunset" provision beyond current maturity dates respectively.

During 2017, S&P, Fitch, and Moody's upgraded the ratings of various SJHTCA and FETCA bonds to Baa3, BB+, and BBB (investment grade) categories with stable outlooks.

Net Position as of June 30, 2017

- **Restricted** – $334 million and $298 million, respectively, for SJHTCA and FETCA. This portion of Net Position is subject to externally imposed conditions that can be fulfilled by the actions of the agency or by the passage of time, and is related primarily to restricted bond proceeds and certain revenues collected.

- **Unrestricted** – Negative $25 million and positive $378 million, respectively, for SJHTCA and FETCA. These amounts are available for any purpose approved by the Board of Directors.

- **Capital Assets** – Negative $2.1 billion and negative $2.3 billion, respectively, for SJHTCA and FETCA. The portion of Net Position related to investment in capital assets is a negative balance because ownership of the toll roads and related rights-of-way has been transferred to the State of California's Department of Transportation, and these assets are not presented within each agency's financial statements. Thus, the balances presented include only certain other capital assets, offset by the debt that financed construction of the toll roads.

Orange County Public Law Library

The Orange County Public Law Library (Law Library) and its employees contributed approximately $1.9 million (preliminary) to OCERS for the year ended December 31, 2017. It has 15 active members. The Law Library's net pension liability was $1.8 million as of June 30, 2017.

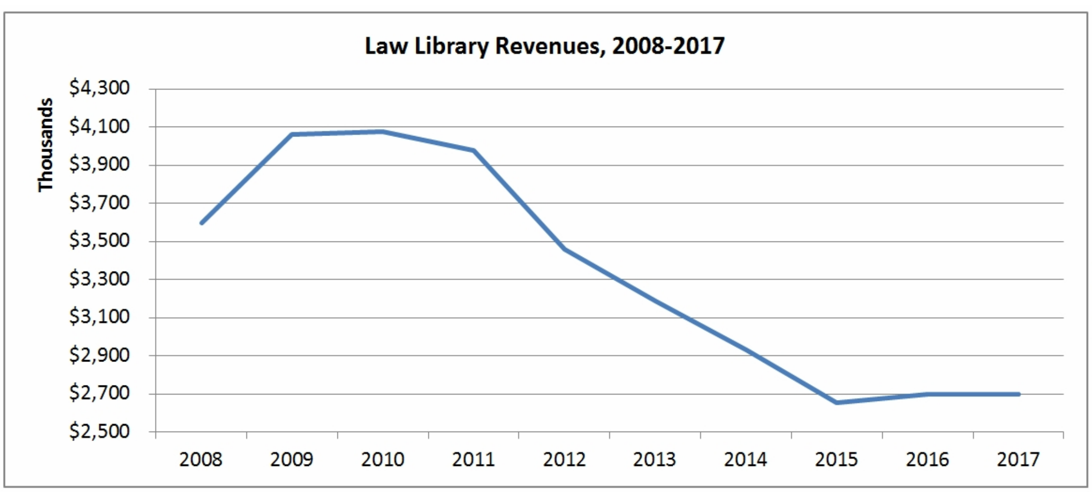
- The Law Library has paid an additional $3 million over the past two years toward its UAAL balance.

The Law Library's Board of Trustees is composed of five judges chosen by the Orange County Superior Court and two attorneys chosen by the County Board of Supervisors.

Revenues

The Law Library's total revenues were $2.8 million for the year ending June 30, 2017.

Filing Fees received by the Law Library accounted for 98% of total revenues for the year. The Law Library's court filing fees are derived from a filing fee paid for every civil action filed in Orange County Superior Court. The filing fee is set statutorily by the State of California and this rate has been stable for several years. The number of civil cases filed in court had declined significantly between 2009 and 2014, but revenues have leveled off since then through the current year (see chart below). Fee waivers granted by the Court for civil cases also have a negative impact on revenues. Accordingly, the Law Library has no control over the number of civil filings nor the filing fee rate set by the State of California.



The Law Library's audited financial statements are prepared on the modified basis of cash receipts and disbursements which is a comprehensive basis of accounting other than generally accepted accounting principles (GAAP). As stated in their audited financials, the Law Library's assets exceed its liabilities by $4.6 million, but the liabilities do not include the Law Library's Net Pension Liability of $1.8 million as of June 30, 2017.

Children and Families Commission of Orange County

The Children and Families Commission of Orange County (CFCOC) and its employees contributed approximately $2.1 million (preliminary) to OCERS for the year ended December 31, 2017. The CFCOC has 10 active members. Its net pension liability was $3.2 million as of June 30, 2017.

- The Children and Families Commission of Orange County has paid an additional $1.7 million in 2017 toward its UAAL balance.

CFCOC was created as a result of Proposition 10, the California Children and Families Act of 1998. The proposition added a 50-cent sales tax on tobacco products sold in California and requires that funds raised be used to support education, health and child development programs for children from the prenatal stage through age five. The State Commission, or First 5 California, receives 20 percent of Proposition 10 funds for state-wide programs and public outreach. The remaining 80 percent of funds are allocated to commissions in each of California's 58 counties by birth rate. Only Los Angeles and San Diego counties surpass Orange County in terms of birth rate totals within the state of California.

CFCOC is governed by a nine member board consisting of the County's Health Care Agency director, the County's Social Services Agency Director, one member of the County's Board of Supervisors, and six members from the public appointed by the Board of Supervisors.

Revenues

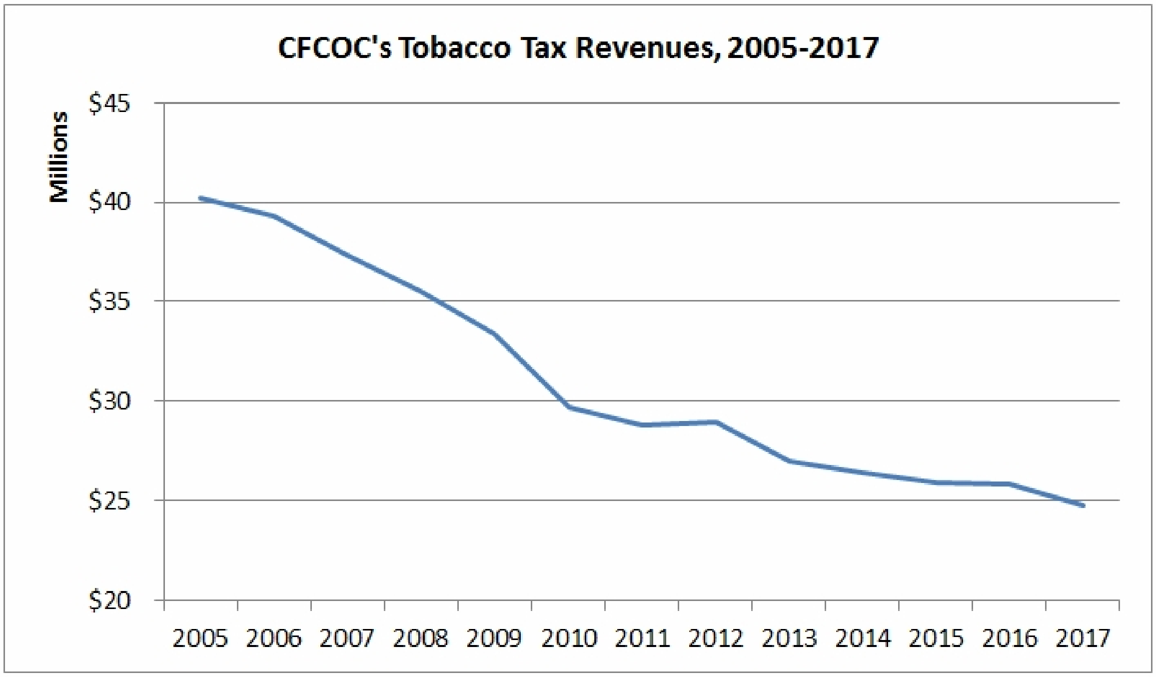
The CFCOC's total revenues were $26.8 million for the year ending June 30, 2017.

Tobacco Tax revenues received by the commission in 2017 amounted to $24.8 million (93% of total revenues). The CFCOC continues to anticipate annual decreases in tobacco tax revenues (i.e. Proposition 10). Since its peak in 2000 (with $50 million in tobacco tax revenues), the CFCOC has had an overall reduction of over 50% (or an annual 4% decline) in tobacco tax revenue, and projects that tobacco tax revenue will continue declining at an annual rate of 3.5% going forward.

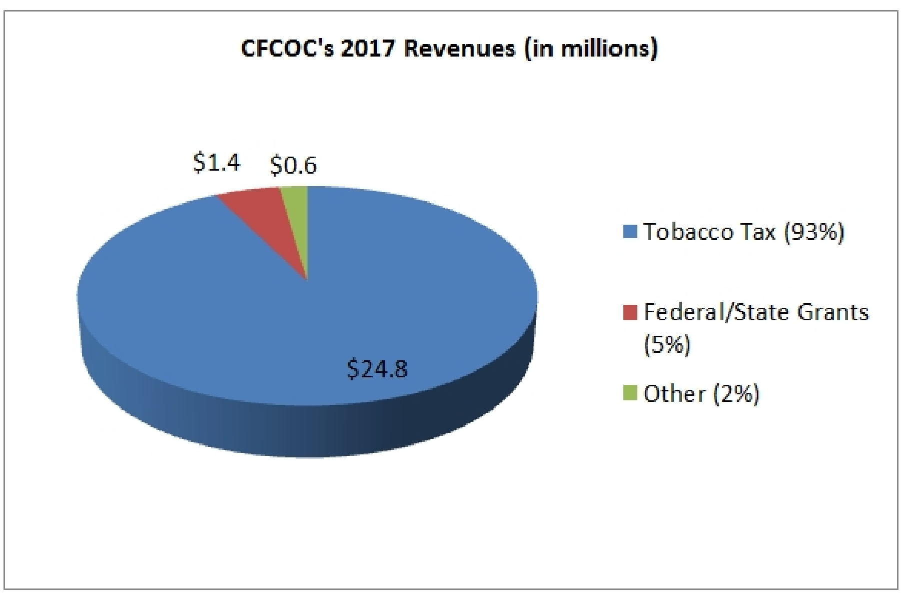
To address the above inherent decrease in revenues, the CFCOC develops three year business plans that step down or modify the nature of the services it provides given reduced revenues; the plan also seeks other possible sources of funding.

Revenues of $1.4 million were for from various state and federal grants for children programs such as the state's Child Signature Program and the federal American Recovery and

Reinvestment Act (ARRA) Health Research grant. The remaining revenues of $574,000 included investment income and other revenues.



CFCOC forecasts that Tobacco Tax revenues will have dropped to $18 million in the 2025/2026 fiscal year.



Net Position as of June 30, 2017

The total assets of the CFCOC exceeded its total liabilities at June 30, 2017 by $44 million. The entire amount is unrestricted and may be used to meet the CFCOC's ongoing obligations to citizens and creditors as directed by its Board of Commissioners.

Orange County Cemetery District

The Orange County Cemetery District (OCCD) and its employees contributed approximately $301,000 (preliminary) to OCERS for the year ended December 31, 2017. OCCD has 25 active members. OCCD's net pension liability was $0.2 million as of June 2017.

The OCCD is an independent special district governed by an appointed Board of Trustees who serve four-year terms. Although privately owned in the beginning, the cemeteries were formed into separate independent districts in 1926. In 1985 the districts were consolidated under one governing board to create the OCCD. OCCD has three cemetery located in Anaheim, Lake Forest and Santa Ana. OCCD typically averages between 900 to 1,000 burial lot sales per year.

Restricted funds have been set aside to fund the perpetual maintenance and care of cemeteries in accordance with the provisions of the Health and Safety Code, which will require continued staffing. The OCCD has also committed funds of $7.2 million for future land acquisitions.

Revenues

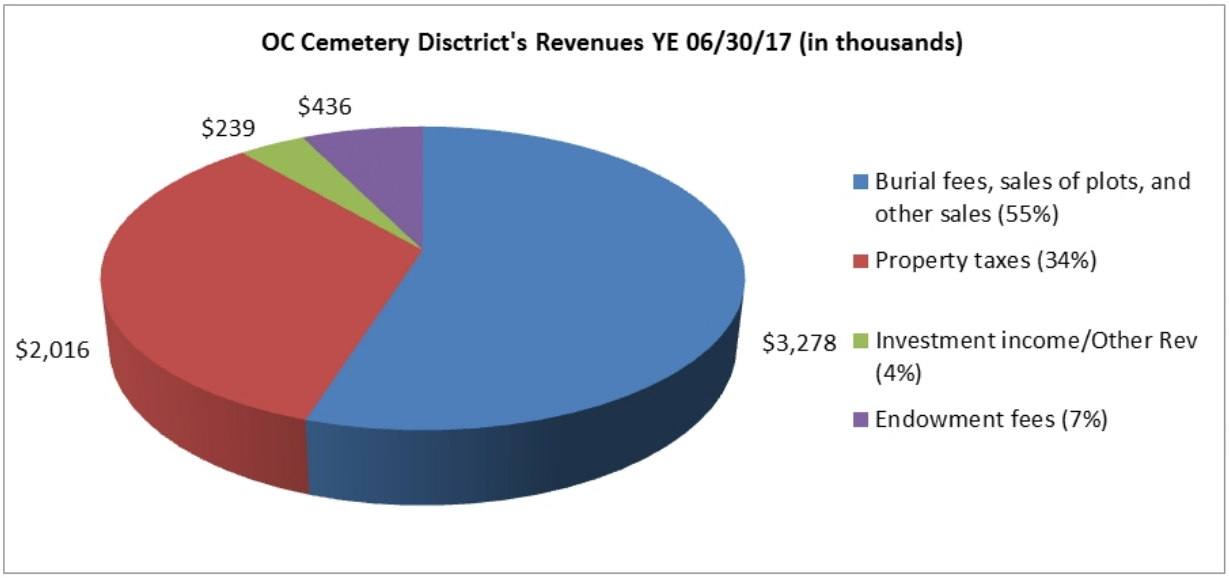
OCCD's total revenues were $6 million for the year ending June 30, 2017.

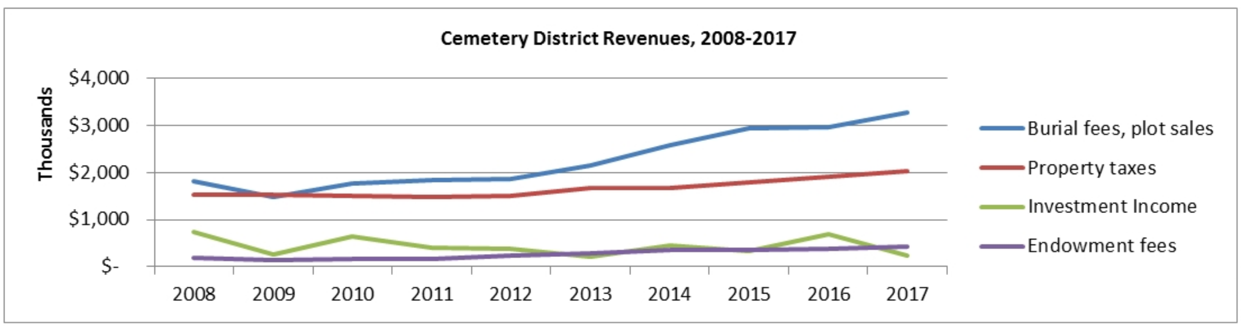
Burial fees, sales of plots, and other sales were $3.2 million, which represents 53% of revenues received by OCCD in 2017. Since OCCD is a government agency, general burial and cremation costs are meant to help recover costs, keeping in line with inflation and OCCD's expected share of property tax revenues.

Property taxes were $2.0 million, or 33% of revenues, and were allocated to OCCD in 2017 from their share of County property tax revenues.

Investment Income and Other Revenues were $239 thousand.

Endowment fees were $436 thousand. Endowment fees of $350-$450 per regular burial/cremation are collected and placed into an endowment principal fund established to provide for the maintenance and care of all three cemeteries in accordance with the provisions of the County's Health and Safety Code.



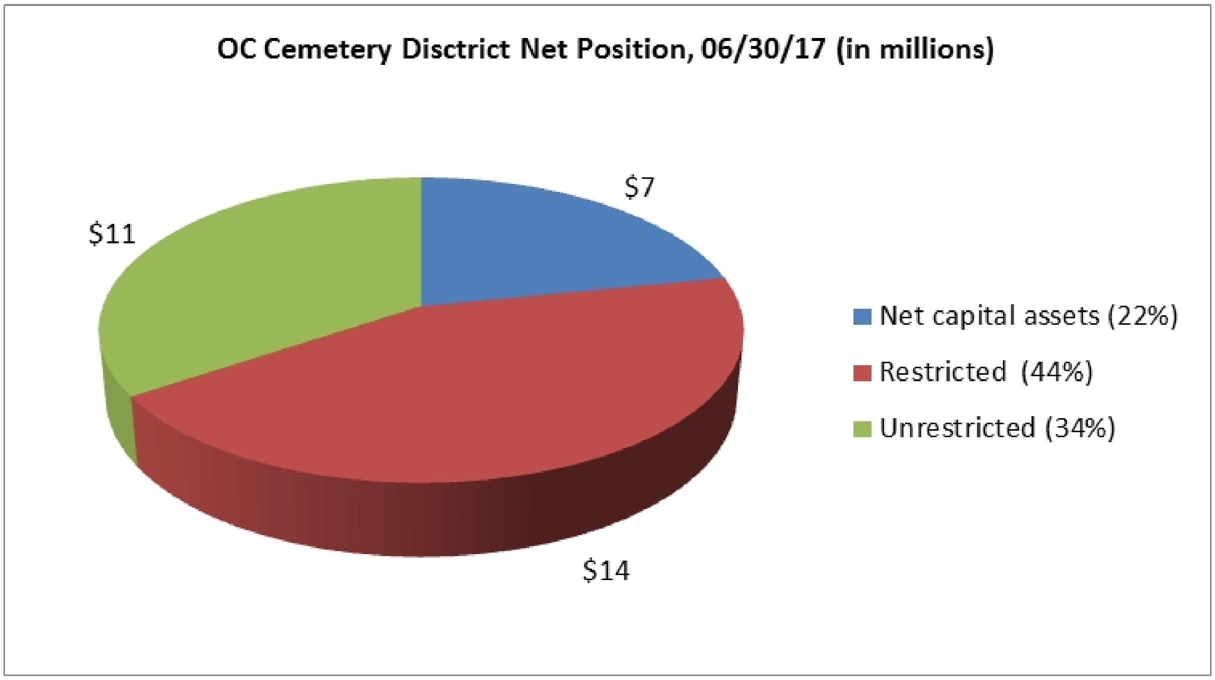


Net Position as of June 30, 2017

The total assets of OCCD exceeded its total liabilities at June 30, 2017 by $32 million. Of this amount, $11 million is unrestricted and may be used to meet the OCCD's ongoing obligations to citizens and creditors.

OCCD's Net Position was assigned or restricted to the funds listed below:

- **Net Investments in capital assets** was $7 million, invested in capital assets (e.g., land, structures and improvements, and furniture and equipment) that are used to provide services to citizens.
- **Restricted** was $14 million, restricted for the perpetual care of the cemetery grounds. These funds are invested and will continue to earn interest income which will eventually be used for the maintenance and operation of OCCD's cemeteries.
- **Unrestricted** was $11 million. These are available for any purpose approved by the Board of Trustees.


OC Cemetery Disctrict Net Position, 06/30/17 (in millions)
$7
$11
$14
Net capital assets (22%)
Restricted (44%)
Unrestricted (34%)

OC In-Home Supportive Services Public Authority

The Orange County In-Home Supportive Services Public Authority (IHSS) and its employees contributed approximately $316,000 (preliminary) to OCERS for the year ended December 31, 2017. It has 25 active members. IHSS's net pension liability was $0.8 million as of June 2017.

The financial statements of IHSS are blended with other government fund units in the County's 2017 CAFR.

Orange County Local Agency Formation Commission (LAFCO)

The Orange County Local Agency Formation Commission (LAFCO) and its employees contributed approximately $162,000 (preliminary) to OCERS for the year ended December 31, 2017. LAFCO has five active members. LAFCO's net pension liability was $1.3 million as of June 2017.

In 1963, the California state legislature formed a Local Agency Formation Commission for each of the 58 counties in the state. These commissions are primary responsible for monitoring the boundaries of cities and special districts with the goal of ensuring municipal services are allocated efficiently and cost-effectively. This process includes the review and approval of incorporating cities within the county, annexing unincorporated areas to cities and special districts, and forming special districts among other actions.

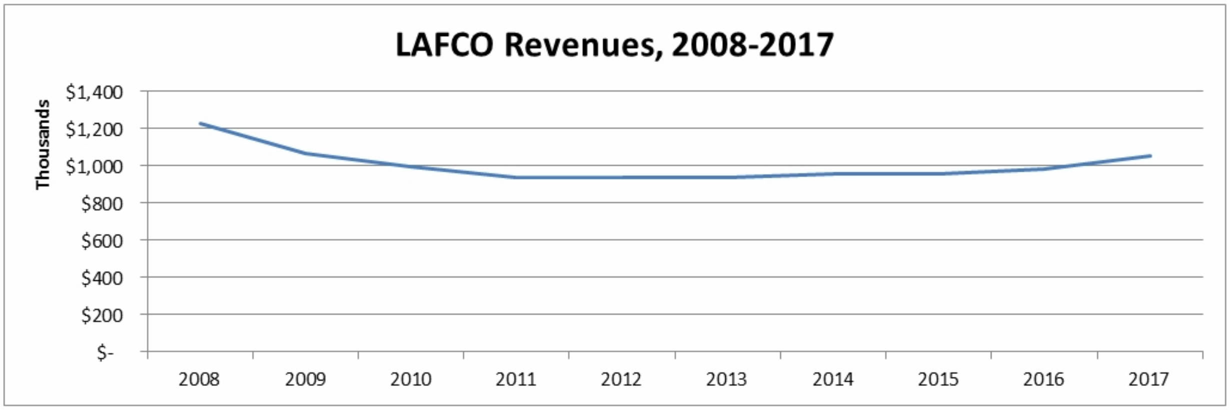
The appointed Board of Commissioners of LAFCO consists of two commissioners representing the County, two commissioners representing cities, two represent special districts, and one commissioner representing the public. An alternate also exists for each of these positions.

2017 Revenues

LAFCO's total revenues were $1.0 million for the year ending June 30, 2017.

Total assessments and service charges received by LAFCO in 2017 amounted to 99% of total revenues for the year.

LAFCO's revenue is comprised of apportionments allocated among the commission's funding agencies. One-third is paid by the County. One-third is paid collectively by the 34 cities within the County. The final one-third is paid by special districts, such as the Orange County Water District, that operate in the County. Revenues are set annually by the commissioners to fully recover the costs of operating LAFCO.



Net Position as of June 30, 2017

The total liabilities of LAFCO exceeded its total assets at June 30, 2017 by $20,000, primarily due to the GASB 68 recognition of a net pension liability on its financial statements.

UC Irvine – Medical Center & Campus (Inactive Plan Sponsor)

The UC Irvine Medical Center & Campus (UCI) has no active participants. UCI's net pension liability was $36.1 million as of June 2017 for its remaining retirees.

- UC and the County of Orange have evenly split payments totaling $4.2 over the past two years toward UCI's UAAL balance.

UCI Irvine – Medical Center & Campus is reported within the University of California's audited 2017 financial statements:

- $33 billion in total 2017 revenues (wide variety of revenue sources).
- $2.4 billion Net Position (none are Unrestricted).

Orange County Department of Education (Inactive Plan Sponsor)

The Orange County Department of Education has no active participants. In 2017, the Department of Education paid $524,000 towards its UAAL balance for the year ending December 31, 2017. The Department of Education's net pension liability was $4.4 million as of June 2017 for its remaining retirees. From its 2017 CAFR:

- $305 million in total 2017 revenues (62% - revenues from property taxes, Federal/State aid, 26% - operating grants, 12% - service charges).
- $163 million Net Position ($18 million is Unrestricted).

The Orange County Vector Control District (Inactive Plan Sponsor)

Vector Control has no active participants. One deferred member paid $4,000 to OCERS in order to purchase additional service credit prior to retiring in 2017. Vector Control's net pension liability was $1.7 million as of June 2017 for its remaining retirees. From its 2017 CAFR:

- $14 million in total 2017 revenues (93% - property taxes and assessments, 7% - other revenues).
- $20 million Net Position ($15 million is Unrestricted).

The City of Rancho Santa Margarita (Inactive Plan Sponsor)

The City of Rancho Santa Margarita has no active participants. Rancho Santa Margarita's net pension liability was $9,000 as of June 2017 for its remaining retirees. From its 2017 CAFR:

- $20 million in total 2017 revenues (68% - property/sales tax, 16% - grants, 7% - service charges, 9% - other).
- $129 million Net Position ($14 million is Unrestricted).

Cypress Recreation and Parks District (Inactive Plan Sponsor)

Cypress Recreation and Parks District (District) has no active participants. Segal Consulting recently calculated the District's UAAL to be $653,000 as of December 31, 2016. OCERS staff is working with the City of Cypress to develop a funding agreement for the City to pay the District's UAAL. The agreement will be presented to the OCERS Board for approval.

From the City of Cypress 2017 CAFR:

- $45 million in total 2017 revenues (58% - property/sales tax, 14% - other taxes, 13% - grants, 13% - service charges, 2% - other revenues).
- $299 million Net Position ($90 million is Unrestricted).

Attachment 3

Memorandum

DATE: March 9, 2018

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **OCERS FUNDING POLICY**

Written Report

Discussion

The Board adopted the Actuarial Funding Policy in January, 2014 and approved amendments to the Policy in December 2014 (attached). The Board has since adopted new actuarial assumptions that need to be incorporated into the policy. The policy is also due for its regularly scheduled triennial review. Paul Angelo will be present at the March 19, 2018 Board of Retirement meeting to discuss actuarial funding policy components and objectives. His presentation materials are attached. No action by the Board is anticipated at the March meeting.

Submitted by:

Steve Delaney
Chief Executive Officer

OCERS Board Policy

Actuarial Funding Policy

Purpose and Background

The Orange County Employees Retirement System (OCERS) is charged with administering defined benefit plans for its members. Administering the system includes establishing systematic funding of current and future benefit payments for members of OCERS. In doing so, the Board of Retirement engages the services of an actuary to assist in establishing contributions that will fully fund the System's liabilities, and that, as a percentage of payroll, will remain as level as possible for each generation of active members. In order for the actuary to perform the requested services, the Board must approve specific funding objectives, methods, and assumptions to be used in the actuarial valuation for the purpose of funding member benefits.

Policy Objectives

- Achieve long-term full funding of the cost of benefits provided by OCERS;
- Seek reasonable and equitable allocation of the cost of benefits over time;
- Minimize volatility of the plan sponsor's contribution to the extent reasonably possible, consistent with other policy goals; and,
- Support the general public policy goals of accountability and transparency by being clear as to both intent and effect, allowing for an assessment of how and when plan sponsors will meet the funding requirements of the plan.

Definitions

1. **Actuarial Accrued Liability (AAL)** – The portion of the present value of projected benefits that is attributed to past service by the actuarial funding method.
2. **Actuarial Funding Method** – A process used to allocate present value of projected benefits among past and future periods of service.
3. **Actuarial Gains and Losses** – changes in unfunded actuarial accrued liability or surplus due to actual experience different from what is assumed in the actuarial valuation. For example, if during a given year the assets earn more than the investment return assumption, the amount of earnings above the assumption will cause an unexpected reduction in unfunded actuarial accrued liability, or "actuarial gain" as of the next valuation.
4. **Actuarial Surplus** – the positive difference, if any, between the Valuation Value of Assets and the Actuarial Accrued Liability
5. **Actuarial Value of Assets (AVA)** – The market value of assets less the deferred investment gains or losses not yet recognized by the asset smoothing method.

6. **Entry Age Method** - An actuarial cost method designed to fund a member's total plan benefit over the course of his or her career. This method is designed to produce stable employer and employee contributions in amounts that increase at the same rate as the members' payroll (i.e., level % of payroll).

7. **Market Value of Assets (MVA)** – the fair value of assets of the plan as reported under generally accepted accounting principles.

8. **Normal Cost** – The portion of the present value of projected benefits that is attributed to current service by the actuarial funding method.

9. **Unfunded Actuarial Accrued Liability (UAAL)** – the portion of the Actuarial Accrued Liability that is not currently covered by plan assets. It is calculated by subtracting the Valuation Value of Assets from the Actuarial Accrued Liability.

10. **Valuation Value of Assets (VVA)** –the value of assets used in the actuarial valuation to determine contribution rate requirements. It is equal to the Actuarial Value of Assets reduced by the value of any non-valuation reserves.

11. **Valuation Period** – The year for which the actuarial valuation is being performed, which is the calendar year preceding the December 31 actuarial valuation date.

Policy Guidelines

OCERS annual funding requirement is comprised of a payment of the Normal Cost and a payment on the Unfunded Actuarial Accrued Liability (UAAL). The Normal Cost and the amount of payment on UAAL are determined by the following three components of this funding policy

a. Actuarial Cost Method: the process used to allocate the total present value of future benefits to each year (Normal Cost), and all past years (Actuarial Accrued Liability);

b. Asset Smoothing Method: the process used that spreads the recognition of investment gains or losses over a period of time for the purposes of determining the Actuarial Value of Assets used in the actuarial valuation process; and

c. Amortization Policy: the decisions on how, in terms of duration and pattern, to reduce the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets (after adjustment for non-valuation reserves) in a systematic manner.

Actuarial Cost Method

The Entry Age cost method with Normal Cost developed as a level percentage of pay of shall be applied to each member's retirement benefit in determining the Normal Cost and the Actuarial Accrued Liability.

Asset Smoothing Method

The investment gains or losses of each Valuation Period, as a result of comparing the actual return on the Market Value of Assets at the end of the period with what the expected return on the Market Value of Assets would have been if the assumed rate of return on assets was realized during the period, shall be recognized in a level amount over a fixed five (5) years in calculating the Actuarial Value of Assets.

Amortization Policy

a. The Unfunded Actuarial Accrued Liability, the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets (after again adjustment for non-valuation reserves), shall be amortized over various periods of time, depending on how the unfunded liability arose;

b. he total Unfunded Actuarial Accrued Liability as of December 31, 2013 (which consists of the outstanding balance of the UAAL from the December 31, 2012 valuation and any new actuarial gains or losses from calendar year 2013) shall be amortized over twenty (20) years;

c. Actuarial Gains or Losses incurred in a single year shall be amortized over twenty (20) years;

d. Changes in actuarial assumptions and cost methods shall be amortized over twenty (20) years;

e. Plan amendments other than Early Retirement Incentives shall be amortized over fifteen (15) years;

f. Early Retirement Incentives shall be amortized over a period not to exceed five (5) years;

g. Unfunded Actuarial Accrued Liabilities shall be amortized in multiple layers by source over “closed” amortization periods;

h. Unfunded Actuarial Accrued Liabilities shall be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase;

i. If an overfunding or “surplus” exists (i.e., the adjusted Actuarial Value of Assets is greater than the Actuarial Accrued Liability) and the amount of such surplus is in excess of 20% of the AAL per Section 7522.52 of California Public Employee Pension Reform Act, such actuarial surplus in excess of 20% of the AAL and any subsequent surpluses will be amortized over an “open” amortization period of 30 years. Any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized as the first of a new series of amortization layers, using the above amortization periods.

Other Policy Considerations

a. The Unfunded Actuarial Accrued Liability, the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets (after again adjustment for non-valuation reserves), shall be amortized over various periods of time, depending on how the unfunded liability arose;

b. The total Unfunded Actuarial Accrued Liability as of December 31, 2013 (which consists of the outstanding balance of the UAAL from the December 31, 2012 valuation and any new actuarial gains or losses from calendar year 2013) shall be amortized over twenty (20) years;

c. Actuarial Gains or Losses incurred in a single year shall be amortized over twenty (20) years;

d. Changes in actuarial assumptions and cost methods shall be amortized over twenty (20) years;

e. Plan amendments other than Early Retirement Incentives shall be amortized over fifteen (15) years;

f. Early Retirement Incentives shall be amortized over a period not to exceed five (5) years;

g. Unfunded Actuarial Accrued Liabilities shall be amortized in multiple layers by source over "closed" amortization periods;

h. Unfunded Actuarial Accrued Liabilities shall be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase;

i. If an overfunding or "surplus" exists (i.e., the adjusted Actuarial Value of Assets is greater than the Actuarial Accrued Liability) and the amount of such surplus is in excess of 20% of the AAL per Section 7522.52 of California Public Employee Pension Reform Act, such actuarial surplus in excess of 20% of the AAL and any subsequent surpluses will be amortized over an "open" amortization period of 30 years. Any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized as the first of a new series of amortization layers, using the above amortization periods.

Other Policy Considerations

a. In order to allow Plan Sponsors to more accurately budget for pension contributions and other practical considerations, the contribution rates determined in each actuarial valuation (as of December 31) will generally apply to the fiscal year beginning eighteen months after the Actuarial Valuation date. The UAAL contribution rates in the current actuarial valuation are adjusted to account for any shortfall or excess contributions as a result of the implementation lag;

b. Any change in contribution rate requirement that results from a plan amendment is generally implemented as of the effective date of the plan amendment or as soon as administratively feasible;

c. When calculating a retirement benefit amount under allowable optional benefit allowances per Government Code sections 31761-31764(known as Options 2,3 and 4), the actuary shall include a cost of living assumption;

d. When calculating both employer and member contribution rates (basic and COLA portions) for Legacy members, the actuary shall include an assumption for the additional cash out of accumulated annual leave, sick leave or compensatory leave both earned and permitted to be cashed out during the final average measuring period, applied on a pooled basis (General, Safety-Probation, Safety-Law and Safety-Fire).

e. The actuarial assumptions adopted by the Board for use in the actuarial valuation affect only the timing of contributions; the ultimate contribution level is determined by the benefits and the expense actually paid offset by actual investment returns. To the extent that actual experience deviates from the assumptions, experience gains and losses will occur. These gains (or losses) then serve to reduce (or increase) the future contribution requirements.

Actuarial assumptions are generally grouped into two major categories:

- Demographic assumptions – including rates of withdrawal, service retirement, disability retirement, mortality etc.
- Economic assumptions – including price inflation, wage inflation, investment return, salary increase, etc.

The actuarial assumptions represent the Board's best estimate of anticipated experience under OCERS and are intended to be long term in nature. Therefore, in developing the actuarial assumptions, the Board considers not only past experience but also trends, external forces and future expectations. The Board will review all assumptions triennially. The current assumptions used by the actuary are listed in Appendix A.

Policy Review

The Board of Retirement will review this policy every three years or more frequently if recommended by the actuary to ensure that it remains relevant and appropriate.

Policy History

The Board adopted this policy on January 21, 2014. This policy was revised on December 15, 2014.

Secretary's Certificate

I, the undersigned, the duly appointed Secretary of the Orange County Employees Retirement System, hereby certify the adoption of this Policy.

Steve Delaney 12/15/14

Steve Delaney
Secretary of the Board

Date

The following are current assumptions used by the actuary when producing the annual actuarial valuation for OCERS.

Economic Assumptions

INFLATION

3.00% per annum, retiree cost of living adjustments are subject to a 3.0% maximum change per year.

INVESTMENT RETURN

7.25% per annum net of investment and administrative expenses.

INDIVIDUAL SALARY INCREASES:

- Inflationary Increases: 3.00%
- Real "across the board" increases: 0.50%
- Merit and promotion increases:

YEARS OF SERVICE	GENERAL	SAFETY
Less than 1	10.00%	14.00%
1	7.25	10.00
2	6.00	8.50
3	4.75	6.75
4	4.00	5.25
5	3.25	4.50
6	2.25	3.50
7	2.00	3.25
8	1.50	2.25
9	1.25	2.25
10	1.25	1.75
11	1.25	1.75
12	1.25	1.75
13	1.25	1.75
14	1.25	1.75
15	1.25	1.75
16	0.75	1.50

YEARS OF SERVICE	GENERAL	SAFETY
17	0.75	1.50
18	0.75	1.50
19	0.75	1.50
20 & over	0.75	1.50

ACTIVE MEMBER PAYROLL INCREASES

3.50% per annum

Non-Economic Assumptions

Post-Retirement Mortality Rates:

HEALTHY

- For General Members and all Beneficiaries: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020.
- For Safety Members: RP-2000 Combined Healthy Mortality projected with Scale BB to 2020 with ages set back two years.

DISABLED

- For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 with ages set forward six years for males and set forward three years for females.
- For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020.

BENEFICIARIES

- Beneficiaries are assumed to have the same mortality as a General Member of the opposite sex who is receiving a service (non-disability) retirement.

EMPLOYEE CONTRIBUTION RATES

- For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, weighted 40% male and 60% female.
- For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 with ages set back two years, weighted 80% male and 20% female.

Termination Rates Before Retirement

	RATE (%) MORTALITY[1]			
	General		Safety	
Age	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.07	0.04	0.06	0.04
40	0.10	0.07	0.09	0.06
45	0.14	0.11	0.12	0.09
50	0.20	0.16	0.18	0.14
55	0.34	0.25	0.27	0.21
60	0.59	0.41	0.48	0.33
65	1.00	0.76	0.82	0.60

All General pre-retirement deaths are assumed to be non-service connected. For Safety, 90% of pre-retirement deaths are assumed to be non-service connected. The other 10% are assumed to be service connected.

	RATE (%)DISABILITY			
Age	**General All Other**(1)	**General OCTA**(2)	**Safety-Law & Fire** (3)	**Safety-Probation** (3)
20	0.00	0.00	0.00	0.00
25	0.00	0.00	0.01	0.03
30	0.01	0.03	0.04	0.08
35	0.03	0.20	0.14	0.10
40	0.08	0.36	0.26	0.10
45	0.11	0.43	0.42	0.16
50	0.14	0.48	0.92	0.20
55	0.18	0.74	1.98	0.23
60	0.29	1.41	5.20	0.10

(1) 55% of General All Other disabilities are assumed to be service connected disabilities. The other 45% are assumed to be non-service connected.

(2) 65% of General – OCTA disabilities are assumed to be service connected disabilities. The other 35% are assumed to be non-service connected.

(3) 100% of Safety – Law Enforcement, Fire and Probation disabilities are assumed to be service connected disabilities.

Appendix A

	RATE (%)TERMINATION			
Years of Service	**General All Other** (1)	**General OCTA** (1)	**Safety- Law & Fire** (2)	**Safety – Probation** (2)
0	11.0	17.50	4.00	16.00
1	8.0	13.50	3.00	13.00
2	7.0	10.50	2.00	10.00
3	5.0	10.00	1.00	6.00
4	4.0	9.00	1.00	4.00
5	3.75	7.00	1.00	3.50
6	3.50	5.00	0.95	3.00
7	3.00	5.00	0.90	2.50
8	2.75	4.00	0.85	2.25
9	2.50	3.50	0.80	2.00
10	2.25	3.50	0.75	1.75
11	2.00	3.50	0.65	1.75
12	2.00	3.00	0.60	1.50
13	1.75	3.00	0.50	1.25
14	1.75	3.00	0.50	1.00
15	1.75	3.00	0.50	1.00
16	1.50	3.00	0.50	1.00
17	1.50	2.75	0.50	0.50
18	1.50	2.75	0.50	0.50
19	1.50	2.75	0.50	0.50
20 or more	1.25	1.75	0.25	0.50

(1) 40% of all terminated members with less than 5 years of service and 25% of all terminated members with 5 or more years of service will choose a refund of contributions.
(2) 45% of all terminated members with less than 5 years of service and 35% of all terminated members with 5 or more years of service will choose a refund of contributions.
(3) 20% of all terminated members with less than 5 years of service and 20% of all terminated members with 5 or more years of service will choose a refund of contributions.
(4) 40% of all terminated members with less than 5 years of service and 30% of all terminated members with 5 or more years of service will choose a refund of contributions.

Retirement Rates

	RATE (%)							
Age	General Enhanced	General-Non-Enhanced (1)	General SJC (31676.12)	Safety – Law (31664.1) (2)	Safety – Law (31664.2) (2)	Safety – Fire (31664.1) (2)	Safety – Fire (31664.2) (2)	Safety – Probation (2)
Under 50	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
50	2.5	2.5	3.0	16.0	11.5	6.0	8.0	3.0
51	2.0	2.5	3.0	16.0	12.0	8.0	10.0	3.0
52	2.0	2.5	3.0	16.0	12.7	9.0	11.0	4.0
53	2.0	2.5	3.0	16.0	17.9	10.0	12.0	4.0
54	5.0	2.5	3.0	22.0	18.8	16.0	14.0	6.0
55	15.0	3.0	4.0	22.0	30.7	19.0	24.0	11.0
56	10	3.5	5.0	20.0	20.0	20.0	23.0	11.0
57	10.0	5.0	6.0	20.0	20.0	23.0	27.0	17.0
58	10.0	5.0	7.0	20.0	25.0	30.0	27.0	20.0
59	11.0	7.0	9.0	26.0	30.0	30.0	36.0	20.0
60	12.0	9.0	11.0	45.0	100.0	45.0	100.0	20.0
61	12.0	10.0	13.0	45.0	100.0	45.0	100.0	20.0
62	15.0	16.0	15.0	45.0	100.0	45.0	100.0	25.0
63	16.0	16.0	15.0	45.0	100.0	45.0	100.0	50.0
64	16.0	18.0	20.0	45.0	100.0	45.0	100.0	50.0
65	21.0	21.0	20.0	100.0	100.0	100.0	100.0	100.0
66	22.0	26.0	24.0	100.0	100.0	100.0	100.0	100.0
67	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
68	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
69	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
70	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
71	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
72	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0

	RATE (%)							
73	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
74	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(1) These assumptions are also used for the CalPEPRA 1.62% @ 65 formula (Plan T).

(2) Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

	RATE (%)			
Age	**CalPEPRA 2.5% @ 67 General Formula**	**CalPEPRA Safety – Probation Formula (1)**	**CalPEPRA Safety – Law Formula (1)**	**CalPEPRA Safety – Fire Formula (1)**
50	0.0	2.5	11.0	6.5
51	0.0	2.5	11.5	8.0
52	4.0	3.0	12.0	9.0
53	1.5	3.0	16.0	10.0
54	1.5	5.5	17.0	12.0
55	2.5	10.0	28.0	21.0
56	3.5	10.0	18.0	20.0
57	5.5	15.0	17.5	22.0
58	7.5	20.0	22.0	25.0
59	7.5	20.0	26.0	31.5
60	7.5	100.0	100.0	100.0
61	7.5	100.0	100.0	100.0
62	14.0	100.0	100.0	100.0
63	14.0	100.0	100.0	100.0
64	14.0	100.0	100.0	100.0
65	18.0	100.0	100.0	100.0
66	22.0	100.0	100.0	100.0
67	23.0	100.0	100.0	100.0
68	23.0	100.0	100.0	100.0

	RATE (%)			
69	23.0	100.0	100.0	100.0
70	30.0	100.0	100.0	100.0
71	30.0	100.0	100.0	100.0
72	30.0	100.0	100.0	100.0
73	30.0	100.0	100.0	100.0
74	30.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0

(1) Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

Retirement Age and Benefit for Deferred Vested Members: For deferred vested members, the following assumptions are made:

General Retirement Age: 58

Safety Retirement Age: 53

Assume that 20% of future General and 30% of future Safety deferred vested members are reciprocal. For reciprocals, assume 4.25% compensation increases for General and 5.00% for Safety per annum.

Liability Calculation for Current Deferred Vested Members: Liability for a current deferred vested member is calculated based on salary, service, and eligibility for reciprocal benefit as provided by the Retirement System. For those members without salary information that have 3 or more years of service, use an average salary. For those members without salary information that have less than 3 years of service or for those members without service information, assume a refund of account balance.

Future Benefit Accruals: 1.0 year of service per year of employment. There is no assumption to anticipate conversion of unused sick leave at retirement.

Unknown Data for Members: Same as those exhibited by members with similar known

	characteristics. If not specified, members are assumed to be male.
Percent married:	75% of male members and 50% of female members are assumed to be married at retirement or time of pre-retirement death.
Age of Spouse:	Female (or male) three years younger (or older) than spouse.
Employee Contribution Crediting Rate:	5.00%, compounded semi-annually.

Non-CalPEPRA Formulas	Additional compensation amounts are expected to be received during a member's final average earnings period. The percentages used in this valuation are:

	Final One Year Salary	Final Three Year Salary
General Members	3.50%	2.80%
Safety – Probation	3.80%	2.80%
Safety – Law	5.20%	4.70%
Safety – Fire	2.00%	2.00%

The annual payoffs assumptions are the same for service and disability retirements.

CalPEPRA Formulas	None

Orange County Employees Retirement System

Review of Elements in Current UAAL Amortization Policy

March 19, 2018

Paul Angelo, FSA

Segal Consulting

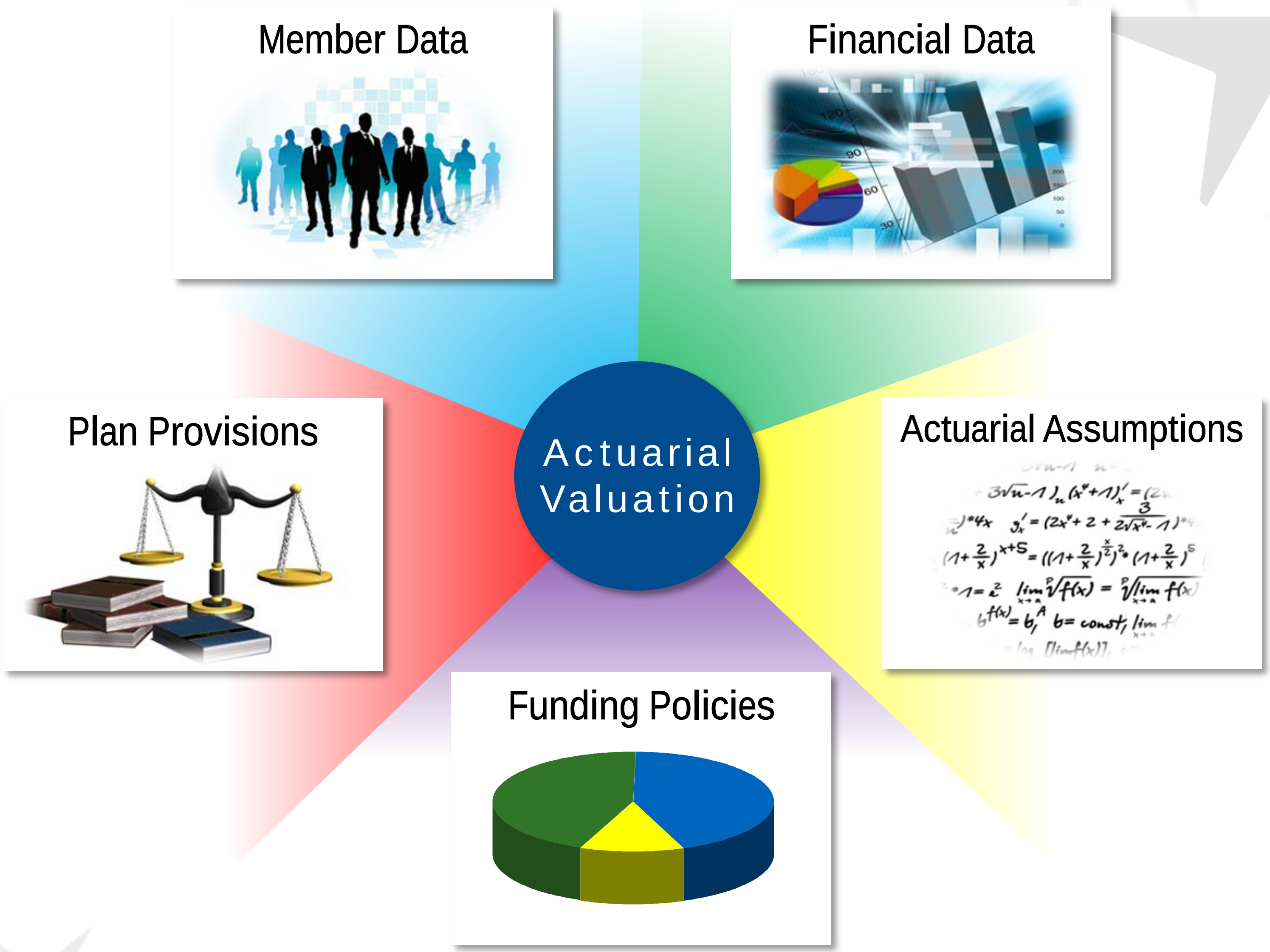
San Francisco

5528912v3

Agenda

- Review of funding policy components and cost elements
- Review of OCERS funding policy objectives and parameters
- Review of OCERS UAAL amortization policy
  - Reviewed and approved by the Board in 2013 and 2014
  - Effective with December 31, 2013 Valuation
- Illustration of UAAL amortization periods and methods
- OCERS December 31, 2016 UAAL Amortization Schedule
- Recent changes made to CalPERS UAAL amortization policy

What goes into an Actuarial Valuation?

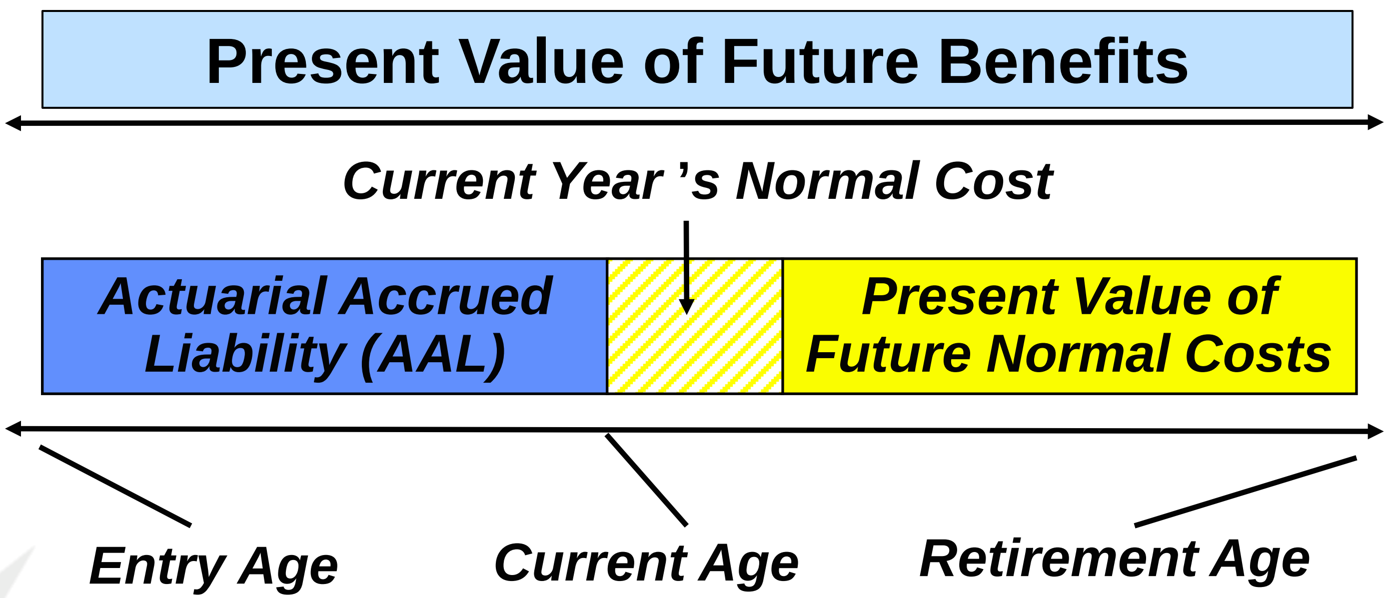


Funding Policy Components

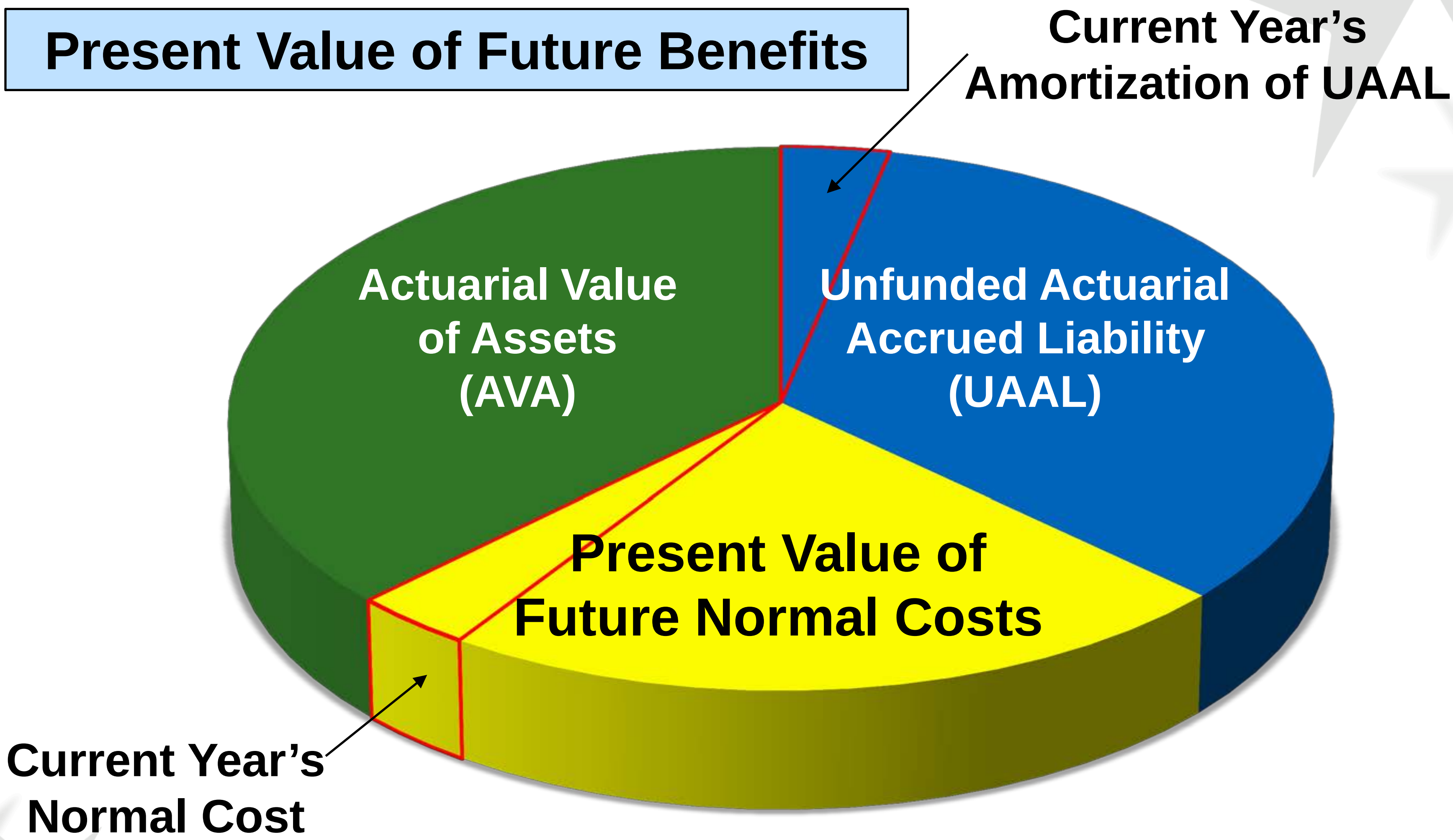
- **Actuarial Cost (or Funding) Method** –
  allocates present value of member's projected benefits to years of service: past, current and future
  - Defines Normal Cost and Actuarial Accrued Liability (AAL)
- **Asset Smoothing Method** –
  determines an Actuarial Value of Assets that recognizes investment gains or losses over a period of time
  - Manages short term volatility while tracking market value
  - Defines the Unfunded Actuarial Accrued Liability (UAAL)
- **UAAL Amortization Policy** –
  sets contributions to systematically reduce any UAAL
  - Includes structure, periods and pattern of payments

Funding Policy – Cost Elements

- **The Normal Cost** is the portion of the value of projected benefits for active members that is allocated to each plan year.
  - Normal Cost is shared between employees and employers
- **The Actuarial Accrued Liability (AAL) measures the Normal Costs from past years**—for retired members, the AAL is the entire value of their benefit.
  - Any unfunded AAL (UAAL) is funded by the employers



Funding Policy – Cost Elements



Policy Objectives of Actuarial Funding Policy

1. Achieve long-term full funding of the cost of benefits provided by OCERS
   - Future contributions plus current assets sufficient to fund all benefits for current members
   - Current Contribution = Normal Cost + full UAAL payment
2. Seek a reasonable and equitable allocation of the cost of benefits over time
   - Both expected costs and variations from expected costs
3. Minimize volatility of the plan sponsor's contribution
   - To the extent reasonably possible, consistent with other policy objectives
4. Support public policy goals of accountability and transparency
   - Allow for an assessment of how and when plan sponsors will meet the funding requirements of the plan

Relationship among Policy Objectives

- Policy Objectives 2 and 3 reflect two aspects of the general policy objective of "interperiod equity"
- Policy Objective #2 promotes "demographic matching"
  - Current taxpayers incur cost of benefits for current public employees serving those taxpayers
- Policy Objective #3 promotes "volatility management"
  - Current taxpayers' cost compares equitably with costs just before and after
- These objectives tend to move funding policy in opposite directions.
  - Policy objectives 2 and 3 combined seek to balance demographic matching vs. volatility management

2013 and 2014 Review of Actuarial Funding Policy

- Funding policy elements approved
  - Continuation of Entry Age actuarial cost method
  - Continuation of 5-year asset smoothing method
  - UAAL amortization policy starting with 12/31/2013 valuation
    - Continuation of level percent of payroll amortization
    - 12/31/2012 UAAL layers combined and reamortized over 20 years
    - Amortization policy for changes in UAAL after 12/31/2012

Source		
Actuarial gains or losses		20
Assumption or method changes		20
Plan amendments		15
Early Retirement Incentives		Up to 5
Actuarial surplus		30

Level Percent of Payroll UAAL Amortization

- UAAL payments structured to increase with total payroll
  - Payroll assumed to increase with inflation and real wage growth
    - Assumptions approved for December 31, 2017 valuation
    - 2.75% (inflation) + 0.50% (real wage growth) = 3.25% (total)
    - Assumes constant active head count
  - Shortfall in UAAL contributions if actual payroll increase is less than assumed
    - Mitigated by actuarial gains from individual salaries increases less than expected

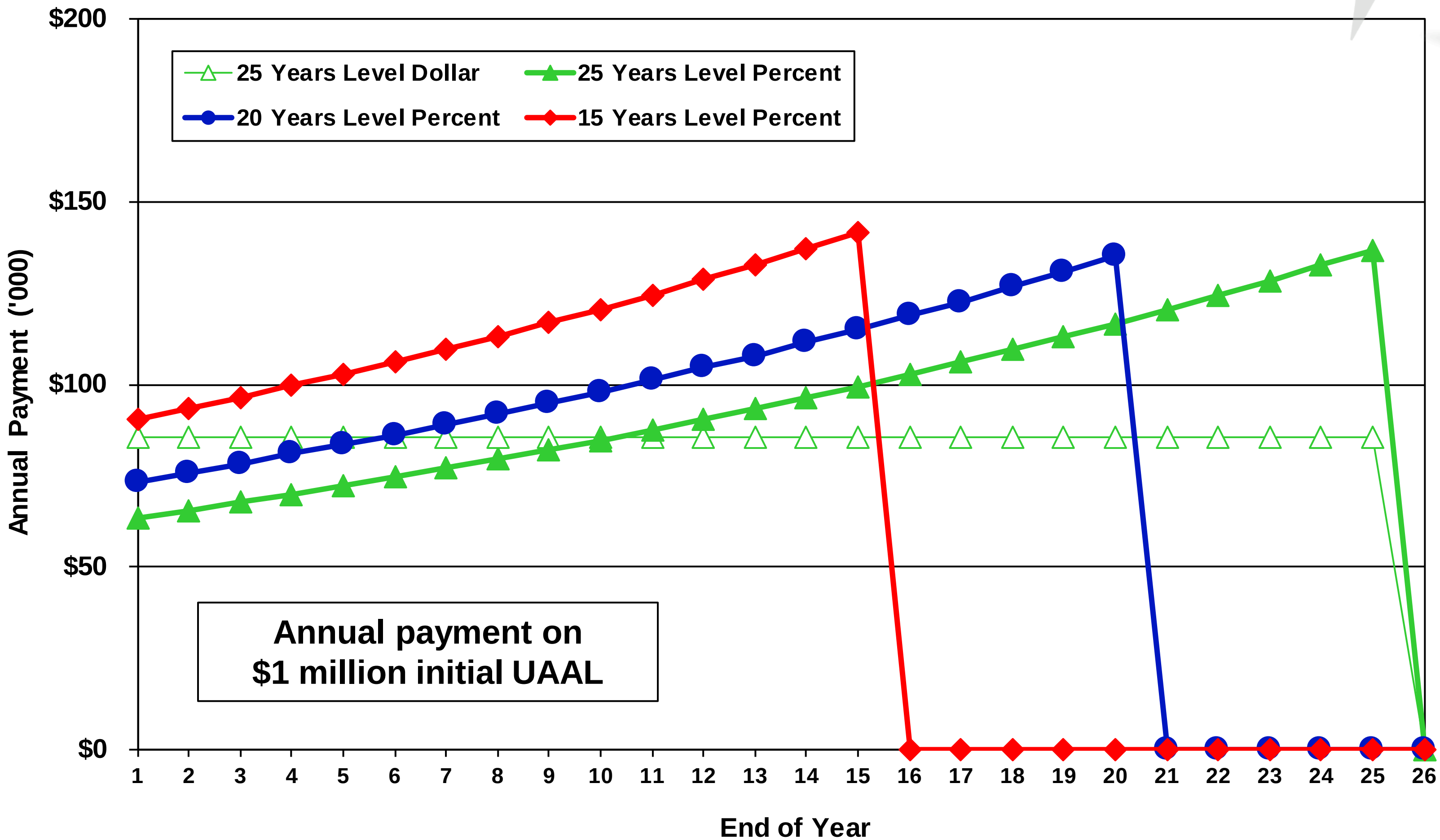
Illustration of UAAL Amortization Periods and Methods

- $1,000,000 initial UAAL, 7.00% investment return assumption

7.00% interest 3.25% payroll growth	25 years Level dollar	25 years % of pay	20 years % of pay	15 years % of pay
Increase in AAL	1,000,000	1,000,000	1,000,000	1,000,000
Amortization factor	11.6536	15.7365	13.6021	11.0509
(first year)	0.085811	0.063546	0.073518	0.090490
Amortization amount				
Year 1	$ 85,811	$ 63,546	$ 73,518	$ 90,490
Year 15	$ 85,811	$ 99,438	$ 115,041	$ 141,600
Year 20	$ 85,811	$ 116,682	$ 134,991	$ 0
Year 25	$ 85,811	$ 136,916	$ 0	$ 0
Total amount paid				
Principal	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000
Interest	1,145,263	1,394,425	1,026,467	714,202
Total	$ 2,145,263	$ 2,394,425	$ 2,026,467	$ 1,714,202

Illustration of UAAL Amortization Periods and Methods

- Annual payment amounts for $1,000,000 initial UAAL
  - Payments increase 3.25% per year

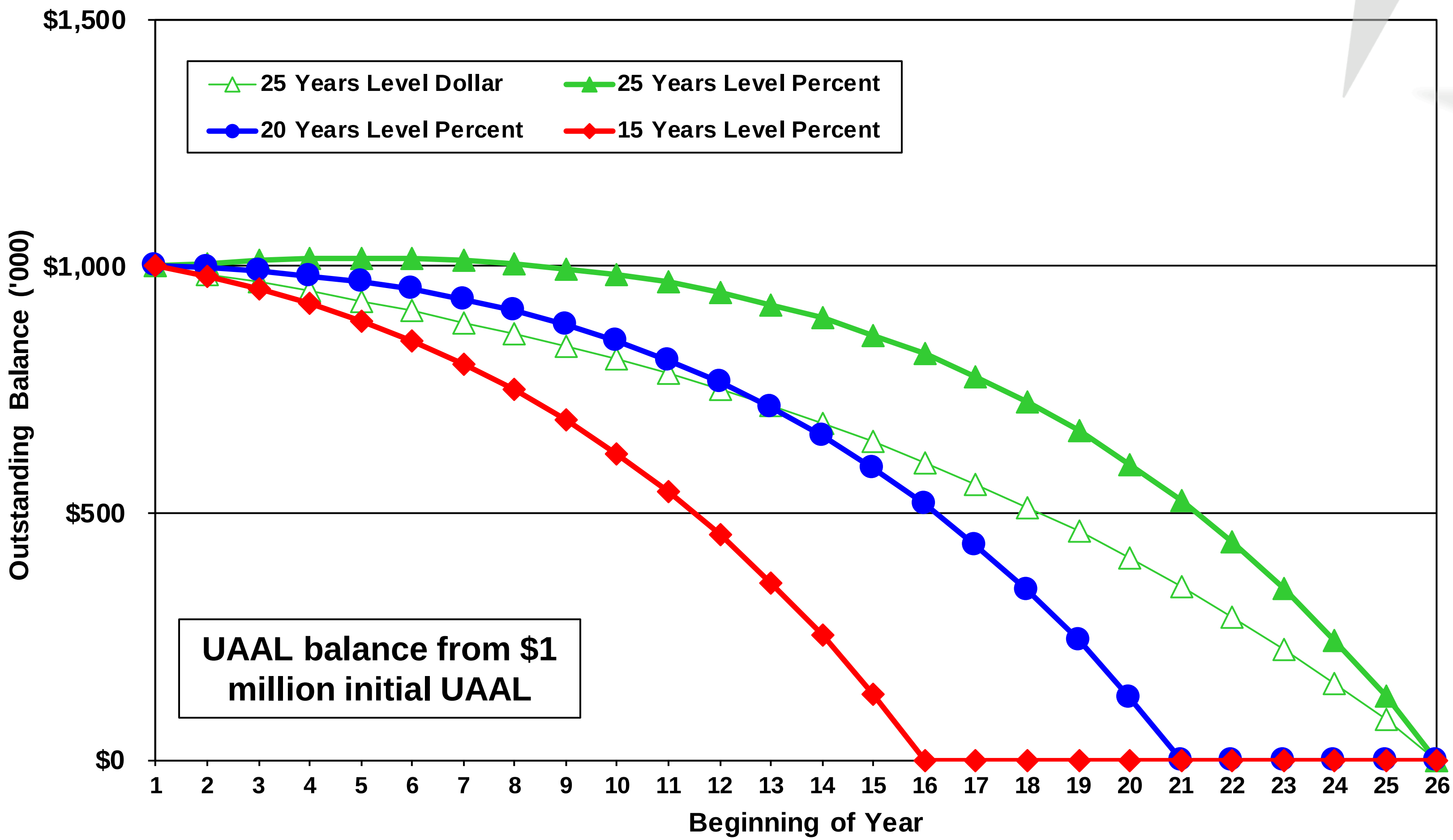


Negative Amortization

- $1,000,000 liability, 7.00% interest
- First year interest only is $70,000
- With level dollar payments, payments are always greater than interest
- With level percentage payments, early payments can be less than interest
  - UAAL increases (but not as a percentage of payroll!)
  - Eventually larger payments cover interest plus increased UAAL
- For OCERS, 20 year amortization means no negative amortization even in first year of new layer

Illustration of UAAL Amortization Periods and Methods

- Outstanding UAAL balance for $1,000,000 initial UAAL

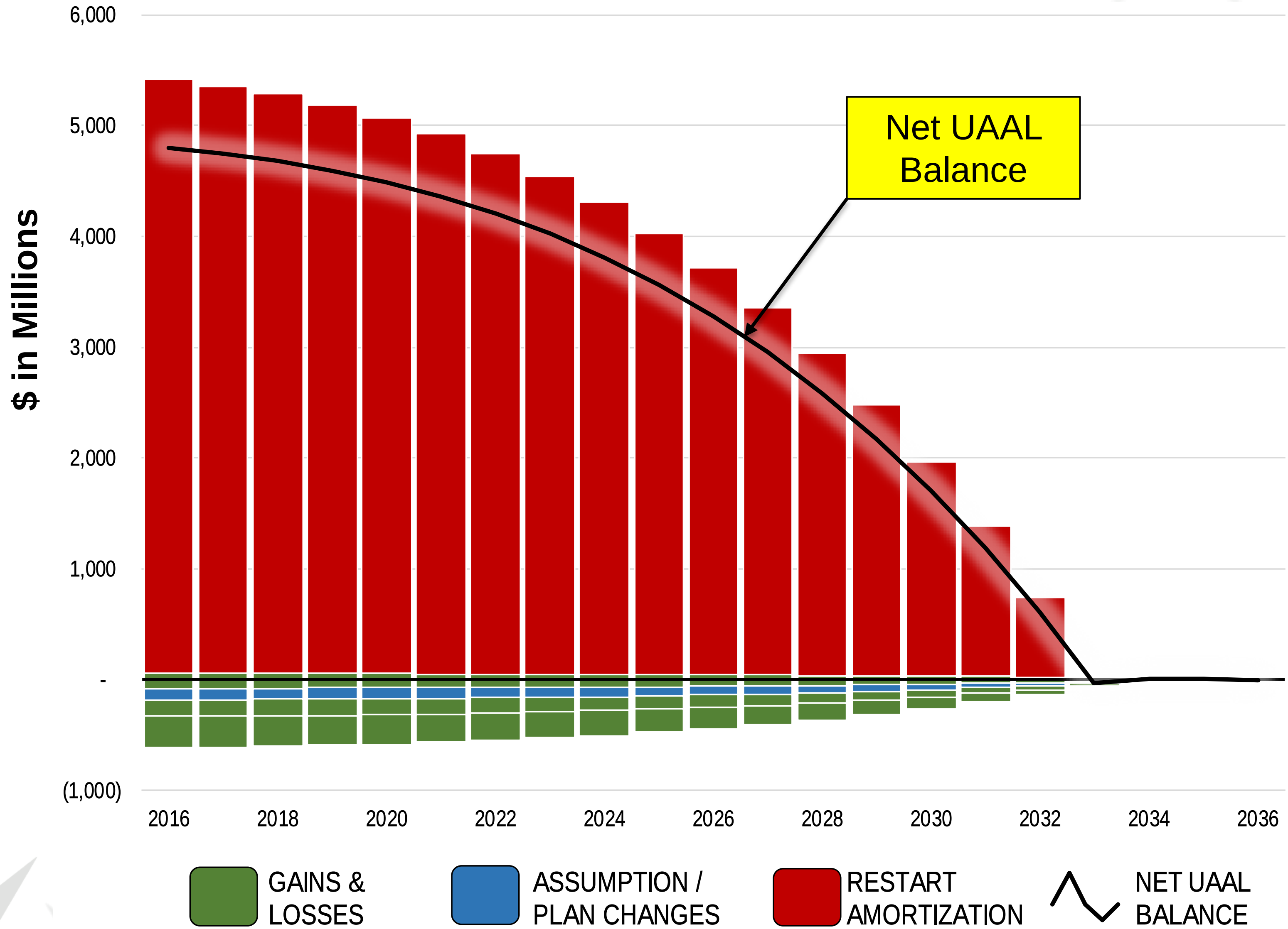


OCERS December 31, 2016 Amortization Schedule

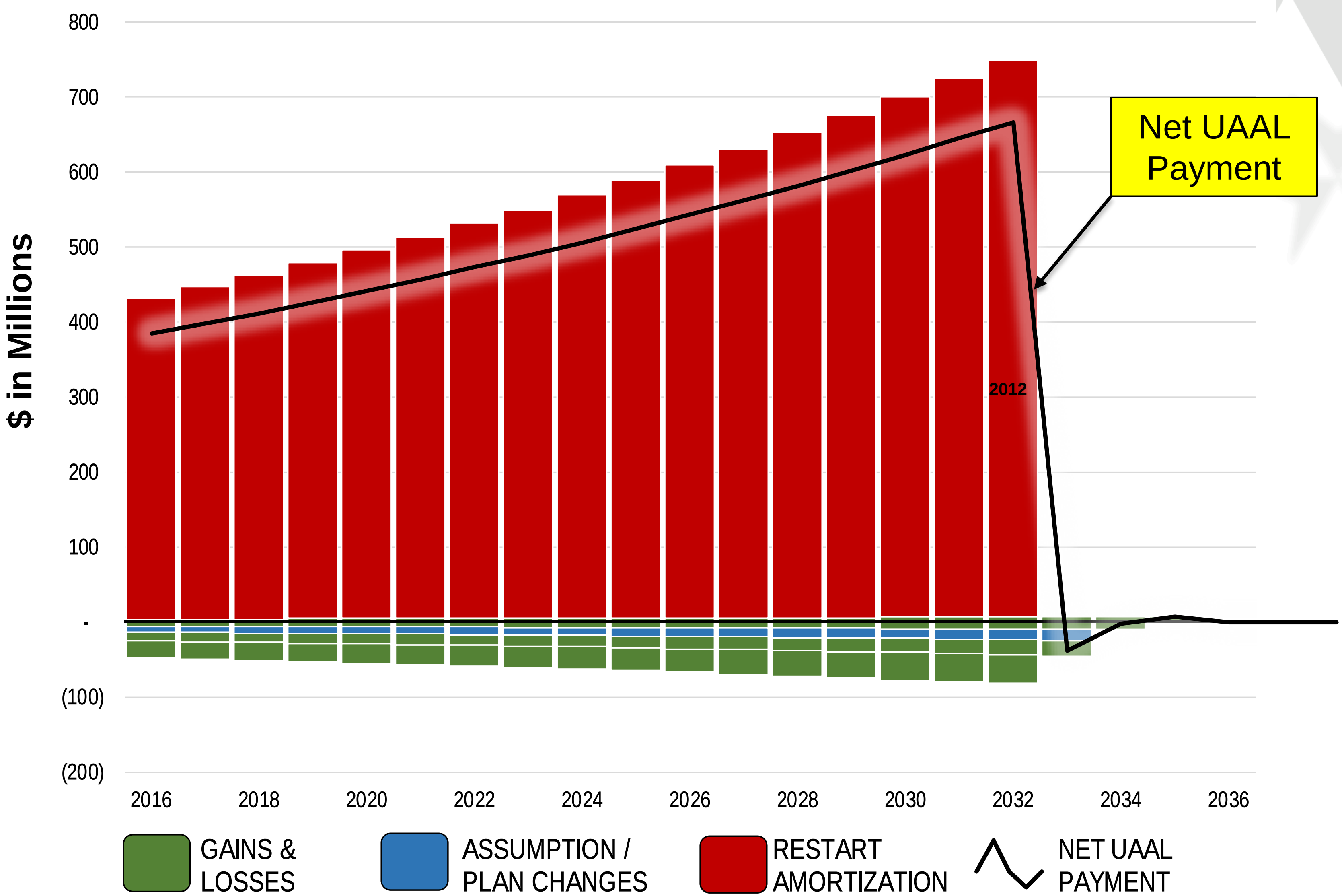
Appendix A (Continued)
UAAL Amortization Schedule as of December 31, 2016

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
All Rate Groups Combined Excluding OCSD, Cemetery, DOE, U.C.I. and Vector Control						
	12/31/2012	Restart amortization	$5,408,524,000	17	$5,353,246,000	$428,237,000
	12/31/2013	Actuarial (gain) or loss	(282,292,000)	17	(279,408,000)	(22,353,000)
	12/31/2014	Actuarial (gain) or loss	(152,244,000)	18	(151,491,000)	(11,629,000)
	12/31/2014	Assumption changes	(104,333,000)	18	(103,818,000)	(7,970,000)
	12/31/2015	Actuarial (gain) or loss	(75,510,000)	19	(75,425,000)	(5,574,000)
	12/31/2015	Law Library restart amortization	1,543,000	17	1,533,000	123,000
	12/31/2016	Actuarial (gain) or loss	56,161,000	20	56,161,000	4,006,000
Subtotal Total					$4,800,798,000	$384,840,000
Rate Group #3 (OCSD)					$(2,522,000)	
Rate Group #11 (Cemetery)					$(289,000)	
Vector Control					$1,115,000	
DOE					$2,848,000	
U.C.I.					$28,533,000	
Grand Total					$4,830,483,000	

OCERS Layered UAAL Amortization Balances as of December 31, 2016



OCERS Layered UAAL Amortization Payments as of December 31, 2016



Recent changes to CalPERS Amortization Policy

- Unlike most systems, CalPERS does not use asset smoothing
  - In April 2013 CalPERS adopted "5 year direct rate smoothing"
  - Mimics asset smoothing without using a smoothed asset value
    - Five year "ramp up / ramp down" of contribution rate impact built into amortization payments
  - Extended smoothing / phase-in to all actuarial experience and assumption changes
- CalPERS 2013 layered amortization periods
  - Actuarial gains or losses: 30 years
    - Similar to 26 year amortization with 5 year smoothing
  - Assumption or method changes: 20 years
    - Similar to 16 year amortization with 5 year phase-in / phase out

Recent changes to CalPERS Amortization Policy

- CalPERS amortization policy revised in February 2018
  - Effective with 6/30/2019 valuation
- For investment gains and losses
  - 20 year UAAL amortization with 5 year ramp up (not down!)
- For non-investment gains and losses
  - 20 year UAAL amortization with <u>no</u> ramp up/down
- For assumption changes
  - 20 year UAAL amortization with <u>no</u> ramp up/down
- New layers will use level dollar amortization

Questions and Discussion

Orange County Fire Authority

AGENDA STAFF REPORT

Budget and Finance Committee Meeting
April 11, 2018

Agenda Item No. 4A
Discussion Calendar

Monthly Investment Reports

Contact(s) for Further Information

Tricia Jakubiak, Treasurer — triciajakubiak@ocfa.org — 714.573.6301
Treasury & Financial Planning

Jane Wong, Assistant Treasurer — janewong@ocfa.org — 714.573.6305

Summary

This agenda item is a routine transmittal of the monthly investment reports submitted to the Committee in compliance with the investment policy of the Orange County Fire Authority and with Government Code Section 53646.

Prior Board/Committee Action

Not Applicable.

RECOMMENDED ACTION(S)

Review the proposed agenda item and direct staff to place the item on the agenda for the Executive Committee meeting of April 26, 2018, with the Budget and Finance Committee's recommendation that the Executive Committee receive and file the reports.

Impact to Cities/County

Not Applicable.

Fiscal Impact

Not Applicable.

Background

Attached is the final monthly investment report for the month ended February 28, 2018. A preliminary investment report as of March 23, 2018, is also provided as the most complete report that was available at the time this agenda item was prepared.

Attachment(s)

Final Investment Report – February 2018/Preliminary Report – March 2018

Orange County Fire Authority Monthly Investment Report

Final Report – February 2018

Preliminary Report – March 2018

Monthly Investment Report
Table of Contents

Orange County Fire Authority

Final Investment Report

February 28, 2018

EXECUTIVE SUMMARY

Portfolio Activity & Earnings

During the month of February 2018, the size of the portfolio decreased by $16.2 million to $145.5 million. Significant receipts for the month included a cash contract payment, apportionments of property taxes, intergovernmental contract and grant payments, and other charges for current services totaling $7.3 million. Significant disbursements for the month included primarily two biweekly payrolls which were approximately $10.8 million each with related benefits. Total February cash outflows amounted to approximately $24.3 million. The portfolio's balance is expected to stay about the same in the following month.

In February, the portfolio's yield to maturity (365-day equivalent) increased by 3 basis points to 1.35%. The effective rate of return, rose by 7 basis points to 1.36% for the month and increased by 3 basis points to 1.15% for the fiscal year to date. The average maturity of the portfolio shortened by 5 days to 96 days to maturity.

Economic News

The U.S. economy continued to grow in February 2018. Employment conditions stayed strong. There were a total of 313,000 new jobs created for the month, a much stronger number than expected, and an upward adjustment of 54,000 new jobs was made for the prior two months. In addition, the unemployment rate remained unchanged at a low rate of 4.1% for the fifth straight month. Consumer confidence measures rose and remained at a high level. However, retail sales continued to decline in February. Both manufacturing and non-manufacturing sectors continued expanding. Durable goods orders and industrial production both reversed and surged higher than expected in February. The CPI (Consumer Price Index) pulled back from the prior month's unusually high increase and posted a modest rise in February. Housing demand and activity stayed strong overall in February. On March 21, 2018, at the second day of their scheduled meeting, the Federal Open Market Committee met and, as widely expected, they voted to raise the federal funds rate to a new target range of 1.50% to 1.75%.

BENCHMARK COMPARISON AS OF FEBRUARY 28, 2018

3 Month T-Bill:	*1.59%*	*1 Year T-Bill:*	*1.96%*
6 Month T-Bill:	*1.79%*	*LAIF:*	*1.41%*

OCFA Portfolio: 1.36%

PORTFOLIO SIZE, YIELD, & DURATION

	Current Month	Prior Month	Prior Year
Book Value-	*$145,509,799*	*$161,668,906*	*$149,217,747*
Yield to Maturity (365 day)	*1.35%*	*1.32%*	*0.84%*
Effective Rate of Return	*1.36%*	*1.29%*	*0.76%*
Days to Maturity	*96*	*101*	*80*

ORANGE COUNTY FIRE AUTHORITY
Portfolio Management
Portfolio Summary
February 28, 2018

Orange County Fire Authority
1 Fire Authority Road
Irvine, Irvine, CA 92602
(714)573-6301

(See Note 1 on page 9) (See Note 2 on page 9)

Investments	Par Value	Market Value	Book Value	% of Portfolio	Term	Days to Maturity	YTM/C 360 Equiv.	YTM/C 365 Equiv.
Money Mkt Mutual Funds/Cash	6,885,317.14	6,885,317.14	6,885,317.14	4.76	1	1	0.898	0.910
Federal Agency Coupon Securities	35,000,000.00	34,756,630.00	35,000,000.00	24.17	971	329	1.223	1.240
Federal Agency Disc. -Amortizing	27,000,000.00	26,913,240.00	26,927,450.00	18.60	125	69	1.420	1.439
Treasury Discounts -Amortizing	15,000,000.00	14,981,970.00	14,983,252.50	10.35	94	29	1.331	1.349
Local Agency Investment Funds	61,000,000.00	60,883,705.27	61,000,000.00	42.13	1	1	1.393	1.412
Investments	**144,885,317.14**	**144,420,862.41**	**144,796,019.64**	**100.00%**	**268**	**96**	**1.327**	**1.345**
Cash								
Passbook/Checking (not included in yield calculations)	919,782.92	919,782.92	919,782.92		1	1	0.000	0.000
Total Cash and Investments	**145,805,100.06**	**145,340,645.33**	**145,715,802.56**		**268**	**96**	**1.327**	**1.345**

Total Earnings	February 28 Month Ending	Fiscal Year To Date
Current Year	160,729.17	1,165,302.93
Average Daily Balance	**153,909,942.98**	**152,281,864.22**
Effective Rate of Return	**1.36%**	**1.15%**

"I certify that this investment report accurately reflects all pooled investments and is in compliance with the investment policy adopted by the Board of Directors to be effective on January 1, 2018. A copy of this policy is available from the Clerk of the Authority. Sufficient investment liquidity and anticipated revenues are available to meet budgeted expenditure requirements for the next thirty days and the next six months."

3/2/18

Patricia Jakubiak, Treasurer

Cash and Investments with GASB 31 Adjustment:

Book Value of Cash & Investments before GASB 31 (Above)	*$*	*145,715,802.56*
GASB 31 Adjustment to Books (See Note 3 on page 9)	*$*	*(206,003.82)*
Total	*$*	*145,509,798.74*

ORANGE COUNTY FIRE AUTHORITY
Portfolio Management
Portfolio Details - Investments
February 28, 2018

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value *(See Note 1 on page 9)*	Book Value *(See Note 2 on page 9)*	Stated Rate	YTM/C 365	Days to Maturity	Maturity Date
Money Mkt Mutual Funds/Cash											
SYS528	528	Federated Treasury Obligations			6,885,317.14	6,885,317.14	6,885,317.14	0.910	0.910	1	
		Subtotal and Average	**5,523,715.48**		**6,885,317.14**	**6,885,317.14**	**6,885,317.14**		**0.910**	**1**	
Federal Agency Coupon Securities											
3133EFJP3	869	Federal Farm Credit Bank (Callable Anytime)		10/15/2015	10,000,000.00	9,945,000.00	10,000,000.00	1.100	1.054	228	10/15/2018
3133EGPD1	921	Federal Farm Credit Bank (Callable Anytime)		04/20/2017	7,000,000.00	6,897,310.00	7,000,000.00	1.180	1.375	518	08/01/2019
3134G7FK2	863	Fed Home Loan Mtg Corp		06/30/2015	9,000,000.00	8,998,380.00	9,000,000.00	1.100	1.065	22	03/23/2018
3134GBHT2	922	Fed Home Loan Mtg Corp		04/25/2017	9,000,000.00	8,915,940.00	9,000,000.00	1.625	1.518	603	10/25/2019
		Subtotal and Average	**35,000,000.00**		**35,000,000.00**	**34,756,630.00**	**35,000,000.00**		**1.240**	**329**	
Federal Agency Disc. -Amortizing											
313385VE3	931	Fed Home Loan Bank		12/20/2017	9,000,000.00	8,985,600.00	8,988,030.00	1.330	1.373	36	04/06/2018
313385WY8	933	Fed Home Loan Bank		01/11/2018	9,000,000.00	8,967,420.00	8,972,310.00	1.420	1.467	78	05/18/2018
313385XN1	934	Fed Home Loan Bank		01/11/2018	9,000,000.00	8,960,220.00	8,967,110.00	1.430	1.478	92	06/01/2018
		Subtotal and Average	**36,553,290.89**		**27,000,000.00**	**26,913,240.00**	**26,927,450.00**		**1.439**	**69**	
Treasury Discounts -Amortizing											
912796NU9	930	US Treasury Bill		12/20/2017	9,000,000.00	8,997,930.00	8,997,742.50	1.290	1.312	7	03/08/2018
912796PC7	932	US Treasury Bill		01/04/2018	6,000,000.00	5,984,040.00	5,985,510.00	1.380	1.406	63	05/03/2018
		Subtotal and Average	**14,975,793.75**		**15,000,000.00**	**14,981,970.00**	**14,983,252.50**		**1.349**	**29**	
Local Agency Investment Funds											
SYS336	336	Local Agency Invstmt Fund			61,000,000.00	60,883,705.27	61,000,000.00	1.412	1.412	1	
		Subtotal and Average	**61,857,142.86**		**61,000,000.00**	**60,883,705.27**	**61,000,000.00**		**1.412**	**1**	
		Total and Average	**153,909,942.98**		**144,885,317.14**	**144,420,862.41**	**144,796,019.64**		**1.345**	**96**	

ORANGE COUNTY FIRE AUTHORITY
Portfolio Management
Portfolio Details - Cash
February 28, 2018

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	YTM/C 365	Days to Maturity
Money Mkt Mutual Funds/Cash										
SYS10033	10033	Revolving Fund		07/01/2017	20,000.00	20,000.00	20,000.00		0.000	1
SYS4	4	Union Bank		07/01/2017	899,782.92	899,782.92	899,782.92		0.000	1
		Average Balance	**0.00**							**1**
		Total Cash and Investments	**153,909,942.98**		**145,805,100.06**	**145,340,645.33**	**145,715,802.56**		**1.345**	**96**

"We visualize problems and solutions through the eyes of those we serve."

ORANGE COUNTY FIRE AUTHORITY
Aging Report
By Maturity Date
As of March 1, 2018

Orange County Fire Authority
1 Fire Authority Road
Irvine, Irvine, CA 92602
(714)573-6301

					Maturity Par Value	Percent of Portfolio	Current Book Value	Current Market Value
Aging Interval:	0 days	(03/01/2018 - 03/01/2018)	4 Maturities	0 Payments	68,805,100.06	47.22%	68,805,100.06	68,688,805.33
Aging Interval:	1 - 30 days	(03/02/2018 - 03/31/2018)	2 Maturities	0 Payments	18,000,000.00	12.35%	17,997,742.50	17,996,310.00
Aging Interval:	31 - 60 days	(04/01/2018 - 04/30/2018)	1 Maturities	0 Payments	9,000,000.00	6.17%	8,988,030.00	8,985,600.00
Aging Interval:	61 - 91 days	(05/01/2018 - 05/31/2018)	2 Maturities	0 Payments	15,000,000.00	10.27%	14,957,820.00	14,951,460.00
Aging Interval:	92 - 121 days	(06/01/2018 - 06/30/2018)	1 Maturities	0 Payments	9,000,000.00	6.15%	8,967,110.00	8,960,220.00
Aging Interval:	122 - 152 days	(07/01/2018 - 07/31/2018)	0 Maturities	0 Payments	0.00	0.00%	0.00	0.00
Aging Interval:	153 - 183 days	(08/01/2018 - 08/31/2018)	0 Maturities	0 Payments	0.00	0.00%	0.00	0.00
Aging Interval:	184 - 274 days	(09/01/2018 - 11/30/2018)	1 Maturities	0 Payments	10,000,000.00	6.86%	10,000,000.00	9,945,000.00
Aging Interval:	275 - 365 days	(12/01/2018 - 03/01/2019)	0 Maturities	0 Payments	0.00	0.00%	0.00	0.00
Aging Interval:	366 - 1095 days	(03/02/2019 - 02/28/2021)	2 Maturities	0 Payments	16,000,000.00	10.98%	16,000,000.00	15,813,250.00
Aging Interval:	1096 days and after	(03/01/2021 -)	0 Maturities	0 Payments	0.00	0.00%	0.00	0.00
		Total for	13 Investments	0 Payments		100.00	145,715,802.56	145,340,645.33

NOTES TO PORTFOLIO MANAGEMENT REPORT

Note 1: Market value of the LAIF investment is calculated using a fair value factor provided by LAIF. The MUFG Union Bank (formerly Union Bank) Trust Department provides market values of the remaining investments.

Note 2: Book value reflects the cost or amortized cost before the GASB 31 accounting adjustment.

Note 3: GASB 31 requires governmental entities to report investments at fair value in the financial statements and to reflect the corresponding unrealized gains/ (losses) as a component of investment income. The GASB 31 adjustment is recorded only at fiscal year end. The adjustment for June 30, 2017 includes a decrease of ($68,353) to the LAIF investment and a decrease of ($137,651) to the remaining investments.

Note 4: The Federated Treasury Obligations money market mutual fund functions as the Authority's sweep account. Funds are transferred to and from the sweep account to/from OCFA's checking account in order to maintain a target balance of $1,000,000 in checking. Since this transfer occurs at the beginning of each banking day, the checking account sometimes reflects a negative balance at the close of the banking day. The negative closing balance is not considered an overdraft since funds are available in the money market mutual fund. The purpose of the sweep arrangement is to provide sufficient liquidity to cover outstanding checks, yet allow that liquidity to be invested while payment of the outstanding checks is pending.

Local Agency Investment Fund *(LAIF)*

As of February 28, 2018, OCFA has $61,000,000 invested in LAIF. The fair value of OCFA's LAIF investment is calculated using a participant fair value factor provided by LAIF on a quarterly basis. The fair value factor as of December 31, 2017 is 0.998093529. When applied to OCFA's LAIF investment, the fair value is $60,883,705 or ($116,295) below cost. Although the fair value of the LAIF investment is lower than cost, OCFA can withdraw the actual amount invested at any time.

LAIF is included in the State Treasurer's Pooled Money Investment Account (PMIA) for investment purposes. The PMIA market valuation at February 28, 2018 is included on the following page.

State of California
Pooled Money Investment Account
Market Valuation
2/28/2018

Description	Carrying Cost Plus Accrued Interest Purch.	Fair Value	Accrued Interest
United States Treasury:			
Bills	$ 15,733,656,226.01	$ 15,803,795,500.00	NA
Notes	$ 17,861,298,987.71	$ 17,729,214,500.00	$ 33,929,220.00
Federal Agency:			
SBA	$ 837,237,284.14	$ 828,627,711.64	$ 1,052,589.60
MBS-REMICs	$ 31,409,462.79	$ 32,174,485.98	$ 146,905.19
Debentures	$ 1,478,495,535.45	$ 1,467,815,100.00	$ 4,801,190.30
Debentures FR	$ -	$ -	$ -
Debentures CL	$ 250,000,000.00	$ 245,698,000.00	$ 1,128,903.00
Discount Notes	$ 9,483,269,721.98	$ 9,509,738,500.00	NA
Supranational Debentures	$ 449,437,605.26	$ 446,037,000.00	$ 1,556,113.00
Supranational Debentures FR	$ 50,000,000.00	$ 50,064,000.00	$ 111,315.11
CDs and YCDs FR	$ 425,000,000.00	$ 425,000,000.00	$ 1,356,241.74
Bank Notes	$ 900,000,000.00	$ 898,827,583.76	$ 2,193,722.23
CDs and YCDs	$ 14,225,000,000.00	$ 14,213,422,342.26	$ 40,574,625.03
Commercial Paper	$ 8,856,111,527.82	$ 8,874,362,173.62	NA
Corporate:			
Bonds FR	$ -	$ -	$ -
Bonds	$ -	$ -	$ -
Repurchase Agreements	$ -	$ -	$ -
Reverse Repurchase	$ -	$ -	$ -
Time Deposits	$ 5,098,740,000.00	$ 5,098,740,000.00	NA
AB 55 & GF Loans	$ 693,260,000.00	$ 693,260,000.00	NA
TOTAL	$ 76,372,916,351.16	$ 76,316,776,897.26	$ 86,850,825.20

Fair Value Including Accrued Interest $ 76,403,627,722.46

Repurchase Agreements, Time Deposits, AB 55 & General Fund loans, and Reverse Repurchase agreements are carried at portfolio book value (carrying cost).

Orange County Fire Authority

Preliminary Investment Report

March 23, 2018

Orange County Fire Authority
1 Fire Authority Road
Irvine, Irvine, CA 92602
(714)573-6301

ORANGE COUNTY FIRE AUTHORITY
Portfolio Management
Portfolio Summary
March 23, 2018

Investments	Par Value	Market Value (See Note 1 on page 18)	Book Value (See Note 2 on page 18)	% of Portfolio	Term	Days to Maturity	YTM/C 360 Equiv.	YTM/C 365 Equiv.
Money Mkt Mutual Funds/Cash	8,665,416.51	8,665,416.51	8,665,416.51	5.76	1	1	0.898	0.910
Federal Agency Coupon Securities	26,000,000.00	25,778,300.00	26,000,000.00	17.27	962	413	1.283	1.301
Federal Agency Disc. -Amortizing	27,000,000.00	26,943,030.00	26,951,485.00	17.90	125	46	1.420	1.439
Treasury Coupon Securities	8,000,000.00	7,988,480.00	7,989,939.39	5.31	99	83	1.652	1.675
Treasury Discounts -Amortizing	20,000,000.00	19,928,550.00	19,930,132.16	13.24	110	77	1.596	1.618
Local Agency Investment Funds	61,000,000.00	60,883,705.27	61,000,000.00	40.52	1	1	1.393	1.412
Investments	**150,665,416.51**	**150,187,481.78**	**150,536,973.06**	**100.00%**	**209**	**95**	**1.391**	**1.410**
Cash and Accrued Interest								
Passbook/Checking (not included in yield calculations)	522,925.96	522,925.96	522,925.96		1	1	0.000	0.000
Accrued Interest at Purchase		20,521.98	20,521.98					
Subtotal		543,447.94	543,447.94					
Total Cash and Investments	**151,188,342.47**	**150,730,929.72**	**151,080,421.00**		**209**	**95**	**1.391**	**1.410**

Total Earnings	March 23 Month Ending	Fiscal Year To Date
Current Year	132,353.45	1,297,656.38
Average Daily Balance	**153,934,243.97**	**152,424,739.16**
Effective Rate of Return	**1.36%**	**1.17%**

"I certify that this investment report accurately reflects all pooled investments and is in compliance with the investment policy adopted by the Board of Directors to be effective on January 1, 2018. A copy of this policy is available from the Clerk of the Authority. Sufficient investment liquidity and anticipated revenues are available to meet budgeted expenditure requirements for the next thirty days and the next six months."

3/30/18

Patricia Jakubiak, Treasurer

Cash and Investments with GASB 31 Adjustment:

Book Value of Cash & Investments before GASB 31 (Above)	*$*	*151,080,421.00*
GASB 31 Adjustment to Books (See Note 3 on page 18)	*$*	*(206,003.82)*
Total	*$*	*150,874,417.18*

ORANGE COUNTY FIRE AUTHORITY
Portfolio Management
Portfolio Details - Investments
March 23, 2018

(See Note 1 on page 18) *(See Note 2 on page 18)*

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	YTM/C 365	Days to Maturity	Maturity Date
Money Mkt Mutual Funds/Cash											
SYS528	528	Federated Treasury Obligations			8,665,416.51	8,665,416.51	8,665,416.51	0.910	0.910	1	
		Subtotal and Average	**9,224,774.50**		**8,665,416.51**	**8,665,416.51**	**8,665,416.51**		**0.910**	**1**	
Federal Agency Coupon Securities											
3133EFJP3	869	Federal Farm Credit Bank (Callable Anytime)		10/15/2015	10,000,000.00	9,953,400.00	10,000,000.00	1.100	1.054	205	10/15/2018
3133EGPD1	921	Federal Farm Credit Bank (Callable Anytime)		04/20/2017	7,000,000.00	6,902,210.00	7,000,000.00	1.180	1.375	495	08/01/2019
3134GBHT2	922	Fed Home Loan Mtg Corp		04/25/2017	9,000,000.00	8,922,690.00	9,000,000.00	1.625	1.518	580	10/25/2019
		Subtotal and Average	**34,608,695.65**		**26,000,000.00**	**25,778,300.00**	**26,000,000.00**		**1.301**	**413**	
Federal Agency Disc. -Amortizing											
313385VE3	931	Fed Home Loan Bank		12/20/2017	9,000,000.00	8,995,320.00	8,995,677.50	1.330	1.373	13	04/06/2018
313385WY8	933	Fed Home Loan Bank		01/11/2018	9,000,000.00	8,977,230.00	8,980,475.00	1.420	1.467	55	05/18/2018
313385XN1	934	Fed Home Loan Bank		01/11/2018	9,000,000.00	8,970,480.00	8,975,332.50	1.430	1.478	69	06/01/2018
		Subtotal and Average	**26,939,990.00**		**27,000,000.00**	**26,943,030.00**	**26,951,485.00**		**1.439**	**46**	
Treasury Coupon Securities											
912828XF2	935	Treasury Note		03/08/2018	8,000,000.00	7,988,480.00	7,989,939.39	1.125	1.675	83	06/15/2018
		Subtotal and Average	**5,557,586.30**		**8,000,000.00**	**7,988,480.00**	**7,989,939.39**		**1.675**	**83**	
Treasury Discounts -Amortizing											
912796PC7	932	US Treasury Bill		01/04/2018	6,000,000.00	5,989,680.00	5,990,800.00	1.380	1.406	40	05/03/2018
912796PM5	936	US Treasury Bill		03/08/2018	8,000,000.00	7,963,680.00	7,964,394.66	1.669	1.701	96	06/28/2018
912796PL7	937	US Treasury Bill		03/15/2018	3,000,000.00	2,988,810.00	2,988,417.50	1.695	1.726	82	06/14/2018
912796PM5	938	US Treasury Bill		03/15/2018	3,000,000.00	2,986,380.00	2,986,520.00	1.685	1.717	96	06/28/2018
		Subtotal and Average	**16,603,197.52**		**20,000,000.00**	**19,928,550.00**	**19,930,132.16**		**1.618**	**77**	
Local Agency Investment Funds											
SYS336	336	Local Agency Invstmt Fund			61,000,000.00	60,883,705.27	61,000,000.00	1.412	1.412	1	
		Subtotal and Average	**61,000,000.00**		**61,000,000.00**	**60,883,705.27**	**61,000,000.00**		**1.412**	**1**	
		Total and Average	**153,934,243.97**		**150,665,416.51**	**150,187,481.78**	**150,536,973.06**		**1.410**	**95**	

ORANGE COUNTY FIRE AUTHORITY
Portfolio Management
Portfolio Details - Cash
March 23, 2018

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	YTM/C 365	Days to Maturity
Money Mkt Mutual Funds/Cash										
SYS10033	10033	Revolving Fund		07/01/2017	20,000.00	20,000.00	20,000.00		0.000	1
SYS4	4	Union Bank		07/01/2017	502,925.96	502,925.96	502,925.96		0.000	1
		Average Balance	**0.00**	Accrued Interest at Purchase		20,521.98	20,521.98			**1**
				Subtotal		543,447.94	543,447.94			
		Total Cash and Investments	**153,934,243.97**		**151,188,342.47**	**150,730,929.72**	**151,080,421.00**		**1.410**	**95**

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ORANGE COUNTY FIRE AUTHORITY
Aging Report
By Maturity Date
As of March 24, 2018

Orange County Fire Authority
1 Fire Authority Road
Irvine, Irvine, CA 92602
(714)573-6301

					Maturity Par Value	Percent of Portfolio	Current Book Value	Current Market Value
Aging Interval: 0 days	(03/24/2018 - 03/24/2018)		4 Maturities	0 Payments	70,188,342.47	46.46%	70,188,342.47	70,072,047.74
Aging Interval: 1 - 30 days	(03/25/2018 - 04/23/2018)		1 Maturities	0 Payments	9,000,000.00	5.96%	8,995,677.50	8,995,320.00
Aging Interval: 31 - 60 days	(04/24/2018 - 05/23/2018)		2 Maturities	0 Payments	15,000,000.00	9.91%	14,971,275.00	14,966,910.00
Aging Interval: 61 - 91 days	(05/24/2018 - 06/23/2018)		3 Maturities	0 Payments	20,000,000.00	13.21%	19,953,689.39	19,947,770.00
Aging Interval: 92 - 121 days	(06/24/2018 - 07/23/2018)		2 Maturities	0 Payments	11,000,000.00	7.25%	10,950,914.66	10,950,060.00
Aging Interval: 122 - 152 days	(07/24/2018 - 08/23/2018)		0 Maturities	0 Payments	0.00	0.00%	0.00	0.00
Aging Interval: 153 - 183 days	(08/24/2018 - 09/23/2018)		0 Maturities	0 Payments	0.00	0.00%	0.00	0.00
Aging Interval: 184 - 274 days	(09/24/2018 - 12/23/2018)		1 Maturities	0 Payments	10,000,000.00	6.62%	10,000,000.00	9,953,400.00
Aging Interval: 275 - 365 days	(12/24/2018 - 03/24/2019)		0 Maturities	0 Payments	0.00	0.00%	0.00	0.00
Aging Interval: 366 - 1095 days	(03/25/2019 - 03/23/2021)		2 Maturities	0 Payments	16,000,000.00	10.59%	16,000,000.00	15,824,900.00
Aging Interval: 1096 days and after	(03/24/2021 -)		0 Maturities	0 Payments	0.00	0.00%	0.00	0.00
		Total for	15 Investments	0 Payments		100.00	151,059,899.02	150,710,407.74

NOTES TO PORTFOLIO MANAGEMENT REPORT

Note 1: Market value of the LAIF investment is calculated using a fair value factor provided by LAIF. The MUFG Union Bank Trust Department provides market values of the remaining investments.

Note 2: Book value reflects the cost or amortized cost before the GASB 31 accounting adjustment.

Note 3: GASB 31 requires governmental entities to report investments at fair value in the financial statements and to reflect the corresponding unrealized gains/ (losses) as a component of investment income. The GASB 31 adjustment is recorded only at fiscal year end. The adjustment for June 30, 2017 includes a decrease of ($68,353) to the LAIF investment and a decrease of ($137,651) to the remaining investments.

Note 4: The Federated Treasury Obligations money market mutual fund functions as the Authority's sweep account. Funds are transferred to and from the sweep account to/from OCFA's checking account in order to maintain a target balance of $1,000,000 in checking. Since this transfer occurs at the beginning of each banking day, the checking account sometimes reflects a negative balance at the close of the banking day. The negative closing balance is not considered an overdraft since funds are available in the money market mutual fund. The purpose of the sweep arrangement is to provide sufficient liquidity to cover outstanding checks, yet allow that liquidity to be invested while payment of the outstanding checks is pending.

GLOSSARY

INVESTMENT TERMS

Basis Point. Measure used in quoting yields on bonds and notes. One basis point is .01% of yield.

Book Value. This value may be the original cost of acquisition of the security, or original cost adjusted by the amortization of a premium or accretion of a discount. The book value may differ significantly from the security's current value in the market.

Commercial Paper. Unsecured short-term promissory notes issued by corporations, with maturities ranging from 2 to 270 days; may be sold on a discount basis or may bear interest.

Coupon Rate. Interest rate, expressed as a percentage of par or face value, that issuer promises to pay over lifetime of debt security.

Discount. The amount by which a bond sells under its par (face) value.

Discount Securities. Securities that do not pay periodic interest. Investors earn the difference between the discount issue price and the full face value paid at maturity. Treasury bills, bankers' acceptances and most commercial paper are issued at a discount.

Effective Rate of Return. Rate of return on a security, based on its purchase price, coupon rate, maturity date, and the period between interest payments.

Federal Agency Securities. Securities issued by agencies such as the Federal National Mortgage Association and the Federal Farm Credit Bank. Though not general obligations of the US Treasury, such securities are sponsored by the government and therefore have high credit ratings. Some are issued on a discount basis and some are issued with coupons.

Federal Funds. Funds placed in Federal Reserve banks by depository intuitions in excess of current reserve requirements. These depository institutions may lend fed funds to each other overnight or on a longer basis. They may also transfer funds among each other on a same-day basis through the Federal Reserve banking system. Fed Funds are considered to be immediately available funds.

Fed Funds Rate. The interest rate charged by one institution lending federal funds to another.

Federal Open Market Committee. The branch of the Federal Reserve Board that determines the direction of monetary policy.

Local Agency Investment Fund (LAIF). A California State Treasury fund which local agencies may use to deposit funds for investment and for reinvestment with a maximum of $50 million for any agency ***(excluding bond funds, which have no maximum)***. It offers high liquidity because deposits can be converted to cash in 24 hours and no interest is lost. Interest is paid quarterly and the State's administrative fee cannot to exceed 1/4 of a percent of the earnings.

Market value. The price at which the security is trading and could presumably be purchased or sold.

Maturity Date. The specified day on which the issuer of a debt security is obligated to repay the principal amount or face value of security.

Money Market Mutual Fund. Mutual funds that invest solely in money market instruments (short-term debt instruments, such as Treasury bills, commercial paper, bankers' acceptances, repurchase agreements and federal funds).

Par. Face value or principal value of a bond typically $1,000 per bond.

Rate of Return. The amount of income received from an investment, expressed as a percentage. A *market rate of return* is the yield that an investor can expect to receive in the current interest-rate environment utilizing a buy-and-hold to maturity investment strategy.

Treasury Bills. Short-term U.S. government non-interest bearing debt securities with maturities of no longer than one year. The yields on these bills are monitored closely in the money markets for signs of interest rate trends.

Treasury Notes. Intermediate U.S. government debt securities with maturities of one to 10 years.

Treasury bonds. Long-term U.S. government debt securities with maturities of 10 years or longer.

Yield. Rate of return on a bond.

Yield-to-maturity. Rate of return on a bond taking into account the total annual interest payments, the purchase price, the redemption value and the amount of time remaining until maturity.

<u>ECONOMIC TERMS</u>

Conference Board Consumer Confidence Index A survey that measures how optimistic or pessimistic consumers are with respect to the economy in the near future.

Consumer Price Index (CPI). A measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care. Changes in CPI are used to assess price changes associated with the cost of living.

Durable Goods Orders. An economic indicator released monthly that reflects new orders placed with domestic manufacturers for delivery of factory durable goods such as autos and appliances in the near term or future.

Gross Domestic Product. The monetary value of all the finished goods and services produced within a country's borders in a specific time period. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory.

Industrial Production. An economic indicator that is released monthly by the Federal Reserve Board. The indicator measures the amount of output from the manufacturing, mining, electric and gas industries.

ISM Institute for Supply Management (ISM) Manufacturing Index. A monthly index that monitors employment, production inventories, new orders and supplier deliveries.

ISM Non-manufacturing Index. An index based on surveys of non-manufacturing firms' purchasing and supply executives. It tracks economic data for the service sector.

Leading Economic Index. A monthly index used to predict the direction of the economy's movements in the months to come. The index is made up of 10 economic components, whose changes tend to precede changes in the overall economy.

National Federation of Independent Business Small Business Optimism Index. An index based on surveys of small business owners' plans and expectations regarding employment, capital, inventories, economic improvement, credit conditions, expansion, and earnings trends in the near term or future.

Producer Price Index. An index that measures the average change over time in the selling prices received by domestic producers for their output.

University of Michigan Consumer Sentiment Index. An index that measures the overall health of the economy as determined by consumer opinion. It takes into account an individual's feelings toward his or her own current financial health, the health of the economy in the short term and the prospects for longer term economic growth.

Orange County Fire Authority

AGENDA STAFF REPORT

Budget and Finance Committee Meeting **Agenda Item No. 4B**
April 11, 2018 **Discussion Calendar**

Communication with Auditors for Fiscal Year 2017/18 Financial Audit

Contact(s) for Further Information

Jim Ruane, Finance Manager/Auditor jimruane@ocfa.org 714.573.6304
Business Services Department

Roger Alfaro, Partner ralfaro@vtdcpa.com 800.889.4410
Vavrinek, Trine, Day & Co., LLP

Proir Board/Committee Action

Not Applicable.

Summary

This agenda item is submitted to provide an update to the Budget and Finance/Audit Committee on the Fiscal Year 2017/18 financial audit, including two-way communication between the Committee and the independent financial auditors in accordance with Statements on Auditing Standards No. 114.

RECOMMENDED ACTION(S)

Receive and file the report.

Impact to Cities/County

Not Applicable

Fiscal Impact

Not Applicable.

Background

The American Institute of Certified Public Accountants (AICPA) issues Statements on Auditing Standards (SAS), which address the guidelines auditors must follow while conducting audits of financial statements. In 2006, the AICPA issued SAS No. 114 - The Auditor's Communication with Those Charged with Governance, which requires auditors and "those with power of governance" to engage in two-way communication regarding audit matters. Specific duties of "those with power of governance" (i.e., Board of Directors) may be delegated to a sub-group, such as an audit committee. The OCFA's Budget and Finance Committee serves as the Audit Committee.

Two-way communication is needed in order to:

- Communicate the auditors' responsibilities (i.e., scope of the audit);
- Obtain information relevant to the audit;
- Provide timely observations arising from the audit that are relevant to the governing body's responsibilities in overseeing the financial reporting process; and
- Communicate any significant findings in writing.

OCFA's independent financial auditing firm, Vavrinek, Trine, Day & Co., LLP, is scheduled to begin its Fiscal Year 2017/18 interim audit fieldwork on May 7, 2018. A representative from the audit engagement team provides a presentation to the Budget and Finance Committee at the beginning of the audit process to commence two-way communication in accordance with SAS No. 114. The auditing firm's representative will also present the financial statements to the Budget and Finance Committee and Board of Directors at the completion of its audit later this year.

Attachment(s)
SAS No. 114 Auditor Communication Letter dated March 21, 2018

VAVRINEK, TRINE, DAY & CO., LLP
Certified Public Accountants

Attachment

VALUE THE *difference*

March 21, 2018

Orange County Fire Authority
1 Fire Authority Road
Irvine, California 92602

We are engaged to audit the financial statements of the governmental activities, the discretely presented component unit, each major fund, and the aggregate remaining fund information of the Orange County Fire Authority (Authority) for the year ended June 30, 2018. Professional standards require that we provide you with the following information related to our audit. We would also appreciate the opportunity to meet with you to discuss this information further since a two-way dialogue can provide valuable information for the audit process.

Our Responsibilities under U.S. Generally Accepted Auditing Standards, *Government Auditing Standards* and the Uniform Guidance

As stated in our engagement letter dated March 20, 2018, our responsibility, as described by professional standards, is to express opinions about whether the financial statements prepared by management with your oversight are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. Our audit of the financial statements does not relieve you or management of your responsibilities.

In planning and performing our audit, we will consider the Authority's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinions on the financial statements and not to provide assurance on the internal control over financial reporting. We will also consider internal control over compliance with requirements that could have a direct and material effect on a major federal program in order to determine our auditing procedures for the purpose of expressing our opinion on compliance and to test and report on internal control over compliance in accordance with the Uniform Guidance.

As part of obtaining reasonable assurance about whether the Authority's financial statements are free of material misstatement, we will perform tests of its compliance with certain provisions of laws, regulations, contracts, and grants. However, providing an opinion on compliance with those provisions is not an objective of our audit. Also in accordance with the Uniform Guidance, we will examine, on a test basis, evidence about the Authority's compliance with the types of compliance requirements described in the U.S. Office of Management and Budget (OMB) Compliance Supplement applicable to each of its major federal programs for the purpose of expressing an opinion on the Authority's compliance with those requirements. While our audit will provide a reasonable basis for our opinion, it will not provide a legal determination on the Authority's compliance with those requirements.

Generally accepted accounting principles provide for certain required supplementary information (RSI) to supplement the basic financial statements. Our responsibility with respect to the RSI listed below, which supplements the basic financial statements, is to apply certain limited procedures in accordance with generally accepted auditing standards. However, the RSI will not be audited and, because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance, we will not express an opinion or provide any assurance on the RSI. The RSI consists of the following:

1) Management's Discussion and Analysis
2) Schedule of the Authority's proportionate share of the net pension liability and schedule of contributions for the OCERS Retirement plan
3) Schedule of changes in net pension liability and related ratios, schedule of contributions, and schedule of money weighted rate of return for the Extra Help Retirement plan
4) Schedules required in accordance with GASB OPEB Standards for the Retiree Medical Plan

We have been engaged to report on the supplementary information listed below, which accompany the financial statements but are not RSI. Our responsibility for this supplementary information, as described by professional standards, is to evaluate the presentation of the supplementary information in relation to the financial statements as a whole and to report on whether the supplementary information is fairly stated, in all material respects, in relation to the financial statements as a whole. The supplementary information consists of the following:

1) Schedule of expenditures of federal awards
2) Individual fund budgetary comparison schedules for all major governmental funds (excluding the General Fund)
3) General Fund - Combining Balance Sheet and Statement of Revenues, Expenditures, and Changes in Fund Balance, including original and final budget

We have not been engaged to report on the introductory section and statistical section, which accompany the financial statements but are not RSI. Our responsibility with respect to this other information in documents containing the audited financial statements and auditor's report does not extend beyond the financial information identified in the report. We have no responsibility for determining whether this other information is properly stated. This other information will not be audited and we will not express an opinion or provide any assurance on it.

We will also audit the stand-alone report for the Orange County Fire Authority Foundation (Foundation), a nonprofit organization and a discretely presented component unit of the Authority.

We will also perform agreed upon procedures on the Orange County Professional Firefighters Association Trust Fund for the year ended December 31, 2017.

<u>Planned Scope, Timing of the Audit, and Other</u>

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; therefore, our audit will involve judgment about the number of transactions to be examined and the areas to be tested.

Our audit will include obtaining an understanding of the entity and its environment, including internal control, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing, and extent of further audit procedures. Material misstatements may result from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the entity or to acts by management or employees acting on behalf of the entity. We will generally communicate our significant findings at the conclusion of the audit. However, some matters could be communicated sooner, particularly if significant difficulties are encountered during the audit where assistance is needed to overcome the difficulties or if the difficulties may lead to a modified opinion. We will also communicate any internal control related matters that are required to be communicated under professional standards.

If any member of the Board is aware of matters that have a material bearing on the financial statements taken as a whole (such as described above in 1-4), please contact Roger Alfaro or Jessica Andersen at (949) 768-0833 or by email at ralfaro@vtdcpa.com or jandersen@vtdcpa.com by July 1, 2018.

We expect to begin our audit on approximately May 7, 2018 and issue our report no later than October 31, 2018, or as agreed to by management. Roger Alfaro and Jessica Andersen are the engagement partners and are responsible for supervising the engagement and signing the report or authorizing another individual to sign it.

This information is intended solely for the use of the Board of Directors and management of Authority and is not intended to be, and should not be, used by anyone other than these specified parties.

Very truly yours,

Roger Alfaro, Partner
Of Vavrinek, Trine, Day & Co., LLP